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Arts and Humanities

Screen Sirens: Teaching gender with film in medical undergraduate education

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Background

Sexual violence is increasingly prevalent in society. Evidence shows that women express a preference for their healthcare provider to initiate the subject within the consultation. This demands that young doctors are equipped to engage in this area. Traditional teaching methods focus primarily on improving professional's knowledge base, yet the attitude of the doctor is fundamental.

Summary of work

As part of a special study module on films studies (n=20 year 1, n=8 year 2), students participate in two workshops; one on gender and one on sexual violence. The workshop aims to explore attitude awareness to gender and sexual violence. Workshops are interactive small-group sessions. Students are asked to evaluate the workshops and complete Risberg's gender attitude survey before and after the class.

Summary of results

Intense debate dominates the classes as students discuss self-identified themes or clips of film. Key themes include consent; sensitivity of the physician, sexual stereotyping. The gender divide within the group becomes apparent emphasising that gender goes 'beyond objective science'. There are some changes in gender attitude after workshops.

Take-home messages

Film is a useful pedagogical tool for exploring 'difficult' subjects, in particular attitudinal issues. Films create an 'alternative reality'; allowing viewers to step back from the intricacies of life but also to question the way we represent the world in which we live.

Assessment

A comparison of the United Kingdom Clinical Aptitude Test (UK-CAT) with a traditional admission selection process

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Context

A study of all applicants to the University of Aberdeen Medical School who also undertook the UK-CAT (United Kingdom Clinical Aptitude Test) in 2006 for 2007 and 2008 deferred entry.

Introduction

Recently it has been claimed that selection to higher education, especially in subjects such as medicine where applicant numbers far exceeds places available, needs to be fairer, more valid and reliable. The UK-CAT was introduced by a consortium of UK Medical and Dental Schools in 2006 in an attempt to address these concerns. In 2006, the UK-CAT consisted of four cognitive sub-tests (verbal reasoning, quantitative reasoning, abstract reasoning and decision analysis). We examined how the UK-CAT can be used in the selection of medical students at the University of Aberdeen (UoA).

Aims

To compare how the candidate performance on UK-CAT corresponds to the local medical student selection process and their subsequent outcome.

Methods

We compared the outcomes of all applicants to Medicine, University of Aberdeen, in 2006 who undertook the UK-CAT. The candidates were selected into one of five outcomes (academic reject; reject following assessment, reject following interview, reserve list or offer). The candidate performance in the UK-CAT (total score and the four domain scores) was compared to candidate performance on the UoA selection.

Results

Data are reported on 1307 (85.0%) students who applied to UoA in 2006 and undertook the UK-CAT. Total UK-CAT score and the four separate sub-tests were positively and significantly correlated with local selection scores. However, the values of these correlation co-efficients were low (0.12-0.29). Furthermore, of 314 students offered a place following the conventional selection process, only 101 were also among the 319 students with the top UK-CAT scores.

Conclusions

Results from this study indicate that UK-CAT scores and performance percentiles show weak correlation with success in a conventional medical admissions process. It appears therefore that the UK-CAT examines different traits compared to our selection process. Further work is required to establish which better predicts success as an undergraduate or as a doctor.

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A study into candidate perspective of post-examination feedback

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Background

Candidates for the MRCPCH Part 2 written examination are now being provided with detailed feedback on their performance. The format of the feedback was one set based on subject areas and another based on domains of competency. The dual nature of the feedback was felt to be of specific usefulness to candidates. The current examination syllabus was set around subjects areas and is developing to reflect the shift towards progression based on acquisition of competencies.

Aims

We wanted to determine the candidates' view of this style of feedback and that it would be useful to help direct their future learning and personal development.

Methods

Candidates were given a questionnaire with a 5-point Likert scale asking their agreement to questions about the relevance and usefulness of the dual feedback given by clinical subject and by competency. Additional questions were asked dependent on whether candidates passed or failed. Return was by pre-paid envelope or fax.

Results

Two-thirds of respondents failed the examination and were required to re-enter at a later stage.

The positive feedback from candidates who passed or failed was consistent. 95% of passes felt feedback was useful with 94% of fails agreeing.

Candidates were more positive about feedback by clinical subject. Interestingly Candidates who passed were more positive about feedback by competency than candidate who failed. The mean difference in the ratings between clinical subject and competency given by passing candidates is 9.6%, SD=4.56; whereas for failing candidates it is 16.3%, SD=7.57.

Failing candidates found feedback by clinical subject more useful or helpful than feedback by competency. 90% score of useful for clinical subject feedback which drops to 55% for feedback by competency.

On feedback by competency we often found approx 10% of responses were missing, no responses were missing for subject feedback.

Conclusion

Dual format feedback was useful to all candidates. The lower positive scores for feedback by competency may reflect lack of familiarity with this concept. This is probably also reflected in the number of no responses for competence feedback. Steps need to be taken to increase candidate understanding of competency based assessment, followed by review of this process of feedback.

The most important follow up exercise will be to review the subsequent performance of candidates who retake the examination and to observe pass/fail rates and changes in performance in each area of feedback. We hope that provision of feedback will improve candidate preparation and pass rates.

Assessment of the Clinical Skills of Junior Medical Students: Face Validity of an OSCE

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Context and setting

The Warwick Medical School four-year MB ChB course is in two parts. Phase I is from entry in September to the end of the following year and is divided into three semesters. During this period students receive one half-day's teaching per week in history taking and physical examination and are also instructed in venepuncture, infection control, moving and handling, and life support.

Why the idea was necessary

For the 2006 student cohort the arrangements for the assessment of the clinical skills of Phase I students were changed from a combination of a single OSCE and a small number of long case examinations to three end-of-semester OSCEs. We investigated the face validity of the new regime.

What was done

Quantitative data were obtained by questionnaire from candidates and examiners. The candidates' questionnaires comprised ten statements inviting agreement or disagreement on a five-point Likert scale. The examiners' questionnaires comprised eight such statements. Qualitative data were obtained by requesting free text comments on any aspect of the assessment. Questionnaires were completed immediately following each OSCE.

Results and conclusions

Approximately 170 students sat each OSCE. Questionnaire response rates were over 95%. A large majority of candidates "agreed" or "strongly agreed" that the OSCE was a fair and accurate assessment (86% after OSCE 1, 71% after OSCE 2, 83% after OSCE 3). Similarly large majorities agreed that the skills tested corresponded with those taught and that the OSCE was a learning experience, and disagreed that the examination was too difficult. Views were divided on whether there was insufficient time at the stations, but there was no shift in opinion with the reduction from ten minutes in OSCE 1 to five in OSCEs 2 and 3.

A large majority of examiners also "agreed" or "strongly agreed" that the assessment was fair and accurate (88% after OSCE 1, 91% after OSCE 2, 85% after OSCE 3). Examiners were also satisfied overall with the candidates' performances, agreed there had been sufficient time to assess them, and disagreed that the examination was too difficult for students at this stage.

The qualitative data from candidates and examiners also revealed no major concerns over the format or content of the assessment. However, many issues were usefully raised, including specific problems with stations, the lack of a break between the written test and the OSCE, and collusion between candidates sitting the OSCE early and those attending later.

Teaching and Assessment by Direct Observation of Clinical Skills T DOCS Programme

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Background

Competency in core clinical skills is an expectation that the general public demands in its future doctors. However, teaching and assessing competence in several hundred students with a limited faculty base remains challenging. Our programme, **T DOCS** is an allusion to GMC-UK's Tomorrow's Doctors which advises on skills that newly-qualified doctors are expected to have.

Aims

- Teaching and assessing 60 core clinical skills in 150 students
- To assess the feasibility of peer-assisted assessment then final tutor assessment

Method

4 Skills "Suites" were created:

- History and Examination
- Procedures
- Emergency and Life Support Skills
- Professional Administration Tasks

The traditional OSCE template was extensively modified as follows:

- Precise details on factual learning for assessment was included
- Students were encouraged to peer assess first and then to undertake formal tutor assessment
- Infection control, communication skills and professionalism were added
- Areas of good practice and improvement identified to provide educational prescription

For the purpose of the pilot, 12 clinical procedures including venepuncture, IV cannulation, bladder catheterisation and oxygen use were evaluated

Results

- Over 1500 assessments in 154 students were completed by a small faculty within 28 days
- 82% achieved completed 10 or more skills, with all students competent in the stipulated minimum of 9
- 67% of students questioned felt the assessment was suitable

Concluding Remarks

Subsequent to the pilot, the assessment form has been modified extensively to include a depiction of progress along Miller's Pyramid of Competency, self-evaluation of confidence in the clinical skill and feedback using the Pendleton Method. Each assessment sheet allows data from several evaluations to be collated and thus becomes an expression of spiral learning. We are confident that the T DOCS programme, facilitated by peer initial assessment, will be an effective vehicle for delivering competence in core clinical skills.

What does it take to be a role player in a simulation assessment?

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Introduction

The Membership of the Royal College of General Practitioners (MRCGP) Simulated Surgery module has developed to become one of the licensing components for the nMRCGP, the Clinical Skills Assessment (CSA), having possibly 3,000 candidates annually. This exam depends on valid, reliable cases being repeatedly simulated by professional role players. Published reports about the effect of repeated and high fidelity role play on the simulators themselves and their contribution to the exam process are conflicting¹⁻⁴.

Aims

To explore the role player experience in greater depth than previously described, and to identify better ways to quality assure the process thereby increasing the reliability of the exam.

Method

Three discussion groups with role players were held during the December 2006 exams. These were recorded, transcribed and coded to develop categories and themes. These themes were checked with role players attending the July 2007 exams by questionnaire, and a final focus group was held at that time to explore emerging themes in greater depth.

Results

Three main themes were identified – how the role affected the role player, how they judged candidates, and what contribution they might make to marking. They made suggestions to improve the quality of the examination, especially regarding case calibration at the start, standardising performances and role player training. While cases could be exhausting, role players did not think they were significantly affected by playing roles repeatedly, and suggested methods to reduce any effects. Role players felt they were good judges of candidates, and gave specific examples of candidate behaviour that affected their opinions. They saw themselves in an 'enabling role', allowing candidates to show off their consulting capabilities. However, they did not want a formal marking role, as they appreciated they did not have the clinical knowledge needed to make an integrated assessment of consulting skills.

Discussion

Role player health is not affected by repeated performances, even if the case is emotionally charged, especially if the clinical assessor is supportive. Role players gave valuable insights into the examining process, particularly their role in enabling candidates to perform. Their opinions of what made for a 'good' or a 'poor' candidate will inform both the quality assurance processes of the CSA as well as providing advice to candidates preparing for this high-stakes assessment.

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Can patients assess students during summative clinical examinations?

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Introduction

Warwick Medical School uses the Leicester Assessment Package (LAP) in the clinical examinations for undergraduate medical students. This is a validated systematic approach to the assessment of clinical skills. One of five areas of assessment is the 'relationship with the patient'. Examiners are asked to judge during an observed consultation if the student; 'maintains a friendly but professional relationship with patients with due regard to the ethics of medical practice' and 'conveys sensitivity to the needs of the patient' awarding a grade (A, B, C+, C-, D or E) for this competency. The patient is not involved in this decision.

Methods

Patients attending for undergraduate clinical examinations were invited to offer each student a grade for the relationship with the patient using the same criteria as the examiners. These were collected and compared with grades awarded by the examiners. These grades did not count as part of the assessment.

Results

The relationship with the patient was graded in 129 clinical examinations by 23 patients. The grades awarded by the examiners were recorded in all cases. The grades awarded by the patients correlated significantly with those awarded by the examiners ($r_s = 0.196$, $p = 0.026$). The patients awarded significantly higher marks than the examiners (the median awarded by patients was B compared to C+ awarded by examiners, $p = 0.001$). Patients awarded a grade A in 36 examinations compared with 3 awarded by examiners.

14 of the 129 candidates failed the examination overall when considering the grades awarded in all five areas of the LAP. Considering only the grade for the relationship with the patient the examiners graded these candidates significantly lower than those who passed ($p = 0.009$), the patients awarded lower grades but the difference was not significant ($p = 0.91$).

Discussion

In this summative clinical examination using the LAP the patients and examiners do have some agreement when assessing the relationship with the patient. However, patients did not distinguish the exceptional or the failing student, as judged by the examiners. The patients award higher grades than the examiners suggesting that either they expect and accept a lower level of competence than the examiners or are assessing different competencies.

The test-retest reliability of 'Clinical Skills' OSCE examiners – a pilot study

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Aims

The aim of this study is to determine the intra-examiner reliability of examiners of a 'Clinical Skills' OSCE examination.

Background

The objective structured clinical examination (OSCE) has gained widespread acceptance since its introduction as a better method of assessment than previous methods.¹ However, in spite of its popularity, there is some evidence of shortcomings of this method. One study showed a lack of consistency in respect of standards being applied across medical schools² though recent efforts have been made to address these shortcomings.³ Other work has shown a degree of inter-examiner variability.⁴ Other potential areas for inconsistencies such as intra-examiner reliability should be scrutinised and the findings of such work could have important implications for future OSCE planning and execution.

Method

An OSCE assessing clinical skills was run for 2nd year undergraduate medical and dental students. The OSCE comprised three parallel circuits of 9 five-minute stations (8 assessed and 1 rest station). Video recordings were made of 6 of the assessed stations for 27 students in one of the parallel circuits. Consent for participation was obtained from examiners and students. Assessments for the OSCE stations were recorded on pre-prepared Optical Mark Recognition (OMR) sheets.

Two weeks after the OSCE examination the 6 examiners involved in the study received a hand-delivered DVD recording of the 27 students at the OSCE station where the examiners had been stationed on examination day. The examiners were asked to re-mark each of the students using a blank copy of the original OMR mark sheets. Examiners were instructed to return the completed mark sheets and DVDs four weeks after the original distribution.

Results

Results will be presented of the findings and implications of the study.

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Should reflection be assessed? The student perspective

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Background

Reflection is widely advocated as a professional skill and is increasingly incorporated into medical education curricula; as such it is likely to be assessed. Yet little is known about what students think about reflection and how it should be assessed.

Summary of work

After engaging in reflective practice for one academic year, a group of third year medical students were surveyed to gauge their opinions on the value of reflection. Results were correlated with basic demographics and learning style (Index of Learning Styles, Feldman & Soloman).

Summary of results

Out of a class of 129, a response rate of 66% was obtained. 54% of students valued writing reflections and 25% reported that they would continue the process even if no marks were awarded. The main barrier to reflective practice was the process of writing it down – many reported this was an activity they engaged in mentally. Many students felt that assessment would detract from the honesty of their reflections. An open relationship between assessor and student were considered fundamental to the learning process. Students with a reflecting style showed no preference towards reflection. Older students were more likely to value reflection. Peer assessment was not acceptable for this group of students.

Take-home messages

If reflection is to be assessed, considerable engagement with students is essential to ensure it remains a valid exercise.

Integrated teaching- the ideal model?

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The aim of our study was twofold. Firstly to assess the amount of duplication in the curriculum between allied disciplines. Secondly, to assess student satisfaction with an integrated lecture series and the views of the faculty involved in content delivery.

The lecture series was compiled for a four week gastrointestinal module (GIM). This module is delivered to the graduate entry programme and the five-year course at intermediate cycle at the Royal College of Surgeons in Ireland (RCSI). Similar material between disciplines was documented and learning outcomes were used to catalogue lecture content. A new lecture programme was designed whereby all lecturers were present together and delivered material in an integrated fashion. Following the delivery of this module students were surveyed in relation to their opinions on delivery, enjoyment and comprehension. The GIM was compared to two traditional modules. Examination results were compared.

Duplication accounted for 23% of previous content. The largest duplication was between lectures by pathology and surgery. The integrated module accounted for a 22% reduction in didactic lectures (n= 8hours) over the four-week period. Students felt they had a broader understanding of the subject when compared to other traditionally delivered models (83%). 95% of students preferred the dual method of delivery. 82% of students surveyed felt that material was easier to learn in the GIM. 84% of students felt that the GIM was a more enjoyable learning experience. There was no statistically significant difference in examination results between the two modules.

Our study clearly shows that an integrated teaching module can be achieved with great success. Traditionally split lectures between disciplines can be replaced with dual lecturers to enhance the learning experience of students and improve understanding between disciplines.

In the context of recent curriculum reform within the RCSI and a move toward a 4 year graduate entry programme, this proves a stimulating and beneficial model with a reduction in lecture hours.

Assessing Knowledge Decay and Improving Student Satisfaction of Feedback using the Audience Response System

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Introduction

Didactic lectures are traditional in medicine in an attempt to impart information on problematic topics and introduce difficult concepts. However, the type of sustained low-level activity found in lectures does not promote effective learning or retention of knowledge. Knowledge retention following traditional didactic teaching often decays at an undesirable rate. The use of audience response systems (ARSs) has been suggested to improve and facilitate learning in a didactic lecture setting by increasing student participation, giving instant feedback, and improving knowledge retention. An ARS is being used on the Durham University Phase 1 Medical Programme to assess information decay in first year medical students.

Method

93 undergraduate medical students attended physiology lectures incorporating the use of the ARS KEEpad. KEEpad was used to ask the students an MCQ before the lecture to assess prior knowledge; at the end of the lecture to assess whether learning had occurred; and 5 weeks later to assess knowledge retention. At the end of the module students were asked to complete an evaluation form which included 2 questions on the use of the ARS. The form included a 6-point Likert scale with the descriptors on an even scale, and space for free-text comments. The 2 questions regarding use of the ARS were *The KEEpad audience response system gives me feedback on my progress* and *The KEEpad audience response system supports the learning experience*.

Results

Before the lecture was delivered 40% of the class selected the correct answer using the ARS, showing a moderate degree of prior knowledge of this topic. At this point the correct answer was not given. The same question was then asked at the end of the lecture and the percentage of students choosing the correct answer increased to 78%. Five weeks later the same question was put to the students, again using the ARS. The percentage of students selecting the correct answer decreased to 60%. The evaluation forms showed student satisfaction regarding use of the ARS was 100% and 98% respectively.

Conclusion

The use of the ARS allowed us to show that learning occurred during the didactic lecture and that some knowledge decay had occurred after 5 weeks but was still higher than their prior knowledge. Students' satisfaction on the use of the ARS for feedback and the learning experience during lectures was extremely high. The ARS is a novel and useful tool to monitor knowledge retention in undergraduate medical education.

The impact of wearing scrubs on contextual learning

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Introduction

The impact of context on learning in medical education is of particular interest, since medical students often learn in one setting (the medical school) and have to apply their learning in another (the practice setting). The classic study of Godden and Baddeley (1975)¹ suggested strong contextual influence on recall, which might suggest that learning in an educational context might not transfer well to practice environments. We wished to explore the impact of an authentic aspect of context (wearing scrubs) on learning and recall for medical students, using qualitative and quantitative approaches.

Methods

A cross-over design was used to compare the effects of context upon information recall. 82 first year medical students at Durham University participated. All students sat a pre-test on the gross anatomy and imaging of the kidney, this established if they had any prior knowledge. The pre-test was completed in their own clothes. Students, divided into groups, wore either scrubs or their own clothes for the first teaching session on the gross anatomy of the kidney. A gross anatomy specific mid-test was then completed immediately after the teaching session. Students then changed into the opposite clothing and attended a self-directed session on the imaging of the kidney. An imaging specific mid-test was then completed. 5 weeks after teaching students completed two post-tests in their own clothes, one gross anatomy and one imaging specific. All tests were conducted online, giving students an instant score. Focus groups and interviews were conducted to obtain student feedback on the learning experience.

Results

Data analysis was performed using a paired t-test. The results show a significant difference between groups; $p=0.04$. The effect size of the teaching intervention was calculated to be 0.27, which is a 'moderate' effect in teaching terms.

Conclusions

Students examined in the same context as they were taught in recalled significantly more information. Student satisfaction was extremely positive with regard to the use of scrubs and instant feedback from online tests. A comparative study is now underway to further investigate the use of context in the medical curriculum. The results may be of relevance to simulation approaches in medical education.

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Basic Science Education

Teaching ECG basic physiological concepts using hands-on approach to pre-clinical medical students: pros and cons

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A deficiency in electrocardiography training for medical students and practitioners has recently been noted^{1, 2}. To equip pre-clinical students in the competent comprehension and application of the basic concepts of electrocardiogram (ECG), we constructed a hands-on ECG laboratory.

The laboratory was designed to illustrate the following objectives taught in the classroom:

- 1) Recognize the locations of ECG standard leads
- 2) Identify components of a normal ECG tracing
- 3) Measure the heart rate
- 4) Determine mean electrical axis and recognize any abnormalities in it
- 5) Distinguish any major rhythmic abnormalities.

The laboratory was conducted in standardized clinical examination rooms using IQmark digital ECG machines. This laboratory has been implemented in the last three academic years. In each year, the class, consisting of approximately 54 students, was divided into six groups, each with its own machine. Each group performed at least two recordings with and without software interpretation. A follow-up exercise was given to the students and was used as an assessment for the students' understanding of ECG basic concepts. An average of more than 90% of the students performed the majority of the exercise correctly. Moreover, student surveys showed that approximately 91% of students rated the lab as extremely or very useful in helping them understand ECG physiological concepts. On the other hand, some issues were raised to improve the lab, such as the need for smaller groups and performing more than one session. Altogether, the lab was well received by the students and appeared to improve their understanding of the basic physiological ECG concepts.

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Effects of demographic factors on student performance in basic science exams

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Background

Exam performance at medical school may be influenced by factors other than academic ability. Previous studies have suggested that mature students perform better¹, ethnic minority candidates worse^{1,2}, but there is no consistency in studies comparing gender^{1,3}.

Aim

To identify demographic factors influencing the performance of undergraduate medical students on a 5-year course who completed their secondary education in the UK in the Clinical Pharmacology Module (CPM) examination and the Integrated Medical Sciences Assessment (IMSA) examination at the University of Leicester Medical School.

Method

Both examinations were taken at the end of the first semester of the 3rd year. The CPM examination was a multiple-choice paper using true/false questioning consisting of 15 questions with 5 separate stems; it was not negatively marked. The IMSA examination was a short-answer question paper, consisting of 15 questions each of 10 marks. Examination scores were obtained for 2 consecutive cohorts. In addition to score, data was obtained on student age, gender, ethnicity (white or non-white), and graduate status (previous degree or not). A stepwise linear regression analysis was performed.

Initial Results

Complete data for 270 students were analysed (2005: n=123 (75 white, 48 non-white); 2006: n=147 (78 white, 69 non-white)). In 2006, white students performed significantly better in CPT ($p < 0.001$) and IMSA ($p = 0.015$). In 2005, white students performed significantly better in CPT ($p = 0.001$) and performed better in IMSA, though non-significantly ($p = 0.124$). Age, gender and previous degree status did not influence exam outcome.

Further Results

Further analysis of later clinical examinations will be performed and compared to pre-university educational achievement. This will be presented at conference.

Conclusions

Students with a white ethnic origin performed better in undergraduate basic science examinations at this medical school. Prior academic achievement (i.e. A level results) might be predictive as has been determined in other studies.

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www.osceskills.com – A Web Based Approach to Objective Structured Clinical Examination (OSCE) Teaching

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Introduction

Objective Structured Clinical Examinations (OSCE) are now a common method of assessment in undergraduate medicine. This style of examination not only allows evaluation of the student's core knowledge, but also their clinical approach to a patient.

Despite being commonplace in medical courses, the resources available to train students in OSCEs remains limited. Whilst a number of universities have their own methods of delivering such teaching, universal resources remain limited.

The Project

Oscskills.com has been available as a free to use online resource since December 2006. It currently offers written and pictorial tutoring in thirty five wide ranging clinical skills. All of the writing is original and was written by the website authors. Similarly, the pictures are all original. Since its release, use of the site has continued to increase to a monthly 'hit-rate' of several thousand from around the world. Furthermore, feedback from individuals, as well as representatives of institutions, has been very encouraging.

Problems

The main issue we are still coming up against is advertising the site. All medical schools in the UK and Ireland have been contacted via email about the site, some of which have gone on to contact their students. Quality control is also difficult as all centres teach their students slightly differently. This is an area we have highlighted for people using the site but we also encourage people to inform us if they feel something should be changed.

The Future

Thankfully there are a number of improvements and expansions which can still be made to the website. We aim to increase the number of stations covered on the site, as well as adding video coverage of the skills to show the examination as a whole. The other change which we aim to make is cosmetic improvement of the site to give a more user friendly and aesthetic resource.

Clinical Skills

Teaching foundation cardiac examination skills to health-science graduate medical students. A controlled trial of two methods

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Objective

To determine if structured teaching of bedside cardiac examination skills improves medical students' examination technique and their identification of key clinical findings.

Design

Firm-based single-blinded controlled trial.

Setting

Inpatient service at a university-affiliated teaching hospital.

Participants

64 health-science graduate medical students

Methods

The study assessed 2 intervention groups that received 3-hour bedside teaching sessions during their 4-week rotation using either: (1) a traditional teaching method, "demonstration and practice" (DP) (n=16) or (2) an innovative method, "collaborative discovery" (CD) (n=24). The control group received their usual ward teaching sessions (n=24). The main outcome measures were scored on examination technique and correct identification of key clinical findings on an objective structured clinical examination (OSCE).

Results

All 3 groups had similar scores for both their examination technique and identification of key findings in the pre-intervention OSCE. After teaching, both intervention groups significantly improved their technical examination skills compared with the control group. The increase was 10% (95% confidence interval [CI] 4% to 17%) for CD versus control and 12% (95% CI 6% to 19%) for DP versus control (both $P < .005$) equivalent to an additional 3 to 4 examination skills being correctly performed. Improvement in key findings was limited to a 5% (95% CI 2% to 9%) increase for the CD teaching method, CD versus control $P = .046$, equivalent to the identification of an additional 2 key clinical findings.

Conclusions

Both programs of bedside teaching increase the technical examination skills of medical students but improvements in the identification of key clinical findings were modest and only demonstrated with a new method of teaching.

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Teaching Knee Joint Aspiration to Medical Students – An Effective Training with Long Term Benefits

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Background

The importance of joint aspiration in the management of acute monoarthritis is well recognised. Although often perceived as a postgraduate competency, Cambridge University trains undergraduates in knee aspiration. Students are taught the skill on a mannequin, and competence is assessed in the final year examinations. The purpose of this study was to assess the effectiveness of undergraduate knee aspiration training, and determine the impact this learning has on subsequent practice.

Methods

The Practical Skills Examination results were calculated using a standardised OSCE mark scheme. The pass mark for each station was calculated using a borderline group method. Results for 4 examinations, over the past 3 years, (306 students) were analysed. Chi square analysis was used to determine whether competence in knee aspiration was significantly different to other core clinical skills. To assess whether training in knee aspiration translated into clinically relevant practice we undertook a quantitative questionnaire survey of 200 trainees at 3 hospitals within the Eastern Region. Postgraduate training places in the Eastern Deanery are populated partly by Cambridge graduates (taught knee aspiration) and partly by graduates from other medical schools (not taught knee aspiration). The survey assessed a) graduates' confidence in knee aspiration and b) how this had impacted on their practice. Chi square analysis was used to compare the two groups.

Results

The final year results showed that 96% of the students taught knee aspiration were competent doing it (mean score 88%). Performance in knee aspiration was found to be either significantly better, or not significantly different, to other core skills.

The postgraduate questionnaire survey results analysed so far (49) show that there is significantly increased confidence in knee aspiration amongst junior doctors taught this skill as students ($p=0.039$). Furthermore those taught as undergraduates are significantly more likely to have undertaken knee aspiration in clinical practice ($p=0.014$).

Conclusions

Teaching knee aspiration to medical students is effective and feasible. Furthermore it improves junior doctor's confidence and translates into improved clinical practice. The possibility of extending this training across other medical schools should therefore be considered.

