Introduction:
The airway management for patients who cannot be intubated using conventional laryngoscopy requires the anesthesiologists to use different techniques such as video laryngoscopy or a fiberoptic bronchoscope to guide the endotracheal tube into the trachea. The purpose of this educational effort was to assess and improve the knowledge and skills of pediatric anesthesia providers in the use of 3 advanced airway techniques; a) Glidescope intubation, b) Fiberoptic through an LMA. c) Nasal Fiberoptic Intubation.

Primary objective: Determine the anesthesiologists knowledge regarding advanced airway device placement

Secondary objective: Assess the skills of participants regarding 3 advanced airway skills using a checklist.

Study Design:
Participants were 22 Pediatric Anesthesiologists at The Children’s Hospital of Philadelphia.

Study Interventions and Measures:

Demographic data (sex, date of birth, time (months) since last PALS training, number of times glidescope or a fiberoptic bronchoscope was used in the last year, years of experience as an anesthesia provider and contact information of the participant) was recorded. The participants were asked to complete a pre-tutorial questionnaire regarding their knowledge about these techniques the day before the tutorial. The experts provided the expert an opportunity to observe the participant perform each of the procedures. Feedback was given the participant (first and last name, email address) was recorded. The number of times glidescope or a fiberoptic bronchoscope was used in the last year was followed by a 20 point checklist (8 for glidescope and 10 for fiberoptic intubation through an LMA and 10 for nasal intubation). This was followed by a 20-minute training session in the perioperative area where subjects participated in a one-on-one tutorial with an expert in difficult airway management and practiced the use of a glidescope and a fiberoptic bronchoscope in a mannequin. This provided the expert an opportunity to observe the participant perform each of these techniques and provide individual feedback to each participant.

Study participants (Attending Pediatric Anesthesiologists) attending the hands-on educational session.

Results:
A convenience sample of 22 pediatric anesthesiologists at a tertiary care Children’s Hospital participated in the teaching session. The average years in practice was 10 years (range 1-32 years). All the participants had used a glidescope in a patient care setting in the previous 12 months and 20/22 had performed a fiberoptic intubation in the previous 12 months. Prior to the training the participants rated their comfort with performing a glidescope intubation at 81% (SD: 21%) and with Fiberoptic intubation at 72% (SD: 22%). The participants baseline average score on the 11 questions about difficult airway management was 60% (SD: 14%). The participants scored an average of 84% (SD: 14%) on the checklist used to assess their glidescope and fiberoptic placement technique in a mannequin.

CONCLUSION/DISCUSSION:
As anesthesiologists we are charged with continuing to improve our knowledge and skills with regards to airway management. Currently airway workshops are offered at national, regional meetings and at individual institutions. We developed a hands-on small group airway-workshop training for skill improvement which was aimed at identifying the skill of individual practitioner with regard to three advanced airway management techniques. This hands on tutorial at an institutional basis was also helpful in advising the practitioner on the equipment and resources available to them in their practice environment. Though participation in this workshop was voluntary; participants were enthusiastic about its continued availability. Many practitioners commented that they were excited about this opportunity and felt that this session provided them an opportunity to practice infrequently used advanced airway management skills with constructive feedback.

References:


