

NYP Guidelines for Airway Management of Suspected or Confirmed COVID-19 Patients (as of April 2, 2020)

PPE Kit

Inventory:

- HEPA filter
- N95 masks x 4 (2 small, 2 regular)
- Welder mask x 2 preferred (surgical Face shields x 2 if no Welder mask available)
- McGrath, #4 blade x 3, #4 blade x 2, #3 blade x 2 #3 blade x 2
- Isolation gown x 2 (yellow, not waterproof)
- Waterproof (blue) gown x 2
- Bouffant hat x 2
- Long "Beard" hat x 1 (**beards will interfere with the effectiveness of the N95!**)
- Sterile gloves: 6.0, 6.5, 7.0, 7.5
- Bag for McGrath Handle / battery post intubation

Directions:

- These bags/supplies are stored with **the unit clerk** and should be requested when the intubating team arrives at the floor/ICU.
- In addition the intubating team should take a bag with COVID supplies **besides, not instead of**, the arrest bag to all intubations/arrests of PUI/confirmed COVID-19 cases.
- A McGrath handle should be retrieved from the attending of that unit; if not readily available use the McGrath handle from arrest bag.
- **Do not take the COVID/arrest bag into the room** with PUI/confirmed COVID-19 patient.
- Take **only the things** that you need with you **into the room**.
- Prepare medications and intubation equipment outside of the patient's room
 - Induction agent, Paralytic, Vasopressor, Flush syringes and a sedative for post intubation
- Have a dedicated provider outside of the room to hand additional equipment/medications that may be needed to avoid contaminating the bag.
- If the bag is contaminated, discard all disposable items. Clean non-disposable items with wipes following manufacturer's directions.
- **Return the used COVID bag to the unit clerk** and the **McGrath handle** back to the **attending** of that unit.
- **Unit clerk to call local supply chain** number and **request bag swap** and/or extra McGrath batteries
- **If reserve COVID hbag is used, return together with arrest bag and restock**

NYP Guidelines for Airway Management of Suspected or Confirmed COVID-19 Patients (as of April 2, 2020)

Example of supply bag



Airway management

Personnel:

- Most experienced practitioner available should perform the intubation
- The team caring for the patient (for example the ICU, floor or ED) needs to ensure that sufficient personnel is available in the room to allow a safe intubation. This could include RN, RT or other personnel as requested by the intubating practitioner. All personnel in the room have to don full PPE

Pre-intubation:

- Advance planning and clear communication are paramount
- Ensure that a well functioning IV is available
- Ideally place the patient in a negative pressure room.
 - If a negative room is not available, place the patient in a single room and close the door.
 - If no rooms are available (e.g., ED), isolate the patient and ensure that other patients/HCW maintain > 6 feet (2 m) distance.
- **Most experienced provider available should intubate**
- **Respiratory Therapy** to set up Ventilator: makes sure there is a HEPA filter on the expiratory limb of the ventilator
- Confirm ETCO₂ waveform capnography is functional (if available); if colorimetry is used place EZCap after HEPA filter
- Minimize personnel in the room
- Bring the **COVID PPE kit in addition to the arrest bag**
 - Do not take COVID/arrest bag into the room, just the necessary equipment

NYP Guidelines for Airway Management of Suspected or Confirmed COVID-19 Patients (as of April 2, 2020)

- **Don PPE (contact, airborne, droplet precautions) outside of the patient's room** in the anteroom, a small room between the patient and the hallway with a sink and PPE that usually accompanies airborne isolation rooms on the floor, or outside of the patient's room, if anteroom is not present: **Hand hygiene, N95, face shield or welder mask, hat, blue/waterproof or sterile gown for intubator; yellow or blue/waterproof gown for assistant, double gloves, hair/beard cover**
 - <https://vimeo.com/394529353/9b7fbb98a5>
 - Beards are discouraged for best N95 mask fit
- Contact IP&C (contact numbers below), and/or WH&S hotline (below) if questions arise about PPE or potential exposures.

Intubation:

- Prolonged pre-oxygenation for more than 5 minutes: for example with 100% FiO₂ non rebreather (caution: respiratory droplets could be released from expiratory ports) or with Ambu bag and mask with a HEPA filter in between (create good seal)
- Goal is rapid sequence induction
 - If need to use bag-mask ventilation, use 2 hands to provide good seal, use HEPA filter between mask and Ambu bag, deliver small tidal volumes
- **Non-invasive ventilation** (no high-flow nasal cannula, no BIPAP) should **not be used just for pre-oxygenation** unless already present
- Avoid awake FOI (risk of aerosolizing the virus with during topicalization and coughing)
- **Most experienced provider available should intubate**
- May apply **cricoid pressure** if feasible
- Use of **video-laryngoscopy** preferred to increase the distance (e.g., McGrath is preferred for ease of decontamination)
- Inflate cuff immediately after intubation
- LMA ventilation maybe warranted in case of difficult ventilation