Acknowledgement

This abstract has been presented at the 2008 British Society of Rheumatology Annual Meeting but is also relevant to the Association for the Study of Medical Education.

Improving Arterial Blood Gas sampling training for medical students via introduction of interactive Digital Versatile Disc

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Study Objectives

The University Hospital of Leicester in collaboration with the University of Leicester have developed an interactive clinical skills curriculum for undergraduate students to ensure competence in the skills stated in the General Medical Council document *Tomorrow's Doctors* of which is stated graduates must be able to safely and effectively obtain an arterial blood gas (ABG) sample¹. All skills are assessed in the lab, and workplace using Leicester Clinical procedure Assessment Tool (LCAT)² assessment and subsequent procurement of passport of clinical competence³

The objectives of this study are:

- To evaluate current course content for the clinical skill of ABG sampling, for 262 medical students and identify limitations of current session.
- Create an improved practical workshop, which utilises an interactive DVD (developed following evaluation of current course)
- Assess the validity and learning outcomes of the new session with interactive DVD incorporated
- Ensure competence through assessment (LCAT) and to, in the long term, increase patient safety

Methods/Design

- Strengths and weaknesses of current ABG training session have been identified using structured survey
- Development of the new material and creation of an interactive DVD, which will allow more flexibility in facilitation of course material
- Structured survey given to students who have taken the new practical session with the interactive DVD incorporated
- Comparison of LCAT assessment scores (quantitative evidence) of the two sessions and comparison questionnaires given to students (qualitative evidence)

Setting

Clinical Skills Unit and Accident and Emergency Department, Leicester Royal infirmary, Leicester, United Kingdom.

Type of participants

Medical students in the final year of medical training who are currently partaking in a seven week placement in acute medicine.

Results

We are aiming to demonstrate quantitatively (comparison of LCAT scores) and qualitatively (comparison of standardised questionnaire) improved learning outcomes and experiences following implementation of the interactive DVD.

Conclusion

The interactive DVD which is standardised and made by doctors should demonstrate improved learning outcomes and experiences for medical students and therefore they are more adequately achieving the standards set in the *Tomorrow's Doctors* document. In combination with the LCAT assessment and passport of clinical practice the session could be implemented on a larger scale (e.g. regional/nationwide).

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Easing the student/doctor transition between basic and advanced life support

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Background

Advanced life support (ALS) knowledge and skills are expected by all qualified doctors in the UK. The gold standard course for obtaining these skills is certified by the Resuscitation Council (UK). The transition from basic life support (BLS), that is taught by all medical schools, to ALS is often difficult and stressful for newly qualified doctors. A Programme has been designed for medical students to facilitate the transition between BLS and the Resuscitation Council (UK) ALS course.

Aims

This programme was developed to increase the skills and long-term confidence required to become a competent ALS practitioner and effective member of a resuscitation team.

Method

All medical students undertaking this programme are from the clinical Phase II section of Warwick Medical School's Graduate Entry Programme. Formal teaching in key resuscitation concepts and skills are supplied in airway management, bag-valve-mask ventilation, chest compressions and defibrillation. These are assessed by a resuscitation officer who is an ALS faculty member. All these techniques are then placed into practice when the student assists as a member of the resuscitation team during the Resuscitation Council's ALS course. This is during the ALS course candidate's final casualty simulation test. The student attends four separate courses over a period of six months and aids in 4-6 scenarios on each occasion, with detailed feedback provided on their performance by the ALS Faculty Examiner.

Results

18 students at present have attended the course.

Initial results show the medical students subjectively to have an:

- A. increase in confidence during ALS scenarios
- B. increase in ALS skills knowledge
- C. reduction in stress levels regarding the transition to becoming an ALS provider

Initial results show that the ALS Faculty report an:

- A. increased confidence of medical students during ALS scenarios
- B. increased ALS skills based knowledge during ALS scenarios

Discussion

This programme is entitled the 'Medical Student ALS Programme' and provides both theoretical and practical exposure to resuscitation techniques and ongoing ALS scenario training. It is a unique opportunity for clinical medical students to increase their knowledge and confidence whilst working as part of an ALS team and provide an ideal base from which advanced resuscitation techniques can be developed. A subjective increase in the confidence levels by the students, which is independently recognised by the ALS faculty, strongly supports utilising this programme more widespread to reduce stress and prepare medical students for ALS training as newly qualified doctors.

Use of a Simulator in Undergraduate Teaching: the Student Perspective

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Context and setting

The General Practice Course at Warwick Medical School previously included some hospital-based sessions. The main objective of these was to improve students' skills in physical examination and clinical reasoning. Rather than rely on opportunistic bedside teaching we delivered a structured programme, one session of which made use of a simulator. The use of simulators has steadily increased over the past forty years. However, the technology is arguably underutilised and the more advanced simulators remain very costly to purchase and maintain.

Why the idea was necessary

Students are required to recognise abnormal clinical signs and to relate them to underlying pathophysiology. However, many such signs – for example, bronchial breathing – are uncommon and/or evanescent. The simulator allows students to encounter such signs in a safe controlled teaching environment.

What was done

The relatively inexpensive simulator MegaCode Kelly (Laerdal Medical, cost £6000) was programmed to exhibit ten abnormal respiratory and cardiac signs, one for each of ten students. Each student was given a brief case history and invited to examine the "patient". The other students repeated the examination. They were then presented with relevant data – an ECG, chest radiograph or spirometry – and invited to discuss pathophysiology, investigations and management. Evaluation was by questionnaire. Students were asked to rate their confidence in their ability to identify the various signs before and after the session. They were also asked how useful they found the session and how realistic was the simulation, both on a scale of 0-10, and to list three things they had learned.

Results and conclusions

30 students evaluated three sessions. The mean self-rated confidence levels before and after the sessions were:

Sign	Before Session	After Session
Wheeze	6.8	8.3
Systolic murmur	4.7	7.7
Pleural rub	3.3	6.7
Dysrhythmia	5.3	7.6
Respiratory crackle	6.4	8.0
Diastolic murmur	3.7	6.1

The increase in confidence levels was highly significant ($p = 0.0006$). Mean usefulness score was 8.6 and realism score 7.0. Things learned included "pleural rub useful to hear", "bronchial breath sounds", "where to place the stethoscope correctly", "clarification of respiratory signs" and "the exact way to carry out an examination and being observed... it doesn't happen often". No major technical problems were encountered with the simulator.

The sessions evaluated positively by the students. Use of an inexpensive simulator can add value to clinical skills teaching. Whether this translates eventually into enhanced clinical competence is an area for further study.

Medical Students' Opinions on their Clinical Attachments: Evaluation by Focus Group

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Context and setting

Students from Warwick Medical School attend the George Eliot Hospital, Nuneaton, on clinical attachments. They participate in all the day-to-day activities of the clinical team: ward rounds, clinics and the acute take.

Why the idea was necessary

Students are provided with many other educational opportunities: bedside teaching, lectures, tutorials and clinical skills teaching. Since the timetable was becoming overcrowded we investigated how students divided their time and which activities they most, and least, valued.

What was done

Two focus groups were held in August and October 2007. 31 students participated: 19 on medical attachments, 12 on surgical. Quantitative data were obtained by questionnaire. This listed the activities in which the students engaged and they were asked to:

- Estimate hours per week spent on each
- Rate their educational usefulness on a scale of 0-4
- Rank them in order of usefulness
- Indicate whether they wanted more or less of each on a scale of 0-4

Qualitative data were obtained from free text comments and open discussion following completion of the questionnaire.

Results and conclusions

The students' average working week was 51 hours. The most highly rated activities (mean rating 3.7/4) were the acute take (ranked 1st), bedside teaching (3rd) and clinical skills teaching (4th). There was considerable demand for more bedside teaching but not for more clinical skills instruction. The mean 4.7 hours a week on acute take were considered sufficient.

Clinics (8.9 hours/week) were highly rated (3.5/4, ranked 2nd). However, ward rounds (6.5 hours a week) were much less so (2.7/4, 7th). Time spent in the operating theatre (5.9 hours/week) was not considered particularly useful (1.7/4). The lectures and tutorials were appreciated but issues were raised about timetabling and cancellations.

The qualitative data yielded many hostile comments about writing portfolio cases (1.2/4, 12th and last, occupying an inordinate 6.9 hours/week) and the Academic Half-Day (1.4/4, 11th). The students recognised they should engage in more self-directed learning, in particular reading (currently 4.0 hours/week) and seeing patients on their own (3.2 hours) but time pressures may militate against this.

Other useful issues were raised by the qualitative data. The students enjoyed and appreciated the focus group exercise. Priorities are to increase bedside teaching, improve the educational opportunities offered by ward rounds and address the issues with regard to portfolios and Academic Half-Day. Students do need more time to engage in self-directed learning.

Evaluation of the Leicester UHL Trust CRIMP (Care of the Critically Ill Medical Patient) course by participating F2 Doctors

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Background

The CRIMP course was designed to teach the competences relating to care of the acute medical patient as detailed in the Foundation Programme Curriculum. The 2-day course was initially piloted on a group of SHOs in 2006 and now forms part of the compulsory study leave for all Foundation Year 2 (F2) doctors working in Leicester. In 2007, six courses were run and a new website to accompany the course was introduced.

Aims and Methods

The evaluation sought to identify how the CRIMP course and website were perceived by the participating F2 doctors in 2007. Information was collected in 2 ways: questionnaires completed before and after the course and focus groups with randomly selected participants. Quantitative analysis was performed on questionnaire data whilst focus group transcripts were analysed using the Framework approach including thematic coding and charting.

Results

118 doctors attended a CRIMP course during 2007. The course was rated highly with 37.3% (38/102) rating the course as excellent and 61.8% (63/102) rating it as good. Those attending the course in the first 3 months rated the course more highly than those attending in the latter part of the year (44.9% versus 30.2% rating the course as excellent respectively). This trend was also noted in the rating of individual workshops within the course. 51.9% (54/104) of participants felt there should be some sort of assessment with MCQs followed by OSCEs being the students' preferred format. Overall the website also received a positive response with 92.9% (52/56) voting the content as excellent or good and 91% (93/102) reporting that they would review the material again following the course. Interestingly, 68.1% (47/69) would have preferred a paper copy rather than the online website. Focus groups also identified high levels of satisfaction with the course as well as highlighting some areas for potential improvement. Themes included views on the timing of the course itself and access to the website and perceptions about the desirability of assessment following the course.

Conclusion

The Leicester CRIMP course and its accompanying website have both received very positive feedback from F2 doctors. Possible introduction of a course assessment in the future would enable us to ascertain whether learning objectives are being achieved.

Utilising interactive clinical skills videos to standardise clinical examination techniques: A student initiated project

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Background

The teaching of medical students in clinical skills utilises the breadth of knowledge of individual consultants in their own fields. However, the techniques and views on what is important during a clinical examination may differ due to a consultant's personal preference. Medical students can become confused by this mixed opinion, which in turn increases anxiety prior to and during examination. One method of standardising this teaching is through the application of clinical skills videos that allow students to view a standard history or examination. However, traditional videos only have one dimension and are presented such that there is no interaction.

Aims

- To standardise clinical examination techniques
- To develop interactive clinical skills videos

Method

A set of history and physical examination scripts were prepared for standardisation purposes and six consultants acted out a 'gold standard' examination in their field. These were filmed and edited by medilectures with media consultancy provided by Oxford University Press. Four dimensions were applied to the videos to enhance learning.

Level 1: "Fly on the Wall": The student views the clinical history or examination exactly as it is carried in clinical practice.

Level 2: "Commentary by the Expert": A level 1 video muted with an expert clinician's commentary guiding the student through each stage.

Level 3: "Captions and level 1 combined": A level 1 video with additional visual captions. This identifies and provides clinical information on key areas that were previously commented on.

Level 4: "Questions flashing" A level 1 video muted with questions that enable self-assessment.

20 different videos have been produced and all 4 levels are close to completion in every video. Work is also underway to further develop the videos to provide more interactive and assessment functions.

Findings

From 1st November to 29th February the University of Warwick intranet clinical skills site received 3247 "hits", with positive feedback received from students at all levels of the clinical phase of the course. Formal evaluation is now currently underway.

A new addition to the simulated patient's "push-buttons" – the emotion-setting dial

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Introduction

Simulated patients are valuable in helping medical students to develop their communication skills, but the process can be daunting. However, learning at the edge of the comfort zone can be valuable and lasting, provided that it is manageable and safe¹. Sessions with simulated patients (SPs) have "pause" and "rewind" buttons to aid the process.

A planning group for the communication skills curriculum at Keele were designing a session to prepare first year medical students to handle patients' emotions. Simulated patients are trained to set the emotional temperature as the script or facilitator instructs. The medical student member of the design group (SC) proposed the innovation of allowing the student interviewer to set the level of emotion felt by the simulated patient about his/her chronic illness. This would allow each student to face the size of challenge they could manage.

Methods

The students were invited by the tutor to choose the level of initial emotion in the SP

- Mild
- Medium
- Strong

The SPs were instructed to "feel" and display this level of emotion when the topic of the chronic condition was broached, and also to respond to the student's efforts within the interview.

Students, tutors and SPs were invited to complete evaluation questionnaires on the year 1 communication skills course after they had completed one clinical placement to practice their skills. The action research group analysed the questionnaires and further discussion generated recommendations for the next run of the year 1 curriculum.

Results

99 of 121 (82%) students responded that being able to choose the level of emotion felt by the SP was helpful and 119 (99%) agreed that communication skills classes prepared them well for placements. Analysis of student comments suggested two themes about choosing the level of emotion. Firstly students expressed feeling confident and not "in at the deep end"; secondly some students were pleased to see the different levels of emotion and to think about how they might empathise. Tutors felt that the level of emotion displayed matched the requested level in 28 of 42 interviews (66%).

Conclusions

- Further training for SPs might make this even more helpful
- A separate SP scenario should be provided for each of the three levels of emotion with descriptions of feelings and reactions for each level

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A Quantitative Survey of GP attitudes towards Psychiatry and the Undergraduate Teaching of Psychiatry

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Introduction

The 2007 Royal College of Psychiatrists campaign 'Images of Psychiatry' has the campaign objective of promoting psychiatry as a 'modern, therapeutic medical discipline which supports recovery'¹. Target audiences identified for this message include doctors from other disciplines and undergraduates, with one of the campaign's key focus areas being the development of undergraduate education in psychiatry.

Previous research on attitudes towards psychiatry within the medical profession itself is limited². However, there have been more studies looking at attitudes of undergraduates towards a career in psychiatry, which point towards unfavourable attitudes towards psychiatry as a career compared to other medical disciplines³ and the need for proactive career advice and positive role models at an undergraduate level in order to encourage psychiatry as a career choice⁴, with reported numbers of UK graduates making this choice being only 4-5%⁵. The best validated tool in measuring attitudes towards psychiatry appears to be the Attitudes towards Psychiatry questionnaire (ATP 30)⁶ which has been used extensively in research amongst undergraduates.

To date undergraduate education in psychiatry has largely been done by psychiatrists. Recent research⁷ has focused on undergraduate education of psychiatry in the primary care setting and indicates that general practitioners (GPs) may be in a good position to take a more active role in teaching psychiatry to undergraduates.

There is little in the current literature with regards GPs attitudes towards psychiatry, which may influence both their clinical practice and their ability to teach and promote psychiatry to undergraduates. Further research into GPs attitudes toward psychiatry and its teaching will help inform on both current perceptions of the profession in general practice and on future best practice as to how undergraduate education in psychiatry may be delivered more effectively.

Aims

- To establish current attitudes of GPs towards psychiatry as a discipline
- To establish current GP competencies and attitudes towards delivery of undergraduate teaching of psychiatry
- To inform on current perceptions of psychiatry amongst GPs
- To inform on future best practice with regard delivery of undergraduate education in psychiatry

Method

A postal questionnaire was administered to all GPs within Shropshire (n = 262). The questionnaire consisted of the ATP 30 (a pre validated tool) with further questions regarding education (current practice, attitudes towards teaching psychiatry, level of psychiatric training, confidence in teaching major psychiatric topics).

Results (in progress)

The response rate was 53% (n= 139 from total sample n= 262).

Data is currently being entered and will be analysed using appropriate statistical tests for descriptive data. Major findings and preliminary conclusions should be presentable by September.

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Assessing experiential learning in undergraduate medical students: The Prehospital Care Programme

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The Prehospital Care Programme at Barts and The London School of Medicine and Dentistry was instigated by a single student and has now developed into an innovative, multi-agency programme.

Emma Lightbody, the programme instigator, is a medical student who had her interest captured by Prehospital Care prior to starting medical school. Essentially, the programme has developed from her ambitions to utilise the educational opportunities offered by London's Helicopter Emergency Medical Service (HEMS) based at The Royal London Hospital. From this initial idea we created a development team including colleagues from the Trust, the Medical School the London Ambulance Service (LAS) and HEMS. The programme the team has created is a series of interlinking Special Study Modules (SSMs) to offer medical students wide ranging clinical exposure through their supervised attendance on regular shifts with London's HEMS and the LAS.

As a development team we believe that the Prehospital Care Programme has great value. The progression of our students on the pilot programme leaves us in little doubt of this, but what we are looking to explore is how we can evaluate and demonstrate the educational impact of the programme.

As part of our evidence stream we are thinking of using the report forms that students are required to complete for each case attended. The forms are designed to both capture detail of, and provoke reflection on, each case they attend. As the medical students will accumulate many such forms we see this as a central data source, however suggestions for other types of data collection could also be considered.

Currently we have this as a focal question;

- How can the value of the Prehospital Care Programme be measured?

As part of our ASME presentation we would also like to share our experiences of using student suggestions as a catalyst for developing curricula and how we constructed the involvement of other agencies into our educational activities for medical students.

Designing a web based learning resource for undergraduate airway management

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Introduction

Basic airway management skills form an essential part of the management of critically ill patients and constitute one of the abilities expected of medical students at graduation¹. However, there lacks consensus on teaching this important topic and frequently its delivery is ad-hoc^{2,3}, leading to deficiencies in medical students' acute care skills, notably in airway management, as demonstrated using high-fidelity simulation assessment⁴. Airway management skills are frequently taught by the demonstration method, commonly seen in postgraduate courses such as ALS and ATLS. However, whilst an effective teaching method, this is expensive and resource intensive.

We aimed to address these issues by the design of a new set of web based modules covering a defined curriculum in basic and advanced airway care to be delivered in tandem with medical students' perioperative care attachment.

Web-based education, whilst not without its shortcomings, has advantages in comparison to traditional techniques and has been used successfully elsewhere⁵ resulting in improvements in students' knowledge, abilities and enthusiasm.

Methods

A series of 3 modules focusing on airway management; basic, intermediate and advanced were designed and produced.

Clinical medical students' knowledge before and after studying the modules will be evaluated using online tests. The students' evaluation of the resource as a learning tool will also be assessed using a questionnaire.

Results

We present the results of objective evaluation of the improvement in students' knowledge from pre- and post- testing before and after exposure to the resource.

Conclusion

Such resources have been successful elsewhere, although there is limited research in the evaluation of success and this work will add to the existing knowledge base. The resource will be further refined and developed as a result of the feedback received.

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Practical Procedures in Gynaecology CD-Rom - Teaching Tool for Undergraduate Medical Student

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Basic training in practical procedures in gynaecology is sometimes limited in outpatients, wards and theatres, which contributes to the poor confidence demonstrated by medical students of the subject.¹ Restrictions in teaching during colposcopy and hysteroscopy for example can arise from caseload, consent, limited access and restricted view of the operative field.² Medical student gender has also been shown to affect patient exposure.³

Computer and video assisted learning is increasingly being recognised as an effective means of teaching and learning.^{2,4} The objective of this project is to develop an interactive CD-ROM combining video of pelvic models and procedures of volunteer patients, to enhance understanding of gynaecological procedures amongst undergraduate medical students.

The CD-ROM takes students through the individual steps of a speculum examination, smear and vaginal swab taking, colposcopy and hysteroscopy. The content combines video clips with voice-over, photographs and text. An interactive multiple choice question section is included for self assessment. The CD-ROM will be evaluated as an educational tool using 100 undergraduate medical students prior to their clinical gynaecology attachment using pre and post viewing questionnaires. Interest in such a teaching tool has been demonstrated by preliminary questioning of undergraduate medical students at Leicester Medical School.

This multimedia tool approach CD-ROM will be an innovative and useful approach to teaching undergraduate medical student prior to and alongside patient exposure.

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Using student and expert views to identify educational outcomes for validated patient safety tools used in an undergraduate medical programme

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Background

Awareness of patient safety and quality improvement has increased following the Institute of Medicine's, To Err is Human: Building a Safer Health System and the UK Department of Health's An Organisation with a Memory^{1,2}.

Quality Improvement links patient outcomes with systems performance and professional development, highlighting the role of education³. By introducing students to safety theories early, their understanding of systems and human error improves⁴.

The UK Safer Patient Initiative uses a programme of evidence based change to improve patient safety⁵. NHS Tayside is implementing this programme using different quality improvement techniques. In partnership with NHS Tayside, the University of Dundee has piloted some of the validated patient safety tools in the undergraduate curriculum.

This study identified learning outcomes for four tools used in the undergraduate curriculum through student and expert views. The tools included SBAR, a tool used for safe communication, medicines reconciliation; a method used to validate patient's medication on admission to hospital, SEWS; an early warning score used across Scotland and Ask Me 3; a health literacy tool.

Methodology

A purposive sample was identified which included experts from different healthcare professions involved in undergraduate medical education and third year medical students who were using the tools within the undergraduate medical curriculum. Interviews were carried out with 6 experts and 41 third year medical students.

The Framework analytical process was used⁶. This included the following stages: Familiarisation, Identifying a thematic framework, Indexing, Charting, Mapping and Interpretation.

Results

The themes and outcomes identified related to learners' knowledge, skills and attitudes in relation to safe practice via the use of the individual tools. Additionally the role of the tools for interprofessional learning and their role in facilitating the transfer of knowledge and skills from classroom to clinical settings was identified.

Discussion

The results of the study give valuable information about reactions from experts and students as to how the tools can be integrated in students' learning and into curricula. This relates to level 1 of BEME and Kirpatrick's criteria. This represents the first stage in identifying the use of the tools. The themes identified show the potential to demonstrate how the tools can influence student knowledge and behaviours in relation to patient safety in further studies. This raises issues relating to types of evidence which can inform the value of such tools in a medical curriculum.

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A nursing shift for medical students: can we improve its value?

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Introduction

Inter-professional education (IPE) is an important component of undergraduate medical education¹. A nursing shift for medical students is one way of facilitating IPE, but there is limited research on this - a review of the world literature by JET in 2002 found only 3 studies referring to medical students undertaking shifts². In Leicester, medical students do a shift during their Child Health module. The objectives are to learn about the role of nurses and to learn a variety of practical skills. However, a questionnaire to medical students and interviews with nursing staff revealed that these objectives were not always achieved³. We implemented changes to the shift, as suggested by our findings and repeated the questionnaire with a subsequent group of students to see if there was improvement in achievement of objectives.

Method

1. Questionnaire

A questionnaire was completed by a block of medical students undertaking the shift in its original form. They were asked if they found it useful, if it improved their communication skills and if it increased their knowledge of the nursing role. They were asked if they had experienced a range of practical, child care and clinical skills. The same questionnaire was given to a block of students who undertook the shift after it had been modified, and their replies were compared to those from the previous block.

2. Changes implemented to the shift:

- *To last for a whole shift, instead of a half-shift
- *To be in a specific area of child health: the neonatal unit
- *To provide a worksheet with clearly stated aims and objectives.
- *To be compulsory

Results

1. The proportion of students who perceived the shift as useful increased from 42% to 90%.
2. The proportion of students who felt it improved their understanding of the nursing role increased from 50% to 90%.
3. There was no change in acquisition of communication skills.
4. Practical, child care and clinical skills were more likely to have been achieved following introduction of the new shift. For example, 85% had taken a blood pressure compared to 50% previously; 90% had fed a baby compared to 43%, and 73% had witnessed giving intravenous fluids to a child compared with 50%.

Conclusions

1. A nursing shift is a valuable tool for medical students to learn practical skills and gain inter-professional knowledge.
2. The benefits can be increased by appropriate research and implementing change.

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Continuing Education

Problem Based Pre-Wardround Teaching in Surgery

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Introduction

On the job learning during a surgical wardround is often a hit and miss affair with little structure or planning. Although useful teaching undoubtedly happens in the hands of enthusiastic seniors, it is often random with little consideration of the learners' needs at differing stages of their training.

Aim

Based on principles of modern educational theory we have implemented a novel teaching tool in a surgical firm comprising a registrar, a senior house officer, a house officer and two medical students. Our goal was to address the learning needs of all concerned while applying some thought into the planning of the sessions based on patients presenting with unique problems during our wardround, thereby trying to improve patient care in the process.

Methods

Following discussion within the group on what our objectives should be and how we should go about achieving them, we have drawn up a simple system as follows:

Each morning during the wardround we would identify one small topic based on a patient under our care. We would then nominate one member of team to research that topic that evening and give a 5 minute presentation on it prior to the wardround next morning followed by a 5 minute discussion. Topic selection would aim to reflect the differing learning needs of all the group on a rotation as much as possible. We would then audit the process with anonymised feedback questionnaires and implement changes to the teaching tool on a continuous basis and aim to present our results of such an audit spiral to the entire surgical department in the hospital.

Results

Despite difficulties encountered due to variable attendance as a result of the current full-shift systems at work and other teething problems, the satisfaction with the teaching tool was high based on the questionnaires. 8 such teaching sessions took place as the audit cycle was completed once, improving such aspects as location of the presentations and incorporating constructive criticism to the presenters to improve their presentation skills. This was an unexpected benefit which proved very useful particularly to the medical students in a non-threatening environment. Topics which proved particularly suitable for this style of teaching and learning were those at the interface between medicine and surgery such as idiopathic thrombocytopenia in a surgical patient or panniculitis in a patient with pancreatitis; problems we don't encounter day to day.

Conclusion

With the reduction in working hours and the ever changing working patterns, it falls upon all of us to use available opportunities for teaching and learning in practice. However, it requires an additional effort to use those opportunities to good effect with adequate planning and preparation. This teaching tool is practical as it utilises the wardround without burdening it with extra time by careful planning. It is also all inclusive and non-threatening, removed as it is from the stress that the patient's bedside offers to students.

The Impact of learning preferences on preferences of teaching methods: A Pilot Study

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Introduction

Funds have been diverted away from education and training in the NHS but demands have increased, and this has particularly been highlighted by the increased expansion in undergraduate medical school places. There is more structure in postgraduate medical education as a result of the foundation and MMC programmes. As a consequence more formal teaching is required. We wished to assess whether the learning preferences of junior doctors had any impact on their preference for methods of teaching delivery.

Method

In order to assess these preferences, trainees attending a one day course were surveyed. This course was organised to give junior doctors an introduction to teaching and training. A variety of teaching methods were used including lectures, small group work, role-playing and interactive sessions. We asked all participants to complete a Felder and Solomon Learning preferences questionnaire (<http://www.engr.ncsu.edu/learningstyles/ilsweb.html>). They were also asked to comment on what teaching methods they preferred.

Results

16 trainees attended. Numbers who preferred a particular teaching method are given below

Table 1

TEACHING METHOD	Yes	No	Never tried
Lecture	10	5	
Tutorial	12	2	1
Small groups	16		
Video	8	3	4
On line	6	6	2
Practical simulation	13	2	1
Practical real situation	15		1
Role play watch	10	5	
Role play participate	13	2	1
Clinical	15		
Quiz	9	5	
Exams	8	8	

Practical real situations and clinical sessions were the most popular. Role play was more meaningful when individuals participated. Exams were not regarded as a method of teaching.

