A. Guidance for Transport of Patients with Suspected or Confirmed COVID-19 to the Operating Room or Procedural Suite

1. **Pre-op huddle:**
    a. When the patient is scheduled for surgery, a huddle should be conducted with:
        i. Designated Team leader
        ii. Anesthesia provider assigned for the case
        iii. Anesthesia technician
        iv. Primary surgical attending or procedural team attending
        v. Circulator and scrub nurse
        vi. Assigned outside runners (anesthesia and nursing)
        vii. Respiratory therapist (if patient is ventilated)
        viii. Charge nurse: In order to plan and prepare the space and ensure all staff who will be present can adhere to Special flu droplet and contact precautions and don and doff the necessary PPE.
    b. Page infection control if there are concerns regarding COVID-19 risk status (IC pager: 94277)
    c. Page EVS to inform case start and procedure location (EVS Manager on Duty East pager: 92746 West pager: 92745)
    d. Allocate a transfer team:
        i. Team leader (will call/hold elevators/wipe down)
        ii. RT (if ventilated)
        iii. Anesthesiologist (head of bed)
        iv. Surgical/procedural attending or fellow/resident (end of bed)
        v. Extra member (ICU nurse or circulating nurse, depending on extra equipment and staffing levels)
        vi. Airway Team Member (optional)
    e. Print and display signage outside OR (STOP and PPE Posters)
2. **Patient PPE** to be worn while traveling
    a. If patient is not intubated, they should wear a surgical mask (not an N95 respirator) if tolerated
    b. If requiring oxygen, it can be administered using a facemask over the surgical mask
    c. If patient is intubated, no mask is required
3. **Staff PPE** to be worn while traveling:
    a. All staff members on transfer *except* the team leader: N95 respirator with eye protection, a surgical gown, head cover and double gloves.
    b. Team leader: surgical facemask, eye protection and gloves.
4. **Non-intubated patients:**
    a. Should be intubated in ICU before transfer to the OR, if the anticipated postoperative destination is ICU and when clinically appropriate
    b. Follow the SOP for airway management in the ICU
    c. **Page RT** for an ICU ventilator if intubating outside of ICU and the anticipatedpostoperative destination is ICU
    d. Patients from medical-surgical floors who are expected to return, intubation will be performed in the surgical or procedural location itself
5. **Intubated patients** should be transported with an ICU ventilator (dry circuit, viral filter in place); Ambu bag ventilation and circuit disconnections should be avoided as much as possible, as these may promote aerosolization.
    a. Use an HME HEPA viral filter between ETT and ventilator for the transfer to permit safe rescue Ambu ventilation in the event of ventilator failure
    b. Travel with a Kelly clamp to clamp ETT if disconnecting the ventilator for any reason
    c. Transfer patient with help from the respiratory therapist
6. **Direct transfer**:
    a. Patients from the ICU requiring essential procedures would be transported from their location directly to the surgery or procedural location and then directly back to their room, avoiding recovery in shared spaces like PACU.
    b. Patients undergoing ambulatory procedures or from med-surg floors, who are expected to return to their locations would be transported directly to the operative or procedural area for securing the airway following anesthesia protocols.

