Aim:

Non-Invasive Ventilation (NIV) reduces mortality in decompensated COPD by up to 50%\(^1\). Variability was observed in management of patients requiring NIV. Respiratory consultants at our hospital are not always available for 24/7 specialist advice. The aim of this programme was to improve NIV management using education and algorithm guidance.

Methods:

A quantitative questionnaire and audit were completed to assess medical and nursing staff knowledge, confidence and current NIV practice. An education programme and an algorithm guiding management (Figure 1) were developed and taught in small group theoretical and practical sessions, then the questionnaire and audit repeated.

Results:

NIV was initiated outside normal working hours in 70% of cases. The questionnaire revealed a low average baseline confidence of 3/10 for FY2, GP Specialty Trainee and Specialty Registrar medics, improving to 7.5/10 after the intervention using a numerical scale. Participants showed an improvement in scores relating to indications and contraindications for NIV. The audit cycle showed that compared with pre-education, time on NIV decreased (19.3 to 10.6 hours), time to Arterial Blood Gas (ABG) improvement decreased (5.7 to 2 hours) and NIV titration improved (0 to 1 setting change in the first 4 hours) in the 11 patients audited.

Conclusions:

Focused education and algorithm guidance can improve the management of patients requiring acute NIV. Improved staff knowledge, confidence and guidance are associated with reduced time on NIV and time to ABG improvement. NHS Learnpro modules have been developed to provide ongoing accessible education.

Developing an e-logbook for acute medical trainees

Introduction

Since the modernisation of medical careers and the Tooke report there has been a requirement for greater transparency in how we regulate and monitor the standards of doctors and trainees\(^1\).

The Acute Internal Medicine (AIM) curriculum requires higher specialty trainees (HST) to have seen at least 1250 Acute take patients and 300 Ambulatory patients before CCT\(^2\).

To be able to meet this aim, trainees are required to maintain a personal logbook of clinical encounters\(^3\).

Creating a secure patient logbook can be challenging for trainees and Hospital Trusts ensuring they adhere to data governance protection rules.

Objective

At East Surrey Hospital (ESH) we set out to design a simple but comprehensive e-logbook, which was fully integrated with our Patient Tracking System (PTS).

The e-logbook was designed to be easy to use, capture all patients seen by trainees during their placement and produce a data subset, which fulfilled requirements for the AIM curriculum and data governance.

The program has a simple user interface and the ability to collate data instantly and accurately (Fig. 1).

Discussion

Hospitals employ multiple systems to manage patient-care, including integrated electronic patient data systems. It is important that the needs of trainees are included when designing such systems to ensure that training is central to acute medical care.

We have demonstrated that with a minor change to our patient tracking system an invaluable resource for trainees can be created and ensures data governance rules are not breached.
Title: Does simulated learning have a place in modern post graduate medical education? The Acute Medic's story

Category: Education

Author: Vera Nina Gotz, Royal Preston Hospital
Konstantinos Arfanis

Co-Authors: Vera Nina Gotz¹, Konstantinos Arfanis²
¹Royal Preston Hospital, ²Lancaster Patient Safety Research Unit

AIM:

Safe clinical care depends on the experience and clinical competency of ‘frontline’ clinical staff. Traditionally medical trainees have developed their skills ‘on the job’. Simulated learning is a new emerging tool to enhance learning in a safe and controlled environment. Indeed, in his annual report 2009 the Chief Medical Officer is pleading for incorporation of simulation into post-graduate medical curricula as a mean of enhancing training. Given the increasing need for trainees to achieve their competencies within the 48-hour European Working Time Directive, we investigate simulation as a learning tool at postgraduate medical specialty trainee level.

METHOD:

We recruited Acute Medicine Registrars in the North Western Deanery (9 participants, ST3 to ST6). Participants were asked to complete a 20-minute high-fidelity simulation on an acutely unwell patient and to complete pre- and post-simulation questionnaires followed by a focus group. The latter were used to examine opinions on the advantages simulated learning has, the role ‘soft skills’ play in patient safety and how simulation can be used to enhance delivery of the Acute Medicine Curriculum (AIM 2012). Data from the focus groups was analyzed using a grounded theory approach. The questionnaires were analyzed using SPSS 19.

