TECHNOLOGY ENABLED LECTURES IN MEDICAL EDUCATION - A PILOT STUDY

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Introduction: Lectures are the most common, cost effective way of transmitting large volumes of information to a large group of medical students. Traditional lectures are often lecturer controlled, rather than student centred, resulting in passive learning with little engagement, short attention span and little objective real-time evidence on how much learning has occurred. In this context, Audience response is a well-documented method to improve student interaction.

Methods: In this pilot study of three lectures, we designed quizzes that students took before the lecture, to test prior knowledge, and then again afterwards, to establish the impact of the lecture and improvement in student understanding. Student feedback was also sought. The quizzes were delivered using ‘SOCRATIVE’, a simple, web-based audience-response system. Students took the quizzes on their own web-enabled laptop, tablet or smartphone, using the Wi-Fi access in the lecture theatre. Students accessed the quiz using a QR code or short, easy-to-type URL.

Results: The answer scores before and after lectures were compared as a group of all attendees. This showed a mean improvement of 29%.

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Conclusions: We found that the strategy of before and after lecture quizzes was well received by students, providing instantaneous formative feedback whilst demonstrating increased engagement, interaction, active learning, critical thinking and improvement of scores. In addition, SOCRATIVE was cost effective and enabled participation of students attending through remote access. From the lecturer perspective, viewing students’ responses in real time facilitates contingent teaching and further comparison of results provides an opportunity to feed forward into improvement of lectures.
DEVELOPING PROFESSIONALISM IN MEDICINE – DOES FORMAL TEACHING SUCH AS THE IDEALS MODULE AT THE LEEDS MEDICAL SCHOOL HELP?

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AIMS: To explore the attitudes of medical students towards professionalism and how they change over the course of the MBChB programme, exploring whether the IDEALS (Innovation, Development, Enterprise, Leadership and Safety) module is instrumental in this change.

METHODS: Eight participants; four in their preclinical years and the remaining four in their clinical years, were recruited from the Leeds Medical School. An explorative qualitative approach was adopted involving semi-structured interviews, which were recorded and transcribed. Transcripts were then thematically analysed to code and identify key themes.

RESULTS: Six themes that describe professionalism emerged from the interviews; professional values, doctor-patient relationship, comportment, inter-personal skills, reflexivity, and drive. Participants were of the opinion that formal teaching in the form of IDEALS had helped them in developing a professional attitude, to varying degrees. Participants in their clinical years were unequivocal in their belief that formal teaching played a major role in their professional development. Participants in their preclinical years were less certain; however, they still appreciated the importance of the formal teaching of professionalism.

CONCLUSION: Formal intervention such as the teaching provided in the IDEALS module at the Leeds Medical School helps students develop professionalism in medicine; however the delivery can be improved. Further research is required to identify more effective teaching and assessment methods for future practice.
FOUNDATION DOCTORS AS EDUCATORS – ARE JUNIOR DOCTOR-LED PRESCRIBING TUTORIALS BENEFICIAL TO BOTH STUDENT AND TUTOR?

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INTRODUCTION: Medical students lack confidence in prescribing and the error rate by junior doctors is high. Foundation Year (FY) doctor-led prescribing tutorials hold the potential to be beneficial to students and doctors. A series of tutorials was developed for final year medical students focusing on common prescribing tasks with the intent to develop prescribing skills, increase confidence and improve teaching ability.

METHODS: Five prescribing tutorials were developed: sepsis, pain, acute coronary syndrome, fluids and electrolytes and diabetes. Teaching materials were designed in conjunction with University of Aberdeen (UoA)-affiliated senior medical staff.

FY doctors across NHS Grampian and NHS Highland were recruited to deliver tutorials. UoA final year medical students were invited to attend.

After each tutorial, feedback sheets focusing on content, structure, presentation and overall quality were completed by students and tutors.

An online survey was sent out to students before and after attending. Results were analysed to identify changes in confidence scores (out of 10) in prescribing in each scenario; and preparedness for the Prescribing Safety Assessment (PSA).

RESULTS: 275 feedback forms were collected. 100% of students agreed or strongly agreed that the content of these tutorials was appropriate and relevant.

Structure was separated into four sections; 1097 data points have been analysed. 77% (N=843) of students strongly agreed and 20% (N=223) agreed that the structure was effective.

Presentation was separated into seven sections; 1924 data points have been analysed. 88% (N=1702) of students strongly agreed and 10% (N=193) agreed that the presentations were effective.

For the overall quality of the tutorials, 90% (N=247) gave the tutorials 5/5 and 10% (N=27) gave them 4/5.

21 pre-tutorial and 15 post-tutorial responses from students were analysed. Confidence scores increased by 2.4 (55%). All students felt better prepared for the PSA (increase of 1.7, 35%).

54 tutor feedback sheets were collected. 83% (N=45) of tutors strongly agree that the tutorials improved their teaching skills; 91% (N=49) strongly agreed that they were helpful for their learning and 89% (N=48) scored them 5/5 overall.

CONCLUSION: Feedback indicates that students value junior doctor led prescribing tutorials and they are beneficial to both the tutor and student. Results so far justify contextual, practical prescribing teaching by junior doctors. The research is ongoing.
USE OF AN UNDERGRADUATE MEDICAL EDUCATION QUALITY DASHBOARD IN A UK TEACHING HOSPITAL: A USEFUL APPROACH TO DRIVE EDUCATION QUALITY?

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Introduction: University Hospitals of Leicester NHS Trust provides placements for more than 200 medical students per year. The General Medical Council (GMC) on their revised ‘Promoting Excellence’ standards set out the requirements for the management and delivery of undergraduate training. Increasingly, placement providers are required to demonstrate compliance with quality standards for education, training and to demonstrate accountability for educational funding. We saw this as an opportunity to create a quality monitoring tool that will allow us to oversee placement education quality against the new GMC standards.

We describe the development and initial implementation of the undergraduate educational dashboard (EQD)

Methods: We created a ‘traffic light’ dashboard (Table A) that was mapped against the GMC’s Promoting Excellence standards. The dashboard has several components, including: a summary of key undergraduate education performance indicators, service level data and data from the learner’s feedback.

The dashboard will be completed by the Department of Clinical Education and Clinical Education Leads on a six-monthly basis.

Results:

Completion of 17 metrics required the collaboration of Educational Leads, Educators and managers. Initial completion of metrics was 71% (initially retrospective data). Poorly completed indicators included: access by Learners to IT systems, evidence of integration of undergraduate quality data into Board and Departmental governance processes, Clinical teachers trained for the role, and accountability for training funding. With recent prospective survey data we anticipate reaching 88% completion rate. The EQD allowed identification of areas that require further improvement, i.e., induction to clinical placements. Furthermore, it reassured us that areas such as supervision and learning were satisfactory across the organisation.

Conclusions: The ‘traffic light’ dashboard system provides a mechanism to enable the Trust to monitor and report on undergraduate education quality and support the management of education quality outcomes. The EQD is a mechanism to raise awareness, drive compliance and improvement in educational governance across the organisation. Identifying a responsible individual in each service area will be crucial to success.
# DEMEC 2017 – abstract poster submissions: Category 2: Undergraduate education

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## Theme 5: Encouraging Research & Patents

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## Theme 6: Supporting Education

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## Theme 7: Supporting Implementation

### Evidence on Policy Implications

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## Funding Sources

- NIH: National Institute of Health
- NSF: National Science Foundation
- DOE: Department of Energy
- DOD: Department of Defense
- NSF: National Science Foundation
- DOE: Department of Energy
- DOD: Department of Defense
- Other Sources

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*Note: The table continues with similar entries for each theme.*
PAEDIATRIC LONG TERM CONDITIONS: LEARNING IN A DIFFERENT WAY
Appleby G* (1), Macaulay C (1,2). Roueche A (1,2)
1 General Paediatric Department, Evelina London Children’s Hospital Westminster Bridge Road, London SE1 7EH
2 Block Leads for Year 4 Child Health King’s College London, Strand, London WC2R 2LS

Introduction

Long term conditions (LTC) are becoming increasingly prevalent in all populations due to improving clinical outcomes. Fourth year students interacted with paediatric patients and their families to explore their experience of illness, LTC and their patient journey; in addition to learning about their medical conditions.

Methods

Students were asked in small groups to give an oral presentation of a patient journey, with a focus on the impact on child or family. Additionally they could choose to incorporate multimedia to help tell the story.

Quantitative data was collected from 33 students; this explored their pre-existing views, their reflections from the week and their views on multimedia use. Qualitative data from notes made during the presentations was also collated.

Results

Of the thirty three students who completed the questionnaire 12/33 (33%) felt their learning was different to what they had anticipated at the start of the week. Also at the end of the week 27/33 (80%) felt more confident in exploring the thoughts and feelings of patients or their families. Some identified their focus shifted from thinking purely about the condition to a holistic overview.

Recurring themes emerged from the facilitated presentation session, these included: the role of the medical student within a consultation, the acceptance spiral where families reframe their normality and how generally children do not define themselves by their illness label.

A range of multimedia was selected in addition to a spoken presentation. This ranged from poetry (including poems written by students), story boards, art or music. Benefits of using multi-media included that it helped students to process emotions and allowed them to appreciate the multitude of things patients deal with. Students were appropriate in their media usage and refrained if it would detract from the story.

Conclusions

Optimising how students learn, think and care for patients with a LTC is an increasingly relevant issue for both now and the future of medical education.

This piece adds to the literature about using patient narratives to consolidate learning.

The use of multi-media to explore the patient journey was positively embraced by the student body. Unanticipated consequences emerged in that it provided an outlet for students to process their thoughts or feelings about the patient encounter. More research is needed into this going forward as an adjunct to traditional written reflective logs.
REGULAR UNDERGRADUATE PRESCRIBING PRACTICE ON DRUG CHARTS MAY HELP TO REDUCE MEDICATION ERRORS AS A DOCTOR

Atiba MO*
Education Centre, Basildon University Hospital

Introduction:
Medication errors are a well-known cause of adverse effects in patients in hospital. Although medical students are taught common drug interactions and side effects there is little training on prescribing on drug charts and the first time this may be experienced may be as a new inexperienced doctor on a busy on call shift.

Methods:
41 final year medical students were split into groups of 3-4 during undergraduate teaching sessions on acute kidney injury. Each group was asked to prescribe medications on a drug chart for a patient with hyperkalaemia and ecg changes.

Results:
0% of groups prescribed emergency treatment for hyperkalaemia 100% correctly. 100% of student feedback regarding practicing this prescription was positive which included an increase in their confidence.

Conclusions:
Accurate prescription of medications is an essential skill for all doctors to have to ensure patient safety. Regular prescribing practice on drug charts during undergraduate training, especially for emergency medications, would provide a valuable method for improving this skill.
Introduction

Although the benefits of a student-centred approach to medical student education have been well documented (1), it is rarely used during clinical placements. Ward-based clinical skills teaching is performed in a specific way with the students having little input in how it is taught (2). In addition, feedback may not be obtained and, if it is, there is little evidence that it influences change (3). During a visit from Barts and The London School of Medicine and Dentistry (BLSMD) to Princess Alexandra Hospital NHS Trust (PAH) it was highlighted that medical students wanted more renal experience. Unfortunately, this was difficult to deliver with no designated renal team or ward. There is, however, a satellite renal dialysis unit adjacent to the hospital and this was used as the site to develop a renal clinical skills programme. The aims of the programme were to encourage student’s confidence and ability in renal clinical skills in a student-centric way, enabling them to take charge of how their education was delivered with active adaptations to the sessions based on their feedback.

Methods

Three 3rd year medical students from BLSMD were attached to PAH for a 9 week placement as part of their Renal, Endocrine and Breast module. Utilising a Plan/Do/Study/Act Quality Improvement cycle, we devised 4 teaching sessions where students would take histories and examine patients with case based discussions at the end of the session to consolidate learning. Written feedback was obtained following each session to help design the next session.

