Anesthesia Team Management of

KNOWN COVID POSITIVE[A] PATIENT or SYMPTOMATIC PUI

During Covid 19 Pandemic

(Updated August 25, 2022)

A. Infection Precautions: frequent hand hygiene and proper donning and doffing of PPE is essential.

1. Hand hygiene after every contact with patient.
2. All patient care, including routine and aerosolizing procedures (e.g., intubation, extubation)- N95 (or equivalent), face-shield over N95, gloves (double for intubation/extubation) and gown.

B. Type of Anesthesia

1. Regional/MAC
    a. Minimize sedation to decrease need of airway manipulation.
    b. Patient must wear surgical mask.
    c. Supplemental oxygen at lowest level under mask to maintain adequate oxygenation.
2. GA- see below.
3. OB- see OB covid-19 guideline separate from this.

C. OR Planning and Setup

1. Discuss with OR leadership to determine which rooms to prepare:
    a. If an airway case (e.g., tracheal tumor, bronchoscopy, etc.) discuss possibility of negative pressure OR with Matt Miller.
    b. If not an airway case, expect to use regular positive pressure OR.
2. Designated OR setup
    a. Precaution signs on the door of the OR- Contact and Airborne.
    b. Ask pharmacist to take the usual Pyxis out of the OR and place in the hallway.
    c. Request trays of “covid drugs” from pharmacy tech (3-DRUG), which are kept on the counter in the satellite pharmacy. These trays (red, white, and blue) contain all of our usual pyxis drugs.
    d. Gather enough fluids, the warmer cartridge, any tubing, and other supplies that will be needed from the pyxis cart.

e. Viral filter between the elbow of the breathing circuit and the patient's mask. For smaller pediatric patients that don't tolerate the extra dead space or weight from the HEPA filter, place it on the circuit's expiratory limb.

f. In-line suction catheter for ETT (ask anesthesia tech).

D. Donning of PPE (prior to meeting patient in ICU or prean)

1. Ask someone to observe you for best practice.
2. Find a "clean" location.
3. Hair completely covered by surgical cap, tie back hair.
4. N95 mask. Apply hand-sanitizer (no jewelry or watches).
5. Put on inner gloves.
6. Put on gown, place thumbs through holes and tie to back.
7. Place N95, face shield over n95 with or without goggles, or CAPR/PAPR
8. Put on a second layer of gloves.

E. Transport patient to OR.

1. If patient coming from ICU
   a. Transport to OR by OR anesthesia team.
   b. Before going upstairs, gather emergency transport meds/equipment as usual.
   c. Directly outside of patient's room, don PPE as in D above.
   d. If patient not intubated prior to transport, place regular surgical mask on patient and go directly to designated OR. Oxygen may be placed by nasal cannula beneath the patient's mask or by an oxygen mask over the patient's mask.
   e. If patient intubated prior to transport, ensure viral filter between the patient's ETT and Ambu bag or ventilator. Go directly to designated OR.
   f. Assign a clean person to assist with doors/elevators so that core team only touches stretcher and patient items. Clean person should carry CaviWipes to clean unintentional contamination.
2. If patient coming from non ICU location
   a. Transport to Pre-an A bed 7 (isolation room) by transportation or to be seen in SSC isolation room (34-36).
   b. Directly outside of patient's room, don PPE as in D above.
   c. The anesthesia team should transport the patient directly to designated OR.

d. Assign a clean person to assist with travel to the OR so the core team only touches stretcher and patient items. Clean person should carry CaviWipes to clean unintentional contamination.

F. Management in Operating Room

1. The primary OR Anesthesia team continues with donned PPE used for transport.
2. Intraoperative hand hygiene required at the following times:
   a. Before and after removing outside pair of gloves (sanitizer).
   b. After contact with soiled or contaminated areas (sanitizer, glove removal, sanitizer, new gloves). If gloves are bloody or otherwise heavily soiled, discard.
   c. Before touching the anesthesia machine or its contents (sanitizer over gloves).
   d. After EVERY contact with the patient (sanitizer over gloves).
3. If needed medications are not in OR, call pharmacy tech and have the tech place medications on a tray just outside of OR. When the pharmacy tech leaves room, a member of the anesthesia team may retrieve tray.
4. All disposable supplies placed in the mouth (e.g., airway, stylet) or nose (e.g., nasogastric tube) must be immediately placed in red bags when removed from patient.
5. Viral filter must stay attached to ETT to prevent dispersion of virus if circuit disconnected.

G. Intubation (if needed) in OR

1. Minimize staff in OR.
2. Anesthesia team + all staff with appropriate PPE during intubation: N95/PAPR, face shield or goggles/eye protection, gloves, gown.
3. Pre-oxygenate patient to ETO2 over 80%.
4. Consider video laryngoscopy (goal is whatever method portends best first pass success).
5. Minimize mask ventilation unless necessary – if needed use low tidal volume and low pressure.
6. Confirm endotracheal intubation.
7. Blades:
   a. Reusable blades- place in outer glove, then place into Ziploc/biohazard bag, then use hand sanitizer on top of inner glove (now exposed). If video-laryngoscope blade, place in bin at base of system.

b. Disposable video-laryngoscope blades- place in red trash bag.

