Education

ABSTRACTS
A synergistic teaching model for acute medicine

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Aim

- Students at our institution undergo a four-week clinical attachment in acute medicine. Historically, they did not receive a preparatory teaching session before this clinical attachment.
- Students feedback indicated that they felt underprepared for this busy and challenging placement.
- We aimed to develop a formalised teaching session that would deliver training in five common medical emergencies over the course of one day.
- We employed aspects of pre-existing instructional methods in order to create an exciting, interactive and efficacious teaching model.

Methods

We designed a synergistic teaching model, incorporating elements of:

- Didactic teaching
- Anonymous electronic voting
- Real-time drug prescribing
- Simulation technology

The topics covered in the training day were: chest pain, acute breathlessness, sepsis, GI bleeding, and overdose.

1. The clinical presentation of a fictionalised patient was described by the faculty
2. As each clinical scenario progressed, the presentation was frequently ‘paused’, and students were asked to anonymously vote for a single best answer question about how to best proceed.
3. When examination findings were required, volunteers from the audience - with assistance from their peers - examined a SimMan Essential Mannikin, which acted as the ‘patient’ in question.
4. Whenever a treatment was needed, the students prescribed it on their individual drug charts
5. Complex interventions were performed in real-time on simulation models by the faculty.

Outcomes / Results

- The teaching session was delivered to 235 medical students over 2 years.
- Quantitative feedback was uniformly positive, with a mean score of 4.53/5 for ‘quality’ and 4.72/5 for ‘relevance’ to their training.
- Qualitative data analysis indicated that students found the session effective, enjoyable and interactive.
- The integration of different teaching modalities, and the use of use of fictionalised patient stories helped comprehension and retention of new information.

Conclusion

Integration of multiple teaching approaches creates a stimulating and interactive learning environment. Medical students respond positively to new methods of teaching acute medicine. Our teaching model can be adjusted for other areas of medicine, and we urge other clinical teachers to adopt this method in medical education.
References


New Regional Acute Medicine High Fidelity Simulation Programme Improves Multidisciplinary Frontline Team Working and Approach to Patient Safety

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Aim

The fast paced dynamic arena of the Acute Medical Unit (AMU) is recognised to be a high risk environment due to the rapid patient turnover and potential for deteriorating patients. The AMU is a critical hub of activity in the hospital and our goal was to ensure that through collaborative, multidisciplinary learning we could optimise front-line patient safety through maximising effective team working. We approached this by designing a dedicated high fidelity simulation programme to enhance technical and non-technical skills across our frontline AMU staff as part of the CMT South East sector simulation and skills programme. High fidelity simulation is recognised to be educationally effective when applied in patient care settings (1).

Methods

Input from the head of nursing for general medicine, AMU matrons and multidisciplinary AMU staff suggested there was a need for increasing nursing leadership and improving on aspects of escalation and handover. The programme ran over two days at Kings involving nine AMU nurses, two advanced nurse practitioners, from our ambulatory care unit, as well as twenty-four core medical trainees, two F1s and two registrars. Further to human factors orientation, simulation based learning was carried out with extensive multidisciplinary debriefing. High fidelity scenarios were designed to tackle emergencies including anaphylaxis, acute kidney injury, sepsis, hyperkalaemia, metabolic acidosis and drug overdoses. There was a particular focus on timely escalation, SBAR handover and vocalising thought processes to ensure that the team were actively communicating at all times and on the same page.

Outcomes / Results

Feedback via both Likert-scale and free-text responses through evaluation surveys at the end of each day demonstrated the programme to be rated as excellent overall, with 100% of trainees and nurses praising the benefits of the multidisciplinary aspect. One trainee commented that it was “the best core medical training day I have ever been to” and nurses reinforced that they would like regular such sessions ideally on a monthly basis. Objective improvements in handover, escalation and approach to patient safety were consistently noted by facilitators.

Conclusion

The programme is now being rolled out across South-East London to integrate frontline AMU staff into the CMT simulation programme, maximising multidisciplinary contributions. Further to the overwhelming positive response funding is now being sought to establish a dedicated AMU simulation programme as a regular educational and training strategy for AMU teams across Kings Health Partners.

References

(1) Issenberg S.B. (2004) BEME systematic review; BEME Guide No.4: Features and Uses of High Fidelity Simulation
Aim

The Royal College of Physician's Acute Care Toolkit 5 described the Acute Medical Units (AMU) as rich learning environments for a wide range of health professionals and students and described recommendations to facilitate learning on AMU effectively(1). We conducted a regional survey with the aim of reviewing the landscape of AMUs in terms of structure, staffing and consultant training in medical education and to assess compliance with recommendations.