Questionnaire results are given in 8 domains, as shown in Table 2.

Table 2: Learning preference scores

	ACTIV E	REFLECTI VE	SENSI NG	INTUITIV E	VISUA L	VERBA L	SEQUENTI AL	GLOB AL
n	11	1	7	5	9	3	9	3
Mean score	3	5	5.6	4.6	6.9	4.3	3.6	5
SD	2.7	0	3	3.3	2.9	3.1	2.6	4
median	3.5	5	5	3	8	5	3	5
range	1-9	n/a	1-9	1-9	3-11	1-7	1-9	1-9

Legend

Maximum score 11 minimum score 1 for any preference

Active learners like to discuss or apply their knowledge

Reflective learners prefer working alone

Sensing learners like connections to the real world

Intuitive learners prefer discovering possibilities and relationships

Visual learners like pictures and diagrams

Verbal learners like written and spoken explanations

Sequential learners like linear steps

Global learners like to see the bigger picture

<http://www4.ncsu.edu/unity/lockers/users/f/felder/public/ILSdir/styles.htm>

Conclusions

Most of our learners were active learners, who also preferred visual cues and to learn sequentially. Most methods used on the course appeared to suit the learners. However, only those who liked the methods may have signed up to come. Teaching in practical and real life situations was preferred and role playing was made more meaningful when there was personal involvement. It may be of interest to assess if methods of teaching suit those on compulsory courses and teaching sessions.

Learning the views of GPs and of policy makers – a pilot study

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Introduction

This study forms the pilot of a study to investigate the understanding of the term “learning” by practitioners and policy makers. This initial study looked at the views of four General Practitioners (GP) and one government document¹.

Adult Learning is described in the literature in a variety of ways.⁽²⁻¹¹⁾ Calman's¹ view reflects the literature but emphasises planned learning with a consequent and measurable change in the behaviour of the learner.

Methodology

The GPs were selected purposefully because they were known not to have a major role in medical education and their practice was geographically convenient. The GPs participated in a semi-structured interview with the author based around a series of questions designed to elicit their understanding and views of learning. The document was selected as it played a key part in the development of the current continuing professional development process in general practice (UK). Documentary analysis was undertaken using a discourse analysis framework.

Results

GP Views: The GPs interviewed undertake brief single loop learning activities in response to particular problems; these learning needs are immediately important and relevant. There is little evidence of reflection in these activities and only one participant kept any kind of record which she might use to help identify longer term learning needs. More systematic learning was rarely seen in this group.

Documentary analysis: Learning is used in a wide range of contexts none of which are fully defined. However, the need for learning to be effective is constantly emphasised even although the report acknowledges the challenges involved. While the educational discourse is poorly defined, the difficulties of operationalising the review's recommendations are acknowledged.

Conclusion

These two sets of results offer different views of learning; that promulgated by the policy makers and that understood by the learner. Both sets of data illustrate difficulties with the understanding and use of the term “learning”. This lack of understanding and coherence in views may contribute to the difficulties experience by many educators and policy makers.

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Voluntary educational activities in the Foundation Programme: an un-assessed parameter

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Introduction: The recently implemented Foundation Programme outlines the first two years of training for UK doctors. Thereafter, trainees apply for highly competitive specialist training posts. During the Foundation Programme, a wide array of voluntary educational activities are available for doctors in their own time. Our study aimed to clarify and quantify the educational activities currently used by Foundation doctors, and to assess their motivational and deterring factors towards voluntary education during this time.

Method

A fourteen point questionnaire was delivered at random to 100 Foundation Year 1 and 2 (FY1 and FY2) doctors across five Trent Deanery hospitals. The questionnaire assessed involvement in the following voluntary educational activities: courses, conferences, higher qualifications, e-learning packages and personal reading. It also sought their underlying attitudes.

Results

Response rate was 49.0% (49/100), comprising 34 FY1, and 15 FY2s. Overall 87.8% of respondents engaged in voluntary educational activities (FY1 85.3%, FY2 100%). The most common (87.8%) was the e-learning package (FY1 85.3%, FY2 100%) followed by courses (69.4%) (FY1 55.1%, FY2 100%), sitting higher qualifications (42.9%) (FY1 12.2%, FY2 100%) and attending conferences (18.4%) (FY1 16.3%, FY2 13.3%). Of courses attended, 25.5% pertained to teaching, 25.5% to advanced life support and 18.0% to surgical skills. The average total cost incurred by doctors for these activities was £581 in FY1 and £1,842 in FY2. The most common deterrents to pursuing voluntary education were a lack of study leave (42.8%), lack of annual leave (22.4%) and expense (20.4%).

The most common motivating factor was the belief they would help candidates achieve a specialist training post (67.3%). Only 8.2% engaged primarily to improve their medical competence.

Discussion

Our study is the first to quantify the voluntary educational activities of Foundation doctors. Most popular is the e-learning package—outstripping courses, higher qualification revision and conferences—highlighting its increasing popularity as a viable and accessible educational tool. The primary deterrent to pursuing voluntary educational activities is lack of study leave, of concern as entitlements to this continue to decrease. Interestingly, Foundation doctors are not motivated primarily by the educational benefits of these activities, but rather by their perceived ability to help attain a specialist training post. For this, they spend over £2,400 during the average Foundation Programme, the first estimate of its kind. This highlights the concerning potential for voluntary educational activities to become a badge of attendance, undermining their intrinsic educational value and outcome.

Look who's teaching now. A pilot study into the introduction of a foundation year one doctor led teaching programme for final MBBS students at five hospitals

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Our presentation, 'Who Taught You That?' at the 2007 ASME annual scientific meeting, looked at the unique and innovative role that Foundation Year One (FY1) Doctors have in preparing final year medical students for MBBS exams. We have subsequently introduced FY1 led teaching programmes at five hospitals and evaluated the appropriateness of FY1s teaching finalists. We have extended this work to examine whether our success at Basildon Hospital during 2006-2007 could be replicated in other hospitals.

We invited newly qualified FY1 doctors to volunteer to organise teaching programmes at the following hospitals; Basildon Hospital (Essex), Trafford Hospital (Manchester), King George Hospital (Essex), Chelsea and Westminster Hospital (London) and North Middlesex Hospital (London) covering 4 medical schools. The FY1 doctors arranged teaching sessions on clinical examination skills, using our model where an examination is demonstrated and the students are then asked to practice these skills, tutoring each other in a relaxed setting. FY1 doctors were given autonomy in deciding on the specific content, teaching materials and general organisation. The sessions were evaluated using structured feedback questionnaires on relevance, style, interaction and overall impression using a 4 point scale. To date we have evaluated feedback from 118 students across the sites between Sept 2007 and March 2008.

100% of students gave the highest rating for relevance at all the sites. 88% (104/118) gave the highest rating for style, 94% (111/118) gave the highest rating for interactivity and 90% (106/118) gave the highest rating for overall impression. 51 students were asked about their confidence in passing finals after FY1-led teaching sessions; 41% gave the highest rating (21/51), the remainder scoring 3/4 on our scale. (Full breakdown of data will be presented).

FY1-led teaching for final year students is extremely well received and a valuable adjunct to existing teaching. The value of recognising the learning needs of students is a key asset FY1 doctors possess as the transition from student to doctor was recent. The vision set out in 'Tomorrow's Doctors' (GMC 2003) developing doctors as teachers, is realised early in training using our model. We have shown it is easily replicable in any hospital/medical school and could be done on a larger scale across the country. We will present an organisational framework for this, addressing concerns regarding the need for senior supervision, the possibility of over-familiarity between students and junior doctors and promoting consistency in quality of teaching and resources available.

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1. "Who Taught You That?" How foundation year one doctors are uniquely placed to teach final year medical students preparing for final MBBS exams. Abstract presented at ASME Annual Scientific Meeting July 12th 2007 Keele University
2. Tomorrow's Doctors. Recommendations on undergraduate medical education. General Medical Council, February 2003.

The GEME Project: An idea for collaboration in Medical Education

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Context

Medical education must “take account of modern educational theory and research” (GMC-UK 2003). However, it is not clear to busy clinical teachers which educational principles and practices are suitable for application in their varied local circumstances. The idea for this project originated from the concept of “memes”, first popularised by Richard Dawkins in his book “The Selfish Gene”. Memes are defined as *“units of cultural information or a building block of culture which spreads through diffusion propagating from one mind to another”*. We felt that a similar concept could be applied to clinical educational.

Objectives

To collate **G**eneralisable **E**ntities in **M**edical **E**ducation. The acronym conjures up the concept of discrete packages of information or “genes” which “expressed” can inform an educational output leading to the “product” of improved patient care. An international collaboration that collates small readable packages on topics in medical education is proposed. General stipulations will include:

- Peer review by a member outside of ones own institution
- Document restricted to 1 page, 500 words, 2 tables/charts, 3 references
- Free access to all interested

Contributions will be categorised into Core, Specialised and Advanced. For example, the Core section covers curriculum design, assessment and learning theory. Advanced section would include teaching evidenced-based care and inter-professional learning. The Specialist section could include video assessment of laparoscopic surgery. An additional section on concise descriptions of individual institutes, teachers and examples of good practice is envisaged. The latter are the “memes” of educational practice.

Key Messages

This set of concise heuristics will allow clinical teachers to relate to a repository of current and useful principles in medical education. The idea draws its inspiration from the Human Genome project. Our presentation will include progress to date including formats and work on early sections.

Concluding Remarks

The project is intended to benefit those new to clinical education and provide materials for rapid up-skilling in this field. This inter-institutional collaboration will allow familiarisation with core principles of clinical education with access to examples of good evidence-based practice with the ultimate aim of improving patient care and professionalizing clinical education to a high standard.

Is there continuity in learning for junior doctors?

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Background

Experience of the patient journey offers a step wise approach to learning and is essential in acquiring clinical judgement. Reduction in junior doctor's working hours, increasing shift work and shortened career pathways threaten to compromise the junior doctor's experience of the patient journey and thus the continuity in learning that it provides.

Work done

Prospective audits of medical admissions were undertaken and demonstrated a) of 105 patients admitted during 5 on-calls, 37.1% (39/105) of patients were not presented to the consultant on the ward round and b) of 158 patients admitted during 10 on-calls 12% (19/158) of patients were transferred to the clerking doctor's home ward for ongoing care.

Conclusions

There does not appear to be adequate continuity in learning for junior doctors. A third of doctors do not present their patient's cases to the consultant and only 12% of patients are transferred to the clerking doctor's home ward.

Take home messages

The learning opportunities provided by the patient journey are being lost. I have developed, and plan to implement, a Virtual Continuity in Learning Programme to recapture this lost knowledge. Utilising the Virtual Consulting Room^{1,2,3}, demonstrated at the Association for Medical Education in Europe exhibition in 2006, (<http://www.ucl.ac.uk/medicalschooll/current-students/learning-resources/Virtual-consulting-room-demo/>) the Programme brings together the actual and virtual patient journey to provide on-the-job learning for junior doctors.

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Provision of learning opportunities for Foundation Year 1 doctors in a district general hospital

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Background

The Foundation Programme aims to equip doctors with a range of generic competencies before embarking on further specialist training. To achieve this there must be provision of adequate learning opportunities.

Work Done

To assess this in our hospital (Colchester General Hospital, Essex Rivers Healthcare Trust) we

- 1) prospectively reviewed patients admitted during ten medical on-calls assessing whether
 - a) the clerking doctor was a Foundation Year 1 doctor (FY1)
 - b) whether the FY1 presented their cases to the consultant
 - c) whether these patients were transferred to the FY1's home ward enabling continuity in learning and
- 2) reviewed the Foundation lecture programme assessing
 - a) attendance and
 - b) feedback via a questionnaire.

Conclusions

Of a total of 158 patients admitted a) 4.4% (7/158) were clerked by an FY1 b) 57.1% (4/7) of these were presented to the consultant c) 14.3% (1/7) were transferred to the FY1's ward and 2) review of the Foundation lecture programme demonstrated a) overall average lecture attendance was 62% (range 14 - 93%) and b) of questionnaire respondents (39.4% (13/33)), 69.2% (9/13) agreed that the programme is beneficial but 76.9% (10/13) stated that it was difficult to find time to attend lectures.

Take-home messages

Despite the majority of responding FY1 doctors agreeing that the Foundation lecture programme is beneficial, audit in our hospital demonstrates that FY1s are clerking only 4.4% of medical admissions, presenting just over half of their cases and continuing to care for only a small number of the patients that they admit. Thus FY1 doctors are not being provided with sufficient 'on-the-job' learning opportunities to gain the necessary skills to equip them with the generic competencies that they will require for further specialist training.

Curriculum Planning

What mistakes/near misses have junior doctors encountered in the field of Radiology? A Critical Incident Study

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Aim

The aim of this study was to investigate the mistakes and near misses that junior doctors have encountered in the field of radiology in order to identify recurrent themes that may be utilised in the development of the current undergraduate radiological curriculum at the University of Bristol.

Methodology

This study utilises the critical incident technique, a method of qualitative research initially established by Flanagan (1954) that involves the identification of particular situations relevant to a specific job where a task is completed particularly well or particularly badly, in other words 'critical incidents'. In this study 172 junior doctors were asked, via questionnaire and semi-structured interview, about their involvement in and details of any mistakes or near misses that they had experienced within the field of radiology.

Results

This study highlighted twenty-one specific incidents relating to the field of radiology ranging from the wrong report being attached to a radiological image to a missed radiological diagnosis of colorectal cancer. The data extracted from these incidents was analysed both thematically and horizontally leading to the identification of over forty themes relevant to undergraduate medical teaching within radiology.

Discussion

The themes identified were evaluated in view of the current undergraduate radiological curriculum at the University of Bristol. The results provide a further evidence basis for the recent developments that have been undertaken in the curriculum as well as providing subsequent recommendations for future improvements.

Reference:

1. Flanagan, JC. (1954) The Critical Incident Technique. *Psychological Bulletin*; 51,372-358.

The Vanilla Curriculum – a learning map for foundation trainees

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Background

The original Foundation Programme Curriculum¹ published 2005 was a complex reference document which those unfamiliar with educational terminology found difficult to translate into practice. This was revised in 2007² and enlarged the document from 96 to 149 pages (4.59 MB). Gloucestershire has been running F1 and F2 programmes since 2004 and informal feedback, received from educational supervisors, trainees and those planning teaching sessions, suggests that few refer to the curriculum regularly, if ever. There was no resistance to the notion of a curriculum or the need for learning objectives but the curriculum in its current form was not considered useful.

The Australians have reviewed their prevocational training programme and rather than produce a comprehensive detailed curriculum decided just to publish a Curriculum Framework for Junior Doctors³ in the form of a folded A3 sheet. We decided to translate the current FP Curriculum into a similar pocket-size framework, which we named the “Vanilla Curriculum”.

Method

We analysed the new curriculum extracting important aspects, removing repetition but retaining basic structure to enable referencing back to the original document. The information was boxed and grouped appropriately. The Acute Care box was considered of prime importance and placed on the front and the Form 4.3 was placed on the back to remind the trainees of the assessed areas requiring evidence in their portfolio. We presented the Vanilla Curriculum to groups of F1 and F2 trainees, distributed copies and left the room. A colleague then ran a focus group.

Results

At the time of writing we await detailed collation of the focus group discussions. However the trainees acknowledged that they rarely referred to the online curriculum and welcomed the idea of a pocket sized curriculum to focus their learning and ensure no important element of the curriculum was overlooked.

Discussion

Although there appears to be a general acceptance of the formalisation of training by consultants, the trainees remain ambivalent about the need for curriculum and assessment and particularly the dilution of clinical knowledge by professional and generic skills. This is an attempt to demystify the curriculum and embed it into clinical practice. This first version of the Vanilla Curriculum has been shared with trainees but we welcome the opportunity at ASME to gather opinions and ideas in order to advance this work.

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Does Sharing Experiences and Protected Learning Time Within a Curriculum Affect the Attainment of Leadership Skills?

Authors: (first author presenting)

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With the emergence of patient-focused care pharmacists are required to take on leadership roles as part of the wider multidisciplinary team. ⁽¹⁾ Previously it was thought that leadership skills were inherited and thus unable to be taught. However, it is now believed that individuals, if given training and the necessary opportunities, can through time develop key leadership skills. ^(2, 3)

A leadership course for pharmacists was developed by NHS Education for Scotland. This research studies 3 cohorts of pharmacists (cohort 1 n=14, cohort 2 n =13, cohort 3 n=14) from June 2006 to November 2007. Course participants were requested to complete records within an electronic e portfolio as a measure of their development of leadership skills throughout the course.

With all cohorts introduction to the competency framework was via a short power point presentation. With Cohort 3, however, each participant was given the opportunity to access a computer to create e portfolio records within some protected learning time when attending the course. Cohort 3 course participants were also given the opportunity to discuss their e portfolio records in small groups.

Study methodology included both quantitative and qualitative methods; the number of records developed and the number of completed records were collated; two focus groups (n1=6, n2=7) where participants' experiences were explored; semi-structured interviews (n=6) were undertaken with 2 participants randomly selected from each cohort who had either completed ≥ 4 or ≤ 4 records.

In all cohorts (with the exception of one individual), each participant completed ≥ 1 record within their e portfolio. In cohorts 1, 2 and 3 a total of 42, 62 and 81 records were completed respectively. Mean (SD) number of records completed by participants was Cohort 1- 3.1(1.7), Cohort 2- 4.8(2.9), Cohort 3- 5.8(4.9). From these results there did appear to be a trend to more reports being created in cohort 3 compared to other cohorts (not statistically significant). Cohort 1 vs Cohort 3 p =?; Cohort 2 vs Cohort 3 p= ?. Student t-tests). Calculated p-values of <0.05 were considered statistically significant.

From the focus groups it was apparent that pharmacists were unfamiliar with using competency frameworks and reasons for completion and non-completion of records were obtained from the one to one interviews.

This research shows that the sharing of experiences and the introduction of protected learning time within the curriculum may affect their recording and attainment of leadership skills.

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Determination of students' opinions of teaching in ophthalmology: a questionnaire based survey

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Aims

To determine students' opinions of the delivery methods, teacher types, assessment and curriculum content experienced during modular teaching in undergraduate ophthalmology.

Methods

75 students undertaking the undergraduate ophthalmology module at the University Hospital Nottingham were randomly selected to complete a questionnaire about various aspects of their ophthalmology module teaching. The questionnaire was a mixed design of closed (Likert system) and open questions. Frequencies were obtained for the categorical data and responses were collapsed into dichotomous outcomes to determine if the majority response was positive or negative.

Results

60 of the questionnaires were returned completed. Students were very positive about attendance at clinic, tutorials, casualty and theatre sessions, they did not value attendance at surgical pre-assessment clinics and were only slightly positive about the university electronic learning facility. Consultants and senior trainees were considered to provide the most useful teaching while nurses were valued least. Students were almost entirely in agreement with the contents of the taught curriculum and also the clinical skills they were expected to master during their module. Students felt that the current module length (2 weeks) was appropriate and that a formal assessment was an important aspect of their module. They felt that formal teaching could not currently be replaced by the web based electronic learning system.

Conclusion

Questionnaires provide a useful form of feedback from medical students. They are easy to administer and analyse. Currently this study suggests that students still value direct teaching contact for didactic teaching above that provided from electronic sources and feel that an assessment is an important aspect of the modular teaching in ophthalmology.

Developing a core curriculum for undergraduate education in psychiatry

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Research in 2005 found that the contents of undergraduate education in psychiatry varied considerably across the UK¹. However, the issues that were faced by University staff were similar². In view of these findings and other relevant issues, the Royal College of Psychiatrists set up a scoping to address the issue. One of the Scoping Group remits is to:

Develop a core curriculum for undergraduate curriculum and provide guidance on how to deliver and assess this curriculum

Method

Step 1: Four members of the Scoping Group worked as a subgroup. The group reviewed the literature and outcomes of previous discussion around the issue. A draft core curriculum was then devised. This was circulated to the wider scoping group for comment and the draft then modified.

Step2: The revised version circulated to the wider College membership, psychiatry leads, primary education contacts and other interested parties.

At this point two medical schools undergoing review of their psychiatry curricula used the documents as part of their curricula review.

Step 3: The feedback was used to develop version 3 which is now subject to the Delphi technique as a way of honing down the curriculum and achieving some consensus within and outside of psychiatry (depending on resources available) but one that is rooted in the evidence available.

Findings

There have been significantly more positive attitudes towards the idea of a core curriculum developed by the Royal College than when it was raised in 1999. There is less resistance to a standardised approach and many respondents feel there is a great need for such an approach. It has been easier for agreement to be reached on the skills and attitudes needed. With respect to knowledge whilst there is agreement on the broad areas, it is more difficult to reach consensus on the depth needed. We can start comparing how students fare when the core curriculum is applied. It has been useful for the discipline to have a common point of reference. The Scoping Group has also been a useful forum for bringing together different aspects of educational practice.

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Can Email Advertising Influence Uptake of a Computer Aided Learning Resource?

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Introduction

One distinct benefit of placing Computer Aided Learning (CAL) resources on the internet is the ability of the server to collect data about usage patterns using web-tracking software which is able to monitor user activity 24 hours a day. There have been studies evaluating the use of server statistics to document access volumesⁱ and how frequency of usage correlates with exam performanceⁱⁱ. Further studies confirm the importance of combining usage patterns with feedback surveys in order to validate CAL interventions¹. Most studies have used web tracking to count the number of educational website "hits" or to count the total number of students or other healthcare professionals accessing that site and identified by a passwordsⁱⁱⁱ ^{iv}. Web monitoring also provides the opportunity to assess the effect of interventions on usage; for example how reminder emails sent to students might impact on use.

Methods

AnswersIn, an online teaching program in gastroenterology, was placed on a university server and made available to third year medical students at the beginning of their ten week gastroenterology/general medical specialties module. There are four such blocks in the academic year. For the first three blocks, the module was made available only to the local campus and then, for the final block, was made available to all three campuses in the medical school. Students were made aware of the program by email at the beginning of the block and then from the mid-block point onwards they received a weekly clinical scenario advertising the resource. At the end of each block, a questionnaire was administered and the usage statistics for the block were extracted from the server. Specifically, the volume of usage for an equal length of time before and after the commencement of the advertisements was measured.

Results

The questionnaire revealed that 96 percent of respondents (90/94) received the email messages. Of these, 86 percent stated that it made them more likely to access the *AnswersIn* program as a result. Reasons cited for this included curiosity to know the answer to the clinical problem and concern that this may be of relevance to their examinations. During the study period, there were 1432 "hits" to the website. There was an overall 32 percent rise in the number of hits after the advertisements commenced.

Conclusions

It appears that relevant and carefully worded advertising has a positive effect on the uptake of CAL resources by medical students.

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Tracking Patterns of Medical Student Online Usage of a Computer Aided Learning Resource with Webalizer© Web Tracking Software

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Introduction

Webalizer^v is one of the most commonly used web server administration tools. It generates web pages of analysis, from access and usage logs.

Data yielded by such programs can give insights into the usage habits of the target audience. This data can take a number of forms and can be used selectively by curriculum planners.

Methods

A gastroenterology teaching program called *AnswersIn* was placed on a university server and was advertised to successive groups of third year medical students during their gastroenterology/general medical placements.

At the end of their placements, the server logs were analysed using Webalizer and the data was tabulated or represented in graphical form.

Results

The Webalizer program yielded a large amount of data including the following:

- A quantitative breakdown of the number of hits, number of visits, pages accessed and volume of information downloaded over the course of a day, week and month
- A graphical indication of the pattern of usage, as measured by these parameters, over hours, days and months
- A "top ten" of most frequent users as defined by the above parameters, as well as a similar ranking chart for most popular pages
- A detailed breakdown of exactly when the *AnswersIn* site was accessed, from where and by whom over any given period of time
- The facility to specifically identify individual users

Conclusions

The Webalizer program is an invaluable tool for providers of online CAL applications. It allows them to monitor usage patterns as well as gauge the extent to which their application is being taken up. Such information may be very useful when deciding when to schedule formal teaching as well as deciding which initiatives are finding favour with the student body and which ones are not.

Choosing a career – how important is role modelling?

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Background

With the introduction of the new medical career structure (Modernising Medical Careers), doctors are required to make career choices soon after qualification. In order to help undergraduates make a wise career choice, it is important to understand the factors influencing their career aspirations. This paper examines the effect of role modelling on career choice.

Work done

This longitudinal study used self-administered questionnaires and focus group interviews with Cardiff students in years 3, 4 and 5 and then a year later with the same cohort. Although a variety of factors influence career choice, role modelling and perceived external pressures are important. Career choices vary over time for individual students.

Conclusions

Role modelling (both positive and negative) of teachers is an important factor in influencing undergraduate career choice. Not only is it important for teachers to understand this, it has implications for junior doctor career pathways. It is suggested that some students are choosing careers on the basis of good role models rather than the academic stimulation of the speciality. This may lead to uncertainty regarding career choices after qualification.

Take home messages

Medical students' career choices are often influenced by role models. Teachers need to take account of this factor when encouraging young doctors to enter their speciality.

COINNS: A new framework for personal, professional and educational developers

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Staff and educational developers use many frameworks to structure teaching activities and to facilitate personal and professional development. The idea for a new model arose from running leadership development sessions. Existing models (e.g. SWOT, reflective frameworks) were limited in scope, and did not specifically encourage creative and positive thinking coupled with identifying clear outcomes and actions.

COINNS stands for: Challenges, Opportunities, Ideas, Needs, Next Steps

COINNS enables individuals and groups to work through a structured process, involving dialogue, discussion, generation of ideas and action planning. COINNS has a positive, action-oriented focus. It starts with acknowledging that people face 'challenges' and asks them to articulate these, but then moves on to active engagement in positive thinking through 'opportunities' and 'ideas'. Probably the most unique feature is the 'ideas' step. This arose from our use of creative thinking activities and processes¹ which develop 'whole brain' thinking² and can be very liberating and empowering. 'Ideas' (which people often want to gloss over) provides permission and encouragement to free-associate and capture some of the internal processes that occur during dialogic^{3,4}, reflective^{5,6} activities.

COINNS includes defining what help (through the identification of 'needs') is needed to achieve the tasks or goals. Finally, the 'next steps' are agreed and listed as action points. Writing down or articulating goals helps make the essential psychological shift towards achievement⁷.

Since initially conceptualising COINNS, we have extended its use to different settings. At an individual level for personal/professional development, it provides structure for reflective commentaries in portfolios or discussions around professional development programmes. It has been used for organisational strategic planning and as a structure for workshop activities and a report for a national event for staff and educational developers⁸. We have also used COINNS in masters' programmes for healthcare educators. In one example, small groups were given case scenarios in which they had to imagine that they had been asked to introduce a blended learning curriculum into a clinical teaching setting. Using COINNS proformas, they worked through each step and reported back to the larger group on their discussion and suggestions.

The COINNS model has been used effectively in a range of educational settings to help structure activities, provide a framework for group and individual work and to promote creative thinking alongside reflective practice and goal oriented activities. It is a flexible tool for healthcare educators.

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Fighting a Corner - Undergraduate Surgery in the Ring

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The Medical Council published two reports on undergraduate medical education in Ireland in 2001¹ and 2003². Having reviewed the five medical schools' curricula, they noted a discrepancy between the proportions of time assigned to the teaching of surgery. We sought to assess whether this discrepancy had an impact upon the number of doctors choosing a career in surgery.

We analysed original records from the Medical Council and then questioned each of the medical schools with respect to the proportion of each teaching paradigm employed i.e. formal or clinical. We calculated the number of doctors holding intern registration for the corresponding period by medical school. We then compared this data with the number of trainees entering Basic Surgical Training by undergraduate institution.

