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.

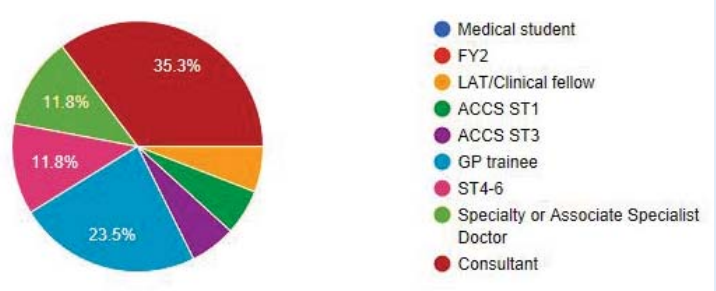
Secondly, the quizzes were intended to be useful independently of our other resources. By providing small kernels of information that could be easily assimilated over the course of 5-15 minutes, we hoped that we could deliver teaching that fitted the busy lifestyle Emergency Medicine entails. In an effort 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.

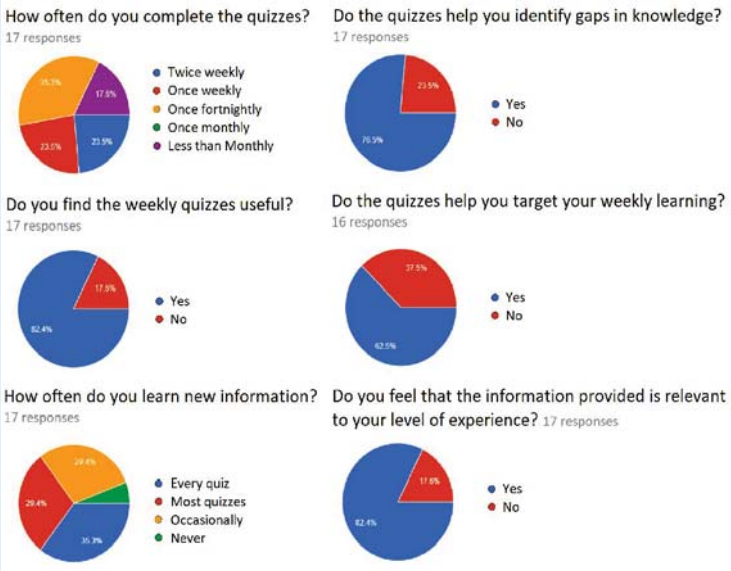
Staff Survey

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.

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

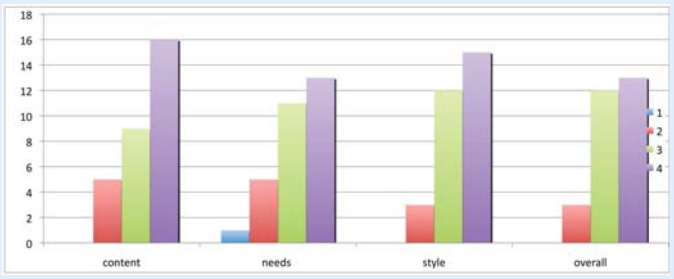
Foundation year 1 doctors in a large teaching hospital discussed triumphs and challenges that they had experienced in the first six months of their employment.

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.

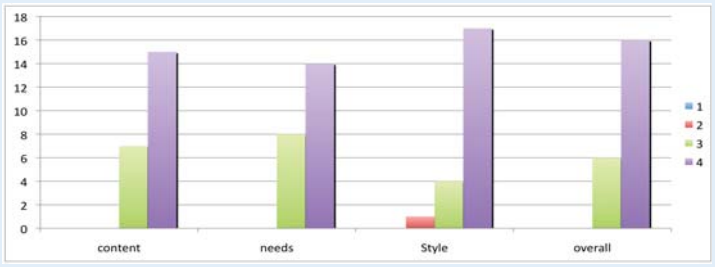
Feedback was sought from both groups regarding content, needs met, style and overall score. Examples of free text comments are presented below, with Clinician lead group in black and Chaplaincy in blue.