Results

Figure 1 demonstrates the student feedback after each session; the suggestions were incorporated into the subsequent session. Table 1 shows the average mean feedback scores.

<table>
<thead>
<tr>
<th>Session number</th>
<th>Usefulness (/10)</th>
<th>Content/Relevance (/10)</th>
<th>Teaching (/10)</th>
<th>Overall (/10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>9.7</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>9.3</td>
<td>10</td>
<td>9.3</td>
<td>9.3</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 1: Mean average scores of feedback obtained after each session

Comparing pre- with post-course self-evaluation in knowledge and confidence approaching patients with renal pathology, there was a statistically significant improvement of 3.33 points or 33% (p = 0.0305) (95% confidence
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interval 0.59; 6.07). The written feedback placed a value on peer feedback and self-reflection. Some students preferred observation whereas others did not want this, reflecting a difference in learning styles.

Conclusion
The initial results from this pilot scheme have been positive. Allowing students to control how their teaching sessions were delivered, based on their own learning styles and needs, was appreciated by the students and reflected in the feedback. It is interesting that students valued peer feedback more than the others and the use of this in clinical skills, along with the adaptive student-centred approach needs to be further investigated for the overall impact on their education.

References


ENTREPRENEURSHIP AS A KEY ASPECT OF THE CURRICULUM: THE DEVELOPMENT OF A TEACHING PROGRAMME

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Introduction

In the United Kingdom, up to 50% of F2 doctors do not proceed directly into speciality training. This rapid change in the direction of our profession is placing increasing demands on an already stretched NHS. In the UK, medical school teaching is understandably focused on the clinical expertise which students will need in their jobs as junior doctors. With the shift in career trajectories of these students it is important that medical education evolves to suit this. The NHS has recognized this and has developed a fellowship for entrepreneurs. Medical schools in the UK do not yet appear to have recognised this need and these skills are not generally included within the UK medical undergraduate curriculum.

Methods

A literature review on the topics of entrepreneurship and management in medical education was conducted using pubmed and the terms “medical”, “education” “entrepreneurship” and “medical” “education” “management”. Based on this, final year medical students at Dundee University have been surveyed regarding their previous exposure to entrepreneurship and management, as well as their interest in their inclusion in the curriculum.

Results

A pubmed search using the terms “medical”, “education” and “entrepreneur” yielded 10 results. Upon review of these abstracts, 2 were found to be relevant to the project. A pubmed search using the terms “medical”, “education” and “manager” yielded 1204 results. Upon review of these abstracts, 19 were found to be relevant. These articles were then reviewed in full and 18 were found to be relevant to medical education (either undergraduate or junior training years). A 10-point survey has been distributed to final year medical students. Results from this are awaited and will be used to form the basis of the pilot programme over the summer of 2017.

Conclusions/implications

A thorough literature search has demonstrated a gap in the literature with regards to changing medical education to prepare students for new, non-traditional career paths. Whilst entrepreneurship is now accepted as an important skill for doctors to be exposed to, this is clearly not filtering through to medical education at the undergraduate level. Similarly, there are also few journal articles exploring the role of managerial skills in medical education. With the help of student feedback, local business owners are now aiding in the process of setting-up a pilot programme in entrepreneurship and management for final year medical students.
Using different teaching styles and real-life scenarios as part of near-peer teaching sessions for final year medical students

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Introduction

Near-peer teaching is playing an increasingly important role in medical education including supporting students’ transition to practice [1]. Junior doctors are ideally placed to teach students as they underwent similar assessments and can utilise examples of real-life clinical scenarios when organising sessions.

Aims

To assess the effectiveness of a newly developed near-peer teaching programme focusing on preparing students for university examinations and being a junior doctor.

Methods

A group of Foundation Year 1 (FY1) doctors delivered a number of teaching sessions for final year medical students using case-based discussion (CBD) and objective structured clinical examination (OSCE) format tutorials. Cases and stations chosen for sessions were based on real-life scenarios FY1s had experienced in their first months as a doctor.

A standardised feedback form collected both quantitative and qualitative data from participants on their opinions of the teaching and learning approach taken. Quantitative data was collected using a 5-point opinion Likert scale in response to a set of statements (1= Strongly disagree, 5= Strongly agree).

Results

55 feedback forms were collected across 6 teaching sessions conducted within a 6 month period. Respondents found all sessions relevant to their upcoming final year exams and starting work as a doctor (global average score to statements= 4.80 and 4.97 out of 5 respectively). The OSCE format, where students role-played as FY1s, was found to be significantly more helpful in preparing them to be a doctor compared to the CBD format (average score to statements= 4.86 and 5.00 out of 5, p<0.05). White space answers highlighted the value students placed on realistic scenarios, as well as having approachable FY1 mentors giving constructive feedback.

Conclusion

FY1s are able to offer clinically relevant case scenarios as part of delivering near-peer learning experiences. In addition to providing exam practice, role-playing as an FY1 using an OSCE format is more helpful in preparing to be a junior doctor compared to CBDs. Using this approach in devising near-peer teaching programmes could better help students in confidence building, whilst also allowing mentors to reflect on their own practice and generate evidence for development portfolios.

References:

Introduction

Ward rounds are fundamental in the care of medical inpatients, yet, formal teaching for newly qualified doctors in this area is not mandated. A recent study conducted across the region of Yorkshire and Humber has demonstrated Foundation Year 1 (FY1) doctors are regularly conducting ward rounds alone and do not feel prepared to do so. The majority of FY1s who responded had never received any teaching on how to conduct a ward round. The BMA Junior Doctors’ Conference recently accepted policy to lobby for mandatory teaching in leading ward rounds, as well as clarity of the role of FY1s in this area.

Methods

We have created a programme of teaching for final year students during their assistantship for the Hull York Medical School. This cross-site teaching programme aims to equip students with the skills necessary to lead ward rounds. It is an interactive programme of teaching, including student participation in a ‘virtual ward round’ patient case.

Results

5 teaching sessions will be delivered to a total of 120 students. So far, 93 students have attended, of which 92 students returned our feedback forms (99% return rate). Provisional results from 4/5 sessions that have so far taken place show that 85% of students disagreed or strongly disagreed to feeling prepared in leading their own ward round before the programme. After the session, 61% either agreed or strongly agreed they felt prepared to subsequently lead their own ward rounds.

As the programme of teaching is ongoing, further details of its evaluation will be presented at the conference.

Conclusion

Previous projects have shown more needs to be done to support FY1s leading ward rounds alone to allow for safe, thorough ward rounds. Teaching ward round delivery skills can improve preparedness of final year medical students and should be considered elsewhere. This programme of teaching aims to equip students nearing qualification with the necessary skills to lead ward rounds, which they are likely to utilise in the near future. This work is a start to improving newly qualified doctors’ preparedness in this area, subsequently improving daily patient care.

References:


INTRODUCING SURGICAL SIMULATION FOR 1ST YEAR CLINICAL STUDENTS

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Introduction: UK surgical training applications have fallen over the last few years and this has been attributed to a reduction in surgical exposure during medical school training. Furthermore there are many aspects of surgical training that are of relevance to all doctors, such as team working, asepsis and informed consent. The GMC’s ‘Promoting Excellence; standards for medical education and training’ recommends experiential learning in simulated settings. The Royal College of Surgeons of England has introduced an Undergraduate Surgical Curriculum encompassing knowledge and procedural skills for all medical undergraduates. Thus it was decided to incorporate a new simulation component into the medical students’ rotation in surgery on the Royal Free campus of UCL. The aim was to assess the students’ enthusiasm for the surgical simulation session and if their interest in a potential surgical career was improved after the session.

Methods: An empty operating theatre was used and over a 2-hour session, the students were introduced to 4 main concepts: the consent process, ‘scrubbing-up’ and ‘prepping’, behaviors during the operation and post-operative patient care. The faculty to student ratio was 1:3-4. Faculty was recruited mainly from senior surgical clinicians. Feedback forms were given to students before and after the session and the data from this was collated and analyzed.

Results: A total of 67 students took part. 94% of the students agreed they enjoyed the session and 86.5% of students wanted further similarly structured sessions. 77.6% of students found surgery interesting prior to the session and 26.7% admitted they were considering pursuing a surgical career. After the session, 37.3% of students (n=7) would consider being a surgeon. 90% agreed they had gained more experience in surgery following the session.

Conclusions: There is concern that the dramatic drop in competition ratios for trainees applying for postgraduate surgical specialties may result in either unfilled positions or a diminishment in quality. Simulated surgical sessions, undertaken in a real theatre environment, has demonstrated an enthusiasm amongst students for this type of teaching. Since most of them felt they understood surgery better from this exercise, it might suggest that the current surgical curriculum is lacking. In the process it has given some students a further insight into surgery with the additional option of making surgery a potential career path.
CONFORMING TO THE NEW RCS UNDERGRADUATE GUIDELINES

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1Royal Free NHS Foundation Trust, UK
2UCL Medical School, UK

Introduction: The Royal College of Surgeons (RCS) in the UK have recently introduced, in 2015, a new undergraduate curriculum which encompasses both knowledge and technical skills to be incorporated as part of undergraduate surgical training. This is an important step as it has been identified that surgical exposure at undergraduate level will increase awareness of surgery and also promote a future surgical career to the undergraduates. The aim of this project, is to identify how local surgical teaching can be improved in line with the RCS curriculum.

Methods: A dedicated clinical teaching fellow, with a 50% clinical component, was employed from August 2016 for 1 year, to help with setting up extra surgical teaching sessions, involving both simulation and procedural skills sessions, as well as cross-pollination teaching involving other specialties. The teaching fellow was dedicated to improving surgical teaching sessions involving general surgery, trauma and orthopaedics and vascular surgery. The RCS curriculum was then compared with teaching sessions pre and post-August 2016 in a local University Hospital and the results analysed.

Results: Using a traffic-light system, topics were highlighted green if they were definitely taught (green), not taught (red) or taught to some degree (orange). This has been illustrated by Figure 1. It was identified that prior to the presence of the teaching fellow, only 43% of the topics as stipulated by the RCS were taught as part of the university’s undergraduate curriculum. However with the introduction of the teaching fellow, this figure rose to 82%.

Conclusion: It can be seen there is a near 2-fold improvement in the delivery of surgical teaching in line with standards as set out by the Royal College of Surgeons in the UK with the employment of a dedicated teaching fellow in the space of 10 months. This is a definite improvement and it can be seen that with further planning and future work, this will mean a local surgical curriculum which is 100% compliant with the RCS undergraduate curriculum, with the hope of promoting both knowledge and skills to our future doctors.
THE NEED FOR IMPROVED TRANSGENDER TEACHING WITHIN MEDICAL SCHOOL CURRICULUMS

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1 Academic department of primary care and public health; Imperial College London

Introduction: Transgender education has been identified as gap within the UK medical school curriculum (1). Medical school students were invited to attend a compulsory teaching session on Transgender education. This was designed to equip them with basic bites of knowledge for them to use practically within a healthcare setting.

Method: Evaluative questionnaires, using ‘Mentimeter’ before and after the session, was conducted to assess the students’ prior knowledge and learning experience. A transgender patient also attended the session and they spoke about their personal experiences as a patient with a focus on what enhanced their experience as a positive one.

Results: The results demonstrated that 44% of students had never met a transgender patient prior to the session. There were significant gaps in basic knowledge; only 32% of the students familiar with the term gender dysphoria, 32% incorrectly defining gender by biological sex and sexuality and 26.5% not understanding the difference between trans-man and trans-woman. Other identified gaps in knowledge include acceptable terminology within the transgender community and awareness of the high risks of suicide in this population. Following the session, a significant improvement in the students’ knowledge was captured; statistical significance (p value, paired t test: 0.02). They were also asked to sum up the session in one word; from this a word cloud was generated to represent their voices. ‘Informed’ was the most cited word followed by ‘enlightening’ and ‘incredible’.

