

# Factors associated with higher first-pass success rate at emergency endotracheal intubation; Analysis of Phase II of the Australia and New Zealand Emergency Department Airway Registry

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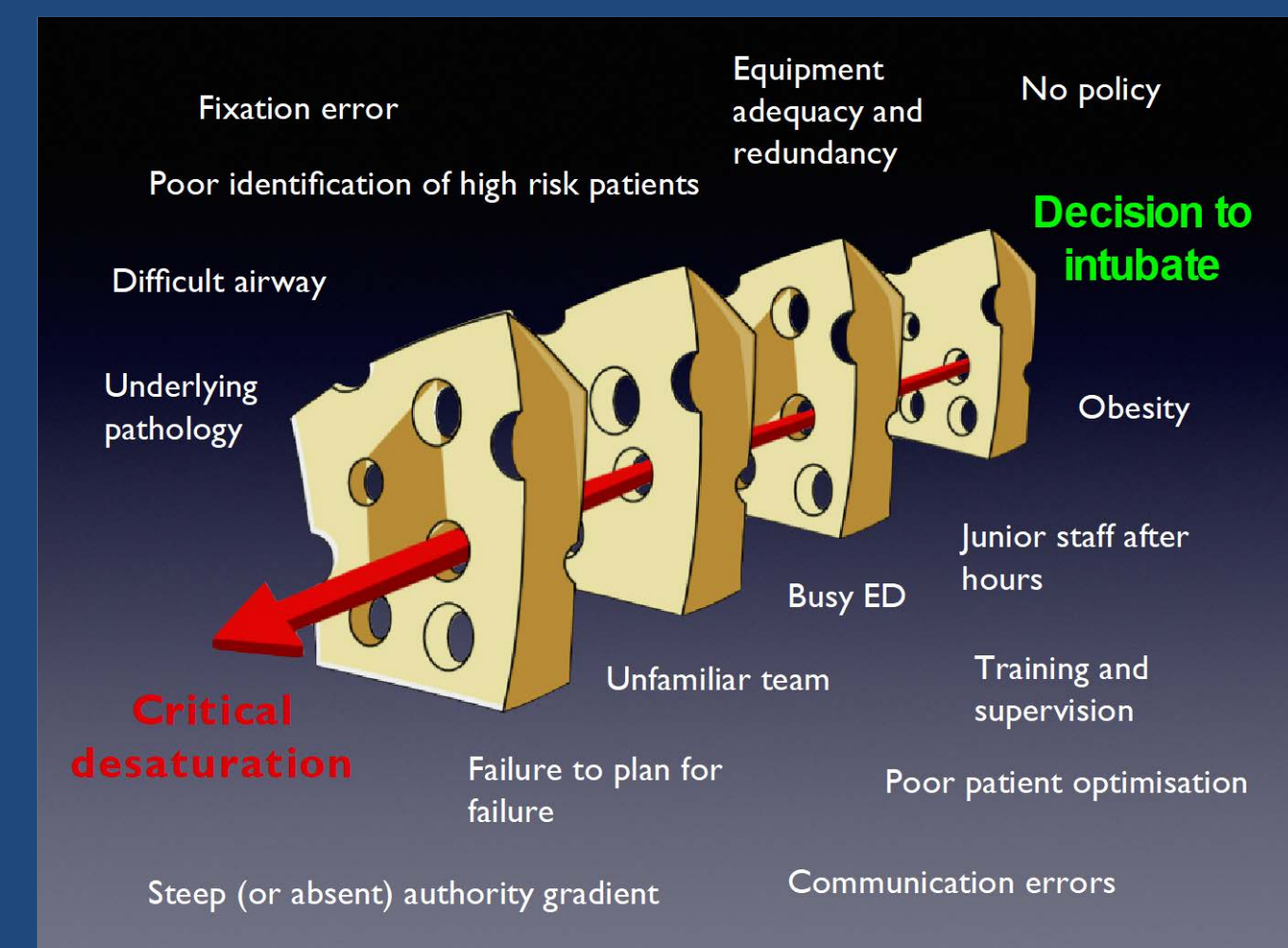
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## Background

Airway management is often a lifesaving procedure and is a core skill for Emergency Physicians. The concept of first-pass success (FPS) at endotracheal intubation is frequently promoted as the goal of emergency airway management. Every effort should be made to secure the airway on the first well-prepared intubation attempt.