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.

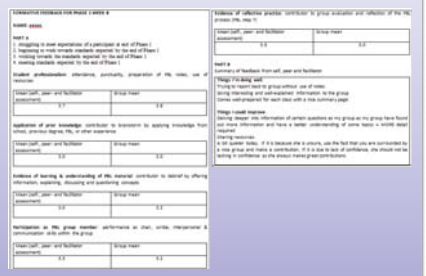
self-, peer & facilitator assessment

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



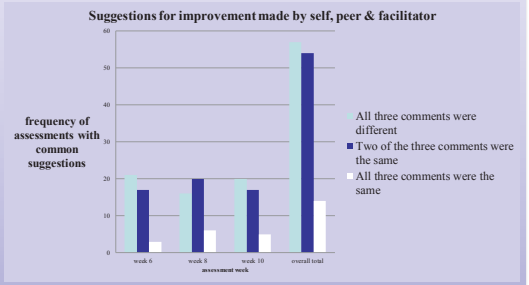
Methods

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?

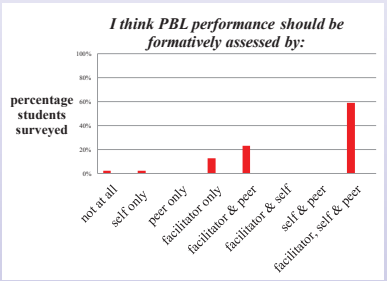
Example: assessor consensus on two of three comments
Assessor 1: Still working on depth in some areas Assessor 2: Sometimes the depth of the answers should be more Assessor 3: Continue to make sure that he doesn’t take over too much
Example: assessor consensus on all three comments
Assessor 1: I could 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..

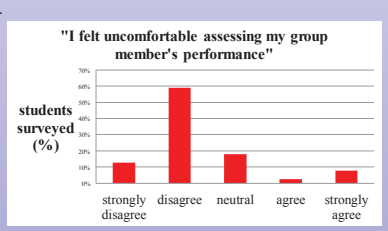
Students overwhelmingly preferred assessment from all three assessors, but still place more importance on the facilitator as the ‘gold standard’ when receiving feedback.



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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University of Glasgow

Introduction

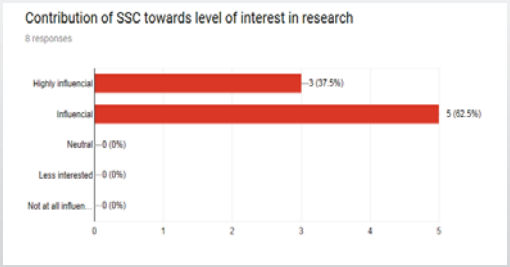
There is increasing pressure on undergraduate medical students to get involved with research at early stages of their careers to secure the most competitive training posts. Despite this, an opportunity for undergraduate research varies between medical schools and often there is no consistent way in which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

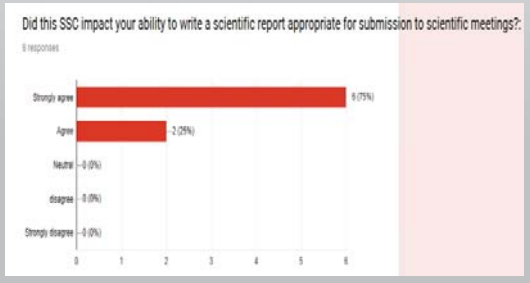
To encourage medical students into emergency medicine and research, an emergency medicine research student selected component (SSC) was developed in conjunction with Glasgow medical school. Successful students gained teaching and mentoring in the emergency department at the Royal Alexandra hospital in 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.

