# Education
## *Ruth Brown*

*Introduction*

Awareness and contribution to maintaining safety is the responsibility of all staff. All staff need to have the technical knowledge and skills to provide safe care as well as the non-technical skills that contribute to minimising risk. Training for safer care is best carried out in multi-professional teams and in situ where possible to ensure validity and to promote team working.

All staff are expected to understand and know about the processes, tools and structures for promoting safety described elsewhere in the toolkit for instance incident investigation and reporting, learning from complaints and the risk register.

*Purpose*

To provide evidence and resources for teaching and learning about safety as well as material for faculty to use.

| Objective 1 | Action | Evidence and Resources |
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| **The curriculum for safety.** | Understanding the behaviours required for delivery of safe care is fundamental to minimising harm to patients. The syllabus contains a list of behaviours whilst the curriculum may describe where and how they are developed. | *The College curriculum describes many behaviours that are crucial to safe care (*the College is currently updating the safety aspects of the curriculum which will be published for 2014) <br> **College of Emergency Medicine, *Emergency Medicine Curriculum*** <br> http://www.collemergencymed.ac.uk/Training-Exams/Curriculum/default.asp <br><br> **Patient safety – a curriculum for teaching patient safety in Emergency Medicine** K Cosby, P Croskerry, Acad Emerg Med 2003 Vol 10 69-78 <br> http://onlinelibrary.wiley.com/doi/10.1197/aemj.10.1.69/pdf <br><br> **Emergency Medicine Quality Improvement and Patient Safety** Curriculum J Kelly, et al Acad. Emerg. Med. 2010; 17:e110–e129 <br> http://onlinelibrary.wiley.com/doi/10.1111/j.1553-2712.2010.00897.x/pdf <br><br> *This article is a systematic review of studies of non-technical skills and patient safety. It is a useful reference list.* <br> **Non-technical skills training to enhance patient safety: a systematic review.** M Gordon, D Darbyshire, P Baker. Medical Education Volume 46, Issue 11, pages 1042–1054, November 2012 <br> http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2923.2012.04343.x/pdf <br><br> *A very easy to read volume on human factors and it's relation to patient safety is:* <br> **Human Factors in the Healthcare Setting. A pocket Guide for Clinical Instructors. Advanced Life Support Group. Wiley-Blackwell** |

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| *continued* | | **Identifying Nontechnical Skills Associated With Safety in the Emergency Department: A Scoping Review of the Literature** L Flowerdew et al.  Annals of Emergency Medicine Volume 59, Issue 5 , Pages 386-394, May 2012<br>http://www.annemergmed.com/article/S0196-0644%2811%2901806-3/abstract |

| Objective 2 | Action | Evidence and Resources |
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| **Use of simulation to enhance safety teaching.** | Descriptions of the use of simulation to recreate hazardous patient encounters and develop team skills in reducing risk. | *The College has a selection of resources for simulation including faculty training – which can be accessed above.*<br>**College of Emergency Medicine, *Simulation course materials***<br>http://www.collemergencymed.ac.uk/Training-Exams/Training/Simulation%20Training/Simulation%20course%20materials/default.asp<br><br>*This special issue of Quality and Safety in Health Care reviewed multiple aspects of simulation – with introductory commentary on psychology and application.*<br>**Creating new realities in healthcare: the status of simulation-based training as a patient safety improvement strategy** Salas E, T Paige J, Rosen MA. BMJ Qual Saf 2013;22:449–452.<br>http://qualitysafety.bmj.com/content/22/6/449.extract<br><br>*A broad review of the use of simulation to train inpatient safety enhancing particularly the medical expert, communicator and collaborator skills.*<br>**Training and simulation for patient safety,** R Aggarwal et al Qual Saf Health Care 2010;19(Suppl 2):i34ei43. doi:10.1136/qshc.2009.038562<br>http://qualitysafety.bmj.com/content/19/Suppl_2/i34.abstract<br><br>*Use of simulation in a Paediatric Emergency Department to enhance safety focusing on attitudes and team work behaviours but recognising cultural and behavioural changes need repeated practice opportunities.*<br>**Impact of multidisciplinary simulation-based training on patient safety in a paediatric emergency department**.  M Patterson et al BMJ Quality & Safety *BMJ Qual Saf* 2013;22:383-393 doi:10.1136/bmjqs-2012-000951<br>http://www.ncbi.nlm.nih.gov/pubmed/23258388<br><br>*Further analysis of the simulation project*<br>**In situ simulation: detection of safety threats and teamwork training in a high risk emergency department.** M Patterson et al BMJ Qual Saf. 2013 Jun;22(6):468-77. doi: 10.1136/bmjqs-2012-000942<br>http://www.ncbi.nlm.nih.gov/pubmed/23258390 . |

| Objective 2 | Action | Evidence and Resources |
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| *continued* | | *This article discusses In situ simulation in a major teaching hospital.* **Unannounced in situ simulations: integrating training and clinical practice** S Walker et al. *BMJ Qual Saf* 2013;22:453-458 doi:10.1136/bmjqs-2012-000986 http://www.ncbi.nlm.nih.gov/pubmed/23211281 <br><br> *Paediatric emergency medicine has developed in-situ simulation to good effect:* **Educational and Research Implications of Portable Human Patient Simulation in Acute Care Medicine** L Kobayashi et al. Acad Emerg Med. 2008; 15:1166–1174 http://onlinelibrary.wiley.com/doi/10.1111/j.1553-2712.2008.00179.x/pdf |