The percentage of time allotted to undergraduate surgery varied between 14-32% in the five institutions. This correlated positively with the institution providing the most candidates for surgical training (23%,n=18). In addition, the largest volume of trainees came from schools making the greatest use of small group teaching (n = 240hours, 24% of total surgical teaching). The institution with the smallest proportion of surgical teaching (14%) provided the lowest proportion of doctors entering surgical training (4%,n=5).

In the context of curriculum pressures, it is imperative that surgery forms a strong part of the undergraduate curriculum if graduates are to be encouraged to pursue a career in surgery. It is clear from this study that the proportion of time allotted to surgery in the curriculum has an impact upon career choice.

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Dental and Medical Collaboration- a learning needs assessment

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Background

The General Medical Council¹ states that doctors must work effectively with colleagues and the General Dental Council² states dental students should work and train with professions complementary to them.

The need for closer co-ordination between primary medical and dental care has been stated by many^{3,4,5,6,7,8}. The presumed benefits for this include reduced referrals, more timely referrals and reduced discrepancies in patient information.

It is our opinion that interprofessional working should start at undergraduate level. An opportunity has arisen for interprofessional teaching between 4th year dental and 4th year medical undergraduates in Primary Care at the University of Leeds. CAIPE define interprofessional education (IPE) as "when two or more professions learn with, from and about each other to improve collaboration and the quality of care"⁹. They state that the principles of IPE include working to improve the quality of care, the needs on service users and carers, encouraging professions to learn with, from and about each other and enhancing practice within professions.

Taking into account the principles stated above, we are carrying out a learning needs assessment to inform the curriculum for this programme. This will involve identifying relevant learning outcomes of our respective undergraduate curricula, evaluation of our current pilot programme from both students and facilitators and local practice needs which will take into account the needs of the public and professionals.

Method

To address part of this we are asking each profession "What are the barriers to collaborative practice?". A short questionnaire will be distributed to dental and medical practitioners within the Leeds PCT at their continuing medical education sessions. These will be distributed during May-July and we aim to have 50 questionnaires completed by each profession. They will be asked to complete Likert scales relating to specific barriers that have already been identified including the respective parties not knowing each other, lack of knowledge about the conditions which are appropriate for referral and lack of shared patient records. Open questions will pick up issues that have not previously been identified.

Results

We will present the results of the questionnaire study and the information collected will also be used to inform the new curriculum by identifying what will enable the two professional groups to work better together in the future. It is also hope that it will help to inform future educational research which will help us to triangulate our results.

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What are the factors that help or hinder the incorporation of palliative medicine teaching into the undergraduate medical curricula in the UK?

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Background

Death and dying occur in almost all areas of medicine, and it is therefore essential to equip medical students with the basic knowledge and skills necessary to care for patients who are dying. This is well recognised and was reinforced by the General Medical Council in 'Tomorrows Doctors',¹ which recommended core teaching on relieving pain and distress, together with care of the terminally ill.

Despite these recommendations, undergraduate teaching about death and dying is variable; a questionnaire survey of universities showed that the average teaching time over a five year course was twenty hours (range 6-100) and this appeared in a variety of guises, times and places in the curriculum.² An explicit aim of the undergraduate programme is to prepare medical students for their role as foundation year one (FY1) doctors,^{1,3} As approximately 50% of all deaths occur in the hospital setting,⁴ FY1 doctors need to have been taught how to care for dying patients.⁵ The aim of the study was to establish the factors promote or inhibit the incorporation of palliative medicine teaching into the undergraduate medical curricula.

Methods

Lead educators of undergraduate palliative medicine teaching programmes were interviewed using a topic guide. A purposive sample was employed to encompass known successful educators but also those who have experienced difficulties incorporating palliative medicine teaching into their undergraduate curriculum. Interviews were transcribed and the principles of the grounded theory approach used to analyse the data. A constant comparative method was used to generate themes. Narratives have been used to illustrate these themes and to represent individual, important or significant experiences outside of these themes.

Results

Fourteen interviews were completed and analysed. There are several factors that effect whether palliative care is incorporated into undergraduate teaching programmes. These include individual, institutional, curriculum and student factors, national documents, patient group characteristics and availability of local palliative care teams.

Conclusion

There are many factors that help and hinder the incorporation of palliative medicine into the undergraduate curricula. We aim to develop a series of recommendations to help educators incorporate (and continue) palliative medicine education into undergraduate medical curricula to improve education for future doctors.

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Radiation and Clinical Imaging: A survey of medical students

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Background

One of the newly qualified foundation year doctor's commonest duties is the requesting of imaging investigations. This may be performed independently following the admission of a patient or on the instructions of their clinical team. Imaging investigations of a range of ionising radiation modalities are requested on a daily basis, often with limited awareness of the radiation doses involved. However, little, if any time is dedicated to the education and instruction of medical students on the safety of medical radiation use. Several studies have been performed on qualified doctors of all grades; the consensus outcome of which was better postgraduate training was required. No study has purely assessed medical students. In addition many have focussed on surveying only a single institution. Our study surveyed a more selective audience of final year medical students from multiple centres. A knowledge deficit in undergraduate students would offer the opportunity of ingraining these concepts before qualification rather than corrective treatment after qualification.

Methods

We administered an anonymous 10 point MCQ style questionnaire to 126 medical students, all within 6 months of qualification at the time of completion. 42 were issued at 3 representative UK centres (Sheffield, Nottingham, Belfast).

Results

The response rate was 96/126 (76.1%). The average score in the questionnaire was 42.6% (institution range: 34.3 – 46.8%). The questions about approximate radiation exposures of common diagnostic tests were particularly poorly answered (31.5% correct) with a tendency to underestimate doses (41.8% underestimated). The risk of radiation exposure was also underestimated in 76.3%. Seventy-two percent and 82.8% respectively of students understood MRI and ultrasound did not involve exposure to ionizing radiation.

Conclusion

The knowledge of the radiation involved in clinical imaging investigations by final year medical students is sub-optimal. The undergraduate curriculum would be improved by the addition of a robust insight into the use of medical radiation in clinical imaging. Our suggestions for improvement include the introduction of a compulsory practical study day on 'Radiation and Imaging' on all medical school curriculums, to be delivered in the 6 months prior to qualification. In addition, better promotion and distribution of the instructional booklet 'Making the Best Use of Clinical Radiology Services' published by The Royal College of Radiologists to all final year students prior to qualification is recommended.

Graduate Entry Medicine

Comparisons of examination performance between 'conventional' and Graduate Entry Programme students: the Newcastle experience

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There are 14 schools in the UK now offering Graduate Entry to Medicine Courses (GEPs). It was thought GEPs could encourage greater diversity of background amongst doctors¹, help workforce numbers², produce more broadly educated doctors³, with possibly superior communication skills¹ and better motivation for staying in medicine¹. However, there are lots of questions. Are GEPs promoting extreme elitism? (Thomas 2006). Are we actually making the most of the diverse backgrounds and previous experience of GEP students?^{6,7} Furthermore GEPs involve significant resource issues⁸. Are they worth the added expense?

Most studies to date have shown that graduate entry students do not perform any better than school leavers⁶. Although the previous educational background of GEP students did have some effect on initial examination performance, these effects diminished over the course of the programme⁹.

We compared assessment outcomes between and across students on our Graduate Entry to Medicine (GEP) course at Newcastle (UK) and the conventional 5 year programme.

Results show that GEP students perform significantly better in assessments than both 5 year programme students, and graduate students on the 5 year programme, although the effect appears to diminish over the course of the programme. Health care professionals achieve fewer distinctions and merits than students from other backgrounds, but their pass rates show no significant difference.

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Dr Richard Price is a GP and Programme Director of the Graduate Entry Programme at Newcastle, UK. He devised the study and wrote the report.

Mrs Sarah Wright is a psychometrician at the School of Medical Education Development at Newcastle University, UK. She performed the statistical analysis and contributed to the writing of the report.

Does age narrow the gender effect on performance in medical school?

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Research Question

Is there a difference in the effect of gender on examination performance between undergraduate and graduate entry students at Leicester Warwick Medical School?

Study Type

A quantitative cohort study over a six year period.

Context

LWMS provides a unique situation to compare graduate entry medical (GEM) students and undergraduates on the same course with the same curriculum, teaching and assessment methods. By definition, the graduate entry medical students are on average 3 years older. Current published literature supports a tendency for females to perform better throughout medical school than males (Kilminster 2006), but have not shown the difference to be of practical value. It is postulated that age and more life experience may show a difference in performance for GEM students. To our knowledge, such data has not yet been compared, and with an increase in GEM schools, it may have future workforce implications (McKinstry 2008 & Dacre 2008).

Methods

Data was collected for the cohort of students graduating in 2006. The two groups for comparison were GEM students from Warwick and undergraduates from Leicester. Examination performance in end of phase 1 written papers, intermediate clinical exam (ICE), final professional clinical exam (FPE) and finals written papers were compared. Ethical approval was granted by the local ethics committee, and written consent from students was sought. Results were compared using SPSS 15 with ANOVA and Chi Squared.

Results

Clinical Exams

University	Gender	Mean age	N	Exam	Mean	SD	P
Leicester	Female	18.47	168	ICE	64.74	8.356	0.052
Leicester	Male	18.47	139	ICE	62.78	9.211	
Leicester	Female	18.47	166	FPE	168.27	15.031	0.003
Leicester	Male	18.47	141	FPE	163.04	15.776	
Warwick	Female	22.94	168	ICE	61.24	7.359	0.839
Warwick	Male	22.94	112	ICE	59.96	7.105	
Warwick	Female	22.94	168	FPE	169.88	13.471	0.144
Warwick	Male	22.94	114	FPE	167.92	14.250	

There was no significant differences in either cohorts for written phase 1 or finals examinations (Chi 2 P = 0.239, P = 0.227. P = 0.355, 0.720.)

Discussion

Females performed significantly better than males in finals clinical examinations at Leicester by a mean of 5 points. This is educationally significant as it equates to the difference between a B and an E over 4 cases, where an E would automatically fail the student in one case. However, this difference is not found to be significant in Warwick for final clinical examinations.

Conclusion

Gender has no significant effect on clinical examination performance of GEM students. This is contrary to younger school leavers.

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Predicting success in graduate students at Leicester-Warwick medical school – a large quantitative study

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Background

In 2000, Leicester-Warwick medical school (LWMS) was one of the first UK medical schools to introduce a graduate entry program (GEM). The aim of this study was to explore examination performance of GEM students at LWMS. Although success in undergraduate courses can be predicted by A level grades, there are no documented predictors of success in GEM courses¹.

Examination results looked at included final written examinations and the clinical examinations: the intermediate clinical examination (ICE) taken after 18 months of clinical studies (year 3); and the final professional examination (FPE).

Methods

A quantitative study over a six year period was conducted. Data was collected for students graduating in the years 2004, 2005 and 2006, and included:

1. Demographic information (age, sex, A level total score, prior degree). A level total score, calculated by translating the scores into numbers (A=10 points – E=2 points) and collating the results
2. Written examination results (percentage)
3. Clinical examinations. The Leicester assessment package (LAP) format is used. In ICE 2 patients are seen and in FPE 4 patients. Grades A-E achieved were translated into numerical scores, and total scores were collated for each student

Results were analysed using SPSS 15.

Results

The three groups of students were compared for differences in demographics and were found to be very similar. Analysis was then performed using the whole study group, included 339 students.

Clinical examination results and finals written results were confirmed to be normal distributions. One way ANOVA was used to look at the variables age, sex and total A level score, and effects on examination marks. A significant result was seen when looking at the effect of A level score on finals written results. No significant effects were seen in the clinical examination results (see table).

Discussion

A significant effect was seen in the analysis A level score and influence on finals written examination results, this was not seen in clinical examinations score.

The effect of A level results on GEM student performance has never been examined before. A broad range of A level score is seen in these students as selection criteria do not include A level results but include an upper second class honours degree in a science subject.

Conclusions

A level results may be used to predict outcomes of written examinations in graduate students but have no effect on performance in clinical examinations.

	A level total score	Number of students	Mean total score	Standard deviation	P
ICE	0-20	91	60.52	7.547	0.898
	21-26	115	60.69	7.218	
	>27	74	61.04	7.124	
FPE	0-20	91	168.19	14.870	0.783
	21-26	116	169.00	12.363	
	>27	77	169.69	14.977	
Finals written exam	0-20	91	65.88	6.040	0.003
	21-26	116	65.99	6.200	
	>27	77	68.96	7.796	

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International Medical Education

Symbiotic International Faculty Curriculum Development

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In 2005 HYMS were invited to deliver a course on the theory and practice of PBL to the faculty of Health Sciences and Technology at Aalborg University, (AAU) Denmark after the head of faculty at Aalborg had approached the GMC for recommendation as to which UK medical school would be best placed to offer this. Delivery of a practice-based experiential PBL training course initiated a productive collaborative development involving staff and students at both faculties. Subsequently, this initial collaboration has generated opportunities for further, higher levels of interfaculty working which were not apparent at the outset.

Key features of that initial training programme were:

1. Flexibility in delivery with reflexive adaptation to the evolving needs of the developing faculty in Denmark.
2. HYMS student involvement in design and delivery of programme.
3. Experiential, practical and interactive format in delivery.

As a consequence of this programme, there has been continued interactive faculty development including the following:

1. Development of HYMS students as teachers with their involvement in the design of the Aalborg curriculum and its delivery, and the development of Student Selected Components (SSC) material.
2. Curriculum development on both sites including:
 - SSC development
 - Elective periods for HYMS students
 - Intercalated degree exchange between the two faculties
 - Student entry from Aalborg to Phase 2/3 (Years 3-5 of the medical curriculum) at HYMS
3. Strategic development at AAU as a health sciences faculty including planning for a new Medical School.
4. Other development including research, profiling, HYMS tutor development and dissemination of good educational practice.

Reference:

1. J Henderson & J Lewis – Directors of Problem Based Learning (PBL) Hull York Medical School (HYMS), A Kardasz – Curriculum & Assessment Manager HYMS

The Implementation of a Peer Reflection Process for online tutors – lesson learnt

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The Diploma in Practical Dermatology is an international distance learning course for General Practitioners (GPs), delivered by the Department of Dermatology at Cardiff University. It uses large numbers of online tutors who are mainly practising GPs based around the world.

Practicing physicians are being increasingly used by Higher Education institutions as part time tutors due to rapidly increasing numbers of students. This can cause a growing challenge to the implementation of quality assurance processes for staff where teaching is a secondary activity and who have their own professional development requirements (Blackwell et al, 2001)¹.

We considered peer reflection of teaching literature, Cardiff University guidelines and policies and the understanding and needs of online GP tutors. This informed the design of a system for peer reflection of teaching of an asynchronous online activity to allow the tutors to gain feedback and support on their teaching roles.

An online process and instructional package were designed and piloted on a group of twelve tutors. Feedback on the success of the process was gathered through the use of an asynchronous online focus group complemented by a subsequent postal questionnaire.

The process was not as successful as we had hoped. It was inferred that this was due to some of the tutors feeling confused about what they were required to do. Although full guidelines and instructions were given, it was apparent that not all tutors read these. Some tutors mentioned that this was because they did not have time to do so and others claimed to have not realised they existed. Many tutors stated that they felt reassured to have someone to “watch” and know that someone was “watching them”. Two pairs of tutors reported problems with emails not working and that this had a negative effect on their communication.

The pilot identified a number of areas for development. The tutors felt that the use of peer reflection was a good idea in practice, but they didn't have time to participate fully. The tutors were asked how to improve the process and suggested having clearer direct web links to the instructions, allowing greater choice of peer partner and communicating via online forums rather than by email. The practicalities of these ideas need to be further investigated to develop a process to allow effective online peer reflection.

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Practice Teaching in Australian GP Vocational Training

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Australian GP Training is provided through Regional Training Providers (RTP) but with a national curriculum. It is an apprenticeship model with educational release time but also dedicated practice teaching time. Ensuring the quality and consistency of this teaching is a challenge as is the incorporation of formative and, possibly, summative assessments. Two frameworks (for the first and second six month terms) were developed in one RTP in response to expressed needs and ongoing feedback from supervisors and registrars.

The objective was to provide a relevant framework for practice teaching which would be adaptable enough for use by supervisors and registrars with very different skills and needs and which would be flexible enough to respond to changing needs. It would provide resources, without stifling individuality, be aligned to the curriculum and incorporate and encourage our formative assessment program.

The Term 1 framework has six modules on basic topics and the Term 2 framework has six modules on aged care presentations, more appropriate to this later stage. Modules contain suggestions for teaching, relevant articles and registrar activities (without overloading). Unlike some other RTPs, there is no compulsion to complete each module for every registrar. However, registrars are expected to have covered the topic areas in some way.

In addition to the modules, the framework encompasses orientation and observation sessions, reviews of progress and activities planned jointly for the individual registrar. Initially a hardcopy folder was supplied but the frameworks are also available on our website.

Evaluation has included initial feedback on the pilot, a brief feedback form sent to all involved practices and informal feedback from visits and supervisor workshops. We are conducting a more formal interview process. Feedback so far has been positive and constructive. The frameworks have been implemented in flexible and customized ways. It will be straightforward to update, add or delete modules as appropriate in the future.

Thinking Writing

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The standard of BSc intercalating medical students' written work at Queen Mary's has been a subject of concern to course directors for some time. This research concerns a series of in-course writing tutorials delivered by subject tutors in conjunction with writing specialists.

An evaluation of the effects of the learning experience on students' writing performance using quantitative (through a pre and post-test writing task) and qualitative methods was performed. This abstract is for the qualitative research only. Students' perceptions of the "Thinking Writing" course were elicited using semi-structured interviews and analysed using the framework method. Emergent themes from the data were collected until data saturation was reached.

Positive outcomes, highlighting an improvement in knowledge of the intricacies of punctuation and referencing, as well as a marked increase of confidence in structuring and the scientific language style used in writing of literature reviews were just some themes. Students feel the course has prepared them particularly well for writing their research projects.

The experience of the "Thinking and Writing course" has helped to improve BSc students' writing skills and scientific writing style awareness. Similar courses should be implemented in Medical Schools to improve students' writing skills for research purposes.

Eye-Spy in the Emergency Department - a novel educational resource for students

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Study Objectives

Students from various disciplines come to further their education in the Emergency Department (ED). For many this is a challenging environment and students can find it difficult to engage with the learning opportunities available. Our aim is to introduce an innovative learning aid in the form of a booklet not currently utilised within the ED setting. The booklet aims to enable students to engage with and explore the learning opportunities in the ED. Eye-Spy in the ED is neither a textbook nor log book, but rather a spotter book which we hope will help to focus student learning in an active way. It incorporates photography and digital imagery of injuries, clinical cases, investigation results and ED equipment. Utilising a format based on the "Michelin I-Spy®" books, tasks and questions are related to the images throughout. In addition, a points system is integrated and provides a numerical record of student activity. This gives the opportunity for comparison with other students and provides positive reinforcement.

Methods

Students from the final year of medical training at University of Leicester Medical School, UK, on 7 week placements in the ED were investigated. Records of clinical exposure completed by the students were compared before and after the introduction of the Eye-Spy booklet in comparable groups of students. Recordings of exposure were divided into clinical observations, procedures and learnt facts. Additionally, structured questionnaires were used to assess students' thoughts regarding the usefulness and effectiveness of the booklet after the introduction.

Results

The numbers of different observations, procedures and learnt facts were analysed in an attempt to compare the variety clinical exposures. Overall students using the Eye Spy booklet recorded wider range of clinical encounters. 16.3% more differing clinical observations were reported in the Eye-Spy group compared with the controls (49 vs. 41). 35 different clinical procedures were recorded by the Eye-Spy group compared to 24 in the controls, representing a difference of 34.5%. 26.2% more differing learnt facts were recorded by the Eye-Spy group (61 vs. 45).

Conclusion

Crude analysis demonstrates that students who used the Eye-Spy booklet had a greater variety of clinical exposures, and therefore greater learning opportunities, than the control group. This suggests that a learning tool of this kind may be useful to students in helping them identify and partake in learning opportunities they might otherwise miss.

An exploration of the informal learning activities that student doctors undertake and their perceived educational value

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Introduction

The project was undertaken by 6 student doctors as part of the Research Attachment SSC.

Background

Informal learning is 'the learning that takes place in the surrounding activities with a more overt formal purpose and takes place in a much wider variety of settings than formal education or training'¹ and contributes to the development of transferable skills¹. There has been an increased awareness in the acquisition of transferable skills at medical schools^{2,3}, however this has focussed on the formal curriculum. This study explored how student engagement within extra curricula activities (ECA) might contribute to the development of transferable skills.

Method

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. Students were provided with an information sheet detailing the purpose of the study and invited to complete the questionnaire anonymously. The quantitative responses were analysed using the Touchstone software and qualitative data subjected to a thematic analysis.

Results

The results report the findings from Phase 1A (n=304; response rate 46%) and 1B (n=256; response rate 34%).

On a scale of 1 – 5 (with 5 most important), the most important transferable skills were: communication (mean score: 1A 4.9; 1B 4.9) decision making (mean score: 1A 4.8; 1B 4.8) team working (mean score: 1A 4.8; 1B 4.9) and organisation (mean score: 1A 4.6; 1B 4.6).

Students participate in a range of ECA, the most frequent being: *Part time work* (1A 41%; 1B 67%), the most frequently cited jobs include: bar/restaurant work, elderly care and GP secretary/receptionist, for 6 -12 hours per week; *Sporting activities* (1A 40% 1B 40%); *Volunteering* (1A 32.6%; 1B 42%), the most frequently being charity organisations, child care and hospital volunteering. These activities assisted the development of communication skills, team working, organisation and stress management skills. From the free text responses participants suggested that:

- Respondents were positive about the contribution to skill development
- ECA enhanced communication, teamwork, organisation and stress management skills
- ECA provided opportunities to develop skills in a pressure free environment
- ECA enabled the development of leadership and management skills
- A small number felt engagement in ECA was just for the sake of the CV

Conclusion

Many students are engaged in ECA and recognise the benefits for the development of skills that are transferable to medicine.

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What do tutors know about peer review?

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An online questionnaire was completed by an international group of General Practitioner (GP) tutors, in order to gain their understanding and experience of using peer review and their beliefs about what it should involve. This was done to inform the design of a system for peer review of teaching of an asynchronous online activity within a distance learning course, to allow the tutors to gain feedback and support on their teaching roles.

The GPs were all tutors for the Diploma in Practical Dermatology, an international distance learning course for GPs, delivered by the Department of Dermatology at Cardiff University. The programme employs large numbers of online tutors who are mainly practising GPs based around the world.

Gosling's (2002) Models of Peer Observation of Teaching grid¹ was utilised in the questionnaire to determine what the tutors thought peer review does involve and what it should involve. A number of open response questions were also used to gather knowledge on the tutors' understanding, experience and needs.

35 tutors completed the questionnaire (a response rate of 56%). Of the tutors who had used peer review previously, 84% claimed they had found it useful as it had allowed them to learn from others' experiences and reflect on their own abilities. Those that claimed they had not found it useful stated that they had found it difficult to be critical and that it had been a negative experience.

Only 14% of the tutors who completed the questionnaire stated that they had previously been involved in peer review of teaching – mainly through being a GP trainer. 54% of the tutors stated that they had been involved in peer review in other (non teaching) settings, again through GP training roles and also when they were students. A significant number of tutors thought that peer review was a form of appraisal.

We concluded that the tutors had varying knowledge and experience of using peer review, but that the majority of them thought it would be useful to their tutoring roles and were keen to participate in it. All of the information gathered from the initial questionnaire was used in the design of a process of peer reflection and instruction package which we further investigated.

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Promoting SDL in Family Medicine Residency Program in Saudi Arabia

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Background

Learning how to learn is an important skill for future physicians. Lifelong learning is the goal of Self-directed learning (SDL).

Purpose

We need to develop a conceptual framework to ensure that the goal of SDL, and its relationship to the other goals of the residency program, are understood and interpreted consistently, and in a way that is most likely to achieve all goals effectively.

Methods

By using the learning from experience model and Personal Responsibility Orientation (PRO) model.

Results

Learner self direction - supportive learning environment is essential and resident need skills that facilitate SDL.

Self-directed learning - working in groups are helpful in SDL, while differences of opinion about how to achieve the goal is a challenge.

Recommendation

Training of the teachers on methods foster SDL

Support to residents and teachers through attending workshops

Intensive mentoring process

The Teaching of Ethics in a Medical Curriculum in International Islamic University Malaysia

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Background

The approach to the teaching of ethics and professionalism in the Faculty of Medicine of International Islamic University Malaysia (IIUM) is different compared to other medical schools, i.e. by incorporating a separate discipline named the Islamic Input into the Medical Programme (IIMP). The IIMP spans over the entire 5 years of the medical programme. The IIMP has five main themes which include: Fundamental Concepts and Paradigms; Medicine, Spirituality and Revelation; Medicine and the Law; Social Issues and Medical Practice; and Professional Etiquette and Ethics.

Method

The aim of this study is to assess the impact of the teaching of ethics through the IIMP. A cross-sectional study was conducted in medical faculty of IIUM. In total 166 students volunteered and were assorted to 2 groups, Year 2 and Year 5 (final). A set of questionnaires consisting of 20 vignettes related to medical ethics was distributed to all students. An independent t-test was used to compare the mean total scores between the groups.

Results

A significant difference ($p < 0.05$) was seen between the mean total scores for the Year 2 and Year 5 students. The percentage Year 2 students with preferred answers is higher compared to the Year 5 students in the following issues: withdrawal of treatment; animal research; examination of patients of the opposite sex; research ethics; alternative medicine; euthanasia; patient management. Less than 50% of medical students chose the preferred answer for issues related to informed consent, research ethics, examination of patients of the opposite sex and principles of lesser harm.

Discussion

This study suggests that the IIMP of the IIUM has a positive impact on the medical students when dealing with ethical issues. The Year 5 medical students were expected to have obtained a higher mean total score. The probable reason for the lower mean total score include the teaching-learning approach utilised which is mainly lecture with minimal small group approach. Also the allocation of marks for medical ethics in summative assessment in the IIUM medical curriculum is minimal compared to the core medical subjects which would have some influence on the weight given by students.

Conclusion

The Medical Faculty of IIUM believes that the approach to the teaching of medical ethics by incorporating the Islamic Input module is effective, practical and relevant. However, the teaching-learning method and the assessment will have to be re-addressed to achieve greater impact.

Multi-professional Education

Life isn't like a text book: effective use of real stories within health professional education and training

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There has been a growing interest in the use of authentic stories in health professional education, particularly in enhancing factual knowledge gained through textbooks and other formal learning, helping to link theory with practice¹. Real-life stories, told from an individual's perspective (patient, carer, health professional) capture experiences that might otherwise never be heard. The inherent complexity of real-life stories engages the learner, promoting critical thinking as solutions are explored² – and encouraging reflection when effective solutions may not be apparent.

A library of stories can provide a useful resource for educators, but without an appropriate supporting framework may have limited utility. Educators may not recognise the full potential within a story and could benefit from additional resources to support teaching and learning.

Telling Stories, Understanding Real Life Genetics (www.geneticseducation.mhs.uk/tellingstories) is a web-base resource where narratives from individuals with or at risk of a genetic condition, family members, carers and health professionals are incorporated within an education framework that supports end users from both teaching and learning perspectives. Stories are available to read online and in a printable format, with video clips (available to download) accompanying some. Educationally the stories are supported with activities, points for reflection and links to further information.

The relevance of the story content to other health and social care professions was recognised at the outset although the resource was initially developed for the nursing professions. Independent feedback and ongoing evaluation confirms that the resource is already being used within medical education. Expansion of the site is underway that will further strengthen the resource by linking content to learning outcomes and core concepts specifically developed for the medical profession.³⁻⁶ These span the continuum of medical education from undergraduate through Foundation, general and specialist training and onto continuing professional development making the resource appropriate for use at all levels of education and training.

