Weekly Online Quizzes

An addition to the educational toolkit?

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Introduction

Teaching of medical staff within the Emergency Department at Glasgow Royal Infirmary is organised into a series of rotating weekly themes, such as toxicology, trauma and paediatrics, which cover the RCEM ACCS curriculum over a period of 4 months. Each week there is a corresponding consultant-led teaching session for which we have created supplementary online educational resources, as part of a flipped classroom educational model.

Engagement with the online educational resources has been variable and it was recognised that new methods to deliver online learning and improve engagement in currently existing resources would be necessary.

Method

In order to improve engagement, a series of online quizzes were developed. There were two quizzes for each weekly theme with each of the 10 questions in the quiz addressing one of that week's learning objectives. The first quiz was issued at the beginning of each week along with a prompt to review other online educational resources should the user wish to. The second quiz was issued at the end of the week and included a short discussion providing the correct answer and the reasoning behind each question.

It was hoped that the quizzes would fulfil multiple functions. Firstly, the quizzes would provide an attractive gateway for participation in online educational activity. To this end the quizzes were designed to be easily accessed, quick to complete and interactive. It was hoped that gaps in knowledge would prompt the use of the other online educational resources developed by our team and this was encouraged through prompts issued with each quiz. The discussion at the end of the second quiz was intended to consolidate the learning that took place over the preceding week. In order to achieve this, the questions were designed to cover each of the 10 objectives covered in the corresponding weekly theme.

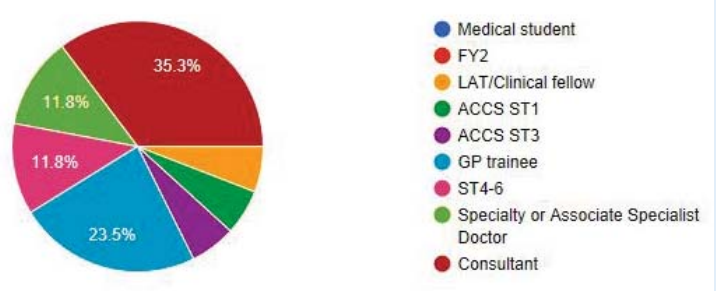
Secondly, the quizzes were intended to be useful independently of our other resources. By providing small kernels of information that could be easily assimilated over the course of 5-15 minutes, we hoped that we could deliver teaching that fitted the busy lifestyle Emergency Medicine entails. In an effort to make the quizzes relevant to the whole team, questions were aimed at a variety of levels that would satisfy all trainees.

Finally, it was hoped that improvement between the first and second quizzes would give learners a sense of satisfaction and that this would provide positive reinforcement for engagement in educational activities generally.

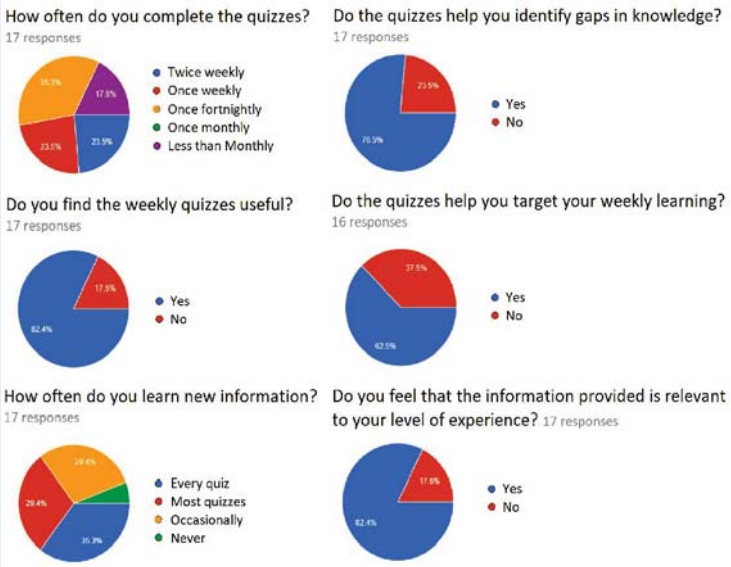
Staff Survey

A Google survey was conducted to assess the staffs' perception of and engagement with the quizzes.

The survey was completed by 17 members of the Emergency Department at the Glasgow Royal Infirmary. The composition of the group was as follows:



Staff Perception



Survey Feedback

Is there anything in particular that you have found interesting or useful?

- Legal themes and drug doses
- Varied content and info grouped in themes
- Useful to see own answers and be corrected where going wrong

If you do not regularly complete the quizzes, what are the barriers to completion?

- Time and don't want to make a fool of myself getting it wrong
- I have to put my email in!
- Too many nudges/quizzes – so frequent that ignoring them becomes a habit.

Conclusion

Overall, the majority of survey participants felt that the quizzes were useful. There was, however, a significant minority who felt that utility was limited, perhaps reflecting the difficulty in pitching questions at a level that satisfies all training grades simultaneously. There was also a concern that sending two quizzes every week was resulting in "email fatigue" that would discourage participation. The twice-weekly quiz system provided maximum benefit to those completing both quizzes each week, and it was evident that only a small number were doing so (23.5% of survey participants).

In response to this feedback, there have been some improvements in the format and content of the quizzes. For example, we now send only one quiz per week to prevent "email fatigue". We will collect further feedback to ascertain these changes' efficacy.

It is interesting that surveillance of users' activity discouraged participation for fear of mistakes being revealed. We collect email addresses to monitor engagement of individuals in teaching activities so that effort can be rewarded (e.g. by certificate) – the results were never intended for any critical assessment of clinical practice. Given this response we are considering how we can make these quizzes less intimidating.

In future, we would like to determine how often use of the quizzes results in the use of our other educational resources. The feedback here briefly touches on this issue, but we cannot yet show a corresponding uptake in use of other educational resources.

Acknowledgement

We would like to thank the medical and nursing staff at GRI ED for their continued support and engagement with education.

Team Based Learning in Medical Education: 5 Reasons to Move from Theory to Practice

Blackrock Clinic

Dr. Jane McManus, Dr. Clare Byrne, Dr. Cian O'Leary, Dr. Robin McManus

Introduction

Team based learning (TBL) is a teaching method first described by Michaelson et al for large classes in business courses and later adapted for medical education at Baylor College of Medicine in 2001 (1). TBL was designed as an active learning strategy, which is learner-centred but instructor led (1). TBL is a relatively new method of teaching being used in the health sciences over past 15 years compared to Problem Based Learning (PBL) which has demonstrated its usefulness in undergraduate medical education over the past 50 years (2). TBL encourages individual and group accountability as small groups of students work together to solve problems (3). We aim to estimate how often TBL is applied in medical education, based on reports in the literature and to summarize the reasons that support the use of this form of teaching. We aim to analyse the outcomes for student performance of using TBL in medical education.

Methods

We surveyed medical education literature and categorised reports of TBL according to group size, postgraduate or undergraduate medical course and level of formality of the teaching. Subsequently, we analysed the reasons for using TBL in medical education as well as the outcomes of using this method.

Results

We identified five distinct reasons to apply TBL including improved learner engagement during class, better content retention through active learner engagement, development of problem-solving and critical thinking skills, team-building and development of communication skills. We identified two main outcomes including an overall improvement in student performance and a larger learning benefit for lower-achieving students compared with higher achieving students.

Conclusion

TBL's strategic sequence, when repeated multiple times during a course, encourages thorough individual preparation while developing teams into cohesive learning groups. TBL has a positive impact on students' learning and performance.

Article	Group Size	UG vs PG	Formality	Reason for TBL	Outcome
An Initial Experience with "Team Learning" in Medical Education Haidet, Paul MD, MPH; O'Malley, Kimberly J. PhD; Richards, Boyd PhD	27	Postgraduate	Formal	To improve participation at the normal noon time lectures To promote the use of evidence based approach to the ordering of clinical tests	95% residents stayed until the end of their sessions No disengaged learners noted during sessions
Using team-based learning to teach pharmacology to second year medical students improves student performance Nathalie K Zgheib, Joseph A Simaan, Rami Sabra, 17/02/10, Medical teacher Journal	N/A	Undergraduate	Formal	To assess if TBL improved student performance	Positive Feedback Improved performance in quizzes after group work compared to individual TBL less effective when questions were difficult – a difficulty range of 30-70%
Influence of curriculum type on student performance in the United States Medical Licensing Examination Step 1 and Step 2 exams: problem-based learning vs. lecture-based curriculum Enarson C	689 Step 1 USMLE students 540 Step 2 USMLE students Over 7 years	Postgraduate	Formal	Assess adequacy of using TBL vs using traditional lecturing methods by comparing T scores in Step 1 and 2 exams between the two cohorts	Similar mean scores noted between the two groups
Using Team-based Learning in an Endocrine Module Taught Across Two Campuses	Number of Students N/A Study spans 3 academic years 2004-2006 Taught over two campuses	Postgraduate	Formal	To encourage student active learning	Higher grades noted using the new TBL course compared to the previous lecture based method, with no failure grades noted in the first 3 years of the new course
Active Learning in a Year Two Pathology Curriculum Koles P, Nelson S Medical Education 2005	83 second year medical students	Undergraduate	Formal	To assess for academic improvement using TL vs traditional case based group discussion CBGD	Students in the lowest academic quartile of the class showed improved academic performance after TBL compared to traditional case based discussion methods Students felt peer contribution was more useful in the TBL group than the CBGD
The Effect of Using Team Learning in an Evidence-Based Medicine Course for Medical Students Hunt D, Haidet P Nov 2009	168 second medical students	Postgraduate	Formal	To align instructional methods with EBM practices – need to reword prior to completion of poster	Students performed well academically Encouraged individual accountability Encouraged teamwork Lack of enthusiasm for TBL noted in students
Team-based learning in a medical gross anatomy and embryology course Neider G, Parmelee D	97 first year medical students	Postgraduate	Formal	Promote active learning Encourage teamwork and collaboration	Most benefit was to students with lower academic standards Lower course failure rates
Application of Team Learning in a Medical Physiology Course Seidel C 2001	200 students	Undergraduate Postgraduate	Formal	Facilitate a group teaching approach with a larger student to faculty ratio	Student engagement Active learning Favourably reviewed by students

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3. Michaelson L, Peterson T, Sweet M. Building learning teams: The key to harnessing the power of small groups in management education. The SAGE handbook of management learning, education and development. 2009:325-43.

Medical students' self-reported oncology learning needs: an evaluation project

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[1]Beatson West of Scotland Cancer Centre, [2]NHS Greater Glasgow & Clyde, [3]NHS Lothian

Introduction

A proportion of 3rd and 4th year undergraduate medical students from a single institution are allocated oncology exposure at the Beatson West of Scotland Cancer Centre (BWOSCC) in Glasgow as part of their general medicine rotation. As this is not a mandatory rotation for all students, there are no oncology-specific learning outcomes in the curriculum.

Aim

An evaluation project was carried out to better identify the learning needs of these students to improve organisation and delivery of learning activities at BWOSCC.

Methods

Medical students allocated to BWOSCC over the period of March 2017 to January 2018 (3 rotations of 3rd year students and 3 rotations of 5th year students) were invited to complete a questionnaire anonymously at the start of their general medicine/oncology rotation. The questionnaire consisted the following questions:

1. Any oncology experience prior to starting the oncology rotation
2. Self-perceived confidence in cancer-related topics using 5-point Likert scales
3. Personal learning aims for the oncology block (multiple selections from a list)
4. Oncology topics they would like to cover (multiple selections from a list)

Results

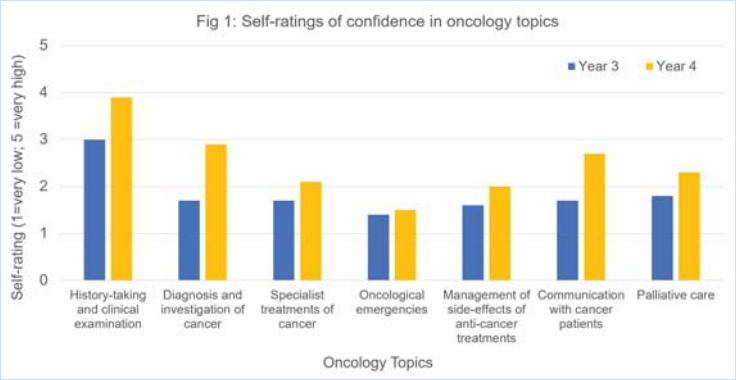
Questionnaires were handed out to 44 students (18 from 3rd year and 26 from 4th year). 31 students (70%) returned their responses.

Prior experience

- 15 students (48%) reported prior oncology attachments, including student-selected modules
- 13 students (42%) reported oncology teaching as part of non-oncology blocks

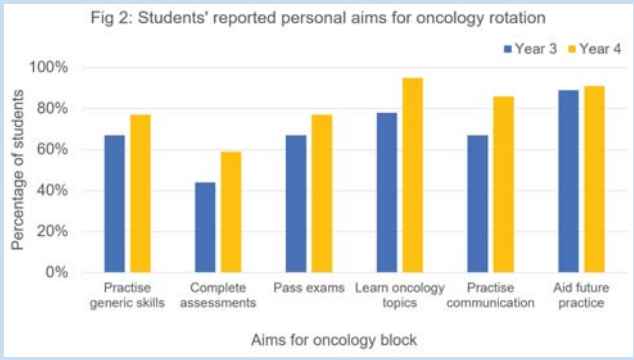
Self-ratings of confidence in oncology topics (Fig 1)

- Lowest levels of confidence were reported for oncological emergencies and management of side-effects of anti-cancer treatments.
- 4th years scored higher than 3rd years in all areas except oncological emergencies, suggesting that this topic has not been adequately covered elsewhere in the curriculum.



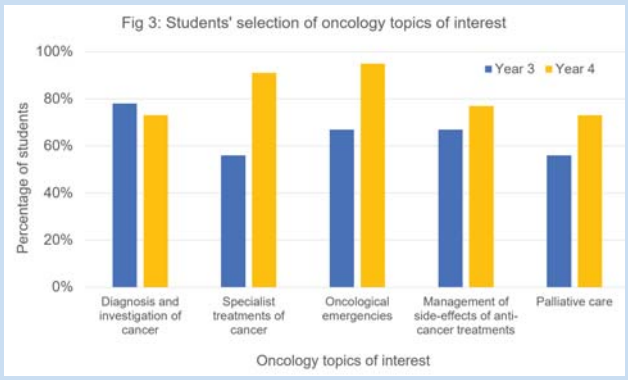
Students' personal aims for oncology block (Fig 2)

- 90% of students were aware of the importance of oncology knowledge and skills for their future medical practice.
- Nearly all 4th years wanted to learn oncology-specific topics, even if these did not form part of their formal learning outcomes.



Students' selection of oncology topics of interest (Fig 3)

- Most 4th year students wanted to cover oncological emergencies and specialist treatments of cancer, in keeping with areas of reported low self-confidence.
- The most popular choice for 3rd year students was diagnosis and investigation of cancer, suggesting that students starting their clinical years have different learning priorities to those who have had a year of clinical experience.



Conclusions and Implications for Practice

- Despite most students reporting a degree of oncology experience prior to the BWOSCC attachment, there were areas of self-reported low confidence.
- Most students hoped to learn oncology-specific topics, even though these were not mandatory learning outcomes within their formal curriculum.
- Learning activities in the oncology block should be focused on topics not adequately covered in other parts of the curriculum, i.e. oncological emergencies and specialist treatments of cancer.
- Although 3rd year students reported different learning priorities, focus should still be placed on topics which they will not visit in other clinical rotations as they may not return to another oncology rotation before graduation.
- Finally, our results suggest an unmet need for a compulsory oncology block for all students to enable graduates to confidently and effectively manage the cancer patients they encounter in their future clinical practice.

Is a Short Compulsory lunchtime Support Session for Foundation Doctors beneficial?

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Introduction

Over recent years, there has been a greater impetus to provide emotional support and resilience training to Foundation Doctors. These sessions can vary in style, content and impact.
It has been our experience that when support sessions are offered after working hours, although well received, attendance is by a small minority only and often very poor.

Aim

We aimed to examine if a group support session, delivered at lunchtime during the compulsory teaching program, could be an effective way of addressing some of the emotional challenges faced by Foundation Year 1 (FY1) doctors.

Method

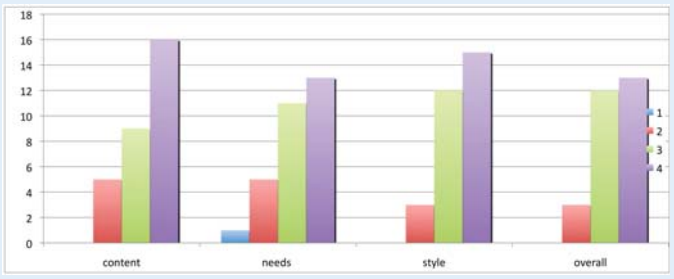
Foundation year 1 doctors in a large teaching hospital discussed triumphs and challenges that they had experienced in the first six months of their employment.

This was done in two separate groups; one facilitated by a senior clinician and the other by the chaplain. The sessions were run during lunchtimes as part of the regular compulsory bleep free 1 hour long foundation teaching program.

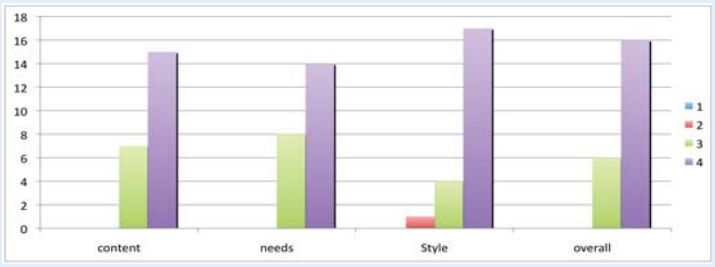
Feedback was sought from both groups regarding content, needs met, style and overall score. Examples of free text comments are presented below, with Clinician lead group in black and Chaplaincy in blue.

Results

Post session evaluation Scores for Content, Needs met, Style Overall
1 (poor/no) blue, 2 red, 3 green or 4 purple (excellent/yes)



Session with Clinician n= 36 mean score 3.36



Session with Chaplain n= 22 mean score 3.73

Positive Comments

Interactive; Supportive; Good to offload

Enthusiastic caring and open senior running session

Opened conversation about challenges of job and coping strategies

Helps seeing that everyone is in the same boat and feels the same

This session was wonderful, I truly did feel like like I was speaking to friends in a safe place

Enjoyed that it was not run by a medic

Definitely good to be done by chaplain

Would prefer if chaplaincy were to organise as things are kept anonymous

Suggestions for Improvement

More helpful / less intimidating in smaller groups

Should be nearer beginning of year

Needs to be during scheduled teaching time or no-one will come especially those that need help.

Please hold more of these sessions more regularly

A way of feeding back to consultants would be useful

Negative Comments

I'm not convinced you can make FY1 better by talking about feelings; the set up and everyone's attitude to 'the FY1' is the problem

Sad to hear a lot of issues are to do with general attitudes and treatment of the FY1 which is something that is hard to change.

Conclusion

The emotional support and wellbeing of junior doctors is paramount in developing a resilient and enduring workforce of the future.

Facilitation of support workshops for foundation doctors as part of the compulsory curriculum is deliverable and well received during a one hour lunchtime, bleep protected session within the working day.

Utilisation of staff such as chaplaincy services in smaller groups is our recommendation to provide valuable support to junior doctors during a critical time in their training.

Acknowledgements:

Mary Smith, Kirsty Hamilton, Lorna Murray, Justine Cannon and all at the Postgraduate Administrative Department of the QEUH without whose support this work would not have been possible.

University of Glasgow

School of Medicine, Dentistry & Nursing

‘BLENDED ASSESSMENT’ OF PROBLEM-BASED LEARNING TO ENCOURAGE THE DEVELOPMENT OF PROFESSIONAL ATTRIBUTES.

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Aim: The importance for medical students to develop their own professional identity and to understand what it means to be professional is equal in value to their primary future role as a healer. While the necessity to develop professional attributes in our future doctors is without doubt, the tools to develop undergraduate medical students as professionals are poorly defined and lack consensus.
Encouraging the development of professional attributes and behaviours in future doctors should be embedded into medical curricula from Year 1.
This study investigates whether the introduction of assessment to the problem-based learning (PBL) process can support professional development in first year medical students.

Intervention

‘Blended assessment’
(combined self-, peer and facilitator assessment) was introduced into five PBL tutorials in weeks six, eight and ten during the first semester of the first year of a medical degree programme. Students were asked to complete a self- assessment and peer assessment of one nominated group member using a form which included a 4 point Likert scale ratings of different areas of performance and free text comments on aspects well done and requiring improvement. The facilitator also completed the identical form for each of the students. All assessment forms were then collected (three pieces of assessment for each student), which were then merged or ‘blended’ to produce one ‘feedback summary’ document that was promptly returned to the student by email within 24 hours. The three numerical ratings were averaged to produce one mean rating and this was provided alongside a group average. Free text comments were also compiled into one section so that (apart from self) the identity of the assessor was not possible.

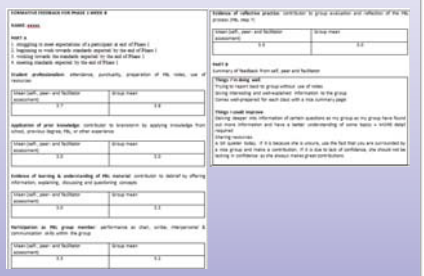
self-, peer & facilitator assessment

students self-assess & peer assess one nominated student

facilitators assess each student

3 forms collected & blended

one ‘blended’ feedback document received by email within 24 hours



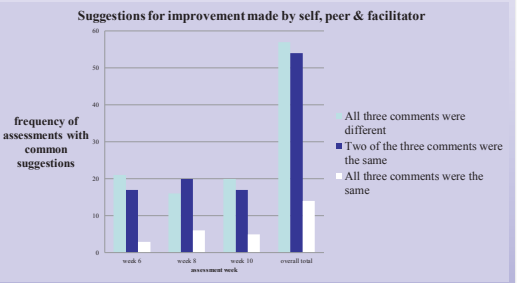
Methods

To evaluate the impact of ‘blended assessment’ on students, the intervention was evaluated using a student questionnaire combining a 5-point Likert scale and free text questions. Voluntary student and facilitator focus groups were conducted using an independent moderator, followed by a thematic analysis

Findings 1: Credibility of ‘blended assessment’ as a tool to further professional development :

The reliability of ‘blended assessment’ can be established by examining whether there was ‘**assessor consensus**’ or similar comments made for a given student . For example, when the ‘blended assessments’ were provided to the students as feedback , did the student, peer and facilitator assessors recognise the same attribute and comment on it?

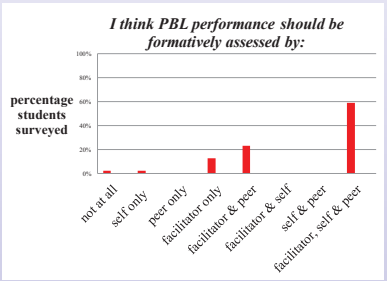
Example: assessor consensus on two of three comments
Assessor 1: Still working on depth in some areas Assessor 2: Sometimes the depth of the answers should be more Assessor 3: Continue to make sure that he doesn’t take over too much
Example: assessor consensus on all three comments
Assessor 1: I could talk more and have less notes Assessor 2: Could contribute a bit more Assessor 3: Continue to try to contribute to brainstorm even if just to get others to explain things/ask questions



Over the three assessment weeks, assessors frequently observed and suggested the same attribute for improvement. Overall, comments which found no ‘assessor consensus’ were made 57 times, while agreement shared by assessors occurred 68 times (54 times for two of three comments; 14 times when all three comments were the same).

Findings 2: Students welcome evaluation by their peers..

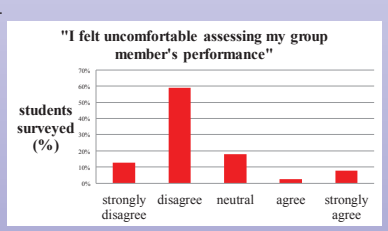
Students overwhelmingly preferred assessment from all three assessors, but still place more importance on the facilitator as the ‘gold standard’ when receiving feedback.



Nevertheless, peer assessment was welcomed by students

“It feels more personal if it’s your peers assessing you … cause ….your peers are just within your group so I feel as though you act more on it when its people doing the same work as you”

The ‘blended’ and anonymous nature of the assessment resulted in students feeling comfortable to give and receive feedback from their peers.



Findings 3: Student experience of ‘blended assessment’ in PBL

The student evaluation survey showed that students found the experience to be **motivating** and **encouraging**, and used the feedback to try and **improve** and work harder. Students welcomed increased opportunities for feedback and **reflection** .

tried to take feedback on board and improve my PBL performance

it served as motivation to do better.

It helped with my reflection process knowing what my peers and facilitator thought of my performance

“Do you think that, knowing you were being assessed, affected how you performed during the PBL process? Negatively? Positively?”		
Negative effect	**0%**	Not applicable
Positive effect	**74%**	“I think I performed more positively by reflecting on the feedback I was given and having pointers on what I could do better.”
No effect	**13%**	“Not at all, I just felt it was important to contribute to the group.”
Ambivalent	**13%**	“Made me put more effort in as I knew I was being watched!”

Conclusions

This research study examined the inclusion of a combined form of self-, peer and facilitator assessment into PBL, and its impact on students and facilitators, as a means of encouraging engagement with professional attributes and behaviours. ‘Blended assessment’ represents a valid means to identify and encourage professionalism in the PBL classroom, and was found to have a positive effect on students, providing encouragement and motivation to engage in a number of professional attributes. Although facilitator assessment is still perceived as the preferred option, students recognised the value of their peers’ opinion, and due to the blended’ and anonymous nature of the process, felt at ease to assess each other.

A novel approach to encouraging medical students into emergency medicine and research using student selected components

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Introduction

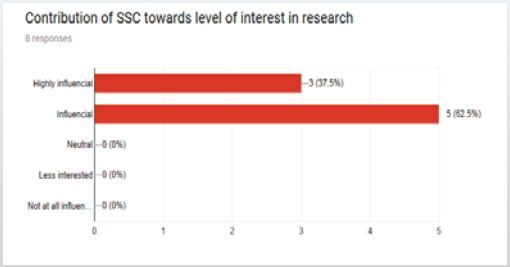
There is increasing pressure on undergraduate medical students to get involved with research at early stages of their careers to secure the most competitive training posts. Despite this, an opportunity for undergraduate research varies between medical schools and often there is no consistent way in which research is incorporated into their curriculum.

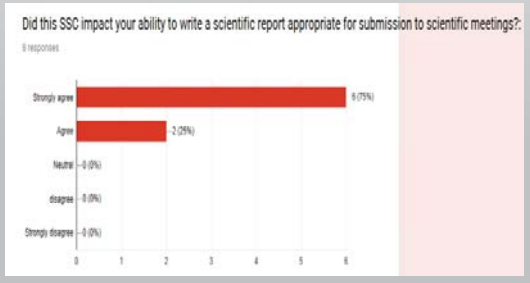
To encourage medical students into emergency medicine and research, an emergency medicine research student selected component (SSC) was developed in conjunction with Glasgow medical school. Successful students gained teaching and mentoring in the emergency department at the Royal Alexandra hospital in Paisley, Scotland. Students were given a research project, and were offered individual support with the aim of giving them early research opportunities and the possibility of presenting and publishing their work at international conferences.

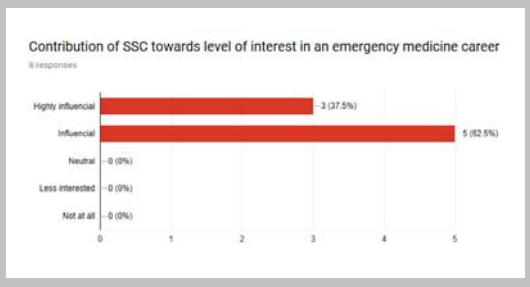
Aim and Method

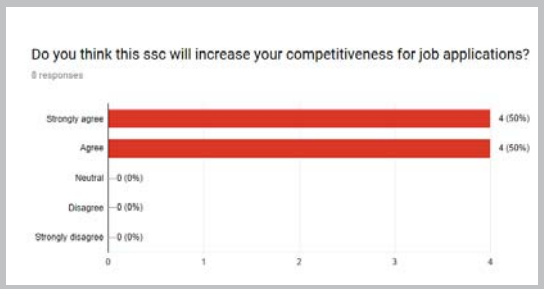
The purpose of this study was to examine the impact of the SSC on students' attitudes towards research and a career in emergency medicine. An online questionnaire assessed the student's level of interest, confidence and SSC research experiences.

