3GG: Posters: Postgraduate Specialist Training

Location: Hall 4.1, CCB
Date: Monday 27th August
Time: 1015-1200 hrs

3GGi (231i)
Development of a national near-peer Core Surgical Training interview course with emphasis on group feedback to improve confidence in the interview process.

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Presenters: Zobia Gundkalli and Hasna Anda, The Princess Alexandra Hospital NHS Trust, Harlow, UK

Background: Application to Core Surgical Training in the UK is competitive and requires rigorous preparation. Feedback is a crucial component of this process, identifying strengths, improvements and the steps needed to meet ideal standards.

Method: We developed a national Core Surgical Training interview course with emphasis on group feedback to address knowledge gaps, aid confidence and develop experience for the final interview. 27 candidates attended. They received a talk on the interview and the domains assessed (clinical, management and portfolio), then rotated through sessions on each domain in groups of 3. These involved individual 10-minute simulations by 2 near-peer tutors in surgical training with recent interview experience, while the remaining 2 candidates observed. A 15-minute group feedback session followed, enabling social group learning. The Pendleton feedback model was used with scoring for additional guidance. Candidates completed questionnaires before and after the sessions to explore levels of confidence and knowledge and to evaluate the course.

Results: There was a 38.4% increase in candidates’ knowledge of the interview process and a 27.4% increase in their confidence in gaining a place. There was a 37.5%, 36.5% and 41.3% increase in confidence in the clinical, portfolio and management stations respectively. All results were statistically significant (p<0.0001). Out of a maximum score of 5 being above average, candidates rated the course 4.72 for organisation, 4.64 for usefulness and 4.8 for fairness of feedback.

We found that emphasis on group feedback enhanced candidates’ confidence and knowledge in all domains. This was further supported by near-peer teaching, which offered a relevant and consistent perspective into the process. The course was evaluated as organised, useful and fair, highlighting that it was well received, allowing candidates to maintain interest and align their expectations for the interview.

Conclusion: Core training interviews remain very competitive and courses are a useful way to improve confidence in candidates. The use of near-peer and social teaching ensures that the course remains relevant and fully engaging. There are high levels of satisfaction for this format of interview preparation.

3GGj (1552)
A Sustainable Ophthalmology Training Program in the Pacific: Methodology and Key Factors for Success.

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Presenters: Catherine Green, Royal Australian and New Zealand College of Ophthalmologists, Sydney, Australia

Background: The Pacific region has been dependent on visiting eye care teams to provide eye care to its population of nine million. The key to sustainable eye care is the training of local eye care professionals. The Pacific Eye Institute (PEI) was established in Suva, Fiji, in 2006 to achieve this.

Method: 1. Planning and engagement: Analysis identified the stakeholders: ministries of health, non-government organisations, education institutions, hospitals and eye care personnel including ophthalmologists; all of whom were engaged - along with the support of the New Zealand and Australian governments - and invited to contribute in relevant areas, including provision of funding. A dedicated training facility, with teaching resources and a fully equipped eye clinic/operating theatre was built.

2. Curriculum development: Needs analysis conducted, based on eye disease prevalence surveys. A Delphi technique was used to agree content, (which included tailoring an internationally benchmarked ophthalmology syllabus) and assessment (exams, workplace-based and surgical). Participants included ophthalmologists and educators from the Pacific and Australasia. Outcomes were peer reviewed.

3. Program establishment: Master of Medicine over four years, conferred by the University of the South Pacific. Full-time local faculty appointed, supported and augmented with a structured, rotating program of sub-specialty teaching provided by visiting lecturers from the Royal Australian and New Zealand College of Ophthalmologists (RANZCO). The sub-specialty teaching is designed to augment generalist teaching. Training is workplace based, both at the PEI and through a program of remote surgical outreach. 13 graduated specialist ophthalmologists, with 12 currently enrolled.
7 countries self-sufficient in ophthalmologists, others projected to be so by 2026. Number of cataract procedures performed in Solomon Islands increased from ~1000 per year in 2013/14 to ~5000 in 2015, with sustained performance.

**Conclusion:** A systematic and flexible approach to specialist training, at the macro, meso and micro levels, has demonstrated a successful and sustainable outcome in the Pacific. This model has demonstrated a measurable societal and economic impact from improved education. Although complex and presenting challenges, this model could be replicable in other developing health system contexts.

3GG3 (1727)
**Assessment for Medical Radiation Technologist Core Competency Training in Taiwan**

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**Presenter:** HSIN-YI Chiu, JCT, New Taipei City, Taiwan

**Background:** Since 2007, Taiwan established 2-year postgraduate program of 14 medical professionals, and then developed Medical Radiation in 2013, both of them are by means of core competency, developing relative training evaluation of effect, evaluating skills and appraisal standards. With the aim of whether the trainees can achieve the efficiency of core competency by utilizing systematic and structural methods.

