Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

POGO score for TV was 100% ($P<.001$). The median difference in POGO scores (TV and DL) was as follows: 50% for PGY-1 residents, 50% for PGY-2 residents, and 25% for PGY-3 residents. As for ease of use, 85.7% (24) reported that the TV was "easy" to use, 10.7% (3) were undecided, and 3.6% (1) reported that the TV was "difficult" to use, whereas 82.1% (23) reported that the TV improved their intubation attempt, 14.3% (4) reported no difference, and 3.6% (1) reported that the TV made the intubation attempt more difficult. In phase 2, there were 37 participants. Overall, the median TV and DL POGO scores were 75% and 25%, respectively ($P=.004$). The median difference in POGO scores (TV and DL) for the 2 groups was as follows: 75% for group 1 and 50% for group 2. Of all the participants, 67.6% (25) ranked the TV as "easy" to use, 21.6% (8) were undecided, and 10.8% (4) ranked the TV as "difficult" to use, whereas 56.8% percent (21) reported that the TV improved their intubation attempts, 27% (10) reported no difference, and 10.8% (4) reported that the TV made the intubation attempts more difficult.

Conclusion: The Trachview Videoscope is easy to use and improves the POGO score and subjective evaluation of performance for intubation by individuals with various experience levels.

379 The Effect of Paramedic Rapid Sequence Intubation on Outcome in Trauma Patients

Domeier RM, Chudnofsky CR, Frederiksen SM, Colone P/Saint Joseph Mercy Hospital, Ann Arbor, MI; Thomas Jefferson Medical College, Philadelphia, PA; Hurley Medical Center, Flint, MI

Study objectives: The objective of this study is to evaluate the effect of paramedic rapid sequence intubation (RSI) on trauma patient outcome.

Methods: Consecutive major trauma patients were prospectively enrolled in 2 phases, the first before and the second after the implementation of a paramedic RSI program. Paramedics with experience in this mixed suburban and rural emergency medical services (EMS) system were eligible for RSI training. RSI training consisted of 6 hours of didactic and mannequin training. Operating room intubation experience is required for oral intubation clearance in the system but is not used for RSI training. All trauma patients with a Glasgow Coma Scale (GCS) score between 3 and 8 and for whom resuscitation was indicated were eligible for inclusion. Exclusion criteria included death in the field or ED and inability to obtain outcome information. For both phases, intubation was indicated for trauma patients with a GCS score of 3 to 8. For phase 2, oral intubation was attempted for all patients before RSI. Etomidate and succinylcholine were administered for RSI. RSI was not attempted for patients for whom the alternative airways, esophageal-tracheal twin-lumen airway device (Combitube), cricothyrotomy, or bag-valve-mask ventilation was judged not feasible. The Combitube was used as the primary salvage airway device. Method of airway control, intubation success rates, and survival to hospital discharge were determined.

Results: There were 134 patients with outcomes in phase 1: 19 of 21 (90.5%) in arrest at presentation had a definitive airway established, and 19 had additional exclusion criteria, leaving 94 for analysis. There were 386 patients with outcomes in phase 2: 85 of 94 (90.4%) in arrest at presentation had a definitive airway established, and 65 had additional exclusion criteria, leaving 227 for analysis. The oral intubation success rate was improved for phase 2 study versus phase 1 control patients (53.3% versus 14.9%); total definitive airway rate was also greater (59.5% versus 40.4%). RSI was used in 112 patients; 11 were excluded. Oral intubation success for RSI patients was 87.5%; 91.1% had definitive airways established. Survival for patients with oral intubation without RSI was similar for both phases (42.4% versus 42.9%). Survival for study patients was improved during phase 2 (78.0% versus 67.3%). Survival for study RSI patients was 85.1%.

Conclusion: EMS protocols for paramedic RSI resulted in improved intubation success rates and improved survival to hospital discharge.