Methods

We sent a questionnaire covering all toolkit recommendations to all Trusts within Mersey Deanery with an AMU. We collated and analysed the results from the six out of nine Trusts that responded.

Outcomes / Results

AMUs ranged in size from 22-59 beds with the number of consultants ranging from 2-7.5 WTE. 83% of Units had consultants with formal educational qualifications with the most common being Train the Trainers accreditation (Fig. 1). 60% of Mersey AMUs had a medical lead for education with 60% having a nursing lead.

All Trusts had trainees spending blocks of time on AMU with 67% of units managing their rota in-house. 83% had Consultants spent > 4 hours on AMU daily. Only 2 confirmed that consultants had no other commitments whilst on AMU.

5/6 units had their own internal educational sessions. Two had teaching sessions twice weekly. The sessions were 45-60 minutes and were predominantly conducted at lunch time. 66% had access to dedicated teaching space but only 33% were embedded within the AMU. The content of teaching varied (Fig. 2).

Conclusion

This regional survey provided valuable information regarding the state of Teaching on the AMU highlighting strengths and weaknesses. This information has enabled reflection, with dissemination via Acute Medicine STEC, and will guide quality improvement strategically on AMUs in the region helping achieve compliance with RCP recommendations as well as upcoming GMC requirements for trainers.

References

Setting Off on the Right Foot: The Effectiveness of an Interactive Module as an Induction to the Acute Medical Unit

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Aim

Many students and doctors feel unprepared to start work in an acute medical environment. This study involved the creation of an interactive, online induction module for students and doctors starting on the acute medical unit in a large teaching hospital. The research aims to evaluate the effectiveness of the module on acquisition of knowledge, change in behaviour and ultimately benefit to patients.

Methods

The online module was designed as a combination of text, animation and video to explain the unit, including the layout, individual roles and safe prescribing. A multi-professional group reviewed the module and completed an online evaluation. Several participants were interviewed. Key themes were identified from the evaluation and interview transcripts, in addition to the presentation of descriptive statistics from the survey. Results were mapped to Kirkpatrick’s hierarchy of evaluation for health professional education.

Outcomes / Results

Six major themes were identified: The module increases confidence, develops teamwork, overcomes previous lack of information, is transferable for other health professionals, allows better preparation, and above all is beneficial to patients. Other moderately occurring themes were identified.

Findings are consistent with literature that shows patient safety and experience is improved from changes to organisational practice, and learning opportunities for individuals. Students and staff previously experienced anxiety and uncertainty starting on the acute medical unit, but were highly satisfied with the module, its relevance, ability to change practice on the unit, and ultimately its perceived beneficial effect on patient care.

Conclusion

The module is an effective way to provide induction in the fast turnover of junior medical workforce, previously notoriously difficult to accomplish. It achieves a change in organisational practice (Level 4a, Kirkpatrick’s hierarchy) with a firm belief that it will benefit patient care (Level 4b). There is future potential and desire for its development in other clinical settings and as a resource for nursing staff/students.

References


Simulation in Acute Medicine: A Novel Multi-Disciplinary Team Training Programme Mapped to the UK Core Medical Training Curriculum

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Aim

Simulation-based medical education (SBME) is increasingly used in healthcare to improve training, quality of care and patient safety\(^1\). Although integration of SBME into the postgraduate educational curriculum is thought to be a key feature for its effective use\(^2\), there is a relative dearth of SBME in Acute Medicine. We have designed and implemented a novel multi-disciplinary high-fidelity simulation programme in Acute Medicine at the Royal Infirmary of Edinburgh (RIE), mapped to the core medical training (CMT) curriculum.\(^3\) Our aim is to improve management of acute medical emergencies and patient safety by providing a departmental MDT based SBME programme.

Methods

MDT based simulation sessions (comprising of three clinical scenarios) are delivered on a monthly basis. Sessions are delivered by trained faculty members in the simulation suite at RIE. Twelve scenarios encompass all four “Emergency” and the “Top 20 Presentations” in the CMT Curriculum\(^3\), with learning outcomes mapped to specified competencies\(^3\). Post session feedback questionnaires were developed to assess immediate benefit and long-term application of learning.

