An Echocardiography Training Programme for Acute Medicine Trainees

Nadia Short
St Thomas’ Hospital
Professor John Chambers
Dr Ronak Rajani
Miss Kelly Victor
Dr Sal Kabir

Aims:
Guy’s and St Thomas’ Hospitals designed a course and accreditation specifically for doctors looking after acutely unwell medical patients. It is called Focussed Acute Medicine Echocardiography (FAME).

Method:
FAME certification consists of 3 stages¹:
Stage 1:  One day course (which includes lectures, practical, seminars, test and reporting session with real clinical cases imaging)
Stage 2:   12 months consolidation to collect 50 log book cases
Stage 3:   Formal exam assessment consisting of 10 clips for reporting in one hour using the FAME template – see Figure 1. Candidates receive outright fail for any potentially serious reporting errors.

Results:
Popularity of the course means it now runs bi-annually using multi-specialty faculty. The Intensive Care Society has recently acknowledged FAME certification. (We are in the process of seeking similar recognition from the Acute Medicine).

Conclusion/Discussion:
There is well established evidence for the value of echocardiography in acutely ill patients but acute physicians who choose echo as their specialist procedural skill have found it difficult to get trained and certified. Committed trainees attempted the BSE’s accreditation² leading to conflicts outlined in Table 1.

Comparison of BSE and FAME Certification for Transthoracic Echocardiography. *Most important tick box on the FAME report is the recognising need for BSE study.

<table>
<thead>
<tr>
<th></th>
<th>BSE certification</th>
<th>FAME certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed for needs of:</td>
<td>Cardiologists and cardiac technicians</td>
<td>Acute Medicine</td>
</tr>
<tr>
<td>Log book case requirements</td>
<td>250 in 24 months</td>
<td>50 in 12 months</td>
</tr>
<tr>
<td>Minimum Standard Study time for acutely unwell</td>
<td>40-45 mins</td>
<td>10 mins</td>
</tr>
<tr>
<td>Limitations</td>
<td>Provides the back up full study</td>
<td>Recommends escalating to a full BSE study if/when required*</td>
</tr>
<tr>
<td>Commitment</td>
<td>Echo clinics throughout career</td>
<td>Any acute medicine post including ITU³</td>
</tr>
<tr>
<td>Report in acute setting</td>
<td>BSE minimum standard too detailed</td>
<td>Tick box template - essential information relevant</td>
</tr>
<tr>
<td>Training resources</td>
<td>Onus on cardiology</td>
<td>Collaborative: acute medicine, ITU and cardiology</td>
</tr>
</tbody>
</table>

Continuous professional development, as with any procedural skill is important. Participation in clinical governance, second opinion studies, monitoring and quality assurance needs the Acute Medicine Unit to work collaboratively with cardiology departments benefitting patients.

References:
Debriefing Post Adult Cardiac Arrest at the North Middlesex University Hospital

Louise Ma
Royal Free Hospital, London
Michael Kim
Clare Morkane
Eleanor Williams
Sharon King
Anne Yardumian

Aim

Healthcare professionals often experience stress during and after the management of cardiac arrests, especially amongst the junior staff.¹ This can lead to poor understanding of cardiac arrest management, resulting in poor future performance. Human factors and teamwork are known to improve with debriefing.²,³ We aimed to provide debrief sessions after adult cardiac arrests to facilitate learning and improve confidence.

Methods

An initial questionnaire was sent to all doctors and nurses in October 2012 to assess their level of confidence and understanding in managing adult cardiac arrests. In November 2012, a 17-point debrief toolkit was designed and made available on all resuscitation trolleys. The toolkit highlighted technical and human factors for discussion, and was used to guide debriefings. In July 2013, a repeat questionnaire was taken to assess change in confidence levels and understanding.

Outcomes/Results

The initial questionnaire showed that 28% of staff (22/80) felt completely competent in performing advanced life support (ALS), and 53% (42/80) felt stressed afterwards. 24% (19/80) had attended a debrief session before, and of those who had not, 82% (50/61) would want it if offered. Due to practical reasons, not all cardiac arrests were debriefed. However, majority of staff ‘learnt a lot’ from debriefs (24/35, 69%) compared to staff who did not attend (18/37, 49%). Moreover, staff ‘learnt a lot’ about the chain of events that occurred during cardiac arrests after attending debriefings (27/35, 77%) compared to those who did not (22/37, 59%). All staff who did not attend debrief sessions would attend in the future if offered.

Conclusion

Not everyone attended debrief sessions for a number of practical reasons. However, we have shown a need for debriefings and our responses to this project were positive, particularly among the junior staff who were keen to use debriefings as an opportunity to learn and gain confidence.

References:

Foundation Year Doctors' perceptions of stressors during high fidelity simulation training and their impact on learning

Rathai Anandanadesan
Imperial College Hospitals NHS Trust
Anthony McKay

AIMS:
High fidelity simulation (HFS) has been praised for its role in encouraging teamwork, leadership, and confidence. However, HFS involving emergency scenarios can be a stressful experience for some individuals that increases anxiety and impacts on learning. The aims of this study were:
1. To identify stressors during HFS
2. To understand trainees' perceptions regarding these stressors and how they affect learning during simulation training.

