Goals/Objectives:

To characterize methods, success rates, and rescue techniques when intubation is performed by flight paramedics and nurses using standardized rapid-sequence intubation protocols.

Methods/Inclusion:

We retrospectively reviewed electronic intubation flight records from an 89 rotorcraft air medical system from January 01, 2007, through December 31, 2009. We report patient characteristics, intubation methods, success rates, and rescue techniques with descriptive statistics. We report proportions with 95% confidence intervals and binary comparisons using chi square test with p-values <0.05 considered significant.

**Major Findings:**

4,871 patients had active airway management, including 2,186 (44.9%) medical and 2,685 (55.1%) trauma cases. There were 4,390 (90.1%) adult and 256 (5.3%) pediatric (age ≤ 14) intubations; 225 (4.6%) did not have an age recorded. 4,703 (96.6%) had at least one intubation attempt. Intubation was successful on first attempt in 3,710 (78.9%) and was ultimately successful in 4,313 (91.7%). Intubation success was higher for medical than trauma patients (93.4% versus 90.3%, p=0.0001 JT test). 168 encounters were managed primarily with an extraglottic device (EGD). Cricothyrotomy was performed 35 times (0.7%) and was successful in 33. Patients were successfully oxygenated and ventilated with an endotracheal tube, EGD, or surgical airway in 4809 (98.7%) encounters. There were no reported deaths from a failed airway.
Conclusions:

Airway management, predominantly using rapid sequence intubation protocols, is successful within this high-volume, multi-state air-transport system.

Link/PDF: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3966436/