Discussion: This project highlights the need for Transgender teaching integrated within the current curriculum, as there were significant gaps on basic knowledge amongst the students. From an educational viewpoint, the session highlighted the very real concept of the ‘power of the patient’ (2). Several comments from the students focused on their enjoyment of having had the chance to ask the patient questions.

Conclusion: Our project highlights the gap within current medical school curriculums that is failing to address the learning needs of the Transgender community.

References:

(1) Is the Lack of Specific Lesbian, Gay, Bisexual, Transgender and Queer/Questioning (LGBTQ) Health Care Education in Medical School a Cause for Concern? Evidence From a Survey of Knowledge and Practice Among UK Medical Students

Vishnu Parameshwaran, Beatrice C. Cockbain, Miriam Hillyard, and Jonathan R. Price

Journal Of Homosexuality Vol. 0 , Iss. 0,0

EXPLORING TUTOR VIEWS ON A CANCER RESEARCH UK COLLABORATIVE TOOLKIT

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(2) Cancer Research UK Facilitator, North West Coast and North Wales, Facilitator Programme, Cancer Research UK.

Introduction: Improving the early diagnosis of cancer is one of several strategic objectives of Cancer Research UK (CRUK) that directly aligns with initiatives from the UK government and National Institute for health and clinical excellence (NICE) guidance.

Aim: The aim was to gain tutor views on a cancer care toolkit for General Practitioner (GP) tutors and students, to support student project work such as clinical audit in collaboration with the Greater Manchester, Lancashire and South Cumbria (GMLSC) CRUK Facilitators.

Methods:
We liaised with CRUK Facilitators to co-produce a toolkit for GP tutor and student use. The toolkit included ideas for quality improvement activities, resources and information.

The toolkit was presented to 22 GP tutors in 3 small group workshops of approximately 6-9 GP tutors at a time, allowing plenty of opportunities for interaction, discussion and feedback on the prototype toolkit.

Tutor feedback was obtained in-situ and online after delivery of the workshops.

Results: Valuable feedback from GP tutors on the prototype toolkit resulted in modifications to the content and layout of the final toolkit version.

14 out of 22 participants (64% response rate) completed the online feedback.

Free text comments showed that the workshop provided tutors with several learning opportunities on how to facilitate a project, ideas for project topics, available resources, how to best utilise the toolkit and tutors reported better awareness of the role of CRUK Facilitators.

Conclusion and Implications: This novel toolkit represents the first University and CRUK collaboration in the UK in order to support medical student involvement in cancer care at a General Practice level.

Exploring tutor views prior to launch of the toolkit has enabled the production of a more tailored resource. Additionally tutors noted key benefits in their confidence, knowledge and willingness to offer student projects in cancer care.

By promoting both tutor and student engagement in quality improvement work in cancer care, use of toolkit has the potential to impact on areas such as cancer prevention, uptake of cancer screening tests and reducing primary care delay in cancer referral.

Further evaluation in will be conducted following implementation of the toolkit on the uptake of projects in cancer care and resulting impact on individual practices.
EXPLORING THE VALUE OF GENERAL PRACTITIONER LED NURSING HOME TEACHING SESSIONS FOR UNDERGRADUATES

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(2) Lancashire Teaching Hospitals Foundation Trust, Sharoe Green Lane, Preston, UK.

Introduction
Nursing homes offer an untapped opportunity for undergraduates to be exposed to the holistic model of multidisciplinary care in Elderly Medicine. This aligns with key objectives of the 2014 National Health Service (NHS) 5-year forward view for health and social care to work in greater partnership and to provide more support for the elderly population living in nursing homes.

Aim
The aim was to implement and evaluate an innovative teaching session delivered in a nursing home by a General Practitioner (GP) to raise awareness of the multidisciplinary assessment of an elderly person’s complex co-morbidities and how that informs their management in a community setting.

Methods
Pilot half-day sessions were held in nursing homes for 83 students in year 4 during an elderly medicine placement. Each session consisted of a GP tutor facilitating a group of 5 students. This was split into small group teaching followed by history taking and presentation of findings. Qualitative and quantitative evaluation was obtained via an e-form.

Results
The evaluation response rate was 30% (25 responses). Over 90% of students said that the placement enabled them to learn very well or fairly well about the interaction between health and social services, the provision of long term care for older adults in the community and the role of the multidisciplinary team in the assessment and management of the care of an elderly person.

Positive comments included the opportunity to obtain the patient’s narrative and to develop a better understanding of care in the community.

Conclusion and implications
GP led teaching in a nursing home has improved students’ knowledge of how complex care needs are assessed and managed within the multidisciplinary team in this setting. This will help to prepare them for professional practice in the future when the population of over 75 year olds with complex co-morbidities is predicted to expand.
2-16

IMPROVING UNDERGRADUATE EDUCATIONAL EXPERIENCE IN ACUTE MEDICINE

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Introduction: Acute Medicine is a busy department, dealing with a broad range of presentations. It therefore has the potential to be a rich learning environment for medical students. Since 2007, the Royal College of Physicians has recommended Acute Medicine experience be included in undergraduate medical curriculum. In Aberdeen, all Year 4 students spend one week in Acute Medicine, meaning approximately 120 students rotate through the department each year.

Students fill in a SCEF (Student Course Evaluation Form) at the end of the block. Analysis of these revealed student opinion of their time in Acute Medicine was, unfortunately, somewhat negative. This was an opinion common to other Acute Medicine departments in the country. There was therefore a need to revamp the design of the attachment.

Method: The following changes were made:

- **Introduction pack** - explaining how department works and what students should aim to achieve
- **Personalised timetable** - for each student
- **5 tutorials** - consultant taught. Topics include: sepsis, breathlessness, headache, chest pain, collapse
- **End of block mini quiz** - formative
- **Feedback forms** - anonymous

SCEF forms were analysed before and after the above changes.

Results: The results are summarised in the following table:

<table>
<thead>
<tr>
<th>Feedback question</th>
<th>SCEF results pre revamp (July 2016)</th>
<th>SCEF results post revamp (November 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The organisation/coordination of the attachment was good</td>
<td>40% disagree 90% agree</td>
<td>14% disagree 86% agree</td>
</tr>
<tr>
<td>The quality of teaching was high</td>
<td>40% disagree 60% agree</td>
<td>100% agree</td>
</tr>
<tr>
<td>Staff were approachable and helpful</td>
<td>26% disagree 74% agree</td>
<td>100% agree</td>
</tr>
<tr>
<td>I was provided with an appropriate balance of learning opportunities</td>
<td>40% disagree 60% agree</td>
<td>100% agree</td>
</tr>
<tr>
<td>I feel more confident about the presentation, diagnosis and management of patients with acute medical conditions</td>
<td>40% disagree 60% agree</td>
<td>100% agree</td>
</tr>
</tbody>
</table>

Conclusions: Following the introduction of the aforementioned changes, feedback is much more positive. There is ongoing review of feedback forms and SCEF results, which should hopefully further reflect the change in experience. Ideas for the future include involving senior medical students in teaching junior students, and developing the role of Clinical Development Fellows in teaching within the department.

References


2 Nazir T, Wallis S, Higham J et al. How we established a new undergraduate firm on a Medical Admissions Unit. Medical Teacher. 2014; 36(11); 940-944. DOI: 10.3109/0142159X.2014.886769
NEW FOUNDATION YEAR 1 DOCTORS DO NOT FEEL PREPARED TO LEAD MEDICAL WARD ROUNDS ALONE: A REGIONAL CROSS-SECTIONAL STUDY

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Introduction: Ward rounds are crucial in providing safe and effective care for patients (1). Foundation Year 1 doctors (FY1s) regularly conduct ward rounds (WR) alone (2,3) despite not feeling prepared to do so (3) and seldom receive specific teaching on conducting ward rounds (3,4).

Methods: All FY1s on medical rotations in 2016 for their first rotation in the Health Education Yorkshire and the Humber region (HEYH) (n=298) were eligible. They were invited to complete a survey that inquired about prior teaching on conducting WR; the frequency of FY1- and senior-led WR; factors FY1s considered and decisions they made without delay during their WR; how prepared and supported they felt to conduct WR alone; finally, whether they thought FY1s should conduct WR alone and how educationally valuable they find them.

Results: The response rate was 34% (n=98). 56% (n=55) of FY1s had no prior formal training on conducting WR. 54% (n=53) of FY1s reported conducting WR alone 2-3 times per week and 94% (n=92) reported their seniors conducted the WR ≥2 times per week.

FY1s made some decisions without additional delay during their WR such as symptomatic treatment (72%; n=71), simple investigations (80%; n=78) and involving other members of the MDT (63%; n=62). FY1s were less likely and/or able to make decisions about requesting complex investigations (18%; n=18), ceiling of care (2%; n=2) and initiating end of life care (3%; n=3). The aspects most FY1s reported considering regularly were history and examination (86%; n=84), observations (88%; n=86) and investigations (89%; n=87). Those that the lowest percentage of FY1s reported considering regularly were discharge planning (41%; n=40), referrals/MDT input (45%; n=44), mobility (45%; n=44) and ceiling of care (22%; n=22).

At the start of the rotation, 84% (n=82) of FY1s disagreed/strongly disagreed that they felt prepared to conduct a WR alone compared to 9% (n=10) at the end of the rotation. 38% (n=37) of FY1s agreed/strongly agreed that they felt supported to conduct WR alone.

65% (n=64) of FY1s agreed/strongly agreed that FY1s conducting WR alone was valuable for learning. However, when asked if FY1s should conduct WR alone, 40% (n=39) disagreed/strongly disagreed and 34% (n=34) agreed/strongly agreed. 92% (n=90) of FY1s agreed/strongly agreed that FY1s should receive prior formal training on how to conduct WR.

Conclusions: FY1s on medical rotations in HEYH regularly conduct WR alone and do not feel prepared to do so at the start of their first medical rotation. Almost all FY1s felt they should receive prior formal teaching on how to conduct WR. More work is required to better prepare future doctors for conducting WR alone.

References
Introduction: This qualitative research aimed to explore the extent to which alcohol is considered a part of medical student culture at a London medical school and the resulting effects of this on student social capital.

Methods: Semi-structured interviews were conducted with eight undergraduate students following ethical approval for the study. Participants responded to a range of questions about their experience of networking at medical school and how this may or may not have related to their alcohol consumption. Participants also completed a demographic questionnaire, which included elements of the NHS alcohol self-assessment questionnaire.

Results: Thematic analysis of interview data suggests that students consider alcohol to be central to medical student culture. This was shown to have a polarising effect on the student population, resulting in two competing subcultures. Participant experiences include accounts of discrimination and isolation as a result of this divide. Students lacking in social capital felt that they were denied access to social support and unofficial academic resources, which they believed would facilitate in their learning and academic success.

Conclusions: Although this was a small sample, the results suggest that there are multiple complicating factors involved in a medical school’s promotion of cultural competence and social capital. Social activities such as drinking alcohol - which are entrenched in the culture of medical students - clash with differences in student ethnicity and background resulting in cultural insensitivity. It is important to consider this in order to ensure an inclusive medical school experience maximising student social support.
TEACHING TRANSFUSION FOR CLINICAL PRACTICE: IMPACT OF AN INTERACTIVE CASE-BASED SESSION USING SOCRATIVE™

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2. Newcastle University Medical School, UK

Introduction: Blood transfusion is one of the commonest procedures performed in hospital and is associated with significant risk. Practical knowledge of transfusion has been found to be lacking in a number of studies. Coverage of transfusion in the undergraduate curriculum is limited and often takes the form of lectures emphasising basic science. Our study aimed to address the need for clinically-focussed teaching through providing a case-based session to final year students. Interaction was stimulated using the free cloud-based student response system Socrative™.

Methods: Our 90 minute session focussed on five important clinical scenarios, highlighting indications for transfusion and acute transfusion reactions. The session was offered to all final year medical students at Newcastle University Medicine Malaysia. For timetabling, the session was provided on three occasions to cover student groups on different clinical placements. 77 of 93 students attended. Using Socrative™, students’ application of knowledge was regularly tested with multiple choice questions they could answer via their smartphones. Students’ learning was assessed using the validated BEST-TEST2 transfusion exam. One group (25 students) was tested before the session and the two other groups (27 and 25 students) were tested after the session. Free text feedback was also collected.