METHODS:
This study involved 2 groups of Foundation Year 1 (FY1) Doctors undertaking HFS training within their local Trust. Perceptions regarding stressors during simulation training and their impact on learning were explored using a pre-course questionnaire which was followed up with semi-structured group interviews that took place at the end of the simulation sessions. Responses from questionnaires and interviews were coded and organized into themes which were subsequently analysed and compared.

RESULTS:
Both groups frequently highlighted performance related factors as perceived stressors encountered during simulation training. Environmental and content related factors were also cited as potential stressors. When asked whether these stressors would assist learning during HFS, the responses between the 2 cohorts, however, were varied. Trainees in the first group felt such stressors did assist learning by creating a realistic, yet safe environment that helped develop coping strategies to deal with difficult situations. However, most of the trainees in the second group found these stressors less helpful towards learning.

CONCLUSION:
The outcomes from this study suggest both performance and environment related factors are commonly sited stressors that occur during HFS. Such stressors can assist learning by preparing trainees to deal with real life situations. However, they can also hamper learning by overwhelming participants and affecting their performance. This information, in turn, can help develop future simulation sessions that utilise these stressors to enhance learning opportunities and minimise their potential negative effects.

REFERENCES:
Immediate and sustained increases in confidence at performing six curriculum matched procedures following one day practical procedures course

Nicholas Smallwood
East Surrey Hospital
Matt Pavitt

Aim:
To assess the need for a practical procedures course for medical trainees based on core medical procedures, then design and introduce a course assessing trainee confidence pre- and post-course.

Methods:
The experience and confidence of 30 medical trainees was assessed through a 10 point, Likert-style questionnaire (1=not confident, 10=confident). A one day practical procedures course was then designed and introduced with trainee confidence assessed pre, immediately post and at 3 months to look for sustained improvements in confidence.

Outcomes/results:
The initial questionnaire of 30 trainees (10 FY2s, 11CMTs and 9 StRs) revealed marked deficiencies in previous experience and confidence across the range of procedures (table 2), even among senior trainees. The number of trainees never having performed each procedure (including in simulation) ranged from 6.7% to 33%. This equates to a total of 32 procedures never having been taught or undertaken in any form by this cohort of trainees.

13 candidates attended the pilot course. Following this, confidence increased across all six procedures, with statistically significant improvements in 3/6 (50%) immediately and 5/6 (83%) sustained at 3 months (see Fig 1 and Table 1).

Conclusion:
Practical procedures form an important part of the work of an acute physician and competence in many is expected by the beginning of Higher Specialist Training (1). Our data, in keeping with national data (2), suggests deficiencies in training and confidence at many trainee levels.

A practical procedures course can provide training in a number of different procedures during one day, and can lead to immediate and sustained improvements in candidate confidence. This may well lead to improved performance when performing these procedures in the clinical setting.

We recommend routine practical procedures training for all FY2 level doctors and above.

References:
Is the future still bright?
Zoha Khan
Central Manchester Foundation trust
Ade Morafa
Tania Syed

Aims
‘Is the future Bright?’. This was a Society of Acute Medicine (SAM) poster in 2009 based on the survey of Foundation Year 1 (FY1) doctors about their impression of Acute Medicine as a speciality. Following on, this is a comparison survey to see whether there has been any significant change in their perception of the speciality five years on.

Methods
A questionnaire based survey similar to previous was used. Hospitals were selected randomly within the Greater Manchester region. 62 FY1s responded, all with a minimum 8-10 months working experience.

Results
There is no significant change in the level of awareness about SAM (46% in 2009, 47% in 2014). There is an increase in the number of FY1s that have worked on the AMU as part of their on-calls (10% 2009, 73% 2014). Only 11% have worked on AMU as a rotation (10% 2009). There is also no significant increase in the desire of choosing Acute Medicine as a career (34% in 2009, 37% in 2014).

Conclusion
We have come a long way as a speciality. There have been new inclusions e.g. annual ‘SAM Awareness Week’ and we need to make further efforts to stimulate junior doctor’s interest in Acute Medicine as a speciality and the SAM. Introducing ‘taster weeks’ for the newly qualified doctors and publishing treatment pathways in acute medicine on our website would further increase awareness and usage. Delivering teaching sessions on ‘common AMU scenarios’ would enhance our involvement and popularity in the hospital based FY1 education programme. Creating more posts on AMU as part of the FY1 deanery tracks would increase their familiarity with the speciality and working dynamics of AMU.

So, ‘Is the future still Bright?’ From the survey it is difficult to ascertain. Will the above suggestions improve the situation? Only time will tell.
Simulation training aids development of essential procedural skills for acute medicine trainees

Ben Lovell
NHS
Nick Murch
Penny Smith

Aim
Acute medicine registrars are expected to be competent in many clinical procedures, often requiring ultrasound guidance. Achieving competency is challenging, due to the unplanned nature of the medical take, competition with other trainees to perform a procedure, and the constrictions of the European Working Time Directive leading to limited exposure to relevant pathologies. We hypothesised that simulation training provides an ideal training modality for acute medicine registrars to develop their technical skills.

