

Preparing for Obstetric Airway Emergencies through Simulation Training

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Introduction

- Failed intubation is more common in obstetrics than the general population¹
- The joint Obstetric Anaesthetists Association (OAA) and Difficult Airway Society (DAS) guidelines¹ differ from standard DAS adult protocols²
- Rehearsal of a failed intubation drill is a curriculum requirement for completion of Entrustable Professional Activity 4 of the Initial Assessment of Competence in Obstetric Anaesthesia³
- Annual emergency front-of-neck-access (eFONA) training is recommended for all anaesthetists⁴

Aim

Introduce regular obstetric airway simulation, including eFONA, for anaesthetic residents at Liverpool Women's Hospital.

Methods

A simulation session was developed:

- Scenario** Category 1 Cesarean under GA → failed intubation → "Can't Intubate, Can't Oxygenate" (CICO) → eFONA
- Part 1** Pre-op assessment, induction, application of OAA/DAS failed intubation algorithm (See fig. 1 and 4)
- Part 2** Pause → demonstration, discussion and mannikin practice of eFONA (See fig. 2 and 3)
- Evaluation** Pre- and post-session surveys assessing prior exposure, confidence and feedback

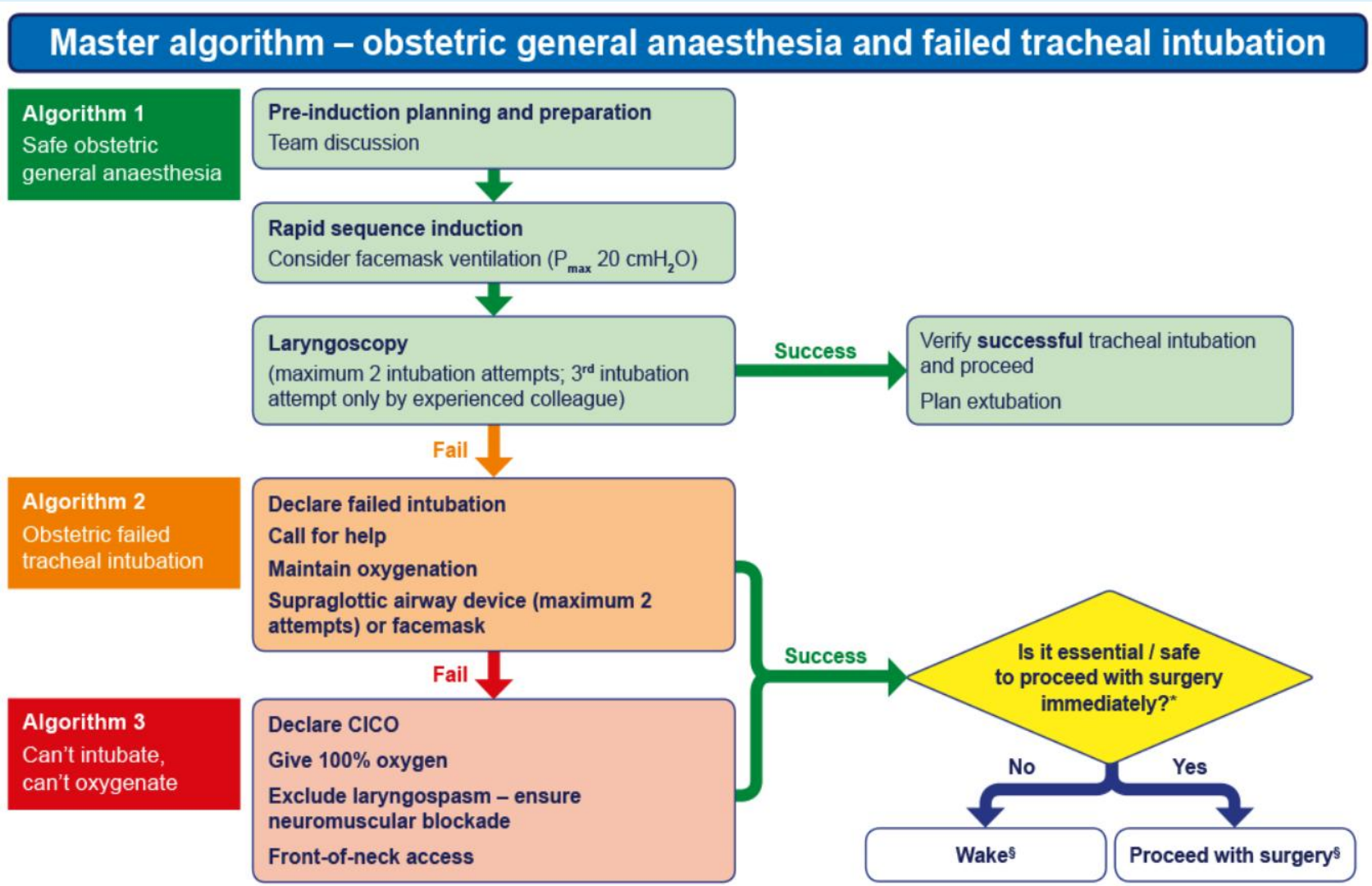


Figure 1: OAA/DAS Failed Intubation Algorithm¹

Results

- 49 anaesthetic doctors participated (CT2-ST7, SAS, clinical fellows) between January 2024 – February 2025
- 36% had not practiced a CICO scenario in the previous year - see fig. 5
- Confidence in both algorithm use and eFONA improved significantly ($p < 0.001$) – see fig. 6

When did you last practice a 'CICO' scenario?

