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Abstract
Pre-Hospital Emergency Airway King LT Study (PEAKS)

Maintaining a patient's airway via emergency airway adjuncts, including the Combi-Tube and King LT, is a fundamental tenet of emergency medical practice. Despite no data suggesting a benefit when used in the field, on April 1, 2009, the King LT airway replaced the Combi-Tube within Vermont EMS protocols due to suggested benefits of the King LT including greater sealing pressure and minimized risk of aspiration when used in controlled settings including the operating room. This study seeks to identify which emergency airway adjunct is safer and provides better patient outcome when inserted by EMS in non-controlled, emergency situations. Identifying a superior airway is significant as it represents major advances in emergency medical protocols and has the potential to save lives in medical emergencies including cardiac arrest.

To obtain these goals, data sheets are being filled out that document the number of times that an airway placed in the field, the number of attempts required before success is achieved, the ease of adjunct placement and ventilation, and any complications or difficulties. After arrival in the ED, staff physicians analyze the effectiveness of the emergency adjunct airway by recording tube location, how well the adjunct is functioning, and both initial and ultimate patient outcomes. This study uses a before-and-after study design, collecting data for the first 100 Combi-Tube insertions in 1999, the last Combi-Tube insertions in 2009, and we are currently collecting data for the first 100 King LT insertions in 2009. Our preliminary results (Combi-Tube N=121; King LT N=44) reveal no statistical change in ease of use or success of insertion attempts between the two adjuncts. However, the King LT provides a significantly higher patient survival rate (16% King LT, 5% Combi-Tube). If the observed trends continue, this analysis suggests that EMS experiences no changes in difficulty between the King LT and Combi-Tube, however, the King LT should be preferentially used in the field as it provides a significantly higher patient survival rate.