**Results:** By collecting 25 Department of Radiology teaching hospitals, which including 79 trainees from 2013 to 2017, the result shows that DOPS average pre-test score is 6.19 (P<0.001,95%CI[±2.169]), post-test score is 8.74(P<0.001,95%CI[±0.962]), mini-CEX average pre-test score is 4.75(P<0.001,95%CI[±2.078]), post-test score is 8.17(P<0.001,95%CI[±0.962]) have significant differences after training. Therefore, trainees’ core competency has significant increased by providing them with stage training.

**Conclusion:** Through 2-year post-graduate training for fore and post analyzed research, we concluded that this program is definitely beneficial to new trainees. We will continuously assess the effect of program as a reference for the adjustment of training program.

**Take-home messages:**
1. This course intensifies the establishment of core competency as a reference for adjusting training time.
2. In comparison with the methods which senior medical staff trained trainees, the course provides systematic and structural evaluation works.

3GG4 (1874)
**Important lessons learnt from a qualitative study exploring the F3 generation**

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**Background:** The number of doctors directly entering UK specialty training after their Foundation year 2 (F2) has steadily declined from 83% in 2010, to just 50.4% in 2016. This year following F2, outside the UK training pathway, is informally termed an ‘F3’ year. There is a paucity of qualitative research exploring why increasingly doctors are taking F3s. Our study illuminates some of these reasons and offers possible suggestions to support these doctors.

**Method:** This is a cross sectional qualitative research study using an explorative narrative bounded case study design. Fourteen participants were interviewed from one foundation school, using a narrative enquiry approach. Participants include 5 doctors who commenced their F3 in 2016, 5 who started their F3 year in 2015 and finally 4 recently starting this in 2017. Thematic analysis was conducted using process tracing and cross-case analysis.

**Results:** A major theme arising was the feeling of lack of control, including over work/life balance. There was also a spectrum of exhaustion with some doctors feeling undervalued and unsupported. Many participants used their time away from formalised training to develop their skills and experience, noting this helped them to become better doctors whilst exploring career possibilities. The timing of specialty applications was felt to be too early for many junior doctors to a) decide what to apply for b) obtain sufficient CV material to be competitive at specialty applications. The advantage of time away from training allowed these doctors to improve their specialty application, enhancing choice over future career and training location. When doctors returned to NHS posts they bought valuable experience.

**Conclusion:** This study provides evidence to help educators, trusts and postgraduate deans in addressing the challenge of retaining and supporting junior doctors. This may include developing new F3 opportunities and providing career support to assist in reintegrating them with training programmes. Health Education England is exploring mechanisms to appropriately recognise the experience and training gained during time out of specialty training.

More and more doctors are taking F3s and we should adapt to support them and ease subsequent re-entry into training.
3GG5 (619)
Which are changes of medical professionalism after one year in internal medicine residency training?

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Background: Medical professionalism is one important aspect during residency training and also medical practice. This skill may develop over time of clinical practice and training. This study aimed to evaluate the changes of medical professionalism in internal medicine residents after one year of training.

Method: We enrolled residents in 2017 internal medicine residency program, Khon Kaen University, Thailand. Self reported questionnaire (33 items) was used to evaluate the medical professionalism at the beginning and at one year after training. Each item had a score from 0-10; 10 is the highest score. There were two types of residents; normal residents and special track resident. The special track residents are those entering the residency training right after receiving a medical degree.

Results: In 2017, there were 22 residents in internal medicine and categorized as 10 normal residents and 12 special track residents. The special track resident group had younger age (25 vs 27 years) and more residents with GPA over 3.50 (100% vs 40%) than the normal residents. The overall professionalism level of all residents after one year of training was slightly increased from 7.27 to 7.36. There were two significant items after one year. The special track residents reported that the ideal medical professionalism on the encouraging the patients to ask questions significantly after one year of training (7.17 to 9.25; p value < 0.01). The normal residents had significant lower score on the same item above (8.50 to 6.80; p value 0.01).

After one year of training in internal medicine, there was no significant change in medical professionalism. The item on encouraging the patients to ask questions was a significant item in subgroup analysis by type of residents. An evaluation at the end of training or third year residents may be required because medical professionalism may take times to develop.

Conclusion: Residency training in internal medicine may have little effects on medical professionalism after one year of training. Types of resident may have different outcomes.

