RÉSEAU DE SANTÉ Horizon HEALTH NETWORK

Infection Prevention & Control Guidance: Operating Room Theatres and OR Decision Pathway for Horizon Facilities – All Phases

January 17, 2023
Version 1.0

OR Decision Pathway – For Horizon Facilities – All Phases

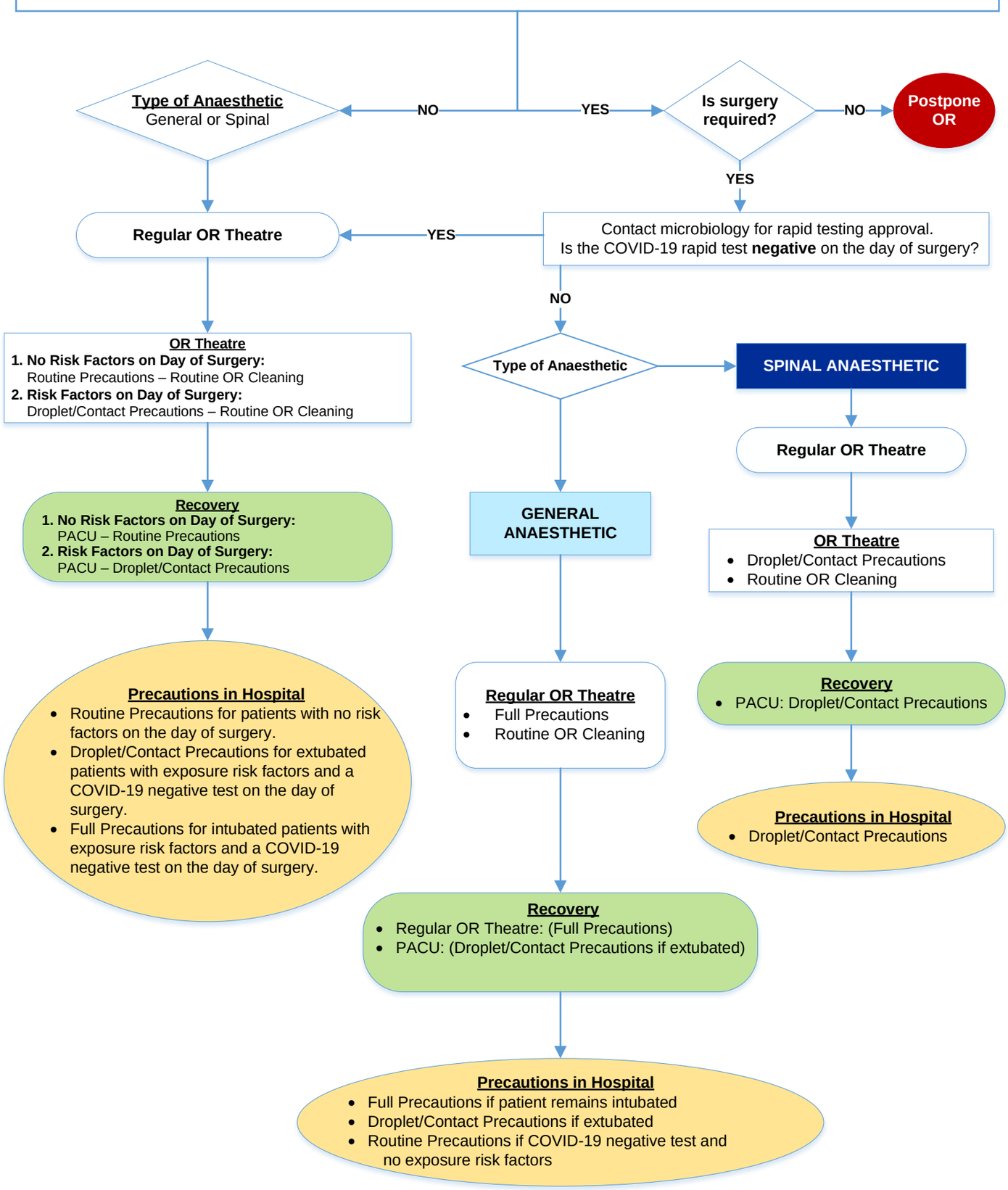
Preoperative Instructions

- Obtain COVID-19 swab for patients 48 hrs prior to surgery if they meet symptom or exposure criteria. A PCR test received up to 72hrs remains acceptable. Testing is to determine if it is safe to proceed to surgery.
- Patients will be asked to limit social contacts for 10 days prior to their surgery date and to wear a face mask if social distancing is not possible.
- A PCR test will be performed by the provincial laboratory at the Dr. Georges-L.-Dumont University Hospital Centre.
- Patients will be actively screened at the time of booking, upon entrance to the hospital, and in pre-op area prior to surgery.

Risk Factors on Day of Surgery

Patient will be considered suspect or COVID-19 positive if he/she answers yes to one or more of the following:

- Is this patient COVID-19 positive? **OR**
- Was preoperative COVID-19 testing indicated but not obtained? **OR**
- Does the patient have a new onset or worsening of one Category A symptom or two Category B symptoms? **OR**
- Has the patient had close contact with a known case (household contact, hospital unit outbreak, LTC/Correctional Facility outbreak)? **OR**
- Has the patient been instructed to self-isolate by Public Health?



January 17, 2023
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Infection Prevention & Control Guidance:
Operating Room Theatres and OR Decision Pathway for Horizon Facilities – All Phases

1. **Priorities**
   a) To reduce the risk of COVID-19 exposure to all Healthcare Workers (HCWs) and patients when performing Emergency and Category 1-4 surgeries during the COVID-19 pandemic.
   b) To reduce the peri-operative risk incurred by recent or concurrent COVID-19 to the patient.
   c) To optimize PPE use.
   d) To optimize surgical flow.