Results: Following the session, there was significant improvement in the students’ BEST-TEST2 scores from 28.9% to 43.9% (p<0.001). The BEST-TEST2 performs a rigorous assessment of knowledge application: a score of 42% indicates ‘basic’ knowledge comparable with a first-year US resident in internal medicine. In feedback, all students reported that the use of Socrative™ had supported their learning. More specifically, they felt that Socrative™ facilitated ‘regular testing’ and ‘made them think’. Many students appreciated the case-based structure: 32% stated that this was one of the three most useful aspects of the session, providing an effective way to ‘apply theoretical knowledge’ and ‘gain practical insight’.

Conclusion: In our study, a focussed 90 minute teaching session was able to have a significant impact on knowledge, bringing students’ scores up to ‘basic competence’ on the challenging BEST-TEST2 examination. Tools such as Socrative™ can be highly effective in promoting learning in large groups at low cost. We advocate ongoing efforts to develop memorable and interactive transfusion teaching.

2. O’Brien KL, Champeaux AL, Sundell ZE, Short MW, Roth BJ. Transfusion medicine knowledge in Postgraduate Year 1 residents. Transfusion. August 2010. 50(8)1649-53
SERVICE INCREMENT FOR TEACHING (SIFT) – A NEW MODEL TO IMPROVE TRANSPARENCY, FAIRNESS AND QUALITY

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Service increment for teaching (SIFT) is funding allocated to help deliver undergraduate medical education within the NHS in England. Identifying costs of teaching within a clinical setting is difficult. This money has often been absorbed into a general ‘NHS pot’ and incorporated into trust baseline budgets.

We describe a model of SIFT resource usage which adopts the principle of the funding following the student. This aimed to improve accountability and deliver teaching more efficiently. To demonstrate value and justify ongoing SIFT funding institutions must aim to raise standards.

SIFT money is linked to job plans and clinical activity to increase transparency. Quality is assessed with General Medical Council (GMC) feedback forms. Clinical Management Groups (CMGs) can monitor how performance matches SIFT income. An example for a CMG is provided. This model has been implemented throughout our trust. The principles can be adapted and applied to other providers and centres.
EXPLORE THE VIEW OF MEDICAL STUDENTS TOWARDS CLINICAL REASONING (CR) TEACHING AT THE UNIVERSITY OF NOTTINGHAM

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**Background:** Clinical Reasoning (CR) skills are usually acquired by the experiential learning of undergraduates as they pass through the clinical curriculum, where they are not formally taught. The absence of this CR training as a specific theme within the University of Nottingham (UoN) curriculum leads to a situation where newly qualifying doctors have varying knowledge and experience about clinical cognition and are relatively unprepared for how best to manage cases.

In order to introduce such a theme to the undergraduate curriculum we explored the current knowledge, beliefs and attitudes of UoN Medical students on CR by interviewing them. 10 students from the third year/ Clinical Phase 1 (CP1) and 18 students from the final year /Clinical Phase 3 (CP3) were interviewed. The UoN UG curriculum has 2 models: Integrated and Problem Based Learning (PBL). All the CP1 students were from the integrated curriculum whereas 11/18 CP3 students were from PBL.

**Experimental methods:** The qualitative interviews, with semi-structured questions, asked students to describe

- Their views on the teaching of CR
- How they have acquired their CR skills
- How to better incorporate CR into the curriculum

The transcribed texts were analysed and coding themes were agreed.

**Results:** The emergent themes are presented under the above headings.

Their views on teaching CR

- Although it is well known that the presence of sound knowledge alone is not enough to make good clinical judgement, CR is rarely taught in medical schools in formal teaching.
- The challenges and barriers to learn CR are described as content factors and environmental factors.

How they have acquired their CR skills

- They develop CR by a combination of the following: knowledge teaching, symptom based teaching, scenario (problem) based teaching, online formative CR tests, observing seniors in action, seeing many patients on the ward, simulation, workshops and clinical skills teaching.

How to better incorporate CR into the curriculum

- Although it seems to be developed as a passive by-product of clinical experience, it is important to teach it explicitly.
- Early exposure to CR would make them think about every situation from a clinical perspective.
- Core lectures about the elements of CR, the theoretical concepts, metacognition and clinical reasoning would be helpful.
- Types of teaching events they would like to see more of in curriculum are discussed. These could overcome the barriers to learning CR.

**Conclusions:** The results of this study have contributed to further development of the CR curricula and have changed our educational practice.
PILOTING AN EXTENDED SURGICAL SKILLS COURSE FOR MEDICAL STUDENTS

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Introduction:
Early exposure in surgery and positive experiences during surgical placements can lead to more students developing an interest in pursuing a career in surgery. However, there has been a reduction in emphasis on surgical education in the undergraduate curriculum. This study evaluates whether an extended surgical skills course would enhance the technical ability, the confidence and the surgical interest of participating medical students.

Methods:
We piloted a 3-month course, which comprised of 7 sessions, fortnightly, of 2 to 2.5 hours duration per session with an end of course assessment. Faculty comprised of consultants and middle grades in surgical specialties. The course covered a range of technical skills, including surgical knot tying, wound management, a variety of suturing techniques and surgical anastomosis. Pre-course and post-course evaluations were completed by participants to analyse their progress. Students rated the course programme using a 5-point Likert scale (5 = highest) and self-reported their level of competence and confidence using a global scale (0-10). Qualitative feedback was also obtained.

Results:
A total number of 23 participants completed the course. All participants who took part in the end of course assessment achieved at least level 2 on the Direct Observation of Procedural Skills assessment form, indicating that they were able to perform the procedure under supervision. The overall feedback was positive with 85.7% and 76.2% rating 4 or 5 for deepening their interest in surgery and motivating them to pursue a career in surgery respectively. The level of confidence in performing suturing on real patients markedly improved from 11.2% of students rating 7 or above pre-course to 85.6% post-course.

Conclusions/Implications:
This was a self-selecting group of students who were already developing an interest in learning surgical skills. The course provided a friendly, non-pressurised environment for students to develop their surgical skills over time through practising on simulations and animal tissue with regular constructive feedback. It enhanced their technical ability and improved their confidence in applying the skills in a clinical setting. We recommend that medical schools or student surgical societies consider adopting this course model to provide supplementary training for students who are interested in learning surgical skills or pursuing a career in surgery.
NEAR-PEER ACUTE ONCOLOGY TEACHING: EXPERIENCES FROM A JUNIOR DOCTOR LED TEACHING PROGRAMME FOR UNDERGRADUATE MEDICAL STUDENTS

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Introduction

Acute oncology is often underappreciated in the medical school curriculum yet it is important in frontline medical practice. We identified an unmet need for acute oncology teaching for final year medical students and devised a lecture series to address this.

Methods

Evening lectures were held weekly for final year medical students at a tertiary oncology centre. Sessions covered two topics each and were led by foundation or core medical trainees, lasting 60-90 minutes. Teaching styles included case-based discussions and more traditional didactic teaching. Online surveys were used to measure confidence before and after the lectures, as well as for lecture feedback. The surveys utilised numerical scales (grade 1-5 where 1 = poor, 5 = excellent) and open questions with free text boxes.

Results

22 students filled in the initial survey. Greater confidence in acute medical topics such as sepsis and pulmonary embolism was demonstrated with 73% rating their understanding as grade 4-5. Conversely, over 50% rated their understanding of acute oncology topics such as superior vena cava obstruction, tumour lysis syndrome, hypercalcaemia and hyponatraemia as grade 1-2. Metastatic spinal cord compression and bowel obstruction received mixed responses. Attendance was 2-9 students per lecture and post-lecture feedback showed improved understanding across all topics with no student rating their knowledge as grade 1-2. The teaching was described as “absolutely invaluable” and students felt junior doctors knew “which topics students find difficult” and what they would be “faced with”. One student felt that didactic teaching “doesn’t add much” but agreed the case based discussions were better “prep for FY1 jobs”. All 20 students surveyed after the lecture series requested more junior doctor teaching.

Conclusions

We highlighted an unmet educational need and in response, developed a near-peer teaching programme. Initial surveys showed low confidence in acute oncology topics but following the lectures, students left with greater confidence and a desire to see similar programmes. Attendance was a limiting factor and this was due to a scheduling clash. Despite this, there does appear to be a niche in teaching medical students that junior doctors are perfect to fill. Ironing out the practicalities of this could be of real benefit to both students and doctors.
Background: Cancer is, according to the Office for National Statistics, the leading cause of deaths from conditions considered preventable, accounting for 39% of preventable deaths.

According to the European cancer Registry survival for malignancies is worse in UK than in other western European countries, late diagnosis being one the possible causes. Future doctors should be appropriately trained in order to effectively recognise signs and symptoms of cancer.

Team Based Learning (TBL) is been proven an effective teaching tool in medicine, we evaluated whether it is effective in training future doctors in recognising abnormality in routine blood tests that could be raise the suspect of cancer.

Methods: A TBL session was delivered to forty-three third year medical student. The session consisted in “best of four” questions, the students were requested to interpret short clinical cases. The scenarios included: iron deficiency anaemia that can be an early sign of colon or gastric cancer, and some pre-cancer and cancer conditions that could be easily be identified with a routine full blood count as myelodysplastic syndromes, leukaemia, lymphomas and multiple myeloma.

Students’ knowledge was evaluated through i-RAT and t-RAT, for the t-RAT t scratch cards (IF AT) were used for immediate feedback assessment.

Results: The results showed improvement of knowledge with t-RAT versus i-RAT for all the scenarios except for acute leukaemia where there was no difference. The results are summarised in table 1.

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>% OF CORRECT ANSWERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron deficiency anaemia</td>
<td>60 66</td>
</tr>
<tr>
<td>Myelodysplastic syndrome</td>
<td>51 93</td>
</tr>
<tr>
<td>Acute Leukaemia</td>
<td>56 57</td>
</tr>
<tr>
<td>Chronic lymphocytic leukaemia</td>
<td>42 64</td>
</tr>
<tr>
<td>Chronic myeloid leukaemia</td>
<td>21 50</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>15 36</td>
</tr>
<tr>
<td>Multiple myeloma</td>
<td>26 43</td>
</tr>
</tbody>
</table>

Most of the groups could correctly diagnose at least four out of seven conditions; the same results were obtained only by a third of the students during the i-RAT. The results are shown in figure 1.
Discussion and Conclusions: TBL is effective in teaching medical students how to interpret blood test results to diagnose early signs of cancer.

To the authors’ knowledge this is the first report of TBL applied in this contest. However the study was conducted on a small number of students, the results should be validated using bigger group.

Acknowledgments:

We would like to thank Narinder Virdee for organising the session and Jo Horsburg for the scratch cards (IF AT).
THE IMPACT OF A ONE-DAY UNDERGRADUATE RADIOLOGY COURSE ON CONFIDENCE AND PERFORMANCE OF MEDICAL STUDENTS IN INTERPRETING COMMONLY ENCOUNTERED RADIOGRAPHS

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Introduction:
Research into undergraduate radiology teaching suggests that medical students feel their radiology training is currently inadequate (1,2). Radiology, as a specialty, is generally not taught formally at medical school; rather, it is integrated inconsistently into various other specialties (2). This study aimed to investigate whether a one day course could help medical students with both confidence and performance.

Methods:
Participants consisted of third and fourth year medical students from Barts and The London School of Medicine and Dentistry. The course consisted of morning lectures delivered by radiology registrars and afternoon small group interactive tutorials led by foundation doctors. The topics were chest (CXR), abdominal (AXR), musculoskeletal radiographs and computed-tomography (CT) of the head. The learning outcomes were created in accordance with the Royal College of Radiologists undergraduate curriculum (3).