The way in which content is provided makes it suitable for incorporation across a range of teaching and learning environments (e.g. lectures, small group and self-directed work including problem based learning). The nature of the stories makes many of them pertinent to other, non-genetic, areas of the curriculum and thus provides opportunities for 1) teaching a variety of topics through a single story and 2) incorporating examples of how genetics impacts health and disease across the curriculum.

The paper will discuss the functionality of the resource and its place within medical education.

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Experiences of introducing innovative E-Learning to medical educators

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The University of Hertfordshire offer a unique Master of Health and Medical education. The programme is multidisciplinary and is taught collaboratively across two schools from two faculties within the University, the School of Education and the School of Postgraduate Medicine. This offers students the benefit of specific educational expertise as well as expertise in teaching and learning in health care settings.

The implementation of Modernising Medical Careers (DOH 2007) has reduced the time available to doctors for class based attendance for their CPD, a trend which is also mirrored in other professional groups. This has not only increased the demand for blended learning activities, particularly distance learning, but has also meant that health care practitioners are becoming more discerning about how their limited contact time is spent. These factors have led to the development of innovative on-line activities to support limited classroom based teaching. These have potential for use across all health and medical education programmes.

As part of the Master in Health and Medical Education, a group of 7 medical educators (doctors and nurse educators) undertook a Masters module in Health and Medical Education at the University of Hertfordshire from February – May 2008. The module had three taught days over three months with the majority of the teaching and learning through on-line activities. In addition to accessing course materials and learning resources through the University's VLE (virtual learning environment), **three specific e-learning activities (e-tivities) were designed and piloted to support the class based activities:**

1. On-line virtual action learning sets
2. Problem based learning supported by wiki technology
3. Experiential learning also supported by wiki technology

This presentation will give an account of the design, and success and challenges of these initiatives, drawing on the students' feedback and engagement with the activities, and reflections of the tutors. Recommendations are made with regard to the use of e-learning within medical education specifically. Students were 'slow starters' in terms of engaging with each other through the technology, despite being computer literate, however, by week 5 most were using the technology freely. The quality of the contributions was particularly high suggesting a level of thoughtfulness that is not always achieved face to face.

Interactive on-line simulations as a common resource for clinical learning by students from five different health care professions

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Introduction

Whilst it is important that students from all health professions understand the concept of the patient pathway, increased use of day case care and shortened in-patient stays may make it difficult for students on ward-based attachments to acquire such holistic understanding. Similarly, whilst students must be able to work with other professions, traditional attachments may not develop their awareness of the collaborative nature of modern health care.

Our project has developed a series of pathway-based on-line simulations for use by students from medicine, nursing, physiotherapy, radiography and operating department practice (ODP). In each simulation, students follow a 'virtual patient' through their journey, complete questions and activities and receive feedback on their answers.

During 07-08, simulations were trialled with students from each profession either as independent learning or preparatory to a short, pathway-based clinical attachment.

Research questions

Do students find the simulations a valuable resource for clinical learning?
Are they equally valuable to students from the different health professions?

Methods

Students evaluated each simulation they completed using an on-line questionnaire that included both 5-point Likert-style and open comment questions. Group interviews were held with students who had also undertaken the clinical attachment (57 in total).

Results

780 completed questionnaires were obtained from medical (76%), nursing (15%), ODP (4%), radiography (3%) and physiotherapy (2%) students. Respondents reported that the simulation had improved their understanding of the patient pathway (88%), the patient experience (80%), the contributions of other professions to patient care (76%) and the clinical condition (79%). Differences between the professions were noted, with nurses giving the most and medical students the least positive evaluations.

Overall, open comments reflected Likert-scale responses. However, some respondents reported difficulty with video download times and some wanted more challenging activities.

Students completing clinical attachments valued the preparation provided by the simulations.

Conclusions and next steps

Pathway-based simulations may be a valuable resource for clinical learning, encouraging students from different health professions to develop their understanding of the patient pathway and awareness of the collaborative nature of modern health care. Work is continuing to expand the range of simulations available, to engage more students in simulation work and to explore further the perceptions of the different professions.

Embedding patient safety teaching in clinical placements for undergraduate healthcare students

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Background

CETL4HealthNE is a HEFCE funded collaboration between all 5 Universities and several NHS organisations in NE England, aiming to develop excellence in healthcare education across the region. Patient safety is a key issue for education and healthcare providers, but thus far it has not been widely taught across undergraduate curricula. One project developed at North Tees and Hartlepool NHS Foundation Trust (NT&H) in conjunction with Newcastle and Teesside Universities was an interprofessional education session about patient safety. This was reported to ASME previously but has now been embedded within practice placements for all undergraduate healthcare students on placement during December within acute Trusts across Teesside and including pharmacy students from Sunderland University.

Aim

To embed effective interprofessional learning about patient safety within clinical placement learning across Teesside

Method

A patient safety session was developed, piloted, and evaluated through the CETL4HealthNE in 2005 at NT&H. This was developed further and retested in 2006 with the inclusion of pharmacy students from Sunderland University. In 2007 the project was rolled out to the other main acute Trust on Teesside, James Cook University Hospital and further evaluated. Trusts developed their own training package but focussed on 2 areas: root case analysis and dealing with complaints.

Results

A total of 208 students from 3 universities and 7 professional groups attended the training, over 2 days, across 3 hospital sites. Feedback from all student groups was very positive. JCUH used paid actors for role playing which was costly but effective. NT&H used the training packs derived from previous years, adapted for different professional groups, which were also well received. Facilitators were drawn from experienced interprofessional educators already employed for undergraduate training across the Trusts.

Conclusion

Effective education and learning is deliverable within practice placements for a variety of healthcare students across different providers, providing there is close collaboration and effective communication between organisations. Timetabling and equity of access were critical areas to overcome. The CETL4HealthNE provided a vehicle for both development and embedding of this critical training.

Patient safety in health care professional educational curricula: an exploration of the intentions of 13 UK courses

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Introduction

Patient safety is a key to improving clinical practice and patient care. However, there is not yet a strong evidence base for the ways in which 'patient safety' is understood and applied during initial professional education. This paper will outline some early findings from a national study which aims to investigate the formal and informal ways pre-registration students from medicine, nursing, pharmacy and physiotherapy learn about patient safety.

Methods

A convenience sample of 13 courses was drawn from higher education institutions across Scotland and England. Curriculum documents were identified as a key source for understanding course intentions. Course directors were asked for copies of relevant course documents and which elements within the course they viewed as relating to 'patient safety'. Analysis was undertaken in stages. Researchers gathered the documentation and undertook a first level analysis using an agreed framework. Two researchers independently analysed the data provided, looking at the use of words and phrases and the formal intentions of the course as well as the broader ethos of each course and its explicit (or implicit) assumptions.

Findings

Few dedicated patient safety lectures or modules were identified. Word searches led to the identification of the following key topics.

- Falls/moving and handling
- Drug management/administration
- Infection control
- Clinical procedures
- Communication
- Professional development

Examination of the overall themes identified suggests that they can be grouped into eight broad areas. Of these, some are about the individual student's own personal and professional development and skills, for example management of self and others to facilitate safe systems of working practice. Others are more concerned with organisational structures and processes which newly qualified health professionals need to be aware of – for example clinical governance including audit, risk, patient safety, and error reporting.

Discussion

Despite a common framework for analysis, different levels and ranges of information were supplied by each course. However the findings raise several interesting issues. Given that 'patient safety' is seldom used it appears that definitions are implicit rather than explicit. There was also some indication that professions focused on different dimensions and applications of safety: questions arise regarding different professional vocabularies. Across the courses curricula are delivered using a variety of approaches which appear to promote hands on or interactive learning. The effectiveness of such approaches requires further exploration. Ongoing work will help us understand and develop effective patient safety education.

Developing Teaching for Multi-Disciplinary Teams: An Evaluation Approach

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Modern health care is based on a multi-disciplinary approach and patient outcomes are affected by the effectiveness of multi disciplinary team (MDT) working. In order to address particular problems in prostate cancer treatment and care the Department of Health has funded a national training programme for MDT working. The purposes of this project are to:

- i) evaluate the effectiveness of that training;
- ii) develop an evaluation methodology for evaluating the effectiveness of MDT training

Effectiveness of the training

This project tries to address some of the problems associated with Multi Disciplinary Team training and its evaluation. A particular focus has been on identifying the problems existing within current MDT practice and ascertaining whether the training programme, developed by LTHT surgeons, encourages an environment where different professionals can work effectively together. Data collection includes:

- Observation of teams before, during and after training. Individual interviews with team members and, where possible, focus groups. Emphasis on areas identified by the teams as being of concern
- Evaluation of the content of the training

Evaluation methodologies

This project links to two other projects in the Medical Education Unit at the University of Leeds. All are concerned with developing evaluation strategies for undergraduate and postgraduate inter professional education and training. The central concern of this project is to consider how activity theory can be used to evaluate the training of working MDTs.

The project findings will be presented in order to consider how the effectiveness of MDT training can be evaluated in practice.

Applying Educational theory to setting up a Foundation Trainee Grand Round

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Objectives

To set up a hospital Grand Round for Foundation Trainees, adding to the existing educational opportunities.

Design

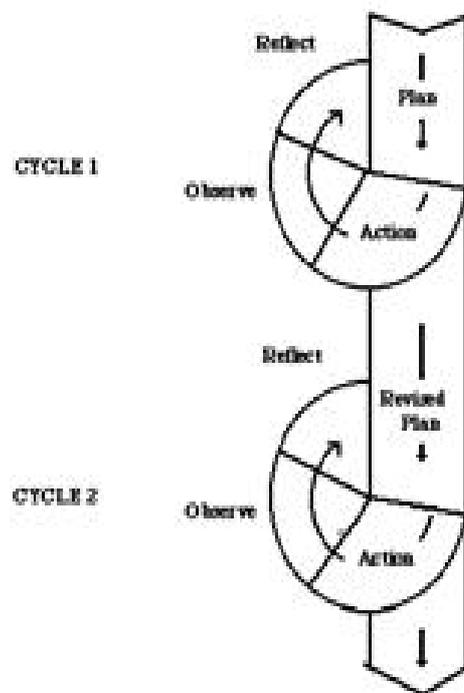
A qualitative research paradigm was employed using Action Research methodology¹.

Setting

A busy District General Hospital.

Method

Action research can be thought of as a spiral of planning, acting, observing and reflecting occurring through time until the most desirable outcome for all participants is achieved². Through a series of planning meetings, key tasks essential to the project were identified, delegated and implemented. This was followed by assessment and reflection of progress and subsequent redesign and implementation of the modified plan figure 1³.



Progress so far

By adopting this methodology we have a mechanism for instigating a Grand Round for foundation trainees, which will be piloted on 5th November. We have collaborated to study a system and change it at the same time: an example of emancipatory research informing practice.

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New Technologies

Novelty or necessity? A survey of clinical teachers' experiences and attitudes towards e-learning

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Background

Over the last decade there has been significant advancement in the use of technology in healthcare education.¹ With the potential of providing an efficient learning environment, over a large geographical campus, universities have placed considerable investment in the development of e-learning to help deliver undergraduate curricula.² However, despite the widespread introduction of such technologies, there have been concerns that such new educational activities may be driven more by novelty, than by pedagogical evidence.^{3,4} To date much of the educational research has focused on the student's perspective. The aim of this study is to establish baseline information regarding clinical teachers' experiences and attitudes towards e-learning. Furthermore, with the increasing interest in Reusable Learning Objects (RLOs) between different healthcare professionals, we also aim to explore the inter-professional dimensions of e-learning.

Method

A self administered postal questionnaire was developed by means of a literature review and focus group meetings, comprising of medical, nursing and dental teachers and students. The questionnaire was designed to capture respondents' attitudes and experiences towards e-learning and its impact on healthcare education. After piloting, the revised questionnaire was sent to all clinical teachers of undergraduate medical, nursing and dental students in Northern Ireland (n=499). After 4 weeks, a reminder was sent to non-respondents. Data was collated and entered to an SPSS database. Analysis will explore the frequencies and variations of responses. Multiple regression analysis will be used to observe for any associations between respondents' demographic and teaching characteristics, and their attitudes towards the impact of e-learning in healthcare education.

Results and conclusions

Three hundred and fifty eight completed questionnaires were returned giving a response rate of 71.7%. Results will intend to highlight undergraduate healthcare educators':

- 1) perceived level of IT ability and availability when providing clinical teaching
- 2) experiences of using e-learning in clinical teaching
- 3) perceived impact of e-learning on students competencies in different clinical domains
- 4) ability to produce e-learning teaching material
- 5) perceived benefits and weaknesses of e-learning, compared to other traditional forms of clinical teaching
- 6) attitudes towards e-learning in inter-professional healthcare education

We also intend to assess for any variation in healthcare educators' age, gender and profession, on their usage and attitudes towards e-learning. The findings of this survey will provide baseline information on the impact of e-learning on undergraduate healthcare education. Such information will inform healthcare educationalists on the role and use of e-learning in the delivery of healthcare curricula.

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Evaluation of Clinical Information Systems in Primary Care

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Introduction

Producing medical graduates fit for purpose is the main objective of undergraduate medical education¹. Medical students of today will work in a networked information environment². With access to vast quantities of information students will critique, organise, and interpret new and existing information when making their clinical decisions. Primary Care is one of the main specialities using sophisticated information systems in clinical practice and it is integral to many of the processes that make primary care work. Primary care is uniquely placed to introduce students to working in this information laden environment.

Methods

By means of a questionnaire, we evaluated the current 4th year Primary Care students in Leeds against the relevant Primary Care course objectives and how well the students meet these outcomes. We have also explored whether the students recognise using clinical information systems as a learning need, what they used it for and whether it affected their understanding of primary care.

Results

78 of the 95 students used the GP Clinical information system. Students input patient data from consultations, completed audit and SSCs. 60% of students reported they received some training and it was informal and ad-hoc in nature. 59% of students reported that their understanding of Primary Care was affected by their knowledge of the computer systems. 47% reported familiarity of the system affected their learning. 46% reported they would have benefited from training prior to their placement. 72% of students reported they did recognise the need to have a working knowledge of the system in their future career.

Discussion

These results are very important to clinical teachers in Primary Care as the students understanding of the systems impacted on their understanding of general practice and on their learning. If we are to achieve our objectives this needs to be taken seriously.

At the Academic Unit of Primary Care we plan to introduce Informatics as part of 'chronic disease management' and 'presentation of undifferentiated symptoms' as a 2 session module and self-directed learning package ensuring we can better equip our students before they arrive on placement. We may update our objectives to incorporate specific Primary Care informatics outcomes in future years.

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Lessons from a wiki project: enhancing students' learning about professionalism

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Today's generation of students are generally conversant with ICT and social networking software such as blogs, wikis and podcasts (Ipsos MORI 2007). As Boulos *et al* found (2006) the use of wikis can add 'new collaborative dimensions' to the learning experience and reduce the technical skills required by users. This study aimed to explore whether the use of web2.0 technologies brought similar advantages in promoting the personal and professional development of undergraduate medical students in a problem-based learning (PBL) context.

To this end, the use of wikis was piloted in four selected PBL groups with 32 students. The research methods included observation of statistics of wiki contributions in the institutional VLE, a questionnaire to participating students; focus groups and facilitator interviews.

Findings suggest that the use of wikis can act a useful resource-sharing space for students. This was especially true in the area of professionalism in which students reported difficulties in locating and finding resources. Students saw the biggest potential for wikis when they were aware of the explicit purpose of the wiki, the way it was being used and their role within it.

Beyond the wiki usage patterns, collected data revealed students' perceptions of the formal and informal learning spaces available to them (the institutional VLE versus online social networking). The way students perceived these spaces ('professional'/public and learner/private) seemed to influence their use of the tool. The conclusion summarises the lessons learnt from the project with reference to how this initiative can be scaled up to a whole-year of the medical student group.

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Learning resources dedicated to facilitating generic history-taking and examination skills increase the effectiveness of teaching at the bedside

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Introduction

Anecdotally nephrology is often identified as a speciality that causes much anxiety for medical students and junior doctors. There is no evidence as to why such a consensus of opinion may exist, but renal medicine is consistently rated by students as more challenging in comparison to other specialities. Lack of exposure to suitable teaching cases due to the changing inpatient population may explain some of the problem. Also renal patients have complex multisystem problems that make the application of traditional clinical methods teaching unsuitable for inexperienced students and clinicians alike.

Purpose

We are developing a web-based interactive tutorial dedicated to history and examination of renal patients to complement existing lecture-based material for the Gastrointestinal and Metabolic medicine module as a study aid for medical students. It complements the case-based approach being adopted by many clinical teachers and provides a good introduction for what to ask and look out for in patients with renal disease, long before students enter the ward environment. This will better enhance the learning experience and provide more opportunity for facilitators to concentrate discussion around the subject matter, rather than improving skills technique, during learning sessions that may already be restricted by service commitments.

Methods

Content from lectures given in previous years to students at an identical stage in their training were used to form the new learning tool. Didactic instructions for performing a generic history and examination were now re-worked to produce a series of task-based learning exercises using true/false, extended matching or drag and drop questions. Students are guided through a series of scenarios intended to help construct a sound framework upon which to deliver a suitable history and examination. Pre- and post-tutorial question test paper will be completed by students and the results recorded within the online database.

Results

Pre- and post-test scores will be compared and correlated with student feedback from free text comment. Both quantitative and qualitative results will then be made available.

Patient Voice

'I had not expected it to be so therapeutic' – bereaved carers as teachers

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Background

In March 2007, a new medical student teaching programme began in our hospice. It involves 2 days, looking at communication skills, symptom control, and caring for the dying. In the afternoon of the second day, students hear from bereaved carers.

Method

Bereaved carers who have had loved ones die in the hospice are contacted by letter approximately 6 months after the death. We also have posters and flyers in the hospice reception area and the outpatient waiting area. Once a carer has expressed an interest, a member of staff contacts the carer to discuss the case and explain what will happen. Carers come and talk to a group of about 15 students with a facilitator; the students have a free-ranging discussion with them. The carers then have time with a facilitator to discuss how the session went, and any other issues. We report written and verbal feedback from the carers and students for the first year (March 2007 – March 2008).

Results

16 carers have participated; 9 have completed evaluation questionnaires. All have found the experience beneficial. They all felt well-prepared on arrival. Most found the experience of telling their story beneficial – one commented that it was strange to talk to such a big group. 4 carers had expected more questions from the students. Carers felt that they had made a difference to the medical students, and found the whole experience, including time with the facilitator afterwards, therapeutic. They were all prepared to come again.

The students stated verbally that they had found the session useful and that they had gained insight into ways in which they, as junior doctors, could impact positively on the care of the dying. 85/97 (88%) of the students who completed evaluation forms agreed strongly with the statement 'I have a better understanding of the experience of caring for someone with a life-threatening illness'.

Conclusions and further work

Carers have valued an opportunity to be involved in education, and have found it a therapeutic experience. Using 'unsanitised' stories as described earlier¹ has resulted in powerful and meaningful experiences for the students. Evaluation needs to be developed further.

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Postgraduate Education

Epiphany: A Case Study of Learner-Centredness in Educational Supervision

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Background

Within the confines of a structured, highly documented, specialist training programme the author has started to explore the nature of supervisory interviews in order to assess their learner-centredness. Previous work is discussed, showing that graduate trainees appreciate mentoring over 'supervision', preferring a learner-centred approach similar to Carl Rogers'. It is not clear that such a model may be entrained within the confines of a prescribed, specialist training programme. Utilising action research, the author has started to explore this in a mixed semi-naturalistic, semi-quantitative way.

Method

Four consecutive supervision interviews with one postgraduate specialist registrar trainee were recorded over eighteen months transcribed and assessed. By analysis of the interchanges between trainer and trainee as time went on it was seen how closely they fitted with a learner-centred mentoring model.

Results

There was seen to be a gradual transition over the series of interviews from a business-like 'tick-box' paradigm to a more supportive one during which counselling techniques were more highly represented. This progression had some of the features of Egan's Skilled Helper model (Current scenario ⇒ Preferred scenario ⇒ Action strategies) but was not particularly learner-centred. Insights into the trainee's feelings and how these might be affecting her progress were slowly gleaned from the interchanges.

Conclusion

From one series of interviews, with one trainee, the difficulty of maintaining a learner-centred approach were apparent. However, counselling techniques enabled a Skilled Helper model to be utilised instead with profit. This is encouraging.

Introducing a Postgraduate Certificate in Professional Practice for Foundation Programme Doctors

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Background

The educational faculty from three NHS Trusts and the Centre of Postgraduate Medical Research and Education (CoPRME) at Bournemouth University have collaborated to develop and run an innovative postgraduate programme that complements the essential elements of the Foundation Programme. Given the Foundation Programme's emphasis for qualified doctors in the NHS to develop reflective competence and proficiency in such 'generic' skills as communication and teamworking, the CoPRME faculty instigated a teaching programme to support and develop Foundation Year 2 (FY2) doctors. The teaching programme is delivered at the University, facilitated through a team teaching approach involving clinical teachers and University faculty, with compulsory attendance by trainees from all three Trusts.

The Postgraduate Certificate in Professional Practice (Medicine)

This year, to facilitate progression to postgraduate study and complement future specialty training, we have designed an optional Postgraduate Certificate linked to the CoPRME Generic Skills Programme. The certificate consists of 3 modules:

- Evidencing Professional Learning
- Assuring and Improving Quality of Patient Care
- Proficiency in Clinical Practice

Each module is assessed by clinical educators and university lecturers, using a combination of written reflective work, presentations and viva voce examination.

Progress so far

Bournemouth University have assessed and validated the Postgraduate Certificate. University fees for completion of each module must be paid by the FY2 trainee. A programme leader has been appointed and seminars and tutorials have been arranged for the participants in the Postgraduate Certificate programme. In our first year, 18 (24%) doctors out of 75 FY2 doctors in the three Trusts have signed up, with completion envisaged by August 2008.

The Future

The Generic Skills training programme and the Postgraduate Certificate will be formally evaluated using qualitative and quantitative research methods over the next year. Thus far, the trainees see the Postgraduate Certificate as a valuable addition to their portfolio of evidence for their professional capability. CoPRME will look to establish further courses to allow doctors to progress to a Masters qualification.

The Personal Touch: Foundation Programme Doctors' Views on Their End of Year Signing-Up Process

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Background

In the United Kingdom, Foundation Programme (FP) training requires doctors to demonstrate competency prior to being 'signed-up' for completion of the FP. The appropriate paperwork is completed with a review of the trainee's portfolio, although not necessarily with the trainee present. In our Trust, we devised a signing-up process based on the Specialist Registrar Record of In-training Assessment (RITA), with a panel of senior doctors meeting each FP trainee and reviewing their portfolio. We hoped that FP trainees would engage with this opportunity to have a personal review, and so have performed a qualitative study of the views of FP doctors about the FP RITA signing-up process.

Methods

A focus group of FP year 2 trainees who had been through the FP RITA articulated the key advantages of our process. A questionnaire based on these findings was written using a Likert scale, and was distributed to FP Year 2 trainees from 3 NHS Trusts, including our own. Data was collated and responses compared between those who had been through the RITA process and those who had not, using Chi-squared tests.

Results

We received 35 responses (11 male, 24 female): 20 FP trainees had been through the FP RITA process, and 15 FP trainees had not. Those who had been through the RITA process felt that it was fair (RITA 18/20, non-RITA 5/15, $p=0.002$), that they had an opportunity to demonstrate their achievements during the signing-up process (RITA 13/20, non-RITA 4/15, $p=0.037$), that taking part in the RITA process has helped in preparing job applications (RITA 11/20, non-RITA 2/15, $p=0.026$) and that their contribution to the Trust throughout their F1 year was acknowledged by the RITA process (RITA 14/20, non-RITA 4/15, $p=0.032$).

Conclusions

Our data suggest that FP doctors valued the foundation programme signing up process when it was based on a RITA format with a personal review, allowing an opportunity to demonstrate their excellence and supported preparation for forthcoming specialist training applications. We appreciate that this process requires considerable levels of commitment from consultants but this study suggests that it is a successful and popular process which is of great use to our FP doctors.

Junior Doctors' Perceptions of Their Learning and Development in F1 Posts in Palliative Care

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Background

Palliative care is increasingly recognised as a core clinical skill that all doctors should possess¹. Medical schools in the UK have expanded their teaching in palliative care accordingly². It is well documented, however, that doctors continue to struggle when caring for dying patients³. This suggests that current learning opportunities need to be evaluated to better inform the educational programmes of the future.

Aim

To explore what foundation year 1 (F1) doctors think of their experience in a palliative care post.

Design

Qualitative study using semi-structured interviews with individual F1 doctors at the beginning of the rotation and at the end of the palliative care post. Transcripts of these interviews were analysed using Interpretative Phenomenological Analysis.

Setting

Two acute hospital NHS Trusts with advisory palliative care teams and one NHS hospice in the United Kingdom.

Participants

Purposive sample of seven F1 doctors matched to a rotation that included a stand alone post in palliative care or one in combination with oncology.

Results

Junior doctors were generally satisfied with the learning opportunities provided by the F1 posts and would recommend palliative care experience to others. They described learning through their day to day interactions with medical staff including specialist nurses and practising their skills on the job. Some struggled, however, to make the transition to a more independent learning style in the clinical environment. Junior doctors felt that the F1 post in palliative care helped them to develop a range of generic competencies including symptom control, breaking bad news and team working. They described their practice changing as a result of acquiring greater knowledge and skills in these areas. Whilst they found posts split between specialities and on call rotas to disrupt their palliative care learning, these offered opportunities to learn additional F1 skills.

Conclusions

This is the first study to evaluate F1 rotations incorporating palliative care. It suggests that F1 posts in palliative care have positive influences on learning, generic skill development and practice. It is recommended that similar posts be set up across the country so that other junior doctors can benefit from this experience.

References:

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Validity of a Questionnaire Method for Quality Assurance of SpR/ST Training

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Background

The quality of Specialist Registrar and Specialist Trainee (SpR/ST) training can be influenced by many factors. These include the clinical teachers, the unit one is working in and the need to cover "service" commitments. Much quality assurance (QA) of training depends on consumer opinion, but it is unclear how reliable this is.

Methods

Questionnaires were completed by all SpR/STs in Geriatric Medicine in the North Western Deanery for their 2005-6 attachments, grading the quality of their experience (A-D) in eleven subspecialties. The questionnaires recommended that experience be graded as follows:

- A:** The consultant/unit provided all facilities including research in the area and international reputation and publications
- B:** The consultant/unit had good experience and expertise providing good quality training in the area and conformed largely to speciality recommendations, perhaps with regional reputation
- C:** The consultant/unit had a special interest but didn't run a beacon service conforming to accepted standards
- D:** The consultant/unit had no specific expertise in the field and the SpR/ST had gained no special training in the topic

The process was repeated for 2006-7 with the same training posts after the trainees had rotated.

Results

This table shows the Kappa plot of the SpR/ST ratings:

SpR Opinion 2006-2007	SpR Opinion 2005 - 2006			
	A	B	C	D
A	2	8	2	0
B	3	30	12	5
C	0	10	34	11
D	0	4	19	36

Kappa = 0.5 (se = 0.054)

P < 0.0001

These results show a reasonable degree of stability and inter-observer variation. Some of the variation was explicable by known changes in service provision, in particular changes in consultants within departments due to retirements and new appointments.

Conclusions

The degree of correlation when the questionnaire was repeated using a rearranged group to rate the same training posts suggests that the method of assessing quality of training is valid in QA. If quality of training is carefully defined, then its assessment by SpR/STs can be valid and reproducible using a questionnaire.