Results









Results

Results indicated that the all students found the SSC to be influential or highly influential towards their level of interest in research compared to before completing the SSC. All students said the SSC supervisor was academically stimulating, impressive as role model and supportive. 100% of students agreed that the SSC had an influential contribution towards their level of interest in a career in emergency medicine. All students agreed that it would increase their competitiveness for job applications. Seven of the eight students had projects accepted for multiple international conferences including Medicine24, The European society of emergency medicine in Athens, Greece, and to the annual scientific conference for the Royal College of emergency of medicine in Liverpool. One students' work was still in progress at time of writing.

Conclusion

In conclusion, emergency medicine research student selected components may be a novel approach to encouraging medical students into emergency medicine and research.

‘Clinical teaching’ in the classroom

Creatively engaging students off the ward

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Dr Gemma Buxton, Clinical Teaching Fellow, NHS Lothian | gemma.buxton@ed.ac.uk

Introduction

Location

University of Edinburgh / Royal Hospital for Sick Children

Background

Recent redesign of the Edinburgh medical school curriculum has resulted in the Paediatrics module being moved from the final year of the course to the penultimate year of the course

Challenge

Two separate year groups simultaneously undertook their Paediatrics module during the 2017/18 academic year, leading to significant capacity issues within the clinical environment

Plan

1. Review the skills that students are expected to learn during the Paediatrics module
2. Identify the skills that could be learnt in a classroom setting, and don't necessarily have to be learnt in the clinical environment
3. Remove some students from the clinical environment each week, and give them classroom teaching instead of a clinical placement

Method

Six or seven students were removed from the clinical environment each week, and given 20-25 hours of small group tutorials. They provided anonymous, free text feedback (n = 135).

Activities included:

- learning developmental milestones by acting them out in chronological order
- completing growth and prescription charts, and calculating fluid requirements
- history-taking, with a tutor playing the role of a child's parent
- quizzes and games to test knowledge, analytical skills, and clinical decision-making
- resuscitation training

Results

Conclusion

Medical students learn vital skills in the clinical environment that prepare them for practice.

However, when there are student capacity pressures, it is possible to recreate some of these educational experiences in a classroom setting, with very positive student feedback.

Evaluating the impact of a focussed CSA Induction for International Medical Graduate GP Trainees – A Qualitative Study

Aqsa Fahd, Joseph McConnell, Nitin Gambhir

Aim:

NHS Education for Scotland (West) introduced an Enhanced Induction programme for International Medical Graduate (IMG) GP trainees to address differential attainment in exams, especially the high stakes Clinical Skills Assessment (CSA) exam conducted by the RCGP. This is a key priority for GMC and Royal Medical Colleges across the UK. As part of this comprehensive strategy, a new programme, focussed on early introduction to CSA was offered to all IMG GPST's commencing their final year of GP training. The purpose of this study was to evaluate the impact of such an intervention.

Methods:

A Qualitative study design using focussed groups and telephone interviews. The interviews were recorded, transcripts were analysed to identify codes and themes using the Grounded Theory approach.

Educational Content of Day:

- Introduction to Differential Attainment in CSA exams
- Insight into Structure and Content of CSA
- Communication skills
- CSA Role Plays

I was happy that I attended the course. Now I know what my weaknesses are and I have enough time to work on it.

... it was more like to pat us on the back, telling us yes the difference is there but there are ways to overcome that ...

Emerging Themes:

- Timeliness-wakeup call
- Appreciation of support leading to increased motivation
- Insight into CSA Structure
- Key elements of CSA performance like active listening, time management, patient centeredness
- Identifying personal learning needs
- Awareness of own interpersonal skills in consultation
- Awareness of resources for CSA preparation
- Insight into cultural differences relevant to CSA
- Proactive approach - utilising Educational Supervisor as a resource
- Allaying performance anxiety with peer practice
- Feedback of CSA Examiners – valuable resource

I have been working on those things like shared surgeries and my supervisor finds I am getting better now, much better compared when I started ST3.

I think it is encouraging and useful seeing that so much support is being given to international graduatesl.

Conclusion:

Preliminary results suggest such a timely intervention is well perceived by International Medical Graduate GP trainees. Focussed CSA induction could prove to be a useful intervention to address differential attainment in CSA exam.

For further information please contact on aqsa.fahd@nes.scot.nhs.uk

From conception to delivery: Evaluation of an undergraduate Obstetrics and Gynaecology teaching program

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Introduction

•Clinical experience during Obstetrics and Gynaecology undergraduate training is limited.
•Wide exposure to acute scenarios is often unachievable.
•Encountering obstetric and gynaecological presentations is commonplace post-graduation, and physicians can be expected to manage these patients having had no further training in the specialty.
•Simulation is commonly used for post-graduate training, and is shown to improve both knowledge and team working[1]. Simulation used in undergraduate curriculum has been shown to better prepare students for foundation years[2].

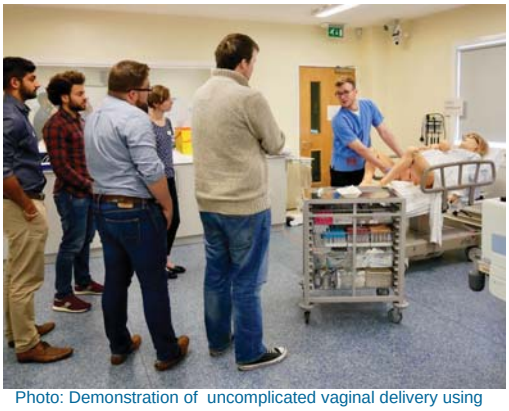


Photo: Demonstration of uncomplicated vaginal delivery using Noelle® maternal and neonatal birthing simulator.

Aims

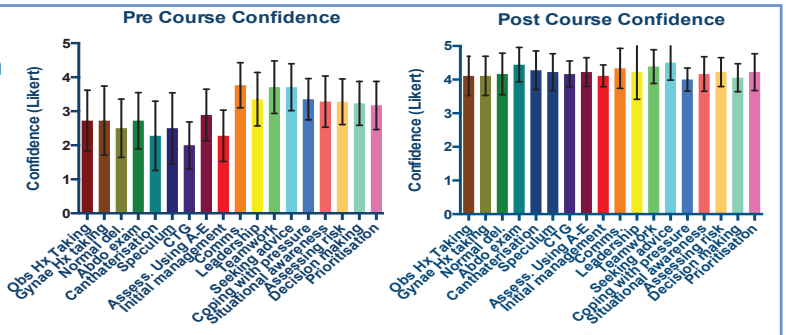
•To determine whether participation in this O&G program improved medical students' perceived confidence and competence in performing clinical skills, managing acute presentations.
•To determine whether students perceived confidence in their interpersonal and cognitive skills improved after engagement in the simulation training.

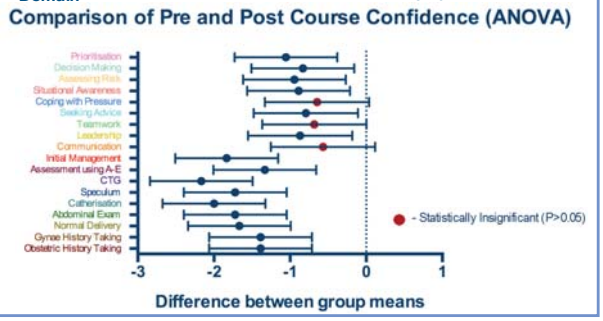
Methods

•A one-day course incorporating simulation was developed.
•It ran eight times over an academic year.
•Pre and post-course questionnaires were completed by students using Likert scales.
•Data was analysed for comparison of means.
•Qualitative evaluation of the course was compiled via a free-text portion.

Results

•An ANOVA test was run showing an improvement in the mean Likert scores (1-5) from pre to post course confidence of 2.0 to 4.2 ($p = <0.0001$) across all domains.
•Comparisons were made of individual domains using Bonferronie Adjustment for multiple comparisons. This showed significance for all areas bar communication, teamwork and coping with pressure.
•These areas were often mentioned as key learning points from the day in the freetext portion of the course evaluation.





•Qualitative feedback was unanimously positive and included: the opportunity to apply skills in simulation, exposure to challenging situations in a controlled environment, availability of feedback, application of an A-E approach and using SBAR handovers.
•Suggested improvements focused on students' desire for additional simulation scenarios and practical history taking sessions.

Photo: Using high fidelity simulation to expose students to acute Obstetrics and Gynaecology scenarios they rarely see.

Conclusion

•Participation significantly improved medical students' perceived confidence and competence in clinical skills, managing Obstetric and Gynaecological presentations and their non-technical skills.
•Simulation provides the students with a unique opportunity to safely manage obstetric and gynaecological specific scenarios to which they were previously unexposed.
•Students felt better prepared to manage acute scenarios following graduation.

References

1. Edwards SE *et al*. Effective interprofessional simulation training for medical and midwifery students. *BMJ Simulation and Technology Enhanced Learning* 2015;**1**:87-93.
2. Scholz, C., Mann, C., Kopp, V., Kost, B., Kainer, F. and Fischer, M. (2012). High-fidelity simulation increases obstetric self-assurance and skills in undergraduate medical students. *Journal of Perinatal Medicine*, 40(6).

Acknowledgements : With many thanks to Sharon Donaghy and Catie Paton at METC, Kirklands; to Drs Rachel Bradnock, David Smith and David Arnott, O&G specialty registrars, NHS Lanarkshire and to our participating medical students.

Using a Hospital Electronic Prescribing system to provide clinicians with reflective information on their prescribing activity in secondary care.

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Sarah McDonald - Senior Pharmacist Prescribing Development & Education, NHS Ayrshire & Arran
Lynsay Lawless - Senior Pharmacist Prescribing Development & Education, NHS Ayrshire & Arran

Background

Within the acute hospital environment, Foundation Year doctors carry out a large proportion of the prescribing undertaken for inpatients. Support and education on appropriate prescribing is provided to our junior medical staff by the Prescribing Development and Education team.

Training on prescribing has previously been based on general issues and historical observations, however more personalised information was considered desirable. Inspired by the information that General Practitioners receive on their prescribing, it was suggested that something similar could be obtained from the NHS Ayrshire & Arran Hospital Electronic Prescribing and Medicines Administration (HEPMA) system.

The aim of this work was to make this information available to the foundation year doctors and their tutors to aid reflection on their prescribing as part of their education and development.

Development

The NHS Ayrshire & Arran HEPMA team developed a bespoke tool, using data held within the HEPMA system to obtain relevant information on inpatient and discharge medicine prescribing, presenting this information in a suitable document.

The tool was designed to allow analysis of prescribing by individual and/or group of prescribers to allow both individual and peer review of prescribing behaviour.

Developmental work passed through multiple stages of development and was refined working in collaboration with the education team.

Outcome

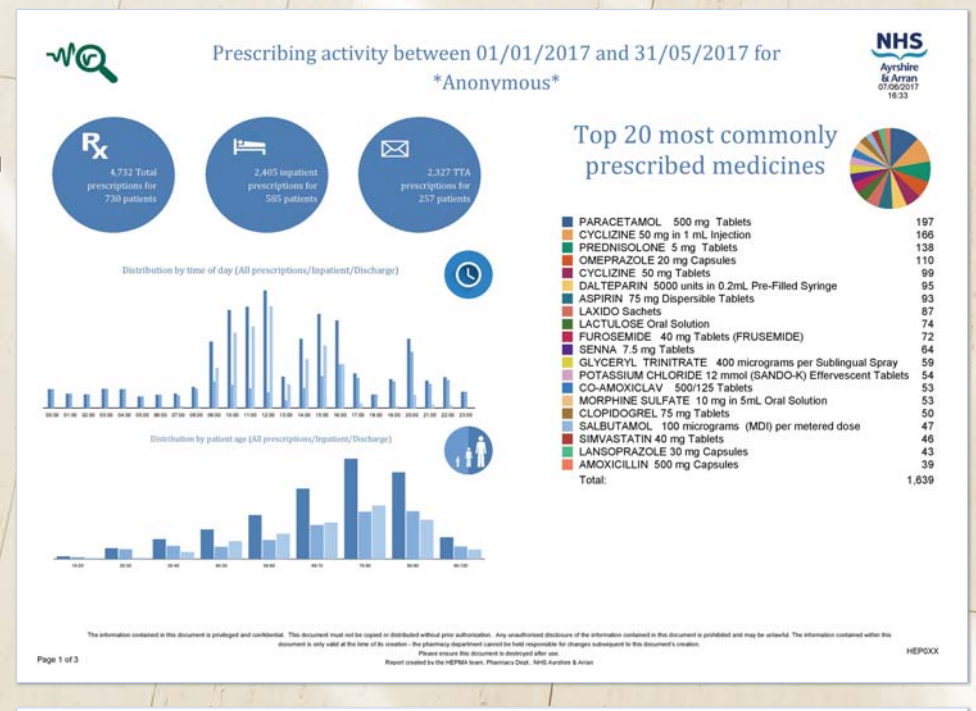
The tool is now in place and makes available details on patterns of prescribing within the hospital environment for use within educational and appraisal sessions by the Prescribing Development and Education team and educational supervisors.

The document produced includes information on:

- Total number of prescriptions
- Numbers of inpatient prescriptions and inpatients prescribed for
- Numbers of discharge prescriptions and patients discharged
- Prescribing patterns by time of day
- Prescribing patterns by patient age
- Breakdown of most commonly prescribed medicines
- Breakdown of medicines prescribed by BNF category
- Formulary compliance rate (with further breakdown of reasons for non-formulary compliance)
- Breakdown of highest value medicines prescribed

(see anonymised sample on right)

The tool can provide information on individual or groups of prescribers to facilitate both individual and peer review



Prescribing activity between 01/01/2017 and 31/05/2017 for *Anonymous*

NHS Ayrshire & Arran 07/06/2017 16:33

4,732 Total prescriptions for 730 patients

2,405 inpatient prescriptions for 585 patients

2,327 TTA prescriptions for 257 patients

Top 20 most commonly prescribed medicines

PARACETAMOL 500 mg Tablets	197
CYCLIZINE 50 mg in 1 mL Injection	166
PREDNISOLONE 5 mg Tablets	138
OMEPRAZOLE 20 mg Capsules	110
CYCLIZINE 50 mg Tablets	99
DALTEPARIN 5000 units in 0.2mL Pre-Filled Syringe	95
ASPIRIN 75 mg Dispersible Tablets	93
LAXIDO Sachets	87
LACTULOSE Oral Solution	74
FUROSEMIDE 40 mg Tablets (FRUSEMIDE)	72
SENNA 7.5 mg Tablets	64
GLYCERYL TRINITRATE 400 micrograms per Sublingual Spray	59
POTASSIUM CHLORIDE 12 mmol (SANDO-K) Effervescent Tablets	54
CO-AMOXICLAV 500/125 Tablets	53
MORPHINE SULFATE 10 mg in 5mL Oral Solution	53
CLOPIDOGREL 75 mg Tablets	50
SALBUTAMOL 100 micrograms (MDI) per metered dose	47
SIMVASTATIN 40 mg Tablets	46
LANSOPRAZOLE 30 mg Capsules	43
AMOXICILLIN 500 mg Capsules	39
Total:	1,639

Distribution by time of day (All prescriptions/Inpatient/Discharge)

Distribution by patient age (All prescriptions/Inpatient/Discharge)

Page 1 of 3

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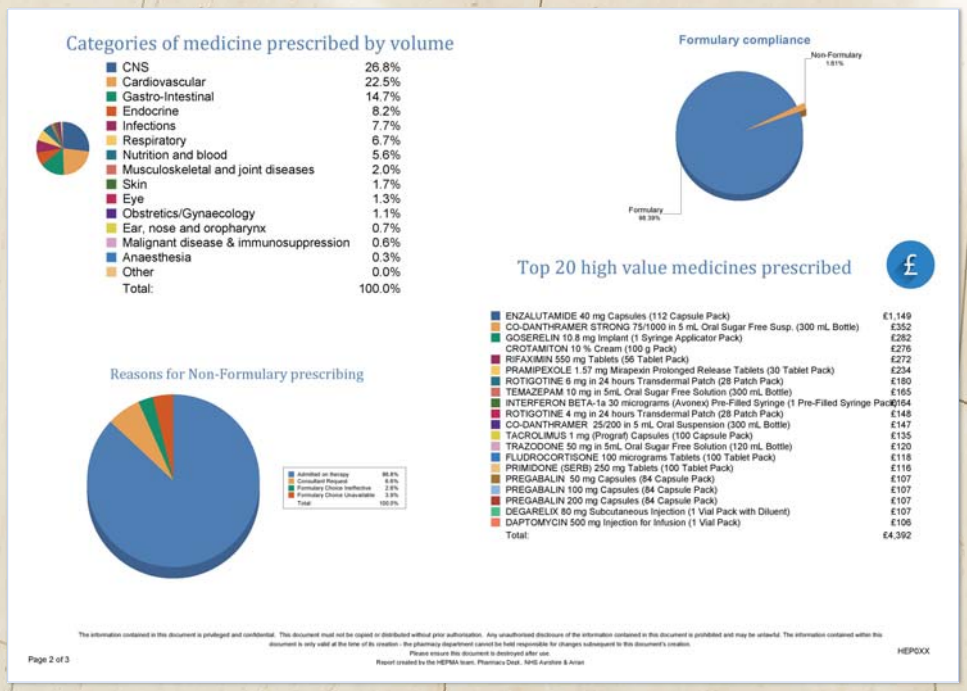

Categories of medicine prescribed by volume

CNS	26.8%
Cardiovascular	22.5%
Gastro-Intestinal	14.7%
Endocrine	8.2%
Infections	7.7%
Respiratory	6.7%
Nutrition and blood	5.6%
Musculoskeletal and joint diseases	2.0%
Skin	1.7%
Eye	1.3%
Obstretics/Gynaecology	1.1%
Ear, nose and oropharynx	0.7%
Malignant disease & immunosuppression	0.6%
Anaesthesia	0.3%
Other	0.0%
Total:	100.0%

Formulary compliance

Non-Formulary 1.81%

Formulary 98.19%

Top 20 high value medicines prescribed

ENZALUTAMIDE 40 mg Capsules (112 Capsule Pack)	£1,149
CO-DANTHRAMER STRONG 75/1000 in 5 mL Oral Sugar Free Susp. (300 mL Bottle)	£352
GOSERELIN 10.8 mg Implant (1 Syringe Applicator Pack)	£282
CROTAMITON 10 % Cream (100 g Pack)	£276
RIFAXIMIN 550 mg Tablets (56 Tablet Pack)	£272
PRAMIPEXOLE 1.57 mg Mirapexin Prolonged Release Tablets (30 Tablet Pack)	£234
ROTIGOTINE 6 mg in 24 hours Transdermal Patch (28 Patch Pack)	£180
TEMAZEPAM 10 mg in 5mL Oral Sugar Free Solution (300 mL Bottle)	£165
INTERFERON BETA-1a 30 micrograms (Avonex) Pre-Filled Syringe (1 Pre-Filled Syringe Pack)	£164
ROTIGOTINE 4 mg in 24 hours Transdermal Patch (28 Patch Pack)	£148
CO-DANTHRAMER 25/200 in 5 mL Oral Suspension (300 mL Bottle)	£147
TACROLIMUS 1 mg (Prograf) Capsules (100 Capsule Pack)	£135
TRAZODONE 50 mg in 5mL Oral Sugar Free Solution (120 mL Bottle)	£120
FLUDROCORTISONE 100 micrograms Tablets (100 Tablet Pack)	£118
PRIMIDONE (SERB) 250 mg Tablets (100 Tablet Pack)	£116
PREGABALIN 50 mg Capsules (84 Capsule Pack)	£107
PREGABALIN 100 mg Capsules (84 Capsule Pack)	£107
PREGABALIN 200 mg Capsules (84 Capsule Pack)	£107
DEGARELIX 80 mg Subcutaneous Injection (1 Vial Pack with Diluent)	£107
DAPTOMYCIN 500 mg Injection for Infusion (1 Vial Pack)	£106
Total:	£4,392

Reasons for Non-Formulary prescribing

Page 2 of 3

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Conclusions

This tool is now available for use within NHSAA and early plans are in place to trial its adoption into the foundation year medical staff training programme.

It is hoped that it will prove to be a useful tool in both stimulating discussion around prescribing and in aiding individual clinicians in reflecting on their prescribing practice.

References

None.

Report Reference HEP155 & HEP160
12/04/2018

#nudge

A supplementary educational tool?

Kilmurray K, Bell H, Ireland A, Taylor S

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Introduction

The teaching programme within the Emergency Department (ED) of Glasgow Royal Infirmary is based on weekly themes that rotate over a 4-monthly cycle. Themes include trauma, toxicology, ENT, ophthalmology, vulnerable patients, mental health and medical specialties. It is based upon a flipped classroom model with educational resources available online to access and peruse prior to a Consultant-led small group teaching session.

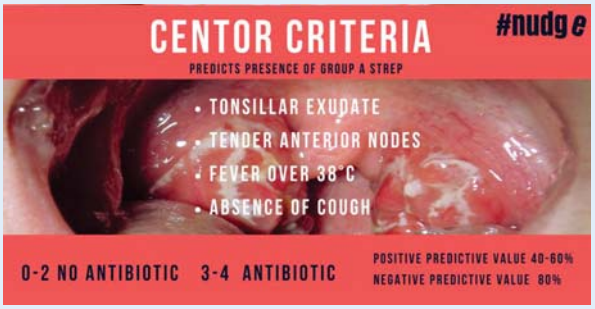
The GMC standards in promoting excellence states that 'Postgraduate training programmes must give doctors in training the opportunity to develop their clinical, medical and practical skills and generic professional capabilities through technology enhanced learning opportunities, with the support of trainers, before using skills in a clinical situation'[1].

Method

In order to excel in GMC teaching standards, and, to reinforce teaching points throughout the week, we created daily emails that are distributed to all medical staff and interested nursing staff within ED. These comprise of a question followed by discussion surrounding the issue and the answer. A link to further reading around the subject is also included at the conclusion of the email. They focus on critical diagnoses, departmental guidelines, important diagnostic tools, novel treatments and emergency procedures. The topic is in parallel with the theme of the week.

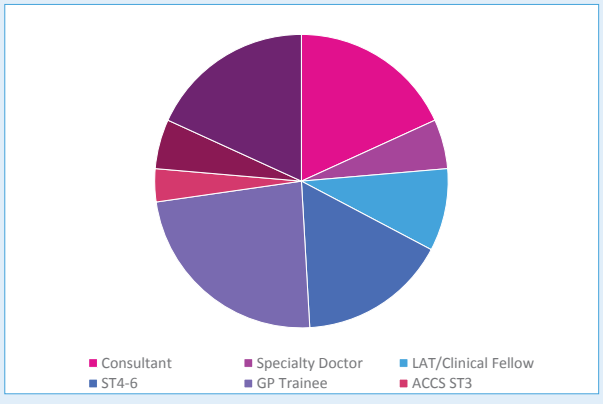
The emails are titled Nudges as they are designed to facilitate learning through a quick question. It is intended that the email takes less than one minute to read. They were introduced in January 2017 and the concept is to raise awareness of an important learning point.

The Nudges are also promoted intermittently as infographics via Twitter (an example is shown below). These emphasise the major learning point for the week to supplement one of the emails.



Staff Survey

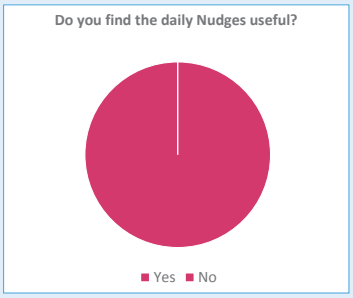
A google survey[2] was conducted to establish the effectiveness of using daily Nudges as a learning tool. It was completed by 55 members of medical staff within the Emergency Department at Glasgow Royal Infirmary. The composition of this group was:

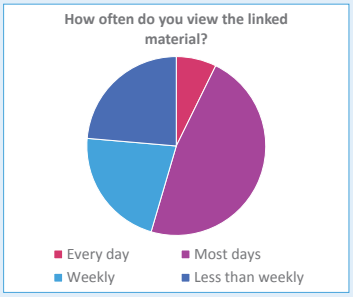


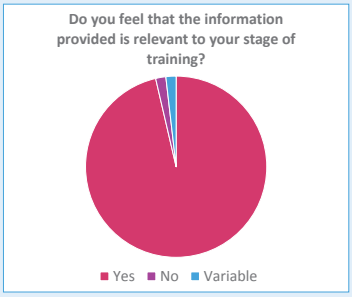
Survey Feedback

- Helpful, daily, bite sized amount of knowledge.
- Great small bits of information (great for exam preparation).
- The nudges have all been really useful and interesting! I think they're a great way of providing concise information snippets and many have come in handy during everyday practice in the ED.
- Fantastic, concise and relevant blasts of information.
- Very much appreciate the effort that goes into them, thank you!
- Really time efficient learning. Don't often have time to sit and read a paper/book, but everyone can make time to read the nudge (read mine standing in line at the post office the other day), and these are usually efficient and straight to the point.
- Keep them coming!
- Great educational tool- interesting and easy to digest.
- Although not everything is new, it serves as useful reminders and I have gone back to the nudges if a patient presents with a similar problem to a previous nudge.
- Easily absorbable amounts of information.
- I love them, they are great! Great to keep feeding us new information. Short and sweet is good, as I don't have time to read anything lengthy.

Staff Perception







Conclusion

Daily Nudges seem to be well received and utilised by ED staff and are an effective method of improving engagement with the flipped classroom model.

References

[1] Theme 5. Developing and implementing curricula and assessments. : Promoting Excellence in Education. GMC

[2] https://goo.gl/forms/GwOaJZu8dExFybLu1

Acknowledgement

We would like to thank the medical and nursing staff at GRI ED for their continued support and engagement with education.

The Evelina London Sedation Course: Trial of a Hybrid Learning Experience to teach paediatric sedation to medical practitioners

Authors: Dr Dani Hall[1,3], Sarah Tomlinson[1,4], Dr Neena Seth[1,5], Matt Norridge[1,2,6]

Introduction

Learning needs for medical professionals are varied given the range of experiences, clinical contexts and time constraints present in any learning cohort.[i] Medical education courses must therefore be appropriately differentiated through design and variety in modality to meet differing needs. Our reflections on the inaugural multiple-modality Evelina London paediatric sedation course[ii] held in December 2017.

The NICE guideline recommendation that all Healthcare professionals delivering sedation should update their knowledge and skills through programmes designed for continuing professional development was a key motivator for the design of this programme.

The sedation course at ELCH aims to improve knowledge and understanding of sedation drug pharmacology, assessment of children and young people for sedation, monitoring, recovery care, and complications.
We adopted a hybrid learning format to help us engage the participants and drive the key learning outcomes.

Methods

A blended-learning model was designed with three elements:

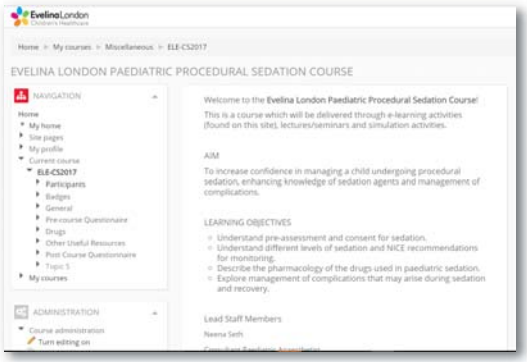
- e-learning sedation podcasts and publications
- face-to-face lectures consolidating online material
- high-fidelity simulation scenarios.

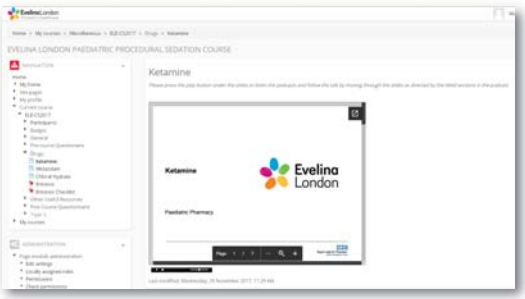
The e-learning was designed to refresh and solidify participants' knowledge and understanding without taking up face-to-face teaching time. Evelina London's Virtual Learning Environment Ocean2Sky.uk was utilised to host e-learning and assessment and could be accessed via username and password by participants in their own time following signup to the course.

A variety of learning needs were catered for by presenting sedation teaching in podcast/podcast with slides/slides only format.

Experiential elements, complemented by facilitated debrief, were designed to draw on learners' previous sedation experiences, allowing them to reflect within scenarios and on their clinical practice and non-technical skills.

Participants were asked to complete a range of knowledge and confidence questions (with certainty-based marking) prior to the pre-session activities to provide effective insight into learner needs for those designing and leading the face-to-face teaching.





They were subsequently asked to perform the same assessment after attending the course. Participants were not issued with a certificate of attendance until the post course questionnaire and evaluation were completed.