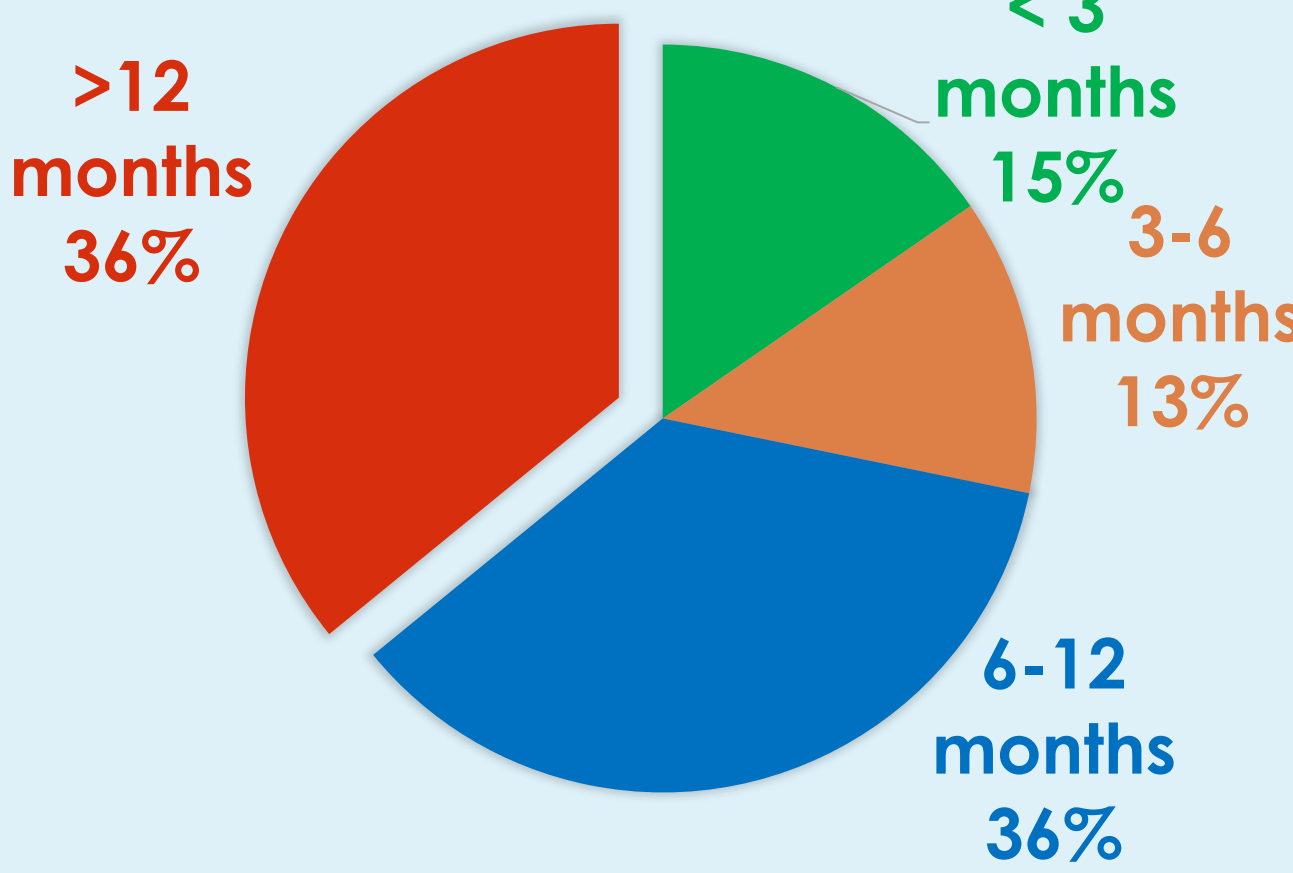