3GG6 (2523)
Eyes cannot see what the mind doesn't know: Tracking perceptive errors among the radiology trainees

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Background: Errors in medical practice are a known and important cause of patient harm. Imaging studies are an ever increasing tool to help clinician arrive at correct diagnosis. Thus incorrect image interpretation also accounts for these diagnostic errors. Regular review and discussion of these errors is an important quality improvement strategy.

Method: The audit of independently reported imaging studies by radiology trainees was performed in our department periodically. The errors were classified as major or minor error based on its potential to affect patient management. The errors were also broadly classified as perceptive errors and cognitive (interpretive) errors. Perceptive errors are discussed in this presentation with illustrations and examples. During the audit, errors were noted and classified. Perceptive errors are commoner among trainees. Feedback was given to the trainees to close the loop and additional training was organized if necessary. The error rates for trainees were tracked. If any particular learning issues are identified, focused teaching was arranged and training curriculum was modified accordingly. Discrepancy meetings where discussion of these anonymized cases where errors had happened were well attended and liked by all the staff.

Errors of perception occurs when an abnormality on image is not noticed by reporting radiologist during the first interpretation. This is more common among radiology trainees in the initial phase of training when ‘the eyes fail to see what the mind doesn’t know’ due to lack of adequate knowledge. Errors of perception can also occur in senior radiologists due to other causes such as fatigue and ‘satisfaction of search’. Discrepancy meeting where errors are presented and discussed anonymously is an effective tool to improve performance and well-liked by all.

Conclusion: Perceptive errors are common especially in early years of training. Periodic audit and review, not only helps an individual trainee to improve his/her performance but also rest of the radiologists to learn from others mistakes. Thus audit and discrepancy meetings are effective quality improvement strategies and overall help to improve patient outcome.
3GG7 (1427)
A 2-day point-of-care post-graduate ultrasound course (PoCUS-Braga) achieves knowledge and self-confidence gains on participating physicians

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Background: The benefits of Point-of-care ultrasonography (PoCUS) for patient care has led to the development of PoCUS post-graduate training courses worldwide. It is important to understand the impact of such courses for improvement and dissemination purposes.

Method: This study evaluated the impact of the 2-day course PoCUS-Braga on participants’ self-confidence in using PoCUS and on immediate and long-term knowledge retention. PoCUS-Braga includes didactic lectures and expert-led hands-on training in simulated and real settings. Knowledge (two MCQ tests on lung, cardiac and abdominal ultrasound) and self-confidence were assessed at the start and after the simulation components. The test results were calibrated using Rasch Calibration Model. One month upon return to their workplaces, participants took a survey about self-confidence and actual use of ultrasound in their practice. Survey results, knowledge and confidence assessments were analyzed with ANOVA, Pearson’s correlation, and t-tests.

Results: There were 61 participants in 3 editions. Mean test scores were 78.3 ± 14.6% (at start), 93.1 ± 5.90% (after hands-on simulation) and to 89.1 ± 6.45% (after real-settings practice). Self-confidence increased significantly from the start of the course to the standardized-patients practice (p < 0.001). Upon return, participants reported the use of PoCUS in 4 patients (median), below the pre-course version of 10 patients. The accessibility to an ecogipher in their workplaces was rated 5.82 on a scale of 1-10, and was considered the main constraint for more use.

Conclusion: PoCUS-Braga impacted positively on knowledge and confidence. Knowledge gains with didactic and simulation were sustained after training in real settings. The use of ultrasound upon return to practice was below initial expectations. Insufficient availability of equipment was the main barrier for US usage reported by participants.

Short post-graduate PoCUS courses such as PoCUS-Braga may increase doctors knowledge and confidence. Barriers inherent to workplace circumstances may condition the application of PoCUS upon return.

3GG8 (1399)
Experience of a blended learning paradigm in teaching benign paroxysmal positional vertigo (BPPV) - a randomized controlled trial

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Background: Benign paroxysmal positional vertigo (BPPV) is a common emergency presentation that requires specific knowledge and skills for the emergency physician. The traditional face-to-face (F2F) teaching of BPPV often entails significant time for both the teachers and learners. Blended learning (BL) has become a common teaching approach in graduate medical education with its advantages of reduced time and comparable efficacy but has not been tested in the context of BPPV teaching to Emergency Medicine Residents (EMR). The primary aim of this study was to assess whether a BL approach would prove more effective than a F2F approach in the EMR education on the management of BPPV. The secondary aim was to gauge the resident opinion of each educational approach.

