LETTERS TO THE EDITOR

Your COVID-19 Intubation Kit

To the Editor

nesthesiologists will be summoned to intubate Coronavirus Disease 2019 (COVID-19) patients and patients under investigation (PUI) both electively and emergently in those exhibiting respiratory compromise and shedding a maximal viral load.

Airway management of COVID-19/PUI patients confers additional significant risk to staff due to the aerosolizing nature of airway interventions, particularly in severe cases of COVID, which on average have a 60 times higher viral load than mild cases.¹ Most COVID patients will, at minimum, be placed on contact/drop-let precautions. Aerosolization can be assumed to occur during facemask ventilation, intubation, and cardiopul-monary resuscitation,² so airborne precautions offer the needed heightened degree of protection and vigilance.

We have developed an organizational system to provide safe and timely intervention for these patients while maintaining the safety of the health care providers. The severe acute respiratory distress syndrome (SARS)-1 literature underscores the value of high-fidelity simulation to manage patients with airborne diseases.³ We convened a multidisciplinary focus group that included Code Blue team leaders, the Department of Anesthesiology & Perioperative Medicine Director of Clinical Operations, and representatives from the rapid response team (RRT) and respiratory therapy team (RRT). We then conducted several mock COVID-19 code blue simulations aimed at improving team preparation, delineation of airway instrument responsibilities, and general provider protective equipment (PPE) education. This team determined that several key components were necessary to prepare before any urgent airway call. Therefore, we aimed to equip our providers and clinical sites with these necessary items:

- 1. Contact, droplet, and airborne precautions: gown, gloves, face shield, powered air-purifying respirator (PAPR)/N95 mask.
- 2. Premade airway kits with a high viral efficiency filter.⁴ Various heat and moisture exchanger filters (HMEF) and high-efficiency particulate absorbing (HEPA) filters meet this standard.
- 3. Video laryngoscope.
- 4. Induction medications.
- 5. A COVID-19 airway response team comprised of attending anesthesiologists.⁵

To facilitate mobility and accessibility of several items, we assembled a disposable COVID-19 airway bag (Figure). The bag is intended for single use and includes

- 1. Airway equipment:
 - a. Positive end expiratory pressure (PEEP) valve;
 - b. High viral filtering efficiency HMEF or HEPA;
 - c. Endotracheal tubes, with stylet;
 - d. In-line suction catheter;
 - e. Syringe for cuff; and
 - f. Oral airways.
- 2. Essential PPE (PAPR, N95 mask, and face shield).
- 3. Essential induction medications and rescue medications.



Figure. Contents of COVID-19 Intubation Kit. COVID-19 indicates Coronavirus Disease 2019.

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When the COVID-19 airway response team is called to perform an intubation, they are ready to proceed with minimal delay and maximum safety. Decision support tools including a content checklist for respiratory therapists, and educational videos demonstrating correct assembly of the airway circuit and donning/ doffing of PPE have further advanced this initiative.

Managing the COVID-19/PUI airway with this airway team equipped with a comprehensive airway bag allows for critical elements to be readily available while maximizing provider safety.

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