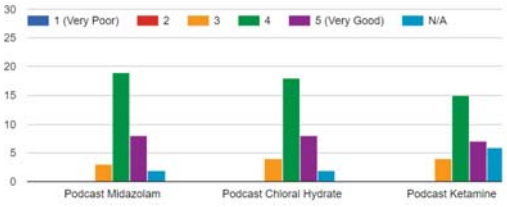
Results

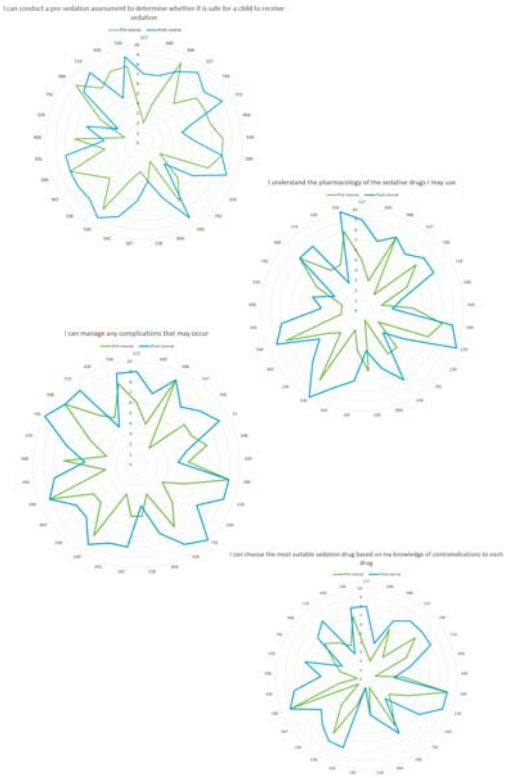
Results were collected via Ocean2Sky.uk and Google Form against knowledge and confidence criteria. These were collated and compared graphically with pre-course questions. Participant knowledge and confidence levels pre- and post-course were compared via Radar Chart (see right) with a larger footprint in blue indicating positive outcomes.

Evaluation showed that most participants had an increase in both knowledge and self-reported confidence in sedation drug pharmacology, principles of safe sedation and emergency management of complications of sedation.

An open feedback session complemented by real-time anonymous online feedback exploring each of the three learning formats showed an appreciated need for training, with excellent feedback in all domains, particularly simulation. Suggestions for future training were facilitated.

Results from the participant confidence measures for the 'Consent' portion of the course did not show as great an improvement as other elements of the course and facilitators reported that this session was not allocated enough time to meet the learning outcomes. As a result, an exemplar consent and assessment video has now been developed as a part of the pre-session activities for future courses.





Conclusion

The hybrid design of e-learning, lecture-format and simulation was highly rated with strong feedback. Moreover, an increase in knowledge and perceived confidence in managing paediatric sedation was demonstrated.

Facilitated feedback and faculty reflection has resulted in some incremental changes to the programme including: MCQ-linked podcasts; increased number of simulations; and an Ask the Experts Panel. A PDSA cycle will be completed after April's course with repeat evaluation process.

The results demonstrate that the multimodal approach was appropriate for this course. The pre-session activities gave participants more time to practice the skills related to sedation and apply the theory and identify future learning needs. The evaluations support the value of this approach.

References

[i] Judy McKimm, Tim Swanwick, "Assessing Learning Needs," *British Journal of Hospital Medicine*, June 2009, Vol 70, No 6: 348

[ii] Sedation in under 19s: using sedation for diagnostic and therapeutic procedures. *National Institute for Health and Care Excellence*, CG110, December 2010

[iii] Donald Schon, *The Reflective Practitioner* (Aldershot: Ashgate Publishing Ltd, 1991)

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Guy's and St Thomas' NHS Foundation Trust

Examination of the role of Virtual Reality within medical education:

a review of the current pedagogies underpinning Virtual Reality Learning Environment (VRLE) design, what can we learn?

Authors - Dr Jenny Caesar (Wishaw General Hospital), Dr Mark Jordan (Royal Alexandra Hospital)

Aims: VR is rapidly developing and becoming more accessible to medical educators. However, limited guidance is available to assist medical educators to make informed decisions about using or maximising effective virtual learning.

This literature-based research project explores the role of VR within medical education through systematic review of the current literature and consideration of the pedagogical themes underpinning VRLE design.

Research questions:

1. What pedagogical themes underpin VRLE design?
2. How is learning mediated by VRLEs?
3. What can be distilled to guide best VRLE design?
4. How does the use of VR/VRLEs in other professional contexts inform medical educational practice?

Method:

- Systematic review of literature
- Data identified from OVID, ERIC, Web of Science and Cochrane electronic databases plus comprehensive grey literature search
- Data time periods 1/1/2010 – 1/3/2017
- Data assessed by SIGN grading system and Kirkpatrick's Hierarchy

Results: 80 studies included after filtering

1. *Pedagogical themes identified:*

- Self-directed VRLE exploration/skill acquisition/practice
- Scaffolding
- Instructor-led VRLE exploration
- Expert demonstration or lecture prior to VRLE
- Creativity
- Exploration of case-based scenarios
- Role Play
- Reflective practice
- Feedback

2. *How is learning mediated?*

- Realistic environments enable problem solving, critical thinking and creativity
- Promote independent learning at learners' pace and exploration of alterative perspectives
- Develop clinical competences through repetition
- Understanding 3D spatial representations may allow students to transition to the work place more easily
- VR is not suitable for all forms of educational information or learning situations e.g. non-technical skills

3. *VRLE Design Guidance at LEARNER, TEACHER and COLLABORATIVE LEVELS*

LEARNER: Include learners within VRLE design and overlap learning context and student knowledge

TEACHER:

- VR is suited to 3D learning concepts and practical skills
- Preparation is a key feature of successful VRLE design
- Use VRLEs to learn basic skills prior to more complex techniques
- VR shows greater impact in training of novices
- Blend VR use with didactic methods
- Data collection may facilitate individualised feedback

COLLABORATIVE:

- Immersive VR experiences lead to collaborative peer to peer study
- Multi-user role play encourages problem solving, critical thinking, authentic learning and opinion exchange
- Unsure if VR mediated role play experiences hold equivalence to similar learning situations in real-life
- Little data on the practicalities (and cost) of large scale collaboration or how standardised reproducible frameworks fit educational needs at different learning centres

4. *How does the use of VR/VRLEs in other professional contexts inform medical educational practice?*

- 23/80 studies related to professional fields other than medical education (e.g. engineering)
- Inter-speciality collaboration informs medical VRLE design, however, ensure external literature relevance to medical learning needs

Conclusions: VRLE design is complex. However, there is evidence supporting the positive impact of VR within medical education (particularly practical skills), if a holistic approach to VRLE design is used.

Medical educational VR practices may be strengthened if VRLE design is informed by other professional fields, however, don't lose sight of medical educational needs and the suitability of VR materials for these requirements.

With predicted growth of VR technology, there is benefit of ongoing research into long-term efficacy and impact on patient outcomes.

DELIVERING PALLIATIVE CARE TEACHING IN A NEW WAY

How The Development Of A 'Pop-Up' Palliative Care Course In A Major Teaching Hospital Is Equipping Medical Students With The Practical Skills They Need to Deliver Excellent Palliative Care On The Wards

Dr. Rebecca Benbow[1], Dr. Jon Tomas[2] & Dr. Stephanie Shayler[2]

1. ST3 Palliative Medicine, Royal Derby Hospital
2. Palliative Care Consultants, Queen Elizabeth Hospital Birmingham

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Introduction

Junior doctors frequently care for patients with palliative care needs. Feedback from Foundation Level trainees[1] suggests university teaching of the practical day-to-day management of these patients is lacking. To address this a short course was developed specifically to equip medical students with the practical skills needed to care for these patients.

Method

We devised a course entitled "Practical Palliative Care" consisting of hour long teaching sessions each covering a different aspect of palliative care (see Course Programme below). This was delivered at the Queen Elizabeth Hospital Birmingham to 8 final year medical students.

We used a mixture of teaching modalities, including case-based discussions and written prescription practice. The course was limited to 8 students, who enrolled voluntarily, to facilitate open discussion and questioning. Students were given a certificate on completion of the course.

The course evaluation consisted of pre- and post-course self-assessments rating confidence on a visual analogue scale, alongside additional written comments.

Course Programme	Topics and learning outcomes for session
1. Beyond the syringe driver	•Course introduction •Context of palliative care •When to refer to specialist palliative care
2. Everybody hurts	•Assessment of pain •Different opioids •What to consider when starting opioids
3. Conversations that make you go aaaargh	•General communication tips •What to say when:- a patient's survival is uncertain, - you think a patient is imminently dying - you think a patient is in last year of life
4. Drug chart decoded	•How and why to start a syringe driver •How to monitor and titrate strong opioids •Anticipatory medications
5. The Good Death	•How to recognise a dying patient •How to provide:- physical comfort for dying patients - non-physical comfort for dying patients - comfort for patients' families
6. Putting it all together	•Self care and holistic care •Summarising and reviewing course •Presentation of certificates

Outcomes

Students' self-rated confidence improved in all domains, as demonstrated in Table 1.

All students reported they found the course relevant to their current and future role. The course was rated highly by students, who found the practical elements, such as prescribing practice, particularly useful.

Table 1	Self assessment of confidence (mean)		
Domain	Pre-course	Post-course	Difference
Managing complex pain needs	23	67	**+43**
Discussing prognosis and dying	29	67	**+38**
Starting and stopping drugs	12	66	**+54**
Caring for the dying patient and family	25	72	**+48**

Conclusion

These results show that a short course, comprising only six hours of contact time with a variety of teaching modalities and a focus on practical skills, is effective in improving the confidence of final year medical students regarding common aspects of palliative care.

We believe this teaching model is easily replicable, meaning larger numbers of students could benefit. Through expansion of this course, we aim to empower the next generation of junior doctors to deliver good quality palliative care from the very start of their careers.

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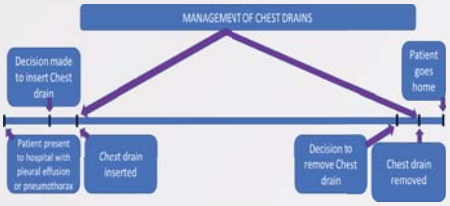
Learning-needs focused hands-on workshops on Chest Drain insertion and post-insertion management

Anur Guhan, Sagara Dissanayaka, Sharleen Siu Sheau Yee, Kirsty McDowell, Paul Connelly & Colleen Gavin

Introduction

Intercostal Chest Drain Insertions (ICD-I) are the most invasive clinical procedures on medical wards. After the NPSA (2007) alerted ICD-I associated morbidity and mortality, NHS organisations made concerted efforts to improve ICD-I training for medical trainees in simulated settings (mannequin/sheep carcass). Subsequent practical training, building on these theoretical skills, remain opportunistic.

Management of a patient who potentially requires a ICD is a multidisciplinary team effort with differing skills required at various stages of the process from patient selection to discharge home following drain removal.



In our practice, we noticed that whilst much enthusiasm is given to and excitement is gained from the technical aspect of ICD-I it self : a) Patient selection for ICD-I is often sub-optimal b) Much of the complications and morbidity occurs post-ICD-I, rather than during and c) Junior doctors (JD) have limited knowledge and confidence in managing chest drains post-ICD-I, especially when trouble-shooting non-functioning drains. We set out to understand the range of ICD-I and post-ICD-I management (P-ICD-I-M) skills in our hospital, with a view to organising hands-on workshops to address any learning needs identified.

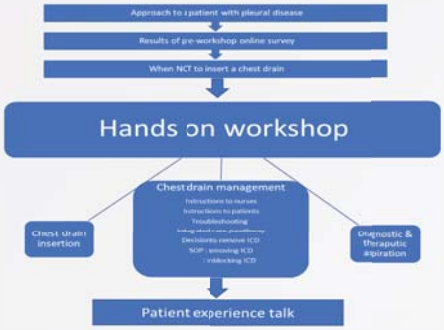
We share our experience.

Method

Doctors of all grades and specialities at the University Hospital Ayr and University Hospital Crosshouse were invited to complete an anonymous on-line survey:

https://goo.gl/forms/c3CHq1YRn2Ua1sDs2

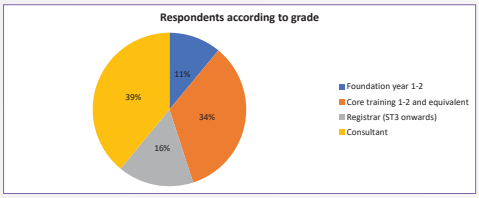
The results informed the programme design of three 4-hour hands-on ICD-I and post-ICD-I management workshops delivered to JD between June and December 2017. Accordingly, the focus of the workshops was weighted towards decision making; patient selection for ICDI and management of patient who has an ICD. Workshop structure is illustrated below We assessed our effectiveness through participants' feedback and evaluation and by repeating the on-line survey

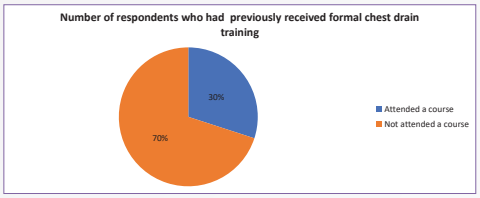


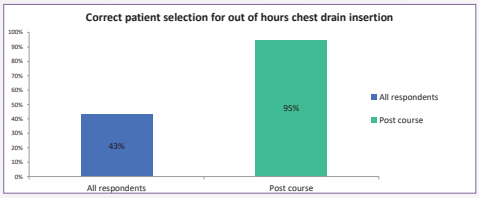
Results

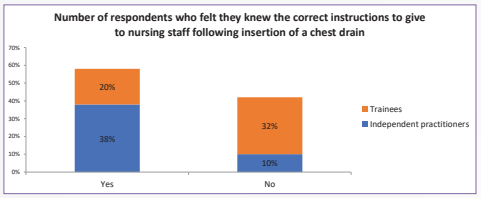
100 responses were received for the initial survey. 24 respondents of the initial survey attended the hands on workshops and 20 of those completed the post-workshop survey after attending the workshop.

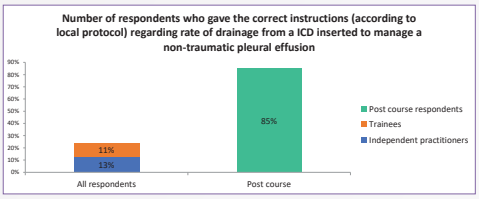
	1 (Poor)	2 (Average)	3 (Good)	4 (Excellent)
Lecture 1 Approach to patient with pleural effusion			3/25 (12%)	22/25 (88%)
Lecture 2 Results of online questionnaire survey of chest drain experience			8/25 (32%)	17/25 (68%)
Chest drain insertion workshop				25/25 (100%)
Thoracocentesis workshop				25/25 (100%)
Chest drain management workshop				25/25 (100%)
Patient experience talk (A patient who had a ICD-I was invited to address one batch)		1/9 (11.1%)	2/9 (22.2%)	6/9 (66.7%)
Session addressed my needs			1/25 (4%)	24/25 (96%)
Lecture 3 when not to insert a chest drain			1/25 (4%)	24/25 (96%)
Style of presentation			1/17 (6%)	16/17 (94%)
Quality of hand outs			2/17 (12%)	15/17 (88%)
Overall				25/25 (100%)

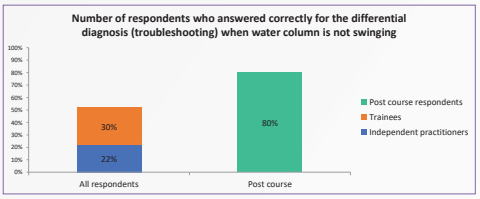


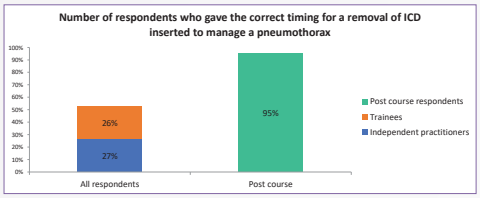


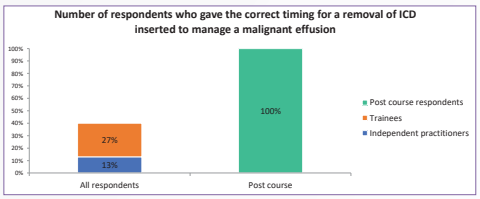


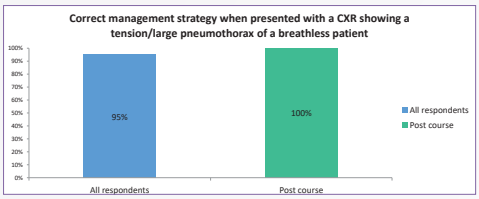


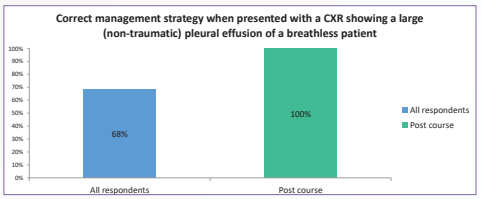












Conclusion

Attention generally given to technical skills' training of ICD-I, perhaps focuses less on developing, the arguably more important cognitive skills of optimal ICD-I patient selection and safe P-ICD-I-M. Our hands-on workshops addressed the identified lacunae in knowledgebase, receiving very satisfactory feedback and evaluation with demonstrably improved change in behaviour, contributing to increased patient safety.

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Learning Lessons From "Lessons Learnt"

Lancashire Teaching Hospitals NHS Foundation Trust

Introduction and Aims

Lessons Learnt is a platform developed for Foundation trainees by a Foundation trainee to discuss patient safety incidents.

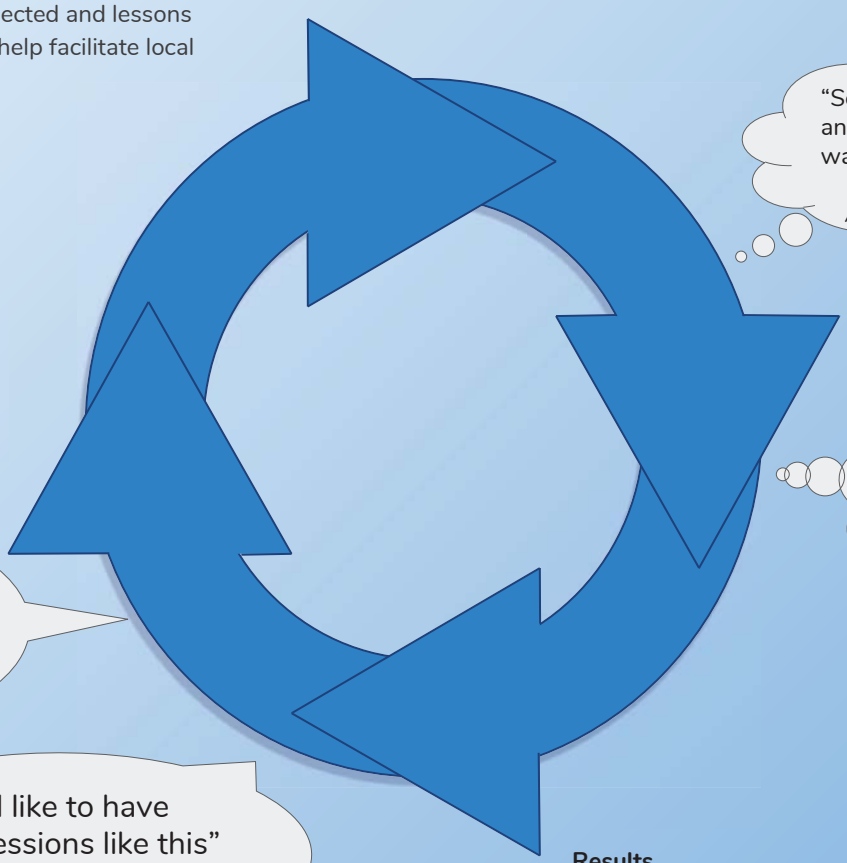
It allows a culture of free discussion between peers, in which a case is dissected and lessons drawn out of the incident to help facilitate local and structural change.

When leading sessions during our Foundation Year 1 (2016-17) we found that **engagement and enthusiasm was poor in the cohort**. After a year of reluctant participation we decided to find out why.

Methods

A SurveyMonkey questionnaire was created and distributed via email to all the Foundation Year 2 trainees at LTHTR.

The simple questionnaire included Likert scale questions, dichotomous questions, as well as space for free text comments.



"Seemed a bit pointless and I don't think much was gained..."

Anonymous FY1

"The facilitation was not helpful in discussing how to improve practice"

Anonymous FY1

"Very informative and useful."

Anonymous FY2

"Would like to have more sessions like this"

Anonymous FY2

Results

Of those that participated in the questionnaire 40% found the sessions useful.
Just 35% were "likely" or "highly likely" to present a case. A majority of these (47%) reported the reason for not presenting was lack of a case to present.

Another large percentage **(23.5%) reported they do not like public speaking.**

Free text comments garnered a lot of useful feedback. This highlighted that people dislike the use of a proforma whilst running the sessions, and people prefer to speak freely. Another useful point is that dates for future sessions were not advertised early enough to allow volunteers to come forward to present.

Conclusions

Feedback regarding Lessons Learnt has been useful to help change the sessions. We have made several changes of the back of these points including:

1. Bringing **consultants of the relevant specialty** in to chair sessions, or matching cases to the consultant available
2. Making the structure more fluid
3. Providing **incentives for participation**, such as involvement in QI projects and certification
4. I**nviting other disciplines** to participate, to stimulate a more lively discussion

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Joy at Work

Ryan. C[1], Ward. E[2], Jones. M.[3]

Introduction: Joy at Work is a framework described by the Institute for Healthcare Improvement aimed to give employees meaning and purpose in their work.[a] Within healthcare improved staff experience and enjoyment at work can affect many outcomes including: patient satisfaction, patient mortality, staff absenteeism and staff turnover.[b]

Aim: Compare and contrast specialist trainees likes and dislikes about their training jobs.

Methods: Two open questions on job enjoyment were included as part of a larger survey on medical recruitment. The survey was sent to all core and higher specialty trainees in Scotland in January 2017. The responses to open questions were thematically analysed by the authors.

Results/Discussion: 843 trainees across Scotland responded to the survey. The most represented trainee groups were: Anaesthetics (100 responses), GP (201 responses), Medicine (185 responses) and Surgery (89 responses). In order to keep anonymity only these four specialities will be discussed.

What Do Trainees Enjoy Most?

Factor Most Enjoyed	1st most enjoyed	2nd most enjoyed	3rd most enjoyed
All Trainees	Patient Interaction	Team Work	Variety
Anaesthetic	Patient Interaction	Team work	Variety
GP	Patient Interaction	Continuity of Care	Variety
Medicine	Patient Interaction	Team Work	Variety
Surgery	Technical Skills	Patient Interaction	Team Work

All four specialties listed patient interaction as one of the most enjoyable aspects of their jobs. Surgical trainees rated patient interaction just behind technical skills such as operating. Team work, with colleagues, the multidisciplinary team and other specialties, was highly valued by all hospital based specialties. GP trainees, likely due to the nature of their work, highly valued continuity of care.

What Do Trainees Least Enjoy?

Trainee group	1st least enjoyed	2nd least enjoyed	3rd least enjoyed
All	Workload	Training paperwork	Workplace Politics
Anaesthetics	Rota / shift work	Poor work-life balance	Management Issues
General Practice	Time pressure	Negative perceptions	Paperwork / e-portfolio
Medicine	Work-load	Rota / On-call	Workplace politics
Surgery	Paperwork	Staff / Bed shortages	On-call requirements

The responses to the most negative aspects of the job were more varied across all specialties. GP trainees felt significantly affected by negative perceptions towards their profession both in the press and by other specialties. Demands of a rota and on-call was mentioned by all hospital based specialties. Workplace politics, between clinicians or with those in management, and training paperwork were considered negative factors across all specialties although not necessarily within the top three of the specialties reviewed.

Conclusion: Intra-professional relationships – either good (teamwork) or bad (workplace politics) have a significant effect on trainee wellbeing. All members of staff (senior doctors, allied health professionals and those in management) should be encouraged to recognise the impact they have on junior doctors experience. Through including trainees in supportive teams, regardless of the duration of their involvement, we can increase joy at work, improve trainee working lives and have a positive impact on patient outcomes.

1- Specialist Registrar Geriatrics and GIM, Queen Elizabeth University Hospital, NHS GGC 2- ACCS Medicine CT3, Ninewells Hospital, NHS Tayside 3- Acute Medical Consultant, Durham University Hospital
(Project undertaken while C Ryan and E Ward were Scottish Clinical leadership Fellows based at RCPE)

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Ten Minute Talks - a novel approach to delivering teaching in a busy medical unit

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NHS Greater Glasgow and Clyde

INTRODUCTION

It can be challenging to deliver teaching for trainees in busy medical units. One of our team (NP) devised a plan to introduce brief, ten-minute teaching sessions following morning handover. We believe this has been a successful development in teaching within our department solving many of the problems in delivering teaching for medical trainees.

FORMAT

- The aim was to achieve focused teaching for day and night shift staff in a short period of time without impacting upon clinical duties.
- Ten minute talks (TMTs) are delivered by consultants on topics of their choosing after morning handover three days a week.
- The speaker simply talks to the group, usually without visual aids.
- A kitchen timer is used to alert the group when ten minutes is up, ensuring night staff get away promptly and day staff are free to start their duties. (See Image 1)
- Night shift staff are always given the choice to leave following handover if they wish.

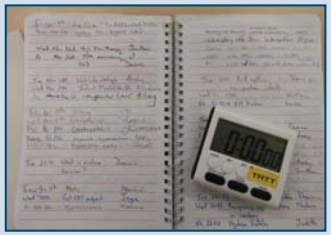


image 1: TMT topic and date log book and kitchen timer used.

CHALLENGES IN TEACHING AND THE BENEFITS OF TMTs

- Shift work and clinical duties make it difficult to gather trainees together – at morning handover staff are already gathered and teaching can be delivered to both day and night shift staff (see Image 2)
- A morning teaching session can be unattractive to those completing a night shift – limiting the session to ten minutes makes the prospect of staying on after a night shift more appealing
- Consultants having to find time to prepare teaching – Ten Minute Talks need little or no preparation

Image 2: Photograph of Dr Anne Marie Heuchan, consultant neonatologist delivering a TMT to staff at handover.

TMTs IN PRACTICE

See Table 1: A range of TMT topics since June 2017

Table 1: A Range of TMT topics delivered since June 2017.

A range of TMT topics delivered since June 2017				
Clinical Subjects	Clinical Governance/ Research	Practical Procedures	Guest Speakers (Specialty)	Trainee Presentations (grade)
Pulmonary Vasodilation	"GET SET' for congenital anomalies audit	Intubation	Infection Control (Microbiology)	'GET SET' Audit- practice for national meeting (ST5)
Skeletal Dysplasias	Discharge Audit & stickers	Central Line insertion	Acute Kidney Injury (nephrologist)	Diaphragmatic hernia (FY2)
Neonatal Seizures	Wireless monitoring research	Ventilator settings	Expressing Early (Infant feeding advisor)	Undescended Testes (FY2)
Chronic Lung Disease- 50th anniversary	Incident reporting	Extubation of the VLBW infant	Labour ward audit (obstetrics)	Ventilator settings (ST8)
Infant Mental Health	Review of Xrays- PICC audit	ETT fixation- using the new neobars	Hand washing (Infection Control team)	RSV in Kenya (ST6)
Trisomy 21	Delayed cord clamping- evidence	"Life start" beds in labour ward (Image 2)	Parenteral nutrition (pharmacist)	Perinatal asphyxia (Spec. Dr)
Nutrition & growth	Probiotics do not prevent NEC- evidence	Use of blood gas machine	Neuro-developmental aids (physiotherapy)	Fluid & electrolyte balance (ST8)

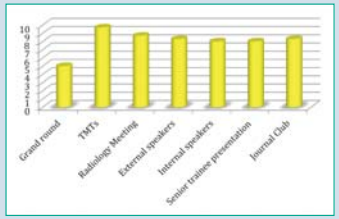
Table 1 Footnote: Over 6 months, delivering three TMTs each week allows for approximately 75 topics to be covered.

FEEDBACK

Trainees were asked for feedback, using anonymous questionnaires) and from consultants (in an email questionnaire format) to assess success of this new method.

The development of TMTs has been well received. Trainees have rated TMTs as their favourite method of teaching when compared to more traditional methods such as grand round, journal club and structured 1 hour teaching presentations. On a ten-point scale (1=poor, 10=excellent) they rated TMTs a mean score of 9.7 compared to our other educational activities, which scored 5, 8.3, & 8 respectively (see graph 1). Free text comments included:

- "I think these are great"
- "I love these"
- "perfectly digestible"
- "Excellent, concise, learn a lot. Happen as scheduled, practical, relevant"



Graph 1: Ten-point scale anonymous rating given by trainees on different types of departmental teaching.

Similarly, consultants gave a positive review of TMTs rating them 8.5 in terms of effective teaching:

- "short, sharp and informative"
- "Very effective on multiple levels. Short duration matches most people's attention spans… (and) … encourages the speaker to focus on key points & cut out waffle", "easy to prepare for"
- "A good adjunct. Could not replace other modes of teaching completely", "Rate them highly & see them closer to a teaching round than formal tutorial but not a replacement for any of these, they are complementary"
- "It captures the essence of a "teachable moment" approach".