Method: 38 EMRs residents were randomly allocated to either F2F or BL approach. They were all assessed before and after implementation of BPPV education. Skills acquisition was measured through the performance of Dix-Hallpike maneuver (DH) and Canalith repositioning maneuver (CR), rated 0 (worst) through 5 (perfect) by raters blinded to the study groups. Medical knowledge was assessed through a written examination comprising 20 multiple-choice questions (MCQs). A validated electronic questionnaire was sent to all study participants to assess their perceptions and self-perceived competence of BPPV with each educational approach.

Results: The characteristics of the residents in the two study groups were similar. In both the F2F and the BL groups, there was a clear improvement in the post-intervention scores in BPPV skills and medical knowledge. The DH and CR evaluations of BPPV skills showed a median difference of 0 (95% CI, -1 to 1). For MCQ, the mean improvement seen in F2F group was 0.1 higher than BL but the 95% CI (-1.2 to 1.4) crossed the null value. More residents preferred F2F approach over BL approach for teachings of BPPV.

Conclusion: The results showed significant improvements in the medical knowledge and skills acquisition of BPPV with both F2F and BL education approaches. Although the improvements were virtually identical, more residents
favored the F2F approach over BL approach for learning BPPV.

3GG9 (550)
Sustainable Improvements in ABIM Pass Rates for Struggling Residency Programs

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Background: From 2010 – 2014, the rolling ABIM pass rate was 77.8%, below the ACGME requirement of 80%. Prior attempts to improve the board pass rate included hospitalist-led small group lectures, reading packets, monthly mock exams, subspecialist teaching on general medicine rounds, lectures guided by deficiencies on the annual In-Training Exam, board-focused review lectures by Department of Medicine faculty, and sending all our PGY3s to a week-long, third-party preparatory course. Our program aimed to improve and sustain our pass rate to above 90%.

Method: We anonymously surveyed residents of the class of 2015 during their PGY2 year to determine their motivations behind passing the boards and adjusted our educational approach based on the results.

Results: 49 of 55 residents responded. All 49 residents reported that their primary motivator was “personal embarrassment over not passing” with 41 respondents stating that “letting down the program director” was the next greatest motivator. We then designed a longitudinal year-long board review course for all PGY3s given by the program director, capped by a week-long course given by our assistant and associate program directors. Consequently, our board pass rate rose to 96% in 2015 and has been sustained across the past 3 years for a rolling rate of 97%

We restructured our approach to board review to capitalize on the second most common motivator by placing program leaders at the forefront of board review. We felt that if the residents could see that the program leadership was making a conscious effort to invest in their success, it would promote the sense of accountability and encourage more preparation for the exam.

Conclusion: Programs striving to improve their board pass rate should consider surveying trainees to assess their reasons for passing the boards. With that information, programs can customize their educational approach to utilize the most common motivators to raise and maintain their pass rate.

Take-home message: For programs struggling with low board pass rates, surveying the residents to determine their motivations behind passing the boards may allow the program to tailor its educational approach to achieve a higher board pass rate.

3GG10 (2691)
Learning evidence-based medicine skills in postgraduate medical education: effects of deliberate practice

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Background: Postgraduate education in evidence-based medicine (EBM) is usually delivered through standalone courses. These can improve knowledge and skills, but likely have little impact on EBM attitude and behaviour in the workplace. The theory of deliberate practice advocates acquisition of complex skills through systematic practice and feedback. Viewing competence in EBM as a complex skill we hypothesised that, compared to only attending standalone courses, learning EBM through deliberate practice results in a more positive attitude towards EBM, and leads to changes in clinicians’ behaviour.

Method: A group of paediatric registrars and consultants, who learned EBM through deliberate practice, were compared to peers who only attended a mandatory standalone EBM course. The deliberate practice group comprised those who had received deliberate training in search, appraisal and application of research evidence, either by working in a paediatric EBM department (Isala, Zwolle) for 1-2 years, or by completing a PhD. Participants completed a 10-item multiple-choice questionnaire, assessing EBM knowledge, and the evidence-based practice inventory (EBPi), which assesses five dimensions of self-reported EBM attitude and behaviour.

Results: 50/62 (81%) of eligible participants completed the questionnaires. Compared to controls (n=20), the deliberate practice group (n=30) scored significantly higher on the EBPi dimensions ‘perceived behavioural control’ (p=0.000) and ‘decision making’ (p=0.047). Compared to non-PhDs (n=32), participants who had completed a PhD (n=18) scored significantly higher on the EBPi subscales ‘subjective norm’ (p=0.039), ‘perceived behavioural control’ (p=0.000) and ‘decision making’ (p=0.000), and tended towards better EBM knowledge (p=0.059) and a more positive attitude (p=0.060).
The deliberate practice group reported more self-confidence in applying EBM skills in daily practice, and higher priority given to using EBM principles in medical decision making. These differences seem largely attributable to the subgroup of PhDs, possibly because they spent more time on deliberate, supervised practice.

