

# Success Rates of Direct Laryngoscopy and Glidescope in an Academic Emergency Department

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**Background:** In the last 10 years there has been an explosion of alternative airway devices and rescue airway devices, such as video laryngoscopes, optical laryngoscopes and intubating laryngeal airways. The success rates of these devices compared to direct laryngoscopy are unknown.

**Objectives:** To compare the success rates of a standard intubating device, direct laryngoscopy, with an advanced form of video laryngoscopy known as the glidescope, as both a first-attempt airway device and as a rescue airway device.

**Methods:** We retrospectively studied data from an academic ED between July 1, 2007 and December 1, 2007. Faculty and residents were asked to fill out a standardized form for each intubation performed in the ED with routine critical information such as number of intubation attempts, initial device used, rescue device(s) used, level of operator, and whether the intubation was performed for a traumatic or medical resuscitation. One hundred seventy-nine intubations were studied.

**Results:** The level of operator performing the intubations was as follows: Attending physicians (6.7%), PGY-I (10.6%), PGY-II (25.1%), PGY-III (54.2%), Anesthesia (1.7%), and MS-4 (1.7%). The success rate of direct laryngoscopy as a first-attempt airway device was 70% (64 of 92), while the glidescope first-attempt success rate was 79% (58 of 73). When used as a rescue device after other methods failed, direct laryngoscopy was successful 77% of the time (10 of 13), and the glidescope was successful 88% of the time (15 of 17).

**Conclusions:** Early data shows a trend towards superior success with the glidescope as a first-attempt airway device and as a rescue airway device in the ED setting. Future analysis of a greater number of intubations will reveal if these early trends are statistically significant enough to suggest a superior airway device in the emergency setting.