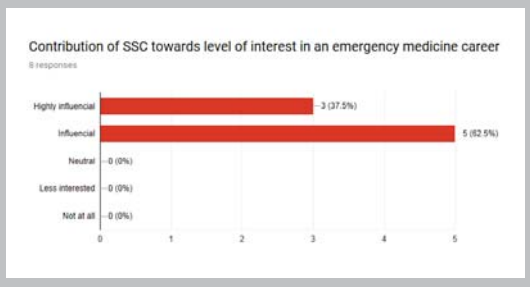
Aim and Method

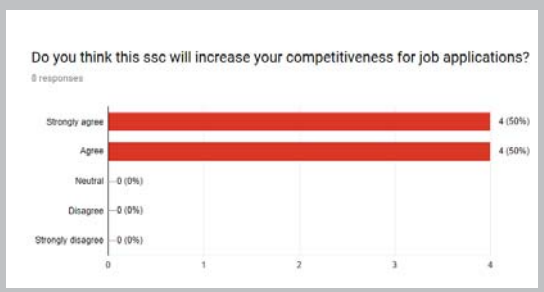
The purpose of this study was to examine the impact of the SSC on students' attitudes towards research and a career in emergency medicine. An online questionnaire assessed the student's level of interest, confidence and SSC research experiences.

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].

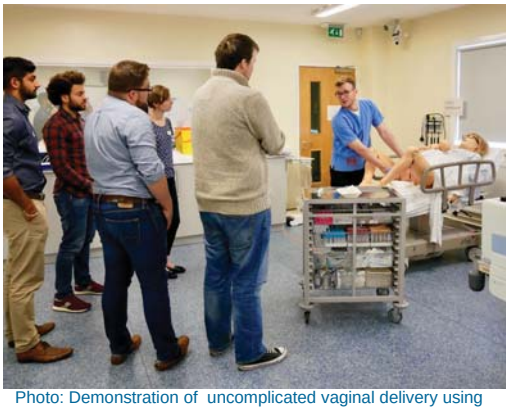


Photo: Demonstration of uncomplicated vaginal delivery using Noelle® maternal and neonatal birthing simulator.

Aims

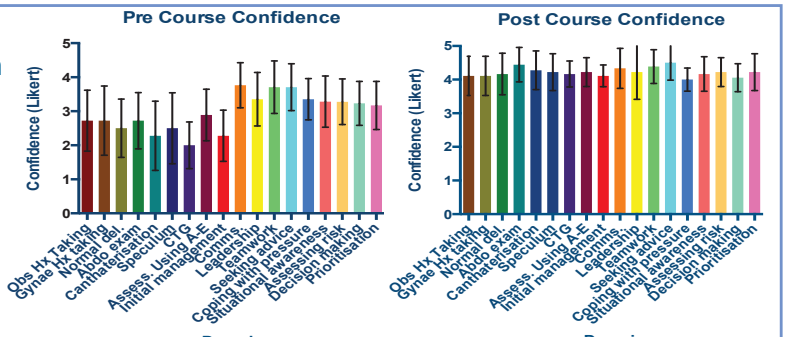
•To determine whether participation in this O&G program improved medical students' perceived confidence and competence in performing clinical skills, managing acute presentations.
•To determine whether students perceived confidence in their interpersonal and cognitive skills improved after engagement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

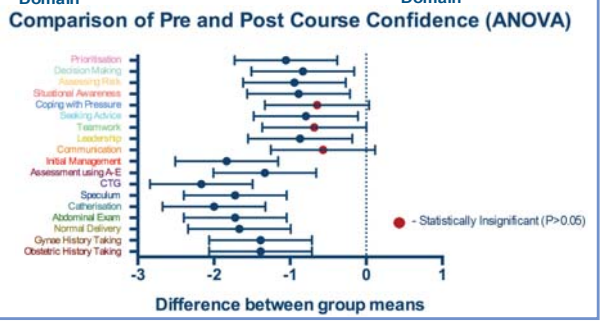
Methods

•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

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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).