**Conclusion:** Learning EBM through deliberate practice might improve attitude towards EBM and lead to more EBM behaviour in the workplace. Teaching EBM to specialist registrars through deliberate practice might achieve deeper learning effects in terms of improving attitude and behaviour, compared to only attending a standalone course.

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**3GG11 (990)**

**Effect of a structured basic course on learning colposcopy – an international prospective interventional study**

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**Background:**
Colposcopy is an important step in prevention of cervical cancer. Precancerous lesions are located and if needed, treated. In Europe, colposcopy training is acquired after specialization or during the specialization program. A few countries use a validated training program but there are no standardized methods for teaching and assessing colposcopy skills. This study aims to evaluate the effect of a structured basic course on learning of colposcopy-related skills and diagnostic confidence. We especially focus on studying the effect on colposcopists with different experience.

**Method:**
Three similar colposcopy courses were arranged during the spring of 2015 by the European Federation for Colposcopy in Kotka (Finland), Oslo (Norway) and London (UK). During the course (6 hours of lectures including many colposcopy cases) the participants were activated by randomly choosing a participant to analyse a case. The teacher aided when needed. All participants were invited to take part in the study, with identical pre-course, post-course and follow-up (2 months later) tests that included ten colposcopic images, ten patient cases and visual analogue scales (VAS) for marking confidence in the answers. The main outcome measures, i.e. mean scores in each category (case management, correct diagnosis, identification of transformation zone, high-grade lesions, abnormal findings and invasion), confidence and the correlation between these two were compared before, after and 2 months after the course, for all participants and stratified according to experience.

**Results:**
213 colposcopists participated in the study. Mean test scores and confidence were higher after than before the course for all participants. The highest increase occurred among beginners. A positive correlation between correct answers and confidence after the course and follow-up could be seen only among the experts.

**Conclusion:**
The structured basic colposcopy course was effective in increasing test scores especially for the inexperienced colposcopists. The beginners improved their knowledge the most but their confidence seemed to increase more than the scores.

**Take-home message:**
A structured course with a high level of participant activation can improve colposcopy-related skills and confidence especially for inexperienced colposcopists. However senior consultants training residents should be aware of the risk of overconfidence.

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**3GG12 (1786)**

**Reasons for prolonged residency in Switzerland**

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**Background:**
Swiss doctors reach the average age of 34 years before obtaining a specialist title, even though, the duration of residency is 5 to 6 years by regulation. We wanted to analyse the reasons why residents have a prolonged residency at our University hospital in Lausanne, Switzerland.

**Method:**
In 2016, we conducted a short telephonic survey with all doctors in our hospital who were working as residents in their 9th year or more (77 respondents, response rate 77%) with one open ended question: "Why you have been working as a resident for nine years or more?".

**Results:**
Three principal reasons were identified: the choice of a second specialty (39% respondents), years of residency spent in a field not recognised for the chosen specialty (30%) and breaks during residency for reasons related to family or research activities (30%).

**Conclusion:**
The Swiss system of postgraduate training gives residents a large autonomy in organizing their
Residency. This is an advantage for residents desiring to combine residency with other activities. However, it results in a long duration of residency as well as lack of coherent structure of residency programs.

**3GG13 (3344)**
Respiratory therapy technology: The continuous teaching and training courses based on Miller’s pyramid

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**Presenter:** Tsai-Chen Yu, Taipei Medical University Shuang-Ho Hospital Division of Chest Medicine, New Taipei City, Taiwan

**Background:** In the past, our PGY training program for respiratory therapists is non-coherent and lacking decision-making training, resulting in incompetent clinical performance. However, therapeutic technology training courses focus on hang-on technical operations and applications. We design the new training courses based on Miller’s pyramid as a clinical assessment. Throughout the consistent training, trainers could assess the competency of learners.

**Method:** In the past, we only have lectures and the final assessment. We noted that the outcome is not satisfied and we re-design the training course based on Miller’s learning pyramid. There are four stages in our revolutionized training course. 1. Knows: We use the “Flipped Classroom” to build the knowledge. 2. Knows how: The “teach-back” method would confirm the competence of trainees. 3. Shows how: We design clinical scenario to assess the clinical decision-making of trainees. 4. Does: Trainers use “direct observation of procedural skills (DOPS)” to observe trainees and give bilateral feedback.

**Results:** Before the program, 7 trainees’ average score is 58 out of 100. After the first stage of training, their score increases significantly to 89. In the second stage, the accuracy of assembling devices raises from 71% to 100%. In the third stage, trainees could handle 71.4% of troubleshooting, pass 100% of the clinical assessment, and achieve 71.4% of their clinical decision-making. In the last stage, the score of DOPS raises from an average of 3 to 4.7 (total 6.0) and trainees satisfaction marked 4.8 (total 5.0).