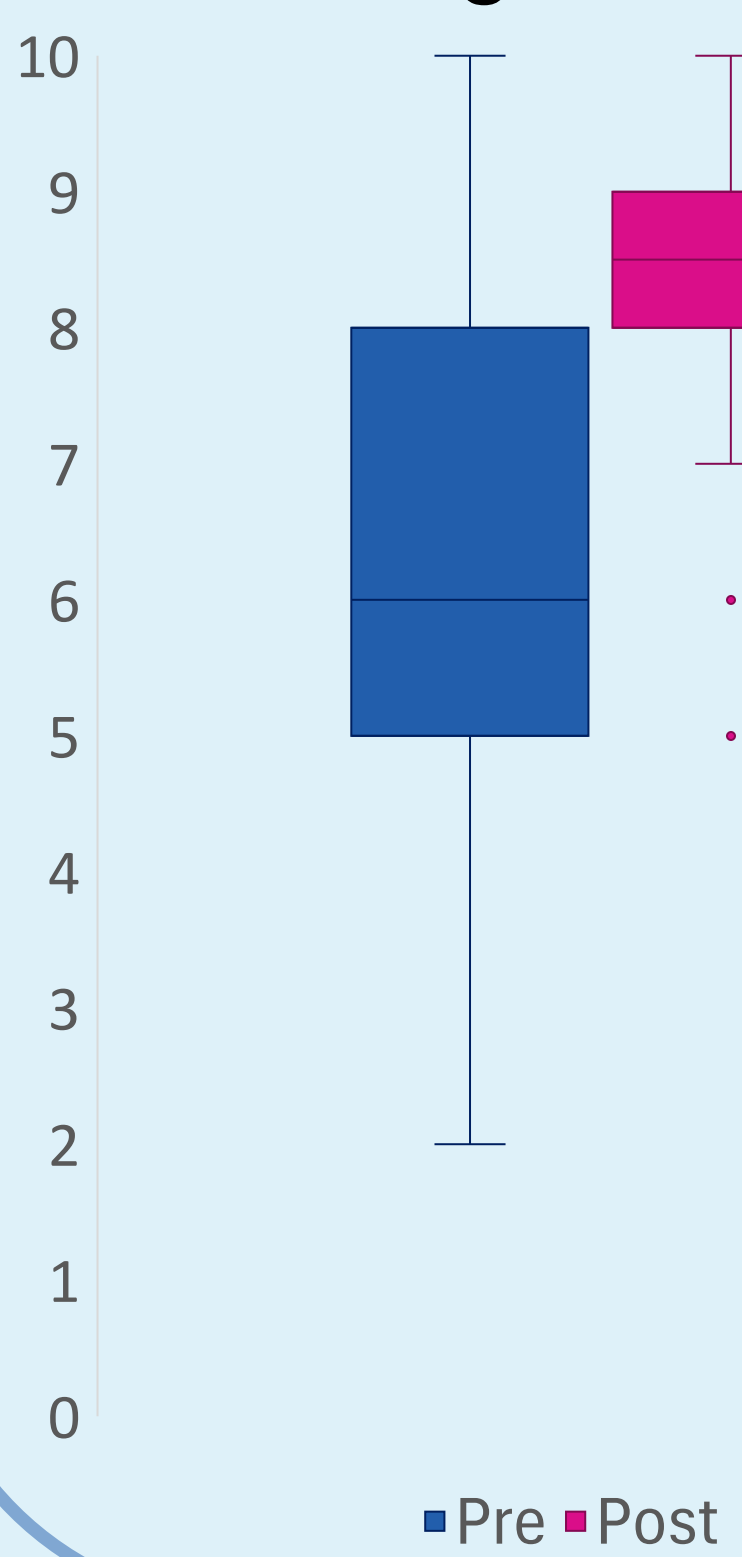