380 The Effect of Severe Acute Respiratory Syndrome on Emergency Airway Management

Wong E, Ho K/Singapore General Hospital, Singapore, Republic of Singapore

Study objectives: From early March 2003 to late May 2003, severe acute respiratory syndrome (SARS) was detected in Singapore. Two hundred thirty-eight patients were infected; 33 died. Forty-two percent were health care workers. The whole medical system in the country was put under stress. One major public hospital became the designated SARS hospital. Emergency cases were diverted to the remaining public hospitals, of which Singapore General Hospital was the main recipient. The increase in workload, new infection control procedures including mandatory wearing of the positive airway pressure respirator and personal protective equipment (PPE), and limiting the number of person-contacts with each patient were thought to affect resuscitation and airway management. Our aim is to study the effects of wearing of PPE and the restriction in number of resuscitation personnel on airway management during the SARS crisis.

Methods: The emergency department has an ongoing airway registry that prospectively captures patient demographics, diagnosis, indications for intubation, persons and discipline of intubating physician, number of attempts, method of intubation, success rates, and complications. The data were divided into 3 periods: (1) before PPE was instituted from November 1, 2002, to March 31, 2003; (2) during SARS (when PPE use was mandatory) from April 1 to July 31, 2003; and (3) after SARs (when PPE use was nonmandatory but encouraged) from August 1 to December 31, 2003.

Results: There was no change in patient demographics during the 3 periods, but there was a change in the patient diagnoses in period 2, with decreases in the proportion of respiratory and cardiac cases and increases in neurology and trauma cases. These changes reverted to the previous distribution in period 3. The alarming discovery was that whereas in period 1 (pre-SARS), resident medical officers attempted intubations 45% of the time, this figure went down to 35% in period 2 (SARS) and 23% in period 3 (post-SARS). Anesthetists performed 1.2%, 8%, and 0% of emergency intubations in periods 1, 2, and 3, respectively. Attending emergency physicians performed 54%, 56%, and 77% of intubations in periods 1, 2, and 3, respectively. The complication/peri-intubation event rates were 10.5%, 9.9%, and 9.4% in periods 1, 2, and 3, respectively. The success rate for residents was 80.8%, 89%, and 86.2% in periods 1, 2, and 3, respectively.

Conclusion: The wearing of PPE and positive airway pressure respirator is thought to make intubation more difficult, as seen by the increase in proportion of intubations performed by anesthetists in period 2 and by attending emergency physicians in periods 2 and 3. The infection control policy that restricts the number of health care staff attending to each patient may have influenced the department's decision to allow only the most confident or experienced personnel to manage the airway. The exposure of junior residents in emergency airway management during SARS and the immediate post-SARS period was decreased. This trend should be further monitored, and intervention may be necessary should it continue to decline.

381 Emergency Physicians Cannot Inflate or Estimate Endotracheal Tube Cuff Pressure Using Standard Techniques

Hoffman RJ, Parwani V, Hsu B, Hahn I/Beth Israel Medical Center, New York, NY; St. Luke's-Roosevelt Hospital Center, New York, NY

Study objectives: Tracheal necrosis and stenosis may result from an overinflated endotracheal tube cuff. Safe, appropriate pressure in endotracheal tube cuffs is considered to be between 15 and 25 cm H_2O, pressures below normal capillary perfusion pressure. We seek to determine the ability of emergency medicine residents and attending physicians in accredited emergency medicine residency training programs to inflate an endotracheal tube cuff to appropriate pressure using standard syringe technique and assess appropriateness of pressure of previously inflated endotracheal tube cuffs by palpating the pilot balloon.

Methods: This institutional review board–approved descriptive survey of resident and attending physicians in accredited emergency medicine residency training programs in New York City used a previously tested, tracheal simulation model with a 7.5-mm endotracheal tube with a high-volume low-pressure cuff (Mallinkrodt, St. Louis, MO). Using their choice of a 5-mL or 10-mL plastic syringe with standard Luer Lock (Beckton-Dickson, Franklin Lakes, NJ), participants inflated the endotracheal tube cuff by standard method of injecting air as they deemed appropriate in conjunction with palpating the pilot balloon to estimate cuff pressure. Subsequently, the endotracheal tube cuff pressure was measured using a highly sensitive and accurate analog manometer (Boehringer Laboratories, Norristown, PA). Later, participants palpated the pilot balloon of 9 endotracheal tubes with cuffs previously inflated to known pressures ranging from 0 to 120 cm H_2O and reported whether the pressure was low, appropriate, or high.