**Conclusion:** We apply Miller’s pyramid principle in our design. Through our data showed that this course combines the different strategy of training and assessment to progressively build the concept of integrative learning. As a result, trainees gain significant learning outcome and satisfaction.

The training program should build on Miller’s framework and progressively form the concept of integrative learning to bridge the gap between medical education and clinical application.

**3GG14 (3154)**
Evaluation of Student Self-perceived Progress and Competence after the Self-directed Medical Simulation Based Trauma Life Support Course

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**Background:** HybridLab is a fusion of distance learning and self-directed medical simulation that allows learners to train 24/7 at their workplace without direct presence of the instructor and/or technician. In 2014 original trauma course was developed on the new HybridLab learning platform. The aim of this study was to assess the satisfaction of participants and the course utility.

**Method:** The curriculum focused on strengthening basic trauma management skills, setting ABCDE priorities for the early management of critically injured trauma patients and strengthening non-technical skills. Twenty-seven surgical residents of Lithuanian University of Health Sciences were enrolled. Progress of the student was assessed immediately and 6 months after the course. Post-course survey was performed and the feedback of the participants and the estimation of self-perceived ability to carry out the crucial clinical tasks and skills was evaluated.

**Results:** During the post-course survey 92% of the participants stated that they found the acquired knowledge and skills clinically relevant and applicable (60% said it was very useful, 32% - useful). After the course 88% of the respondents were confident that they were capable of safely applying the acquired skills in the clinical setting (43% stated that they felt proficient, 45% - skilled).

During the post-course survey, we asked the participants to estimate their self-perceived ability to carry out the crucial clinical tasks and skills, including the primary and secondary survey of the patient, management of the airways, immobilization and control of external bleeding. Overall, 94% of the course participants acknowledged that the course has increased their competence to provide advanced care for the severely injured patient and 56% of the respondents stated the change was significant and encouraged them to review their daily clinical practice.
Conclusion: Evaluations of students’ opinion and acceptance can be seen as first step when establishing a new learning program. Our study revealed a high approval of the participants for the offered blended (hybrid) learning environment and contents. Broad acceptance is crucial for successful programme implementation, but it is also important to evaluate its influence on participants’ gain of practical skills.

3GG15 (426)
Group Reflective Learning Sessions Improve Anaesthesiology Residents’ engagement and confidence in conducting a Personal Reflective Practice

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Background: Reflection is an advanced meta-cognitive process of analysing, questioning and re-framing experiences, to develop greater understanding of one’s thoughts, feelings and behaviours. Reflecting on one’s practice is vital for lifelong learning and improvement. In our context, Anaesthesiologists practice within multi-disciplinary teams, but with little interaction with fellow Anaesthesiologists during working hours. Many cases of learning value get discussed informally as “tea-room talk” between colleagues.

Method: Compulsory written reflective pieces tend to be unpopular with trainees and may generate resentment or apathy. We sought to develop an effective and enjoyable peer reflective activity simulating conversations between friends. This weekly activity began in July 2017 with an introduction to the concept and objectives of reflection. Residents were encouraged to use question prompts (AMEE Guide no.44, Appendix) to guide their reflections. Residents were free to select any case with learning value in one or more of the ACGME Core Competencies. Each resident’s reflection was enhanced by peer-to-peer formative feedback (facilitated by a core faculty member), followed by development of a personal improvement plan. Confidentiality of patients, staff involved and residents’ thoughts/ emotions was emphasized, to maintain a safe and non-judgmental environment for learning.

29/33 (87.8%) of residents responded to a survey conducted after 6 months.

Self-Reflection and Insight Scale (Roberts, 2008) was used to assess for differences in (1) Engagement in self-reflection, (2) Need for self-reflection, and (3) Insight, before and after introduction of these sessions.

Improvement was noted in scores for components (1) and (2), especially for residents who had presented >1= 2 times, or attended >1= 7 sessions.

Results: 80% understood the importance and goals of reflective practice and were familiar with the process of reflection, while 66% were confident of independently conducting a personal reflective practice.

Vast majority were comfortable with the group format.

Conclusion: As medical landscapes rapidly evolve, self-regulated learning and reflection has surpassed knowledge acquisition in importance. Group sessions are an effective and non-threatening way of fostering reflective practice in residents.

Take-home message: Participation in group reflective learning sessions positively influences residents’ engagement and confidence in conducting a personal reflective practice.