Figure 5: Survey of doctors' last practice of CICO

Pre- and Post- confidence analysis - DAS/OAA Algorithm



Pre- and Post- confidence analysis - eFONA Skill

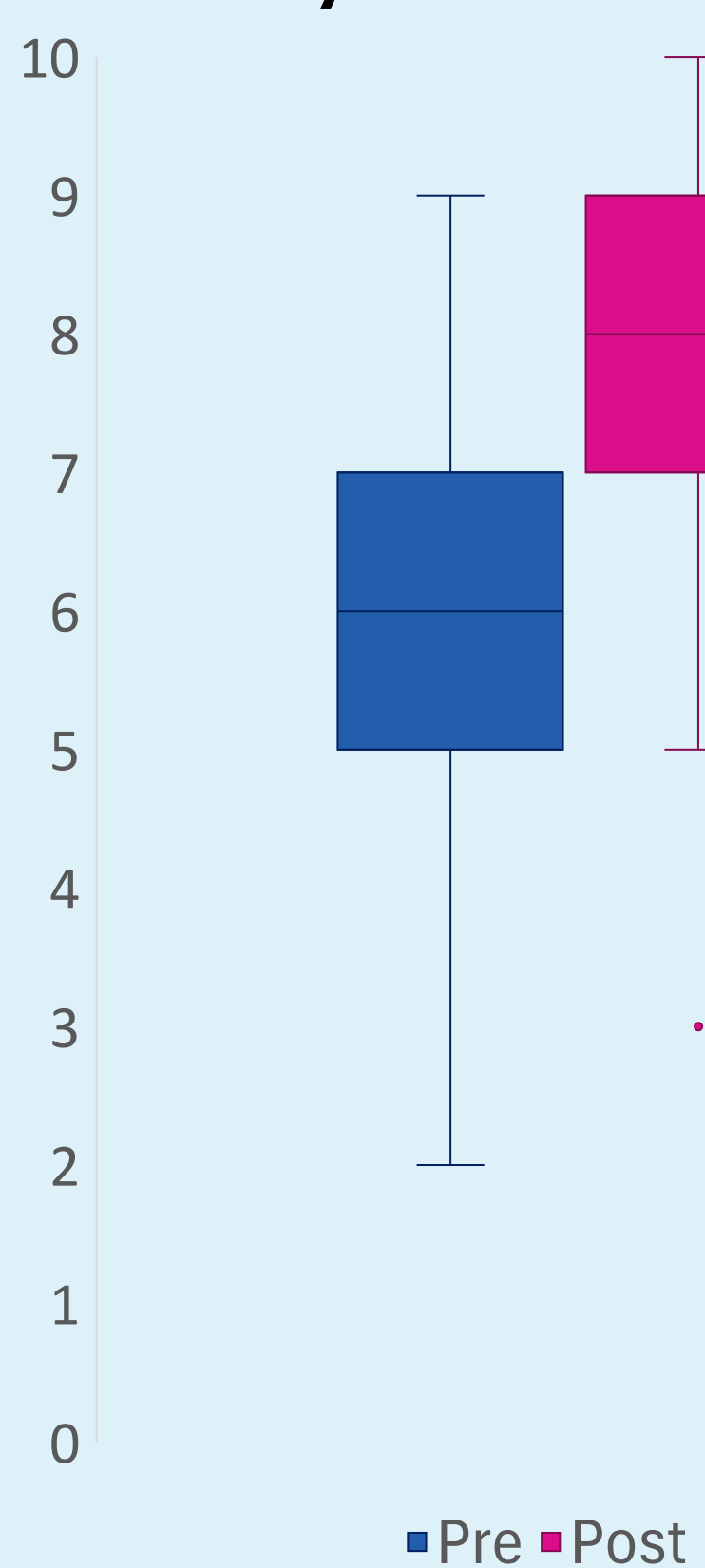


Figure 6: Pre- and post-session confidence in OAA/DAS Algorithm and eFONA skill

Challenges During Implementation

Challenge

Staffing pressures limited attendance

- Solution** Small groups (2-3) ensured adequate staffing
- Added benefits** Ample hands-on practice and safe educational environment

