

POSTER 015.
**Success and Complications of Out-Of-Hospital
Nasotracheal Intubations Performed by an Air
Medical Team**

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Objective: The optimal method of out-of-hospital endotracheal intubation remains controversial. Our objective was to describe the success rates and complications of nasotracheal intubations performed by helicopter air medical personnel.

Methods: Five-year review of prehospital and hospital records of 125 trauma patients flown to two trauma centers after intubation attempts. Intubations were performed by nurse/paramedic teams and included blind nasotracheal (BNTI), direct oral (OI, without paralytics), and surgical cricothyroidotomy (SC) according to regional EMS protocols.

Results: There were 185 intubation attempts in 125 patients, whose median Glasgow Coma Scale score was 5. Eighty-eight patients (70%) received BNTI; the remainder received other airways. Blind nasotracheal was successful on the first attempt 77% (68/88), and 84% overall. Seventy-six patients (61%) were intubated in the helicopter and 49 (39%) at the scene. Ground EMS personnel had attempted intubation in 48 patients; 21% (10/48) were thought to be successful, but the airways were replaced by the flight team. Nasotracheal tubes were maintained up to 10 days. Immediate complications included reintubation/self-extubation (10), failed attempts (8), epistaxis (3), esophageal placement (2). Late complications were sinusitis (6) and vocal-cord granuloma (1). Intubation success and complications were no different for BNTI versus OI, but mortality was significantly lower in the nasotracheal group (19% vs 81%, $p < 0.01$, Fisher's Exact).

Conclusion: Out-of-hospital nasotracheal intubation of trauma patients can be an effective and safe means of securing the airway. Complications were acceptable and reflect the severity of injury more than the route of intubation. Our air medical crew's airway skills compare favorably with ground EMS providers in our region.

POSTER 006.
**Paramedic Skills: Comparing Emphasis
in Training to Perceived Importance**

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Purpose: North Carolina recently reduced the required continuing education (CE) hours and is currently considering revision of the initial training (IT) curriculum for paramedics. This study was undertaken to determine which prehospital skills are perceived by paramedics to be the most important, and if the emphasis placed on those skills during IT and CE corresponds with the perceived importance.

Methods: Surveys listing 21 skills were distributed to North Carolina paramedics who were asked to rate the importance of each skill and the emphasis placed on each skill in IT and CE, on a scale of 0 to 4.

Results: Six-hundred (44%) of 1,364 surveys were returned. Respondents had a mean of 9.9 ± 5.6 years of EMS experience, and 5.4 ± 4.0 years of experience as paramedics. The skills were ranked in the following order of importance: 1) endotracheal intubation; 2) defibrillation; 3) assessment; 4) medication administration; 5) CPR; 6) bag-valve-mask ventilation; 7) oxygen administration; 8) IV therapy; 9) spinal immobilization; 10) vital signs; 11) hemorrhage control; 12) chest decompression; 13) use of nebulizers; 14) cardioversion; 15) pacing; 16) intraosseous infusion; 17) cricothyrotomy; 18) splinting; 19) multi-lumen lower airway adjuncts; 20) nasogastric tube placement; and 21) urinary catheterization. Importance in prehospital care was ranked equal to or higher than emphasis in both IT and CE for all skills except splinting and urinary catheterization, which received higher rankings for emphasis in IT. Emphasis in IT equaled or exceeded the emphasis in CE for all skills except intraosseous infusion.

Conclusion: The perceived importance of most prehospital skills exceeds the emphasis placed on those skills during both IT and CE programs, which should be considered in revising IT and CE curricula.

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