## Challenges



ANZEDAR



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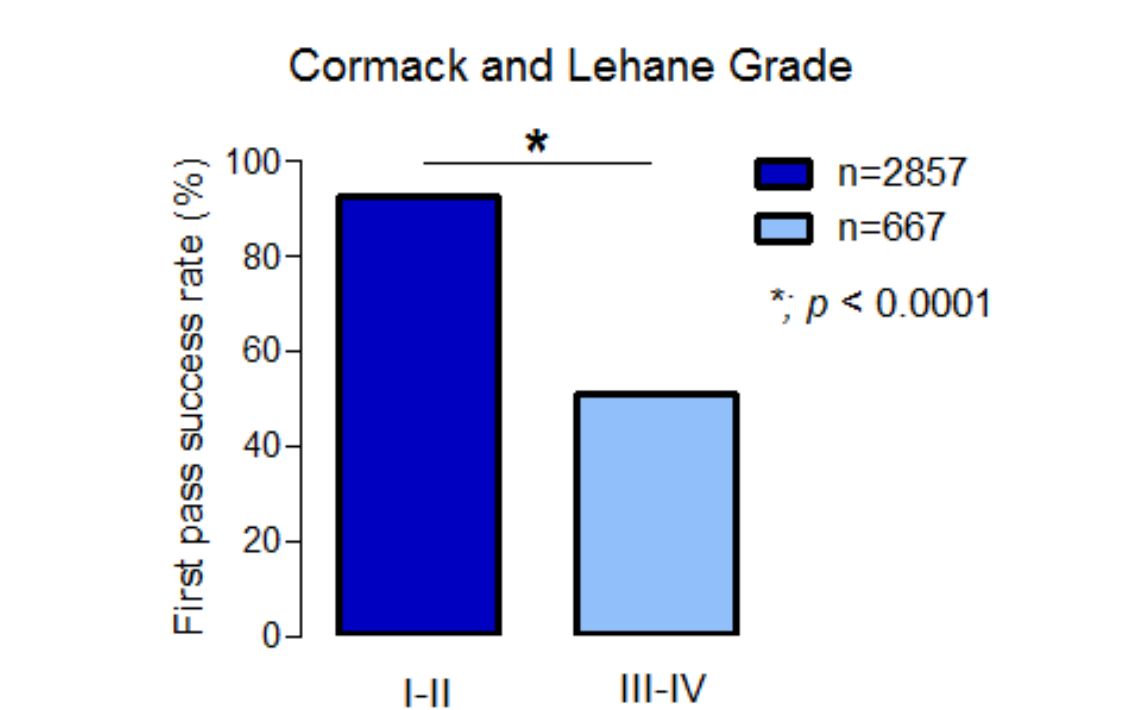
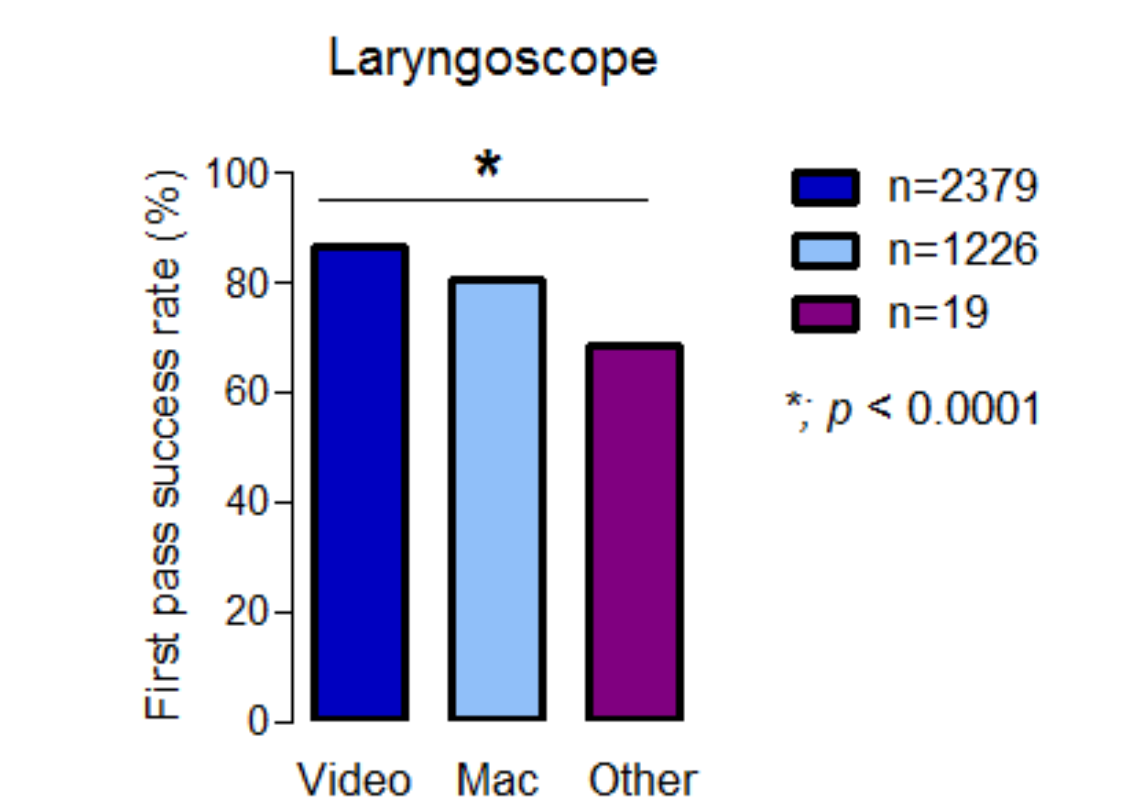
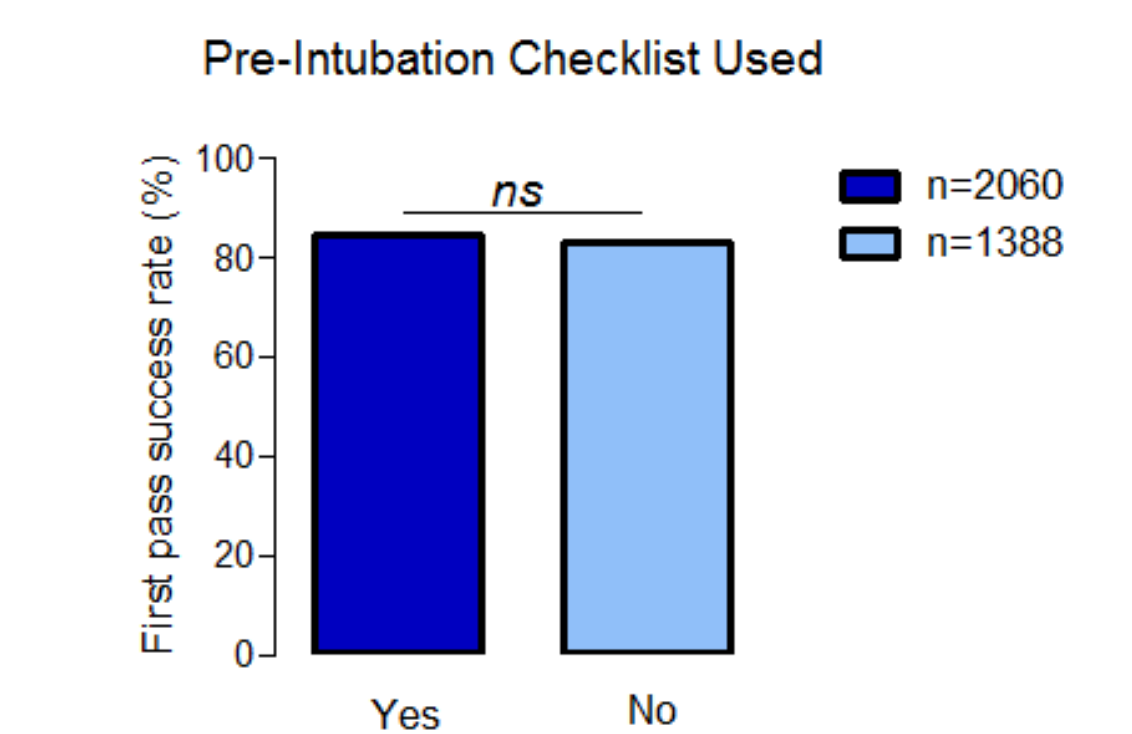
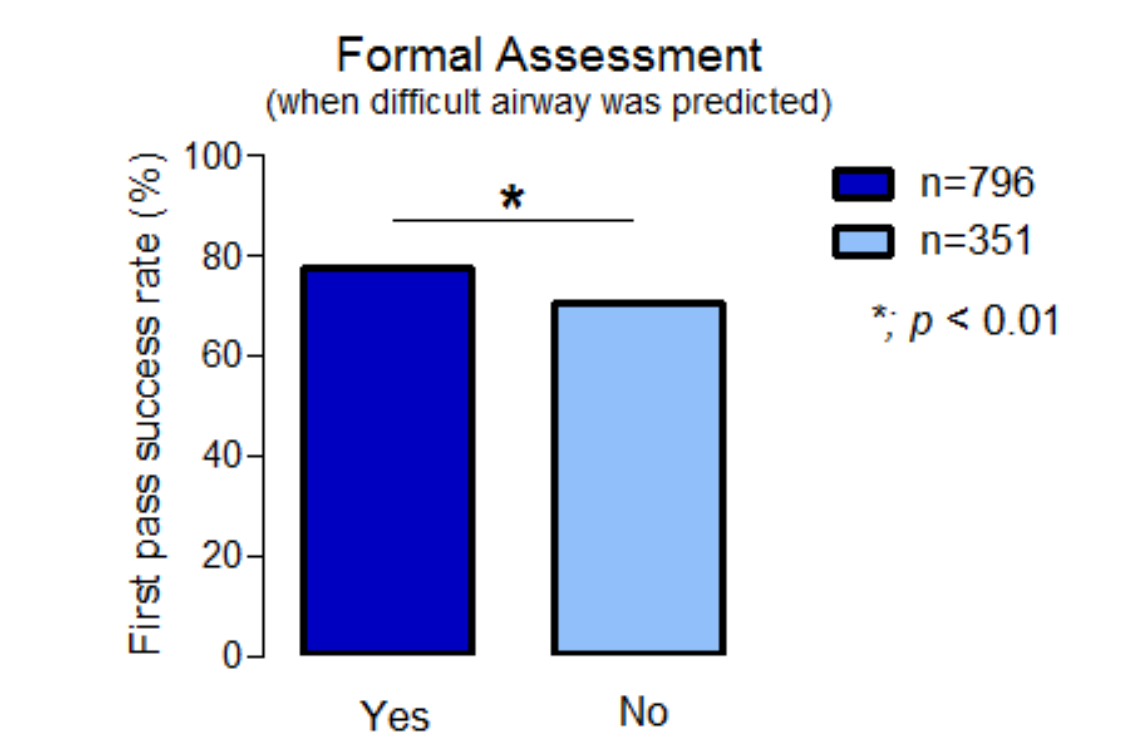
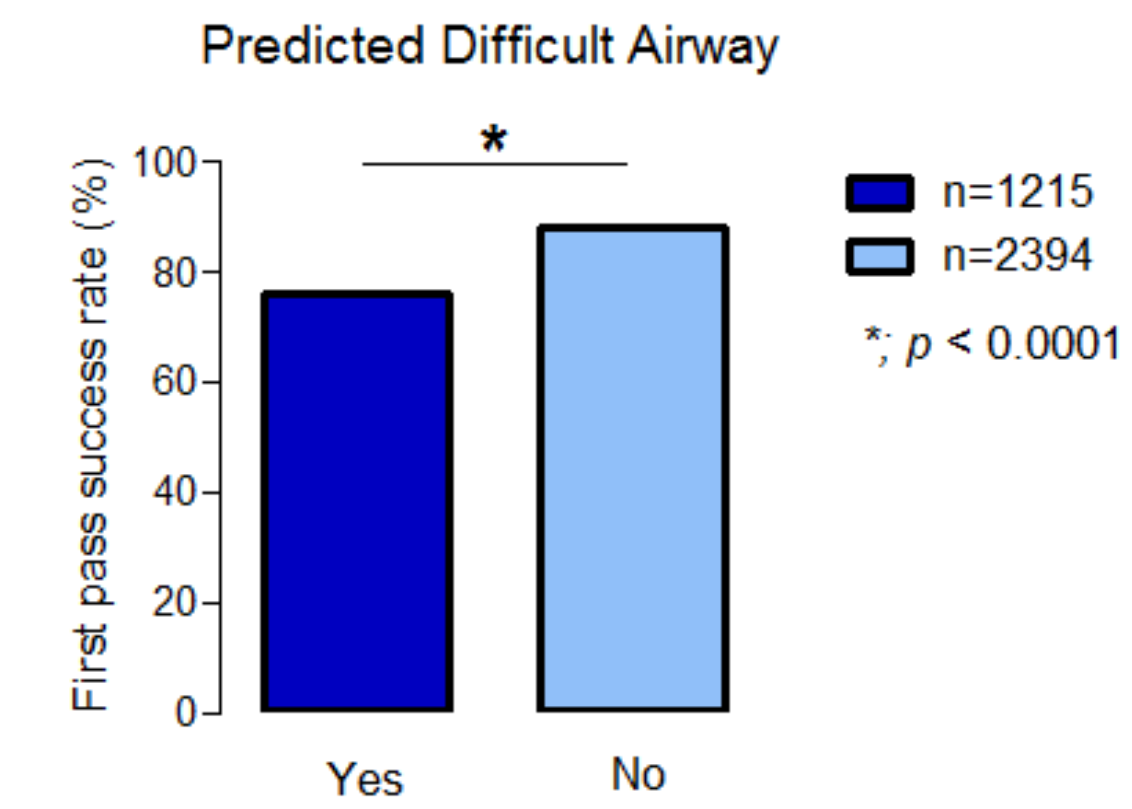