RESULTS:

Participants agreed that simulated learning is beneficial to medical trainees. Simulation allows trainees to develop their skills in a safe, risk-free environment and offers exposure to conditions and tasks that are otherwise not commonly encountered. Specific curriculum competencies mentioned included communication, team working, decision making, prioritization of tasks, patient safety, safe prescribing, and all 'emergency presentations' with associated 'top 20 common medical presentations'.

CONCLUSION:

High-fidelity simulation allows Acute Medicine trainees to develop skills in line with the AIM curriculum 2012 in safe and stress-free environment.
Title: Improving End of Life Care (EOLC) in an Emergency Assessment Unit (EAU) in recognition that care doesn't stop at the moment of death

Category: Education

Author: Ann Wood, Salford Royal Foundation Trust
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AIM

It was recognised that neither the environment of the EAU, nor the predominant skills possessed by staff were conducive to providing exemplary EOLC. It was also recognised that EOLC does not stop at the moment of death. This abstract summarises some of the work taking place on EAU to improve EOLC.

METHOD

A Staff Nurse from EAU was seconded to the Bereavement Team for three months, focusing on the implementation of a number of initiatives, including;

- Care after death policy
- Dignity in death symbol
- Care after death checklist (ensuring families are given options, family members to have photographs, a handprint, lock of hair, donation from their deceased relative as a memory)
- Educating and cascading best practice
- Supporting colleagues in provision of all aspects of end of life care.

OUTCOMES

A marked and quantifiable improvement in EOLC delivered on the EAU has been confirmed by positive feedback from families and the coroner.

Feedback was garnered from nurses utilising a questionnaire, key findings include;

- 70% of nurses felt that the quality of EOLC delivered has improved
- 100% of nurses felt more confident in caring for a dying patient and their relatives.

CONCLUSION

The importance of EOLC and its effective delivery has been recognised as an essential and practical component of acute nursing activity. The care and compassion utilised during EOLC is now viewed as an extension of and constituent part of the care delivered to all patients. By increasing each individual nurse’s awareness and skills, effective and compassionate EOLC can be delivered in the acute environment of the EAU.
Aims

Serious Incident (SI) reporting on our Acute Assessment Unit (AAU) identified delays in the recognition, early assessment and management of septic patients. Multidisciplinary simulation training was initiated to address the issue.

We aimed to:

· Improve staff’s knowledge and confidence in recognising and treating a septic patient
· Improve team communication
· Reduce the incidence of ‘Failure to Rescue’ SIs on AAU

Methods

A sepsis scenario was developed by the AAU and patient safety teams. Starting in March 2013, each week two nurses and a junior doctor from AAU participated in the scenario on the ward. A Laerdel SimMan was used to run the mid-fidelity simulation in-situ. Simulation trained faculty ran and debriefed the session ensuring key learning objectives were covered. 54 members of staff completed the training.

Results

See Table 1 and Table 2 attached. Free text entries from questionnaires indicated that participants identified learning around communication, teamwork, and the recognition and management of sepsis. Analysing local SI data, from July to December 2012 there were five SIs on AAU related to failure to identify, escalate or rescue the unwell patient. From January to June 2013, there were none.

Conclusion

We used mid-fidelity, in-situ simulation to address the multidisciplinary learning needs identified from our own patient data, whilst working within the current financial and staffing constraints.

Staff feedback has been overwhelmingly positive, and most importantly, there have been both educational and patient safety benefits from this project.
AIM

Non Invasive Ventilation (NIV) use is of critical importance in the management of Acidotic Type 2 Respiratory Failure in the Acute Medical Unit (AMU), usually obviating the need for intubation and mechanical ventilation. The AMU is staffed out of hours by a team of Junior Doctors in Ireland, including interns (FY1), senior house officers (SHOs), (FY2-ST2), and registrars/ specialist registrars (ST3+). The purpose of this study was to determine the knowledge base of these groups in the use of NIV under the following headings:

- Indications
- Starting Pressures
- When to re-evaluate Pressures
- Use of oxygen with NIV
- Complications of NIV
- Exclusion criteria for NIV

METHODS

A questionnaire was administered to these groups of doctors in two major teaching hospitals to complete and results tabulated below.
OUTCOMES/ RESULTS

The table below indicates number (percentage) with correct outcome.

