Team simulation training to improve paediatric emergency airway care across a region.

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Objectives
To improve paediatric emergency airway management, including surgical airway procedures, across our region using multiprofessional, multidisciplinary team training.

Methods
Over three years 18 teams (220 participants) of doctors and nurses from ENT, anaesthetics, paediatrics and ED were trained on a simulation based training course. Skills stations, including animal cadaver models for tracheostomy, and hybrid simulation scenarios were used. Hospital teams were also encouraged to improve the pathway at their base hospital by looking at ‘the plan, the team, and the kit’. Strategies for change that have worked in other centres were taught.

Results
An improvement in the time taken to intubate a child during in situ simulations in both the pilot hospitals was demonstrated. Improvement in confidence (4.2 to 7.9 out of 10) and knowledge were found post course. Evidence of a change in practice was found at 2 and 6 months in the first and second cohorts to undertake the MAST course. Following course attendance five regional units have acquired specialised ENT airway equipment trolleys and undertaken local in situ simulations to test their pathway. Local airway training courses run in three of the centres.

Conclusion
Team training on the MAST course has encouraged regional hospitals to have a pre-emptive plan for paediatric airway emergencies. It has defined the essential roles of the whole team, improved individual skills through regional and local training and revealed the need for emergency equipment. A decrease in the time taken to intubate a child in an emergency has been demonstrated following this initiative.

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