Ticking all the right boxes: An evaluation of the online learning agreement and web-based resources of the Intercollegiate Surgical Curriculum

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The Intercollegiate Surgical Curriculum Project (ISCP), launched in August 2007, is a joint initiative of the Colleges of Surgeons of Great Britain and the Republic of Ireland, the Joint Committee on Higher Surgical Training and the specialty associations. It marked the adoption in surgical specialties of a structured approach to specialty training in line with Foundation and specialty training reforms across the UK (in the wake of MMC and PMETB). ISCP sets out explicit standards, assessments and staged progression for specialty trainees. Learning, teaching and assessment are co-ordinated online by means of a web-based system in which the trainee's learning agreement is the lynch pin. ISCP is intended to support a consistent approach to training, to allow flexibility and accessibility for surgical trainees and to ensure transparency of recording and monitoring for trainees and supervisors.

This paper reports on the findings of an evaluation study which focused upon participants' engagement with the ISCP learning agreement and with the web-based tools designed to support specialty training. The qualitative study generated data from semi structured interviews with 18 surgical trainees and 13 educational supervisors. The focus of this paper is to explore the relationship of the learning agreement with processes of learning, teaching and assessment, and the educational value accruing to learning surgeons from use of the web-based system. It highlights research data which reveal the ways in which surgical trainees and educational supervisors' engaged with the ISCP website; and further considers whether or not such engagements support the trainees' self-directed learning and enable trainers to target their supervision and feedback.

Never mind the commentary, what's the grade? Students' attitudes to written feedback

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Feedback in medical education is seen as a vital component of professional development and is incorporated into training placements, reviews and assessments at all levels of training. The value of prompt, regular and specific feedback on performance is well documented^{1,2}. Within the clinical context, learners are generally anxious to know how they are doing so that they can improve; feedback can serve to provide reinforcement of learning, strengthening newly learned associations and so improving performance.

However, when health care professionals are taken out of their familiar clinical environments and placed within a classroom environment on a medical education masters programme, attitudes to feedback on written assessed work can change. This paper reports on a small scale pilot study of students studying for a masters qualification in medical education, focusing on the students' approaches to the written feedback they received. The qualitative data generated from group discussions indicated some interesting attitudes, especially given that these programmes are attended by self selecting, and hence motivated, enthusiastic postgraduates. The findings are considered through the theoretical lens of social and cultural capital³.

Themes that emerged from the data indicate that even with cohorts such as these, they are driven more by their overall grade, than the detailed written feedback they receive. In fact for some the written feedback is disregarded, with the grade becoming all encompassing. Some students felt that comments written on the pages were unhelpful and could at times be construed as patronising, or superfluous to their needs. The act of editing or commenting on written work can be construed as an act of symbolic violence³, a tacit almost unconscious cultural or social domination that occurs within the every-day social interactions of the classroom setting. While for the tutor, the time and effort spent in providing written feedback and the educational principles underpinning so doing are completely at odds with this notion of authoritative voice as perceived by students.

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Why do I want to be a GP? A survey of undergraduate students' perceptions on a career in General Practice

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Introduction

In America and the UK there is a growing crisis as fewer medical students are choosing a career in general practice. This crisis is further heightened by health care policy which emphasizes a primary care led service. In Ireland GP training schemes remain highly competitive with 62% of applicants not obtaining placement in 2007.

This study aims to look at interest in family medicine at undergraduate level within University College Cork and to consider what aspects of family medicine influence students' career choice.

Methods

A survey was administered to Irish Medical students in years one through five before lectures asking students to mark on a five point Likert scale whether they agree / disagree that family medicine is flexible, challenging, lucrative, prestigious and whether family medicine gives one room to grow.

The Kruskal Wallis Test was employed to explore data variation and the Mann Whitney test was used to examine differences between specific groups.

Results

Three-hundred and thirty-one students (mean age = 22.7, SD=3.6; 59.8%, females, N=198) in years one through five filled in the questionnaire (RR 81%). 16.7% (N=55) ranked family medicine as number one, 24.9%(N=82) as second, 32.0%(N=106) as third, 18.1%(N=60) reported that family medicine was not an option, No significant difference was found between year of study and choice of family medicine (p=0.38). Students ranking family medicine as first compared to those that wouldn't consider becoming a GP saw family medicine as more prestigious (p=0.015), more similar in salary to other physicians (p=0.010), more flexible (p<0.001), more challenging / stimulating (p<0.001) and as having more room for growth (p =0.001).

Conclusion

General practice is the preferred career option for less than one fifth of students, which contrasts with the high level of interest expressed by postgraduates. A change in career choice appears to occur within the first year of qualification. Social influences such as prestige, salary and flexi-time are important influences in career choice at undergraduate level.

Performance of postgraduate medical students compared to undergraduates at Leicester Warwick Medical School – a large quantitative study

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Background

In 2000, Leicester-Warwick medical school (LWMS) introduced a graduate entry program (GEM). Until 2006, the curriculum, teaching styles, and assessments were identical for both the undergraduate and the GEM course. The only differences were in course length and site. The GEM course a four year course in Warwick, and the undergraduate course, a five year course in Leicester. LWMS therefore provides a unique situation to make comparisons between GEM students (Warwick) and undergraduates (Leicester). We believe this is the first study to compare examination performance of the undergraduates and GEM students.

The examinations compared include:

1. Phase 1 written exams (taken after 16 months at Warwick and the end of year 2 at Leicester)
2. Intermediate clinical examination (ICE) taken after 18 months of clinical studies
3. Written final examinations
4. Final professional examinations (FPE) – clinical finals.

Methods

Ethical approval was granted by the local ethics committee, and written consent from students was sought. A quantitative cohort study was conducted. Data was collected for students graduating in the years 2004, 2005 and 2006. Examination data was collected including:

1. Demographic information
2. Written examination results (pass/fail)
3. Clinical examinations (ICE and FPE). The Leicester assessment package (LAP) format is used. In ICE 2 patients are seen and in FPE 4 patients. Grades A-E achieved were translated into numerical scores, and total scores were collated for each student.

Results were compared using SPSS 15.

Results

The three cohorts of students on each course were compared for differences in demographics and were found to be very similar. Analysis was then performed according to the course attended. Continuous data for clinical examination marks were in the form of normal distributions, and were compared using independent samples t tests. Binary data was compared using Chi squared test.

Clinical examination results

		Number of students	Mean total score	Range	Standard deviation	P
ICE	Leicester	309	63.90	42-94	8.797	0.006
	Warwick	281	60.69	42-82	7.294	
FPE	Leicester	312	165.61	165.61	15.987	0.084
	Warwick	285	168.88	132-220	13.895	

Written Examination results

		University		P
		Leicester	Warwick	
Phase 1 written	Pass	235	235	1.00
	fail	24	24	
Finals Written	Pass	251	275	0.030
	fail	21	10	

Discussion

Results of the clinical examinations show that Leicester students perform better in ICE (p=0.006), and by the time FPE is taken any difference is no longer statistically significant.

There was a significant difference in the numbers of students passing the finals written papers, with more GEM students passing. There was no significant difference in phase 1 examination results. These results may suggest different rates of learning for undergraduates and GEM students, with GEM students performing as well as undergraduates in final examinations.

Conclusions

Graduate students perform as well as undergraduate students in final clinical and written examinations.

Is there a place for simulators in endoscopy training? Learning points from the pilot study

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Background

The evidence shows that simulators can be used to improve learning curves in endoscopic training.¹ Despite evidence that simulators benefit training, experience using them in endoscopy training is limited.

Aims

- To establish realistic goals in setting up an endoscopy simulator half day course.
- To introduce novices to flexible sigmoidoscopy using a simulator.

Methods

Individuals with no formal endoscopy training were voluntarily recruited to take part in a half day course to teach them skills in flexible sigmoidoscopy using a simulator. Ethical approval was not required but subjects were consented to have their performance recorded for research purposes. The course design used a variety of teaching methods including a short didactic lesson, hands-on practical experience, video, and both peer and tutor observation². The learning objectives were focussed on orientation of the instrument, basic manoeuvring skills and being able to perform a complete simulated flexible sigmoidoscopy. All activities were supervised by course tutors with opportunity for interactive discussion during the teaching episode. Successive performances were recorded using objective, previously defined parameters using the Symbionix® simulator.

Questionnaires were completed to collect information regarding demographics, level of experience and opinions regarding endoscopy training. Subjects were asked to evaluate the course and were given individual feedback.

Results

5 subjects participated in the pilot study on three independent occasions. All five subjects were male aged 20-29. A median of 3 flexible sigmoidoscopies was performed by each subject. Subjects took a mean of 22 minutes to perform a procedure. Subjects tended to perform better in various parameters in successive procedures.

All participants felt it would be safer to train on a simulator prior to real life experience and that they had found the course useful. Feedback from all trainees commented on the usefulness of hands-on experience and 3/5 subjects appreciated the one-to-one tutor supervision.

Conclusions

The learning objectives of the course were realistic and achievable with positive feedback from the subjects recruited. The pilot study has highlighted that to gain sufficient skills to perform basic endoscopy, more time is required using a simulator. A high tutor to trainee ratio is paramount to the learning experience and aids participant satisfaction. A further study is planned to identify the numbers of simulated procedures required to benefit endoscopy training.

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Seizing the day- a novel model of work-based learning

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We present an integrated model of work-based learning which aims to turn effective working into learning, through a cycle of enhancing the opportunities available within the workplace. Identifying and maximising learning opportunities is vital at a time of information proliferation and decreased training and working time in medical speciality training.

Work-based learning has a sound theoretical basis in Vygotsky's zone of proximal development and peer learning theories. Work-based learning is well developed in General Practice but is increasingly acknowledged by other speciality colleges.

The model addresses the different aspects of the workplace which need consideration in order to harness the learning opportunities: the ethos, work environment, resources and the learner and tutor factors in both planned and opportunistic learning. It describes how the opportunistic and planned elements in work-based learning can interact and be fed back in the learning cycle between these different elements.

The model emphasis is that work-based learning can benefit the continued education of both learner and teacher. Nevertheless, a high level of ongoing commitment from both parties is required to make the cycle of learning effective. However, work-based learning should not be a time or resource intensive process, since it aims to complement and enhance existing opportunities within the workplace. This should lead to more focused, deeper learning which would enhance the professional and personal development of the learner.

Eco-friendly laparoscopic home trainer

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Introduction

Laparoscopic surgery is becoming the mainstay for the management of common emergency operations such as appendectomies and cholecystectomies. The nature of the equipment and skills involved in laparoscopic surgery make it a challenge for the surgical trainee to be able to practise skills and techniques in order to perfect them. The lack of availability of training facilities in some hospitals and the financial restraints that laparoscopic equipment imposes also make an alternative means of practice essential. This poster describes the design of an environmentally friendly version of a laparoscopic home trainer.

Methods

The basis of a laparoscopic trainer is to have a cavity, camera, monitor, light source, ports and instruments. The idea of a home made laparoscopic trainer is not new, however, this is a new concept in the today's technology era to allow practice in a safe environment that is learner-centred¹. This is a portable alternative to previously described home trainers using a plastic box and a webcam². A cheap and eco-friendly way for trainees to practise laparoscopic skills is with equipment that they have at home for sustained deliberate practice³. This laparoscopic home trainer consists of a simulated abdominal cavity made from a shoe box with holes cut on either side for laparoscopic instruments (e.g. a grasper), another hole cut at the breath of the box to fit a mobile phone whose video option acts as laparoscopic camera that can be viewed either from the mobile phone or connected to a computer. A torch provides the light source. Trainees can use sugar cubes, peas or other objects to practise manipulative tasks within the simulated abdominal cavity.

Results

This device was used by a group of surgical trainees with different levels of experience of laparoscopic surgery. All trainees found it feasible and acceptable for use at home and felt it would aid the development of hand-eye co-ordination in inexperienced trainees.

Conclusion

This device is easy to reproduce and provides the trainee with equipment that allows the development and improvement of psychomotor skills necessary for laparoscopic surgery⁴ with some haptic feedback. This model has potential to be used by trainees after a basic laparoscopic skills course. Trainees after their course would have a written guide of 'how to build your own laparoscopic home trainer', with take home disposable laparoscopic instruments which cost between £25-£85 that are incorporated into the cost of a laparoscopic skills course.

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Using interviews to gain an insight into the factors which drive the career choices of junior doctors

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In 1996 The University of Liverpool reformed its medical curriculum from a traditional lecture-based course to an integrated PBL curriculum based on the recommendations included in *Tomorrow's Doctors*. Initial evaluations of this reform have focused on the perceived competencies of the final two cohorts to graduate from the traditional curriculum and the first two cohorts to graduate from the reformed curriculum as PRHOs/F1s. Recently, the project has been extended to examine the influence of curriculum reform beyond the F1 year by asking the same cohorts of graduates about the influence of their medical curriculum 6 years after graduation.

During February 2006 – June 2006 interviews took place with 45 graduates from the final two cohorts of the traditional curriculum and from March – June 2007 25 interviews took place with graduates from the first cohort to graduate from the PBL curriculum. The interviews had 2 distinct parts. One was to look at factors determining career choice, and the other was to look which aspects of the undergraduate curriculum were useful to how they practice as clinicians. The focus of this presentation is to summarise the reasons they gave for their career choice. As all the interviewees were 6 years past graduation they had made definite decisions about their career path.

The majority of interviewees had decided upon career choice in the postgraduate setting although the PBL graduates were more likely to have been influenced by their undergraduate curriculum than their traditional counterparts. Graduates often talked about very personal reasons for career choice and gave their own individual experiences. A very small number from both types of course arrived at university with pre determined career paths. The desire for work life balance came out as a significant factor. Despite the increase in community based education in the PBL curriculum there was little difference in the reasons given for career choice in general practice by graduates from either course, often making a decision regarding general practice after graduation. Psychiatrists from both curricula though were inspired by their undergraduate attachment in psychiatry. Many graduates complained about difficulties obtaining training posts since the introduction of MMC which often had to be taken into consideration.

Doctors have a variety of reasons, some of them personal or particular to their own situation when making career choices. These interviews do show that the majority of these doctors preferred to make a career choice based on postgraduate experiences.

Professionalism

A Study into Altruism, Cynicism and Empathy (ACE) in 4 year groups of Medical Students undertaking a PBL curriculum

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The investigation used an anonymous voluntary cross sectional 37 item questionnaire constructed from 20 items of the Jefferson Scale of Physician Empathy (JSPE)¹ interleaved with 10 items from the cynicism and 7 items of the altruism subscales of Wrightsman's Philosophies of Human Nature Scale (PHNS)². The 7 point positively scored Likert scale was then aggregated into the relevant subscale score. Two different first year cohorts of medical students were surveyed; one in the first week (1a) and the other after 6 months (1b). The fourth year students (4) were surveyed in the middle semester and were resurveyed in the first week of their final year (5). The final summative assessment at Liverpool is undertaken at the end of the fourth year of study.

Results: 724 questionnaires were completed (response rate = 58.4%), 252 (36%) male and 453 (64%) female. All results are mean values.

Year	Altruism Scores			Cynicism Scores			Empathy Scores		
	Male	Female	All	Male	Female	All	Male	Female	All
1a	29.62	29.85	29.80	37.82	33.70§	35.41	104.05	111.88§	108.50
1b	27.84	30.01§	29.41	38.29	35.95*	36.68	106.69	109.82	108.94
4	26.80*	28.70	28.08*	39.85	36.01§	37.23	103.65	111.20§	108.62
5	27.64*	29.43	28.86	38.17	33.63§	34.99#	104.59	111.10§	108.34
All	28.31	29.56§		38.33	34.58§		104.61	110.73§	

* Compared to 1a p<0.05, # compared to 4 p<0.05, § compared to male p<0.05

Graduates (149) were less altruistic (28.1 v 29.4 p=0.014) and more empathetic (110.4 v 108.1 p=0.03) whereas overseas students (56) more cynical (40.1 v 35.5 p<0.001) and less empathetic (104.6 v 108.9 p=0.007) than peers.

Correlations - altruism and cynicism (Pearson Correlation = -0.291 (p<0.0001)), empathy and cynicism (Pearson Correlation = -0.297 (p<0.0001)) and altruism and empathy (Pearson Correlation = 0.225 (p<0.0001)). Reliability of subscales: Cronbach's Alpha - altruism = 0.71, cynicism = 0.77, empathy = 0.77.

Conclusions: Females are more empathetic and altruistic and less cynical than males. Cynicism varies with time and context and is reversible. No difference between first week and final year students. There are correlations between cynicism, altruism and empathy. Overseas students are more cynical and less empathetic whilst graduates are more empathetic and less altruistic than peers.

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Staff Development

The views of clinical psychiatric teachers about teaching psychiatry to medical students?

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There is some evidence that medical students who experience good quality teaching are more likely to choose psychiatry as a career^{1, 2}. It is argued that, to date, work has focused largely on the student experience³. There has always been an understanding between medical schools and the NHS that their relationship is mutually beneficial. However, with increasing pressure on both types of organizations to increase efficiency as well as quality the relationship can become strained. Seabrook⁴ undertook a small qualitative study and identified staff difficulties in meeting teaching commitments in the light of other service pressures and also some dissatisfaction with medical schools and clinical academics. Hendry et al³ concluded that more reciprocal links between hospital staff and medical schools, opportunities for consultants to understand and to comment on curricular and timetable developments and recognition of teaching were needed. Through qualitative interviews, psychiatric education leads and others responsible for organizing teaching at medical schools identified time and resources as factors for staff non engagement in clinical teaching⁵. General adult psychiatrists have particularly experienced increase in workloads⁶ and may also feel that they bear the brunt of the teaching load.

Aim

To find out the level of contracted teaching, views about being a teacher, views about students and how teaching is facilitated or thwarted for clinical teachers at 3 East Midlands medical schools.

Method

A study specific questionnaire will be emailed to all consultant psychiatrists, training doctors and doctors in non training posts, who teach students from Derby, Leicester and Nottingham medical schools. Earlier work has been used to develop the questionnaire.

Procedure

The project lead will be responsible for sending out the questionnaire to ensure that respondents are able to answer honestly without fear that the responses will be used to increase their teaching or identify performance issues. There will also be two reminders.

Sample

Clinical teachers who teach medical students from Leicester University and Derby/Nottingham medical school (n= approximately 170. Data collection is currently underway.

Analysis

SPSS will be used to analyze the quantitative data. All open ended data will be analysed thematically.

Conclusion

We already know that the issues are not region specific so the findings should be generalisable to the rest of the country. This work will help identify more clearly how the Royal College of Psychiatrists can facilitate clinical teachers to maintain and improve their clinical teaching skills and thereby better promote psychiatry.

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Student Support

Disabled Medical Students – Disclosure and Support

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Background

There has been growing pressure on UK medical schools to admit disabled students since the introduction of the Disability Discrimination Act (DDA) 1995. Students with a variety of disabilities and chronic illnesses are now studying medicine, but there is little data on the disabilities represented or support available to such students. The aim of this study was to obtain a snapshot of disability and disclosure of disability, difficulties experienced and support requirements in medical students.

Methods

This was a cross-sectional, electronic questionnaire survey of all Aberdeen University medical students (November 2007) (n=944). Students were asked if they had disclosed a disability on admission, and again after being given the DDA definition of disability. Questions covered included: nature of disabilities, their effects on studies and support accessed. Respondents reporting disabilities were also asked if they had experienced discrimination due to disability.

Results

Responses were received from 328/944 students (35%).

Only 19 (6%) students reported having a disability on admission to university, of whom 12 (63%) had disclosed this. However, a further 42 (13%) students regarded themselves as meeting the DDA definition of disability after reading it. From this point on, data is reported from both groups (61 students). Disabilities described fell into five categories: specific learning difficulties, mental health issues, sensory impairment, chronic illness, and mobility impairment. These were reported as impacting on studies in various ways.

66% of disabled students had not sought any specific support from the university but 70% of students thought the general support available was sufficient. Support utilised included extra time in exams, assistance with claiming Disabled Students' Allowance, and arrangements for accessible placements.

12% of disabled students reported discrimination usually in the form of comments from medical staff or other students which suggested poor attitudes towards disability.

Conclusion

Our study shows that not all disabled students disclose their disability at admission. Furthermore, medical students have a narrow view of what defines disability, which also reduces disclosure. While some support can be accessed without disclosure, the majority requires at least partial disclosure. Students seem to have a dilemma about disclosing disability, and thus accessing full support, and avoiding discrimination (by non-disclosure). More work is needed in this area.

Teaching About Specific Subjects

Death, anxiety and recent experience of bereavement among medical students: a cross-sectional study in the University of Cambridge

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Background

Medical students' personal experiences of bereavement and their difficulties with death and dying may influence their future care of dying patients.

Aims

In one UK medical school to investigate:

- 1) Students' experience of personal loss.
- 2) Students' level of death anxiety (DA) at different stages of the course.
- 3) To compare these data with Dickinson's 1995 study of US final year medical students.

Methods

Cambridge medical students were given a questionnaire during the 2007/2008 academic year that included Templer's Death Anxiety Scale: fifteen items where 0 indicates low DA and 15 high DA. Demographic information was requested.

Results

376 responses received to date. Data collection is complete for Year 1 (182/267 68.2%) and Year 4 (104/138 75.4%). Year 6 data collection is still underway (90 responses to date): analysis of the complete dataset will be presented. Mean age was 20.6 years, 54% being female.

Over one third (141/376, 38%) had experienced the loss of someone close: parents (12), friends (34), grandparents (99), aunt or uncle (25). Thirteen losses were within the past month, 36 within 6 months, and 74 within one year.

The mean DA scores [Standard Deviation] were; Year 1 5.4 [3.2], Year 4 5.9 [2.9], Year 6 6.1 [2.6]: the rise in DA between Year 1 and Year 6 did not reach statistical significance in this interim analysis ($p = 0.063$). Templer's mean DA for undergraduate students' is 6.4: Dickinson found a mean DA of 5.0 among US medical students.

A majority reported being afraid of the thought of death (62%) and fearing dying a painful death (59%). Fewer reported the sight of a dead body as horrifying (7%) and being really scared of having a heart attack (11%).

The DA of final year women (6.8 [2.7]) was significantly greater than the DA of final year men (5.5 [SD 2.4]) ($p = 0.021$). There was no significant difference for DA between men and women in Year 1 or Year 4. There was no significant difference for DA between those with or without experience of close losses in any of the Year groups. Dickinson found lower DA among men medical students and those with close losses.

Conclusion

Many students had experienced losses that might make them vulnerable to stress. The implications for clinical training are discussed.

Pharmacology: Do medical students learn what we teach?

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Background

Major concern has been expressed about the knowledge and skills of newly qualified doctors in prescribing drugs, and these have been contrasted unfavourably with those of nurses¹. Developing an understanding of the rationale and practice of using common drugs is a complex process. Clinical pharmacology has always had a major place in the curriculum of Leicester Medical School. Nevertheless examiners have consistently commented that, relative to their other skills, students' confidence in making prescribing decisions is often low.

Aim

The aim of this project was to implement an educational intervention to promote student engagement in the learning of clinical pharmacology, rather than the delivery of further lecture-based teaching.

Method

A project called 'Desert Island Drugs' was introduced into the Clinical Methods block, which is undertaken by 270 third and fourth students each year. Students are allocated to small groups of 10-12. They are tasked to choose the 8 most important drugs (in addition to paracetamol, prednisolone, amoxicillin and insulin) to take to a desert island to treat patients, who have no other access to health care. Strangely, their illnesses will be exactly those seen in primary care in the East Midlands.

Students are required firstly to compile their personal list considering efficacy, side effects and cost. They then debate in their small group a consensus list. Each group presents its selection to three other groups and their tutors. Following the presentations, which are assessed for originality of approach and engagement of the audience, the groups debate the pros and cons of their selections, in a discussion mediated by a senior pharmacist.

Evaluation

The presentation techniques used varied from 'death by PowerPoint' through to innovative dramatic representations of particular drugs. The impact of the project has been evaluated by analysis of student feedback and change in knowledge on a 65-item Extended Matching Question paper.

Results

The paper will present the students' views about which aspects of pharmacology they best learnt from engagement with the project. Data concerning knowledge change on the EMQ test done by 132 students from three consecutive cohorts will also be given.

Reference:

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Using live theatre to communicate the impact of domestic abuse to medical students

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Context and setting

The University of Aberdeen has a five year undergraduate medical course. Until 2007, there was no teaching in the curriculum on domestic abuse. We introduced a new means of teaching students about domestic abuse, based around a live theatre production.

Why the idea was necessary

Over a hundred women die yearly in Scotland as a result of domestic violence. However, abuse can be psychological, financial or sexual as well as physical and affects 1 in 4 women and 1 in 6 men. Around 1% of visits to accident and emergency departments are estimated to involve domestic abuse and so medical staff are often the first people victims turn to. Doctors need to know how to recognise and, more importantly, understand the reality of domestic abuse.

What was done?

All 2nd, 3rd and 4th year medical students and staff were invited to attend a live theatre production which aimed to create a realistic scenario of abuse in the home. Live drama is a high impact communication tool which enables audience interaction with the actors. Geese Theatre Company is a team of actors who usually work with perpetrators of abuse and violence within the criminal justice system. They performed a drama called 'Stay' which depicts the collapse of a couple's relationship in the face of the man's controlling behaviour, emotional abuse and physical violence. It also explored the experiences of the woman in relation to the abuse and the impact on her child. After the performance the actors and tutors conducted a 'debrief' question-and-answer session for students.

Evaluation and impact

The feedback from those who attended was excellent. It was described as 'as realistic as it gets'. Students and staff felt that the performance was hugely believable and a fantastic way of raising the issues of domestic abuse. Domestic abuse is neglected in the medical curriculum and live theatre is an extremely effective way of communicating the reality of such abuse to tomorrow's doctors. The performance was a challenging insight into abuse, the attitudes and beliefs that sustained it, and the impact on the victim.

Why undergraduate paediatric musculoskeletal medicine is in its infancy

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Background and Aims

Paediatric musculoskeletal (pMSK) complaints are common, with a wide spectrum of presentations from benign and self-limiting to debilitating and life-threatening. However, delay in accessing care for conditions with pMSK presentations is well documented and poor clinical skills are a likely contributory factor. The aim of this study was to establish current pMSK teaching at UK medical schools, and explore potential barriers to inclusion of pMSK within undergraduate programmes.

Methods

The study was conducted in two phases. In phase one, current pMSK teaching in UK medical schools was surveyed using a questionnaire, sent electronically to Child health (ChH) leads at all UK medical schools (N=30). For the second phase of the study, to explore the perceived difficulties in teaching pMSK in medical schools, individual interviews with paediatric teachers (N=4), and focus groups (N=3) with medical students were performed at different UK locations.

Results

Twenty-three medical schools were represented in phase one (77% response rate). Respondents stated that the majority of 'Child Health' is taught in Years 4 (14/23) or 5 (15/23) and pMSK taught in less than 50% of schools (Table 1). ChH leads felt that although teaching pMSK clinical skills was important, it was less well taught than other bodily systems (such as cardiovascular, respiratory and abdominal systems).

Interviews and focus groups in phase two suggested that the barriers for teaching pMSK include: lack of time within the curriculum for child health, the pressures of covering all paediatric clinical skills and knowledge, non-inclusion of pMSK in summative assessments, the intrusive nature of pMSK examination, availability of suitable patients on the wards, and lack of reinforcement in clinicians' practice due to poor practitioner confidence.

Conclusions

pMSK medicine is deemed to be poorly taught at UK medical schools. Barriers to pMSK teaching are complex and need to be managed rather than simply addressing teaching content. Consideration to the learning environment, student motivation, clinician attitude and skills needs to be made, with a corresponding shift in the community of practice within undergraduate ChH. There is a need to achieve consensus on pMSK teaching content, and use this to design an evidence-based and pragmatic curriculum whilst working towards changing attitudes and teaching environments.