<table>
<thead>
<tr>
<th>Question</th>
<th>Medical Specialist Registrar/ Registrar (n = 32)</th>
<th>Medical SHO (n = 62)</th>
<th>Medical Intern (n = 76)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indications for starting NIV</td>
<td>31 (96.9%)</td>
<td>55 (88.7%)</td>
<td>50 (65.7%)</td>
</tr>
<tr>
<td>Starting pressures</td>
<td>30 (93.7%)</td>
<td>52 (83.9%)</td>
<td>38 (50.0%)</td>
</tr>
<tr>
<td>When to escalate pressures/ re-evaluate</td>
<td>31 (96.9%)</td>
<td>53 (85.5%)</td>
<td>44 (57.9%)</td>
</tr>
<tr>
<td>Use of oxygen with NIV</td>
<td>30 (93.7%)</td>
<td>48 (77.4%)</td>
<td>42 (55.3%)</td>
</tr>
<tr>
<td>Complications of NIV</td>
<td>28 (87.5%)</td>
<td>47 (75.8%)</td>
<td>48 (63.2%)</td>
</tr>
<tr>
<td>Exclusion criteria</td>
<td>28 (87.5%)</td>
<td>42 (67.7%)</td>
<td>34 (44.7%)</td>
</tr>
</tbody>
</table>

CONCLUSION

NIV theory and practice is not often covered in depth in core medical textbooks, yet it’s application in the emergency setting is usually lifesaving. The results show the senior decision maker and initiator of NIV (Registrar/ Specialist Registrar) knowledge is reassuring. However more junior staff, particularly those who have just completed medical school, would benefit from more focussed learning and hands on experience in workshops, which we have now developed in the AMU as a result.
AIM:

We have previously trialled a method of collaborative working where junior and senior trainees work in ‘tandem’. The educational value for FY1 training has previously been evaluated\(^1\). The current study aims to evaluate the impact on registrar training and reevaluate the impact on FY training.

METHODS:

A higher speciality trainee (Medical Registrar) and FY1 doctor attend the patients simultaneously (in tandem). One doctor takes the lead with history and examination whilst the other documents in the notes, completes medication chart and requests investigations. These roles are alternated. The management plan is formulated together.

When the junior leads, immediate feedback is provided. When the senior leads, juniors benefit from observing the senior and taking part in formulating management plans.

RESULTS

19 anonymous questionnaires were returned by FY1s and 12 by registrars.

The FY1 doctors felt they were examining more critically ill patients, receiving useful feedback, gaining more practical experience and were able to complete work place based assessments. However they felt that the quality of tandem clerking was highly dependent on the interest of the registrar.

Registrars’ feedback generally pointed towards benefit for FY1s but their opinions were equivocal for their own learning needs apart from gaining leadership and teaching skills.

CONCLUSION

Tandem clerking is certainly enjoyed by both groups and enhances training predominantly for junior trainees. This education may prove beneficial when they clerk patients independently on other on call shifts. Attempts should now be made to assess the effect on patient care and flow through an assessment unit.

REFERENCES:

Aims

Junior doctors start their foundation years with variable teaching experience. The GMC’s Good Medical Practice guidelines state that all doctors must develop the skills, attitudes and practices of a competent teacher. This is illustrated in core medical training applications where candidates are required to undergo “formal training in teaching methods lasting between five and twenty days” to score the maximum points. This is somewhere between the usual short courses that many doctors attend, but less than a formal postgraduate diploma lasting over a month. We decided to close the gap and design our own intermediate length modular course on teaching methods for foundation doctors.

Methods

We designed a course equivalent to 5 days with the time divided between 5 contact sessions, assessment and portfolio. The course is delivered at Milton Keynes Hospital making it accessible to trainees.

Outcomes

14 participants registered for the course, with 10 completing the necessary sessions. They are currently compiling their portfolios for assessment. Feedback has been very positive, with current data revealing an average of 4/5 rating for both inspiration and increased confidence. Many teaching sessions for the new F1’s induction have been generated secondary to this course.

Conclusion

There is demand for local, accessible teaching courses for trainees as demonstrated by our course. This has both motivated and improved confidence to teach at a junior level. Given the success, the course will run again in the autumn, with attendance and completed portfolio likely to attract 15 credits from the University of Bedford.
Title: The Yorkshire Simulation Training Survey  
Category: Education  
Author: Adam Burns, Mid Yorkshire Hospitals NHS Trust  
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Aims:  
The Yorkshire Simulation Training Survey aimed to sample the training experiences of acute medicine specialist trainees within the Health Education Yorkshire region.