Outcomes / Results

Feedback was gathered from each simulation session. All reported:

1. Increased confidence (measured on a 10-point Lickert scale) in managing major haemorrhage (mean increase of 2.8), sepsis (mean increase of 1.8), and hypoglycaemia (mean increase of 2.0)
2. Agreement of the value of the programme as part of their learning, demonstrated in figure 1.
3. Key Learning Points that tied in with CMT curriculum outcomes, detailed in figure 2.

Conclusion

Provisional analysis shows that this programme has improved teamwork and confidence in managing acute emergencies. Future plans include evaluating the application of SBME learning to clinical practice, extending the sessions to involve technical and non-technical skills and potentially integrating the programme into CMT on a wider scale.

References:

The #tweetorial: Using Twitter as a teaching tool for medical undergraduates

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Aim
Recent years have seen a paradigm shift in the way medical education is delivered, with social media emerging as a fresh contender within its arsenal. In keeping with the principles of the #FOAMed (‘Free Open Access Medical Education’) movement, Twitter in particular has promise in revamping conventional Socratic pedagogy by bringing with it novel means of mobile learner discussion and real-time feedback. Hence, we held a series of online ‘tweetorials’ to elucidate Twitter’s role in the delivery of medical education to undergraduates.

Methods
A series of hour-long twitter-based tutorials, or ‘tweetorials’ were run from a single Twitter account (@medfinalsrev). This account was established in October 2013 by a graduating medical student and as of March 2015 has over 1900 followers. These ‘tweetorials’ were led by experienced clinicians and spanned a range of medical specialties including acute medicine, cardiology, gastroenterology and respiratory medicine. ‘Tweetorials’ were held regularly on a weekly basis and structured around common medical presentations, with ample opportunity for students to interject with questions and suggestions. All tweets relevant to the ‘tweetorials’ were downloaded from the twitter website (6 March 2015) and data analyzed in Microsoft Excel via Twitter analytics; additional data on impact was obtained via TweetReach.

Outcomes / Results
199 primary tweets from the @medfinalsrev account were noted since the introduction of the ‘tweetorials’. 177 interactions were noted from other users, including replies, retweets (RTs) and favourites. Impact was calculated by TweetReach data: 3,233 accounts were reached with a total of 11,414 impressions attributable to the ‘tweetorials’.

Conclusion
Twitter’s user-friendly interface coupled with its accessibility has allowed medical students access to mobile medical education outside of regular confines; ‘tweetorials’ have in turn shown their potential as a tool in medical education and robust academic discussion. As social media continues to establish its foothold in our lives, there is an opportunity to further develop and refine these ‘tweetorials’ in an aim to foster lateral thinking and academic discourse amongst medical students and the multi-disciplinary team.
The Trainees Voice - AIM Trainee Survey 2015

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Aim

To identify how happy trainees are with their Acute Internal Medical (AIM) training and identify any training or curriculum issues that we could relay back to Society for Acute Medicine (SAM) Council and Specialist Advisory Committee (SAC).

Methods

All AIM trainees were invited to participate in an online survey via ‘Survey Monkey’ through SAM membership, their training programme directors (TPDs) and Twitter [1,2]. Survey questions focused on the AIM curriculum including specialist skills, ultrasound, practical procedures and on call commitment. [3] Trainees were also asked how we could promote our specialty.

Outcomes / Results

101 trainees responded. 55.6% of trainees were very happy or happy with their training, 23.3% felt neutral and 19.2% of trainees felt unhappy or very unhappy with their training. 77.8% of trainees enjoyed the variety of each day (figure 1), while 55.6% of trainees stated patient flow difficulties were their least favourite part of training (figure 2). 55% of trainees are expected to cover rota gaps more than non-AIM trainees.

Other selected results:

- The top three procedures trainees were struggling to get signed off were knee aspiration (41.6%), temporary cardiac pacing (79.8%) and Sengstaken-Blakemore tube insertion (87.6%).

- 20.2% of AIM trainees are taking part in a Diploma of Medical Education.

- 54.2% of trainees struggle to get time off for specialist skill and/or admin.

- 82.3% of trainees felt that some form of ultrasound should be a mandatory part of training.

- 82.1% of trainees recommend AIM as a career choice.

Conclusion

Over half the trainees are very happy or happy with their training and a huge majority would recommend AIM as a career. Trainees enjoyed the variety and managing patients of all ages, and disliked patient flow difficulties and lack of respect from other specialties. There was much emphasis on the need to promote AIM as a specialty.

References


[3] Joint Royal College of Physicians Training Board. Specialty training curriculum for acute internal medicine August 2009 (Amendments made August