Methods
We secured funding for a series of simulated procedural skills training days for London trainees in acute medicine (ST3 level and above). The content of each study day was designed with reference to the JRCPTB Acute (Internal) Medicine curriculum.

Ultrasound-guided procedures included:
- Abdominal paracentesis
- Central venous cannula insertion
- Insertion of intercostal drain

Additional procedures (indicated as ‘desirable’ rather than ‘essential’ by the curriculum) included:
- DC cardioversion and external pacing
- Knee aspiration
- Insertion of intraosseous cannulas
- Lumbar puncture

Training took place in our Simulation Centre, using simulation mannequins as ‘patients’. All usual ward equipment was available.

Outcomes/Results
- Trainees greatly valued the opportunity to undertake complex clinical procedures in a controlled and supervised environment.
- Mean score awarded for overall educational value of the training = 5.5/6
- All candidates indicated improved confidence in performing procedures
- Trainees were able to evidence their achievements by obtaining Direct Observation of Procedural Skills (DOPS) assessments (‘Practised in simulation centre’), and receiving certification of participation. These documents could be used in the trainee’s e-portfolio to attest to their commitment to training and achieving competency.

Conclusion
Acute medicine trainees are expected to become adept in numerous clinical procedures during a relatively short training period. Opportunities to develop these skills are sparse. Simulation provides an ideal training tool to demystify, describe, and develop technical abilities without patient harm. We urge other training centres to explore this innovative training method.
Aim
The Black Book (BB) Project is a trust-wide initiative transforming the culture of evidence-based medicine through innovative development of trust guidelines on acute medical conditions. It was published in August 2013 primarily to improve efficiency in patient care and promote the culture of patient safety by empowering the multiprofessional team with up-to-date information.

Methods
An initial survey performed on 50 doctors of all levels in the trust identified a need for BB. The project was implemented in 3 phases over 9 months:

1. **Phase I (Distributive Leadership):** appointment of ‘Lead Guideline Consultants’ and Specialty Registrars.
2. **Phase II (Guideline Development & Formatting):** all written guidelines standardised into logical flow-diagram format, referenced to national guidelines and appraised by all consultants and pharmacists within each department.
3. **Phase III (Publication & Dissemination):** A5 booklet produced and electronic copy available on the Intranet, and currently in planning stages for mobile website and smartphone App.

A ‘task group’ is responsible to ensure sustainability by addressing feedback and regular updating of guidelines.

Outcomes
BB received more than 500 online views within its first week of implementation, and continues to be popular especially among junior doctors. A 4-month post-implementation survey showed that 70% of 38 responders were aware of its existence, with more than 90% of users rating it a useful to very useful tool. The Cardiology section was rated most useful and majority would like more guidelines to be developed and a Smartphone App.

Conclusion
BB now has 26 essential guidelines available within one-click on the Intranet. It forms a crucial part of the induction for over 100 new FY1/2 trainees joining the trust every August. It has proven to be a valuable widely-used tool owing to engagement of key stakeholders and therefore, its effective implementation in providing evidence-based and safe care for patients.
Southend AMU Doctor Activity Survey 2013-14

Patrick Harnett
Southend Hospital
Stjohn Karssiens

Background
Southend hospital serves a population of 350,000. The AMU sees around 18 to 20,000 referrals per year. Doctors from all medical teams and all grades rotate through the AMU Rates of patient clerking by different grades of doctor appeared to vary. The survey was conducted to determine actual rates of patient clerking and amount of exposure to acute medicine from doctors of different grades.

• AIMS
  – To examine the patterns of activity for the doctors in training in the AMU
  – To determine the training content of AMU

• Method
Patient list data daily for 6 months from 1st October 2013 to 31st March 2014 was examined to determine the number of patients seen by individual doctors

• Results
  – Patient clerking’s: 8200
  – Total number of doctors in training CLERKING patients in AMU
  • GRADE No.of doctors
    – all grades 112
    – SpR 24
    – CMT1 5
    – CMT2 8
    – GPVTS 12
    – Locum SHO 9
    – FY1 35
    – FY2 18
  • Average number of patients clerked by grade per appearance on AMU:
    – GRADE average seen per shift
      – F1 - 2.84 patients
      – F2 - 4.30
      – CT1 - 3.60
      – CT2 - 4.64
      – GPVTS - 3.75
      – Locum SHO - 3.40
      – SpR - 4.42
  • 36 of 112 (32%) Doctors had less than 10 appearances on AMU
  • 18 of 112 Doctors (16%) had less than 5 appearances on AMU

• Conclusions
  • 1) Larger than expected number of doctors participating in AMU clerking.
    – Variable number of appearances poses challenges for:
    • Effective induction to AMU
    • Feedback and education
    • Continuity
    • Handover
  • 2) Rate of clerking generally lower than expected, particularly in FY1.
  • 3) Long tail of few appearances by many doctors
Data for 12 months to be reviewed to assess experience for whole year. Inappropriate tasks and interruptions minimised for acute team. Feedback clinics introduced to increase opportunity for assessment.