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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

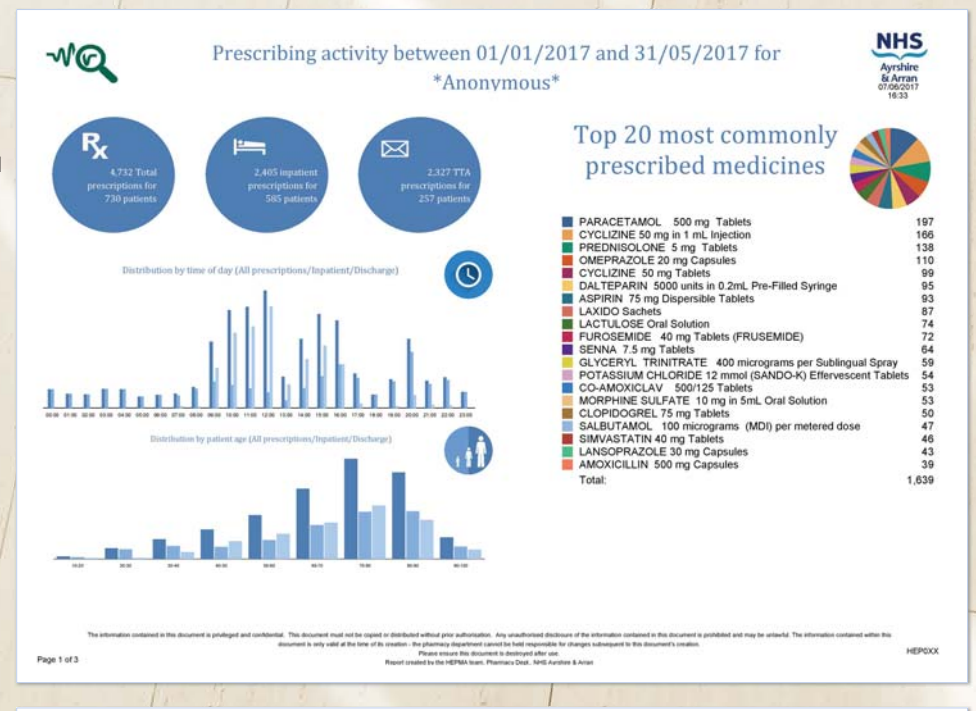
The tool is now in place and makes available details on patterns of prescribing within the hospital environment for use within educational and appraisal sessions by the Prescribing Development and Education team and educational supervisors.

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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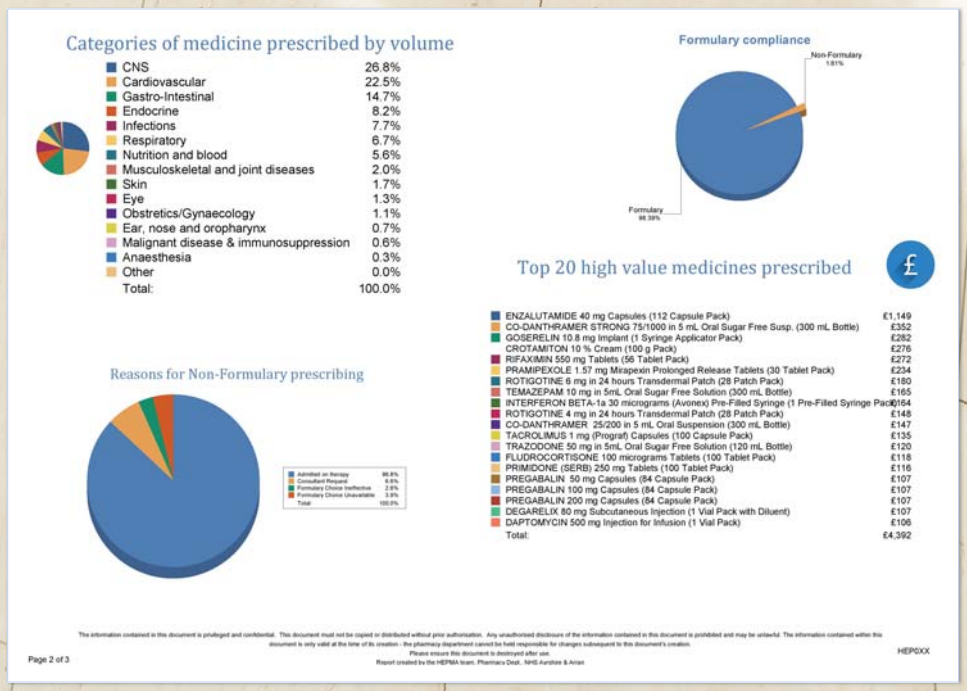

Categories of medicine prescribed by volume

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

Report created by the HEPMA team, Pharmacy Dept., NHS Ayrshire & Arran

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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

Emergency Department, Glasgow Royal Infirmary, 84 Castle Street, Glasgow, G4 0SF

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.

