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Title: PERI – COVID Interventional Radiology (IR) Protocol

Applies to: All Hamilton Health Sciences (HHS) Employees working in the Interventional Radiology Suite in Diagnostic Services

1.0 Purpose

1.1 This is a working document and will likely be different as the COVID situation evolves. This document is meant to help the health care practitioner with the procedural management of known or potential COVID-19 patients.

2.0 Equipment/Supplies

- N95 respirator
- Eye protection
- Gown
- Gloves
- Hat
- Neck coverage if deemed necessary
- Shoe covers
- Use disposable equipment where appropriate

3.0 Policy

3.1 General Statements

3.1.1 The recommendations for testing of patients who potentially have COVID-19 will change. The current recommendation (March 20, 2020) is to test patients with a positive travel history (out of the country in the past 14 days) and are symptomatic. Only patients needing urgent or emergent intervention who are suspected (test pending) or confirmed COVID-19 will be considered for an Interventional Radiology (IR) procedure.

3.1.2 A suspected (test pending) or confirmed COVID-19 patient must be identified as such when the patient is booked for the IR. The transport team will also need to be alerted to the COVID positive patient. All staff involved in the care of the patient can then follow appropriate precautions and procedures.

4.0 COVID Positive Protocol

4.1 Room Preparation

4.1.1 Identification of appropriate Interventional suite as per site.

4.1.2 A portable HEPA filtration Unit for Aerosol Generating Medical Procedures (AGMP) is to be placed in the room from the time the patient enters the IR suite until after the room has been cleaned following the case for a minimum of 30 minutes after final cleaning.

4.1.3 All extra equipment present in the room should be removed. The anesthesia machine/Spacelab monitor is clean of extra equipment, metal stools only. Unicells and other storage equipment should be removed.

4.1.4 Removal of anesthetic drug cart from room – Anesthesiologist/Sedation nurse will be taking in only essential medications, airway and other equipment for the case. Leave cart outside room. A COVID-19 specific bin/bag can be put together.

4.1.5 Droplet/Airborne AGMP precautions signage should be placed on all doors outside room to indicate COVID-19 Patient.

4.1.6 Designate only one door for entry into the room, minimize opening and closing of that door.

4.1.7 On the Anesthesia tubing, ensure a HME filter is attached as proximal to the

endotracheal tube as possible i.e. proximal to the "Y". (This is our standard set up).

4.2 Team Preparation:

4.2.1 Team meeting with Interventionalist, Anesthesiologist (as applicable) and RN's/RPN's/MRT's and any other staff involved in care to walk through process. This must be done prior to sending for patient in order to be ready in room for patient arrival.

4.2.2 Limit the number of people in the IR suite. A designated runner (nurse/MRT) will be located outside of IR suite to facilitate accessibility of supplies.

4.2.3 Appropriate PPE (Airborne/Droplet) for members in the IR to be available. This may change with resource availability.

- Surgical mask (N95 for intubation and extubation as well as when manipulating the connections (e.g. disconnecting), or other airway interventions and any surgical procedures that are considered AGMPs
- OR hat disposable
- Beard cover if needed
- Eye protection (face shield and lead goggles)
- Level 3 impervious gown for AGMPs and yellow gown for droplet, sterile Level 4 for scrub team
- Lead gown beneath PPE
- Gloves
- Shoe cover

4.2.4 Minimize to as few personnel as possible during intubation. Others to wait outside of room in full aerosol precautions.

4.2.5 Work in pairs paying close attention to high risk contamination areas. For example have a partner check your PPE donning and doffing.

4.2.6 Anyone requiring CPAP/BIPAP or any procedure which risks aerosolizing within the IR suite requires full airborne COVID precautions. Any procedures in this category should be attempted at the bedside if possible

4.2.7 The consent should be acquired at the bedside prior to transfer if possible.

4.3 Transportation to IR Suite

4.3.1 Patient should be transported directly from location in ICU, ER or inpatient ward to the IR Suite. Do not stop in hallway or reception areas. Hospital transport policy for patients in droplet/airborne applies. IC - Transportation of Patients Within or Between Healthcare Facilities of Who are Suspected or Confirmed COVID -19. The patient will wear a regular surgical mask.

4.3.2 **Intubated Patient**

Patients should be paralyzed prior to disconnection from circuit in order to prevent coughing. Flows should be turned off on ICU ventilator prior to disconnection of circuit so as not to aerosolize particles into the room. Endotracheal tube should be clamped and attached to the Ambu-bag using a HME filter. Once in the IR suite, clamp endotracheal tube prior to disconnecting from Ambu-bag and attach to the anesthesia circuit. (Kelly/Line Clamp is used for clamping).

