Anesthesiologist-led COVID-19 Airway Training Skills Session to teach novel team approach and workflow

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What’s the Problem?

Intubation is an aerosol-generating procedure that poses a significant infectious risk to the operator in the COVID-19 era, where the volume of intubations was expected to increase dramatically. Following national anesthesia societal and organizational recommendations regarding best practices to decrease risk of viral transmission, a new 3-person airway team approach was developed. Additions to the preexisting airway management workflow included an aerosol-containing intubation shield, a new breathing circuit configuration incorporating HEPA filtration, and the use of unfamiliar PPE, all of which required mastery of a complex sequence of events surrounding the patient encounter. This high-stakes workflow was a substantial departure from standard practice and a broad educational effort was required. A departmental simulation was developed to this end.

Simulation Objectives:

1. Introduction to new team structure and roles
2. Meticulous donning/doffing and PAPR training
3. Room entry strategy, preparation, and intubation of a COVID patient using the Jefferson Anesthesia bundle of events including equipment modality, medication selection and ventilatory strategies
4. Introduction to the use of an intubation shield
5. Post-procedure team workflow, with proper room exit, equipment decontamination and doffing

How Might We: Allow the team to practice the sequence of actions necessary for the safe emergent airway management of COVID-19 patients?

Learner Actions:

1. Assign roles outside room
2. Don PPE (gown/gloves/PAPR)
3. Bring equipment into room
4. Perform correct workflow and circuit config for an RSI
5. Practice intubation workflow in different role configurations
6. Perform in-room equipment cleaning and doffing
7. Perform out-of-room equipment cleaning and doffing
8. Debrief

Metrics/Outcomes:

- > 150 personnel trained
- Groups of 3-4 learners per session
- 1 hour sessions with 5 per day
- 1 lead facilitator and 1 trainer for “train the trainer” model
- Subjective feedback highly positive, probable morale improvement
- To date, exceptionally low rate of COVID-19 infection among anesthesia staff