OBSERVATIONS

- For any given topic most important points can be covered in a ten minute slot, the format encourages speakers to keep to the essential and important facts
- Although the trainees on night shift are offered the option of leaving after the clinical handover we note that they almost always stay on for the talk, knowing it is limited to just ten minutes.

POTENTIAL FOR USE IN OTHER MEDICAL DEPARTMENTS

- This method would be easy to adapt by other medical units – once the idea was conceived we were able to implement it with almost no preparatory work
- We have delivered TMTs three times a week but they could be done as often as desired from daily to once a week
- We have had a wide range of topic types but they could be targeted at a specific area e.g. reminding staff of guidelines or covering key basic topics e.g. diabetic ketoacidosis, acute asthma, exacerbation of COPD

CONCLUSIONS

TMTs have proved a popular and effective addition to the education programme in our unit. They have ensured that focused relevant teaching is delivered thrice weekly to both day and night shift staff in a very busy neonatal unit with a minimum of resources or preparation. We believe this format could easily be adapted to be used in other medical departments to complement their existing teaching. We both encourage and invite other departments to adopt a trial of this novel approach to teaching and welcome feedback as to how it is received.

FURTHER DIRECTION

It would be interesting to see how trainees would approach this style of teaching as teachers themselves and also how TMTs would be received by medical students during clinical placements. This could be discussed with university course coordinators as to how to trial and implement TMTs across the board. Further role out of TMTs would then need to be reviewed for success rates and direct feedback.

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April 2018

Evaluation Of A Novel Approach To Teaching Communication Skills

Dr Gwen Collin CT2 Dr Alex Collins CT3 Dr Francis Felix CT3 Dr Jigna Patel ST7

Aims

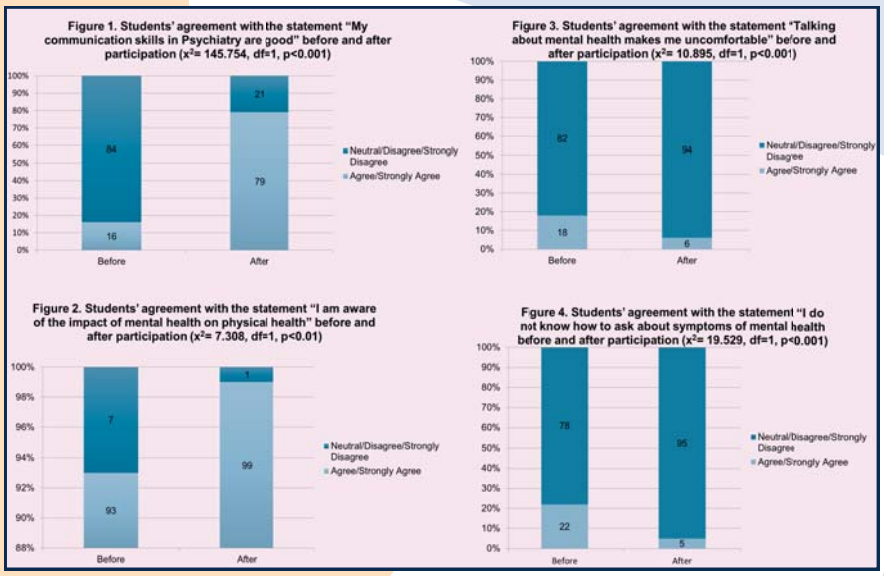
Medical students often express feelings of apprehension and a the lack of confidence when talking to people with mental health difficulties. Psychiatry Pitstop, a novel, near-peer led teaching programme, was introduced for medical students to improve their communication skills and confidence. Near-peer led teaching, a well recognised teaching method in practical disciplines such as anatomy and clinical skills remains unexplored in Psychiatry [1,2,3]. We have been running for 6 years and is delivered twice a year at 2 medical schools as an extra-curricular activity (Leeds and HYMS medical schools).

Our programme consists of six 2-hour weekly sessions. In each session, a tutor-led interactive presentation is followed by communication skills practice with simulated patients and detailed feedback on student performance. Pre- and post-course questionnaires were completed by 199 students and the results compared. Before the course, 16% of our students considered their communication skills good; afterwards, 79% did so. Following our course, students reported feeling more comfortable when talking about mental health, having improved knowledge of how to ask about mental health. symptoms, and an increased awareness of the impact of mental health. Thematic qualitative responses also support our near-peer led feedback as well received and valuable learning tool.

Methods

Each week is assigned a particular psychiatric topic: self-harm; psychosis; depression and anxiety; substance misuse; cognitive impairment; and eating disorders. Our student performance feedback is based on Pendelton's Rules. The chi-square test was used to analyse the level of the students' agreement with statements in our pre- and post-course questionnaires. Anonymous feedback at the end of each session provided thematically analysed qualitative data.

Results



Conclusions

Our 'Pitstop' near-peer led teaching is an effective way to improve student confidence and their communication skills when talking to people with mental health difficulties. A particular strength is the vigorous use of feedback as a learning tool. We therefore encourage its introduction in other medical schools and other specialities.

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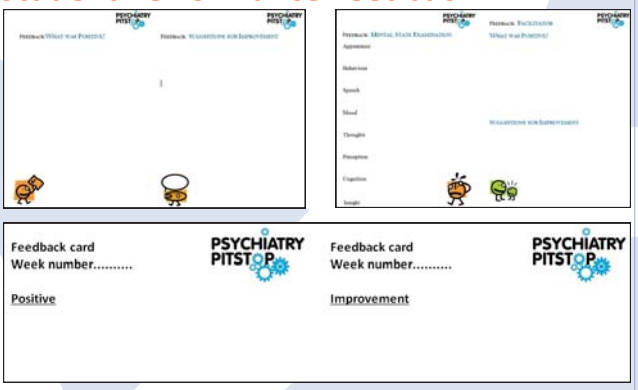
Student Performance Feedback



Interactive Presentation

Simulated Patients

Thematic Qualitative Responses

Positive Feedback:

- Supportive learning environment.
- Good diversity in tutor levels of training.
- Good range of cases and realistic scenarios.
- Good overall structure and format of sessions.
- Good opportunity to practise communication skills.
- Structured feedback from tutors, simulated patients and peers.
- Opportunity to practice talking to simulated patients with psychosis, depression, and cognitive impairment, as they do not often talk to people with these conditions in clinical placements.
- Topics of substance misuse and eating disorders valued.

Suggestions for Improvement:

- Handouts to be given.
- More time for feedback.
- To be told weekly topics in advance.
- More guidance and time on Mental State Examination.
- Request to observe psychiatrists interviewing simulated patients.
- Some suggested shorter periods with simulate patients, so more students would have the opportunity to practise their communication skills in each session.

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Acknowledgement

We would like to thank all of the students, tutors, organisers and simulated patients.

‘Psychiatry In A Day:’ a pilot study for Advanced Nursing Practice

Dr Jennie Higgs Clinical Teaching Fellow, Medical Education Directorate NHS Lothian.
Dr Neelom Sharma Consultant Psychiatrist, NHS Lothian

Introduction

The authors designed and ran a Psychiatry Training Day for the Advanced Nursing Practice (ANP) MSc course at Edinburgh Napier University. Up to now this course has not included any psychiatry teaching. Given that practitioners work in clinical areas where psychiatric symptoms are relatively common (including prison service, hospital at night and acute medicine) this appeared a clinically significant omission. This project aimed to teach fundamentals of psychiatry in a single day.

Lecture 1: Psychiatric history taking and an introduction to common psychiatric conditions
A brief introduction to depression, bipolar affective disorder, anxiety disorders, schizophrenia and emotionally unstable personality disorder with reference to history taking, diagnosis and management
Lecture 2: Mental State Examination
Structure and content of a MSE with patient videos to illustrate specific findings
Tutorial 1: History taking and mental state examination
Participants practised history taking and mental state examination through simulated patient encounters (cases used were depression and panic disorder)
Lecture 3: The Mental Health Act and Risk Assessment
Principles, criteria for detention and specific sections were covered. Risk assessment was explored through case vignettes
Tutorial 2: “Putting it all together”
Two case examples (schizophrenia and emotionally unstable personality disorder) were used to allow participants to explore and reinforce learning around history taking, mental state examination and risk assessment via facilitated group discussion.

Figure 1: Outline of the day

Methods

The day consisted of 3 lectures and 2 small group tutorials. Lectures were delivered by a Clinical Teaching Fellow and Consultant Psychiatrist. Tutorials were delivered by Higher Trainees in Psychiatry, with 5-6 participants per group. An outline of the sessions can be seen in figure 1.

15 out of 18 of those who attended provided feedback via an online questionnaire. For each lecture participants were asked to rate their agreement with statements related to the content, learning objectives and lecture style. For both tutorials participants were asked to rate their level of agreement with statements related to the purpose, environment, tutor, and content. There were free texts boxes for additional comments for each lecture and tutorial. Participants were then asked to rate their agreement with statements about the impact of attending the day overall and to provide comments. They were also asked for an opinion on whether pre-reading would have been helpful and feasible.

At the start and end of the day participants were asked questions via Mentimeter. This allowed for feedback and comments to be collected and displayed instantaneously. This was partly done as an ice breaker and to experiment with new technology but it also gave a valuable insight into the participants’ views.

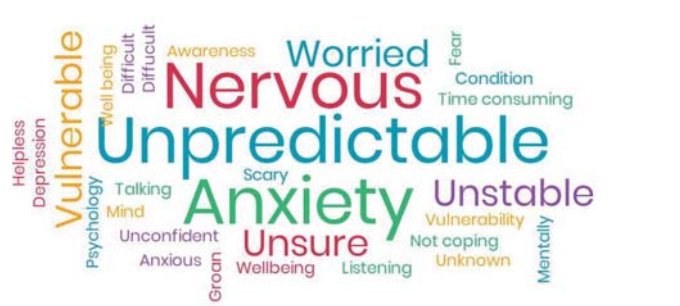


Figure 2: What words come to mind when you hear “psychiatry” or “mental health”? Responses at start of day.

Figure 3: What words would you now use to describe psychiatry? Responses from end of day

Results

Participants were asked 3 questions via Mentimeter. The change in participants’ responses to the question “what words come to mind when you hear psychiatry?” was striking, see figures 2 and 3. Participants were also asked how they would describe the training day, responses to this question can be seen in figure 4.

Detailed feedback was collected via an online questionnaire. Responses to “The content of the lecture/tutorial was relevant to me” were combined for the 5 sessions. 91% of respondents agreed or strongly agreed with this statement. This confirmed that the course content had been well designed.

Regarding the three lectures, 93% of respondents agreed or strongly agreed that the learning outcomes were clear and that the lectures were engaging. For the two tutorials, 97% agreed or strongly agreed that the purpose of the tutorials was clear while 93% agreed or strongly agreed that the small group environment helped their learning and that their learning was positively enhanced by the skills of the tutor.

Free text comments for the lectures showed that respondents found them to be interesting, well structured, engaging and at an appropriate level. It was noted that some respondents found the sessions somewhat rushed and containing too much information. One option would be to introduce pre-reading for the training day although in this small sample 6 out of 15 respondents did not feel this would be beneficial and that they may not have time for course preparation in their current role.

Free text comments for the tutorials highlighted that participants found the environment safe, relaxed and supportive and that the tutorials had reinforced learning gained from the lectures.

Overall respondents commented positively on the structure, content and tutors with 14 out of 15 participants agreeing that attending the day had improved their confidence with regards to assessing patients with mental health problems and 13 agreeing that it had helped to meet their learning needs.

Figure 4: How would you describe the training today?

Conclusion

The feedback demonstrates that the training was well received by participants and that it may be a valuable addition to the Advanced Nursing Practice course. We plan to run the training again with more participants and will gather more data to inform further development. We recognise that it was a rather full programme and will consider ways to address this such as pre-reading.

Transgender Healthcare Teaching in the Undergraduate Medical School Curriculum

University of Glasgow
School of Medicine, Dentistry & Nursing

A. Donaldson[1], J. Ewan[2] , R. Frize[1] , S.F. Sneddon[1].

1. Undergraduate Medical School, University of Glasgow; 2. Sandyford Gender Clinic, NHS Greater Glasgow & Clyde

With increasing recognition of the diverse and specific needs of transgender individuals in a health care setting, lack of knowledge, poor attitudes and prejudice towards transgender patients can result in this population being afraid to access medical care. Educating medical students early in their career in a sensitive and inclusive manner could help change these attitudes. It has been shown that medical undergraduates and post-graduates often feel unprepared or uncomfortable in caring for transgender patients due to lack of training and experience[2-4]. The aim of this study was to address this through introduction of basic transgender healthcare education into the University of Glasgow undergraduate medical curriculum, with the goal of implementing further interactive and fully inclusive teaching.

Figure 1: Transgender Symbol[1]

Aims

- To give basic medical knowledge of transgender health care to early stage medical students.
- To discern the understanding, knowledge and comfort using knowledge of early stage medical students in relation to transgender health care issues.

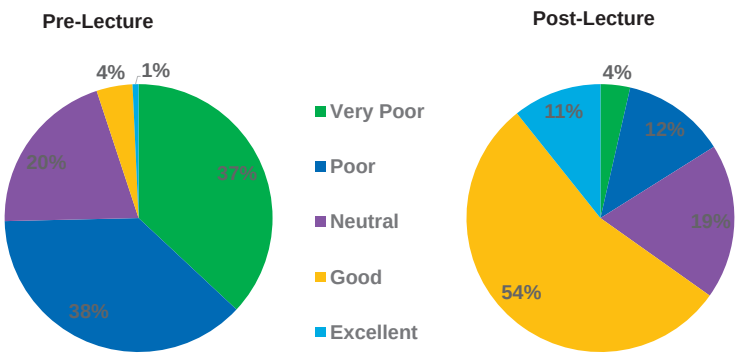
Methods

- Literature review of current research into transgender health care education was undertaken. 83 papers were found, with only 14 being eligible for full reading.
- An hour long lecture was prepared and delivered to Year 2 undergraduate medical students by a Gender Specialist containing terminology associated with gender dysphoria, the health pathway of a transitioning patient and medical and surgical options for transitioning patients.
- An anonymous 18 question survey using a Likert scale and a comment section was produced for the students to answer before and after lecture to discern:
  - Understanding of and comfort using gender terminology
  - Understanding of and comfort using medical and surgical management of transgender patients
  - Opinions of introduction of transgender healthcare into medical curriculum
  - Opinions of further education techniques that could be included into curriculum

Results

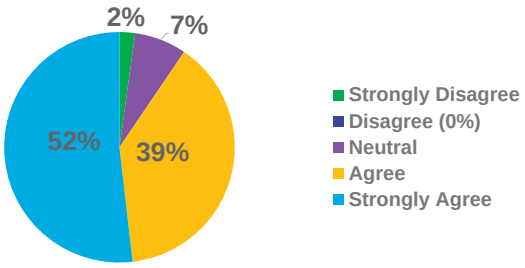
- Questionnaires were distributed to 241 Year 2 undergraduate medical students prior to and after delivery of the transgender healthcare lecture.
- 138 students completed the pre-lecture questionnaire (57%)
- 112 students completed the post-lecture questionnaire (46%)

Q. What is your understanding of specific health needs for transgender people out with the transition process?



- Before the lecture, students had:
  - Poor understanding of gender terminology e.g. binary, non-binary
  - Poor understanding of management (medical, surgical, psychological)
  - Felt uncomfortable using terms: transgender, binary and non-binary
- After the lecture, statistically significant (p=0.000) improvements were shown in:
  - Understanding of terminology and management
  - Comfort using knowledge of terminology and management

Q. The Medical Curriculum should include Teaching on Transgender Health Care.



- Student comments included wanting more teaching on transgender patient mental health problems and more interactive sessions
- Students favoured the following teaching sessions:
  - Patient consultations (66.9%)
  - PBL scenarios (57.1%)
  - Communication skills (50.9%)
  - Lectures (32.1%)
  - Small group sessions (14.3%)

Conclusions

- **This study has shown that the vast majority of medical undergraduates would value teaching on transgender health care included in their curriculum.**
- **A one hour lecture improved student knowledge and comfort around transgender healthcare, improving their confidence before practical placements start.**
- **Although the lecture was beneficial, students would like more interactive teaching involving members of the transgender community to further improve their knowledge and confidence.**
- **We wish to repeat this questionnaire after introduction of further teaching such as communication skills sessions.**

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Meeting the needs of GPs in training in South East Scotland -a qualitative review, analysing a new Obstetrics & Gynaecology study day

Dr. Sigi Joseph

Dr. Sigi Joseph

GP Partner ,Pathead Medical Practice, GPST1 Course Organiser South East Scotland Deanery, Edinburgh

NHS Education for Scotland

Introduction

Research Aim:

- Ascertain through both Quantitative and Qualitative analysis what our GPST's value most in a study day.
- Develop common themes which trainees sighted as reasons for a courses value and enjoyment.
- Utilise these common themes to assist future course development within thnit.

Method:

- Questback post course feedback was analysed to draw numerical data.
- 8 in –depth interviews were conducted with a variety of GPST's at different stages of training.
- The combined data underwent a thematic analysis to extract useful transferable themes.

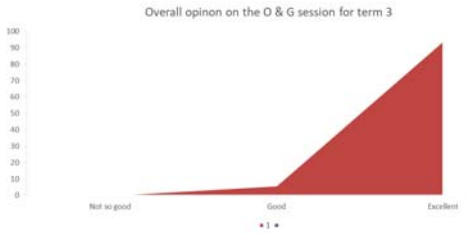
Summary of Work

- Curriculum mapping exercise is useful prior to developing a course.
- Clarifying delivery points within training against a spiral curriculum approach.
- Targeted teaching based on the needs of trainees for stage of training maintain a GP Focus is essential.
- Collaboration with specialists to get up to date clinical information pertinent to community practice is of value.
- Mixed method approach of a study day is appreciated both in terms of enjoyment and to drive learning.

Results:

Thematic analysis led to two main categories with sub themes:

- Structural Themes
  - Flexibility in educational delivery
  - Relevance to perceived training needs
- General Themes
  - Confidence building
  - Preparedness for exams or work
  - Social & supportive aspects of peer gathering



Social aspects of Learning have great weighting with our trainees

"To be honest I just love it all. I really think its valuable to get out of your practice and see your peers, social learn together and also join that kind of safe environment when people aren't afraid to say they don't know something" GPST3

"I think a lot of appreciate the chance for some learning out of practice. A chance to get a day away together and to learn." GPST1

Relevance to future working life crucial.

"Nothing can be too Gp focussed for me." GPST2

"I recall really thinking now this is useful and actually I think I could manage that in my 10 minutes." GPST3

Take Home Messages

Keeping " THE WHY" at the centre of our educational delivery and maintaining the focus on generalism to empower working life is highly valued.

Creating a "safe" learning environment which facilitates peer to peer connection and support is paramount.

Keeping CALM (Coaching, Action Learning and Mentoring) in Leadership

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NHS Education for Scotland

Introduction:

The Scottish Clinical Leadership Fellowship (SCLF), run by NES, offers a select group of medical and dental trainees in Scotland the opportunity to develop leadership skills. From 2016 the fellowship offered Coaching and Action Learning to fellows.

Each fellow was allocated a professional coach who met with them regularly on a one-to one basis. Coaching was individual to each fellow's needs and topics were led by the fellow. Action learning is described by the Action Learning Associates Foundation as:

"The process of bringing thinking and action into harmony. Through working in action learning sets, we bring together diverse peers or people from within the same organisation to work through issues, share ideas and challenge perceptions in a trusting, supportive environment"

Action Learning was undertaken during group study days, facilitated by a professional colleague.

SCLFs accessed mentors as part of their daily work, supervising and supporting them in their individual projects.

Aims:

To assess the impact of Coaching, Action Learning and Mentoring on those taking part in the Scottish Clinical Leadership Fellowship

Methods:

A survey was developed asking SCLFs the positive and negative aspects of coaching, action learning and mentoring. This was emailed to all SCLFs from 2016 onwards. Responses were thematically analysed by two independent reviewers.

Results:

14 SCLFs replied, a response rate of 67%. Respondents were from a range of specialties from CT2 to post-CCT. All respondents made positive comments about coaching, action learning and mentoring.

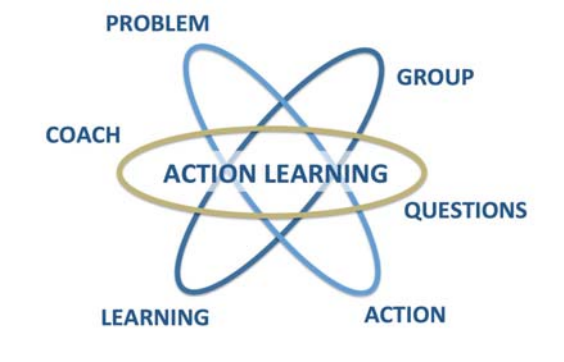

Image Source: World Institute for Action Learning (https://wial.org/action-learning/) 2018

SCLF

Coaching:

Perceived benefits of coaching were personal development (9 responses), reflection (5) and an external opinion (4). The predominant negative theme was difficulty understanding the concept.

"Opportunities to speak with someone who understands but is external to my organisations. "Me" time for personal development"

"Safe space, divorced from any clinical hierarchy, to discuss fears, concerns, and hopes for the future; insightful questioning on my own ways of working; feeling of support/building of self-belief"

Don't usually have burning issues I feel the need to explore - tend to need to think of an idea for the sessions. At times feel slight unease as other members talk more deeply about more personal issues

Great to get a group discussion to help to think about things from a different perspective. Challenged my thinking

Action Learning:

The main benefit from action learning was the opportunity to think differently about problems (7), group cohesion (5) and practical advice (4).

The main drawback was difficulty in finding the right issue (4), difficulty understanding the concept (4) and embarrassment (4). 3 trainees wished to continue action learning after the fellowship ended.

Mentoring:

Fellowship mentors were seen positively as giving external support (8) and guidance (7). There was, however a 'boss versus mentor' conflict raised by 2 respondents.

"Having gone into such a new environment and role it was very important to have someone I could look to for guidance and in confidence."

Conclusions:

Coaching, Action Learning and mentoring were all viewed positively by SCLFs. As the fellowship develops these will continue to benefit trainees. Better explanation of the concepts will enable trainees to maximally benefit. These opportunities should be considered for all trainees, not only those in a bespoke fellowship.

'Non-traditional' students' experiences of applying to study medicine in Scotland: an interview study

Rachel Ball[1], Jennifer Cleland[2], Kirsty Alexander[2]

[1]School of Medicine and Dentistry, University of Aberdeen
[2]Centre for Healthcare Education Research and Innovation, University of Aberdeen

INTRODUCTION

In the UK, students from lower social classes are consistently underrepresented in medical school, despite the widespread implementation of widening access (WA) initiatives in accordance with government and BMA policy[1].

Previous research in the area has focussed on identifying reasons students from non-traditional backgrounds are less likely to apply to medical school, such as lack of school support[2], fears about failing/dropping out of the course[2,3] and a perception that only a certain type of person could go to university[3].

However, it is also important to explore the experiences of those 'non-traditional' applicants who did choose to apply to medicine and were ultimately successful. The experiences of this group of students can provide useful intelligence for admissions and widening access policy and practice.

METHODS

This study was qualitative, with data collected via semi-structured interviews with 12 participants from three Scottish medical schools (Aberdeen, Dundee and Glasgow) who had self-identified as having "non-traditional" backgrounds. All participants were of UK origin.

Data analysis was inductive and thematic.

Of the twelve participants, ten had entered medical school as undergraduate students, either straight from school or after a gap year. The remaining two students had both completed at least one degree before starting medical school.

RESULTS

Three overarching, interlinking themes were identified in the data.

Shift from lack of confidence to having the confidence to apply

While participants had begun to consider medicine at an early age, they viewed it as elitist and thus unattainable for them, lacking the self-belief to seriously consider applying:

"I didn't think I was the sort of person that could study medicine –like smart enough…I didn't think that it was a realistic dream"

These low levels of confidence persisted until applicants found out they had performed well academically, and achieved the high entry requirements medical schools expect from their applicants:

"I'd got my five As & I thought, I can do this"

This strongly suggests that academic achievement was a vital 'turning point' in the participants' journey to medicine. Academic achievement boosted their self-confidence enough to encourage them to apply.

Resilience in the Face of Barriers

All participants in this study were faced with a variety of barriers whilst applying to medical school, which they managed to overcome by demonstrating some level of psychological resilience. This ability to successfully deal with challenges seemed key in allowing our participants to make successful applications:

"A lot of my teachers, like when I had to miss classes and things, to go to do like, volunteering and shadow work…they were very, oh…why you're doing this…to get…time off…I had to really fight for it"

Importance of Connections to the Medical Profession

Participants also stressed how beneficial they found being linked to the medical profession in some way was for their application. They viewed these connections as important in both confirming their interest in becoming a doctor, and reassuring them that they were able to become one:

"It was nice to speak to a doctor and seeing what he's been through, and through REACH it was nice to speak to students that were doing what I will be doing when I get into that"

CONCLUSION

Currently, many WA initiatives target secondary school pupils before they have sat their exams. However, our findings show that many WA students did not consider medicine a realistic possibility before obtaining the necessary qualifications. Therefore, whilst resilience and loose connections to medicine are valuable for non-traditional students in their journey into medicine, there is also an opportunity for medical schools and the Scottish Government to reach out to students immediately after exam results are released. This would provide potential candidates (who may not have considered medicine achievable prior to this) with accurate information, allowing them to meet the October application deadline.

ACKNOWLEDGEMENTS

Thank you to: REACH Aberdeen for funding this project, the participants who gave up their time to support this research, and Dr Manjool Medhi who conducted the interviews. This study was carried out by Rachel Ball as part of an intercalated degree focussing upon medical education.

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Impact of disseminating a standardised trust wide clinical skills teaching programme on undergraduate medical students

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Department of Medical Education, NHS Lanarkshire

Introduction

Medical students from the University of Glasgow are expected to gain competency in a defined set of clinical skills while on medical and surgical rotations during their third and fourth year (1). To support this aim, Clinical Teaching Fellows (CTFs) from the NHS Lanarkshire Medical Education Department have developed a standardised clinical skills teaching programme and disseminated it across the trust's three hospital sites.

Aims

The study had two major aims

1. To determine if programme delivery improved perceived student confidence
2. To establish if programme effect was independent of teaching site.

Methods




Each session is led by a CTF for a group of 4-6 students and lasts between 60 and 90 minutes. They begin with a short presentation on the skill, followed by demonstration and practice on clinical models

Anonymised pre and post session questionnaires were completed using a Likert scale to rate confidence. These were analysed for normality using Shapiro-Wilk testing. Wilcoxon rank-sum testing was used for comparison of non-parametric paired means and Kruskal-Wallis analysis used for multiple comparison of non-parametric data. Data was analysed using Prism, considering a p-value <0.05 a significant difference. Qualitative evaluation of the course was compiled via a free-text questionnaire.

Results

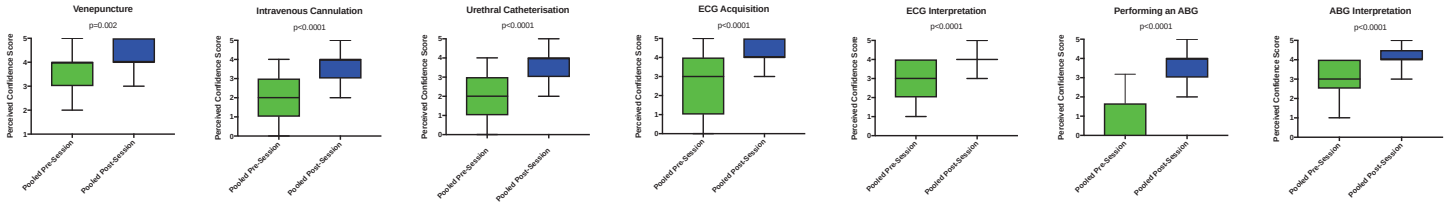

Figure 1. Box plots displaying Wilcoxon rank-sum tests for pooled perceived confidence data.

Multiple analysis of confidence before and after each intervention across all three sites showed no significant difference (Kruskal-Wallis, p=>0.999).

Free text questionnaire: Highlights

'Low pressure environment to practice in' (Venepuncture/Cannulation)
'OSCE practice' (Venepuncture/Cannulation)
'Getting in moment feedback from CTF while performing procedure' (Urethral Catheterisation)
'Step by step approach. Going through cases.' (ABG)
'Systematic approach was very useful' (ECG)

Free text questionnaire: Suggested Improvements

'More than one model to enable multiple students to practice at same time' (Urethral Catheterisation)
'More sterile packs and equipment' (Urethral Catheterisation)
'The arm isn't that easy to use/lifelike' (Venepuncture/Cannulation)
'Having more time for multiple practices' (ABG)

Conclusions

The implementation of a standardised clinical skills teaching programme gives significant improvement in perceived confidence amongst undergraduate students and appears to be independent of environment, thus improving pragmatic application of this programme across sites.