4.3.4 **Non-Intubated Patient**
Patient should wear regular procedural mask during transportation. The procedural mask should be placed over the oxygen delivery device. The oxygen should be dry, not delivered with humidification.
Transportation route should be a low traffic route. Endeavor to clear patients and staff from route in the DI / IR hallway when able.

5.0 Procedural Management

5.1.1 Airway management keeping with principles of COVID-19 patients. Please see Anesthesia recommendations for intubation of suspected or confirmed COVID-19 patient. PERI - Anesthesia Recommendations for Airway Management of Patients with Suspected or Confirmed COVID – 19

5.1.2 No nebulized medications

5.1.3 Avoid steroids and NSAIDS use (weak evidence)

5.1.4 Limit the number of individuals in the room during the IR procedure

5.1.5 Use disposable equipment where appropriate

5.1.6 All personnel must wear a lead gown prior to donning PPE.

5.1.7 Have a person designated outside the room capable of being the runner for equipment not brought into the room during the initial team preparation

5.1.8 Non-essential personnel should leave the IR suite prior to extubation.

5.1.9 If the patient is to be extubated, this should occur in the IR suite. Every effort should be taken to limit the number of disconnections of the endotracheal tube.

5.1.10 Place an oxygen mask over the patient immediately following extubation and then a procedural mask over the oxygen mask.

5.1.11 Recovery **can be** done by a PACU nurse in the IR suite. PPE including N95 mask, hat, eye protection, gloves and gown should be worn by the recovering nurse who may be caring for the airway i.e. suctioning, handling the mask. The anesthesiologist should remain until there is no risk of needing airway intervention.

5.1.12 The patient **can be** transported back to the planned bed location bypassing PACU. The patient should wear a procedural mask as per the transport to the IR suite.

5.1.13 Intubated patients should be transported back to ICU paralyzed and apneic to prevent coughing with circuit disconnections as per the above transport.

5.1.14 Doffing of PPE should be done in the corner of the IR suite, greater than 6 feet away from patient following the PPE protocol currently in place. Have another team member watch to avoid contamination

5.1.15 Please apply Reuse/Extended Use principles for PPE doffing as applicable to the case.

5.1.16 Any p.r.n. supplies (which may be required urgently during a procedure should be placed in an individually sealable bag. If not used, the bag is cleaned and the equipment removed for future use.

5.1.17 Equipment and supplies should be confirmed and assembled by the radiologist, anesthesia and team prior to patient transfer to the room.

6.0 Cleaning

6.1 Cleaning Room

6.1.1 Room with the Portable HEPA filter unit running, can be cleaned by an environmental aid from CSS, wearing a fit tested N95 respirator. If this is not feasible, delay cleaning for one hour after the patient leaves the room. The procedure for the terminal clean for **viral infection** should be followed. CSS - Droplet/Contact Precaution COVID -19 Environmental Cleaning

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6.1.2 Any disposable supplies remaining in the room and unprotected within sealed bag/container should be discarded and not returned to clean core.

6.2 Cleaning of the Anesthetic Machine

6.2.1 Dispose of anesthesia machine circuit and filter and bag regular garbage.

6.2.2 Change the sampling line.

6.2.3 Consider disposing of soda lime (limited evidence)

6.2.4 The ventilation part of the machine can be autoclaved and will be brought to MDRD according to the manufacturer cleaning protocol. Please page biomedical technology / Respiratory Therapist to remove and transfer to MDRD.

6.2.5 All equipment in room should be terminally cleaned as per policy. CSS - Droplet/Contact Precaution COVID -19 Environmental Cleaning Protocol

7.0 Stretchers and non-disposable Transfer Equipment

7.1.1 Stretchers and non-disposable transfer equipment must be cleaned according to the hospital standard
CSS - Droplet/Contact Precaution COVID -19 Environmental Cleaning Protocol

7.1.2 Disposable items used in procedure/transport are to be discarded in regular garbage. Reusable linens to be discarded in regular soiled linen bag.

8.0 Cross References

IC - Transportation of Patients Within or Between Healthcare Facilities of Who are Suspected or Confirmed COVID -19.
CSS - Droplet/Contact Precaution COVID -19 Environmental Cleaning Protocol
PERI - Anesthesia Recommendations for Airway Management of Patients with Suspected or Confirmed COVID – 19

9.0 External References

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