There was a pre and post course assessment consisting of 15 multiple-choice questions. Additionally a questionnaire was given evaluating their confidence in interpretation (rated from 1= not confident to 10=completely confident). A paired T-test was performed to investigate the significance of the results.

Results:
7 students completed the quiz and questionnaires. The mean assessment scores were 10.43 pre-course and 14.33 post-course. This demonstrated a statistically significant improvement of 4.43 marks or 27% (p=0.0004 95% CI 2.59 to 5.41).

Likewise, students demonstrated a significant increase in confidence in all four areas.

Confidence in CXR interpretation increased by 21%, or 2.1 points (p=0.0113 95% CI 0.69 to 3.60); AXR increased by 31%, or 3.14 points (p=0.0008 95% CI 1.90 to 4.39); CT Head increased by 44%, or 4.43 points (p=0.0002 95% CI 3.03 to 5.83) and Musculoskeletal X-ray increased by 37%, or 3.71 points (p=0.002 95% CI 1.97 to 5.46).

Conclusion:
Our results demonstrate that a one-day intensive course statistically raised both confidence and knowledge in interpreting common radiographs.

The combination of lectures and interactive small group teaching sessions seemed to allow students to consolidate their knowledge and apply it more successfully when tested in the post-course assessment.

Additional research is required to further explore the impact of the course and the plan is to run a second course at the start of the next academic year.

References
USE OF UNDERGRADUATE SKILLS DAYS TO IMPROVE CONFIDENCE IN SURGICAL SKILLS

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Introduction: At present, there is a lack of undergraduate surgical skills training in UK medical school curricula. Surgical skills days provide an extra opportunity for interested students to increase their exposure to surgical skills.

Aims & Objectives: This prospective study compares self-reported confidence levels in various surgical skills before and after an undergraduate surgical skills day organised by Scalpel, the University of Manchester undergraduate surgical society.

Method: Seven workshops were developed ranging from suturing to laparoscopy with regional doctors recruited to facilitate training. The day was advertised to Manchester medical students with more senior medical students (years 3-5) in mind. 56 students attended; 34 male and 22 female. A questionnaire was developed and provided to all attendees. This assessed attendees’ confidence levels in skills before and after each workshop on a scale of 1 (very unconfident) to 5 (very confident).

Results: Feedback response rate was >85%. Confidence levels increased in all workshops. Overall, mean confidence increased by 2, from 1.7+0.3 pre-course to 3.7+0.5 post-course (p<0.0001). The rise in confidence ranged from 0.9 in advanced suturing to 2.6 in tracheotomy.

Conclusions: Undergraduate surgical skills days improve confidence levels in surgical skills. With limited opportunities available to learn surgical skills in the undergraduate medical curriculum, student surgical societies provide effective skills training for students wishing to pursue a surgical career.
STUDENT RESPONSES TO TEAM-BASED LEARNING (TBL) IN YEAR ONE OF A UK MEDICAL DEGREE PROGRAMME

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Introduction:
Team-based learning (TBL) is a form of collaborative learning that uses a specific sequence of individual work, group work, immediate feedback and peer evaluation. TBL has been shown to improve students' engagement with course material, increase their capacity for problem-solving and develop their team working skills.

Methods:
98 students in 2015-16 and 88 in 2016-17 undertook TBL activities in year one of a UK medicine programme. Student feedback on their TBL experience was collected using online evaluation surveys consisting of numerous Likert scale questions and opportunities for respondents to provide free-text comments.

Results:
84.7% of students completed the TBL evaluation in 2015-16. The majority of respondents agreed (i.e. either ‘Mildly agreed’, ‘Agreed’, or ‘Strongly agreed’) that: (a) the TBL sessions were well organised (82%), (b) the reading packs provided were useful (64%) and well aligned to the readiness-assurance tests (64%), (c) the application exercises allowed teams to apply existing knowledge to important aspects of medical practice (73%), (d) feedback on their performance had been provided in a timely fashion (94%), and (e) feedback allowed them to see where they could improve next time (66%). However, the majority (64%) did not support the use of the specific system that was used for peer evaluation.

Therefore, prior to commencing TBL for the 2016-17 cohort, TBL was explained more carefully to students, the specificity of learning outcomes in the reading packs was improved, and collection and scoring of peer evaluation was changed to an online system. These changes resulted in increased satisfaction with TBL among the 54.5% of students who responded to the evaluation of TBL in 2016-17. For example, when asked about reading packs and their relevance to learning outcomes, 96% and 95% respondents agreed they were useful, in contrast to 64% and 69% in 2015-16. Similarly, 89% of respondents supported the new system of peer evaluation as opposed to 36% in 2015-16.

Conclusion:
These evaluations suggest that TBL can be a useful adjunct to undergraduate medical curricula. The application exercises provide a link to the context in which students will apply their knowledge of the basic medical sciences, and reflection on performance in TBL can carry over into other aspects of study. However, our experience also emphasises the importance of responding to student feedback in order to enhance TBL and the student learning experience.
STUDENT-DEVELOPED MOCK OSCE STATIONS (SMOSCES): A TOOL FOR STUDENT REVISION AND IMPROVING FAMILIARITY WITH NEW EXAM FORMATS

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Introduction: Nottingham Medical School has recently made significant changes to their 5th year OSCEs in a drive to make them more integrated and realistic. This has meant a move away from individual system based tasks, to more complex multi-faceted stations, and a change from checklist to domain based marking.

Despite being given materials detailing these changes, anxiety about this new exam format became pervasive amongst the 5th year students, who were accustomed to the old OSCEs.

The team at Lincoln Undergraduate Medical Education Centre (LUMEC) decided that creating a pack of mock OSCE stations would have the dual effect of providing much-wanted revision material, as well as improving user’s familiarity with the new exam format.

Importantly, it was decided that students should create the materials themselves, as part of their revision process. There is robust evidence that getting students to author MCQs promotes higher order thinking and improves performance1, and this also seems to apply to creating OSCEs2.

Methods: 20 students volunteered, and created 30 mock OSCE stations, complete with examiner guidance and domain-based mark sheets. The LUMEC fellows then reviewed these with the students, making any necessary changes to ensure clinical accuracy and adherence to the new exam format. Stations were then made available online via Dropbox to all students placed within LUMEC in the last year.

Two feedback surveys were sent out after the exams had finished, one to the student authors (n=20) and one to all other students who were sent the Dropbox link (n=94).

Results: Student feedback on the SMOSCES was overwhelmingly positive. Of the 31 responses to the user survey, 97% agreed/strongly agreed that they had found them a useful revision tool, whilst 100% agreed/strongly agreed that they had improved their understanding of the new exam format.

The author survey responses (n=18) were similarly positive. 100% identified the process of creating a station as a useful exercise in their exam revision, whilst 94% felt it had improved their understanding of the new exam format.

Positive aspects repeatedly raised in the qualitative feedback were the breadth and quality of the stations, as well as their closeness to the real exams format. Multiple students cited the resource as having decreased their anxiety levels.

There was almost no negative feedback in either survey. The only recurrent theme was that the SMOSCES should be expanded upon with more stations in future.

Conclusion: The SMOSCES fulfilled 3 main objectives:

1. Providing a high-quality revision exercise for student authors.
2. Creating revision material specifically tailored to the new exam format.
3. Allaying student anxiety by improving their familiarity with the new exam format.

In future, we hope to expand the SMOSCES by encouraging other regional centres to join us in creating a larger, more diverse bank of stations which can be made more widely available.

References

Introduction: The underlying principle of approaching a critically ill patient is to use the Airway, Breathing, Circulation, Disability, Exposure (ABCDE) method of assessment. The ABCDE approach likely improves patient outcomes by improving team performance and helping to focus attention on the most serious clinical problems. The Kirkpatrick Model is the worldwide standard for evaluating the effectiveness of training and comprises of four levels of training; Reaction, Learning, Behaviour and Results. We prospectively analysed feedback data to establish if simulation teaching in 4th year Orthopaedics and Rheumatology would encourage a systematic approach to patient assessment, with the aim of improving future clinical practice and whether the Kirkpatrick model could be applied.

Methods: Two simulation scenarios were used; septic arthritis and an open fracture. These scenarios had previously been piloted and found to be enjoyable, realistic and relevant to 4th year teaching. The scenarios were both run in a high fidelity simulation suite. The scenarios included learning outcomes, facilitator and student briefs, information for the patient and nurse in the scenario, set up and debrief instructions. Feedback was collected by questionnaire after the session and specifically asked if the simulation training would guide future learning or practice.

Results: Feedback was collected from 39 students over a three month period from February – April 2016. 44% (17/39) stated that the teaching would influence their future practice in adopting an ABCDE approach to patients. The overall feedback for the scenarios was very good.

Conclusions: It is encouraging that feedback for the simulation scenarios was overwhelmingly positive and this teaching method is now firmly embedded in the 4th year medical students’ curriculum. Most of the students had only had one prior experience of high fidelity simulation and for some they had only just rotated into their orthopaedic and rheumatology module, which made the approach to some of the clinical aspects of the scenario more challenging. With appreciation of the Kirkpatrick model in analysis of their feedback we found that the simulation teaching enabled students to acquire the intended knowledge, skills, and confidence in the training and they found it engaging and relevant. Although only 44% of students stated the simulation training would influence their future practice in adopting an ABCDE approach to patients, in time and as a result of continued exposure and practice during simulation training, it is anticipated that this will improve. The use of this approach was discussed in the debrief sessions and it is emphasised in other aspects of their teaching. Of note 7/39 (18%) highlighted that the prescribing of drugs was an area they found beneficial practising in ‘real time’, so this is one potential area we look at in develop further simulation scenarios in the future.

References

Introduction

Inspection comprises the initial stage of the clinical examination, and inadequate patient exposure and inspection has been recognised to be a contributory factor to medical error. Whilst a thorough inspection lays the foundation for an effective clinical examination, inspection skills are rarely taught in isolation. We have set up a new short course for undergraduate students at our hospital, with the aim to develop inspection skills within the context of clinical assessment, using a method that is equally beneficial to a small group of medical students.

Methods

We have led this half-day course four times, with four to six students, utilising a timed multiple station approach. This is with an entirely formative purpose and includes the presence of peers to facilitate vicarious learning. The tutors are responsible for prior identification of patients, which includes explanation of the focus on inspection in order to obtain informed consent. Within each station, students take turns to inspect a patient and present findings, leading to a short discussion where the tutor may ask students questions relevant to the inspection findings or the patient’s condition, or the patient may share how the condition affects them.

Results

We collected data from 21 students using pre- and post-course self-assessment questionnaires using Likert scales on confidence in inspection, and in presentation of clinical findings. The course was rated highly in terms of teaching effectiveness (mean 4.71/5) and there was evidence of a significant improvement (p= <0.001) in both mean confidence in inspection skills (pre-course 3.00/5, post-course 4.14/5) and mean confidence in verbal presentation skills (pre-course 2.48/5, post-course 3.62/5).

Qualitative feedback praised discovering “how much you can find out about a patient just by looking at them” and students welcomed the variety of medical conditions encountered within a single session, and tutor feedback that helped them to refine their descriptive language.

Conclusion

Our new approach for delivering clinical education to a small group of medical students is perceived to be effective, and is seen to improve student inspection and verbal presentation skills. We have found this course provides a comprehensive induction to our clinical medicine rotation, introducing students to many specialties within the hospital and emphasising systematic inspection skills within clinical examination.
Introduction

Appropriate management of cardiac arrest is an essential learning outcome within undergraduate medical training. Current educational methods may help students to develop an algorithmic approach to the management of cardiac arrest. However, there can be difficulty in transferring these skills to the unpredictable reality of clinical practice.

We aimed to expand opportunities for experiential learning for final year medical students during their Preparing for Practice (PfP) rotation, including ensuring all students have opportunities for debriefing following exposure to cardiac arrest, to guide their reflection on their ‘concrete experiences’ and for meaningful dialogue and support.