The notable logistical challenges of such a programme included setting up non-clinical areas safely for practicing clinical skills and the movement of shared clinical models between sites. Improvements suggested by students primarily focussed on requesting higher fidelity models and additional disposable equipment. We have identified an appropriate teaching space at each site and sourced funding for the purchase of additional clinical models to address these logistical challenges and suggested improvements. This programme will now form a core part of the teaching provided to undergraduates by CTFs in NHS Lanarkshire.

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PALS
Peer Assisted Learning Scheme

UNIVERSITY OF ABERDEEN

The Flipped Classroom: Peer-Led Case Scenarios in Undergraduate Medicine

Rose A[1], Rafiq N[2], Parson SH[3], Venkatesh A[4]

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INTRODUCTION

The flipped classroom is an instructional strategy where the order of teaching is reversed: students complete background reading and subsequently apply this learning in class through problem-solving.[1,2] Reported benefits include deeper learning, increased student engagement and satisfaction.[3,4] However, a flipped model facilitated by peer-tutors has not yet been explored. At the University of Aberdeen Medical School we introduced a flipped classroom within the established Peer Assisted Learning Scheme (PALS). Clinical cases were explored through small group discussions to promote understanding of key differential diagnoses (e.g. chest pain, headache).

METHODS

Case-based discussions (CBD) were developed across seven specialties. PALS tutors (fourth and fifth year medical students) were allocated to a group of first/second years recruited via the PALS' Facebook page. Together, they worked through clinical and knowledge-based scenarios. Tutee feedback was sought through a questionnaire including 5-point Likert scale and free text responses. Completion was voluntary and therefore consent implied.

RESULTS The three evenings were delivered by 33 tutors to 155 students

Respiratory/CVS: **33** respondents (19 first year, 14 second year) (see Fig 1)
- **100%** found the tutorial useful & felt it improved their understanding
- **100%** found the teaching style effective (84.8% strongly, 15.2% agree)

GI/Neuro/ENT/Endocrine/Urinary: 79 respondents (all second year)
- **100%** found the tutorial useful & improved their understanding (see Fig 2)
- **96.2%** found the teaching style effective, 3.8% were indifferent

Free text comments were extremely positive for both (see Fig 3)

Figure 3: Examples of free text comments

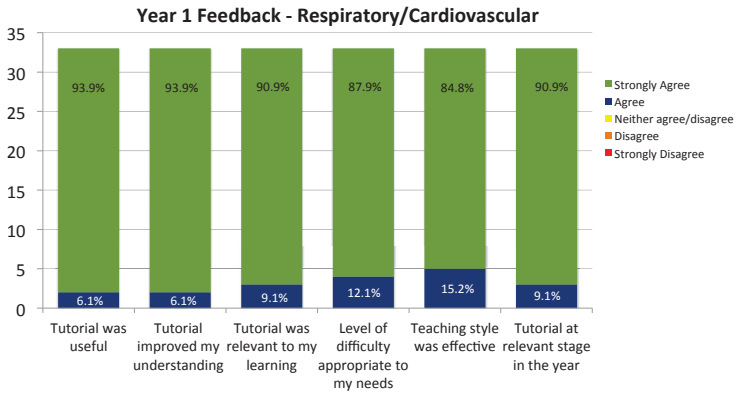
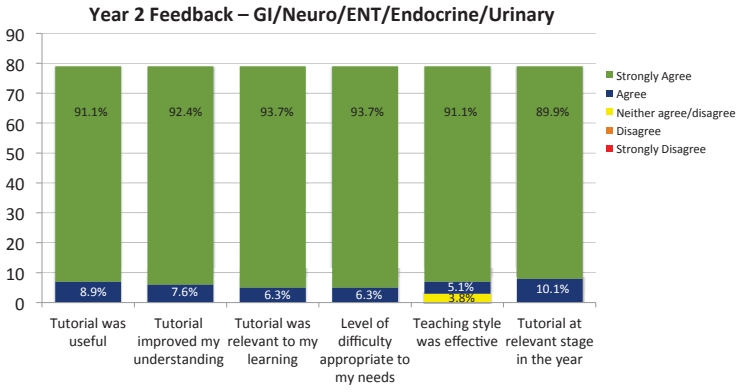


Figure 1 (above) and Figure 2 (below)



DISCUSSION / CONCLUSION

Our experience demonstrates that a flipped classroom approach is popular with first and second year tutees, improving student understanding, enjoyment of learning and confidence leading up to exams.

Given the overwhelmingly positive feedback, we have included CBDs as an annual PALS event and are keen to expand CBDs within PALS at a postgraduate level, involving foundation trainees with senior medical students. Finally, it is hoped that the results of this pilot study will be considered when reviewing the undergraduate medical curriculum outwith peer assisted learning.

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Ethical statement: PALS was approved by the University of Aberdeen's College of Life Sciences and Medicine Director for Learning and Teaching.

Acknowledgements: Our thanks to the all the PALS tutors and tutees for participating in this evaluation and for the University of Aberdeen's Centre for Academic Development's Learning and Teaching Enhancement Programme (LTEP) who funded a part of this project.

COME HERE. GO ANYWHERE

Equip, Empower, Engage;
Medical students using appreciative enquiry to improve and innovate paediatric patient experience

Marianna Przybylska [a], Niall Burke [a], Clare Harris [a], Marcel Kazmierczyk [a], Ellie Kenton [a], Olivia Yu [a], Sonia Joseph [b]
[a] Medical Student, University of Edinburgh
[b] Department of General Paediatrics, Royal Hospital for Sick Children, Edinburgh

Introduction

Scottish Children's Parliament report, 2014[1]

- 'Guide' and 'include' young people in healthcare
- 'Talk' to young people directly
- Healthcare staff to show greater empathy

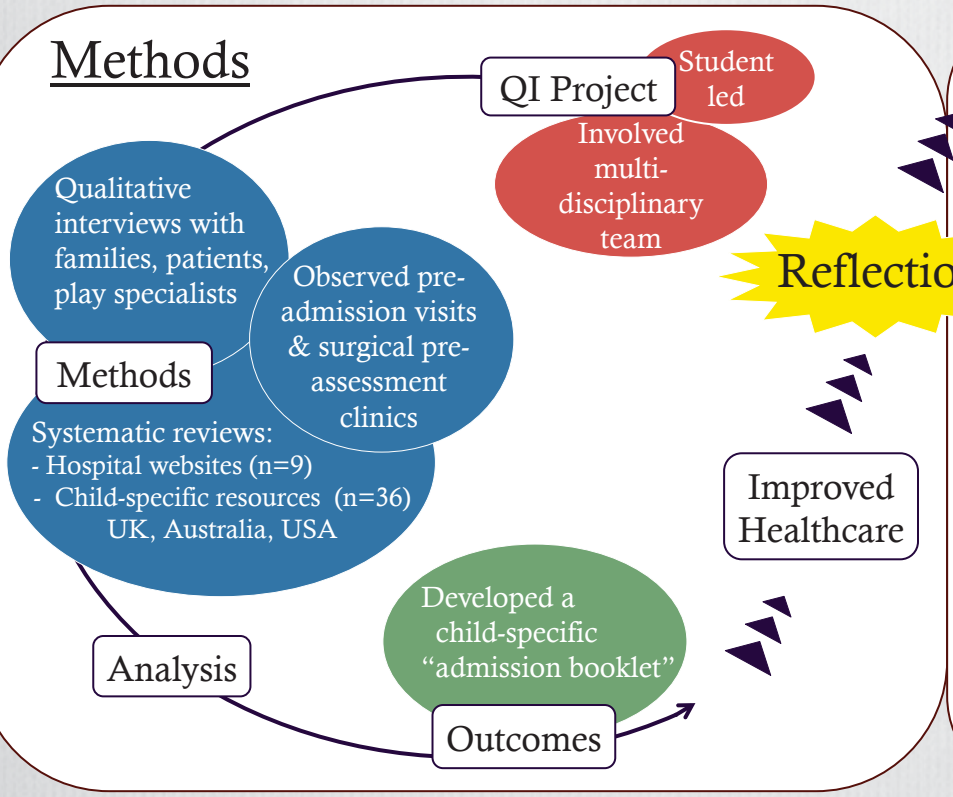
Role of medical students[2]

- Objectively observe the process of hospital care
- Highlight improvement opportunities
- Provide new insights
- Assist in evaluating and implementing system change

Medical students initiated a quality improvement project with **aims to:**

- Evaluate information needs of families admitted to the Royal Hospital for Sick Children, Edinburgh
- Compare the quality of child-specific information resources locally and globally
- Use reflective logs to track learning and development of skills

Methods



Results

- Exposure to clinical practice
- Training in communication skills: with patients and wider healthcare teams
- Learning the process of setting up a quality improvement project
- Understanding importance of reflection and the power of asking "why?"
- Empowering the next generation of doctors to realise they can make a difference

Conclusion

Harnessing student enthusiasm and empowering medical students as key leads in patient centred quality improvement projects:

- Benefited service
- Enabled deeper student understanding of healthcare provision
- Supported a positive team culture
- Provided vital learning for future careers as doctors
- Reinforced that student voices are vital in providing patient well being and patient safety

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Marianna Przybylska Email: marianna_prz@hotmail.com

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A Simple Initiative To Enhance Team Learning

Natalie Bee, Harriet Coleman, Fiona Osborne, Sonia Joseph, Mairi Stark
Royal Hospital for Children, Edinburgh

Introduction

Setting: a large paediatric hospital with a high level of clinical acuity providing both tertiary and quaternary care with 8300 admission/year.

Challenge: the impact of shift based working, transitional staffing groups and high service demand on longitudinal team learning.

Solution: a simple cost-free initiative to enhance team learning from workplace scenarios in the form of a weekly email bulletin highlighting learning points emerging from clinical practice the preceding week.

Aims

- Inspire team learning and reinforce team working.
- Promote evidence-based practice.
- Promote a culture of quality improvement and patient safety, highlighting local and national initiatives applicable to our daily work.

Methods

Initiation
- Weekly learning points email sent to senior nursing staff and all medical staff working in the team (Oct 2017) Figure 1

Survey
- After 4 months an electronic survey combining 'yes/no' questions and free text boxes was disseminated

Evaluation
- 'Yes/No' questions demonstrate learning points' 'reach' and application
- Open responses analysed in context of aims

Quote of the week:
"Don't aspire to be the best on the team. Aspire to be the best FOR the team."

Dear ARU team,

Here are the learning and QI points from this week. It has been a very busy week with everyone working hard. I must say I have been particularly proud of our team this week ☺.

Have a fabulous weekend!
Natalie, Harriet, Fiona and Team

Figure 1

Results

- Overall there were 17 respondents out of 24 (response rate 70%).
- Some respondents partially completed the questionnaire.
- 16 out of 17 read the learning points in a typical week, and 14 out of 14 would recommend reading them to a colleague.
- 13 out of 14 had changed their clinical practice based on the learning points.
- Themes identified amongst open question responses indicated key benefits including (figure 2 & 3):

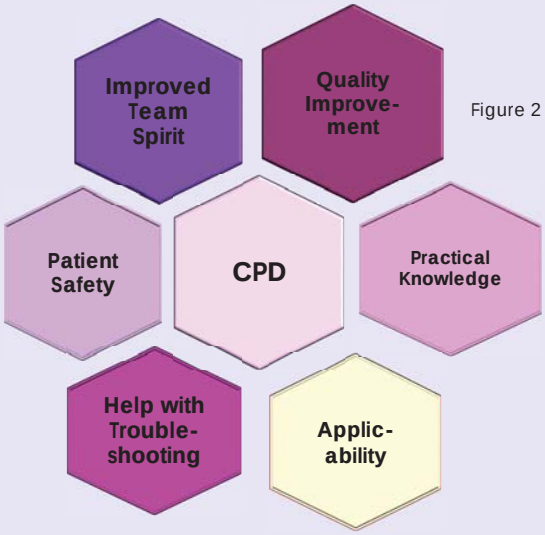


Figure 2

In your opinion, what are the key benefits of the learning points?

"Great addition to life-long learning and continuous professional development (CPD)"

"Having a summary of the interesting facts; reinforcement of facts needing special attention; positive learning from mistakes"

"A good reference for future care. Makes reflective ePortfolio entries on key topics easier"

Figure 3

Conclusion

- For our department, weekly learning point emails were successful in facilitating changes in practice to promote patient safety and quality improvement.
- This is a simple ***cost-free*** initiative which can be applied to any department to create positive change.

‘Introduction of empathy mapping exercise for medical students in early patient experience to enhance empathy and compassion in Dr-patient relationship.’

Evelyn Watson [1], Anita Laidlaw. [1]
[1] University of St Andrews

University of St Andrews

Introduction

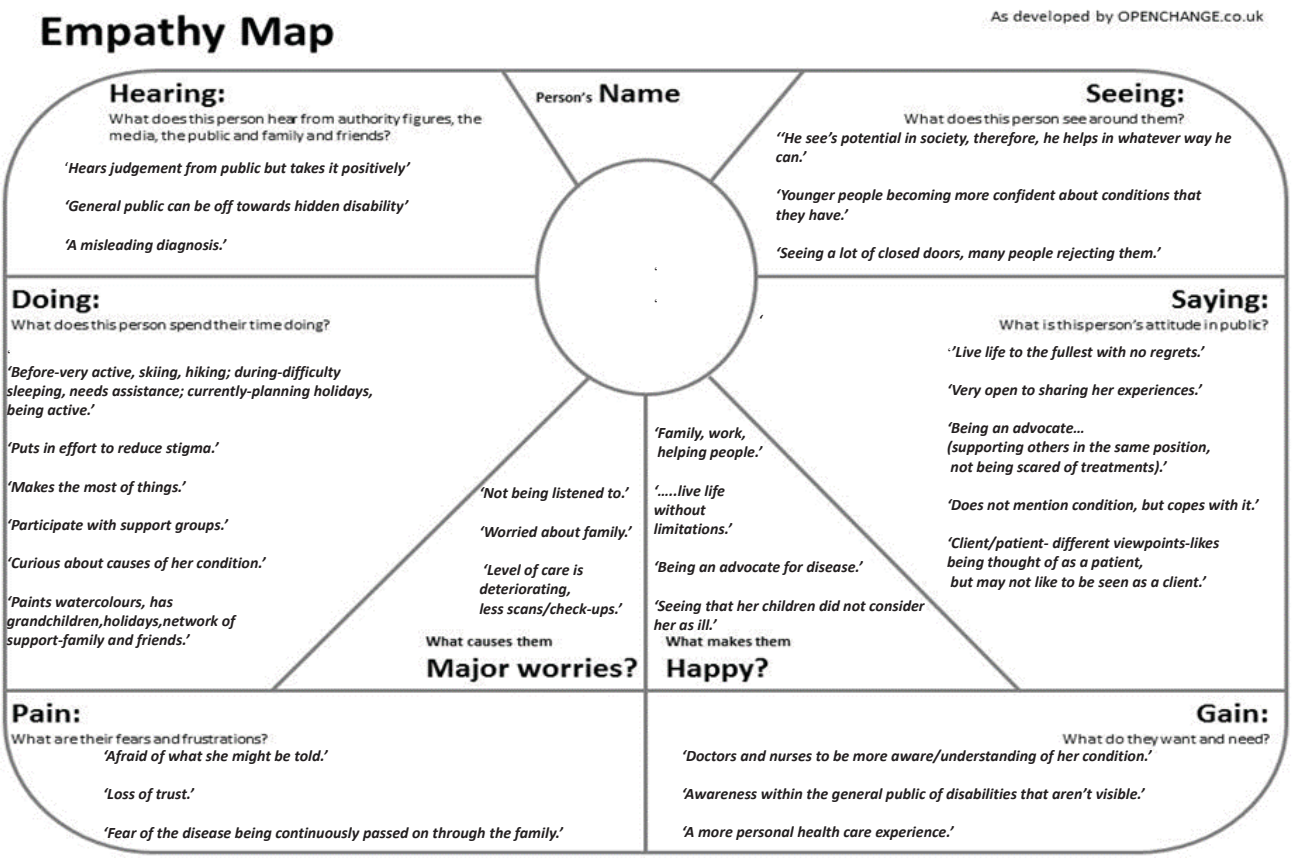
Recent concern has highlighted lack of compassion within healthcare professionals in the UK(1) and specifically with lower medical student empathy as they progress through medical training(2). Lack of compassion or empathy within healthcare professionals is of concern due to the potential impact on patient care(3). Additionally, empathy has also been linked to resilience in medical students(4), therefore encouraging empathy development and self-compassion within medical education may be of benefit to medical students and enhance their interactions with patients.

Methods

An empathy mapping exercise was introduced into existing volunteer patient conversation workshops involving 1st year medical students, University of St Andrews. Part of the workshop involved medical students working together to complete an empathy map, drawing on what they learnt during their patient conversations. Volunteer patients also completed an empathy map. There are 8 domains within the empathy map consisting of a) hearing; what was heard in relation to illness, b) doing; what the patient liked to do, c) seeing; what patient saw around them, d)saying; what was being said in relation to the patient, e) gain; identified needs f)pain; physical and psychological, g) what made them happy and h) what caused them major worry (see figure below).

Results

20 workshops (6-8 medical students, 1 volunteer patient per group) occurred. Similarities were found between empathy maps completed by medical students and volunteer patients in the eight domains of the empathy maps.



Conclusions

Introduction of this empathy map proved a useful exercise in engaging medical students with the implications of living with a long-term illness. There were considerable similarities between the empathy maps completed by medical students and volunteer patients which could suggest that this approach allowed students to enhance their empathic skills and compassion. Further research to explore student's perceptions and beliefs surrounding the value of empathy and mapping exercise, in relation to clinical interactions with patients could be beneficial in informing curriculum development in medical education. Recent funding has been granted from the joint ASME and GMC Excellent Medical Education Award to conduct a research project further exploring the implementation of this empathy map which will occur between the Schools of Medicine at the Universities of St Andrews and Leicester. That project will involve conducting semi structured interviews with both undergraduate medical students and volunteer patients involved in sessions using the empathy map, allowing us to gain greater insight into the value of introducing this tool.

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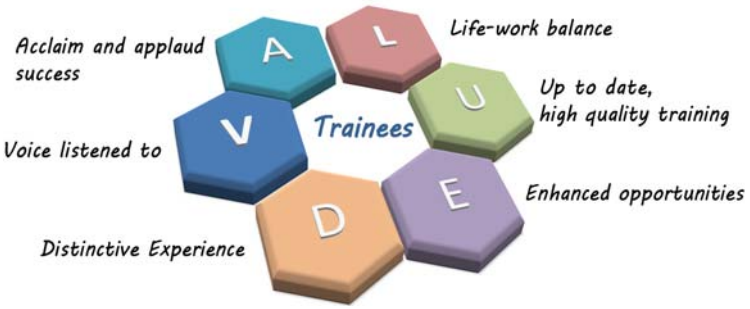
A VALUED survey of Postgraduate Medical Trainees in Northern Ireland

Dr Rachel Campbell, Dr Camille Harron, Prof Keith Gardiner
Northern Ireland Medical and Dental Training Agency (NIMDTA)

Aim

The Northern Ireland Medical and Dental Training Agency (NIMDTA) launched the 'VALUED' strategy in June 2017 to encourage doctors and dentists to train and remain in Northern Ireland. It focuses on six areas for development relevant to promoting a high quality training experience for doctors in training.



From national work, such as Health Education England's (HEE) 'Enhancing junior doctors' working lives', we know that not all training experiences are positive and that there are areas which could be improved.

In order to enhance the Deanery's insight into trainees' views a regional survey was undertaken. The aim is that information gathered from this will contribute to the development of the VALUED strategy further. Hearing directly from trainees about their training experiences will allow for targeted interventions with an aim of ultimately improving training.

http://www.nimdta.gov.uk/professional-support/valued/

Methods

An anonymous online survey was developed in consultation with senior educators at NIMDTA and trainees. A variety of Likert scales, dichotomous questions and open space answers were used to gather both quantitative and qualitative data.

The questions were organised into themes which included;

1. Overview of training
- Do you feel valued and supported by your Trust and Deanery?
- How is your morale in work?
- Are you committed to your career in medicine?

2. Training posts and rotas
- What are your biggest challenges in work and training?
- Are you committed to your training programme?
- How long before starting your post were you informed of where this would be?
- How long before starting did you get your rota?

3. Well-being and lifestyle
- How is your annual leave organised (allocated/flexible)?
- Are you in less that full time (LTFT), have you experiences any barriers to this?
- Have you returned to work after time out of training? Did you feel supported on your return?
- Do you feel work has negatively affected your physical or mental health?

4. Educational opportunities
- Questions around feedback from senior colleagues
- Have you applied for Out of Programme (OOP)? Were you granted this? Any difficulties with this?
- Have you had difficulty obtaining study leave from your employer?
- Have you had difficulties accessing prospectively applied for study leave?

5. Areas for improvement
- In your opinion what could be done to improve the working environment you are currently in?
- In your opinion what could be done to improve the training experience to make you feel valued?

The survey was distributed to trainees by email and completion encouraged through reminders in trainee and trainer newsletters.

Results

235 responses (15% completion rate) were received. The commonest challenges experienced by trainees at work and in training are highlight below.

What are your three biggest daily challenges in your clinical work?
'Balancing service provision with training needs'
'Heavy workload', 'work load and work life balance'
'Staff shortages', 'Empty rota lines'
'High burden of out of hours working'

What are your three biggest daily challenges in making progress through your training?
'Balancing the demands of training with trying to have a social life'
'finding time for portfolio'
'Increased service provision needs'
'Exams: studying whilst working out of hours'

Trainees were asked to report if they felt valued by their Trust and by NIMDTA. 54% of trainees 'Agree' or 'Strongly Agree' that they feel valued by their Trust and 44% feel valued by NIMDTA.

60% of those returning to training felt that they were supported by the Deanery with qualitative results reflecting challenges with communication during their time out of training, and difficulties returning to clinical practice and on call.

57% of trainees reported that work is having a negative impact on their physical or mental health.

When asked what could be done to **make trainees feel more valued** common themes arose:
- *More focus on training, more time allocated to teaching*
- *Improvements with rotas: notice of rota, design*
- *Improvements to working environment: lockers, office space, time for admin, on call room*
- *Improved development of trainees leadership potential*
- *Better communication between trainers/NIMDTA/trainees*
- *More training for exams*
- *More feedback*
- *Mentoring*

Outcomes and Improvements

Within the Deanery the results of the survey have been reviewed with senior NIMDTA faculty with a view to exploring priorities for action and potential solutions, some are already being tackled, examples include continued development of a:
- Peer Interview scheme to support trainees through interviews,
- NIMDTA Roadshow events to engage with trainees at their place of work
- Peer Mentoring scheme to support trainees through their career.

We have provided feedback to trainees already on how the information they provided through the survey has resulted in change and we will continue to do this.

This regional survey has provided an effective opportunity for the Deanery to engage with trainees about what is important to them. We plan to repeat the survey annually to assess improvement and to identify new priorities.

Contact details: rachel.p.campbell@gmail.com

The Princess Alexandra Hospital NHS Trust

Does medical school prepare you for difficult conversations? Assessing the impact of a palliative care study day on the confidence of final year medical students.

Dr Alice Copley[1], Dr Hannah Costelloe[1], Dr Andrew Greenhalgh[1], Mr Andrew Foster[1], Dr Pratik Solanki[1]
1. Princess Alexandra Hospital NHS Trust, Harlow

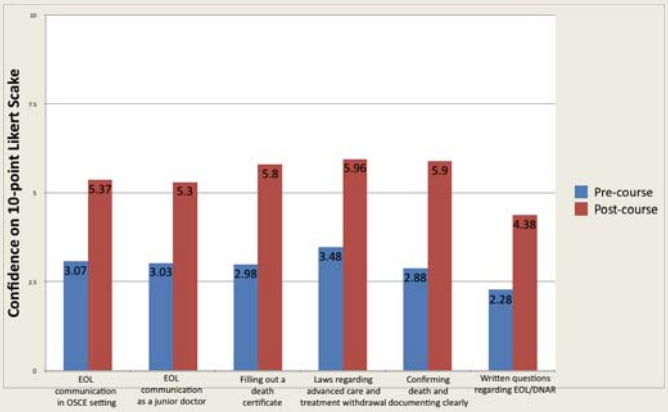
AIMS

There is anecdotal evidence that final year medical students feel unprepared for the palliative care elements of their final year exams and as a junior doctor. Most new doctors will not have practiced completing a death certificate or prescribing anticipatory medications before starting work. The literature describes that breaking bad news insensitively can cause patients additional distress.(1) There can also be consequences to the clinician including guilt, anger, anxiety and exhaustion.(2)

METHODS

We organised and delivered a palliative care study day for final year medical students. We aimed to improve confidence by building on current knowledge and facilitating communication skills practice. The course consisted of 10 practical small group teaching, simulation and OSCE-style stations. We evaluated pre- and post-course confidence and knowledge using a 10-point Likert scale and a validated assessment of knowledge.

RESULTS



The course was highly evaluated with the mean average quality and delivery rated at 4.95 out of 5. 100% of students would recommend the course to a colleague. Confidence improved in all six of the areas evaluated: end of life communication in an OSCE setting (42.2% improvement), end of life communication as a junior doctor (41.7% improvement), filling out a death certificate (43.9% improvement), knowing laws regarding advanced care and treatment withdrawal (47.2% improvement) and being able to confirm death and document clearly (43.9% improvement). All results are significant with a p-value <0.0001 on paired T-test. Likewise there was an improvement in assessment marks by 24.7% (p=0.039)

OUTCOMES AND CONCLUSIONS

"Brilliant day. Very useful skills and learning."

"Very useful - lots of material that isn't focused on much in final year."

"Great range of topics delivered in suitable manner for finalists."

Palliative care is an area in which final year medical students feel unprepared. A significant improvement in confidence and excellent feedback highlights the need for more teaching of this nature in medical schools, as well as the potential benefit of focussed teaching sessions.
The feedback we received demonstrated that palliative care is best taught via small group learning, including simulation and OSCE-style scenarios, as students prefer practical learning and value communication skills practice.

References: 1 - (Walshe et al, 1998), 2 - (Bousquet et al, 2015)

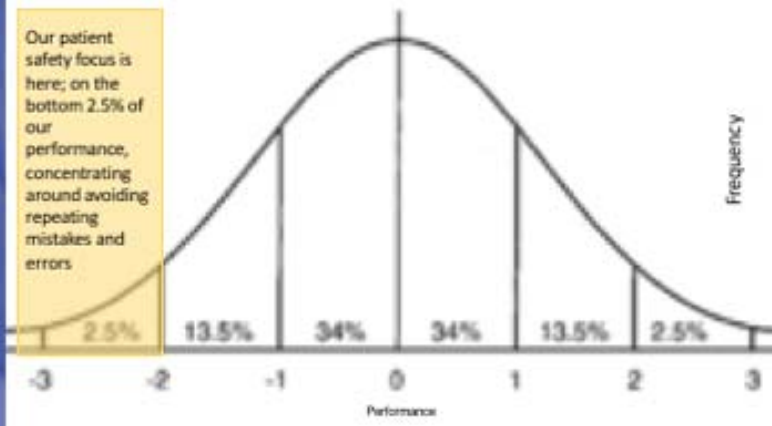
Dr Catherine Stretton, ST5 Anaesthetics, South East Scotland
NHS Education for Scotland Conference, April 2018

Learning from Excellence

CHANGING WORKPLACE CULTURE

If we can learn so much from the very worst of our performance, what could we stand to learn from the very best?

What is Learning from Excellence?



Negativity bias is pre-programmed into our brains, as an instinctive way to detect and avoid predators and risk in our earliest evolutionary times. Negativity bias is so much a part of our survival that it happens without thinking. It has permeated into all of our daily activities, even our work.

Healthcare has developed an ingrained negativity bias. We focus a huge amount of resource into learning from those times where things go wrong: Critical Incident Forms, Significant Event Analysis, Incident Reporting Forms, etc. Our professional norms (exams, appraisal, ARCP are designed to assess for minimal competence.) We spend all our time focussing on the worst part of our performance. These are valid, robust and reliable ways to make sure we achieve what we must, and to examine our errors so we don't make the same mistakes twice. But how dos this concentration on the poorest part of our performance impact on our confidence, resilience and morale at work?

What we did in NHS Fife

EDUCATE

To get started, we shared the concept of Learning from Excellence with our team. Our successful initiative started with building an enthusiastic base in our ICU. We made a huge effort to include the whole MDT, to teach them about:

- The negativity bias in the NHS and how it can make us feel demoralised, pessimistic and unmotivated about our work
- Highlighting how our patient safety systems are all concentrated around the worst 2% of our practice
- How we could stand to learn amazing things from the excellent practices of our colleagues.

