

Simulation Training in Paediatric Anaesthetics Improves Resident Doctor Emergency Management

Introduction

Anaesthetists in training deliver resident on-call, responding to emergencies and covering emergency theatres, with off-site consultant support. Paediatrics is a sub-speciality with challenges unique from adult anaesthetic practice in knowledge, skills and clinical decision making. Clinical exposure to paediatric anaesthetic emergencies is infrequent. This is anxiety provoking for resident doctors and has potential safety ramifications.

Simulation training enables introduction and optimisation of clinical skills in life-like environments without risk to patients. It is a well-established forum for training in technical and non-technical skills.

Potential benefit was identified for simulation training in paediatric anaesthetic emergencies, delivered within a tertiary paediatric hospital, where there was no established simulation programme running.

Method

A survey of anaesthetic trainees identified enthusiasm to engage.

Support was sought from within the Paediatric anaesthetic department for release of trainees from clinical duties.

Local agreements were formalised for room and equipment utilisation, with consideration to environmental and economic sustainability.

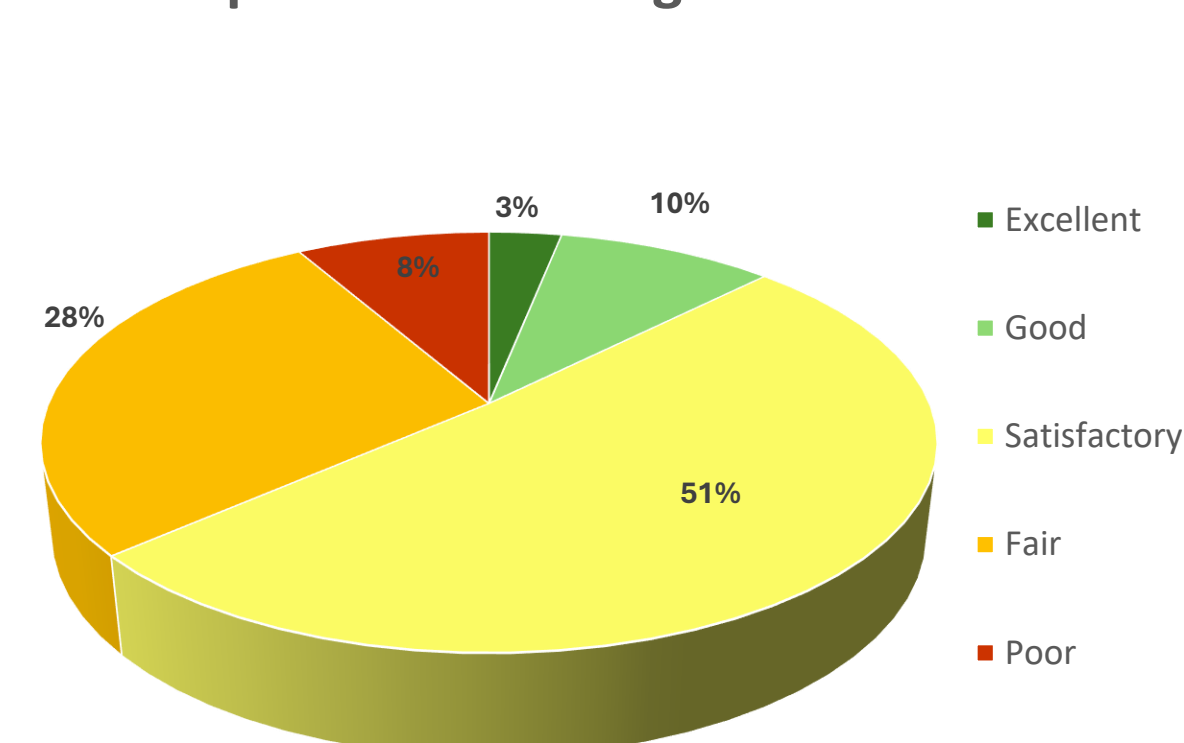
Training sessions were devised and run, covering a variety of emergency paediatric simulation scenarios, with guided debrief, reflection and discussion.

Each session, paired pre and post simulation training surveys were conducted on all candidates. Data included grade, pre and post training knowledge and confidence scores for emergency scenarios, and feedback on the training.

Objective

To improve trainee knowledge and confidence in managing paediatric anaesthetic emergencies.