8. Confirm appropriate cuff pressure to minimize risk of aerosolization.

9. If desired, attach in-line suction.

H. Case End/Emergence:

1. If patient is going to ICU,

   a. Alert the ICU of your impending arrival so that hallways can be cleared and ICU staff have enough time to don proper PPE.

   b. Identify a "clean" team member to accompany core team and assist with doors and elevators during transport.

   c. Do not extubate the patient in OR.

   d. Do not go to PACU.

   e. Notify anesthesia tech that you are leaving.

   f. Transport the patient intubated with the viral filter between ETT and Ambu directly to ICU for extubation (usually done by ICU team; however, anesthesia will assist if needed).

   g. Doff contact/droplet/eye PPE after dropping off patient in ICU before returning to basement. (see I below)

2. If patient going to PACU

   a. Call PACU charge nurse (732-5443) to alert staff to be ready with appropriate PPE for recovery in PACU 21 or other isolation room.

   b. Place surgical mask on patient with supplemental oxygen under mask by nasal cannula. Use oxygen mask over surgical mask if needed.

   c. Identify a "clean" team member to accompany anesthesia team and assist with transportation to designated room in PACU.

I. Doffing

1. Stand by the door in PACU 21 or ICU and drop all items into garbage.

2. Hand Hygiene to outer gloves.

3. Remove gown.

4. Remove outer gloves.
5. Bend forward to remove face shield and clean with CaviWipe, and can replace. May use alcohol to remove residue.
6. Sanitizer to inner gloves.
7. Inner gloves off into trash
8. In secluded area, sanitize hands, remove and dispose of N95, sanitize hands. Replace with surgical mask.

J. OR Cleanup/Arrival of next patient

1. EVS and anesthesia techs wearing appropriate PPE (including N95 masks) may enter the OR Immediately after the patient leaves the OR. They should perform cleaning with OR doors closed to enable clearance of virus.
2. Anesthesia techs use cleaning protocol.
3. Discard all medications that were out.
4. The water trap at the end of the gas sampling line may contain virus and should be discarded in a red biohazard bag or sharps bucket.
5. OR nurse will remove precaution signs on the door of the OR only after EVS and anesthesia techs have performed their roles.
6. The next patient may enter the OR 30 minutes after the prior patient has left- this will enable appropriate clearance of the virus.

K. Ectopic locations

1. Patients who need emergent GI procedures should have the procedural services come to the basement for their procedure.
2. Patients who need emergent eye procedures should have surgery in the basement; however, equipment limitations may necessitate surgery on the second floor.
2. Patients who need MRI/IR should have airway management onsite with above precautions.

[A]ADDENDUM

Convalescent Covid

A patient with a Covid positive test preoperatively may be considered to have an effectively covid negative test if:

1. Asymptomatic patient- at least 10 days* elapsed since date of first positive Covid test and patient remains asymptomatic.
2. Symptomatic patient- at least 10 days* (mild-moderate illness) or 20 days* (severe illness) elapsed since symptom onset and at least 24 hours since resolution of fever and respiratory symptoms improved.
3. Severely Immunocompromised patient- at least 20 days* elapsed since symptom onset or date of first positive Covid test and at least 24hrs since fever and other respiratory symptoms improved.

*But less than 3 months

NOTE- This only refers to the patient's covid status regarding the likelihood of being contagious. A separate determination needs to be made regarding safety for surgery in a patient who recently had a covid illness. Per Infection Prevention, surgery should wait a minimum of 3-6 weeks after covid diagnosis, requiring the patient to be well for at least 2 weeks, and depending on the severity of the illness, comorbidities of the patient, and procedure risk.

The recommendations in this addendum were taken from the CDC statements below and the URMC guideline "Discontinuation of Isolation Precautions for Recovering COVID-19 Patients" on our intranet.

Support from the CDC website in October 2020:

"Available data indicate that persons with mild to moderate COVID-19 remain infectious no longer than 10 days after symptom onset. Persons with more severe to critical illness or severe immunocompromise likely remain infectious no longer than 20 days after symptom onset. Studies have not found evidence that clinically recovered persons with persistence of viral RNA have transmitted SARS-CoV-2 to others."

"Data to date show that a person who has had and recovered from COVID-19 may have low levels of virus in their bodies for up to 3 months after diagnosis. This means that if the person who has recovered from COVID-19 is retested within 3 months of initial infection, they may continue to have a positive test result, even though they are not spreading COVID-19."

References

1. Consensus statement: safe airway society principles of airway management and tracheal intubation specific to the COVID-19 adult patient group. Brewster et al.
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3. ASA ASA/APSF/AAAA/AANA Joint position statement https://www.asahq.org/aboutasa/newsroom/news-releases/2020/03/update-the-use-of-personal-protective-equipmentby-anesthesia-professionals-during-the-covid-19-pandemic
4. Recommended Guidance for Extended Use and Limited Reuse of N95 Filtering Facepiece Respirators in Healthcare

Settings https://www.cdc.gov/niosh/topics/hcwcontrols/recommendedguidanceextuse.ht ml

5. Scott Weingart. COVID19 Intubation Packs and Preoxygenation for

Intubation. *EMCrit Blog*. Published on March 13, 2020. Accessed on March 18th 2020. Available at [https://emcrit.org/emcrit/covid19-intubation-packs-and-preoxygenation-forintubation/]

6. Pediatric Anesthesiology Guide to COVID-19 Compiled by Jennifer Lau, MD Childrens Hospital LA, Last Edited 03.16.20 (please send edits to jenlau@chla.usc.edu)
7. Pediatric Anesthesiology Guide to COVID-19 Compiled by Jennifer Lau, MD Childrens Hospital LA, Last Edited 03.16.20 (please send edits to jenlau@chla.usc.edu)
8. Up to Date Coronavirus disease 2019 (COVID-19): Anesthetic concerns, including airway management and infection control.