Table 1

	Teaching within UK medical school (n, %)
pMSK history taking	9/23 (39%)
pMSK screening examination	8/23 (35%)
pMSK regional examination	5/23 (22%)
pMSK lectures	9/23 (39%)
pMSK taught within adult musculoskeletal medicine	3/23 (13%)
pMSK within summative assessments	6/23 (26%)

Attitudes to illness and disability among medical students

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Background

The inclusion of disabled students in medical schools and disabled doctors in the workplace is a contentious issue. In the UK, legislation¹ requires that universities do not discriminate against disabled students. Current debate centres on what should exclude a disabled person from medical school. There is also continued concern about how doctors manage their own health and their attitudes to ill colleagues.²

As part of a study of disability, we explored the views of University of Aberdeen medical students towards disabled medical students and doctors.

Methods

This was a cross-sectional, electronic questionnaire survey of all medical students at the University of Aberdeen in November 2007 (n=944), using a combination of closed and open question styles.

Results

Responses were received from 328/944 students (35%).

75% of respondents thought that people with some disabilities would be unable to become a medical student, 80% that some disabilities would prevent someone from working as a doctor and 58% that disabled students should have adjustments made to assessments.

Disabilities thought to prevent the work or study of medicine could be categorised as: inability to complete medical school, inability to work as a doctor, adverse effect on patient safety and adverse effect of work on health of doctor. Few respondents mentioned the relevance of the severity of illness or disability.

Whilst the attitudes of respondents seem to change as they progress through the course, in general their views on disability seem quite rigid. This may reflect medical students' attitudes to their own health and how they might deal with future illness or disability.

Conclusion

Medical students have good insight into the types of condition which would make practicing as a doctor difficult, but do not seem to consider severity or ability to compensate for difficulties as relevant compensatory factors. This rigid attitude may discourage medical students and doctors from disclosing problems (their own or concerns about colleagues), or seeking appropriate care if they become ill. Further work is needed to explore these issues in more depth.

References:

1. HMSO. (1995) Disability Discrimination Act 1995
2. Doctors' Health Matters: The work of the Doctors for Doctors Unit in supporting doctors and promoting wellbeing within the profession. Health Policy & Economic Research Unit. April 2007

Gender-specific learning opportunities? A qualitative analysis from the obstetrics and gynaecology setting

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Introduction

A positive student learning experience in Obstetrics and Gynaecology correlates favourably with future career choice. Considerable attention has been directed towards defining and creating such a positive experience in light of recent recruitment problems within the speciality.

Aims and Objectives

To improve the learning of students during undergraduate training in Obstetrics and Gynaecology. To identify perceived gender-specific barriers to learning and determining whether final year medical students and junior doctors feel adequately prepared to perform a pelvic examination following undergraduate training and early postgraduate experience.

Method

We conducted a focus group study with final year Cardiff medical students (n=17) and separately first year junior doctors (n=7). We choose to study the student experience within the obstetric and gynaecology because of the rich opportunities to learn how medical students encounter new professional skills and opportunities to interact with new healthcare professionals such as midwives. Sessions were transcribed, coded, and themes were determined by content analysis.

Results

Medical students identified the consent process to be the greatest barrier to pelvic examination experience. More often this included situations where consent was obtained on behalf of the medical student, for example by a senior medical team member or healthcare professional. Male and female medical students discussed male students being inappropriately introduced to patients. Students described sexist introductions as the greatest challenge for obtaining consent from patients.

Our qualitative approach permitted us to identify circumstances where male students were more likely to be refused examination participation compared with their female peers. This early work indicates males have adopted strategies to overcome perceived sexist barriers. We shall discuss the dynamics and involvement of healthcare professionals and their efforts to obtain consent from patients, on behalf of students, and whether this could be a barrier of PE experience.

Conclusion

Males are adopting strategies to overcome commonly discussed gender-specific barriers to obtain more practical 'hands on' experience. Teaching needs to recognise this issue in order to progress the development of skilled and competent doctors who serve a subsequently safer patient population. It is the role of medical educators to identify those barriers and work effective solutions.

Patient safety in health care professional educational curricula: examining the learning experience – a case study for Medicine Phase 1

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Introduction

Keeping patients safe is critical and the pre-qualification education of health care professionals is a key intervention. However, there has so far not been any strategic approach on how patient safety is taught in healthcare professional curricula¹. The current case study is part of a multi-centre project investigating this issue and the findings presented relate to a single UK medical course. Eraut's three professional contexts provided the theoretical background to the project². This presentation focuses on results obtained from the academic context and tackled patient safety education as planned, delivered and received.

Method

To gain an insight into patient safety education as planned we undertook a documentary analysis of the electronic curriculum and conducted interviews with course leaders. To investigate patient safety education as received we conducted focus groups with students from the second and final years of the course and with patients involved in delivering the curriculum. This was complemented by an interview with an FY1 doctor with a special interest in patient safety. To gain an insight into patient safety education as delivered, we undertook observations of academic teaching sessions. Data were analysed using a thematic approach.

Results

We found documents and interviews to be relatively consistent. Both referred to broad umbrella terms reflecting difficulties defining patient safety and the integrated nature of the curriculum. Both also matched in that there was no designated module explicitly labelled "patient safety" but nonetheless some parts of the curriculum were viewed as more pertinent than others (with a skill-based emphasis). Policy drivers were perceived as the main external influence on patient safety education. Focus groups confirmed the broad, all embracing and integrated nature of patient safety in the curriculum. Participants also felt that placements and clinical skills were crucial. Students favoured an approach to learning characterised by theory preceding practice. Lectures were viewed less favourably. Two skill-based observations took this format and accordingly students appeared concentrated and keen. In contrast during a lecture on pharmacology students appeared loud and distracted.

Discussion

The concept of patient safety appears to be difficult to grasp for those who plan and experience medical education. Nevertheless, there is a high degree of consistency regarding the ways which the topic is tackled and viewed, as well as a general consensus on the importance of clinical skills. The results can help to inform future efforts to make patient safety more explicit in the medical curriculum.

References:

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2. Eraut M. Developing Professional Knowledge and Competence. London: Falmer Press, 1994.

Use of a modified Delphi method to develop Labour Ward learning objectives for undergraduate medical students

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Background

The labour ward experience, an important part of learning, has changed emphasis with students rarely performing deliveries themselves (Higham 2006). Learning objectives should reflect the changes in labour ward experiences and value those commonly available in today's labour ward. However, little guidance is available in terms of the learning objectives (LOs) for Obstetrics and Gynaecology (O&G) teaching at undergraduate level.

Methods

This study used a four-round modified Delphi study conducted over a six week period during July and August 2007, using a panel of experts identified as stakeholders in the teaching and learning of medical undergraduates in the Labour Ward. The panel included midwives, medical students and physicians, including anaesthetists, gynaecologists and obstetricians.

Results

Individual interviews were conducted with members of the panel of experts to create the questionnaire for Round One of the Delphi process. This identified an initial list of eighty LOs. In Round One, panellists were given this questionnaire and asked to score each of the 80 suggested objectives in order of importance (1 being least important). All participants returned completed forms. The mean score was then calculated for each objective. Objectives with low mean scores were removed for the next round. This process was repeated three times, and the list of LOs distilled to nine by Round 4.

Conclusions

Through a Delphi technique, clinical staff identified the top nine LOs for MBChB labour ward teaching. Attitudes were new and overall the LOs placed more emphasis on the importance of developing professional attitudes and skills than knowledge. The LOs were consistent with the principles of Tomorrow's Doctors. Further research is needed to investigate if different LOs are required at various level of UG training. We believe these LOs can be used as practical guidance for teachers of O&G.

Teaching and Learning

Assessing student opinion of a premedical handbook aimed at introducing clinical observation skills

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Introduction

Applicants to medical school may suffer from “pre-med syndrome”, where they concentrate on academic achievements to maximise their chances of success. Locally, successful applicants have sought advice on how best to prepare themselves before starting their studies. Early community experience of medical students helps them socialise to their chosen profession and can make their learning more real and relevant. Providing community experience through written material is difficult, but “the art of observation” can be taught using written materials, and may provide an increased awareness of the doctor-patient relationship and increase confidence in subsequent clinical settings.

To address this expressed need, the University of Aberdeen developed a pre-medical booklet for those students accepted at medical school, issued 4-6 weeks before the start of term. The booklet comprised sections on developing objective observational skills through directed tasks, study skills, reading resources and a “medics-4-medics” section containing advice from existing students.

The booklet formed the first stage of a step-wise introduction to observational skills, further supported by practical exercises during Freshers’ week and thereafter as part of the MBChB programme.

Methods

An adapted consumer information rating form was administered to all first-year students during week 3 of the first term.

Results

128/174 students (74%) completed the evaluation form. 96% (123) had received the booklet and 77% (99) read most or all, whilst everyone read at least some. 28% (36) found the observational skills section useful or very useful and 70% (90) found it at least somewhat useful. 36% found the study skills section useful or very useful and 54% found the medics-4-medics section useful or very useful. 37% agreed that it helped them prepare to study medicine and 57% agreed that it raised new ideas. Overall, 67% thought the booklet was good or excellent.

Discussion and Conclusions

The booklet was well read. The most popular section was the medics-4-medics, followed by the study skills advice. The observational skills section was not as popular as had been hoped, possibly because its future relevance may not have been fully appreciated. Most students thought that the booklet raised ideas they had not thought about previously. Perhaps students were looking for a “survival guide” – with practical advice on starting a new, and daunting part of their lives, and thus tending towards the study advice and tips from older students.

Pre-course literature may smooth the transition from school to the challenges of a higher education. It may encourage early development of skills in clinical observation and although students may not be initially attracted to this idea, they admit that it is introducing new concepts that will underpin their future study and career.

MESS: a peer to peer teaching support system for students delivered by students

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Medical Education Support System (MESS) is a peer-to-peer tutoring network that offers coaching in the form of 2-hourly sessions in knowledge and skills. It began in 2004 and was established by medical students with an interest in teaching and learning, and whose philosophy was to provide an additional platform for students to be interactive in their learning and to feel at ease in discussions.

The MESS sessions happen twice weekly, and have structure, with defined learning objectives, and occur as an interactive lecture environment. The Year 1 student groups are the main users of these sessions. Students who apply to become a 'MESS tutor' are from Year 2 and above, are given an introductory seminar and audited to assess their ability to teach. Other health professional students, such as physiotherapists, are now assisting in the MESS tutoring, particularly in the learning and teaching of the anatomy of the upper and lower limbs.

The paper discusses the issues surrounding the set up of MESS, and how it contributes to teaching skills acquisition and supports the inter-professional components required by the GMC in *Tomorrow's Doctors'* (2003).

Doctors – Superficial or Deep??

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Aims

1. To investigate the Learning Approaches (Superficial/ Strategic/ Deep) taken by University College Dublin Medical students
2. To assess the correlation between individual Learning Styles, sub-categorising by gender

Methods

Permission to survey was attained from the School of Medicine. Ethical Exemption was awarded. The short version of Entwistle's Approaches & Study Skills Inventory for Students (ASSIST) was distributed during Week One, Semester One, 2007; to first year Medical students. Assimilated data was analysed utilising the Statistical Package for the Social Sciences.

Results

106 (82.2%) of 129 enrolled Medical students completed the questionnaires. 84.4% of female and 80% of male medical students. The most prevalent approach is Strategic, least prevalent Superficial. T-tests reveal no statistically significant gender differences. The non-parametric Spearman's Rank method was utilised to assess correlation between Learning Approaches. The Deep and Strategic Approaches correlate positively, significance level < 0.05 , whereas there is no correlation with the Strategic Approach. It is imperative to note that all students surveyed are first year, first semester undergraduates, so their responses largely reflect their school education, rather than a tertiary education.

Conclusion

The desirable Deep Learning Approach implies the intention to actively form a personal understanding of the topic under study, critically analysing the evidence and assimilating an individual opinion; the undesirable Superficial Learning Approach implies that a student merely studies to attain the pass mark, motivation being extrinsic. With increasing emphasis upon the continuum of Medical Education it is reassuring that medical students exhibit aspects of androgogical learning, displaying the desire and capacity for meaningful intellectual gain.

The prospect of serious games as a teaching tool in medical education

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Background

Recently, medical educators have linked with games companies to make the use of games in the education of healthcare professionals a reality. This has resulted in the evolution of 'serious gaming in healthcare'. Such a learning methodology has great scope, combining education with enjoyment. However, the boundaries of this new teaching tool are ill-defined.

Aim

To ascertain the extent to which serious gaming can help the teacher to pass on clinical knowledge and also to consider the value of games in student assessment.

Methods

A comprehensive and critical review of the literature was performed. Data was retrieved through searches from Medline, Embase, Cochrane's EPOC, Controlled Trial databases, ERIC, British Education Index, Web of Science, BEME/Cochrane protocol.

Results

The literature demonstrated that serious games:

- A. may provide transferable skills and knowledge
- B. may increase confidence and performance in a set task
- C. can be replayed to assess a student's performance
- D. can be analysed to assess how the student arrived at a set answer
- E. can not assess open ended skills. e.g. Leadership
- F. do not reduce the possibility of cheating

Conclusion

Our review suggested that game playing would help to encourage a 'learning environment' that increases the student's motivation to learn and self assess.

It has been proposed that the healthcare student will benefit from the virtual world that the serious game can provide, resulting in better transferable skills and knowledge than didactic learning. This may increase self-confidence and result in enthusiasm for the subject, which could lead to increased time on task and ultimately lead to improved performance.

Assessment must measurably show that the student has actually learned the desired material and that the measurement is itself accurate. Challenges in assessment include open-ended simulations where the game aims to teach abstract skills such as leadership or where more than one solution is appropriate. However, serious games allow the advancement of assessment methods beyond the traditional multiple choice question; assessment of the learning can be based on the arrival at the correct answer and completion time. These can easily be recorded and replayed for future reflection by both students and teachers. Cheating in the context of serious games ranges from additional assistance through to alteration of the game programming. This may be partly prevented by teacher observation and questioning in the process of the game.

Portfolio reflections on experience of graduate-entry medicine in a UK medical school

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Following Tomorrow's Doctors (2002) the graduate-entry medicine (GEM) school at Derby has used educational research to design a curriculum to enhance the students' critical and reflective thinking, aiming to develop not only their knowledge while studying at medical school, but also their skills for on-going, life-long learning. To develop their reflectivity the students are required to write a portfolio. The advantages of this approach have been outlined by researchers in this area (e.g. Driessen, van Tartwijk et al. 2005; Driessen, Overeem et al. 2006). Within the portfolio the students write a reflective account of their first year at medical school, describing, analyzing and evaluating their experiences and their progress. Problem-based learning (PBL) is one of the main teaching approaches used at the medical school. It is an approach that is increasingly being introduced in medical schools, although there is on-going discussion about its effectiveness and how this can be demonstrated in research (e.g. Jolly, 2006; Colliver & Markwell, 2007).

The present study uses qualitative, theme based analysis and grounded theory to categorize a purposive sample of students' thoughts and experiences from their portfolios, providing a depth of knowledge about what it is like for GEM students. The study found that students reflected on a wide range of themes. Teaching approaches explored included anatomy, clinical skills, lectures, workshops, patient contact, self-directed learning and PBL. PBL was explored by the students in great depth, including their thoughts on group dynamics, facilitation, silent students, learning objectives, leading the sessions, planning, teaching others and the difficulties of transition between groups. This analysis also takes into account what may be considered as more personal issues such as the challenges of balancing studying with other obligations, present and past learning experiences, and social support. As experienced graduates, these students' experiences are, in many ways, different to undergraduate medical students and their reflective writings demonstrate this. There were also some themes exploring the learning experiences that are less likely to be explored in other studies due to their subjective nature, such as motivation, control of learning environment, learning styles and self-reflection.

Portfolio assessments can support the students to reflect on their own subjective experiences at medical school. This study shows the depth and breadth of the students' experiences, that they bring to reflection. It will be beneficial for this exploratory study to be developed in future research.

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Integrating the teaching and assessment of health care inequalities in undergraduate paediatrics in New Zealand

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Introduction

Patients from ethnic minority groups often receive a lower quality of health care and though medical students should learn about these disparities they are included in few curricula^{1,2}. It is a challenge to ensure such disparities are learned and assessed in the clinical context. In New Zealand, Maori receive a lower standard of health care and have poorer health outcomes than non Maori^{3,4}. Given that nearly 40% of Maori are under 15 years of age, medical students need to learn about these disparities in care during their 5th year paediatric rotation. In the light of this, we revised the curriculum, defining clear learning outcomes relating to Maori health and health care disparities, and integrating this learning within the clinical rotation and paediatrics assessment.

Method

Learning outcomes were reviewed to include health care disparities within the Māori Health domain. A lecture on Hauora Māori (Māori Health) on the first day of the six-week rotation was introduced which addressed selected aspects of Māori child health including health care disparities. During the rotation, students work with a range of children and their families from diverse cultural backgrounds. The paediatrics assessment includes the submission of three case reports, one of which concerns a Maori child and their family. Students are required to critically review the care the Maori child received, identifying problems with access to and through care, and auditing the quality of care received against recommended best practice. Finally, students are required to reflect on their learning and state how this influences their future practice and professional development. Students and teachers are fully aware of assessment criteria and the same teachers mark all three case reports.

Results

The Māori case reports indicate most students show a good understanding of the issues involved. A small study shows little inter-observer variability between case report assessors. A student survey indicates that both the lecture and the case report are deemed helpful in learning about the issues involved in delivering equitable care to Māori children.

Conclusion

Placing the learning and assessment of health care disparities in the context of a clinical case report and clinical rotation enables students to learn about factors contributing to these inequalities through everyday clinical practice. By refocusing learning and assessment to include a consideration of health care disparities and integrating this within a clinical rotation, student learning is enhanced with little additional burden being placed on clinical teachers.

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Does experience of teaching benefit students?: Evaluation of involvement in peer-led initiatives in medical education

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Introduction

The curricular outcomes as defined in Tomorrow's Doctors include the requirement for students to "develop the skills, attitudes and practices of a competent teacher".¹ The interpretation of this directive varies between medical schools from an optional formal medical education component to a less-defined implicit conveyance of generic teaching skills, such as presentation skills and leadership responsibilities. The growth of peer-led educational programmes provides students with new opportunities to develop such skills. This study was conducted to evaluate the perceived benefits of peer-led initiatives to student-tutors.

Methods

Fifty-seven students who were involved in the delivery of peer-led basic sciences and clinical skills revision programmes were asked to complete a fourteen-item questionnaire, consisting of 5-point Likert scales and free text boxes. Themes included were benefits in terms of acquisition of skills, knowledge and confidence, prior experience of teaching, motivations for involvement and difficulties encountered.

Results

Fifty-four students (95%) responded to the questionnaire. On a 5-point Likert scale students reported that the teaching was highly beneficial (mean: 4.6), consolidated existing knowledge (4.2) and increased confidence in teaching compared to previously (4.0). Fifty-two students (96%) replied that they would "most definitely" like to be involved with teaching again. Responders offered a range of motivations for participation; these included a desire to consolidate existing knowledge (n=27), enjoyment of teaching (n=23), a desire to help junior students (n=14), wanting to gain experience of teaching (n=13) and an interest in a career in medical education (n=9). In addition, other benefits reported by students included practicing communication and presentation skills, forging links between different year groups, developing team-working and leadership skills and experiencing different learning and teaching styles. The main difficulties identified were conflicting time commitments, an occasional reluctance of attendees to participate and limitations of student-tutors' knowledge.

Conclusion

As a doctor, the ability to teach and convey information to others in a readily-understandable way is vital in the education of patients, colleagues and students. This study has described a range of benefits to student-tutors, not least the acquisition of new skills and the enjoyment of teaching, as evidenced by an overwhelming willingness for future participation in teaching.

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Evaluation of a peer-led basic sciences teaching initiative

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Introduction

The benefits of peer-led education are well-described in the literature in primary and secondary education; however, to date reports in medical education remain limited and describe programmes co-ordinated by faculty staff.^{1,2} This study serves to evaluate an initiative which has been running for three years, conceived and delivered by medical students in their clinical years to support junior students approaching an important pre-clinical written assessment.

Methods

The course consisted of eleven weekly sessions of two hours duration and was available to all students in the cohort. Each session included a short lecture and structured case studies, the latter forming the basis of small group teaching by a team of senior students. The programme concluded with a written examination, in a similar style and format to the faculty assessment. In order to evaluate the programme, attendees were asked to rate how helpful they found the sessions on a 5-point Likert scale. In addition, we sought consent from students, both those who had attended the programme and those who had not, to utilise their official examination results to investigate if the two groups of students performed differently. A ratio of performance in the index assessment to previous performance (using a composite score generated by the official faculty examinations) was compared for students attending no sessions, 1 to 4 sessions, 5 to 8 sessions and ≥ 9 sessions.

Results

The evaluation ran for two consecutive years and attendance was variable, ranging from 60 to 150 students per week. Consent was obtained from 184 students for use of their data and quantitative analysis was performed as described above. 86% of attendees rated the programme as 4/5 or 5/5 in terms of usefulness. Quantitative data showed a trend of improved performance from those who had not attended to those who had attended more than 9 sessions, however, this was not statistically significant.

Conclusion

Junior students found the programme to be helpful in preparation for their assessment and this was reflected by both positive feedback and the high level of attendance. Although a significant quantitative difference between attendees and non-attendees could not be demonstrated, these results suggest that there may be a small benefit in terms of examination performance and future work should seek to explore this.

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Teaching Leadership in the Medical Undergraduate Curriculum

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The General Medical Council (GMC) recognises that doctors need management and leadership skills.¹ The Hull York Medical School (HYMS) has responded by having “Management of resources for quality and efficiency” as one of the seven vertical themes running throughout its five year undergraduate programme. It also now offers a Student Selected Component (SSC) in Leadership as one of a number of optional courses available to fourth year students. There are many models of leadership; the one chosen for the course was that based on Covey as it accepts that leadership can be learned and provides a scheme by which it can be undertaken.² The current SSC consists of a three day programme delivered in collaboration with Karen Pickering and Associates (KPA) and the Improvement Foundation. KPA work in the NHS and industry as consultants in management and leadership skills and the Improvement Foundation are a group involved with promoting quality in healthcare.

Day one begins with an introduction to the differences between management and leadership followed by a look at the individual participants’ personality (Myers Briggs) and learning style. On day two, knowledge of self forms the basis from which the exploration of Covey’s model occurs. Day three introduces the concept of Quality Improvement and the tools available to undertake this. A variety of tasks and reading options are provided for study in between the intensive teaching days. The assessment of students was by individual presentation to a set rubric which they all passed.

The course was evaluated by pre- and post- course questionnaire. Seven students undertook the course. The results support the notions of leadership training for all medical students and for the concept that leadership could be taught which increased after the course. Students gained confidence about leadership and became more aware of the differences between leadership and management. These conclusions must be tempered by small numbers and self selection of students. Further evaluation of future courses is intended along with possible long term follow up of participants.

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The value of peer-assisted learning to support the introduction of a new assessment format

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Introduction

The physiological and psychological effects of examination stress are well-documented in the literature.^{1,2} The experience of stress is influenced by a number of variables, including individual factors (e.g. age, gender, personality) and contextual factors (e.g. nature of assessment, social support).³ In addition, the perception of control and ability to predict future events is a powerful moderator of stress.¹ During the academic year 2007-08 Leicester Medical School changed from long case assessments to objective structured clinical examinations. We established a peer-led programme in order to support third year medical students through this transition.

Methods

A group of senior clinical students, with guidance from Faculty staff, co-ordinated a two-day programme. The course was made available to the entire cohort and consisted of lectures clarifying the examination format and the assessment criteria, practice stations and communication and clinical examination skills revision. The latter was undertaken in groups of approximately 20 students each led by a team of three senior students. In order to assess the value of the programme attendees were asked to complete a questionnaire, which included 5-point Likert scales and free text boxes.

Results

More than 100 students attended all or part of the course and 61 students returned questionnaires. Students reported that the programme was a useful adjunct to their preparation for the index assessment (mean 4.7 on a 5-point Likert scale), that it improved their consultation skills (4.7) and that they were more aware of what to expect (4.7). In free text boxes students were asked to highlight what they found particularly helpful; themes included the opportunity to practice the new format of examination (n=19), observation by and personal feedback from student-tutors (n=12), an improved understanding of the format and assessment criteria (n=12) and consolidation of consultation skills and knowledge (n=11).

Conclusion

The peer-led initiative described served to increase the preparedness of attendees and clarify expectations of them. This may have moderated students' experience of examination stress, although further work is required to explore this. This programme demonstrates how senior students may act as a valuable resource to support the delivery of the medical curriculum.

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Near-peer teaching for undergraduates by Foundation Doctors: a novel modality that benefits tutors as well as students

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Background

We have devised, piloted and delivered a novel “near-peer” tutoring scheme run by newly-qualified Foundation Doctors for final-year medical students. Tutors were recruited from the University of Edinburgh medical graduates of 2006. Tutors were provided with an optional preparatory seminar covering teaching technique. Overall, 73 sessions were provided, with 271 student attendees. 99% of attendees who responded to voluntary anonymised feedback expressed interest in attending more sessions. Feedback from tutors and the results of a randomised controlled trial of the efficacy of the teaching are reported.

Work Done

An anonymised questionnaire, comprising five-point Likert scales, was used to gauge feedback from our team of Foundation Doctors. Of the 18 tutors, one was not contactable, and 12 of the remaining 17 responded (71%). 100% of tutors agreed or strongly agreed that they felt more confident about formal teaching and 92% were more likely to teach in future. Furthermore, 92% agreed or strongly agreed they were more confident about their knowledge of the topics taught, and 100% agreed that their communication skills had improved.

A new cohort of Foundation Doctors was recruited for 2008 to establish continuity. A compulsory tutor training symposium was arranged in order to provide standardised and formal preparation for the new cohort of tutors. The symposium aimed to develop applicable skills that Foundation Doctors can use throughout their careers. Furthermore, a series of case scenarios with model answers was developed in conjunction with the University, to promote consistency and improve tutor training and subject knowledge.

A blinded randomised controlled trial of the efficacy of near-peer teaching was also performed. Twenty student volunteers were randomised to receive a 30-minute Foundation Doctor-led tutorial on prescribing or no teaching. All students completed mock prescribing exercises using a different clinical scenario. Two blinded assessors scored each chart using pre-agreed criteria incorporating clinical knowledge base and generic prescribing technique; the number of dosing errors was also recorded. The overall score was not significantly different between groups (13.9 vs. 12.15, $p = 0.242$). However, the tutorial group made significantly fewer dosing errors (mean 9 vs. 22, $p = 0.049$).

Conclusions

Feedback from tutors demonstrates that they benefited from providing tutorials. Our data suggest that generic prescribing skills of students are also improved by near-peer teaching. Given the potential benefits for both students and Foundation Doctors, we believe this modality can usefully contribute to core teaching programmes in other medical schools.

The Education Innovation Group: How can we capture and share innovative teaching?

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Educational innovation occurs, not to order, nor initiated by a committee, but in a variety of sometimes anarchic ways, in response to changing local or global situations, as a reaction to government orders or professional demands, or as the brainchild of an individual who perceives a new way of meeting an educational challenge. The most exciting innovations can result from the farsighted definition of the *next* challenge or from the addressing of a familiar problem within a new, updated context. Yet so often, innovation remains closeted in the setting where it was generated and colleagues do not benefit.

At Bristol, the Centre for Medical Education has created an 'Innovation Group' to watch for the germination of novel approaches locally and to scan the broader horizon for inventive, new ideas, with the aim of sharing these across the faculty. Interesting teaching initiatives are disseminated via monthly lunchtime seminars and two annual day conferences, which may include speakers external to the faculty and/or the university.