NOMINATE

We then provided a simple system for colleagues to nominate each other. Our paper based system worked brilliantly. We bought a lockable post-box (for privacy) and then painted it bright gold with glitter! We put the box prominently in the centre of our ICU and provided forms for people to complete at work or at home. We kept our data collection to a minimum, so it was easy and quick for busy staff to complete. We asked: Who was excellent, What did they do, and Why was it excellent. We put posters up around our area to remind people to look for excellence during their day at work and nominate their colleagues.

FEEDBACK

We collected the nomination forms every week, and sent them, via email, verbatim, to the individual nominated. They were told what they did that was recognised, and why their behaviours made it excellent. We found it was really important that the nominated individuals received their feedback quickly. However, not everyone checks their emails regularly, and unfortunately some of our MDT colleagues don't have trust email addresses, in which case paper certificates were posted via internal mail. We kept the nomination feedback private for the recipient. Some individuals may feel uncomfortable with a public celebration of their performance, so we hoped this would avoid unintended embarrassment.

LEARN

The learning cycle is layered. Individual practitioners learn what their colleagues perceive to be excellent within their work. They continue consciously in their excellence, and apply these behaviours to other areas of their practice. After 3 months, we reviewed all of our received nominations together. We identified common themes of excellence in compassion, palliative care and team working. Others can learn from these anonymous examples of each-others excellence, spreading excellent behaviours and practices between individuals. There is the added benefit of a huge improvement in moral of the unit in which excellence nominations have been introduced.

GROW

Our experience has been shared with NHS Lothian, and resulted in Learning from Excellence systems being set up across NHS Lothian. We have also registered with www.learningfromexcellence.com and are part of their their community of practice network, providing support, assistance and advice to colleagues across the country.

We have also joined forces with our safety teams and QI team. LfE is potentially an incredibly powerful resource for improvement projects and we plan to use this system and our experience as part of a Joy in Work programme in NHS Lothian.

"The excellence nominations have made me totally reconsider how I think about work. Six months ago I was going to hand in my notice and leave nursing forever. Now, I look forward to achieving excellence for my patients everyday."

With thanks to Adrian and Emma Plunkett

Are medical students going to sea at all?

The current state of clinical teaching at a university hospital

Kevin Gervin, Jennifer MacFie, Coralie Turner, Sarah McCusker
NHS Greater Glasgow & Clyde; University of Glasgow

Background

Clinical teaching (CT) involving real patient encounters may occur within in-patient or ambulatory settings and is vital to medical education. However, its usage is apparently diminishing, with various reasons being hypothesised.

Aim

In this study, we seek to describe and evaluate medical students' current experiences of CT, at a tertiary, university hospital.

Methods

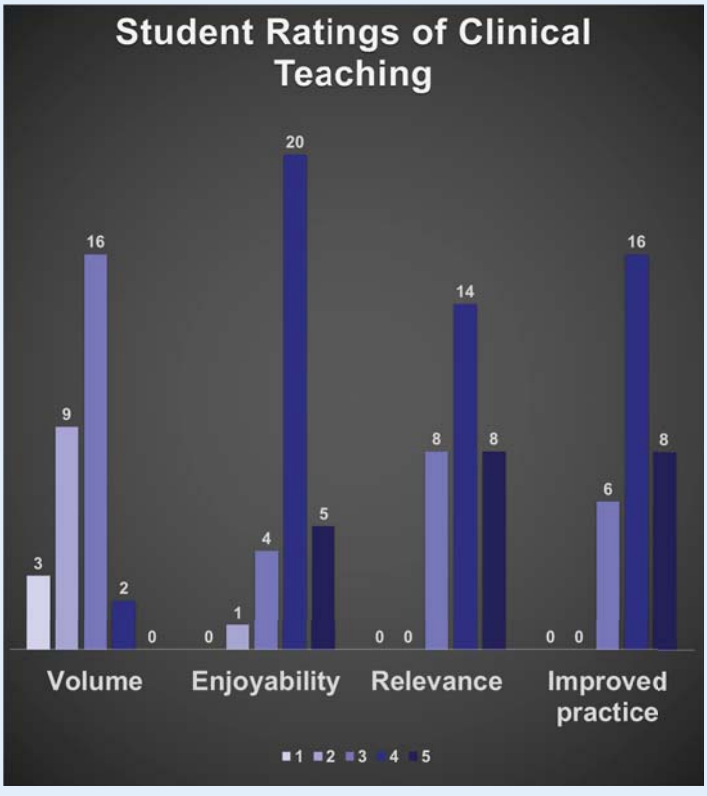
30 final phase medical students on 10-week senior general internal medicine rotation were surveyed on their experiences of CT. Questionnaires included five-point Likert-type and free-response questions. Details included approximate number of encounters, setting, grade of tutor, organisation and quality indicators including enjoyment, relevance, improvement to practice. Free-response questions enquired about most/ least useful elements and suggestions for improvement

Results

Number of sessions per student in 10 weeks:

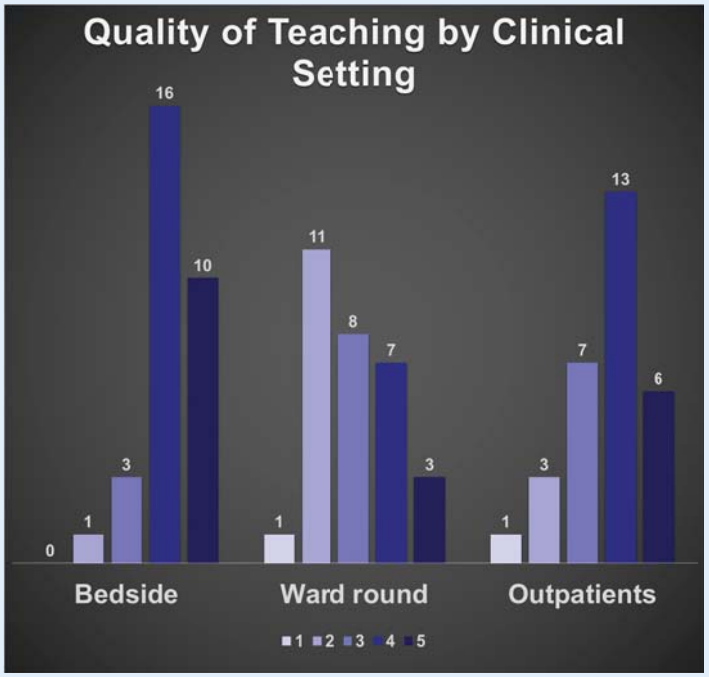
- Mean= 20.759
- Mode= 20
- Range= 8-40

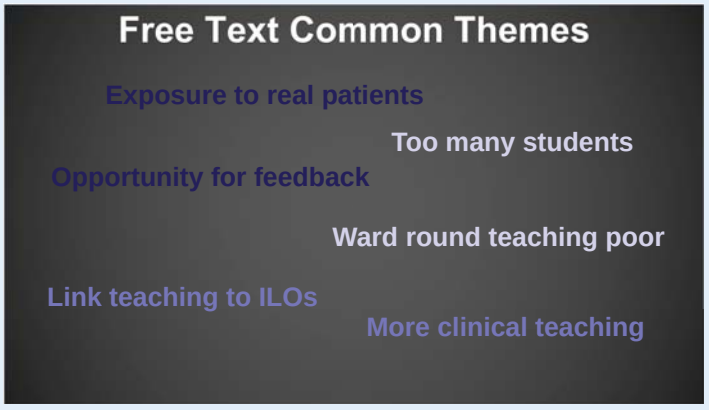
Graph 1 displays students' ratings of clinical teaching overall.
Volume is considered less than adequate (mean: 2.567; range: 1-4), but students find it enjoyable (mean: 3.967; range 2-5), relevant (mean: 4.000; range: 3-5) and believe it has improved their practice (mean:4.067; range: 3-5).



Teaching is provided by all grades from FY1 to consultant, and the number of session provided by different grades is fairly equal, (range= 22-27) only 17 students received teaching from all grades.

Graph 2 displays overall opinion of teaching by clinical setting.
Student rate teaching at the patient bedside highest (mean: 4.138; range 3-5), followed by outpatients clinic(mean: 3.667; range: 1-5). Ward round teaching is rated poorly (mean: 2.567; range: 1-5)





Conclusions

The volume of teaching in particular is concerning, with students reporting an average of only two clinical teaching sessions per week. These students are on their final general internal medicine placement. Students particularly value experience and feedback gained from CT. At our institution the quality of CT is good, without being stellar. However, students have a desire for more, better organised CT. Ward rounds in particular appear to be a missed CT opportunity.

References:
Peters M, Ten Cate O. Bedside teaching in medical education: a literature review. Perspectives on medical education. 2014 Apr 1;3(2):76-88.

An evaluation of home-based laparoscopic simulation programmes for core surgical trainees in the UK and Ireland

Blackhall, V[1,2], Cleland J[1], Moug S[4], Wilson P[3], Walker K[2]
On behalf of the Scottish Surgical Simulation Collaborative (RCSEd, RCPSG, NES)
1) Centre for Health Research and Innovation, University of Aberdeen; 2) Highland Academic Surgical Unit, Centre for Health Science, Inverness; 3) Centre for Rural Health, University of Aberdeen; 4)Department of General Surgery, Royal Alexandra Hospital, Paisley.

Highland Academic Surgical Unit

INTRODUCTION

Deliberate practice using portable laparoscopic box simulators is associated with the successful acquisition of laparoscopic skills, which are transferrable to the operating theatre (1-3). However, trainees tend not engage with practice (4-7).

This was our experience in our own attempt to incentivise frequent practice on take home simulators by trainees in the two Scottish core surgical training programmes (The Incentivised Laparoscopy Practice Study (ILPS)) (8).

The aim of ILPS was to quantify gains in laparoscopic motor skills of core surgical trainees using take home simulators. Trainees were given metric feedback on their performance (e.g. time to complete task).

The incentive was an eCertificate which was awarded on attainment of certain metric performance standards. The eCertificate was designed to cue trainers to allow the trainee access to first operator tasks in live theatre.

Similar programmes have been run with varying success elsewhere in the British Isles, including Ireland, Wessex and Bristol.

Figure 1: The eoSim take home laparoscopic simulator.

METHODS

This was a qualitative study utilising focus groups. Views were gathered from stakeholders at each of the three regions (Scotland, Ireland, Wessex, Bristol). Participants included:

- Core surgical trainees (CSTs) enrolled in home-based laparoscopic simulation programmes
- Naïve CSTs, not previously enrolled but familiar with the simulation equipment
- Consultant trainers involved in training CSTs
- The CST training programme directors
- Faculty from the original programmes

The focus groups were audio recorded, transcribed and coded. A thematic analysis was performed (9).

RESULTS

Twelve focus groups involving 63 participants were conducted (42 trainees, 21 trainers). Four main themes were identified from the data. These are discussed in turn.

Trainee motivation
Trainees are motivated to engage with activities explicitly associated with career progression, rather than tasks which they find interesting, or are associated with personal development.

Trainee: *"I'll look at a list of courses that gets scored on your CV, and tick those off, rather than go to a conference that I'm interested in"*

They prioritise tasks which score points at national selection interviews, rather than developing their technical skills.

Trainee: *"having good dexterity becomes less of a priority, because you spend time doing things that get you points"*

The structure of the surgical training scheme perpetuates this problem, supporting 'point scoring' rather than rewarding trainees for 'being good operators'.

Trainee: *"the system promotes tick boxes, rather than being a better surgeon, you have to play the game"*

Some regions mandated their simulation programme. Although this improved engagement initially, trainees disengaged once they had done the bare minimum. Mandating simulation seems to reinforce the 'tick box' culture rather than challenging it.

Trainee: *"once I'd completed it and got my certificate, I haven't gone back to it"*

Feedback
Trainees and faculty members had concerns regarding the validity of the metric feedback.

Faculty: *"they're inaccurate. And proving that they are competent? I don't think so"*

Instead of metric data, most trainees wanted individualised performance feedback from their trainers, delivered at scheduled training sessions.

Trainee: *"I like the idea that when I am doing it, someone could actually watch me and give feedback"*

Trainer involvement
Trainees highlighted a lack of realisation of an operative reward. This was partly due to a lack of trainer engagement. Trainers were apparently unaware or disinterested in the programme and described lack of confidence in delivering the necessary training.

Trainee: *"My consultant didn't care that I was doing this, it didn't translate in terms of doing more operating*

In addition, training behaviours of the trainers may be difficult to challenge. Trainers tend to work at the pace of their own training model, gradually increasing the level of the trainee's operative responsibility over time.

Trainee: "no matter how much training people did outside of theatre, when they got into theatre, every trainer just wanted to, go back to basics."

Clinical systems
Clinical systems within the surgical department limited operative opportunities in general, also challenging realisation of an operative reward.

As the most junior member of the surgical team, core surgical trainees were often drafted away from theatre to undertake ward duties.

Trainer: *"in [City x] the trainees don't get to operate because all they do is clerking in patients.*

DISCUSSION

Scheduled simulation sessions which provide trainees with the opportunity for consultant feedback may improve engagement. Promoting a shift away from a 'tick-box' culture is more challenging. This may, in part, be facilitated by the imminent introduction of the Improving Surgical Training Pilot. This will see the introduction of modified assessment structures (entrustable professional activities) which focus on the behaviour and values required for a professional activity rather than specific knowledge and skills associated with current workplace based assessments, as well as greater recognition and accountability for trainers, and recognition and funding of simulation strategies including in-house skills sessions.

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NHS Highland | University of Aberdeen | The Royal College of Surgeons of Edinburgh | Royal College of Physicians and Surgeons of Glasgow | NHS Education for Scotland

Turning the tables on student timetables: a pilot project

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Introduction

The use of smart phones has dramatically increased over the last decade within healthcare organisations and medical schools. Doctors are able to access textbooks, guidelines, medical calculators and drug formularies using their handheld device, with 85% of resident doctors reporting they used their smartphone during ward rounds for patient care[1]. Furthermore, 22% of medical students on clinical attachments use medical related apps several times a day[2]. Google Calendar is an easy-to-use, free and secure online calendar[3] accessible with free Google account.[4]

Methods

Use of a live Google Calendar was introduced for 4th year undergraduate medical students during their medicine and surgery clinical placements at University Hospital Wishaw.

The undergraduate administrator creates and maintains the calendar and grants students and educators access to view the calendar (Figure 1). Users can access the calendar on smart phones and web browsers, with e-mail alerts sent automatically with changes to the timetable.

An electronic, anonymised questionnaire was distributed by e-mail at the end of the students' placement to investigate perceived utility.
This consisted of demographic details, 5 yes/no questions and a free-text comment.

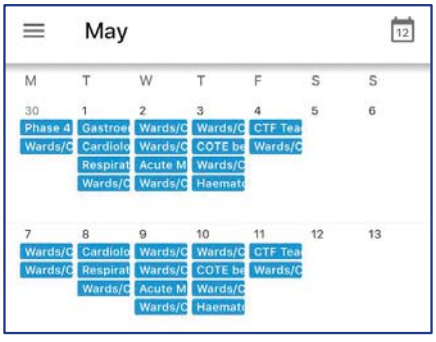

Figure 1: Google Calendar

Results

With a response rate of 80%, 67% of respondents had used a Google calendar prior to their clinical placement at University Hospital Wishaw.
83% of students preferred the live Google Calendar to a paper timetable (Figure 2) and 83% of students said they would like to have a Google Calendar for all clinical placements (Figure 3).

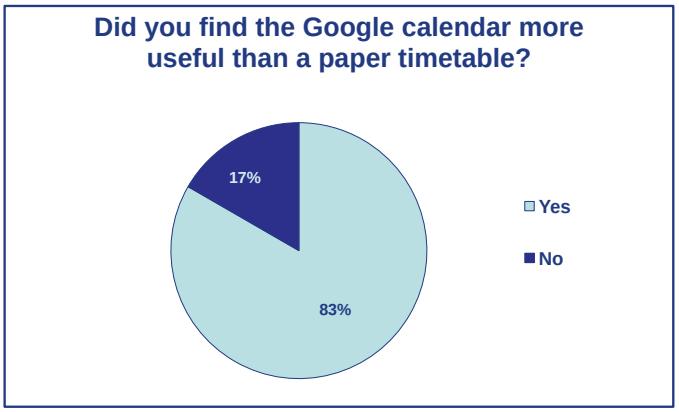

Figure 2

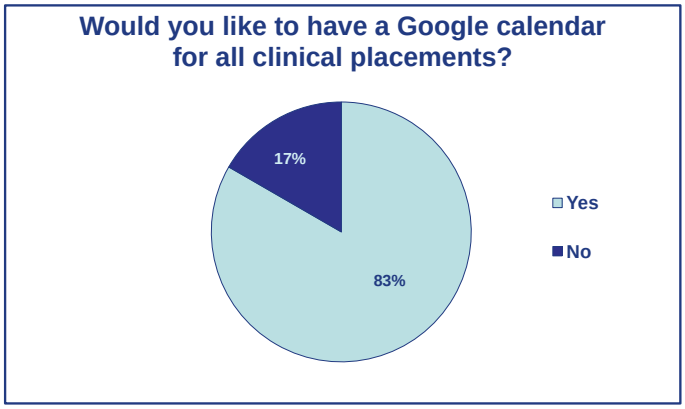

Figure 3

Anecdotally, administrative staff found that the initial investment in setup time has resulted in a more efficient and effective communication tool.

Conclusions

- The positive feedback via this study and feedback from administrative staff has resulted in the introduction of the system across all 3 hospital sites in our trust.
- 88% of students across the 3 sites preferred the Google calendar to a paper timetable.
- Further assimilation of student opinion will be complemented by input from administrative staff and estimation of time/cost saving.

References

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iViewExpert :explicating practitioner expertise in complex medical procedures, for transfer to trainees.

Amin A[1], Blackhall VI[1,2], Whiteley I[3], Wilson P[4], Walker KG[1]

on behalf of the Scottish Surgical Simulation Collaborative (RCSEd, RCPSG, NES)

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Highland Academic Surgical Unit

INTRODUCTION

As doctors become expert in a complex procedure, they develop automatic nuances of performance that are often difficult to explain to a peer or a trainee (so called 'unconscious competence[1]'). In addition, traditional methods which attempt to establish a shared understanding of decision making are associated with limitations. Whilst concurrent reporting alters the flow of the task at hand, retrospective reporting is subject to bias and often incomplete[2].

IViewExpert is a technique (validated in the aerospace domain) which externalises an expert's cognitive processes, without disrupting task flow. Similar methods have been used to study clinical reasoning of expert occupational therapists and emergency physicians.
The aim of this novel project is to assess the feasibility of adapting the technique to training technical skills in medicine.

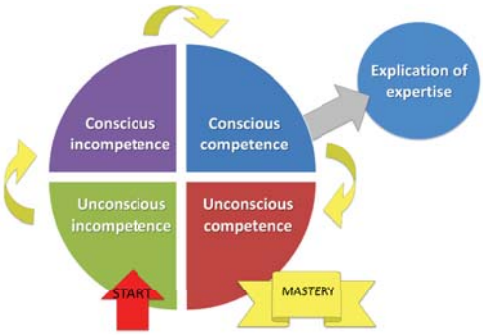

Figure 1: Peyton's learning cycle[1]. When learning a new skill, individuals are initially unaware how to perform a task. With time, they develop of awareness of how to, but are unable to execute the task. With practice, they are able to complete the task but have to think about it. Eventually, they can complete the task automatically, having achieved a state of mastery. Transfer of expertise does not occur in this final phase and 'cued recall debrief' relies on shifting the trainer to a state of conscious competence in order to explicate their cognitive processes.

METHODS

This was an observational pilot study in which expert medical practitioners wore a head mounted camera to capture complex procedures (colonoscopy, epidural insertion and laparoscopic cholecystectomy). Footage captured was reviewed along with a facilitated debrief in order to externalise cognitive processes. The debriefs were structured upon a validated narrative and undertaken by a psychologist, trained in the technique. The debriefs were recorded and formed an audio commentary. The videos and accompanying audio commentaries were edited and formed learning packages, which were watched by a group of learners. The learner group comprised junior doctors, who ranged from foundation to specialty trainees, and nurse endoscopists (endoscopy video only).

Figure 2: The iView expert team fitting and adjusting the head mounted camera pre-procedure

The technique differs from standard procedural videos in that it theoretically provides a more detailed insight into thought processes of the expert. This is facilitated through the video debrief which encourages reflection upon kinaesthetic (head movement) as well as auditory and visual cues, resulting in a higher level of experiential immersion[4].

Questionnaires examined educational value of the technique using Likert scales and free text answers. Quantitative data were presented in terms of agreement with statements. Qualitative data from free text responses were coded in order to identify key themes.

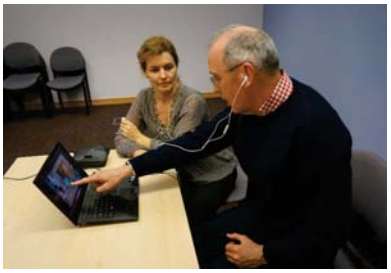

Figure 2: The debrief process. The debrief should be conducted within 24 hours of the event by a trained facilitator. Non-directive probes can be used to expand upon recall generated by auditory, visual and kinaesthetic cues.

RESULTS

A total of 15 learners watched the videos. The majority of learners (13/15; 87%) agreed that the process was a useful learning tool. The majority (13/15; 87%) also felt that the process gave useful insight into the operator's thoughts and actions.

Qualitative analysis of the free text learner responses demonstrated that the technique revealed useful and unique nuances of the procedure at study. The learners felt it provided *"better understanding of the difficult steps."*

DISCUSSION

The intervention could represent a powerful adjunct to training. Rather than generating a procedural description, it appears to elicit important subtleties of a procedure, more relevant to experienced practitioners rather than novices or beginners. Therefore, we are currently undertaking a larger study focusing on a cohort of experienced practitioners as learners.

We also wish to evaluate whether the experts who participated in the 'cued recall debrief' process found it valuable and whether there are particular environments, procedures or individuals for which this technique works best. Preliminary results show that experts found the process highly immersive and that they were able to gain insights into their own practice of which they were not previously aware. In addition, the technique appears to be best suited to non-routine, especially challenging procedures.

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Improving Clinical Reasoning in Medical Students

Jennifer Macfie[1,3], Sarah McCusker[1,3], Eilidh MacDonald[2,3], Kevin Gervin[1,3], James Boyle[2,3].

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Introduction

Clinical reasoning is the ability to think critically in order to formulate differential diagnoses and management plans[1], and is a vital component of clinical competence. Clinical reasoning in medical students can be developed through targeted teaching sessions.

Durning et al developed and validated post clinical encounter forms (PEF) to assess clinical reasoning ability in the Objective Structured Clinical Examination (OSCE) setting[2].

We introduced the PEF across 2 Glasgow teaching hospitals as a means to assess clinical reasoning in undergraduate medical students. We hypothesised that our structured teaching format would improve clinical reasoning abilities, evaluated using Durning's PEF.

Aim

We aimed to demonstrate that clinical reasoning skills can be improved in third year medical students through participation in our structured teaching days. We hypothesise that our design for teaching will confer improvement in mean PEF score, suggesting overall improvement in clinical reasoning ability.

Method

271 pre-clinical third year medical students attended for 3 full-day clinical reasoning sessions across 2 hospital sites. Each session focused on 2 body systems (Fig 1).

Fig 1	System taught
Session 1	Respiratory & rheumatology
Session 2	Cardiology & neurology
Session 3	Endocrinology & gastroenterology

Teaching for each system teaching included:

•Introductory examination video and discussion

•2 hours bedside teaching

•Discussion of findings facilitated by the SNAPPS method[3]

•Class brainstorm of differential diagnoses, illness script formulation and investigation and management plan generation

Assessment of clinical reasoning

Clinical reasoning abilities were assessed by students completing a PEF based on the same system-relevant clinical case, pre and post-teaching.

Forms were marked by faculty based on pre-determined correct answers, and mean scores calculated. Scores were documented for each student, facilitated using student ID number, for each system. Data was also collected regarding gender and previous degree status.

Effectiveness was evaluated by comparing pre- and post-session analysis, and calculation of mean improvement in score for each system.

Results

271 students were included, having attended minimum of one teaching session. In total we has 139 female students and 94 males.

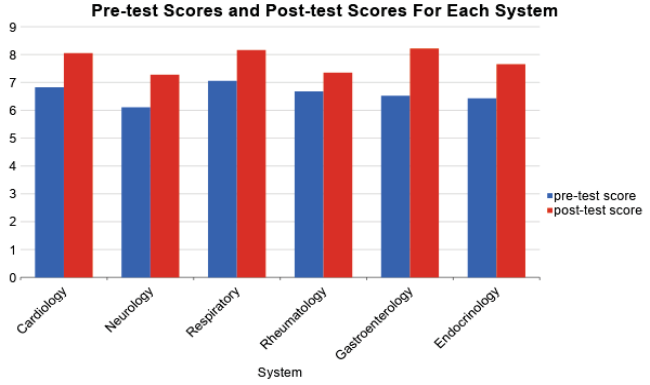
Students without both pre- and post- scores were discounted from analysis.

Analysis using a paired students' t test showed p=<0.0001 for the pre and post testing of each body system.

Fig 2: pre-test and post-test scores and standard deviations for each system

System	Pre-test Mean Score	Pre-test Standard Deviation	Post-test Mean Score	Post-test Standard Deviation
Cardiology	6.83	1.87	8.05	1.23
Neurology	6.11	1.56	7.82	1.55
Respiratory	7.06	1.97	8.16	1.46
Rheumatology	6.68	2.35	7.35	1.96
Gastroenterology	6.52	2.20	8.22	1.25
Endocrinology	6.43	2.24	7.66	1.46

Fig 3: graph showing improvement between pre-test and post-test scores



Conclusions

Using PEF we demonstrated an improvement in clinical reasoning following our structured teaching sessions.

This demonstrates that students' clinical reasoning skills can be developed by using a structured teaching program aimed at development of such skills.

Teaching techniques used could be easily integrated into a variety of undergraduate teaching to improve clinical reasoning for future teaching sessions.

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GOing PROfessional

Using point-of-view filming to facilitate preparation for practice in final year medical students

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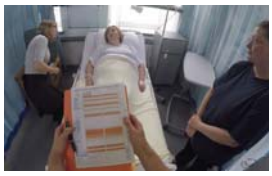
The School of Medicine, Medical Sciences and Nutrition, University of Aberdeen AB25 2ZD

UNIVERSITY OF ABERDEEN

Introduction

First person, or point-of-view (POV), filming is well established in the social sciences, however, few reports exist regarding POV video applications in medical education. We describe how POV filming was used to deliver an *en masse* ward simulation exercise for final year medical students as a means of preparation for practice.



Methods

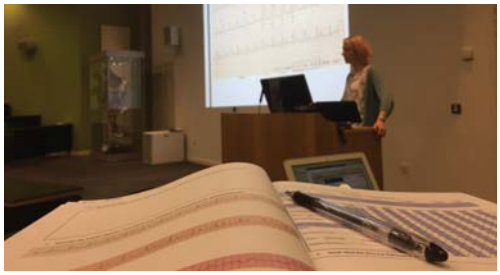
We designed scenarios around the traditional ward round where a member of staff, assuming the role of a Foundation doctor, wore a GoPro camera. Faculty portrayed patients and other members of the clinical team. We devised a workbook and accompanying PowerPoint presentation in conjunction with the scenarios, and students were encouraged to perform tasks in real-time in relation to the videos.

Topics included:

- Handover
- Documenting a ward round
- Writing discharge letters
- Prescribing
- Interpreting X-rays and ECGs
- Making treatment decisions
- Dealing with interruptions
- Responding to emergencies

Examples of model answers were incorporated with pauses for discussion of important issues and reinforcement of salient learning points.

The interactive lecture lasted two hours and was delivered to all final year students at the University of Aberdeen.



Discussion

The session received overwhelmingly positive feedback in terms of **enjoyment**, **interactivity** and **utility**. Students felt it was a good introduction to subsequent in-situ ward simulation exercises and prepared them for the transition to student assistantships.

Many commented that it gave them newfound insight into the responsibility and pressures experienced by foundation doctors.

Conclusions

- POV filming can facilitate immersive and reproducible educational experiences for large cohorts of students.
- Requires less time and resource than traditional small group simulation.
- Guarantees equity of educational experience.

- We propose that this concept could be applied to many areas of medical education to achieve:
  - close-up, purposeful observation of practical procedures e.g. surgical or endoscopic techniques
  - team-briefing and debriefing
  - critical incident drills

Student feedback identified appetite for a similar POV session observing the assessment and management of an acutely unwell patient. The development of an online learning package for this is currently in progress.

Publication:
Thomson FC, Morrison I, Watson WA 'Going Professional': using point-of-view filming to facilitate preparation for practice in final year medical students. *BMJ Simulation and Technology Enhanced Learning* Published Online First: 30 June 2017. doi:10.1136/bmjstel-2017-000224

Full article available at: http://stel.bmj.com/content/early/2017/06/30/bmjstel-2017-000224

Sharing learning from adverse incidents and excellence in the neonatal intensive care unit.

