



Patient safety and simulation based training – have we really understood the full potential of these new words?

Anne Lippert

Associate professor, consultant

Danish Institute for Medical Simulation

annlip01@heh.regionh.dk

Waking up – patient safety

- 2000 – “To Err is Human; Building a Safer Health System” *Washington, DC:National Academy Press;2000*
 - 300 patients die each day in USA because of errors in observation and treatment

Follow Up- patient safety

- **2006 – Five years after ”To Err Is Human”**
JAMA, 2005 Vol293 no.19
 - Errors in the organisation / system – not the individual
 - Patient safety is now on the agenda
 - BUT – it is a very slow process
- **Why:**
 - Complex systems like Health Care have a high risk of errors
 - It takes a change of culture and attitude to create a safety culture
 - Measuring quality improvement is difficult

A near miss !

70-80 % are the result of poor communication



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Similar work environments



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Ilcor Advisory Statement

- Education in resuscitation:
 - Train the teams that are working together
 - Use simulators
- Ref:
 - Chamberlain, Hazinski et al in
 - Resuscitation 59 (2003) 11- 43

Best Evidence Medical Education (BEME) collaboration on high fidelity simulators:

- Provides feedback
- Repetitive practice
- Curriculum integration
- Range of difficulty level
- Multiple learning strategies

Issenberg B, et al: Features and uses of high-fidelity medical simulation that lead to effective learning: A BEME systematic review. Med Teach 2005; 27:10-28

Best Evidence Medical Education (BEME) collaboration on high fidelity simulators:

- Capture clinical variation
- Controlled environment
- Individualised learning
- Defined outcomes
- Simulator validity

Issenberg B, et al: Features and uses of high-fidelity medical simulation that lead to effective learning: A BEME systematic review. Med Teach 2005; 27:10-28

Simulation based training

Must be:

- Recognisable
- Relevant
- Motivating
- Active
 - All key aspects of adult learning

Cross training

- Doctors – nurses – paramedics
 - We are trained apart, yet need to work as teams
 - Do we know each others' task?
 - Do we know each others' competencies?

Crisis Resource Management

- Closed loop communication
- Clear messages
- Clear roles and responsibilities
- Knowing one's limitations
- Knowledge sharing
- Constructive intervention
- Reevaluation and summarizing
- Mutual respect
 - Ref: ACLS provider manual. Peter Oluf Andersen





Full-scale simulation

The novice

- The situation can evolve more slowly – time to think
- Time outs are possible
- Train in context
- A link between training and clinical problems
- Building up competence

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The senior

- Experience with rare critical incidents
- The possibility to train
 - complex skills
 - problem-solving
 - complex decision making
- Discussion with peers

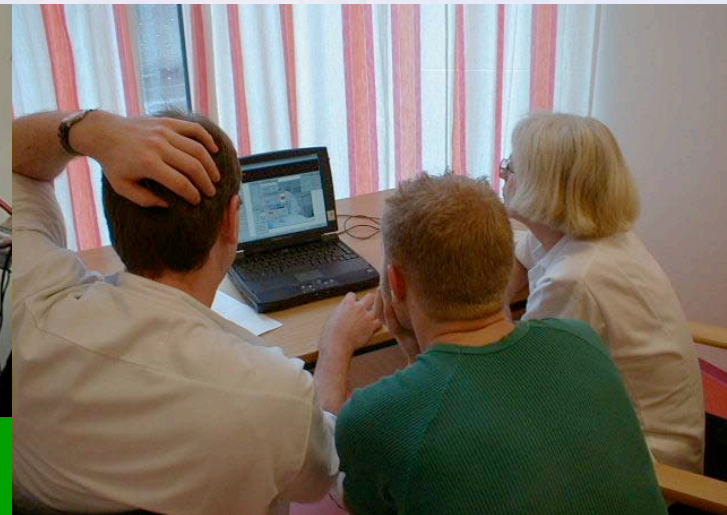
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Debriefing



- Debriefing – discussion and reflection
 - Facilitator sets the scene (structure)
 - Let the trainee analyse the situation
 - The observers provide feed back
 - Emphasise the learning points
- *Follow up – plans for the next scenario or training in clinical practice, learning contract*

A cocktail of educational methods



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Another application of simulation

- A simulated error is performed during the scenario
- Objective:
 - The following defusing / debriefing
 - How does the team react?
 - How does the team manage the situation?
 - How is the "ally" taken care of

Evaluation – “effect” of the course / education

- Do they like it?
- Do they learn?
 - theoretical knowledge
 - practical skills
 - team behaviours
- Does it affect the organisation?
- Is patient outcome improved?

(Kirkpatrick)

Best education:

- Christenson J et al: A comparison of multimedia and standard advanced cardiac life support learning. Acad Emerg Med 1998; 5:702-8
- Schwid HA, et al: Use of a computerized advanced cardiac life support simulator improves retention of advanced cardiac life support guidelines better than a textbook. Crit Care Med 1999; 27:821-4.
- Schwartz LR et al: A randomized comparison trial of case-based learning versus human patient simulation in medical student education. Acad Emerg Med 2007; 14:130-137

Train The Trainers

- Is absolutely necessary



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Train The Trainers

- Is costly



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Train The Trainers

- Is great fun



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Conclusion

To enhance patient safety we need to:

- Inform and educate all staff about errors and near misses
- Reinforce a non-blame & -shame culture
- Educate all staff in team skills
- Choose best evidence education
- Use simulation based education as some of the tools
- Educate the educators