Methods

Clinical teaching fellows across three NHS Lanarkshire hospitals were responsible for briefing a total cohort of 43 final year medical students, assigning them to trained mentors, and ensuring that their rota included at least 12 hours of shadowing a Foundation Year 1 Doctor (FY1) carrying the cardiac arrest pager, during a six-week programme in Spring 2016. They were also responsible for data collection, using anonymous written questionnaires distributed to students at the start and end of rotation, assessing previous experience of cardiac arrests and their expectations regarding the role of an FY1.

Results

The majority of final year students (76%) starting their final clinical attachment (PfP) have been present at cardiac arrest, although with a mean of 1.7 arrests. Following PfP there was a small rise, to 82.4% and a mean of 2.2 respectively. Students regard their cardiac arrest experiences as providing useful learning, rating their experiences as on average 3.6 (before PfP) to 4.2 (after PfP) on a 1-5 Likert scale.

Few students (48-52%) have actively participated in cardiac arrest, and this is largely by performing CPR. Student perceptions of the role of the FY1 in the arrest team are largely appropriate. However, many students do not feel entirely prepared for this, with mean scores of confidence before PfP being 2.6/5 (CI 2.15 to 2.97) on a Likert scale. These do significantly improve to 3.4/5 (CI 3.03 to 3.79) at the end of the PfP attachment.

Conclusions

Students regard experiential learning as important in regards to cardiac arrest, but they have few opportunities for this within a medical degree. Our PfP programme, which includes simulation and on-call experiences, has increased student confidence in preparation for the FY1 role within cardiac arrest.
**IS ACUTE CARE TEACHING IMPROVING SENIOR MEDICAL STUDENT’S KNOWLEDGE IN THE MANAGEMENT OF ACUTELY UNWELL ADULT PATIENTS? - A QUESTIONNAIRE STUDY**

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**Introduction:** UK medical graduates are consistently identified as being unprepared for acute care. Presently, medical students at one of the 33 undergraduate medical schools in the UK receive a 2-weeks 4th Year and 4-weeks 5th Year Acute Care block in the form of tutorials, clinical attachments and skills stations. This study explores the effect of the current teaching on the standard of acute care knowledge among senior medical students at that institution.

**Methods:** An anonymous online questionnaire was devised and distributed to the senior medical students (n=182) who were at varying stages of acute care training: not had any Acute Care blocks, only completed 4th Year Acute Care block or finished both 4th and 5th Year Acute Care blocks. The questionnaire consisted of ten multiple choice and single best answer questions on ECG interpretation, Acid-Base balance, Fluids, Sepsis and Adult Life Support algorithms, with 1 mark awarded for each correct answer, giving a mark out of ten. Following completion of the questionnaire, participants were asked to provide feedback on their performances and the Acute care blocks.

**Results:** There were 62 (34.1%) students in the no block group, 54 (29.7%) in the 4th Year block only group and 66 (36.3%) in the both block group. Median scores (IQR [range]) for each group were 5/10 (4-6 [1-10]) - no block, 6/10 (5-7 [2-9]) - 4th Year block only and 7/10 (6-8 [3-10]) - both blocks. The score improves with progress through each block and this improvement reached statistical significance between the no block group and the both block group (p<0.001) as well as between the 4th Year block only and the both block groups (p<0.01). This is supportive of students learning from the acute care teaching. Questions that generated the lowest correct response across the groups were causes of metabolic acidosis (11.0%), fluids used in resuscitation (21.4%) and sepsis criteria (26.4%), with reasons being lack of practice and clinical exposure and difficulty in choosing all the answers for the multiple-response questions. This suggests that, despite improvements, there were still gaps in their knowledge.

**Conclusion:** Overall, Acute Care blocks teaching has a positive effect on students’ level of acute care knowledge. However, it also highlighted some deficiencies which should be attended to so that students are more prepared for their transition to Foundation Years.
YOUTUBE BASED CARDIOVASCULAR EDUCATION FOR MEDICAL STUDENTS: THE ROAD AHEAD WITH OSCESTATION
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Introduction:
Social media and eLearning videos are powerful learning tools and can help improve learning, demonstrate practical or complex procedures and simplify difficult topics\(^1,2\). We shared these via our registered OSCEstation (objective structured clinical examination) video portal.

Methods:
YouTube videos were created for teaching medical students on a variety of cardiovascular system scenarios and procedures (Figure 1). Our goal was for these videos to be viewed and shared worldwide for purposes of medical education with the aim of micro learning, note taking, comprehension of complex concepts, role-play and revision for exams.

Results:
4 high quality cardiovascular focussed eLearning YouTube videos were created across several clinical departments in Teaching Hospitals. To date there have been almost 160,000 views of our cardiovascular videos and almost 15,000 users have subscribed to the channel, with excellent feedback related to them.

Conclusion:
The use of YouTube as a social media platform for teaching and learning is the road ahead for medical education. A quality assessed, structured and sustainable educational online platform like TheOSCEstation aims to meet the requirements of a new generation of learners.

References:
MAY I HAVE YOUR ATTENTION PLEASE? (MAINTAINING ATTENTION OF STUDENTS IN A LONG TEACHING SESSION)

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Introduction:
For maximum learning to take place in a classroom based teaching session, teacher must be able to efficiently manage the resources, space, and students’ behaviour. Benjamin (2002) suggest that students start losing attention between 10-15 mins into the lecture. I have been teaching final year students for last few years and I have found that teaching sessions lasting for 2 hours or more loose students’ attention by the end of it. This has made me wonder what changes can I bring in my teaching style or lesson planning that will keep students’ attention steady throughout the session.

Methods:
This study was carried out under Newcastle University from January 2017 to April 2017. Twenty-four final year medical students attending hospital based practice (HBP) rotation in surgery at Friarage Hospital Northallerton were included. Over the course of 4 months, there were four 2 hours long teaching sessions. Six students attended each session. First session in January collected baseline data. The changed lesson plan with 30 minutes’ break was implemented and data was collected for the next 3 sessions for comparison. The students were asked to record their level of attention on a questionnaire at the start of each lecture and at subsequent 10-minutes intervals, signaled by a ring on a phone timer. The results were analysed using mean and plotting the data on charts.

Results:
The results clearly depict that breaking a long session into two smaller session with introduction of a break in between improves the attention of students. In the baseline data, the major decline in attention was observed around 50-60 mins into the lecture. The break was therefore introduced at that time. This inquiry showed that the level of attention goes back to the level at the beginning of teaching activity after a 30 minutes’ break. The mean level of attention is close to “below average level of attention” at 120 minutes in baseline data. It increased to “above average level of attention” at 120 minutes after introduction of break.

Conclusions:
Keller (1987) talked about motivational design and how the teaching activities should motivate students towards learning. Keller believed that gaining and maintaining attention of learners is the cornerstone of a teaching activity. Multiple factors were kept in mind in designing this study including long lectures, afternoon hours, last activity of the day, and teaching strategies. These contribute towards declining attention span of students in a lecture. Lecture breaks can serve to revitalise, stimulate interest, and improve concentration in long teaching sessions. Break during the lecture helps in tackling the issues of monotony, noise, and excessive material coverage (Anderson and Harrison, 1985).
WHAT IS THE VALUE OF LONGITUDINAL MEDICAL STUDENTS PLACEMENTS IN GENERAL PRACTICE?

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Background

The vision for future healthcare delivery requires expansion of General Practice, however, despite the 2013 mandate for 50% of medical students to become General Practitioners (GPs), only 22.8% of 2015 graduates intended to follow this career route. The East Midlands and others UK areas have very low application rates for GP posts. Leicester Medical School launched a new curriculum in September 2016 to increase General Practice teaching from 8% to 25%.

Methodology

Using a qualitative approach we aimed to explore medical student perspectives of the breadth of learning they are now experiencing from General Practice apprenticeship style placements to identify the benefits and challenges for the new curriculum.

A medical student researcher completed semi-structured one-to-one interviews with a purposeful sample of medical students who had completed the new style teaching in Primary Care. The topic list aimed to explore their insights and experiences. The data were analysed using thematic analysis using Nvivo software.

Results

Twenty interviews were completed from October 2016- May 2017. Overall the findings are positive with students reporting feeling more confident in their diagnostic ability when able to manage a clinic on their own and better prepared for practice. The main themes include; i) advancing diagnostic reasoning from support to run clinics; ii) a greater desire to take up General practice as a career pathway; iii) greater understandings about team members roles and responsibilities and from interprofessional learning. There was a clear steer on how to support learning as a proactive partnership.

Conclusion and Implications

Outcomes identify that apprenticeship style General Practice training benefits medical students. Students perceive it prepares them for real clinical practice, especially when given the opportunity to practise their clinical skills with a wide range of diverse patients. This supports the new curriculum directive and aspirations to increase the numbers of doctors joining Primary Care.
FOUNDATION TEACHING FOR FINALS: A SUSTAINABLE NEAR PEER PLATFORM

Chantelle Rizan*1, Daveena Meeks1, Nina Wietek1
1Brighton & Sussex University Hospitals NHS Trust

Introduction:
Teaching and the acquisition of new knowledge play key roles in GMC Duties of a Doctor. Near-peer teaching plays an increasingly important role in medical education, mutually beneficial to both provider and recipient. The primary aim of this study was to evaluate the efficacy of a formal teaching programme for final year students, organised and delivered by foundation year doctors. The secondary aim was to establish factors improving sustainability of the programme.

Methods:
A 21-week, twice-weekly evening teaching programme, ‘Foundation Teaching for Finals’ (FTF) was developed in consultation with the local medical school undergraduate curriculum. Each week encompassed a different medical theme, involving one didactic, lecture based session and one heuristic small-group OSCE skills based session. Junior doctors were recruited both as co-leads and as teachers. Student feedback forms were disseminated to teachers who returned these to FTF organisers in exchange for portfolio certificates and feedback breakdown. The feedback forms used five-point Likert scales and white space questions. Quantitative results were analysed using Microsoft excel and qualitative results through thematic exploration. Factors improving program sustainability were considered by junior doctor co-leads.

Results:
Feedback forms were received for 13 out of 21 sessions organised (total n=314). Average attendance was 23.53 students (range 10-40). On average, students rated the overall teaching sessions as 4.58/5, usefulness 4.61/5, content 4.58/5, relevance 4.69/5 and teaching style 4.44/5. Analysis of white space questions demonstrated relevance, appropriate teaching level and interactivity were common themes. Areas students wished to improve were formal handouts and longer session durations.

In order to create a sustainable programme, all teaching material, contact lists and certificate/ feedback templates were stored on an online Dropbox account. New junior doctor co-leads for next year were appointed and provided comprehensive handover.

Conclusions:
Both final year students and foundation year doctors actively engage in near peer teaching. Benefits to students include additional tuition and a peer group based learning environment for preparing for finals. Benefits for junior doctor teachers include teaching in a formal program alongside CV and portfolio building. In summary, the FTF model is a successful platform that could be replicated at other sites nationally.
DEVELOPING MINDFULNESS IN MEDICAL EDUCATION, THE LEICESTER EXPERIENCE
*Dr C Sanders, GP Specialist educator, University of Leicester Medical School,
Dr J Hales, senior lecturer, University of Leicester Medical School,
Dr A Cook, GP Specialist educator, University of Leicester Medical School,
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Department of Medical Education, University of Leicester, Centre for Medicine, Lancaster Road, Leicester LE1 7HA

Introduction

This poster will outline the background and rationale for introducing mindfulness into medical education, referencing the evidence base for this intervention. An overview will be given of the new Health Enhancement Programme at the University of Leicester Medical School, with an exploration of themes and application to the healthcare workforce both in primary and secondary care.

Methods

Analysis and discussion of evidence base for mindfulness. Qualitative student and tutor feedback from the Leicester Health Enhancement programme will be outlined.

Results

A reflective analysis of the student and tutor’s experience of teaching mindfulness as core curriculum at the University of Leicester Medical School will be presented.

