

The Sutherland Emergency Department Airway Corner Newsletter

2019 Year in Review

Total intubation Data for period Jan 2019 until Dec 2019

Total number of Intubations	48
First Pass Success Rate	85%
Induction Agent (total > 100% due to multiple agents used)	Ketamine – 56% Propofol – 25% Fentanyl – 21% Thiopentone – 6% Midazolam – 4%
Paralytic Agent	Rocuronium – 63% Suxamethonium – 21% None – 16%
Bougie/Stylet use	Bougie – 85% Stylet – 6% None – 8%
Indication for Intubation	Respiratory Failure – 27% Overdose/Ingestion – 21% Cardiac Arrest – 19% Seizure – 17% Altered Level of Consciousness – 8% Cardiac Failure – 4% Sepsis – 2%
RSI checklist use	81%
Age of Patient	Oldest – 86 Average – 58 Youngest – 2 months
Weight of Patient	Average – 81 kg Heaviest – 180 kg
Time from Triage to Intubation	Average – 2 hours, 23 mins Longest – 16 hours, 4 mins
Apnoeic Oxygenation	Nasal cannula – 56% BVM + PEEP – 18% CPAP/BiPAP – 12% LMA – 12%
Intubator Specialty	Emergency medicine – 79% Anaesthetics – 15% ICU – 6%
Complications	Hypotension – 13% Desaturation – 10% Oesophageal Intubation – 4% Aspiration 2%

Discussion

Overall at Sutherland Hospital during the last year we had first pass intubation success rate of 85%. This is comparable to the results of a 2017 systemic review and meta-analysis of intubation success rates in the emergency department where it was found there was an average first pass success rate for intubations in ED of 84.1%¹. Our ongoing target for first pass intubation success rates at Sutherland is > 90% to minimise the associated morbidity and associated complications with failed intubation attempts.

There did not seem to be a recurring theme with failed first pass intubation attempts but keys to ensure that the chances of initial intubation success include

- Airway checklist use
- Adequate airway assessment using predictors of difficult intubation
- Patient positioning – ear to sternal notch, ramping obese patients
- Adequate preoxygenation and apnoeic oxygenation
- Staying proficient on airway skills – simulation, courses, familiarisation with equipment

¹Park, L et al. Systematic review and meta-analysis of first-pass success rates in emergency department intubation: Creating a benchmark for emergency airway care. *Emergency Medicine Australasia* (2017) 29, 40–47.

Reminder for all medical staff that the airway registry forms are kept in the top of the intubation trolleys, and the completed forms can be left in the tray below the S8 cupboard in resus. Please continue to complete the forms for all intubations in ED, especially when intubations are done by outside specialties.