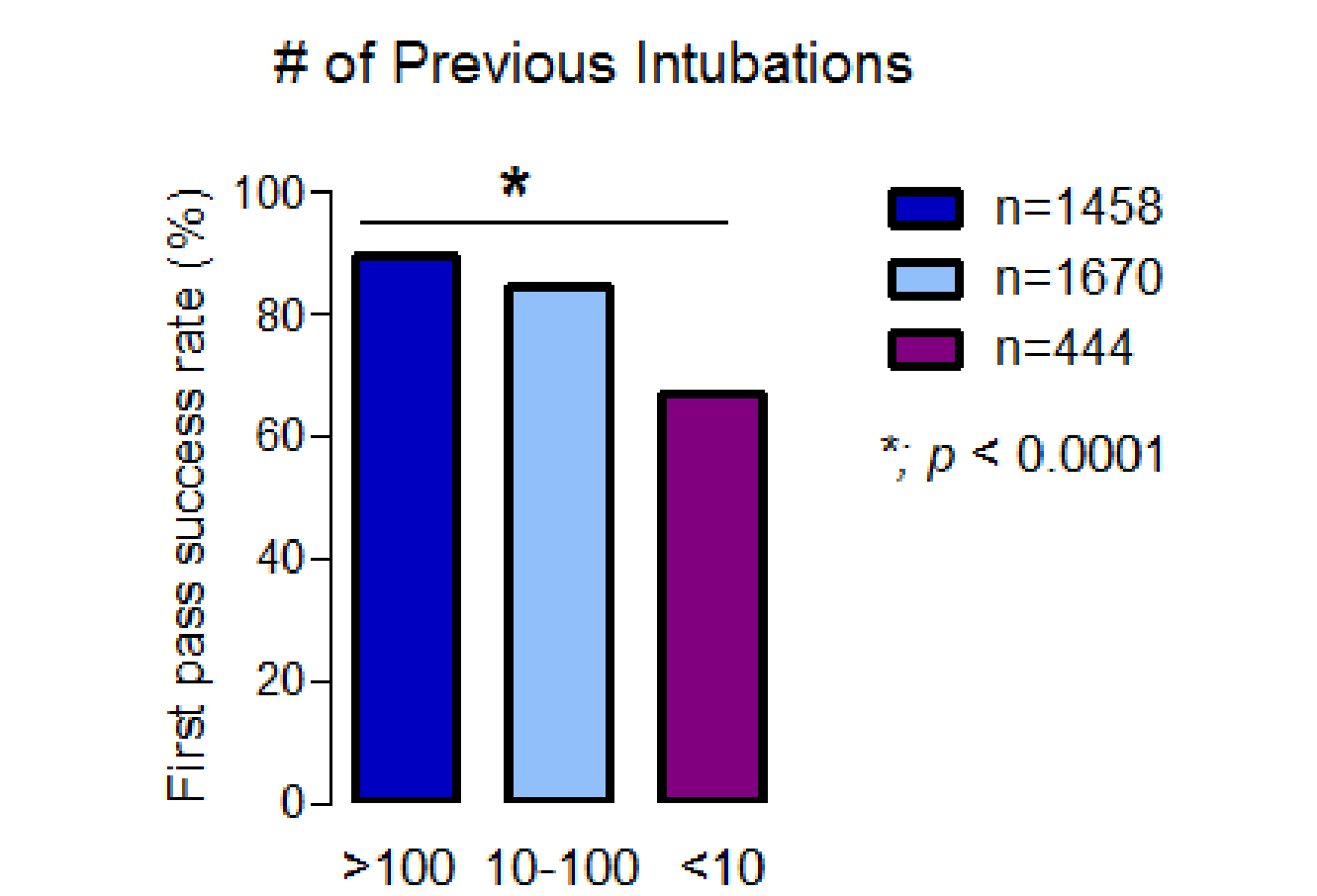
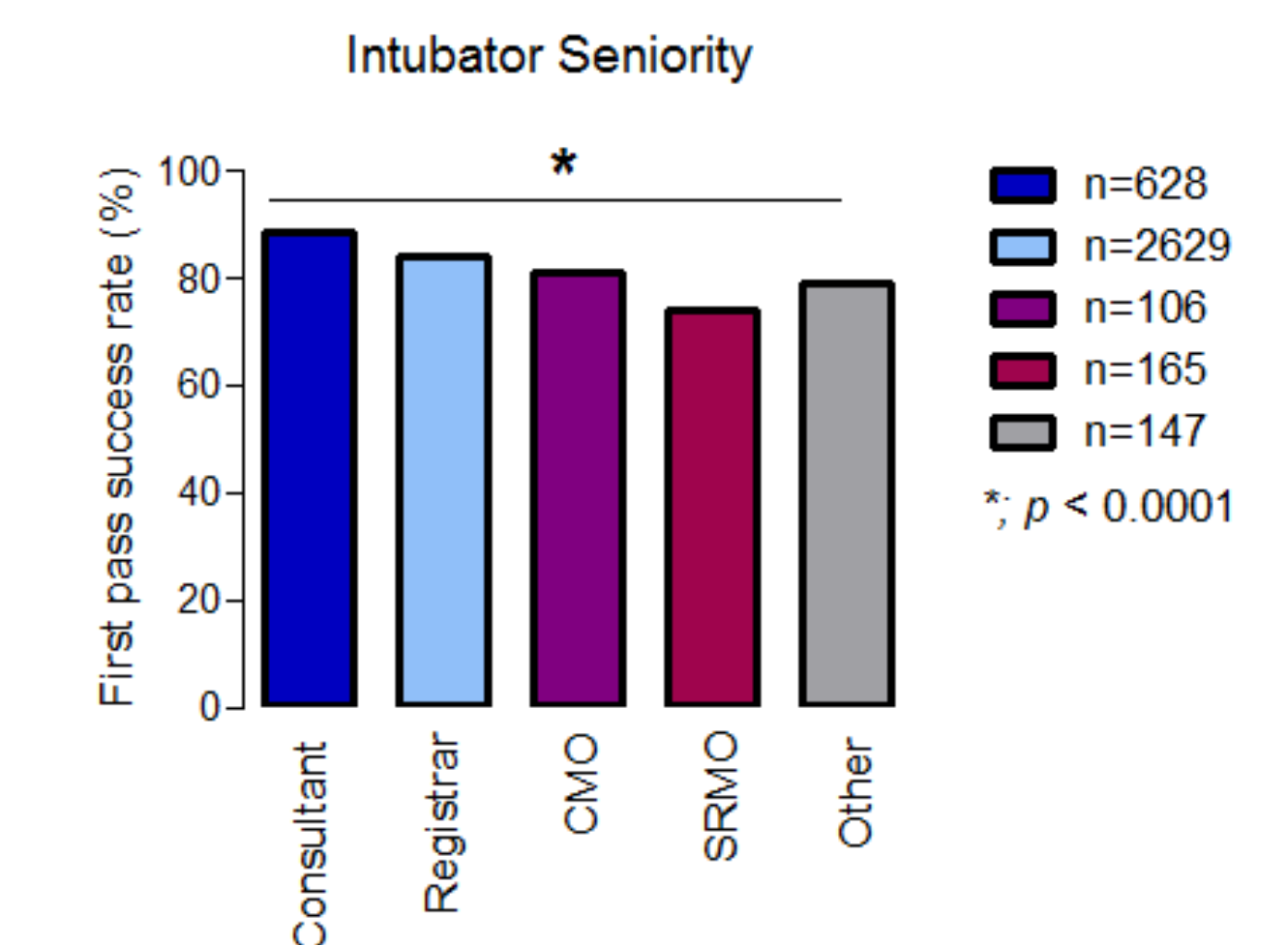
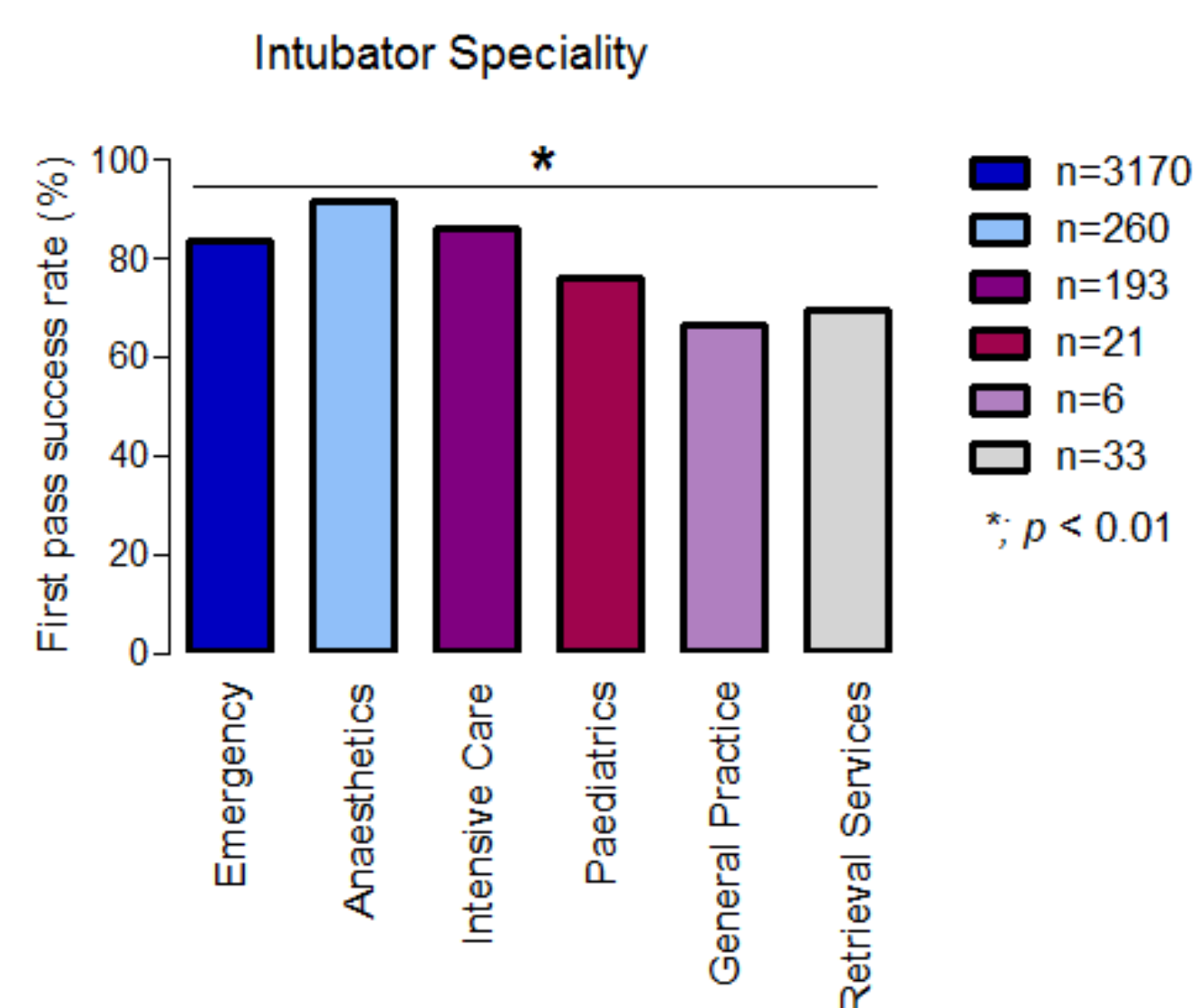
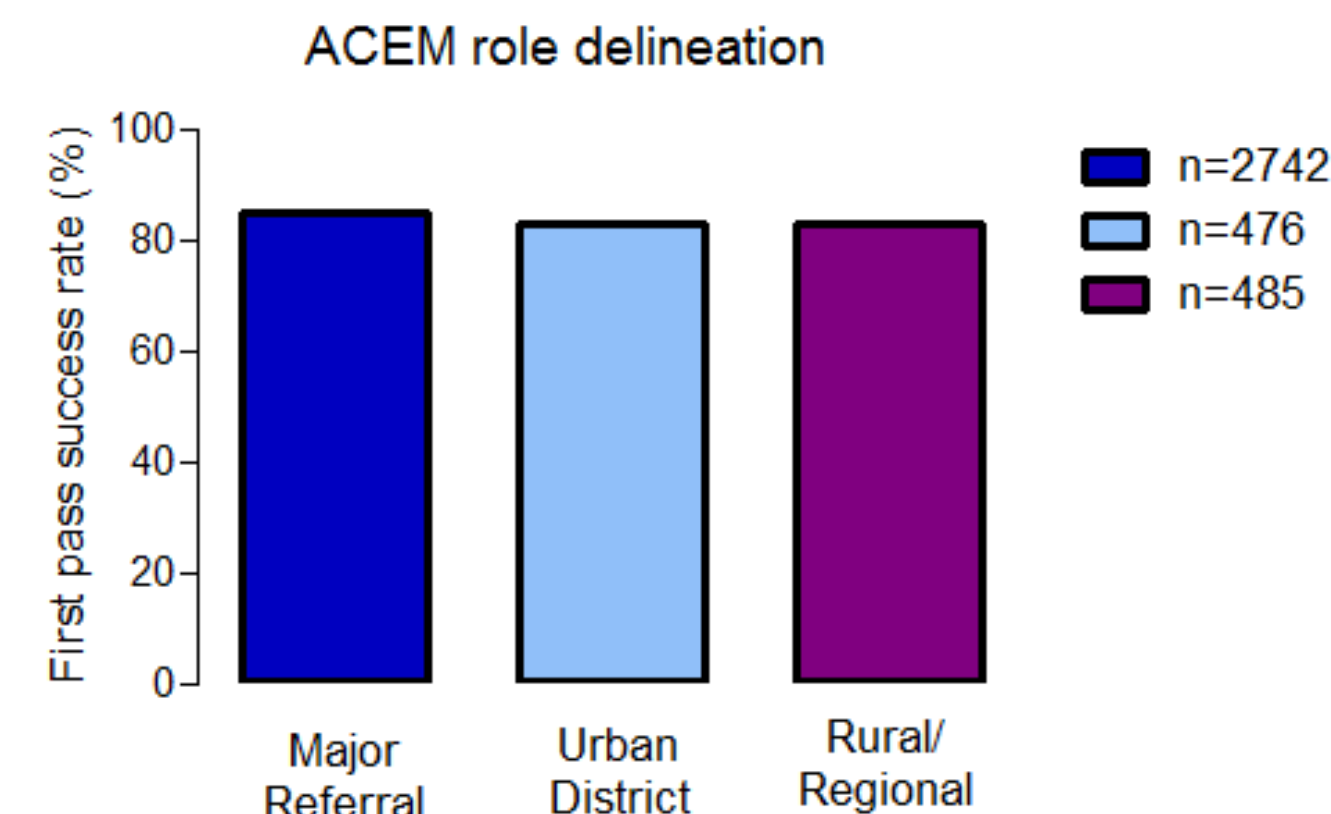
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## Study aim

To investigate the factors associated with higher FPS rate at emergency endotracheal intubation in Australian and New Zealand

## Methods

Observational study of airway management practices in 3,710 patients who underwent intubation at 43 Emergency Departments (EDs) over 24 months. The Australian and New Zealand Emergency Department Airway Registry (ANZEDAR) form was used to collect information on airway management practices. The relationship between the primary predictor variable of interest and success rate at intubation was analysed. Statistical significance was determined using chi-square test



## Results:

- Overall, FPS rate was achieved in 3,127 (83.3%) of encounters.
- 96.9% of patients were successfully intubated within 1 or 2 attempts.
- There was no difference in FPS rate between EDs of different role delineation level.
- FPS in Medical > Trauma encounters
- Variables found to be positive predictors of FPS include:

- formal airway assessment
- use of video laryngoscope
- use of bougie
- obtaining view grade of I-II.
- ↑ team leader and intubator seniority
- number of intubator's previous intubations performed.

- Use of pre-intubation checklist did not affect FPS significantly, however was associated with higher success rate at subsequent intubations.

## Discussion:

FPS is comparable between regional and major referral centres. This study identified a number of factors and strategies which could improve FPS and care for critically ill ED patients