Methods:  
An online survey was produced using the SurveyMonkey® survey engine. All trainees within the region were contacted via e-mail and asked to complete the questionnaire. Three pages of questions relating to demographic data, technical skills and non-technical skills training were used. A mix of quantitative and qualitative data was collected incorporating Likert scales and free text responses.

Outcomes:  
Thirty registrars out of a total fifty one (58.2%) replied to the study. Seldinger chest drain and central venous catheter insertion were the most common simulation courses experienced by trainees. Candidates found cardiac temporary pacing wire and Sengstaken tube the most difficult skills to obtain training on, or perform clinically. Concerns were expressed as to a perceived risk of decline in practical skill competence without continued experience. Whole body simulation training experience was rare with only 32% of candidates receiving difficult scenario training. There was strong support for non-technical skills training with 41% of trainees strongly agreeing that it should become part of the teaching programme.

Conclusion:  
This survey demonstrates the need for improved training of low occurrence skills such as cardiac temporary pacing wire. Trainees also report significant non-technical skills development needs. Simulation training in Yorkshire could meet trainee requirements through repeated exposure to rare practical skills and whole body simulation to incorporate difficult scenarios and human factors.
AIM:

Task-Based Learning (TBL) is an educational strategy where clinical tasks serve a central focus and learning is built around them. We have employed TBL locally in our unit in undergraduate teaching. This study is aimed at exploring the undergraduate students' perceptions of TBL in order to determine its acceptability.

METHODS:

Year 3 undergraduate students from Manchester Medical School attached to our hospital were invited to take part in an electronic survey aiming to explore their perceptions of TBL. This was preceded by a pilot project to test the validity of survey tool.

OUTCOME/ RESULTS:

60 responses were received (from a total of 90 students). An overwhelming majority of the students, who responded, felt very positively about TBL. 90% (54/60) students felt that TBL gave them a sense of belonging to the medical team. 95% (57/60) saw TBL as strategy providing opportunity for action and reflection. 94.9% (56/60) perceived TBL to be helpful in putting learning into its real life perspective. 73% (43/60) felt that they contributed to smooth running of the unit and their contributions to the unit were valued. 76% (46/60) students felt that TBL was better than didactic teaching and enabled them to acquire right set of knowledge, skills and attitudes.

CONCLUSION:

There is a lot of evidence in literature to support that TBL is an effective, efficient and educationally sound strategy. Our study shows that it is perceived as a very useful mode of instruction by undergraduate medical students attached to acute medical firm.
REFERENCES:


What do the waves mean?: Teaching telemetry to nurses on the AMU

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Claire Regan
Sian Davies
Natalie Walker

BACKGROUND:

Telemetry, the monitoring of patients electro-physiologic state, is a hallmark piece of equipment on the AMU. It provides ongoing 3 and 5 lead views of the patient's ECG during their stay on the AMU. It is manned by competent practitioners on each shift whom are able to respond to changes in rate and rhythm and whom can recognize life threatening patterns as defined in the Resuscitation Council's ALS algorithm. Or is it?

Nursing shift leaders report that they feel under-qualified, underprepared, and unsure about the telemetry model. On our AMU of the 8 shift leaders, only three had done an ALS course, and 1 had received other/formal teaching on electrocardiography.

At UHSM we have a tertiary cardiology/ electrophysiology service which includes physicians, nurses, and cardiac scientists. As part of a multi-disciplinary group; we decided to create a formal education package to train nursing shift leaders on basic ECG recognition based on the ALS algorithms.

PLAN:

1. Senior nurses from the AMU team volunteered to participate in the 3 day training project
2. The volunteers would be taught the basics of cardiac electrophysiology and rhythm recognition in 60 minute taught sessions
3. Pre and Post test evaluation of electro-physiologic concepts, rhythm recognition, and practical use of the telemetry module were taught

OUTCOMES:

1. All participants reported increased awareness/ confidence in managing patients on telemetry
2. All participants felt they could more-accurately assess and report abnormalities in ECG patterns on the AMU
3. Nurses, doctors, and allied health professionals worked collaboratively to address a problem in patient care using local expertise and experience