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Glasgow

Introduction

Care within the NHS must be safe, effective and patient focussed. Robust governance process requires that adverse incidents are identified, reported and reviewed through significant clinical incident (SCI) reviews. SCI reviews should identify learning outcomes to help reduce the risk of such incidents recurring. It has been recognised that learning outcomes from neonatal SCI reviews are not consistently shared with staff. Furthermore, there is often inadequate evidence of lessons learned or effective change implemented following incidents (1).

The concept of "Learning from Excellence" is becoming more recognised in healthcare, providing new opportunities for learning and also improving staff morale and resilience (2). Indeed, research suggests that learning is improved through positive reinforcement (i.e. through emphasising good outcomes) when compared with negative reinforcement (i.e. focussing on failures) (3).

We developed bulletins for staff members outlining the learning points from SCI reviews. We hypothesised that these would improve knowledge of lessons learned from clinical incidents. We, in addition, developed bulletins highlighting areas of excellent clinical care. We hypothesised that staff members would gain educational benefits from these as well as improving staff morale.

Aims

1. To address the challenges of effectively disseminating learning outcomes from neonatal significant clinical incidents (SCIs) through *"Lessons Learned"* bulletins, while avoiding possible detrimental effects on staff morale.

2. To use examples of excellent clinical care through *"Learning From Excellence"* bulletins as an aid to learning within our unit

Methods

"*Lessons Learned*" incident feedback bulletins and "*Learning from Excellence*" bulletins were developed each time learning points emerged from SCI reports or from good neonatal practice. The bulletins were disseminated electronically to all neonatal medical and nursing staff and were displayed on the unit on a dedicated neonatal governance board.

We carried out a survey of neonatal staff to assess the impact of the bulletins. Bulletins were rated on a scale of 1-5 (with 1=very unhelpful, 5=very helpful.) We assessed the effectiveness of the bulletins on clinical practice and staff morale.

Results

To date, 11 *'Lessons Learned'* incident feedback bulletins and 5 *'Learning from Excellence'* bulletins have been produced and disseminated. 8 neonatal staff (medical and nursing) responded to our survey as follows:

1.On a scale of 1-5 (1 = very unhelpful, 3 = neutral, 5 = very helpful) how helpful to you find the *'Learning Together'* bulletins?

100% of responders rated this as 4 (helpful) or 5 (very helpful).

2. On a scale of 1-5 (1 = very unhelpful, 3 = neutral, 5 = very helpful) how helpful to you find the *'Learning from Excellence'* bulletins?

100% of responders rated this as 5 (very helpful).

3. Have you been made adequately aware of these bulletins?

83% stated 'Yes'

Results (continued)

4. Are the bulletins are likely to improve your clinical practice?

100% stated 'Yes'.

5. Do you feel the bulletins have a positive, neutral or negative effect on staff morale?

75% stated 'positive', 25% stated 'neutral'.

Figure 1: An example of a *"Learning From Excellence"* bulletin.

Figure 2: An example of a *"Lessons Learned"* bulletin.

Conclusion

Succinct electronic feedback bulletins are an effective way of highlighting important learning outcomes from neonatal SCIs. Combining these with learning bulletins from good clinical practice may help to convey learning points while improving staff morale. These bulletins have been well received by staff members within our neonatal unit.

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Collaborative-cooperative Learning: Improving Medical Student Satisfaction and Learning

Sarah McCusker[1,2], Coralie Turner[1,2], Kevin Gervin[1,2], Jennifer Macfie[1,2]

1 Department of Medical Education, Queen Elizabeth university Hospital, Glasgow;
2 Undergraduate medical school, University of Glasgow

Introduction

Collaborative and cooperative learning techniques independently demonstrate active learning benefits. These include self-directed learning , improved knowledge acquisition and retention, with enhancement of learners' problem-solving and professional skills[1].

Although ubiquitous and popular, lectures have limitations, with attention decreasing precipitously beyond 20-minutes[2].

Glomerulonephritides and haematological malignancies are topics medical students frequently cite difficult to comprehend[3].

Aim

We sought to evaluate if combined collaborative-cooperative (CC) format is superior to lecture format for teaching these topics to medical students, evaluated by acceptability and effectiveness.

Methods

Randomised, crossover-control quasi-experimental design was applied to convenience sampled final-phase medical students (n=48), on general medicine placement. On two consecutive weeks, students attended an initial parent specialty principles lecture. Post-lecture, students separated into pre-randomised groups experiencing a single format. In the second week, groups crossed-over formats (Fig 1).

Fig. 1	Week 1: Haematological malignancies	Week 2: Glomerulonephritides
Lecture	Group A	Group B
Collaborative-cooperative	Group B	Group A

Intended learning outcomes were identical and explained simultaneously between formats.

CC students were allowed one-hour presentation creation time in groups of 3-4, on one predetermined disease, using standardised templates. The groups returned to share presentations with their cohort. Faculty attended CC presentations to trouble-shoot.

Acceptability of CC was evaluated via anonymised questionnaires consisting of:
- Likert scale
- Multiple selection
- Free-text

Effectiveness was evaluated via extended matching question (EMQ) performance in a mock exam. Results were analysed using descriptive statistics.

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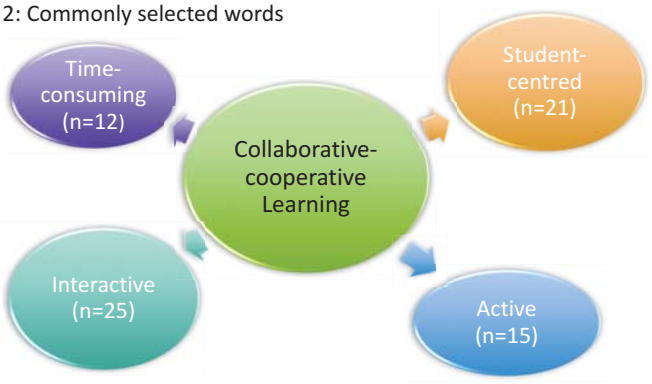
Results

Student Feedback

31 (65%) students provided feedback on CC format
→ Group A (n= 17) Group B (n= 14)

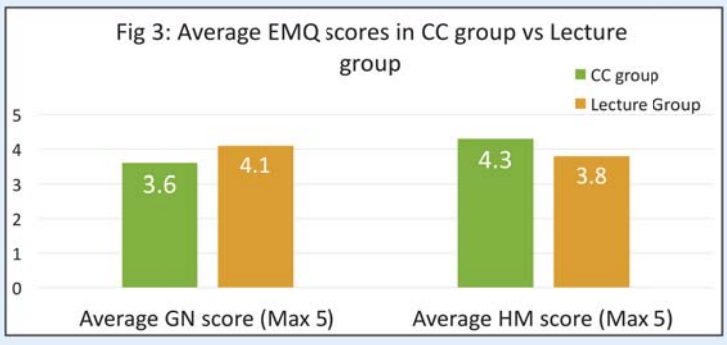
- CC was largely viewed as acceptable (21 agreed/strongly agreed)
- 77% found CC more intellectually stimulating (24 agreed/strongly agreed)
- 77% (24) trust faculty lectures more
- 48% wish CC for other topics (endocrinology/autoimmunology most cited)
- Most commonly selected words are shown in figure 2

Fig. 2: Commonly selected words



EMQ results

36 (75%) students completed EMQs
→ There was no consistent improved EMQ scoring for CC compared to lecture format (Fig 3).



Conclusions

Responses indicate that collaborative-cooperative learning is:

- viewed as an acceptable learning method
- more intellectually stimulating than lectures

However, CC is not necessarily advantageous to knowledge retention for these topics; possibly due to distrust in CC format and peer exactitude. We demonstrated no consistent improved EMQ performance for CC students, compared to lecture format. Although students recognise the potential benefits of CC, familiarity and trust in this format needs development.

Getting the most out of clinical placements

Enabling self-directed learning to medical students in Trauma and Orthopaedics

Authors: Jamie A Nicholson, Avinesh Chelliah and Gavin Brown

Aim:

- Recent updates to the undergraduate Trauma and Orthopaedic module has improved student feedback through interactive tutorials whilst on placement and revised learning outcomes
- Students are assigned a consultant tutor to encourage a team based approach and continuity, however, the clinical attachment still receives mixed feedback
- Given the specialisation of most consultant Orthopaedic surgeons, students occasionally report a lack of varied exposure to Orthopaedic practice and some repetition in their placement as a common criticism

Methods:

New solutions were considered in order to build flexibility, variation and autonomy to the clinical placement which included the following;

- *A co-tutor consultant ensuring pairing of teams with a complementary mix of specialist interests*
- *A student led sign up system (NHS Lothian 'TUBS') offering additional opportunities to a range of clinics, theatres, on call emergency sessions and multi-disciplinary team involvement*
- *A clinical work book based on learning objectives for the block based on the different clinical environments whilst on placement*

Student views were gathered before and after the above interventions

Results:

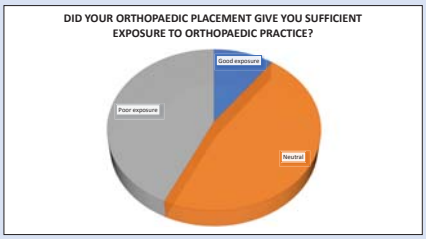
Baseline pre-intervention - First rotation of students in academic year n=30

Did your orthopaedic placement give you sufficient exposure to Orthopaedic practice?

- 10% thought they had good exposure to a wide range of Orthopaedic practice
- 47% neutral and **43% thought the exposure was poor**

Do you think a clinical work book would add value to your clinical placement?

- 94% of students thought a clinical work book would be of use.



Post intervention - Two consecutive rotations of students n=60

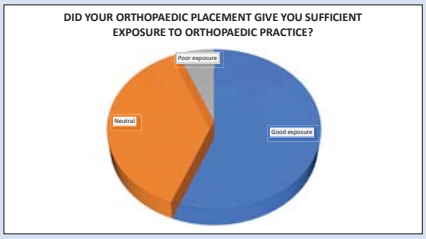
- 56% thought they had good exposure to a wide range of orthopaedic specialities
- 38% were neutral and **6 % thought the exposure was poor**

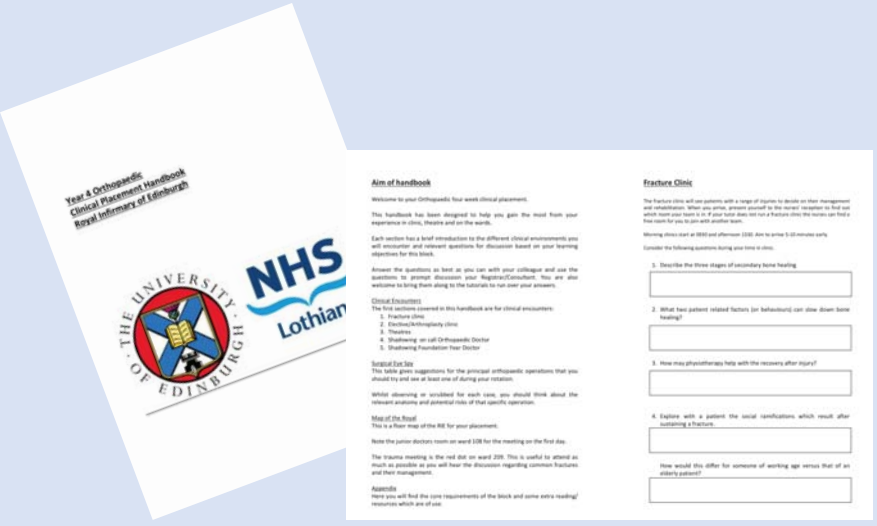
Use of Orthopaedic co-tutor and additional sign up sessions

- Overall 63% of the students used their co-tutor more than 5 days out of the placement
- 40% of students used the optional sign up sessions.

Clinical work book

- 85% of students thought the clinical work book complemented their clinical placement
- 100% thought that it helped to guide the expected depth of knowledge.





Clinical Work Book provided to students

Discussion and Conclusions:

- We have moved away from didactic teaching with a flipped classroom approach to the formal clinical teaching delivered whilst on placement
- Providing students with more autonomy and extra self-directed learning opportunities for their clinical placement improved student satisfaction
- Such strategies maybe employed in other surgical specialties to allow for the increasing specialisation of tutors and to optimise time spent on placement

This study was carried out by NHS Lothian Clinical Teaching Fellows

Edinburgh Trauma and Orthopaedics

THE UNIVERSITY OF EDINBURGH NHS Lothian

MED education safety quality
Medical Education Directorate

Balint groups for Medicine of the Elderly trainees in South East Scotland: data from a pilot scheme

Dr Jennie Higgs Clinical Teaching Fellow, Medical Education Directorate NHS Lothian
Dr Imogen BJ Smith ST6 Geriatrics and GIM, South East Scotland

Introduction

Balint groups are case based discussion groups which place particular emphasis on the doctor-patient relationship[1]. Participation in Balint groups helps doctors to understand and reflect on the relational aspects of patient care which can allow doctors to process difficult interactions with patients. There is increasing interest in the effect this may have on stress and resilience.

Balint groups are commonly used in psychiatry and general practice. Interest in their use in foundation training and undergraduate medical education is growing[2]. To the authors' knowledge, there has been no experience of using Balint groups in other specialties in South East Scotland. Medicine of the elderly trainees must provide evidence of reflection in their training portfolio as per Good Medical Practice guidelines. The authors were interested in whether Balint groups would be useful and provide valuable space for reflection.

Structure of a Balint group
8-12 participants with 1 or 2 facilitators.

Case presentation: 5-10 minutes, without notes or preparation on a case that has been on the presenter's mind for any reason

Questions of fact: 5 minutes for other group members to ask factual or clarifying questions

Group discussion: 30 minutes for discussion of the case (the person who presented does not take part in this, instead they sit back and listen)

Presenter is invited back into the discussion: 5-10 minutes, no pressure for the presenter to contribute but they may wish to comment on the discussion or answer questions

Group ends on time; the facilitator guides the structure and discussion but does not attempt to find solutions or tie up loose ends. Confidentiality and respect of all members' opinions is vital.

Methods

In December 2017 23 Geriatrics trainees were invited to attend a Balint group at a regional training day. Two groups were run consecutively with the same facilitator with 12 and 11 participants respectively. Due to positive feedback, in March 2018 the groups were repeated at another regional training day with 24 trainees attending. Of these, 5 were attending for the first time. Again, two groups were run consecutively with 8 and 16 participants respectively. None of the participants had attended a Balint group prior to the training days. The groups were facilitated by a Clinical Teaching Fellow who has completed Core Psychiatry Training, has personal experience of Balint groups, and has attended Balint Society training.

Data were collected on the trainees' perceptions of reflective practice, their expectations prior to attending their first group, subsequent experience in the group, willingness to attend further groups and perceptions on the potential impact that attending Balint groups regularly may have. A mixture of qualitative and quantitative data were collected. Qualitative data were examined for themes. At the first training day feedback data was obtained from all 23 participants. At the second training day feedback data was obtained from 19 participants.

References: 1. A very short introduction to Balint groups. John Salinsky 2009. Balint Society UK https://balint.co.uk/about/introduction/
2. How to encourage reflection on the doctor patient relationship. BMJ 2015; 351

All agreed that it is important for doctors to reflect on their clinical decisions

All but one agreed that it is important for doctors to reflect on the emotional aspects of their work

All but one agreed that reflecting through conversations with colleagues is more helpful than reflecting alone

Only 54% agreed that they had time to reflect in their current role

Results

Data for the scale questions are shown above, all other questions used free text boxes. Responses to the question "What were your expectations prior to attending?" ranged from scepticism to open mindedness. Responses to the question "What did you like/find useful about the group?" were analysed for themes. For the first question these themes were: environment/setting, shared experience/peer support, different perspectives and challenging cases. The summary of these themes is shown below, the responses were overwhelmingly positive. There were fewer comments in answer to the question "What did you dislike/find unhelpful about the group?". Participants commented that the group may be too large, that some members dominated the discussion and that there was insufficient time to cover a variety of cases. One participant stated that they did not tend to find reflection helpful.

In the original group 21 out of 23 stated that would like to attend further Balint groups. At the second training day all 19 respondents stated that they thought Balint groups should be continued as part of regional training days. Some participants also stated that they would attend Balint groups outside of regional training days but cited work commitments and time pressure as potential barriers. Participants were asked to comment on the potential impact of attending regular Balint groups. Themes emerged which were: peer support, ability to reflect, ability to manage challenging cases and emotional wellbeing. All comments were noted to be very positive.

Conclusion

This pilot study has demonstrated clear interest from trainees in using Balint groups to aid reflective practice as part of their regional training days. Feedback has been overwhelmingly positive and we therefore plan to run further sessions over the coming months with the same cohort.

E-mail for Rapid Prescribing Error Feedback

Authors: Mr Anthony Carson, Mrs Sarah Connelly, Dr Fiona Farquhar, Dr Ilona Shiliday (NHS Lanarkshire)

NHS Lanarkshire

Background

- Prescribing errors in hospital are common and contribute to patient harm
- Previously published work has demonstrated that e-mails are an acceptable method of providing timely feedback and that visual aids can enhance safety behaviours

Aim

- Utilise feedback e-mails with images of note extracts as a learning opportunity for prescribers in medical receiving

Methods

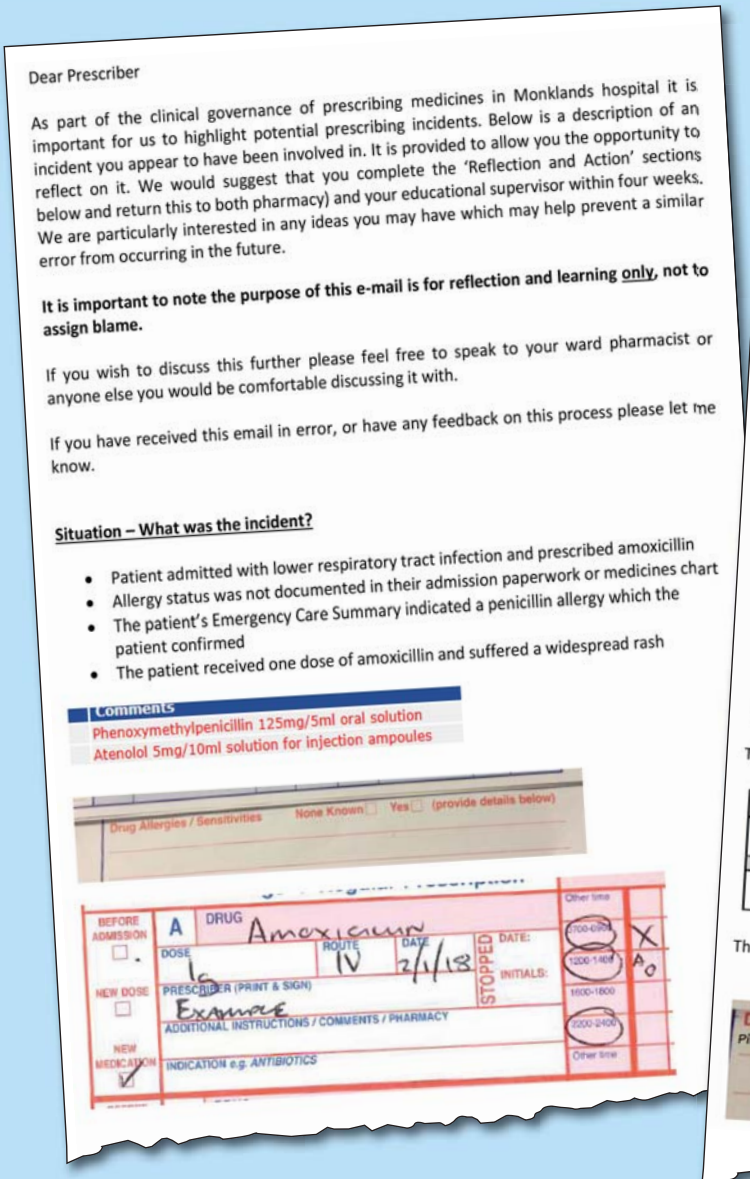
1. In the event of an error sufficient details were collected and images of relevant extracts taken from the patient's notes
2. A standardised e-mail was dispatched to the prescriber and their educational supervisor. This described the nature of the error, highlighted relevant extracts and suggested how such errors could be avoided
3. The prescriber was asked to provide a reflection and an action plan to prevent future errors

Outcomes/results

- Datix reports regarding medication errors had a modest reduction (12.3/month to 10.5/month, P=0.2)
- 66 e-mails have been dispatched in the last year with a 41% response rate
- Insulin errors were most common
- Most occurred in the ST grade followed by FY1s then GP trainees

Conclusions

- A small reduction in error rates was noted
- Engagement with the process could be improved
- Troublingly, insulin was the most common medicine involved which is a significant patient safety concern designated a 'never event'
- A range of training grades were involved suggesting this is not simply an issue of experience.
- Further work is required to continue to reduce the rate of errors, improve engagement and gather data for project evaluation



Dear Prescriber

As part of the clinical governance of prescribing medicines in Monklands hospital it is important for us to highlight potential prescribing incidents. Below is a description of an incident you appear to have been involved in. It is provided to allow you the opportunity to reflect on it. We would suggest that you complete the 'Reflection and Action' sections below and return this to both pharmacy) and your educational supervisor within four weeks. We are particularly interested in any ideas you may have which may help prevent a similar error from occurring in the future.

It is important to note the purpose of this e-mail is for reflection and learning only, not to assign blame.

If you wish to discuss this further please feel free to speak to your ward pharmacist or anyone else you would be comfortable discussing it with.

If you have received this email in error, or have any feedback on this process please let me know.

Situation – What was the incident?

- Patient admitted with lower respiratory tract infection and prescribed amoxicillin
- Allergy status was not documented in their admission paperwork or medicines chart
- The patient's Emergency Care Summary indicated a penicillin allergy which the patient confirmed
- The patient received one dose of amoxicillin and suffered a widespread rash

Comments
Phenoxymethylpenicillin 125mg/5ml oral solution
Atenolol 5mg/10ml solution for injection ampoules

Drug Allergies / Sensitivities None Known Yes (provide details below)

BEFORE ADMISSION A DRUG Amoxicillin
DOSE 1g ROUTE IV DATE 2/1/18 STOPPED DATE: INITIALS:
NEW DOSE PRESCRIBER (PRINT & SIGN) Example
ADDITIONAL INSTRUCTIONS / COMMENTS / PHARMACY
NEW MEDICATION INDICATION e.g. ANTIBIOTICS

Reflection – Staff self reflection on situation

This patient was admitted on a busy weekend nightshift and, unfortunately, I appear not to have noted their penicillin allergy. This could have been a more significant reaction and should not have occurred. I have reviewed the process for taking a medication history as described and will ensure I take the time to do this in future.

Action – What can be done to help prevent this in the future?

Such incidents could be summarised and shared with other trainee prescribers to allow for everyone to learn from an individual's mistakes – particularly if this occurs in a supportive culture.

Suggestions

- Accurate medicines reconciliation is an important step in the clerking in of a patient to ensure a safe admission to hospital. Please use two sources when confirm a patient's medicines and allergy status. We would suggest use of the printable Emergency Care Summary:

Allergy Description	Date Recorded	Comments
H/O: drug allergy	25-Jun-2015	Piroxicam 0.5% gel
H/O: drug allergy	24-Feb-2015	Nitrofurantoin 50mg capsules
Beta blocker contraindicated	28-Feb-2007	_CONVERTED DRUG
Anticoagulation contraindicat	06-Feb-2006	_CONVERTED DRUG
Beta blocker contraindicated	12-Dec-2005	_CONVERTED DRUG

These should be recorded in detail in the allergy box i.e:

Known drug allergies? Yes No
Enter details below:
Piroxicam (unknown reaction), nitrofurantion (rash), beta-blocker (collapse), anticoagulation (previous ICH)
Known non-drug allergies? Yes No

These should be recorded in the allergy tab on the patient's Kx:

Drug Allergies / Sensitivities None Known Yes ✓ (provide details bel
Piroxicam (unknown reaction), nitrofurantoin (rash), beta-blockers (collapse), anticoagulation (previous ICH)

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Clinical years student perceptions of the use of Durning's "post encounter form" as a formative assessment during inpatient clinical reasoning days

Elizabeth Cosgrove[1,2], Coralie Turner[2,3], Colin Hall[2,3], Eilidh MacDonald[1,2], James Boyle[1,2].

1 Department of Medical Education; Glasgow Royal Infirmary; 2 Undergraduate Medical School, University of Glasgow; 3 Department of Medical Education, Queen Elizabeth University Hospital

Aim

Durning et al (2012) developed and validated the post encounter form (PEF) as a tool to evaluate the clinical reasoning skills of pre-clinical students in the diagnosis of diabetes mellitus in the outpatient setting.

The PEF was introduced at two Glasgow teaching hospitals to assess any improvement in clinical reasoning skills in undergraduate medical students in their clinical years after 3 inpatient clinical reasoning days. This included a structured debrief of a targeted patient encounter using the SNAPPS framework, brainstorming the presentation with guided concept maps with a high degree of directness, illness script generation and completion of compare and contrast grids. This work aimed to assess student response to the use of the PEF.

Methods

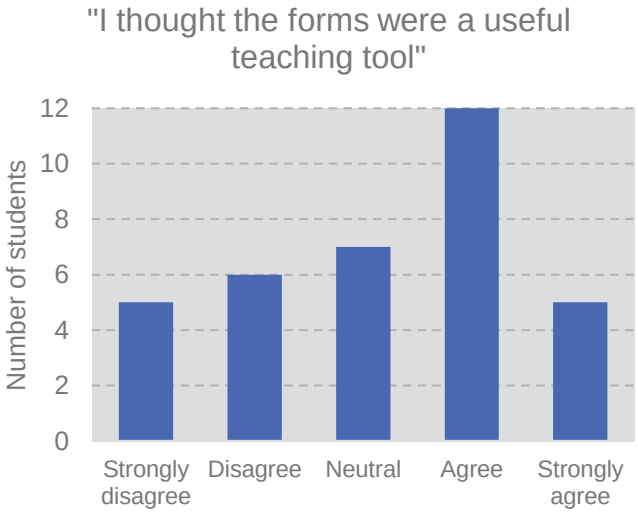
- Students attended 3 inpatient clinical reasoning days, each focusing on two different body systems, over twelve weeks.
- They completed four PEFs at the beginning and end of each day based on fictitious clinical cases related to the day's themes.
- We assessed student response to the use of the PEFs as a means of formative assessment by means of an electronic student evaluation form using YACRS software and a five-item Likert scale two months after the end of teaching.

References

Durning, S., Artino, A., Boulet, J., La Rochelle, J., Van Der Vleuten, C., Arze, B. and Schuwirth, L. (2012) The feasibility and validity of a post-encounter form for evaluating clinical reasoning. *Medical Teacher* 34(1), pp30-37.

Results

While the PEF has been validated to evaluate clinical reasoning skills, we aimed to ascertain whether undergraduate medical students find it to be a useful and acceptable method of formative assessment. With the use of YACRS software we asked the students 12 separate questions relating to their perceptions of the usefulness and acceptability of the PEF. We received between 31-38 student evaluations per question on a Likert scale as per the chart below. This feedback was largely positive and suggested an acceptability of the form. Gaining the student evaluations in this way proved challenging, perhaps given that there was a period of two months between the last clinical reasoning day and the day that feedback was collected.



Conclusion

- It is important to use methods of teaching and assessment that are acceptable to students.
- Our work shows that this form is acceptable to clinical students as a form of formative assessment on hospital placement.
- Further work is required to assess the role of the PEF in other teaching settings.

Promoting resilience skills in remote and rural medical students

Dr Jennifer McGowan [1], Dr Alicia Garland[2]
University of Aberdeen[1], NHS Highland[2]

Introduction

The GMC recommends medical schools introduce regular resilience training for medical students[1]. Resilience is described as the ability to adapt to change and respond in a positive way to stressful situations.

By enabling medical students to cope with stress in medical school, they will be better equipped to cope with the working environment, particularly with the challenges facing rural medical practitioners[2].

Aims

Our aim was to provide an opportunity to build skills in resilience during a weekend of social activities for a group of rural medical students.

Methods

15 students and 5 faculty members (figure 1) from the University of Aberdeen Remote and Rural programme participated in a weekend of activities in Findhorn on the Moray coast (figure 2).

Figure 1. Staff and students of the remote and rural programme 2018

Figure 2. Findhorn, Moray

These students are based in the Highlands for one year and have several placements in remote and rural areas. The students opted to attend the 2.5 day residential retreat. Over a weekend various activities were planned to encourage the group of students and staff to bond and to promote skills in resilience, as seen in Fig. 3.

By incorporating resilience skills as part of social and clinical activities in a relaxed environment, students were able to actively participate in enjoyable events while being exposed to techniques which may be beneficial in their future careers to prevent professional burnout.