Reported Knowledge Pre-Scenario

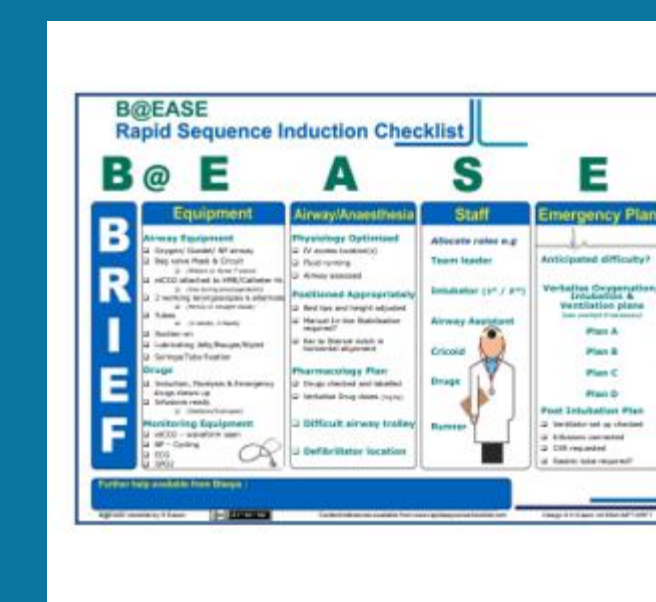
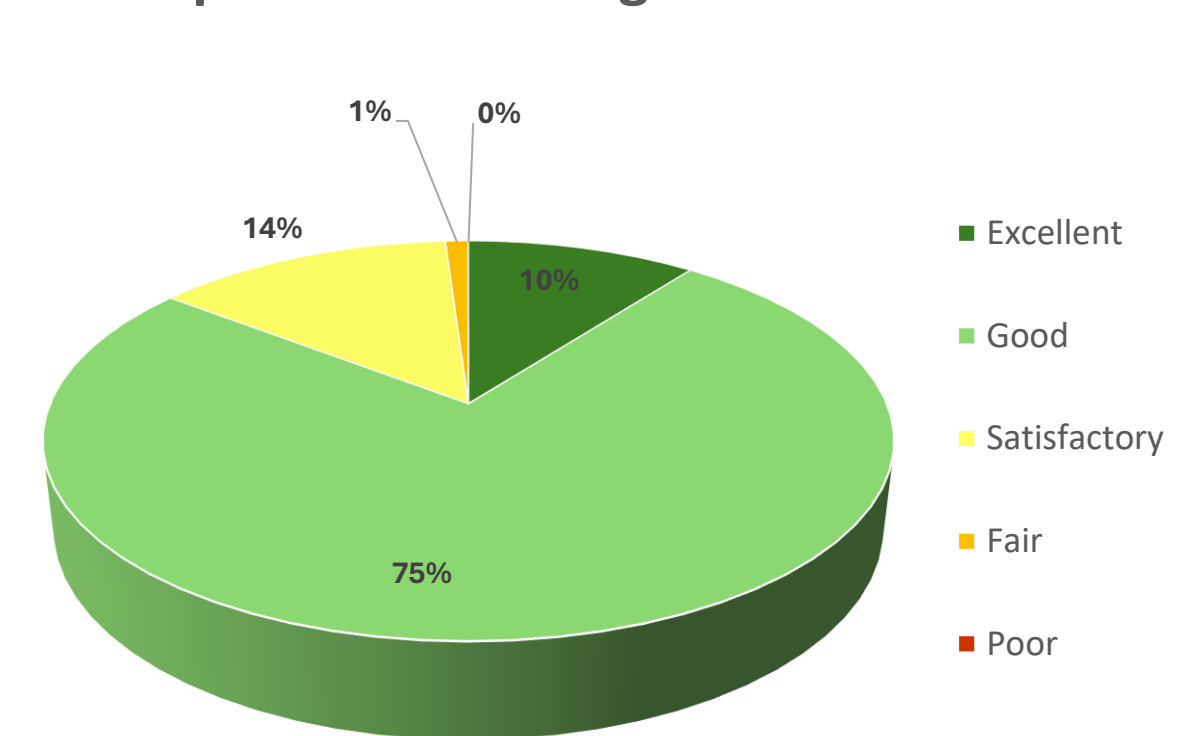


Results

Pre-training only 13% of candidates rated knowledge as good or excellent, improving to 85% post-training. Overall candidate confidence improved following every scenario.

Subjective assessment showed a clear improvement in pre and post training candidate knowledge and confidence.

Reported Knowledge Post-Scenario



Feedback comments

“Very useful session recapping common emergencies but with emphasis on paed. Very helpful and constructive.”

“More SIM would be helpful” “Excellent”



Conclusions

A clear benefit from the training was shown.

Achievable potential for further development and expansion was identified.

The considered formulation has enabled the simulation training to be integrated into the department teaching program allowing all rotating resident doctors to participate.

Potential has been created to expand to higher-fidelity simulation and include other specialities and healthcare professionals.

Changes in Reported Confidence Levels Pre - and Post-scenario