B. Guidance for Intraoperative Management of Patients with Suspected (PUI) or Confirmed COVID-19

1. **Preparation:** The principle is to eliminate the contamination of anesthesia machine and Omnicell contents in the OR when the patient is on the table
    a. Collect necessary anesthesia equipment, disposables and medications and place on a cart
    b. Drape anesthesia machine and Omnicell workstation with large plastic drapes
2. **PPE for OR staff**
    a. Anesthesia: Continue using the N95 respirator (per reuse protocol), eye protection, gown, leg covers and double gloves.
        i. Keep an extra set outside the OR for additional help to enter in event of a crisis
    b. All surgical and nursing staff must adhere to Special Flu droplet and Contact precautions and wear appropriate PPE with special attention to hand hygiene.
    c. In the instance of planned intubation or accidental extubation, all staff in the room must use N95 respirator with eye protection instead of surgical masks with faceshield (or other eye protection)
3. **Central line placement**
    a. If central line or other invasive device needs to be placed in the OR, remove PPE, scrub and don new PPE (N95 and eye protection may be left in place)
    b. Follow usual aseptic technique and line insertion protocol
4. **Reduce OR traffic:**
    a. Preoperative Huddle in OR with the surgical, anesthesia and nursing staff to ensure shared mental models and team dynamics
    b. Adhere to departmental policies on trainee involvement in COVID-19 care
    c. Limit the total number of staff participating in direct care in the OR
    d. Identify the runner to help bring equipment should you need help or additional supplies.
    e. Use the OR phones to communicate with coordinator outside the OR
5. **HEPA filter**:
    a. This is not required in the OR as the frequency of air exchanges within the OR are adequate.
    b. If the planned procedure ***outside*** of the OR involves aerosolization, please clarify the need for a HEPA filter and if unclear, consult with infection control (pager #94277).
6. **Airway management:**
    a. For MAC procedures, patients should wear an oxygen mask rather than nasal cannula to reduce droplet spread
    b. If intubating in the OR:
        i. Follow the SOP for airway management in the ICU
        ii. **Page RT** for an ICU ventilator, if the anticipated postoperative destination is the ICU, and have them assist with intubation in the OR
        iii. Use an HME HEPA viral filter between ETT and ventilator for the transfer to permit safe rescue Ambu ventilation in the event of ventilator failure
    c. Avoid unnecessary disconnections of the ventilator circuit to reduce risk of droplet spray
    d. Clamp ETT if disconnecting the ventilator for any reason
7. **Management of General Anesthesia**
    a. If patient requires ICU ventilation:
        i. Avoid using the anesthesia machine for delivery of anesthetic
        ii. Use TIVA for maintenance of anesthesia
        iii. This permits uninterrupted use of the ICU ventilator before during and after transfer to OR and back
    b. If postoperative destination is not ICU, the use of the anesthesia machine for delivery of anesthesia is permitted

C. Guidance for Transport of Patients with Suspected (PUI) or Confirmed COVID-19 from the Operating Room

1. **End of case huddle**: the team should confirm the steps outlined above in section A regarding:
    a. Team members who will be involved in the transfer back to the ICU or med-surg floors
    b. Review of required PPE for persons during transit
    c. Notification of EVS for decontamination
    d. Airway and ventilatory management
2. **Recovery planning:**
    a. For patients expected to require ICU care
        i. The plan would be to transport them intubated back to their room for recovery and extubation
        ii. Once appropriate, patient transport should be performed as described in Section A
    b. For patients in ORs expected to return to med-surg floors
        i. The entire post-anesthesia care will be delivered in the OR/procedure room where the surgery/procedure was performed, avoiding recovery in shared spaces like PACU
        ii. In certain circumstances it may be necessary to transfer the patient to a designated recovery location, which is appropriately vetted for safe care of the COVID-19 patient (for example, Stoneman3)
        iii. Extubation should be planned after the OR nursing and surgical team have completed their duties and leave the OR, unless required to assist the extubation.
        iv. Extubation is an aerosol inducing procedure: All remaining staff in the OR must adhere to the PPE standards including N95, eye protection, gown, and gloves
        v. A designated PACU nurse will participate in the post-extubation recovery following standard procedure
        vi. After extubation, the patient should wear a surgical mask if tolerated, and oxygen administered over the mask
        vii. Anesthesia staff will assist PACU nurse in the postanesthesia care as needed. Additional support staff who are needed in the post-anesthesia recovery must adhere to PPE before entry.
        viii. Once appropriate for PACU discharge, patient transport should be performed as described in Section A
3. **Decontamination of the OR:**
    a. Follow the details in the approved BIDMC protocol.
    b. EVS team will then perform an end-of-case room decontamination for COVID-19