Challenge

Initial monthly sessions: resource heavy with low yield

- Solution** Departmental buy-in for dedicated slot during induction programme every 3 months
- Added benefits** Consistent sustainable delivery and widest reach of residents

Conclusion

- This simulation training closes a critical training gap and is valued by residents
- Boosts confidence and strengthens preparedness, with potential to improve patient safety
- Integration into the induction programme has made delivery sustainable, maximising reach and impact



Figure 2: Simulation set-up

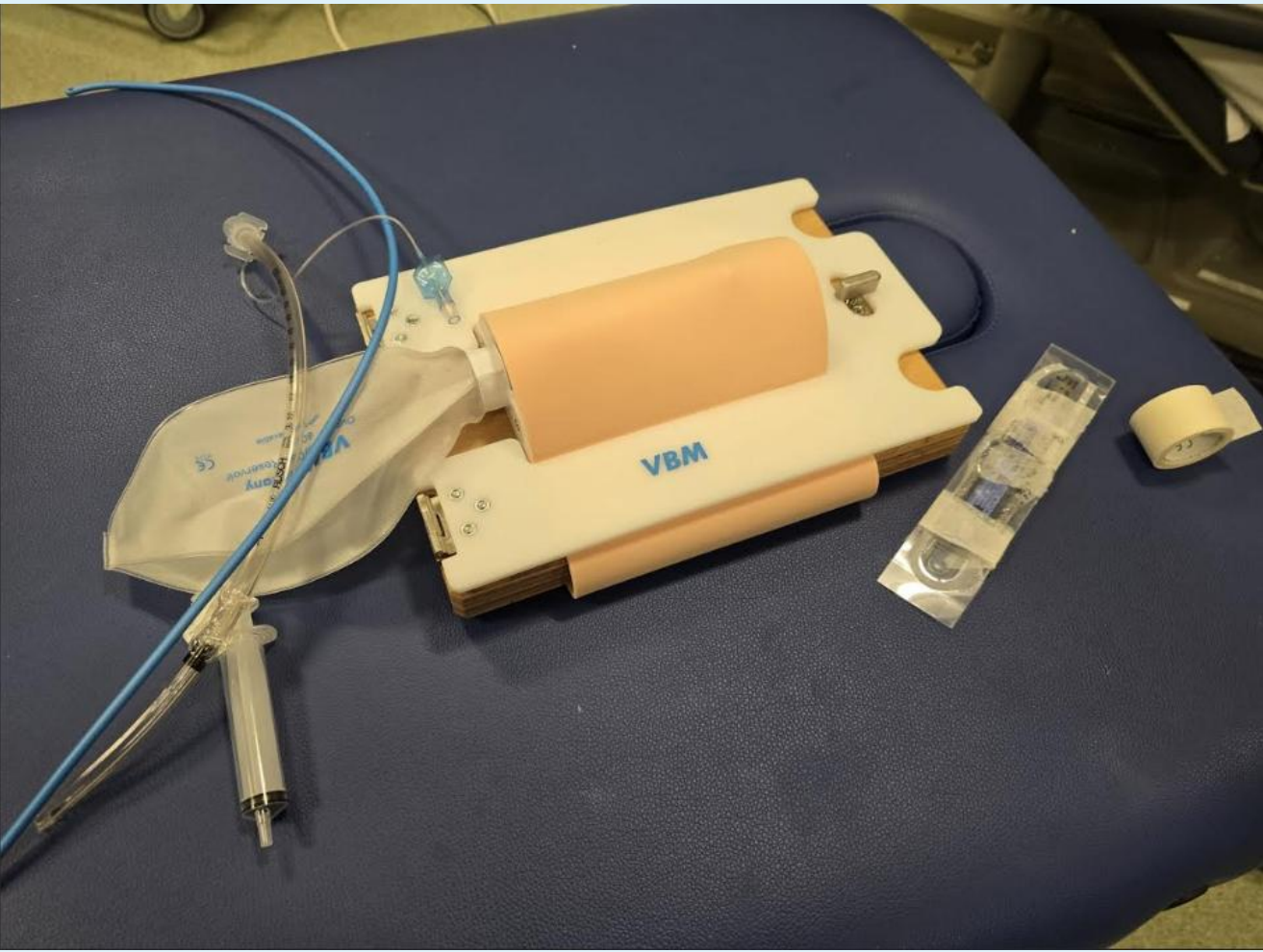


Figure 3: eFONA model & equipment

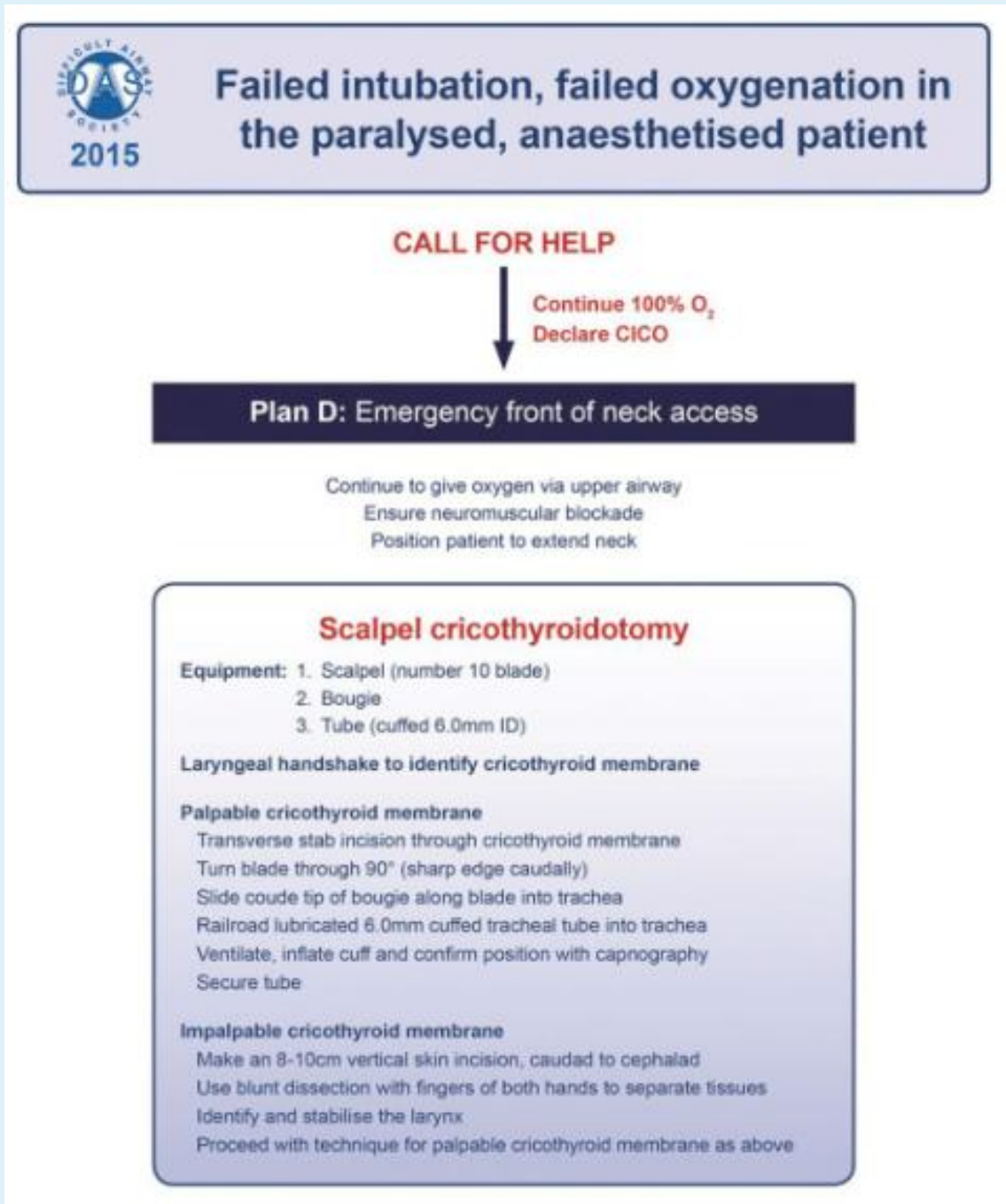


Figure 4: eFONA Algorithm¹

References

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