3GG16 (454)
Transition to Practice: Evaluating the need for formal training in supervision and assessment among senior emergency medicine residents and new-to-practice emergency physicians

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Background: Emergency medicine residents may be transitioning to practice with minimal training on how to effectively supervise and assess trainees. It remains unclear how comfortable senior residents and new attending physicians are with these competencies. Our study sought to examine physician comfort with supervision and assessment; whether there was a perceived need for formal training in these areas; what the current gaps were in training; and what barriers or enablers exist in implementing it.

Method: Qualitative data were collected in two phases during September 2016-November 2017 through one-on-one interviews of PGYs and CCFP-EM emergency residents, and attending physicians within their first 3 years of practice, at the University of Toronto and McMaster University. A semi-structured interview guide was developed in consultation with a qualitative researcher, and then refined after the first phase of interviews, to ensure that all potential areas of thematic generation were touched upon. Transcripts were coded, analyzed, and collapsed into themes using NVivo software. Data analysis was guided by a constructivist grounded theory based in a relativist paradigm, which assumes that one’s reality is constructed inter-subjectively through understandings that are developed socially and experientially.

Results: Thematic analysis revealed five themes: Residents and staff described acquiring the skills of supervision and assessment passively through modeling the behaviours of others; the training that is available in these areas is variably used, creating a diversity of physician comfort levels; the many competing priorities in the emergency department represent significant barriers to improving supervision and assessment; providing negative feedback is universally difficult and often avoided; the move towards competency by design (CBD) will act as an
impetus for more formal curriculum being required in these areas.

**Conclusion:** There appears to be a lack of standardization in how supervision and assessment are taught, and gaps in physician comfort, particularly in how to identify failing trainees and approach negative feedback. As programs transition to a CBD model, there will be a greater need for formal training in supervision and assessment to achieve a standard level of comfort and competence among senior residents and new-to-practice physicians.

**3GG17 (3703)**
**Partnering with Industry to develop a multidisciplinary Professional Development Programme for a Paediatric quaternary centre**

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**Background:** Morgan Stanley’s relationship with Great Ormond Street Hospital (GOSH) began in 2007. As a corporate sponsor, they have donated much needed facilities for staff and patients. In addition, Morgan Stanley employees volunteer their time to work with young people and staff, providing support and mentoring. The Postgraduate Medical Education team at GOSH utilised this relationship with industry to develop a Professional Development Programme (PDP) for GOSH Staff.

**Method:** The PDP was designed to address the professional development needs of doctors, nurses, allied health professionals (AHPs) and admin staff at various bands in the hospital structure. The programme was structured on three levels, catering to varied experience. Level 1 for junior members of staff, Level 2 middle grade and Level for the senior members of the organisation. Level 1 gave an introduction to professionalism in the National Health Service (NHS). More advanced levels focused on building NHS wisdom, covering areas such as leadership, self-awareness, quality improvement and finances.

The Morgan Stanley team offered their expertise delivering sessions on topics including financial administration techniques, business case writing and team management.

**Results:** On average, 16 delegates attended each course. All professional areas were represented, from various clinical specialties. The face-to-face sessions were a mixture of lectures, learning games, flipped classrooms, action learning sets and reflective practice. 100% provided feedback and all agreed, or strongly agree, the course was relevant, well facilitated and it would influence their future practice.

**Conclusion:** Leadership and professional development are important in upskilling the workforce and staff retention. Having a multi professional audience provided a great dynamic to the sessions; participants gained a respect for the work their colleagues do on the front line or the back office. Participants valued the sessions, finding them relatable despite the stark contrast in the organisations. There is much benefit in working with other industries. The private sector has a focus on resource efficiencies, something the public sector needs. Setting the sessions off-site gave participants an opportunity to remove themselves from the clinical setting, allowing them to immerse themselves into the educational offering.

**3GG18 (580)**
**Educational needs of neonologists on end of life care in a tertiary hospital**

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**Background:** The topic of neonatal palliative care is often a difficult one to address for physicians and parents alike, and there are many challenges faced in providing optimal care for terminally ill babies. This study aims to assess the perspective of neonatologists towards palliative care services and end of life issues, and determine how terminally ill babies and their families can be better supported.

**Method:** We conducted a survey amongst the neonatologists in KK Women and Children’s Hospital, which has a tertiary level neonatal care facility. An online survey was sent to the physicians in the department, with the objective of assessing the challenges they faced in the care of terminally ill babies, as well as their understanding of the services provided the hospital’s palliative care team for neonates.

