

The Australia and New Zealand ED Airway Registry

Introduction

Endotracheal intubation is a high-risk, multidisciplinary procedure that is associated with an increased rate of severe complications when it occurs in emergency departments (EDs) as opposed to operating theatres. It is a procedure often undertaken on critically ill or injured patients and complications such as desaturation and hypotension occur commonly. The reasons for this are multifactorial and some are shown in Figure 1 (top right).

This project aims to improve the safety of intubation in Australian and New Zealand EDs by developing a standardised data collection tool to audit practice then feedback to promote improvement.

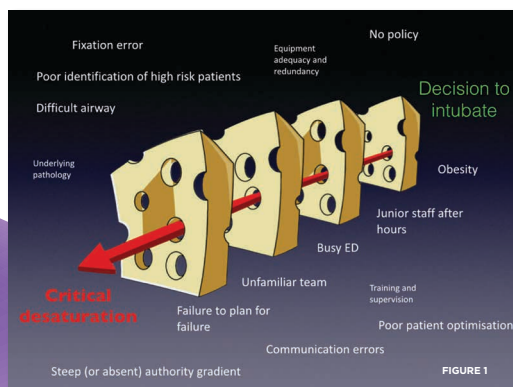
A partnership with the NSW Emergency Care Institute (ECI), part of the NSW Agency for Clinical Innovation, has enabled EDs from across Australia and New Zealand to participate in the project.

Key activities

Following an initial 18 month observational study, a practice improvement bundle was developed at Royal North Shore Hospital (RNSH) to improve patient safety. This involved multidisciplinary training, development and use of a pre-intubation checklist and changes in intubation practice according to best evidence.

At Northern Sydney Local Health District, the registry has also enabled real-time review and improvement of intubation practice in the EDs of Mona Vale, Hornsby and Manly hospitals.

The ECI partnership has allowed the registry to spread across Australia and New Zealand. It is the first multicentre study of intubation in this region and is expected to contain over 3000 episodes by the end of the project in mid 2015.



This data will become the region-wide benchmark for the standard of intubation in EDs, while the information gained will continue to improve patient safety and the skills of ED clinicians.

It is envisaged that improvements will occur not only through local audit but use of the large dataset for research into the effects of different techniques.

Key achievements

Over 30 EDs now contribute to the database. Using our tools, many of them are now taking steps to improve their patients' safety.

At RNSH, intubation success on first attempt improved from 83 per cent to 94 per cent ($P < 0.001$) and the incidence of complications fell from 28 per cent to 20 per cent ($P = 0.017$).

