

Simulation of Airway Management in COVID Suspected/Diagnosed Patient
St. Paul's Hospital
Mar 8, 2020

Learning Objectives:

1. Practice meticulous donning and doffing of PPE + Double Gloving under conditions of aerosol precautions.
2. Emphasize early airway intervention.
3. Practice airway management with limited personnel and no learners present.
4. Introduce and use the SPH COVID Airway Checklist.
5. Practice modifications for airway management in COVID suspected/diagnosed patients.
6. Emphasize the importance of teamwork and communication in safely managing the airway and preventing contamination of team members.

Overview:

A middle-aged male patient presented to the ED earlier today with cough, fever, and dyspnea. Vital signs are essentially normal at that time and he was oxygenating and ventilating normally. He was transferred to a negative pressure room in the ICU as one was available. You have been called because his oxygen requirements have started to increase and the team suspects he may be developing COVID-19.

Pre-briefing:

- A. Welcome, Objectives, Expectations, Roles
 - Review objectives.
 - Acknowledge confidentiality and safe space.
 - Emphasize functioning within each HCW's normal role.
- B. "Fiction contract"
 - Expectation is that you will try to engage with the scenario and treat it as real as you are able.
 - If something serious occurs, we will use the safety phrase "This is not a simulation."
- C. Logistical details of the room and mannequin
- D. We will end the scenario by saying, "The simulation is now over." Our debrief will then begin.

Scenario:

Phase 1: Arrival to the scenario

55yo male in negative pressure room wearing non-rebreather mask at 15L/min, BP 177/98, HR 121 sinus tachycardia, SpO2 91%. Participant arrives after being called by ICU as only learners are

present in house. Confederate is the ICU resident who gives the history, and would like to help with the intubation.

Phase 2: Pre-airway management

Team goes through checklist and gathers necessary supplies to bring into the room. Performs time out. Discusses airway plans A, B, C.

Phase 3: Donning

Participant dons partnered with an observer.

Phase 4: Airway management

Manages airway with preferred drugs and technique. Vital signs modified accordingly. Glo-Germ is aerosolized during airway intervention.

Phase 5: Doffing

Participant doffs with partner. Checked with UV light post-doffing.

Debriefing:

Possible key points:

1. Personnel
 - a. No learners
 - b. Minimum number
 - c. Extra donned person ready to bring in extra equipment/supplies/drugs as required
2. PPE technique
3. Double gloving technique
4. Early AW management to avoid crash intubation or the need for BMV, increasing risk of multiple attempts and/or increased aerosolization
 - o Intervene if decreasing SpO2 while requiring:
 - FiO2 60-95% or
 - 10-15L FM
5. Equipment needs
6. Avoidance of NIPPV, high flow nasal cannulae and nebulized medications
7. Paralysis of patient, preferably with rocuronium (longer to prevent coughing if difficulties encountered)
8. Avoidance of BMV, if possible. If required, small tidal volumes
9. Video assisted intubation is preferred to maximize distance of intubator from the patient
10. HME filter or clamp on tube and/or mask and/or supraglottic airway at all times