

Evaluation of a Paediatric Consultant level skills maintenance simulation program in a regional centre.

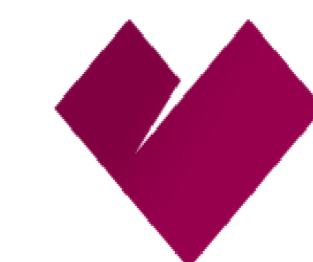


Perceived changes in the confidence of regional paediatricians following implementation of a regular Advanced Paediatric Critical Care course in regional Victoria.

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INTRODUCTION

Rural and regional paediatricians in Australia need to be competent in neonatal and paediatric resuscitations as they may be required to manage these rare events¹. Although paediatricians are trained in both neonatal and paediatric resuscitation, maintaining these vital skills can be challenging, as they may only need to manage these events a few times a year. Simulation training may assist achieving and maintain clinical competence.

The Deakin University Simulation Centre Geelong facilitated an expert-level Paediatric Simulation program for paediatricians from regional and rural Victoria. University Hospital Geelong is a regional paediatric centre with a special care nursery, paediatric ward and four co-managed paediatric ICU beds. Paediatricians may be first line in resuscitation and stabilisation before retrieval or ICU transfer. Baseline data collection showed that regional paediatricians feel confident performing a resuscitation on a child, managing bronchiolitis and paediatric seizures, however this confidence drops with increasing time interval between use. Furthermore they are confident in managing a neonatal resuscitation including intubation and ventilation. Confidence levels are reduced regarding skills such as placing a paediatric endotracheal tube, managing a severely unwell asthmatic or diabetic child and managing an end of life scenario.

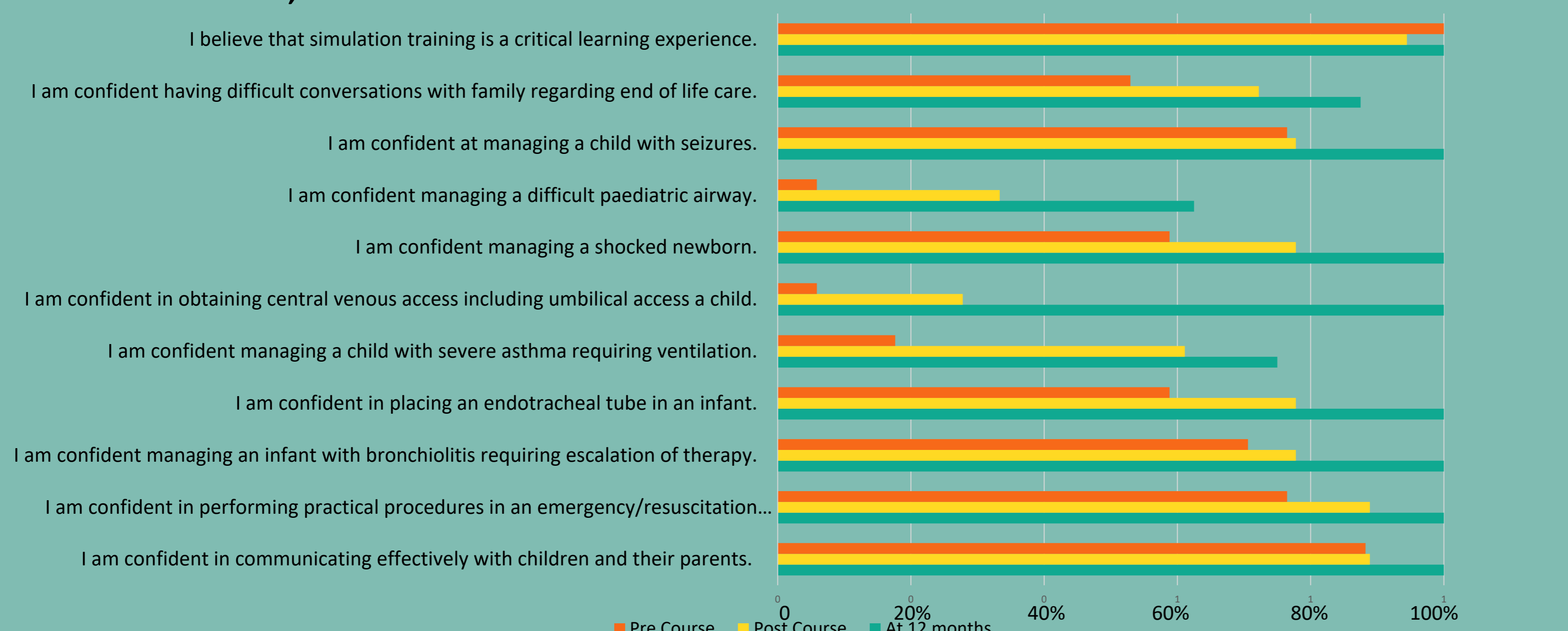
Paediatricians welcomed the opportunity to practice and maintain skills in a simulated environment. A biannual paediatric consultant simulation program was suggested and has been implemented. **The AIM of the program was to hone and achieve skill maintenance in rarely used but vital skills.**

METHODS

Baseline data was obtained regarding perceived confidence across 9 core paediatric skills. Repeat measures were taken after the first program, and then again after the biannual program had been in place for two years.

RESULTS

Percentage of respondents strongly agreeing/agreeing with statements before and after the course, and 12 months later.



DISCUSSION

Participant's confidence to manage paediatric emergencies and care for children requiring intensive care increased from pre-course to first post-course measurements – and most importantly skills were maintained in the following years. Specialist skills such as central venous access and asthma ventilation remained low confidence – as these should be the remit of intensivists in the majority of cases. These findings are similar to the results of a study by Kane, Pye and Jones (2011).



CONCLUSION

Simulation teaching is a highly effective tool to increasing and maintaining confidence in performing high level skills and managing paediatric emergencies amongst regional Paediatric consultants. This increase can be maintained with regular (biannual) attendance at simulation mornings. The results of this evaluation will have implications for paediatric simulation education delivery in regional and rural settings for skills maintenance and training

References:

- Hardy A et al. Survey of procedural and resuscitation requirements for paediatricians working in a non-tertiary centre: Implications for training. *Journal of Paediatric and Child Health*. 55 (2019) 441-445
- Lopreiato, J. O. and Sawyer, T. Simulation-Based Medical Education in Pediatrics. *Academic Pediatrics*, vol. 15, no. 2, 2015, p. 134-42.