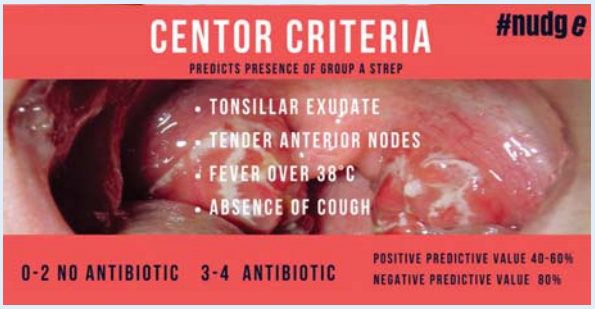
The GMC standards in promoting excellence states that 'Postgraduate training programmes must give doctors in training the opportunity to develop their clinical, medical and practical skills and generic professional capabilities through technology enhanced learning opportunities, with the support of trainers,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

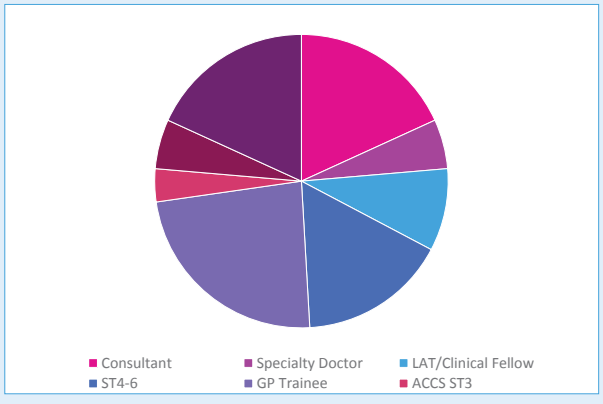
The emails are titled Nudges as they are designed to facilitate learning through a quick question. It is intended that the email takes less than one minute to read. They were introduced in January 2017 and the concept is to raise awareness of an important learning point.

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

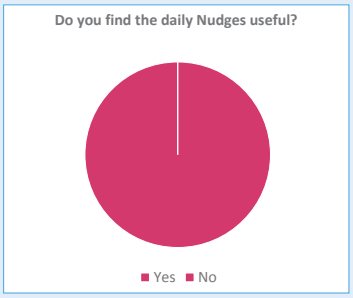
A google survey[2] was conducted to establish the effectiveness of using daily Nudges as a learning tool. It was completed by 55 members of medical staff within the Emergency Department at Glasgow Royal Infirmary. The composition of this group was:

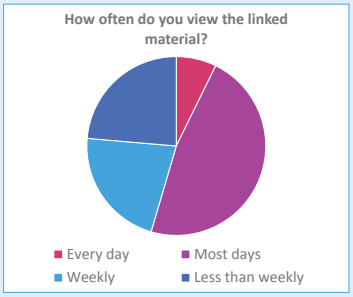


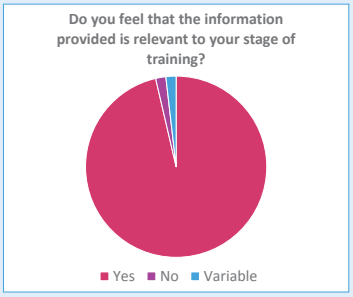
Survey Feedback

- 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:

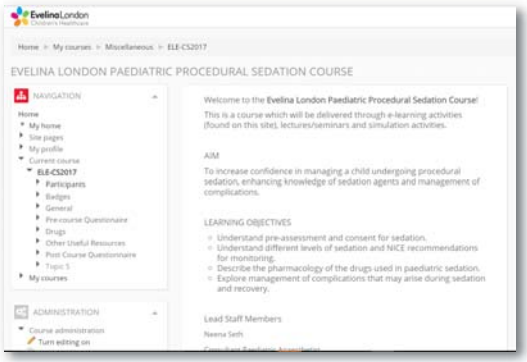
- e-learning sedation podcasts and publications
- face-to-face lectures consolidating online material
- high-fidelity simulation scenarios.