Fig. 3. Resilience activities

"School sports day":
To promote healthy activities for personal wellbeing

Small group sessions:
To encourage reflection
To build relationships with faculty

Pre-hospital care scenarios:
To apply clinical skills and knowledge
Teamwork

Problem solving activities:
Peer communication
Peer support

Conclusion

Resilience training is essential for medical students to enable them to develop coping skills for their future medical careers. This is particularly important with the challenges faced by practitioners in the remote and rural setting. This weekend fieldtrip is an example of promoting skills in resilience in an enjoyable and social setting.

References:
GMC Supporting vulnerable doctors action plan http://www.gmc-uk.org/Supporting_vulnerable_doctors___action_plan_FINAL.pdf_66514193.pdf
Longenecker. R, Zink. T and Florence. J. 2012. Teaching and Learning Resilience: Building Adaptive Capacity for Rural Practice. A report and subsequent analysis of a workshop conducted at the rural medical educators conference. *The Journal of Rural Health*. 28 pp122-127.

Hot Debriefs Following Cardiac Arrests

Dr S McCarthy & Dr F Burton
Emergency Department, Hairmyres University Hospital

AIM:
Does 'hot debriefing' following cardiac arrests provide a valuable learning opportunity for staff members, improve staff morale, and is patient care improved as a result?

Background:

Debriefing is a discussion of actions and thought processes after an event to promote reflective learning and improve clinical performance[1], and has been shown to provide a multitude of benefits including higher staff satisfaction, reduced stress and improved clinical performance[2] when conducted in a medical setting.

Although intermittent informal debriefs were occurring throughout Hairmyres Emergency Department there were no formal debriefs or guidance on how and went to perform these.
It was therefore decided to introduce formal debriefing following cardiac arrests and evaluate the benefit that the debriefing process would bring to the department.

Methods:

To gain further understanding of debriefing in a medical setting, its benefits and challenges, online literature was reviewed and other Scottish Emergency Departments were contacted for an insight into their use of debriefing.

Following this a 'Debriefing Tool' was made (Figure 1) and introduced to the department via email, teaching sessions, weekly team brief and discussed at team handovers.

Figure 1:
Cardiac Arrest Debriefing Tool

Adapted from DISCERN Tool[2]
Mullan, P.C., Wuestner, E., and Kerr

- 3 month evaluation period, aiming to complete hot debriefs for every cardiac arrest within Hairmyres Emergency Department during this period
- Debriefing tools were reviewed on a weekly basis to assess for any points requiring immediate action
- Staff received a 'Staff Satisfaction Survey' following participation in a debrief to ensure all staff members felt comfortable participating and to ascertain whether hot debriefing was being found to be helpful
- 'Spot Awareness Survey' was conducted mid way through the evaluation period to ensure staff understanding of ongoing debriefing, and re-advertisement following this
- Following the conclusion of the 3 month study period staff were invited to participate in an online survey to express their opinions on 'hot debriefing'
- Assessment of the debriefing tool itself was also attempted by putting a rating scale on the back of the debriefing tool for the debrief leader to complete

Figure 2: Selection of positive comments from debriefing tool

Results:

- Over the 3 month monitoring period 10 hot debriefs were conducted (59% completion rate)
- 94% of staff surveyed agree/strongly agree that hot debriefs allowed the team to highlight things that were being done well
- 95% of staff felt that 'hot debriefing' drew attention to area of practice that required improvement
- 89% of surveyed staff thought 'hot debriefing' improved patient care
- 79% agreed that staff moral was improved as a result of debriefing
- 95% felt 'hot debriefs' provided a valuable learning opportunity
- 100% of staff surveyed felt that 'hot debriefs' in the emergency department should continue
- The Likert scale to review the debriefing tool itself was only completed on 4 occasions, with leaders either agreeing or strongly agreeing that the tool was useful for leading the debrief, and 89% of participating staff feeling the tool helped to facilitate discussion

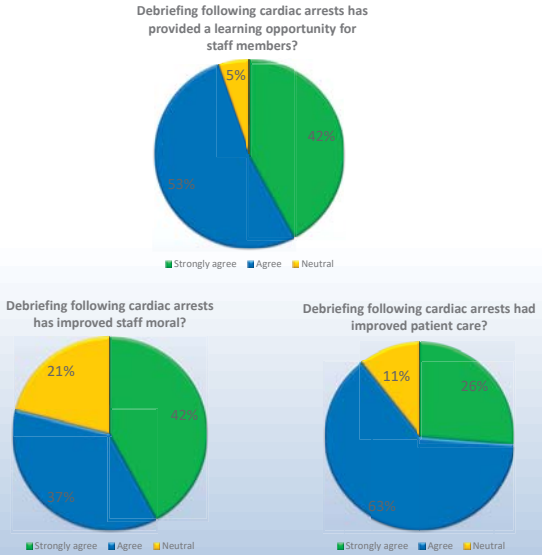


Figure 3: Selection of results from final online survey

Conclusions:

Conducting debriefs following cardiac arrests in our department has allowed for identification of areas of practice that could be improved, but also importantly recognition and reinforcement of positive staff behaviors (Figure 2).

Overall staff members felt that 'hot debriefing' improved patient care and 100% of staff surveyed wanted post cardiac arrest debriefing to continue, although difficulty consistently performing debriefs due to departmental pressures were highlighted.

We hope to continue 'hot debriefing' following cardiac arrests within our department, considering other scenarios as triggers, and are looking to extend debriefing following cardiac arrests to other departments.

Acknowledgements:
May I please express my gratitude to all staff members at other Scottish Emergency Departments who were contacted and kindly gave insight to their departments use of debriefs.

References:
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2. Mullan, P.C., Wuestner, E., and Kerr, T.D. 2012. Implementation of an In Situ Qualitative Debriefing Tool for Resuscitations. *Resuscitation*. [Online]84(7), pp. 946-951. Available from: https://www.researchgate.net/publication/233983872_Implementation_of_an_In_Situ_Qualitative_Debriefing_Tool_for_Resuscitations

For further information please contact Dr S McCarthy – sineadmccarthy1@nhs.net

Focused Skill Walkthrough

A Novel Methodology for 1-1 Personalised Near-Peer teaching

A. Whelan, C. Robertson, Z. Al-Moasseb, J.G. Boyle

Ethically approved by the College of Medical Veterinary and Life Sciences – University of Glasgow
With thanks to the UOG medical students for their participation as students and tutors

Aim & Summary

- Near peer education is an increasingly popular teaching adjunct - we aimed to see if a modified mock OSCE with novel teaching methodology could provide a resource light method of developing clinical skills in undergraduate students
- We designed a randomised control trial to look at both quantitative i and qualitative impact to assess our model
- Our model, the Focused Skill Walkthrough (FSW) had significantly greater efficacy than the practice mock OSCEs many Universities currently offer
- The FSW model was well received by students and clinical tutors, having unique benefits to both

Method

- We conducted an initial pilot study – 22 students were recruited from year 2 of the medical school
- Students were randomly allocated to either the FSW test group (described below) or the control: mock OSCE with no additional teaching
- Tutors were senior medical students trained by junior doctors in using the FSW model
- We utilised external markers in line with the University's formal OSCE to assess quantitative impact and asked students to complete questionnaires.
- Students returned to their first station and were re-assessed at the end of the mock OSCE to identify if their teaching had an improvement

Focused Skill Walkthrough

3 minute clinical skills teaching

Mock OSCE

Tutor assesses student using adapted marking scheme, separated into identified focused skills (4 per station) – 1 focused skill is selected for tuition

Part A – 1 minute

Tutor performs the focused skill only describing all required steps

Part B – 1 minute

Student performs the focused skill as the tutor talks them through each step

Part C – 1 minute

Student repeats focused skill until the end of station with coaching as required

Results

Figure 1 highlights the quantitative improvement between both cohorts.

- No significant increase in mean in the mock OSCE control group.
- There is a significant increase of >15% in the FSW group

Figure 2 highlights student impact and satisfaction from the trial

- There is a significant increase in mean satisfaction and perceived value in the FSW group in comparison to the control.
- Both groups had a significant increase in mean confidence from baseline after the trial.

Figure 1

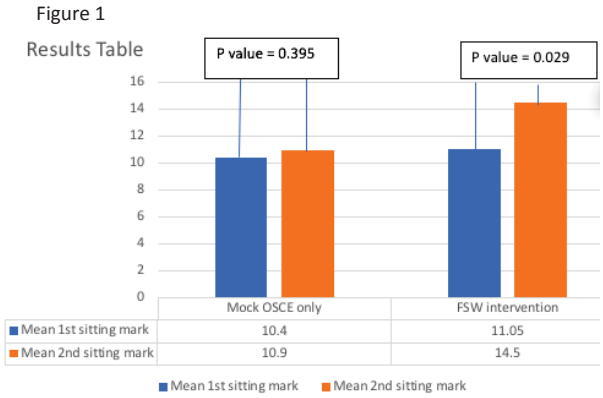
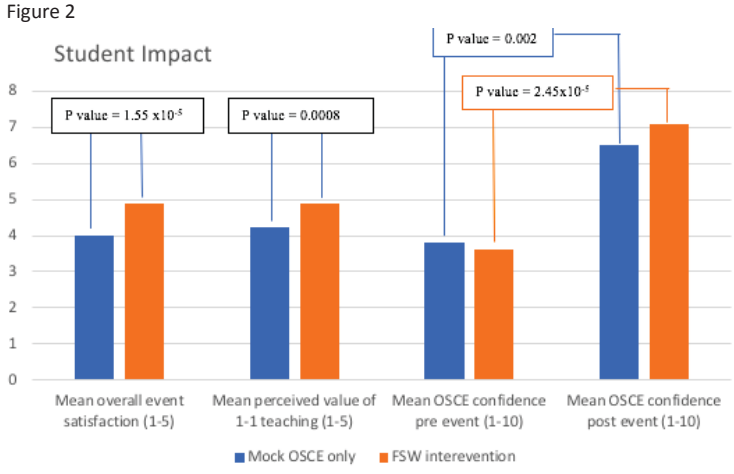


Figure 2



Conclusion

- In line with current literature, we suggest a mock OSCE does not correlate with increased quantitative marks in an OSCE despite student impact
- We report an FSW model is more effective than a mock OSCE alone with improved quantitative marks
- This model was well received by students and tutors, favored over the existing mock OSCE only model adopted by the University and our control
- We are conducting a larger scale RCT this May to look at medium/long term outcomes to assess how they affect marks in the formative OSCE

A Pilot Study in the Effectiveness of Mastery Learning and Peer Cannulation in the teaching of Cannulation to Medical Students

Justin Chiu, Dr Alasdair Taylor, Ms Audrey Gregory, Dr Daniel Taylor-Sweet, Dr Neil Ramsay, Dr Paul Fettes

University Of Dundee

Introduction

- Peripheral intravenous catheter insertion is an essential skill for medical students
- Students often report low self-confidence in cannulating patients and find the transition between practicing on models and real patients difficult
- A need to update our current practice of teaching cannulation[1] was identified
- We have designed a 2h session using Peer Cannulation as part of a Mastery Learning programme[2] to help aid the transition

Outcomes

- To assess the efficacy of the sessions
- To assess the logistics involved and the feasibility of incorporating the sessions within the school curriculum

Methods

- 35 Year 4 students were recruited from the University of Dundee Medical School and gave informed consent to participate
- Participants were issued pre-reading material and a video demonstration
- Participants attended a 2h Mastery Learning session
- The first hour consisted of supervised deliberate practice on simulation arms
- Once students felt adequately prepared, their performance was assessed according to a checklist
- This was followed by 1h of supervised peer cannulation
- Participants were surveyed before and after the sessions on their confidence at performing cannulation as well as their feedback on the sessions

Deliberate Practice → **Assessment** → **Peer Cannulation** → **Feedback**

Results

Efficacy of sessions

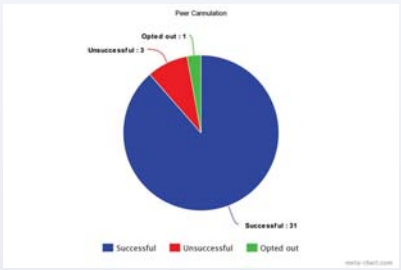
- Participants reported increased confidence post-intervention

Legend

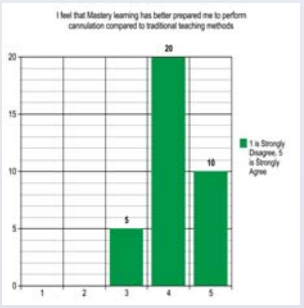
= Pre-intervention

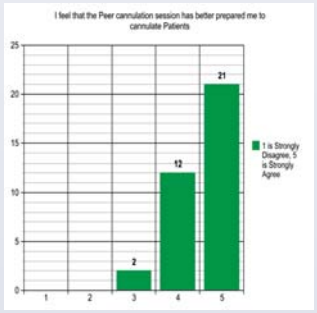
=Post-intervention

- 89% of participants managed to successfully cannulate a peer indicating a high level of mastery at the end of the session



- Participants were strongly in favour of incorporating the sessions into the school curriculum with key reasons being increased personal feedback, higher fidelity and an increased ability to empathise with patients





Logistics

- A high tutor to student ratio of 1:5 was required to run the sessions effectively
- A ratio of 2 students to 1 model arm was required to enable sufficient deliberate practice
- Common problems faced by participants include vein identification and applying proper countertraction, techniques difficult to demonstrate on simulation arms

Conclusion

- Mastery learning and peer cannulation improves the transition between simulation and clinical practice, but requires a high number of tutors and equipment
- We intend to incorporate the sessions within the 4th Year Anaesthetic block in august 2018 and further observe it's downstream effects

References

1. McGaghie, W. C., Issenberg, S. B., Petrusa, E. R. and Scalese, R. J. (2010), A critical review of simulation-based medical education research: 2003–2009. Medical Education, 44: 50–63.
2. Kulik C, Kulik J, Bangert-Drowns R. Effectiveness of Mastery Learning Programs: A Meta-Analysis. Review of Educational Research. 1990;60(2):265-299.

Contact Email: paulfettes@nhs.net

THE ART OF HEALING

Design of Hospital Based Complex Clinical Care (HBCCC) Units for Dementia Patients

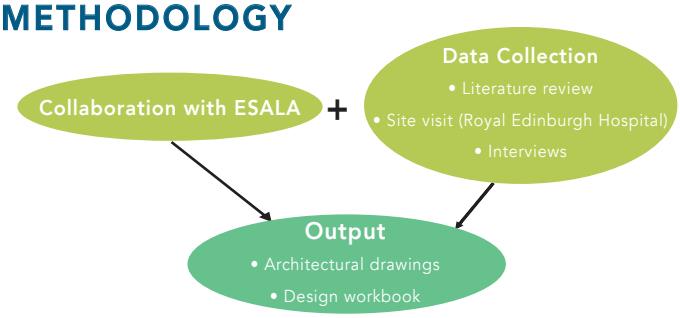
Rajanran A, Fong R, Kok J, George R, Lau N, McClure R, Rae R, *Edinburgh Medical School* | Dr Clafferty R, *NHS Lothian*

AIMS

Thinking beyond medical intervention has become increasingly important in the management of patients with dementia, particularly those cared for in HBCCC facilities as there have been no significant pharmacological breakthroughs in the last 18 years (1). This is reflected in the emphasis of a holistic approach towards patient management in our medical training as future clinicians need to be able to recognise factors and disciplines beyond medicine that could contribute towards optimal patient care.

Our project is an experiment into this multidisciplinary approach to healthcare at an undergraduate level, carried out as a Student Selected Component (SSC) project. We complemented research on the design of existing HBCCC units for patients with dementia and worked with two undergraduates and a tutor from the Edinburgh School of Architecture (ESALA) to design an optimal ward environment for these patients.

METHODOLOGY



RESULTS

NEW PERSPECTIVES GAINED IN MEDICAL EDUCATION

4 VENTURING OUT

Going beyond our comfort zones is an integral part of one's university experience. When the SSC module presented an opportunity to undertake a project beyond the medical curriculum, we did not shy away from venturing into a field in which we had no prior experience or skills, which was truly a rewarding experience.

3 TEAMWORK

Learning how to work together as a team not just within the medical field, but also with professionals outwith medicine was a crucial aspect of this project. We had to learn how to communicate effectively and to be open and respectful of ideas and opinions especially from differing fields.

2 BEYOND MEDICINE

Medical pharmacology often finds itself hitting a brick wall in managing dementia. So, we explored a different perspective of 'healing', expanding our horizons to include environmental & design aspects, in search for other ways to support the growing population of individuals with dementia in the future.

1 EXPERIENTIAL LEARNING

We approached the design aspects of this project as an architecture student would - by creating a portfolio showing the progression of our ideas before coming up with the final drawings.

5 FLEXIBILITY

As we delved into a different world of architectural jargons and conventions, we learnt to communicate our ideas with professionals outwith of medicine, through mediums such as sketches, plans and colour schemes. We drew parallels to a standard architectural project by preparing briefs and thinking thematically, thereby adapting our thought processes into an architectural framework.

6 REFLECTION

This project was carried out in the context of an SSC module that promoted reflection and the spirit of enquiry in medical practice, requiring maintenance of a reflective blog as well as production of 2 reflective reports. This enabled us to think about the limitations in our knowledge and skills, and to seek timely help from our tutors and peers.

7 LIFELONG LEARNING

Developing a mindset of lifelong learning not only involves exploring new frontiers but reinforcing one's existing knowledge. Having learnt about the manifestations of dementia from a biomedical viewpoint, we consolidated this knowledge by revisiting it from a different angle, e.g. exploring environmental influences on these manifestations.

PROGRESSION OF IDEAS: FROM SKETCHES TO ARCHITECTURAL DRAWINGS

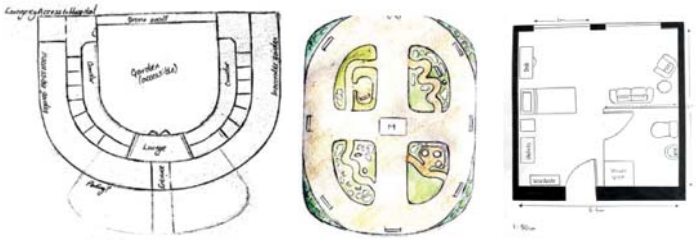


Figure 1: Sketches from our portfolio

5 themes (Autonomy, Safety, Familiarity, Sensory Stimulation, Social Interaction) that encompassed the needs of patients, staff and relatives were identified from data analysis. Design improvements to dementia wards were considered under each theme and integrated to produce drawings of our envisioned HBCCC unit. The pictures in figure 1 show some of our sketches from our portfolio which shows our progression of ideas throughout this project. Figure 2 shows the final architectural drawings which consists of a plan drawing of the unit and 3D drawings of a personal space (bedroom) public spaces (lounge and garden).

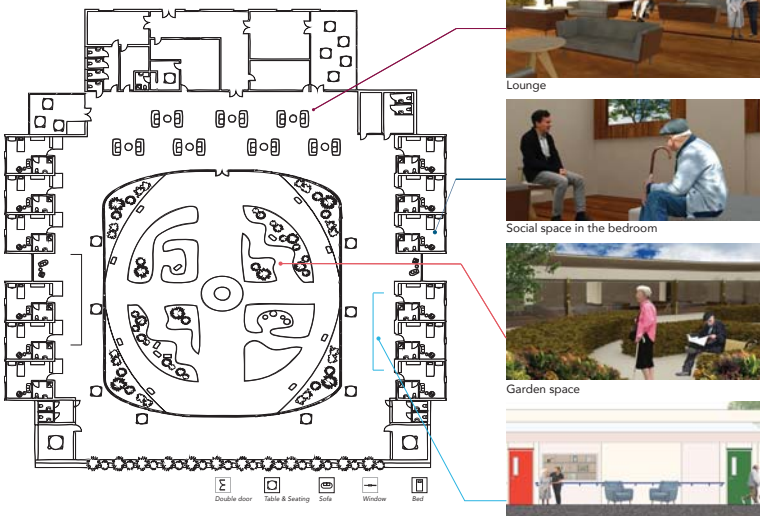


Figure 2: Final building plan and 3D drawings

CONCLUSION

The design of patient environments has great potential in improving the provision of care for patients with dementia and should be approached as a multidisciplinary effort integrating the input of clinicians, carers, staff and architects. Encouraging this approach early in medical training would be useful in bringing about new perspectives on existing issues in healthcare.

ACKNOWLEDGEMENTS

1. Dr. Robert Clafferty, Consultant Psychiatrist at the Royal Edinburgh Hospital
2. Mr. Iain Scott, Lecturer at the Edinburgh School of Architecture and Landscape Architecture
3. Miss Dashini A Suras Varan – who produced the plan drawing and the 3D drawings
4. Mr De Rui Lee – who produced the section and elevation drawings

REFERENCES

1) Inaugural lecture: Could a dementia-free world become a reality? Professor Craig Ritchie

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Evaluation of Inter-professional Education (IPE) through "Evening On-Call"

Claire Coey[1], Sheelagh Peacock[2], Catherine Paton[2], Sharon Donaghy[2], Caroline Martin[2], Julie McQuade[2], Peter Hamilton[1], Peter Buckner[2], Dr Leon Zlotos[1], Gail Craig[1], Fiona Stewart[1], Dr Ailsa Power[1].

1. NHS Education for Scotland, 2. NHS Lanarkshire Medical Education

AIMS

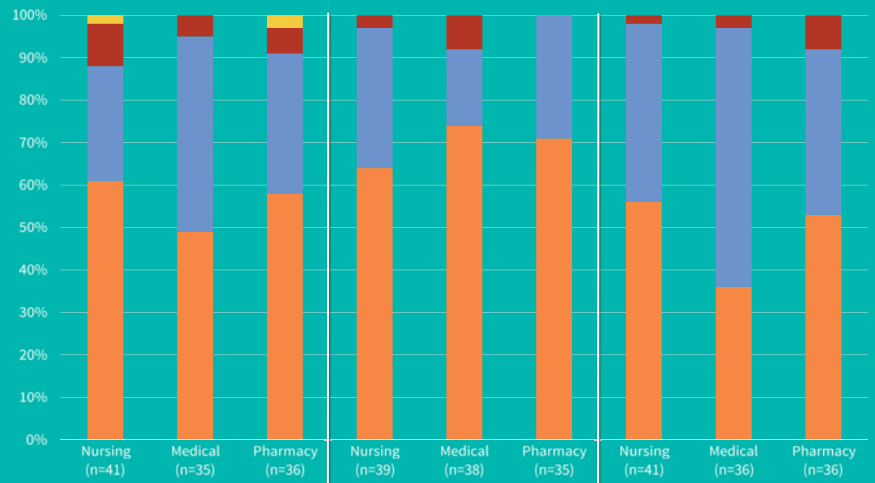
This study aimed to evaluate participants perceptions of "Evening On-Call" to ensure it was meeting the learning needs of students and to allow improvements to be made for future events.

"Evening On-call" incorporates manikin and actor patients in a multi-ward simulation. Medical and nursing final years students and Pre-registration pharmacists test their clinical, prioritisation and communication skills under observation from their seniors.

METHODS

Upon completion of the session participants completed a questionnaire to capture their views regarding event organisation, the feedback they received and relevance of the session. There were also free text sections for additional thoughts. A follow-up questionnaire was then sent out for completion six months later.

RESULTS



	Evening on-call gave me greater understanding of the role of other professionals			Evening on-call will help me to effectively prioritise my work load			Evening on-call enhanced my professional confidence		
	Nursing (n=41)	Medical (n=35)	Pharmacy (n=36)	Nursing (n=39)	Medical (n=38)	Pharmacy (n=35)	Nursing (n=41)	Medical (n=36)	Pharmacy (n=36)
Strongly Disagree	0	0	0	0	0	0	0	0	0
Disagree	2	0	3	0	0	0	0	0	0
Neither	10	5	6	3	8	0	2	3	8
Agree	27	46	33	33	18	29	42	61	39
Strongly agree	61	49	58	64	74	71	56	36	53

It would be great to have the opportunity to attend a session like this in 1st, 2nd and 3rd year - appropriate to the level of training. This would have helped me to become more confident communicating with members of the MDT earlier in my training.

Longer time OR more sessions available.

Another session, for a chance to improve.

CONCLUSIONS

- Evening on-call was positively received by all professions, before and at 6 months after the event.
- Initial questionnaire feedback was overwhelmingly positive for each group.
- The follow up questionnaire supported the initial questionnaire findings with the majority of respondents stating it had helped them in practice once qualified.
- All groups requested more time and more scenarios.

Acknowledgments

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Paired Learning

Improving Collaboration Between Clinicians and Managers

Health Education England

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What is Paired Learning?

Paired learning is a peer-peer buddying programme involving semi-structured one-to-one and group meetings.

"never going to build a relationship with someone you never see"

Aim

Close collaboration between NHS clinicians and managers is essential in providing effective healthcare, but relationships between the two groups are often poor.

The purpose of this study was to assess whether a paired learning programme (PLP) can improve knowledge and attitudes between NHS clinicians and managers.

Table 1 – Template Structure for Paired Learning Meetings

Meeting	Content
First meeting	Introductions / Background Training/qualifications Career path Set learning goals
Second meeting (manager to lead)	Explain job role Team structure Decision-making process Current work issues/problems Explanation of your relevant directorate/work stream (eg. finance/safety/ quality)
Third meeting (clinicians to lead)	As above plus: Describe place of work and daily routine Shift patterns Patient flow
Fourth meeting	Flexible and self-directed. Options include: Shadowing Informal self-directed discussion Quality Improvement project ideas/planning

Methods

A PLP pairing clinicians and managers over a four-month period to participate in four buddy meetings and three group meetings was delivered.

Participants were recruited from a body of Clinical Leadership Fellows, HEE managers and NHS Graduate Management Trainees in Yorkshire and the Humber

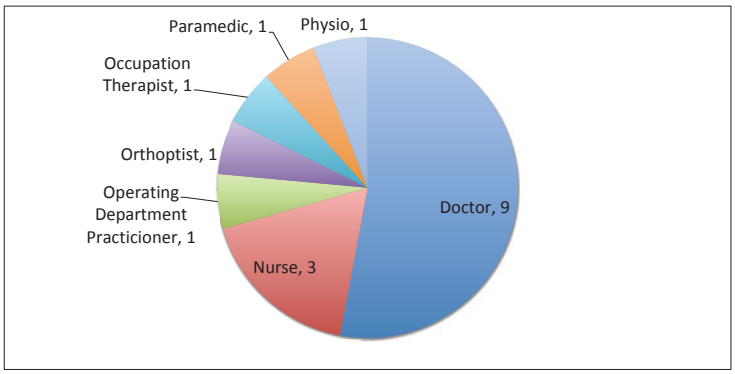
A mixed methods study was completed which collected quantitative and qualitative data in the form of pre and post course questionnaires and focus group discussions.

"I feel that clinicians are much more accessible"

Table 2 – Contents of Each Group Meeting

Group Session	Content
Introduction	Overview of programme Learning outcomes Introduction to buddy Focus group 1
Mid-point "systems leadership lab"	Practical workshop to encourage systems thinking Opportunity to work together, network and ask for help with PLP
Celebration	Participant pair presentations of reflections and learning Group feedback Networking Focus group 2

Figure 1 – Breakdown of Clinical Leadership Fellows by Role



Results

17 pairs of participants took part in the programme. They reported increased understanding, changed attitudes and better communication between clinicians and managers following the PLP. Direction quotations from participants are shown around this poster.

Self-rated knowledge increased across all domains but was only statistically significant for ability to engage, ability to establish shared goals and knowledge of decision-making processes.

"Stepping out of the day job and reflecting on what I do, why and my place in the wider NHS."

Table 3 – Summary of Quantitative Data

Question	Pre-Course Mean (95% Confidence Interval) N=33	Post-Course Mean (95% Confidence Interval) N=21	P-value
I am aware of the role of clinicians/managers	3.9 (3.66-4.13)	4.2 (3.94-4.54)	0.08
I am able to engage with clinicians/managers	3.6 (3.28-3.94)	4.2 (3.92-4.41)	0.03
I am able to establish shared goals with clinicians/managers	3.2 (2.91-3.57)	3.9 (3.61-4.20)	0.04
I am aware of the clinical/ managerial decision-making process	2.8 (2.46-3.14)	3.7 (3.38-4.05)	0.03
I adapt my communication style when interacting with different groups	4.2 (3.88-4.42)	4.4 (4.17-4.59)	0.31
I have developed a 'professional network' to support my clinical and non-clinical activities	3.3 (2.89-3.68)	3.9 (3.42-4.28)	0.05

"Hugely influenced my view of managers... Encouraged me to think of them as a resource"

Conclusions

This study shows that Paired learning has the following potential outcomes between different staff groups:

- Break down barriers
- Increase knowledge and understanding
- Change attitudes
- Facilitate communication

The Future

Would **you** consider Paired Learning as a viable tool in your organisation?

"Widen the scope... advertise the benefits. So it becomes part of everyday working practices"

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