**Results:** There were 17 respondents to the survey, mainly senior medical staff with experience in caring for terminally ill neonates. A common challenge cited by neonatologists was initiating discussion on the topic of end of life care with families, and a large majority (70.6%) did not feel that the palliative care team was usually involved in such conversations. All the respondents were aware of the Advanced Care Planning programme (ACP), and a large majority (94.1%) agreed that the ACP helps to align the goals of care for terminally ill neonates. Only 47.1% of respondents felt that families were adequately involved in decision making about their terminally ill children, and 35.9% felt that parents did not have adequate support and resources. General understanding of community palliative services available was also limited. Majority of the respondents (70.6%) strongly agreed they would benefit from further teaching about end of life care, including initiating conversations with families on the topic.

**Conclusion:** This survey has demonstrated some of the challenges faced by neonatologists in the care of the terminally ill babies, as well a lack of understanding of the resources available for families of patients, especially in the community setting. These results can guide the design
Assessing the Quality of Educational Supervisor Reports and Supervised Learning Events

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Background: Our previous research has shown that Educational Supervisor Reports (ESR) and Team Assessment of Behavior are strongly predictive of doctors in difficulty (1). However, quality of ESRs and Supervised Learning Events (SLEs) are variable and this study evaluates whether this can be improved using a structured form and targeted feedback to trainers.

Method: A one page framework was used to assess the quality of each ESR (n=15) by the Renal Medicine Annual Review of Competency Progression (ARCP) panel at Health Education England North West (HEE NW) in 2014. Formative feedback was sent to each educational supervisor (ES) and their comments were invited and individually discussed. The successive ESRs (n=15) were then assessed by the Renal ARCP panel in 2015 and 2016 to see if there had been any improvement in quality. A similar framework was used to assess the quality of SLEs (sample of 3-4 per ES) by the Renal ARCP panel (n=21) in 2016. The ES and trainee feedback was assessed qualitatively using a thematic analysis.

Results: Successive ESRs showed:
- Significant improvement in quality with increase in excellent grading from 13.3-80% (P<0.0001).
- Detailed free-text comments referenced to multiple sources of evidence
- More constructive feedback with specific learning objectives incorporated into the personal development plan.
- Good evidence of learning from clinical incidents. The SLE quality was:
  - Variable with 2/3 being acceptable.
  - Minimal free-text limited to clinical skills.
  - Few comments on generic skills including communication skills and professionalism.
  - Feedback was poor and non-specific.

The ES and trainee feedback was:
- Overwhelmingly positive; trainees felt valued for being asked.

Conclusion: A simple structured form to assess ESR and SLE quality during ARCPs can provide useful formative feedback to ES and this significantly improves quality of successive ESRs. The ESR quality work has now been rolled out regionally at HEE NW and nationally through the Joint Royal Colleges of Physicians Training Board.


Report: Development Trial of an Abdominal Emergency Medical Training Course

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Background: Abdominal pain is a frequent complaint of ambulance outpatient (5%). The Japanese Society for Abdominal Emergency Medicine in collaboration with four other medical societies published the Practice Guidelines of Acute Abdomen in 2015. The Japanese Society of Internal Medicine has held the Japanese Medical Emergency Care Course(JMECC) since 2009, but the abdominal emergency scenario has not been included in the course.

Method: We developed a training course specified for abdominal medical care (Hokuriku branch of Fellow of the Japanese Society of Internal Medicine). We identified 23 core competencies and core ultrasound skills for abdominal medical care. Total score for these core competencies significantly increased during the careers of clinical resident and gastroenterologist.

The goals of the course are as a physician to obtain the ability to quickly respond to patients complaining of abdominal symptoms (emergency medical care, interview, physical and ultrasound examinations, clinical reasoning, presentation and patient attention). Eleven courses for five hours were held from 2011 with over 200 participants. The course contains preparation and questionnaire, abdominal physical and ultrasound examinations and simulated medical care, followed by formative evaluations and lectures according to results of the questionnaire until the seventh course.

Results: Of the trainees, 75.3 per cent answered very helpful for future learning and 64.9 per cent were satisfied (The recovery rate was 95.1 per cent). The total score for abdominal core competencies were significantly lower in medical students and higher in gastroenterologists than the other groups (clinical residents, other specialized physician and general medicine). The biggest difference between gastroenterologists and the other was abdominal ultrasound competence.

Conclusion: There are learning needs for abdominal medical care, especially performing abdominal ultrasound. Keeping the quality and quantity of the instructors and simulated patients are the most difficult. Introduction of abdominal ultrasound phantom might be considered.
instead of simulated patients. It is important to provide opportunities of ultrasound to the beginners. In order to standardize abdominal medical care, development and holding of standardized course is required. We have developed the five-hours Abdominal Emergency Medical Training Course. The use of abdominal ultrasound is the key component.