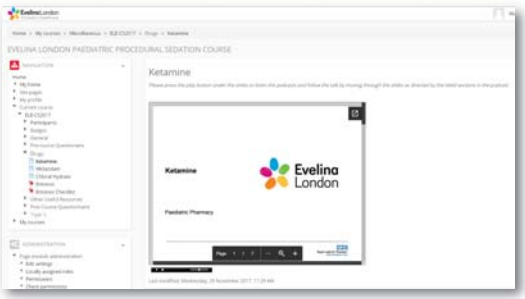
The e-learning was designed to refresh and solidify participants' knowledge and understanding without taking up face-to-face teaching time. Evelina London's Virtual Learning Environment Ocean2Sky.uk was utilised to host e-learning and assessment and could be accessed via username and password by participants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

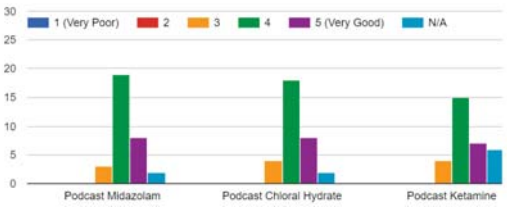
Results

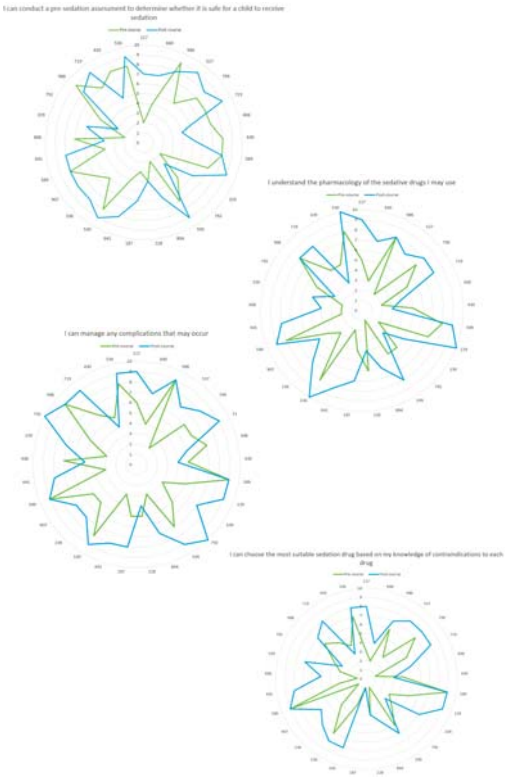
Results were collected via Ocean2Sky.uk and Google Form against knowledge and confidence criteria. These were collated and compared graphically with pre-course questions. Participant knowledge and confidence levels pre- and post-course were compared via Radar Chart (see right) with a larger footprint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

Referencces

[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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NHS
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

Correspondence: **rbenbow@nhs.net**

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.

References

1. Bowden J, Dempsey K, Boyd K, Fallon M and Murray SA. Are newly qualified doctors prepared to provide supportive and end-of-life care? A survey of Foundation Year 1 doctors and consultants. Journal of Royal College of Physicians of Edinburgh. 2013; 43(1):24-8

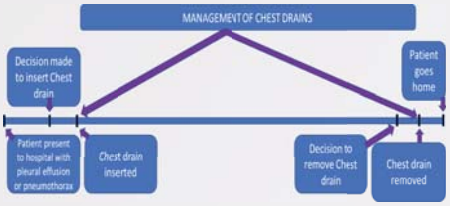
Learning-needs focused hands-on workshops on Chest Drain insertion and post-insertion management

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.

