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RESPONSIVE IN-SITU SIMULATION IN KIDS (RISK): IMPROVING SAFETY AND TEAMWORK FOLLOWING CLINICAL INCIDENTS

O. R. de Brett, S. Ho, S. Eisen, Y. Baki, O. Davies
University College Hospital, London, UK

Background and Context

RISK provides multi-disciplinary, in-situ simulation training in direct response to reported paediatric clinical incidents at University College Hospital, London (UCLH). The programme aims to run realistic scenarios to improve clinical systems, teamwork and patient safety.

Problem

UCLH delivers over 2000 paediatric general anaesthetics per year. The APRICOT study identified severe peri-operative events in 5.3% of children undergoing general anaesthesia (1). Incident reporting itself does not improve patient safety without reflection, investigation and reorganisation (2). RISK implements a responsive, timely and robust system to ensure learning and quality improvement from incidents.

For some, involvement in a paediatric emergency is a rare and stressful event. These simulations give the opportunity to practice in a realistic environment.

Strategy for Change

Clinical incidents are analysed. Those resulting from clinical management, human factors or system errors are identified. Simulations are developed, replicating common, rare and site-specific issues. Simulations, e.g. status epilepticus in a remote location and major haemorrhage in A&E are run in the same environment and without prior warning adding valuable realism. 'Low-fidelity' mannequins and remotely-operated tablets are used for monitoring. The faculty consists of anaesthetists, paediatricians and nurse educators, with multidisciplinary curriculum-mapped learning objectives tailored for each specialty.

Measure of Improvement

Post-scenario debriefs, led by a Consultant clinician give immediate opportunity for feedback, identifying key learning points and latent errors. Anonymised feedback is collected via QoR code, including confidence ratings, acceptability of teaching methods and key clinical and non-technical learning points. Detailed written feedback is provided for each individual for their portfolios.

Latent threats e.g. problems with operational processes or safety of clinical environment are identified and addressed at Paediatric Clinical Governance where action plans are developed and implemented. Resolution is confirmed by repeat simulation within 6 months.

Overall programme success is measured by ongoing clinical incident report analysis.

Lessons learnt

Problems identified include missing and out-of-date drugs and equipment, lack of familiarity with clinical environment and issues surrounding operational processes, e.g. issuing emergency blood. This has sparked development of an emergency paediatric intubation checklist and grab bag.

Staff feedback is extremely positive - 80% enjoyed the simulation, 71% found it realistic and 64% felt more confident after.

RISK has been improved from feedback, including warning key people in advance (Duty anaesthetist, On-call paediatric consultant, ED nurse-in-charge and outreach team) ensuring safe running of the hospital.

Message for others

RISK is a fun, novel and effective method of learning from real-life clinical incidents, allowing change in practice and process to prevent future events. Staff report excellent, positive feedback and ultimately, RISK improves our emergency paediatric care. Our methodology and approach can easily be applied by others wishing to make a simple patient safety intervention in response to clinical incidents.

References

1. Habre W et al. APRICOT Group of the European Society of Anaesthesiology Clinical Trial Network. Incidence of severe critical events in paediatric anaesthesia (APRICOT): a prospective multicentre observational study in 261 hospitals in Europe. Lancet Respir Med. 2017 May;5(5):412-425.

2. C Macrae. The problem with incident reporting. BMJ Quality and Safety 2016;25(2) 71-75.