

Front of Neck Access in children: Developing training and grab bags in a Tertiary UK Children's Hospital

**Birmingham Women's
and Children's
NHS Foundation Trust**

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Background

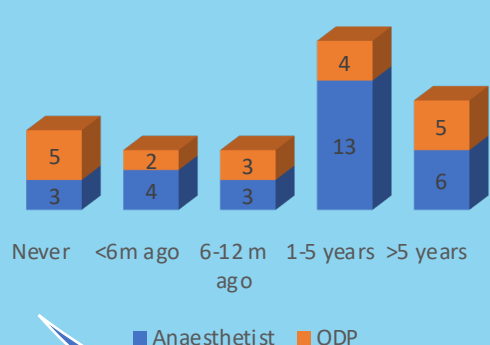
Following incidents where emergency front of neck access was performed on children within our institution, a need for standardised equipment and training in cricothyroidotomy was identified.

Here, we document our 2 year journey to instigate and maintain training in Front of Neck Access using the scalpel-bougie technique and to develop front of neck access grab bags that are age specific in Birmingham Children's Hospital, a Tertiary Children's only hospital in the UK.

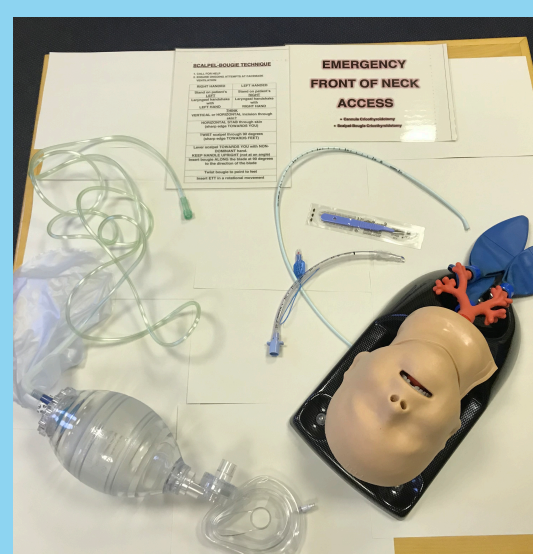
- Successful outcome from FONA requires technical and non-technical skills as well as training, a standardised approach to the technique and pre-prepared kits(1).
- NAP 4 resulted in a general shift in the preferred technique from cannula to scalpel cricothyroidotomy in adults(2).
- Current paediatric based guidelines favour the cannula approach but there have been recommendations to mirror adult guidelines (3).
- Some institutions have implemented the scalpel-bougie method their preferred technique in children's (4).

Identifying Need

- All surveyed staff would like:
- Training
 - Pre-prepared FONA packs



Starting Training



- Roaming "tea trolley":
 - Candidates shown DAS FONA video as a refresher
 - <https://das.uk.com/content/video/fona> (5)
 - Adult FONA mannequin used for practice
- Example "grab bag" reviewed – based on "Melbourne" kit (4)

Feedback

- 38 people trained:
 - All felt it was useful
 - 84% found the new kit better than existing kit.

- Suggestions
 - Colour coding
 - Age specific sections or weight/size guide
 - Artery clips
 - Preference for roaming tea trolley or drop in sessions

Second Round of Training

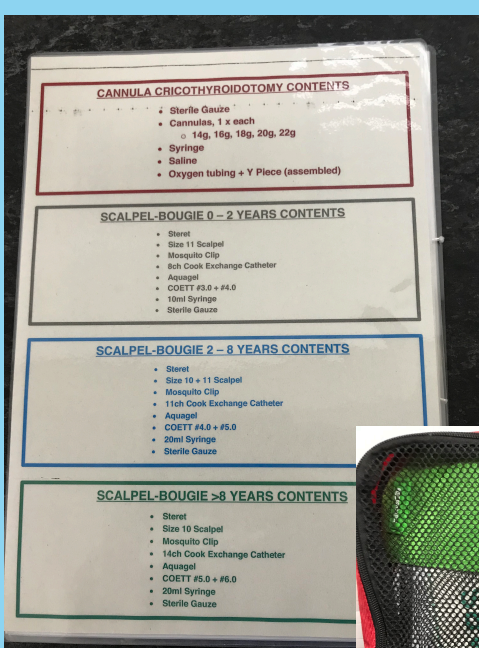
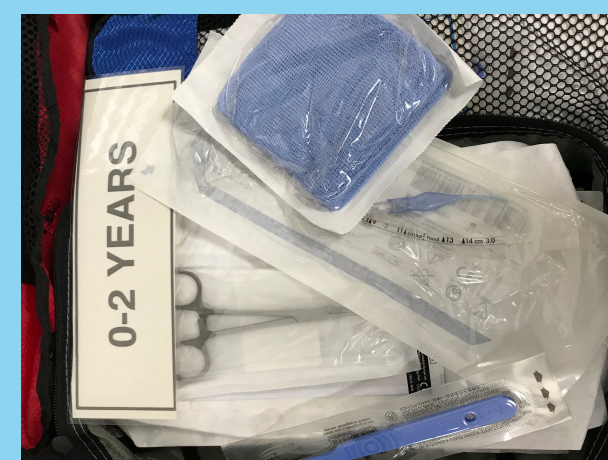
- 27 People trained
- 100% felt more confident with procedure
- 100% felt new kit was better than existing kit

Feedback and suggestions:

- Majority felt 6 monthly training was most appropriate
- Roaming "tea trolley" during training period was preferred but drop-in sessions also found to be useful

The Current Set-up

- FONA grab bags disseminated throughout theatres
- Colour coded age-range specific packs with small range of choice in each pack
- 6 monthly FONA training
 - Baton project handed over between fellows –
 - Roaming tea trolley and drop-in sessions
- Paediatric mannequin sourced
- Aiming to source or make a neonatal airway



Summary

In summary, over 2 years we have developed sustainable, rolling, 6 monthly training across specialties in our hospital in performing emergency front of neck access in children. We have also created FONA grab bags which contain essential, ages specific kit in order to reduce reduce cognitive load in crisis situations which have been tailored to the needs of our institution.

References

- 1) Greenland KB, Acott C, Seegal R et al. Emergency surgical airway in life-threatening acute airway emergencies – why are we so reluctant to do it? *Anaesth Intensive Care* 2011; 39: 578–584.
- 2) Cook TM, Woodall N, Frerk C. Major complications of airway management in the UK. Part 1: anaesthesia. *Br J Anaesth* 2011; 106: 617–63).
- 3) Weiss M, Engelhardt T. Proposal for the management of the unexpected difficult pediatric airway. *Pediatr Anesth* 2010; 20: 454– 464.).
- 4) Sabato SC, Long E. An institutional approach to the management of the 'Can't Intubate, Can't Oxygenate' emergency in children. *Pediatr Anesth* 2016; 26: 784–793
- 5) Difficult Airway Society, UK; Front of Neck Access – Training Video <https://das.uk.com/content/video/fona>



By your side