Conclusion

This poster aims to explore the evidence base for mindfulness in medical education, and present available data from introducing this intervention in core curriculum at University of Leicester Medical School. The relevance of the course to the current NHS workforce will be outlined, with application to daily medical practice in primary and secondary care.
EVALUATING THE INTRODUCTION OF TECHNICAL CLINICAL SKILLS TRAINING IN YEAR ONE OF THE UNDERGRADUATE MEDICAL CURRICULUM

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GKT School of Medical Education, Faculty of Life Sciences & Medicine, Chantler Simulation and Interactive Learning (SaIL) Centre, Guy's Campus, London, SE1 1UL.

Introduction:

The introduction of communication skills training during the initial stages of the undergraduate medical degree has been reported by students and tutors to be an effective means of enhancing the acquisition and development of this skill set. In contrast, little research has evaluated the medical students’ perspective regarding the introduction of technical clinical skills training during their first year of medical education. To address this, the clinical tutors at King’s College London (KCL) compared the views of students given differing degrees of technical clinical skills teaching over a one or two year period.

Methods:

Students were recruited from the KCL Stage curriculum (n=184) consisting of 48 hours of clinical skills tuition over one year and the KCL Phase curriculum (n=94) involving 12 hours of clinical skills teaching over a two year period. All participants completed an online questionnaire designed to determine their perceived preparedness for carrying out technical clinical skills ranging from hand-washing to manual blood pressure measurement. Further questions determined their views regarding the introduction of this training during the first year of medical education. The five-point Likert scale responses of the Stage and Phase students were compared using Mann-Whitney U tests.

Results:

Significantly more Stage compared to Phase students reported feeling prepared to carry out all of the clinical skills listed (p<0.01 for all individual skills) except for a urine dipstick test and a manual blood pressure measurement in which both Stage and Phase students reported similar levels of preparedness. The majority of Stage and Phase students strongly agreed with statements that learning clinical skills during the first year of medical school enabled a better understanding and retention of the topic. In contrast, significantly more Phase compared to Stage students reported that they did not receive enough clinical skills teaching or the opportunity to practice (p<0.001).

Conclusion:

This study has highlighted the positive impact an early introduction to technical clinical skills teaching can have on the perceived preparedness for carrying out these skills. The widespread consensus for clinical skills teaching in year one supports its addition to the medical undergraduate curriculum, especially if accompanied by the opportunity to practise such skills as a means to reinforce and consolidate the skill set acquired.
Introduction
On Saturday 21st January 2017, we hosted our first ‘How to be a Fy1 Doctor’ Course at Princess Alexandra Hospital in Harlow. It was a free course for final year medical students focusing on topics not normally taught at medical school. The majority of tutors were Fy1s and Fy2s and were able to provide real life guidance on what the year would entail. In total there were 34 students and 23 tutors.

Methods
Pre-course material was provided to the students. After an initial introduction, there was an interactive ABCDE demonstration. Thereafter, the students were split into ten groups of 3 and 4 and rotated around ten different teaching stations. Each station was 40 minutes long.

The stations were:
1) Mock Ward round
2) Sim on-call
3) Surgical emergencies
4) Medical emergencies
5) Prescribing/discharge summaries
6) Practical skills
7) Radiology
8) Prioritisation/Death certificates
9) Airway skills/Chest compressions and defibrillation
10) Massive Blood loss

Results
Overall the feedback was very positive - Feedback scale: 4=very good; 3=Good; 2=Average; 1=Poor. All averages given below are mean averages Overall Quality: 3.93/4 Overall Delivery: 3.91/4 Overall Timekeeping: 3.97/4 100% of students would recommend the course to a colleague.

There were a number of positive comments including:
• Really good. Very useful. Relevant to FY1.
• Very good course. Lots of key facts and tips throughout the day.
• A very good course. Great revision practice for finals.
• Excellent day- great revision and useful skills and techniques. Amazing Food. Helpful and useful.
• Such a good day- thank you. Really useful- great for finals. All the staff were so helpful!
• Excellent. Learnt a lot. Highlighted areas of improvement. Highly recommended.
• Time keeping excellent. Really good day- content really useful for FY1 that is not always covered in medical school. Teachers were all excellent with good insight into their own experiences.
• Excellent course- very well prepared and ran smoothly. All topics very relevant and I felt challenged and I learnt lots. I would pay for this course.
• Thanks very much. Best course I have done.
• Absolutely fantastic course. One of the very best I’ve ever been on.

Conclusion/Implications
After discussion in the Medical Education Committee meeting, we plan to run the course during the induction programme for the incoming Fy1s. We are hoping for this to become an annual course, with the outgoing Fy1s teaching and the incoming Fy1s.

There remains a large step-up from final year medical student to year 1 doctor and we believe that courses like this will help to reduce that gap and ensure more confident newly qualified doctors. It is likely that students would greatly appreciate similar courses run by other educational institutions, no matter their background or nation.
IMPROVING MEDICAL STUDENTS’ UNDERSTANDING OF OSCES BY PROVIDING OPPORTUNITIES TO BE EXAMINERS AND PATIENTS IN A STRUCTURED ENVIRONMENT

*Dr Solanki P*: Senior clinical teaching Fellow, Princess Alexandra Hospital NHS Trust, Harlow,
Dr Evans L: Associate Dean of Undergraduate Education; Princess Alexandra Hospital NHS Trust, Harlow.

**Introduction**: Objective Structured Clinical Examinations (OSCEs) are an important part of summative examinations within medical schools in the UK. There is both published and anecdotal evidence that the aims and thus the mark schemes of certain stations are not completely understood by students. A study by Nasir in 2014 found that only 40% of students felt it was easy to understand instructions at an OSCE. Likewise, more recently, emphasis has been placed on patient ratings of candidates and students may not always be appreciative of this aspect. For these reasons, the undergraduate education department at Princess Alexandra Hospital NHS Trust organised a series of mock OSCEs for third year medical students with a view to address these issues.

**Method**: We provided three mock OSCE sessions each containing 11 to 12 students. The students were split into three groups: one group as examiners; one as patients and one as candidates. Patient scripts and mark schemes were given to the appropriate groups and the students were given 5 minutes to get accustomed to their roles. The candidates then participated in a 4 station OSCE, each station 7 minutes long. After the circuit was completed, the candidates would repeat the round and receive 2 minutes of feedback from both the ‘examiner’ and the ‘patient’. After this, the whole session was repeated, but this time with the initial group of examiners becoming candidates; the group of patients becoming examiners and the group of candidates becoming patients. This was then repeated a third time, to ensure all students had an opportunity to be an examiner, a patient and a candidate. Feedback was obtained from the students at least 24 hours after the session, to ensure there was time for reflection beforehand.

**Results**: We received feedback from 27 students (84%). Results are shown in the table below:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that the experience of being an examiner improved my understanding of OSCEs</td>
<td>94%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I feel that the experience of being a patient improved my understanding of OSCEs</td>
<td>69%</td>
<td>31%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Overall, I benefited by experiencing OSCEs in this format</td>
<td>94%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I feel that the all third year students should get the opportunity to be a patient and an examiner in an OSCE situation</td>
<td>94%</td>
<td>6%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The comments reflected on an increased appreciation of what examiners were looking for, the ability to give feedback to peers highlighted common mistakes and the being a patient stressed the importance of building a rapport and being considerate.

**Conclusion**: OSCEs remain a daunting exam for the majority of medical students, particularly earlier on in their clinical years. Similar sessions could allow students to develop their understanding of the important aspects associated with these exam and may help to improve anxiety levels. Further research is required to look at the impact of these sessions on overall OSCE performance.

**References**
THE USE OF HIGH FIDELITY SIMULATED CASES TO IMPROVE THIRD YEAR MEDICAL STUDENTS’ ABILITY TO
MANAGE AN ACUTELY UNWELL PATIENT

Dr Solanki P - Senior Clinical Teaching Fellow, Princess Alexandra Hospital NHS Trust, UK;
Mr Foster A- Clinical Skills and Simulation Lead, Princess Alexandra Hospital NHS Trust, UK;
Dr Evans L- Associate Dean of Undergraduate Education, Princess Alexandra Hospital NHS Trust, UK

Princess Alexandra Hospital NHS Trust, Medical Education Department, Hamstel Rd, Harlow CM20 1QX

Introduction: A major issue for medical students is that they rarely obtain experience on the management of unwell patients. As soon as a patient is noted to be unwell, students may be excluded and a great educational opportunity is missed. Although simulation is used for final year medical students, those in earlier clinical years are generally overlooked, with the assumption that they have not yet had the experience or knowledge to find simulations useful. The undergraduate education department at Princess Alexandra Hospital NHS Trust thus developed hybrid simulation sessions, incorporating a high fidelity simulation with a tutorial, with the aim to improve students’ ability to treat sick patient.

Method: In total, there were 9 groups of third year students on placement at the Trust throughout the year, with each group containing a maximum of 4 students. We initially carried out a survey on their knowledge on the ABCDE approach- Airway; Breathing; Circulation; Disability; Exposure (1). This was marked against a peer reviewed check-list which was created in conjunction with the local resuscitation department. Each group of students received 4 simulation scenarios over two 2-hour sessions. The scenarios used a high fidelity manikin in a simulation suite and were led by a senior teaching fellow. The simulation was paused at various points to allow discussion to occur around diagnostic, management and referral skills. Feedback was obtained after each session and a repeat ABCDE survey was performed at least 24 hours after the final simulation session to investigate the impact.

Results: We received 52 feedback forms. The results are shown in table 1.

<table>
<thead>
<tr>
<th>Session was relevant to my curriculum</th>
<th>I feel that simulations should play a vital part of my on-going clinical education</th>
<th>I would like more simulation sessions</th>
<th>I feel overall that simulations will help me become a better doctor</th>
<th>Faculty were helpful, knowledgeable and good facilitators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Average</td>
<td>5</td>
<td>4.9</td>
<td>4.8</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Table 1: Feedback scale: 5=strongly agree; 4=Agree; 3=Neither agree nor disagree; 2=Disagree; 1=Strongly disagree

There were a number of positive comments with several students stated that this was one of the best teaching sessions they had ever had.

Regarding the impact of the sessions on the students’ ability to look after an unwell patient, performing a paired T-test demonstrated a statistically significant (p<0.0001) improvement in average assessment scores from 10.25 pre-simulation to 16.50 post, showing an improvement in around 6.25 points or 61% (95% confidence interval: 4.26; 8.24).

Conclusion: Interactive simulated cases provide an innovative way of improving the confidence and ability of medical students to manage an unwell patient. These sessions are highly evaluated by students and allows them to learn by doing. Further studies are required to investigate the impact these sessions can have on student development during clinical years.

References

INCREASED PRIMARY CARE TEACHING FOR MEDICAL STUDENTS AND THE INFLUENCE ON CAREER CHOICE

Sood A.K.* Leicester Medical School; Sanders C.J. Leicester Medical School; Keerig M. Leicester Medical School
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Introduction:
There is a requirement for more general practitioners and the government has set a target of 50 percent of medical student graduates becoming GPs.

Methods:
Leicester Medical School introduced a new curriculum in October 2016 which is more primary care focussed. Students will have earlier placements in primary care and longer placements in all years. General Practitioners (GPs) will be involved in teaching both at the medical school and also in the community.

Outcomes:
The aim is to develop the student experiences of primary care and the multi-disciplinary team and to provide good role modelling to increase the recruitment into general practice. The GPs required teaching and training to help deliver the curriculum and a restructuring of teaching models and student placements.

Results:
Student interview findings during and following placements are very encouraging with more students now considering a career as a GP following their greater exposure to primary care and GPs as teachers.

Conclusion:
Further evaluation will be required as to the impact of the greater primary care focus in undergraduate teaching especially following the longer placements in years three, four and five.
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TRAINING THE TEACHERS-A NEW APPROACH
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Introduction:
Leicester Medical School’s new curriculum was introduced in October 2016 and is much more Primary Care focussed. To facilitate this it was necessary to develop a specific teaching programme for the General Practice (GP) teachers and this was followed up with on line teaching material. The remit for the teaching was to produce a programme which could be developed and used on an ongoing basis and was sustainable.