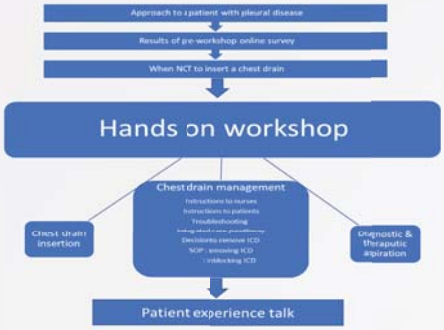
We share our experience.

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

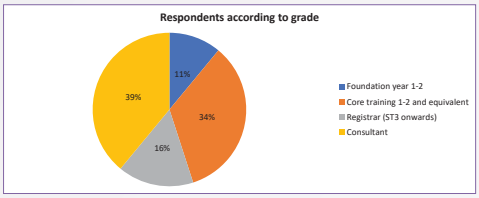
The results informed the programme design of three 4-hour hands-on ICD-I and post-ICD-I management workshops delivered to JD between June and December 2017. Accordingly, the focus of the workshops was weighted towards decision making; patient selection for ICDI and management of patient who has an ICD.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

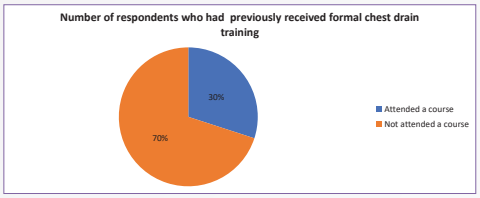


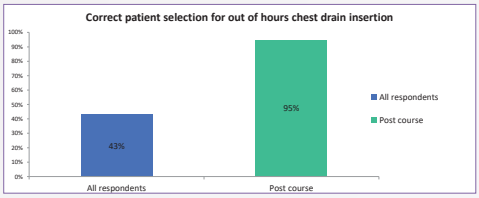
Results

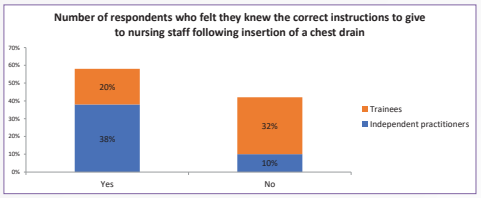
100 responses were received for the initial survey. 24 respondents of the initial survey attended the hands on workshops and 20 of those completed the post-workshop survey after attending the workshop.

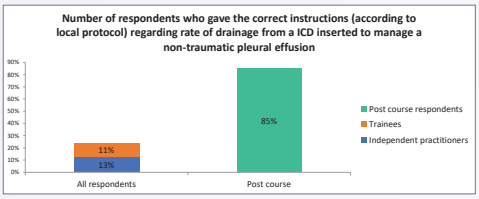
	1 (Poor)	2 (Average)	3 (Good)	4 (Excellent)
Lecture 1 Approach to patient with pleural effusion			3/25 (12%)	22/25 (88%)
Lecture 2 Results of online questionnaire survey of chest drain experience			8/25 (32%)	17/25 (68%)
Chest drain insertion workshop				25/25 (100%)
Thoracocentesis workshop				25/25 (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%)