The group is not concerned exclusively with tracking others' innovations; it is also empowered to ask its own questions. One example is the convening of focus groups to try to tap into students' ideas about exciting elements of the teaching and learning experience provided by the university.

The Innovation Group has the ultimate goal of informing and developing medical teaching by sharing best practice and inspiring others to innovate within their own curriculum area.

Bedside teaching is the most preferred, yet one of the least used methods to teach penultimate year students at a UK medical school

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Introduction

Ensuring consistency in clinical teaching across a curriculum is challenging. Changes in the demographics of the hospital population and increasing student numbers put pressure on limited resources. Medical schools have attempted to cope by creating new environments such as clinical skills centres utilising simulated patients and role play. Despite the availability of these alternative strategies, didactic lecturing continues to be used as a primary teaching medium by supervising clinicians.

Purpose

The proportion of given, to the variety of teaching methods available to clinical tutors at Leicester medical school is not well documented. More importantly the opinion of penultimate year students who prepare to sit their first summative assessment – the Intermediate Professional Examination (IPE) - as to their preferred teaching methods is also unknown.

Methods

A questionnaire study was conducted and students asked for their responses prior to an informally organised revision session before IPE. A four point rating scale was used to rank preferred and prevalent methods of teaching. The results were tabulated and frequencies with percentages displayed. So 23% ranked 'Lecture' as their most preferred teaching method (rank 1), and 8% ranked it as their least preferred (rank 4) of the 4 methods.

Results

	Most preferred n (%)	Least Preferred n (%)	Mean Rank n (%)	Most used n (%)	Least used n (%)	Mean Rank n (%)
Lecture	31 (23%)	10 (8%)	2.14	107 (80%)	3 (2%)	1.29
Bedside	88 (67%)	3 (2%)	1.46	13 (10%)	41 (31%)	2.89
Role Play	4 (3%)	77 (58%)	3.39	6 (5%)	72 (54%)	3.39
PBL	9 (7%)	42 (32%)	3.00	7 (5%)	17 (13%)	2.44
Totals	132	132	2.5	133	133	2.5

Bedside is the most popular and least unpopular teaching method, and has the best mean rank. 80% of people ranked Lecture as most used with only 2% ranking it least used. Friedman tests were conducted to evaluate differences in ranked scores for the teaching methods and produced highly significant results for Most preferred method and Most used method ($p < 0.0001$ in each case). Post-hoc tests (Wilcoxon test) showed the bedside method to be preferable to all other methods ($p < 0.0001$), but Lecturing was used more often than any other method ($p < 0.0001$).

Conclusion

Despite students selecting bedside teaching as their most preferred method to receive clinical teaching, the majority remains in lecture format. This is probably due to the clinical responsibilities in addition to education of clinicians, and the vagaries of clinical work that often forces them to resort to a well practiced lecture.

Interestingly role play was least preferred by students. This needs to be explored further given the increased use of actors as simulated patients to address patient shortages. Also many would argue that the acquisition of generic consultation skills such as communication can be effectively achieved through role play.

Clinical teaching can be delivered using a variety of methods influenced by the teacher, the patient and student. As tutors we need to acknowledge student preference but also consider their stage in the course and the curriculum requirements for that level in order to select the most appropriate method.

The impact of a brief lecture programme on students' readiness for a clinical examination

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Introduction

Leicester medical students receive early teaching on consultation skills within a foundation course (CSFC). *Clinical methods* is the only attachment students have prior to their first summative assessment – the Intermediate Professional Examination (IPE) dedicated to further developing these competencies. The quality and quantity of clinical skills teaching within five other blocks before IPE is inconsistent depending on clinical tutor variability and junior doctor involvement. Unlike final year students who have a dedicated three week revision block prior to their final professional examination, no time is allocated for revision within the current curriculum structure for penultimate year students before IPE.

Purpose

The majority of students who come to our unit and are taught informally by the bedside remain unclear as to the requirements of a 'focused' history and examination in preparation for IPE. Two teaching sessions separate from the formal curriculum, were organised specifically concentrating on history and examination techniques. It was unclear whether material normally taught at the bedside could be reproduced in lecture format, and whether students would actually leave the sessions having a better idea of what comprised a 'focused' history and examination.

Methods

A questionnaire was distributed and students were asked if they felt ready to sit IPE prior to the start of the session. At the end of the session, the final parts of the questionnaire were completed and students again asked about their perceived readiness to sit the exam. These responses were split into ready (very ready and ready) and not ready (soon and no). McNemar's Test was used to see if there was a difference in proportions ('Ready' responses) before and after the intervention (the teaching sessions). Free text comment was also invited.

Results

	Very	Yes	Maybe	No
Do you feel a revision session is necessary? n = 139	128	8	3	0
Did you find the session useful? n = 138	103	30	5	0
	Very much	Yes	Maybe	No
Do you have a better idea of what a focused history is? (post-session) n = 140	83	49	7	1
Do you have a better idea of what a focused examination is? (post-session) n = 140	78	50	10	2

Do you feel ready to sit IPE?		Post-session	
		No	Yes
Pre-session	No	104 (85%)	19 (15%)
	Yes	4 (24%)	13 (76%)

McNemar's Test reveals a difference in proportions of 0.11, McNemar test statistic =9.78 (p=0.0018). Thus significantly more subjects felt ready to sit IPE after the intervention (23%) than before (12%). Free text comment is being analysed

Conclusions

Nearly all attending penultimate year students felt that a revision session was both necessary and useful prior to IPE. The majority of students had a clearer idea of what the requirements for a 'focused' history and examination were after the two informal teaching sessions. A significant number of students subsequently felt ready to take the examination after attending the session. There was a simultaneous reduction in the number who perceived themselves not ready at all compared to at the start. Free text comments were complimentary and requested the sessions be delivered earlier in the curricula, either in their existing format or as actual formally organised teaching activity.

Penultimate year medical students feel less confident about mental health cases prior to summative assessment

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Introduction

A standard 'junior' rotation has now been established whereby penultimate year students at Leicester medical school are guaranteed to experience the same variety of specialities prior to assessment. Students then have to complete a history and examination in 18 minutes as part of their Intermediate Professional Examination (IPE), before 5 minutes of questioning. The same time limits exist regardless of the case speciality. Therefore a psychiatric case which can involve more information retrieval is allocated the same time as a medical or surgical case, placing more pressure on students already inexperienced in consultation skills.

Purpose

A series of informal revision sessions have been organised for the last 5 years for both penultimate and final year students. The content has traditionally included medicine or surgery based on previous examination case mix and student requests by electronic mail. Changing in-patient demographics and the emerging use of simulated patients to compensate for the drop in recruitment of 'traditional' cases has increased the probability that a student will be challenged by a psychiatric case. Mental health is currently not included in our revision sessions for penultimate year students. It was necessary to know whether we could continue to neglect psychiatric cases, bearing in mind in the latest round of the IPE, all students would see one simulated patient with a mental health problem.

Methods

A questionnaire was handed out prior to the revision session asking students to use a four point rating scale to rank from 1 to 4 the amount of organised teaching activity they had received within an attachment across a range of specialities. They were then asked to rate their confidence in each of the areas before the revision session commenced using a similar scale. After the session, they were asked to re-rate their confidence scores across the same specialities.

Results

	Cardiorespiratory	Mental Health	Gastrointestinal	Musculoskeletal
<i>Most</i> teaching so far (%)	37.1	25.8	11.3	25.8
<i>Least</i> teaching so far (%)	22.2	21.4	44.4	12
<i>Most</i> confidence prior to session (%)	42.9	17	18.7	21.4
<i>Least</i> confidence prior to session (%)	11.5	36.9	20.5	31.1
<i>Most</i> confidence after session (%)	38.4	16	17.9	27.7
<i>Least</i> confidence after session (%)	5.5	51.4	22	21.1

n=126

Conclusion

Penultimate year students felt more confident about potentially facing patients from the speciality of cardiorespiratory medicine than mental health despite the same length of attachment. Importantly, in spite of receiving less formally organised teaching in gastrointestinal medicine, another core speciality, their confidence in tackling such cases in the exam is still substantially greater in comparison to cases involving patients with mental health problems.

Most importantly, despite not including gastrointestinal and mental health in our teaching programme, the lack of confidence amongst students after the session remains unchanged for gastrointestinal, but is further increased for mental health. We are currently reviewing the makeup of future sessions but feel further work into the specific attitudes of medical students toward different specialities needs to be undertaken. This should focus on teaching and learning strategies and individual factors related to the student, teacher and the patient.

What happens to data from intercalated degree research projects?

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Background

The intercalated BSc in Medical Sciences at the University of Aberdeen has an integral extended research project of 20 weeks duration. However nothing was known about the fate of data generated from such research projects. It was decided to investigate the outcome of intercalated degree research data to be able to inform students what they might expect from their research projects.

Methods

A simple questionnaire was sent to all staff who had supervised a student undertaking a research project as part of their intercalated BSc in the last 5 years. Information was requested about whether students had presented their data as a poster or orally, whether the data had been published either as an abstract or as a full paper and whether the data had contributed pilot data to a subsequent grant application. Further details in terms of whether the data were combined with other data for publication and whether grant applications had been successful was also requested. Where research data were not presented or published we asked supervisors to indicate why this was the case.

Results

A total of 141 students had intercalated between 2002 and 2007. We received information about 75 of these, spread evenly over the 5 years. There was little change over the 5 years in the percentages of students who had produced useful data. Research data was not used at all in only 18 projects. In total 58.8% of research projects resulted in presentations either as a poster or orally and most cases this was at national meetings and was accompanied by publication of an abstract. A third (25) of students had their work published as full paper; in around half of these this was a stand alone publication. Two students also contributed to review articles. Supervisors reported that 22% of research projects contributed pilot data for subsequent grant applications, of which 83% were funded.

Conclusion

It was gratifying to see that for most students, the intercalated research project resulted in presentations, publications and contributions to grant applications. This gives added value for both students and supervisors. It was clear that some supervisors were more proactive than others in encouraging students to use their data, or even contribute to a related publication. In summary, this information shows that the intercalated degree research project is likely to be of benefit to both students and supervisors.

The introduction of Problem-based learning into an undergraduate one week Ophthalmology course

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Introduction

Medical students at the University of Bristol undergo five years of training. Only one week is devoted to ophthalmology. Lectures are a popular and time-efficient teaching method for large groups, but they do not encourage deep and lifelong learning¹. Adults prefer a goal-orientated, active approach to learning² which was reflected in student feedback: problem-based learning (PBL) was the top-ranked alternative to traditional teaching methods used on the course. As a result, the course became more student-centred with a reduction in lectures and the introduction of a PBL exercise in the academic year, 2007-2008.

Methods

Students from the 2007-2008 academic year were asked to evaluate the ophthalmology course by questionnaire. Their performance in the ophthalmology exams will be compared with the previous academic year (before the introduction of PBL) with adjustment for inter-year variation.

Results

We present data from 52 students (57% returned the questionnaire form). For the PBL exercise, mean scores on a 10-point Likert scale were 7.30 for the learning demands made on students (1=minimal;10=great), 7.86 for meeting the learning objectives of the session (1=meets none;10=meets all), 5.00 for the difficulty of the material (1=difficult;10=easy), 7.66 for the appropriateness (1=inappropriate;10=appropriate) and 7.53 for the usefulness of the exercise (1=not useful;10=very useful). The overall course rating was 7.06 (10=highest). Qualitative feedback from students on PBL was positive, though some found the work demanded too much time and effort and a few wanted more lectures.

Discussion

PBL has several advantages: it encourages deep learning, students find it fun and motivating and it helps the development of generic problem-solving skills³. Students have different learning styles⁴ which means that some will prefer PBL more than others. The short time allocated to the ophthalmology course is restrictive but does not preclude the implementation of PBL. The definitive test of this teaching method will be student performance in clinical practice. We aim to compare exam results before and after the introduction of PBL as an alternative measure.

Conclusion

Overall, medical students enjoy PBL in ophthalmology. They find it useful and appropriate as a teaching method. However, the time constraints imposed by the short length of the course meant that some students found it stressful.

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Analysis of Clinical Pharmacology assessments: are Graduands smarter than school-leavers?

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Background

An honours degree is an obligatory requirement for medical school entry in many countries including North America. Recently, UK medical schools have offered 4-year 'Graduate-entry' degree courses. Since 2003, the University of Leicester has admitted predominantly 'school-leaver' students for a traditional 5-year course and health science graduates for its 4-year course.

Aim

To compare the performance of 5-year course with 4-year course students in the Clinical Pharmacology Module examination in 2005 and 2006.

Method

The examination was taken at the end of the first term of the 2nd and 3rd years for 4-year and 5-year students respectively after a 12-week taught clinical pharmacology course. A Multiple-choice paper using True/False questioning was set consisting of 15 questions with 5 separate stems. The Mann-Whitney test was used for analysis and all students were included in the initial analysis.

Results

Data was collected from 511 students (2005: 53 4-year and 196 5-year; 2006: 55 4-year and 207 5-year). In 2005, the 4-year mean score of 68.2 (range 59-74) was significantly higher than the 5-year mean score of 61.0 (range 47-72) $p < 0.0001$. In 2006, the 4-year mean score of 59.4 (range 46-71) was similar to the 5-year mean score of 58.8 (range 42-72) $p = \text{NS}$.

Demographic data was available for 317 5-year students, who were further sub-divided into true school-leavers (age < 21 years) compared to graduands or older students; there was no difference in the mean scores between school-leavers and older students (2005 mean score: school-leavers (n=131) 61.5 and older (n=21) 61.1; 2006 mean score: school-leavers (n=134) 59.2 and older (n=31) 59.5).

Conclusions

In the 2005 clinical pharmacology exam, graduate students on the 4-year course scored significantly better than 5-year students. This is an interesting result particularly as it is not clear why some of the earliest graduate-entry students should perform better than school-leavers. Prior educational achievement may be an influencing factor as has been identified in other studies of medical student assessments. Further work will wish to determine if this pattern of results is reproducible in other specialty examinations at this stage of the course and in later clinical examinations.

Reflections on palliative care – what do students learn?

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Context

In October, 2005 the palliative medicine teaching at Leicester changed, with the students coming to the local hospice for teaching. They met ward patients, usually alone or in pairs. Patients were asked to be involved if they were able and willing to 'tell their story'. Students were asked to discuss issues such as the impact of the disease, the way the patients and families were coping with serious illness and the effectiveness (or otherwise) of the care that they were receiving. Students reported back to the group (with EW) to discuss what they had heard. The assessment of the morning was in the form of a reflective essay, where they were asked to discuss 'What, so what, now what' – what they had seen, what it had meant to them and where they thought they would take their learning in the future. The essays were analysed by EW looking for themes.

Results

The main themes were

- Negative preconceptions of hospices
- Improved understanding of palliative care
- Increased awareness of the importance of social issues to the terminally ill
- The importance of spirituality and religion to patients and families
- Description of the students' own emotions and feelings when meeting the dying, and ways of dealing with these feelings
- The vital role of good communication
- Ways that staff, patients and families cope with impending death
- Ways that the student as future doctor will cope with caring for dying patients

Conclusions and future plans

The students demonstrated that a short and simple intervention can promote deep reflection. Part of the difficulty in teaching palliative medicine is the need to challenge the 'hidden curriculum' in medicine that places diagnosis and cure above all else¹. This work shows that students can be stimulated to think beyond this, and that using unselected patient stories is a valid way of doing it. The reflective essay was a useful method of assessing the learning achieved around a subject that is often considered difficult. The challenge now is to provide this type of stimulus to all students, and to continue to encourage reflection as a means of development.

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The learning environment in primary care: a review of the literature

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Summary

This poster presents the preliminary results of a comprehensive search of the literature exploring the learning environment in primary care, including general practice, from UK and international perspectives.

Introduction

Community and primary health care are becoming increasingly important in both the UK and more globally due to a number of factors such as increased healthcare costs, an emphasis on preventive medicine, new health technologies and treatments which allow out of hospital diagnosis, care and treatments, and increased patient choice. In parallel to this the teaching of future health care professionals has increased emphasis within community based or practice settings. We have explored the scope and nature of the learning environment in primary care.

Methods

A comprehensive literature search was conducted including published literature in peer review journals (identified via educational and healthcare databases), books (via library catalogue), the grey literature (via relevant databases), and from a secondary search of public and professional documents and via academic educational organisations (including ASME).

Results

The preliminary results identified 3269 articles linking education, learning and teaching in primary care in the field of healthcare. The poster will present the main findings from the literature review that highlight a series of key themes, including:

- Learning environment and educational theory
- Communities of practice in primary care
- Health policy and learning in primary care
- Learning medicine in primary care
- Health professional teaching in primary care
- Patient perspectives, staff perspectives
- Primary care and general practice – a unique learning environment?

Conclusions

Primary care and general practice is the environment where increasing numbers of tomorrow's doctors, nurses and other healthcare professionals will be taught. Understanding this environment is important to understanding its impact on how and what health professionals will learn, and how they will relate to patients in the future.

Personal Development Tutors: How Confident and Equipped are they in Fulfilling their Role?

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Background

In September 2005 Leicester Medical School introduced a new Personal & Professional Development Programme (PPDP) for the undergraduate MBChB. The Programme has three strands: Personal Development Planning (PDP), Career Management & Guidance and Personal Health & Well-Being. The PDP component involved personal tutors taking on an extended role as a 'Personal Development Tutor' and encouraging and fostering student participation in the PDP process. The two key outcomes of the PDP process are enhanced self-awareness of strengths and weaknesses and direction for change, and a record of learning experience and achievement, personal reflections and plans for self-improvement.

Aim

The aim of the study was to identify whether Personal Development Tutors felt confident and equipped to fulfil their extended role.

Method

46 Personal Development Tutors (from a range of professional backgrounds) were invited to take part in the study. Each tutor was asked to complete a structured questionnaire split into five sections. Section 1 consisted of 8 questions requiring a yes or no answer. Sections 2-4 required responses on a 5 point likert scale. Section 5 consisted of space for free text comments.

Results

63% (29/46) of tutors completed the questionnaire. Most tutors attempted to engage with the new Programme. 72% (20/29) attended the initial 'Personal Development Tutor' briefing session and 96% (27/29) read through Programme hand books and other resources provided. The majority of tutors had a clear understanding of the key aims of the Programme, why students need to develop reflective skills and the importance of students maintaining a personal learning portfolio. Tutors already familiar with the PDP process indicated higher levels of confidence in engaging students and offering guidance and advice. These tutors came from a General Practice and midwifery background. Tutors requested further training in two main areas: clarification on their exact role as a Personal Development Tutor and techniques on how to engage students more effectively in the PDP process.

Conclusion

The results of this study suggest that although the majority of tutors showed a strong willingness to engage with the PPD Programme and their extended role as a Personal Development Tutor, many were not clear about what the extended role entailed and did not feel confident in their ability to guide students through the PDP process. This is currently being addressed through tutor development and improved support.

Reflective Practice in the Foundation Programme: Lost in translation? An evaluation study

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Introduction

The Foundation Programme (FP), the corner stone of the MMC initiative, is intended to produce 'Tomorrow's Doctors' that are 'fit for purpose' (GMC). The twin towers of the FP are attainment of set 'competencies' along a time line and nurturing a habit of life-long learning. Reflective practice as a learning/teaching strategy is relatively new in post-graduate medical education and limited literature exists.

Objective

This was an evaluation study of an innovative educational intervention from trainee and trainer perspective, with a view to producing small scale evidence of this second key plank of the Foundation Programme curriculum - Reflective practice - its meaning, intentions and implementation, as seen through the perceptions and attitudes of trainees and trainers. Attitudes and perceptions are important internal motivators in adult learning.

Methods and Analysis

A qualitative research perspective along a process evaluation pathway, using Action-research methodology was used. Methodological triangulation (surveys, focus groups, interviews) with data saturation and a thematic analysis based on researchers own experience and literature review were used to achieve validity and reliability.

Results

Results are discussed in context of understanding and acceptability, barriers and facilitators. The research findings are used to draw up generalisable and transferable recommendations

Evaluation of training using a computer game for introducing medical students to the management of patients with sepsis

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Abstract

Study objectives: To develop a computer game teaching medical students about the management of patients with sepsis, evaluating educational effectiveness using multimodal methodology.

Methods

A software package is being developed using Blade Engine v2.0 to allow medical students to learn about the management of patients with sepsis using interactive scenarios. A functional beta model will be available during spring 2008. Evaluation of the game will take place within the Emergency Department of Leicester Royal Infirmary. The participants will be clinical stream medical students from Leicester University Medical School attached to the department.

Participants will guide themselves through a selection of important sepsis cases that aim to deliver the latest evidence from acute sepsis care whilst developing clinical decision making skills and relating established basic science knowledge. Impact on learning will be assessed through pre and post course MCQ's. Learner satisfaction will be derived from a structured questionnaire. Data will be interpreted using Excel®. This study does not require the approval of the research ethics committee.

Results

Will be available at the time of presentation at the ASME Annual Scientific Meeting, September 2008

Video Podcasts for Medical Undergraduates

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Expanding use of portable MP3 players and more recently portable video players has opened the market for producing a range of innovative teaching materials that are easily downloadable for students. Brain Injury is a subject sometimes found particularly challenging by medical students because of its complex nature, making novel teaching tools in this subject particularly valuable.

We present our experience of designing a range of video podcasts for medical students, with a focus on all aspects brain injury. We found that the subject matter lends itself very well to the use of images and animations with audio explanation, to explain complex medical issues. The format of the podcasts was based on established pedagogical principles for this teaching method. The eight session video podcast series was recorded by members of the University of Leicester academic staff as well as radiologists, neurosurgeons and Emergency Physicians already known to the students.

Images, animations and video footage of operations were used to support the audio files. In addition, interviews with clinicians involved with the subject, as well as patients and their carers, gave a wide-ranging view of the topic to the student. Students are able to download these from the University of Leicester website and watch them in their own time.

Assessment of learning was by a brief online exam. Although not fully evaluated yet, initial response from the students to this type of learning tool is encouraging, and appears to confirm that this is a novel way of giving students a better learning experience.

Improving Undergraduate Ward-Based Clinical Teaching: ELEMENTS - A Blended Learning Environment

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Background

Medical undergraduate teaching uses modern teaching techniques and technologies in the teaching of basic medical sciences. However, the teaching of clinical skills within hospitals often continues to use a very traditional 'bedside' approach and can be variable in the level to which students are actively engaged with the session and the quality of its delivery. Moreover, students can bring different levels of prerequisite knowledge to clinical sessions that are difficult to address at the bedside.

NHS Lanarkshire has developed an e-learning environment for the medical students that are attached for clinical teaching to its hospitals (**elements: e-learning medical environment for students**). It attempts to engage students by using a novel and interactive mode of learning; to extend the problem-based learning style into the clinical environment and to develop or refresh pre-existing student knowledge to enhance that obtained during the clinical session.

Design and impact

Through an individual login-accessed platform, the site provides a guide to the learning opportunities available:

- preparatory e-learning modules that relate to specific clinical teaching sessions
- e-based resources that assist the student's progression through each e-learning module
- a personal folder for storing links to additional resources and assignments completed
- evaluation of the e-based and clinical components of the learning
- teaching sessions timetable

Interface

The e-preparatory work, through which the students explore wider sources of material, takes the form of case based scenarios that are followed by question-led assignments. The assignments are linked to web-based materials that they can use to help answer the questions/tasks that they are set.

On logging into the system, the student is presented with a learning area and specific reminders about forthcoming teaching sessions and their scheduled e-preparation and assignments. In addition, they can access their personal folder.

Tutors, course organisers and administrators can also access the system, select the topics assigned to students and perform general administrative functions. Moreover, they can monitor the progress of the students and ensure that they complete any work set before each teaching session. Both online and tutorial teaching is evaluated.

Conclusion

Despite the traditional focus perpetuated within clinical medical training, a web-based blended learning environment can enhance such training for medical students; both in terms of derived knowledge and the experience of learning itself.

Why do students choose not to intercalate?

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Background

Approximately 30% of medical students undertake an intercalated degree, usually a BSc. This is usually optional. At the University of Aberdeen the numbers of students choosing to undertake an optional intercalated BSc has been steadily declining and over the last 4 years only 17.9% students intercalated. We have found (unpublished data) that intercalating adds benefits in terms of improved performance in subsequent years of the MBChB. Despite this, most students decide not to intercalate.

Methods

We conducted a cross sectional questionnaire survey of 4th and 5th year medical students (n= 343) at the University of Aberdeen who had previously opted not to intercalate. SNAP survey software was used to capture data, which was analysed using SPSS. Ethical approval was not required although students were made aware that they were not obliged to participate and that it was completely anonymous.

Results

The response rate was excellent: 293 students (85%) completed the questionnaire. The majority were female (63.0%). 15.4% were postgraduates and 76.8% were white (British, Irish or other). Nobody had applied but not been accepted. The main reasons students opted not to intercalate was not wanting another year of study (69.6%) or incurring more financial burden (51.9%). We asked students about their debt and 25.7% had no debt, 13.8% had debt up to £5,000, 19.0% had debt up to £10,000 and 41.7% had debt of over £10,000. Fifteen students had debt over £25,000. There was no relationship between debt levels and citing financial reasons for not intercalating.

Information about intercalating is routinely provided in a presentation, a brochure and an open day. When asked about these information sources only 40% students had been to the presentation, 15% had read the brochure and 12% had attended the open day, resulting in only 15% of students having enough information to inform their decision about whether to intercalate.

Conclusion

The main reasons students chose not to intercalate were avoiding another year of study or more debt, as reported previously. Locally, the benefits of intercalating need to be better defined and presented to students so they can make a more informed decision whether to intercalate. It is important to demonstrate to students that early exposure to research during an intercalated degree gives them valuable skills for life long practice. Much work needs to be done to address the negative student views surrounding intercalated degrees.

Undergraduate Medical School Choice

Factors affecting medical applicant's choice of university and expectations of a medical degree programme in one London-based school

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Introduction

Barts and The London has a long tradition and commitment to educating tomorrow's doctors. Whilst the school currently thrives with unprecedented numbers of students it is timely considering current market forces to explore why students choose to come to us. Possessing a greater understanding of the academic, cultural, and social factors that contribute to applicants' decisions will facilitate both our admission and selection procedures and help us tailor our curriculum to meet their expectations.

To this end the reasons why first year students chose to apply to one London-based medical school, the factors associated with their choice, the process through which these decisions were made and in particular any constraints upon applicants' choices were explored. Students' expectations of the course and whether these were fulfilled were also investigated. These findings may also benefit other universities by informing them of the factors involved in student choice and what expectations applicants have of medical school.

Method

A qualitative methodology utilising questionnaires was chosen so that good coverage of the whole first year cohort (n=300) in their second term at medical school could be sampled. Ethical approval was granted. The questionnaire was designed so that reasons for choosing, the factors associated with their choice of medical school and their expectations could be ranked according to the importance placed on them by the students. These factors were scored according to ranking. The questionnaire also contained opportunities for free text responses.

Results

In a pilot study, 20 completed questionnaires were completed and studied. 45% of these students chose the Barts & The London as first choice. The most important factors affecting choice were particular attractions about the school (26.7% of the combined score), the location (25%) and family commitment (19.4%). The most important expectation, which was almost unanimously met, was early clinical exposure.

Conclusions

The importance of this study is that it confirms the main reasons why students may choose our London-based medical school and also highlights the social and cultural pressures our applicants are under that may affect this choice.

Take home message

In order to ensure that as many candidates have equal access to education as possible, Barts & The London and all other medical schools must recognise the social and cultural pressures that help to shape or in some cases control students' decisions about medical school choice.