Methods:
Health Education England working provided funding of £300,000 for the development and implementation of the teaching programme. A steering group was formed and drove the development of the process. Seven whole day teaching sessions were developed and delivered to 40 GPs over 12 months from inner city Leicester. Medical Educators from Leicester Medical School, local GPs and medical students were involved in the teaching.

Outcomes:
The seven teaching days were 1. Running a teaching group and preparing a teaching session 2. Assessment of performance and feedback on consultation skills 3. Mentorship, diversity and individual student issues 4. Professional values and continued professional learning 5. How to teach assessing and managing co-morbidity and long-term conditions 6. The new curriculum and teaching in primary care 7. Masterclass-practicing skills learned. On line teaching was developed and trialled for future teachers. This consisted of live and avatar recordings of discussions between educators, between educators and medical students and power point presentations and tips for teaching.

Results:
Feedback collected from all of the programme consistently showed the perceived improvement in teaching skills and feeling of being more confident in teaching medical students in settings ranging from one to one teaching, group work and lecturing both within the primary care setting and also at the medical school.

Conclusions:
The programme has been extremely successful with attendance for the whole seven day programme being close to 100%. This is in part due to the quality and usefulness of the teaching and also because of the backfill payments from the funding made to general practices for the GPs attending. Many of the teachers attending are now involved in teaching medical students and future workshops are proving to be very popular. The programme with appropriate modification is now being used for secondary care teachers involved with Leicester Medical School.
Introduction:
Bedside teaching is an opportunity for clinical teachers to demonstrate and assess history taking and physical examination skills of medical students in the presence of a patient. It has been shown objectively that effective bedside teaching can improve exam performance. In recent times however there has been a steady decline of the incidence of bedside teaching on ward rounds.

Methods:
A bedside teaching programme was designed and piloted at University Hospital Lewisham (UHL), a busy acute district general hospital that is one of the teaching sites of King’s College London (KCL). The teaching programme was aimed at preparing KCL final year medical students for sitting their OSCEs at the end of the academic year.

A junior doctor delivered structured teaching sessions at the bedside to multiple groups of up to five medical students over a six-week period. Evaluation of the programme was qualitative, using anonymous feedback forms based on the model provided by the Joint Royal Colleges of Physicians Training Board. Feedback was used to gauge the progress of students through the programme, the impact of the teaching sessions and how it could be improved.

Results:
12 students completed a total of five sessions each during the period of the programme. From the anonymised feedback it was reported that students felt significantly more prepared to sit their OSCEs compared to prior commencing the programme. They also: felt more confident in history-taking and physical examination abilities, honed professionalism, gained valuable exposure to real patients, and felt more able to clarify doubts compared to lecture-based teaching sessions.

Conclusion:
The junior-doctor led bedside teaching programme received favourable feedback and medical students reported increased confidence in all the clinical skills domains taught, as well as overall preparedness for OSCEs in finals. There is a desire amongst medical students and participating junior doctors for this to become a regular programme at UHL. The challenge would be to expand the scope of the teaching programme to include medical students from other years of clinical school experience.
USE OF ONLINE VIDEOS IN EARLY YEAR STUDENTS AT ST GEORGE’S MEDICAL SCHOOL (UNIVERSITY OF LONDON)

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(1) Final year medical student, St George’s University of London.
(2) Lecturer in clinical skills at St George’s University of London and GP.
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INTRODUCTION

• Over the last few years there has been an exponential rise in internet, smartphone and social media usage.
• Students are increasingly using online videos to augment and assist their learning, especially for practical and clinical skills
• We carried out a survey of early medical students at St Georges Medical School, and aims to answer the following questions:
  o What percentage of students use online videos to learn clinical skills
  o What do students use online videos for?
  o Which websites do students use?
  o What do students perceive to be the challenges in using online videos?
  o What help do students want from educators and medical schools, to help enhance and improve their learning from online videos?

METHODS

• Questionnaire based survey
• Hard copies of questionnaire distributed to students during clinical skills sessions
• Year 1 and 2 students of Graduate Entry Programme, and Years 1, 2 and 3 of the 5 year undergraduate programme.

RESULTS

<table>
<thead>
<tr>
<th></th>
<th>Number of respondents</th>
<th>Total number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBBS5 Year 1</td>
<td>73</td>
<td>200</td>
</tr>
<tr>
<td>MBBS5 Year 2</td>
<td>124</td>
<td>201</td>
</tr>
<tr>
<td>GEP (graduate entry programme) Year 1</td>
<td>43</td>
<td>94</td>
</tr>
<tr>
<td>T Year</td>
<td>80</td>
<td>342</td>
</tr>
<tr>
<td>TOTAL</td>
<td>320</td>
<td>837</td>
</tr>
</tbody>
</table>

• 63% of students use online videos for clinical skills related learning
• Many more use online videos for revision (34%) rather than learning (15%), although largest number use for both (44%)
• Youtube (74%) is the most popular site for online videos

• With respect to deciding which resources to use:
  o 63% of students self search
  o 54% go by recommendations from peers
  o 23% go by recommendations from educators/lecturers

• With respect to frequency of viewing:
  o 56% of students use once a month
  o 28% use once a week
Perceived challenges when using online videos
• Variation in content between different videos = 54%
• Credibility of source = 49%
• Quality assurance = 37%

What do students want from medical schools, with respect to learning from online videos
• 93% want official guidelines and a ‘viewing list’ of online resources
• 81% feel that ‘viewing list’ of online resources would be more useful than a traditional ‘reading list’ of textbooks
• 75% would like a greater focus on the use of videos for clinical skills
• 94% of students thought that online resources could not replace the practical face-to-face clinical skills teaching that they currently receive

CONCLUSIONS
• Early years medical students use online videos extensively for their learning, especially for clinical skills
• Most students use online videos for revision, as opposed to for learning
• Students feel that the greatest challenges they face when trying to use online videos effectively are variability in content and credibility of sources.
• Only a minority of students decide which online videos to use on the basis of recommendations from educators/lecturers.
• The vast majority of students want greater focus on the use of online videos and official guidance
• Most students feel that ‘viewing lists’ of online resources would be more useful than traditional ‘reading lists’
IMPROVING STUDENT SATISFACTION BY INCORPORATING THEIR SUGGESTIONS

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INTRODUCTION: Applications to paediatric training are falling and speciality decisions are often made during medical school rotations. We are passionate about paediatrics and therefore need to increase recruitment. Each year, our paediatrics department hosts nine 4 week rotations of medical students.

METHODS: Using the central university feedback and a single targeted questionnaire, we identified and put in place the students’ suggestions. The students felt the timetable was jumbled so we streamlined the placement into 4 themed weeks:

1. Outpatients
2. Inpatient general paediatrics
3. NICU
4. A&E, ambulatory and community paediatrics

The number of scheduled teaching sessions remained unchanged. Students were allocated a starting week and rotated following individualised calendars.

We tested the change by comparing the targeted questionnaire and central university feedback with pre-intervention data and performed unpaired T-tests.

RESULTS: On the central university feedback, overall student satisfaction rose from 67% to 100% at our site. The perceived opportunity to clerk patients rose from 40% to 100%. Comments included ‘very much enjoyed the format of the 4 weeks’ after intervention.

28 students completed the pre-intervention questionnaire and 20 students completed the post-intervention questionnaire. Appreciation of placement structure rose significantly from 32% to 95%, p<0.001.

84% of students found the ‘self-directed learning’ area of the timetable ‘useful’ compared to 64% pre-intervention which was statistically significant at p=0.046.

Satisfaction with the number of scheduled teaching sessions rose significantly from 21% to 70% post intervention, p<0.001.

A significant number of students felt that they were able to meet their learning objectives post intervention at 80% up from 50%, p=0.02.

CONCLUSIONS: The initial change was time intensive, but now the placement runs more efficiently with less administrative time required. The students can follow patient presentations and management plans over a week to understand themes and concepts when caring for paediatric patients. They were also able to utilise their self-directed learning time more effectively post-intervention. Despite no increase in formal teaching, the student satisfaction rose significantly.

We listened to university feedback and incorporated student suggestions to improve the satisfaction of our placement. Through these changes, student approval and achievement of learning objectives have risen.
A TRIANGULAR SYSTEM OF NEAR-PEER LED FORMATIVE MEDICAL STUDENT OSCE TEACHING: ONE DOCTOR AS SIMULATED PATIENT AND A SECOND AS AN EXAMINER

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Introduction

Objective structured clinical examinations (OSCEs) can be anxiety provoking for medical students & formative OSCEs allow students to develop their exam technique. This study aimed to assess whether students find a triangular system of near-peer led formative OSCE teaching, utilising one doctor as simulated patient and a second as an examiner valuable. We also assessed whether acting as examiners in these two roles could enhance junior doctor’s skills as clinical educators.

Methods

Eleven final year medical students at a district general hospital attended a formative OSCE. Ten foundation doctors acted as simulated patients or examiners. The OSCE had two cycles comprising five histories and examination stations for which five minutes was allowed, followed by two minutes each for viva and for feedback.

Results

All students and examiners completed feedback questionnaires. 90% of students rated the content, relevance and overall quality excellent. Six students suggested longer time for stations. 100% of doctors thought the OSCE was fair and examined skills expected of junior doctors, with the added component of simulated patient feedback allowing for further improvement to student skills. 89% felt participating developed their teaching skills and would participate again.

Conclusions

This triangular system of near-peer led formative OSCE was well received by both students and examiners. Examiners felt that it was a fair exam and that skills expected of a junior doctor were examined, whilst students valued the learning opportunity. Students would like more time allowed per station.

This type of formative OSCE provided a valuable learning opportunity for medical students. It also provided an environment in which foundation doctors could enhance their skills as clinical teachers. Future considerations may be to allow for more time per station.

Foundation doctors are effective clinical educators for final year medical students and foundation doctor delivered formative OSCEs can be a rewarding educational experience for all involved.
THE REFORM OF MEDICAL HISTOLOGY EDUCATION WITH A HYBRID METHOD OF USING THE TRADITIONAL MICROSCOPE AND COMPUTER-ASSISTED INTERACTIVE TEACHING AND LEARNING

Jian Yang, Michelle Machado, George Tsao and Sookja K Chung
School of Biomedical Sciences, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong

Introduction
The importance of preclinical education in medical education has been emphasized as early as 1910 by Abraham Flexner. Histology is often learnt in preclinical curriculum as a basic science course embodying the function of cells, tissues and organs at the cellular and molecular level. The traditional approach to teaching and learning histology, involves the use of the microscope and histological slides. At the University of Hong Kong (HKU), histology education is in the process of being reformed. In addition to the traditional approach, computer-assisted histology teaching software is also utilized by way of the Aperio System. To further enhance the experience, an HKU Anatomy Electronic Atlas is provided to the students as a study aid. These changes along with their impact on the student learning experience are outlined below.

Method
Histology education at HKU is fully integrated into the first three years of the system-based Bachelor of Medicine, Bachelor of Surgery (MBBS) program, and is delivered via 50 hours of lectures and practical. For each practical session, the class is organized into 25 groups of 8-10 students and led by 6 academic staff. Each student has access to a microscope, a box of specimen slides, the online Aperio System containing 150 digitally-scanned specimens and an E-manual with a paired HD Electronic Atlas. Teaching and learning activities include live demonstrations, group exercises relating to clinical pathology and clicker-style question sessions followed by instant feedback and discussion.

Result
Microscope-based learning complements other basic and clinical education and provides medical students with the necessary skills to develop their future clinical and research work. The interactive Aperio system and mobile-device-based E-learning greatly capture students’ attention and interests. Incorporating pathological questions prepares the students to transfer their knowledge to clinical scenarios.

Conclusion
MBBS histology education at our institution provides students with firsthand experience in microscopic study with microscope slides and interactive digital resources, and clinical-related exercises. This hybrid learning system is effective, evidenced by students’ enthusiasm during the practical sessions, student feedback, and their performance in the problem-based learning and summative examinations.