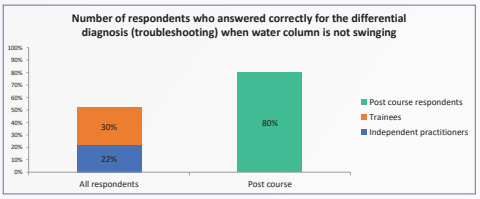


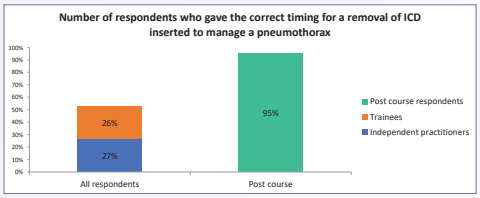


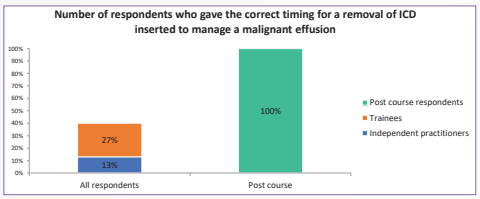


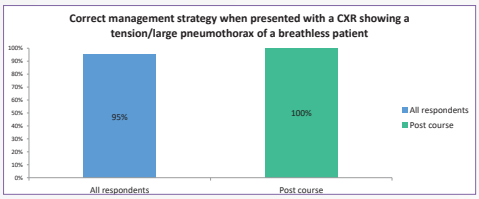


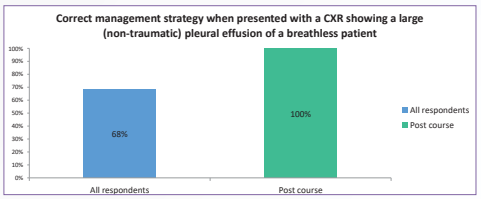












Conclusion

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.

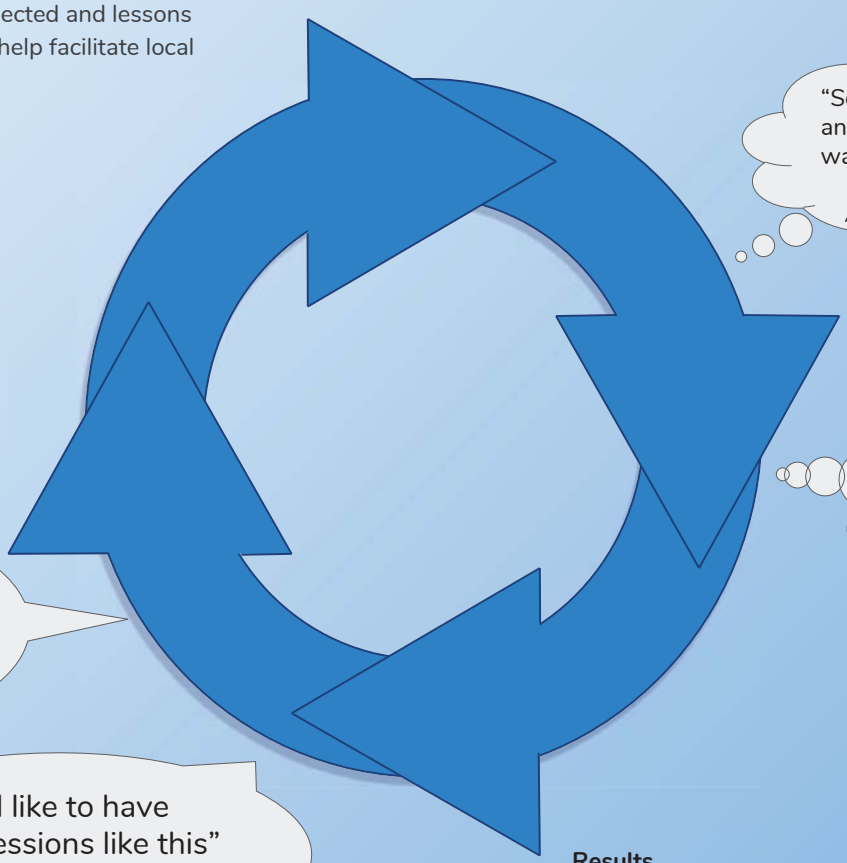
It allows a culture of free discussion between peers, in which a case is dissected and lessons drawn out of the incident to help facilitate local and structural change.

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)

a. Perlo J, Balik B, Swensen S, Kabcenell A, Landsman J, Feeley D.*IHI Framework for Improving Joy in Work.*IHI White Paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2017.
b. Mailley J. Engagement: The Grey Literature What's known about engagement in the NHS, and what do we still need to find out? Birmingham: Aston Business School; 2011.