

A national collaborative simulation project: paediatric anaesthetic emergencies

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In collaboration with nine simulation centres in the United Kingdom, we are developing a national core skills paediatric simulation course for specialist registrars (SpRs) during their paediatric anaesthetic training module. The Royal College of Anaesthetists (RCA) states: '(trainees should have) strategies and practice for the management of anaesthetic emergencies in children: loss of airway, laryngospasm, failed venous access, suxamethonium apnoea and anaphylaxis including latex allergy' (1). This is unlikely due to the limited time SpRs spend in paediatric anaesthesia, the time constraints of the European working time directive and the centralisation of paediatric services. Paediatric simulators may provide this exposure in a short time frame. High fidelity patient simulators are computer driven mannequins that mimic the anatomy, physiology and pharmacology of a vast number of different patients and pathological states. Any intervention by the learner, leads to real-time interactive changes in the patient/simulator condition. This includes airway manipulation, airway instrumentation, ventilation strategies, delivery of anaesthetic gases and delivery of intravenous fluids and drugs. In the aviation industry simulator training has enhanced safety (2); whether simulator training in medicine improves clinical performance or patient safety has yet to be proven. What is known is that simulator training improves confidence and performance when dealing with a simulated scenario for the second time and healthcare workers find simulator training both useful and enjoyable (3–6). After ethical

approval the first stage of this project involved development of five evidence based peer reviewed scenarios. An extensive literature review for each scenario was completed. Evidence based management guidelines for each of the emergencies were drawn up. After some iteration the scenarios and guidelines were endorsed by the participating centres. The next stage involves programming the simulators and planning the content and structure of the course. A pilot course will be run at one simulation centre to assess validity of the emergency scenarios.

Conclusions: This is the first time a national collaborative simulator project has been undertaken in the UK. It may be extremely useful in training for emergencies in paediatric anaesthesia. It is a model that could be adapted for simulator training in other specialities in medicine.

References

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