Post-intubation:

- Attach ETT to the ventilator
- Confirm ETT placement by CO₂ sampling or EZCap
 - If Ambu bag is used prior to connecting ventilator, make sure HEPA filter is placed between ETT and Ambu bag
 - ICU level ventilators have a HEPA filter included in their expiratory limb by default. Therefore no additional HEPA filter is required. For non-standard ICU ventilators (for example in the OR) make sure there is a HEPA filter placed on the expiratory limb prior to attaching a PUI or confirmed COVID patient
- Take off top layer of gloves after intubation and prior to touching other equipment
 - **Careful** – do not contaminate yourself during this process

NYP Guidelines for Airway Management of Suspected or Confirmed COVID-19 Patients (as of April 2, 2020)

- Use disposable stethoscope to examine the patient
- RT to set up ventilator prior and help with applying ETT holder
- Secure the tube with ETT holder or tape
- **Dispose used and all disposable** items that were brought into the room in trash cans in patient's room
- McGrath: clean all surface areas with wipes, remove outer gloves and then wipe again and **then place into the specimen bag and affix sticker "Wiped" to the bag.**
- **If a different (video) laryngoscope is used, clean as per manufacturer and IP&C instructions or discard if disposable.**
- **Doff PPE**, ideally in anteroom (can remove all pieces including N95, and wash hands). But if anteroom is not present, then doff in patient's room (at least 6 feet away from the patient), except for the N95 mask, which is removed outside of the room. Hand hygiene.
 - Doffing video: <https://vimeo.com/394529353/9b7fbb98a5>
- If you used the yellow gown for intubation (which you should not do): change scrubs (the gown is not waterproof)
- Wash hands or Purell, Apply new non-sterile gloves and clean McGrath with Purple wipes, allow 2 minute dry time
- HCWs who were in direct contact with PUI/COVID-19 patient will need to **self-monitor with delegated supervision** (check temperature twice a day, and report symptoms for 14 days). Can return to work as long as they are asymptomatic, unless there is a breach in PPE. If that is the case, let us know, discuss with IP&C and follow their recommendations.
 - Workforce Health and Safety (WH&S) hotline for questions around protocols relating to COVID-19. 6a-11p, 7 days a week, **646-NYP-WHS0 (646-697-9470)**
- **Return the used COVID bag to the unit clerk** and the **McGrath handle** back to the **attending** of that unit.
- **Unit clerk** to **call local supply chain** number and **request bag swap** and/or extra McGrath batteries

Extubation

Please see NYP guidelines "Tracheal Extubation for the COVID-19 Patient" for more detail

- Ideally would extubate in a negative pressure room.
 - If in the OR (positive pressure) and going back to negative pressure ICU room, keep intubated.
- Proper hand hygiene and PPE as above
- Limit the number of staff to a minimum
- Consider antiemetic prophylaxis to avoid nausea, retching, or vomiting

NYP Guidelines for Airway Management of Suspected or Confirmed COVID-19 Patients (as of April 2, 2020)

- Extubate to face mask (in case there is coughing) or facemask
 - Avoid extubating to BiPAP/HFNC

Transportation

Please see NYP guidelines "Transportation of PUI/COVID-19 Patients" for more detail

- Transportation should be avoided unless necessary
- Hand hygiene and PPE
 - All personnel who **actively transporting** the patient need to wear **PPE: minimum droplet/contact, along with N95 masks if aerosol-generating procedures are in progress (e.g., non-invasive ventilation)**
 - **Another HCW wearing PPE for droplet +/- airborne precautions** (see above) but **NOT gown/gloves** should be available to **interact with the environment**. They should keep a distance > 6 feet, if possible
- For intubated patients with a tracheal tube: best to use transport ventilator with HEPA filter in expiratory limb; If Ambu bag used: place HEPA filter between ETT and Ambu bag
- If the patient is not intubated, the patient should wear a surgical mask
- If elevators are used, only the patient and healthcare team should be in the elevator
- If transporting to procedure area, PPE should be changed prior to transfer back to the home unit to avoid contamination of environmental surfaces during return to unit.

For questions about infection control issues, contact the Department of Infection Prevention & Control at your site:

NYP-AH: 212-932-5219

NYP-CU, NYP-MSCH, ACN: 212-305-7025

NYP-LH: 914-787-3045

NYP-LMH: 212-312-5976

NYP-WC, NYP-WBHC, ACN: 212-746-1754

NYP-BMH: 718-780-3569

NYP-HVH: 914-734-3950

NYP-Q: 718-670-1255

Date: 3/24/20

Version: NYP 3.1

gw