| Objective 3 | Action | Evidence and Resources |
|---|---|---|
| **To understand how the effectiveness of safety education can be improved and measured** | Consolidation of learning is by reflection and building self-awareness. | *Evidence shows that experiential learning at undergraduate level can change behaviours regarding safety and error reduction.* **Teaching Medical Students About Medical Errors and Patient Safety: Evaluation of a Required Curriculum,** J Halback, L Sullivan. Acad Med. 2005; 80:600–606. http://journals.lww.com/academicmedicine/Fulltext/2005/06000/Teaching_Medical_Students_About_Medical_Errors_and.16.aspx <br><br> *This article discusses how focused training develops safety skills in medical students.* **Development and evaluation of a 3-day patient safety curriculum to advance knowledge, self-efficacy and system thinking among medical students** H Aboumatar et al. BMJ Qual Saf 2012;21:416e422. doi:10.1136/bmjqs-2011-000463 http://qualitysafety.bmj.com/content/early/2012/03/14/bmjqs-2011-000463.abstract <br><br> *Successful demonstration of simulation for acquisition of skills for medical registrar crisis resource management.* **Simulation to develop tomorrow's medical registrar** Shah, A., Carter, T., Kuwani, T. and Sharpe, R. (2013),. The Clinical Teacher, 10: 42–46. doi: 10.1111/j.1743-49 8X.2012.00598.x http://www.ncbi.nlm.nih.gov/pubmed/23294743 <br><br> *Evaluation of what is needed to ensure quality improvement and safety training is effective.* **Quality improvement in medical education: current state and future directions**.B Wong et al Medical Education, 201246: 107–119. doi: 10.1111/j.1365-2923.2011.04154.x http://cores33webs.mede.uic.edu/ipse/edresources/documents/Publications/Teaching%20Patient%20Safety/Wong_Quality%20improvement%20in%20medical%20education.pdf *What works with surgical non technical skills* |

| Objective 3 | Action | Evidence and Resources |
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| *continued* | | **Teaching non-technical skills in surgical residency: A systematic review of current approaches and outcomes**. N Dedy et al Surgery. 2013 Jun 15. pii: S0039-6060(13)00181-5. doi: 10.1016/ |

| Objective 4 | Action | Evidence and Resources |
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| **Faculty materials** | Teachers of safety should have access to material which is suitable and relevant to the learner. | *The WHO have published resources suitable for both undergraduates and multi-professional learning.*<br>**World Health Organisation,** *Patient Safety Curriculum Guide*<br>http://www.who.int/patientsafety/education/curriculum/Curriculum_Tools/en/index.html<br><br>*The Academy of Medical Royal Colleges have produced curriculum material specifically for postgraduate medical education although much is suitable for multi-professional EM teams.*<br>**Academy of Medical Royal Colleges,** *Safety Improvement*<br>http://www.institute.nhs.uk/safer_care/safer_care/patient_safety_and_improvement_guidance_for_postgraduate_medical_education.html<br><br>*This document provides guidelines for faculty development for teaching non-technical skills.*<br>**Training Faculty in Nontechnical Skill Assessment National Guidelines on Program Requirements 2013**<br>Annals of Surgery Volume 258 (2) 370-375<br>http://www.ncbi.nlm.nih.gov/pubmed/23222032<br><br>*Key publications in the development of nontechnical skills are included here:*<br>• **A universal model of diagnostic reasoning** P Croskerry 2009 Academic Medicine 84(8) 1022-1028<br>http://www.ncbi.nlm.nih.gov/pubmed/19638766<br>• **Critical thinking and reasoning in emergency medicine** P Croskerry 2009 Patient safety in Emergency Medicine (eds P Croskerry et al) Lippincott Williams and Wilkins p213-218<br>• **Beyond the organisational accident: the need for "error wisdom" on the front line** J Reason. Quality and safety in Health Care 13 (sup 2)ii28-ii33<br>http://qualitysafety.bmj.com/content/13/suppl_2/ii28.abstract<br>• **Organisational safety: Organisations and safety in health care** R L Wears Qual Saf Health Care 2004;13:ii1 doi:10.1136/qshc.2004.012732<br>• **Safety at the sharp end – a guide to non technical skills**. R Flin, P O'Connor and M Crichton Ashgate Guildford |

| Objective 4 | Action | Evidence and Resources |
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| *continued* | | *The National Patient Safety Agency (now part of NCB) has a range of resources for patient safety* http://www.nrls.npsa.nhs.uk/resources/patient-safety-topics/ <br><br> *An overview of peer reviewed articles on a number of clinical and nontechnical skills related topics.* **Making Health Care Safer** A Critical Analysis of Patient Safety Practices *Evidence Reports/Technology Assessments, No. 43* Edited by K Shojania et al http://www.ncbi.nlm.nih.gov/books/NBK26966/ |