

Designing an in situ simulation programme for a Paediatric Emergency Department

Authors:

Dr A Blackmore¹
Dr M Purva¹

Dr H Capitelli-McMahon²
Dr E Herrievan²

Institution:

1- Hull Institute for Learning and Simulation, Anlaby Road, Hull, HU3 2JZ, United Kingdom
2- Hull and East Yorkshire Hospitals NHS Trust, Anlaby Road, Hull, HU3 2 JZ, united Kingdom



Introduction:

In situ simulation is a powerful tool to improve team learning and expose latent errors in the clinical environment¹. We wanted to design a programme of in situ simulation to both train individuals to work as a team and look for latent errors within the department.

Methods:

Scenarios were scripted to require a multidisciplinary approach and would test existing departmental pathways.

We used mobile cameras and a projector to allow remote viewing and control of the manikin from an adjacent room. We invited available staff to observe.

We had good buy-in from the senior medical and nursing staff, with cover arranged to free up junior medical staff to participate.

Debriefing was performed in a structured way with good judgement² and participants were encouraged to formulate individual take home points that they could apply in future.

A report was produced following each in situ session highlighting key messages from the simulation and debrief, disseminating learning and documenting latent errors. Latent errors were graded using the NPSA risk matrix and action plans were developed.

Feedback was collected on pre and postcourse questionnaires using a 10-point Likert scale to indicate agreement with statements (1= Strongly disagree, 10= Strongly agree).

Results:

The in situ simulation sessions have been very well received by staff with positive responses to the questions "I enjoyed the session" (mean score 9), "the scenario was useful and relevant to my practice" (mean 9.5) and "I learned something that will change my practice" (mean 8.75). Discussions during the debrief allowed us to challenge shared misconceptions amongst the medical and nursing staff.

Latent errors identified within the department included:

- NG tubes stocked in a container labelled "ET suction catheters" resulting in the wrong piece of equipment being used in the scenario
- Unavailability of printed paperwork in Paeds resus relating to Paediatric sepsis
- Shared misconception that the inpatient Paediatric team wouldn't accept a child with Bronchiolitis who hadn't had a trial of bronchodilator therapy

Conclusion:

Our work in progress Paediatric ED in situ simulation programme has been well supported and well received. Keeping to basic principles of good practice when designing an in situ programme^{3,4} has been key to its initial success.

We made sure we had buy-in from stakeholders within the department and designed our learning outcomes to meet the needs of the learners and the department as a whole. Using the same rooms that equivalent real patients would be seen in allowed for increased realism for the learners but also allowed latent errors of equipment or medications to be exposed.

Using a structured approach to feedback that not only highlights the learning objectives but also gives learners a chance to raise their own learning points helps to increase engagement with the process and allows deeper understanding of the skills required to work in a team looking after an unwell child.

Production and circulation of a post simulation report has helped to demonstrate the usefulness of the programme both in terms of disseminating lessons learned and highlighting latent errors. The reports also make the lessons learned accessible to staff members who were not able to participate or observe the sessions.

References:

- 1-Fent G, Blythe J, Farooq O, Purva M In situ simulation as a tool for patient safety: a systematic review identifying how it is used and its effectiveness. *BMC Simulation and Technology Enhanced Learning* Published Online First: 09 November 2015. doi: 10.1136/bmjstel-2015-000065
- 2-Rudolph JW, Simon R, Dufresne RL, Raemer DB. There's no such thing as "nonjudgmental" debriefing: a theory and method for debriefing with good judgment. *Simulation in Healthcare*. 2006 Apr 1;11(1):49-55.
- 3-Standards Framework and Guidance, Association for Simulated Practice in Healthcare (ASPIH) Standards for Simulation-based education© 2016.
- 4-Spurr J, Gatward J, Joshi N, Carley SD. Top 10 (+ 1) tips to get started with in situ simulation in emergency and critical care departments. *Emergency Medicine Journal*. 2016 Jul 1;33(7):514-6.