Do prehospital advanced airways improve outcomes in patients with out-of-hospital cardiac arrest?

A Meta-Analysis of Prehospital Airway Control Techniques Part I: Orotracheal and Nasotracheal Intubation Success Rates
Hubble, et al

- Global prehospital endotracheal success rate is 86.5% (and most of this is self-report) without the use of sedation or paralytics, with generally lower success rates for trauma and nonarrest patients.
- For nonarrest patients, sedation and RSI seem to increase the success rates.
- Across all clinicians, nasotracheal intubation has a low rate of success. Safety and efficacy in a prehospital setting are questioned.

The Association Between Prehospital Endotracheal Intubation Attempts and Survival to Hospital Discharge Among Out-of-Hospital Cardiac Arrest Patients
Studnek et al

- Individuals with no ETI attempt were 2.44 times more likely to have ROSC than those with one successful ETI attempt (45.3% vs. 25.3%).
- Regardless of success or failure, more than one attempt is less likely to have prehospital ROSC than one attempt.
- Individuals with no ETI attempt were 4.96 times more likely to be discharged from the hospital alive than those with one successful ETI attempt.

Advanced Airway Management Does Not Improve Outcome of Out-of-hospital Cardiac Arrest
Hanif, et al

- Patients treated with BVM in the prehospital setting compared to ETI were 3.3 times more likely to survive to discharge.
- Witnessed arrests, non-nursing home patients and those presenting with VF or VT were more likely to survive to discharge.

Effect of Out-of-Hospital Pediatric Endotracheal Intubation on Survival and Neurological Outcome: A Controlled Clinical Trial,
Gausche, et al

- Pediatric patients treated with BVM compared to ETI had increased survival and better neurologic outcome.
- As a result of this study, ETI is not used in the prehospital setting for pediatric patients in Los Angeles county.
Conclusions:

Though more studies need to be performed, the majority of reviews and studies have shown that patients treated with BVM as compared to ETI in the urban prehospital setting have better outcomes.