2. **OR Theatre**

At the beginning of the pandemic there were major concerns regarding the potential for the OR to be a high-risk area for COVID-19 transmission. Experience during the first two years of the pandemic has shown that the opposite is true, with no evidence that the OR has been a significant contributor to COVID-19 transmission. During this time anesthesiologists were found to have amongst the lowest risk for COVID-19 in healthcare workers. It has also been confirmed in multiple studies that aerosol concentrations during AGMPs in the OR, such as intubation, extubation and face mask ventilation, were far lower than concentrations measured in patients with respiratory distress, loud speech, or volitional coughing.

During this time, the transmission mechanisms of SARS-CoV-2 have been intensely investigated. Infection can be transmitted by direct/indirect contact, droplets, and aerosols, with most transmissions occurring within a 2-metre radius during a 15-minute exposure time. Current evidence suggests that transmissions are often related to short range inhalation of infectious aerosols. Long range aerosol transmission appears to be a minor contributor to transmission of COVID-19, which diminishes the necessity for strategies which prevent the spill-over of air from rooms where an AGMP has been performed in a patient with COVID-19.

Conscientious use of PPE requires that all of these mechanisms be considered. Meticulous hand hygiene along with gowns and gloves are required to protect against contact, medical grade face mask and eye protection are required to protect against droplets and N95 respirators are required to protect against aerosols. While an N95 respirator doubles respiratory protection from inhaled aerosols compared to a medical mask under laboratory conditions, its additional real-world protection remains undefined. Its greatest benefit is probably realized while caring for COVID-19 patients who have high aerosol loads due to coughing, sneezing or respiratory distress, particularly when AGMP's are performed in such patients. Given the above, several modifications to COVID OR protocols have been made so that safety can be maintained while improving surgical patient flow.

- Full Precautions should be used in the OR for all suspect/proven COVID-19 patients if an AGMP is expected/probable. Droplet/Contact Precautions are acceptable for suspect/proven COVID-19 patients in the OR where an AGMP is unlikely to occur, but an N95 can be used based upon PCRA and should be easily accessed.
- OR staff are required to maintain up-to-date N95 respirator fit testing.
- Patients who do not have suspect/proven COVID-19 (and no other transmissible infection/colonization requiring additional precautions) can be managed in the OR with Routine Precautions.
- The use of a COVID OR Pod is no longer required for suspect/proven patients with COVID-19 given that long range transmission of COVID-19 has not been demonstrated in OR settings. These rooms will be referred to as Negative Pressure OR Suites. Configuration of these rooms will continue to include positive pressure laminar airflow in the OR suite with a negative pressure anteroom which exhausts air external to the building. According to the Canadian Standards Association, OR Suites with an AIR (negative pressure anteroom) are still required for procedures performed on patients with airborne infection (active tuberculosis, measles, and varicella). Any OR suite is now considered suitable for patients with suspect/proven COVID-19.

- All OR theatres should maintain positive pressure laminar airflow providing at least 20 air exchanges per hour to reduce the risk for surgical site infection.
- The number of healthcare workers in the OR should be kept to an absolute minimum for all patients, regardless of COVID-19 status, during intubation/extubation.
- OR signage requiring Full Precautions must be maintained at all OR entry and exit points for suspect/proven COVID-19 patients undergoing general anesthetic from the time of intubation until settle time has been reached post-extubation.
- Following intubation, other HCW's may enter the theatre without regard for settle time as long as they follow Full Precautions.
- Only essential equipment should be present in the OR for all procedures, regardless of COVID-19 status.
- OR traffic during operative procedures must be kept to a minimum regardless of COVID-19 status.
- Decisions such as timing of surgery, type of anesthesia, type of laryngoscope, anesthesia induction protocol etc. are the purview of the OR team and are not considered in this IPC OR protocol.
- The patient should wear a medical grade face mask (ear loops) throughout the procedure for patients undergoing spinal/regional anesthesia. For patients undergoing general anesthesia, a medical grade face mask should be worn at all times outside of the peri-intubation period.
- Extubation under most circumstances will occur in the OR, and as for intubation, should be performed with minimal persons present.
- Once the airway is stable (no coughing), place medical grade face mask on patient and apply oxygen delivery device.
- Suspect/proven COVID-19 patients can be recovered in the OR or in PACU. If recovered in PACU, patient may be transported prior to settle time. All HCW's entering OR will continue to follow Full Precautions until settle time has elapsed.
- A segregated area in PACU should be used for the recovery of suspect/proven COVID-19 patients, with curtains closed and at least 2 metre physical distancing from non-infected patients.
- Oxygen may be removed once deemed safe to do so and medical grade face mask will continue to be maintained on the patient.
- Routine OR theatre cleaning must be performed after each case. Terminal cleaning will no longer be required after each suspect/proven case of COVID-19 but must be performed at the end of the day.

3. **Surgical Workload**
   Each hospital will establish a process to ensure their surgical workload is appropriate.

4. **COVID-19 Testing**
   Universal pre-surgical screening of asymptomatic patients for COVID-19 is no longer recommended, as there is a lack of data supporting its routine use and is unlikely to provide incremental benefit when other IPC strategies are in place. Universal testing also has several unintended adverse consequences, such as unnecessary surgical cancelations, added complexity to surgical bookings, patient inconvenience, strain on specimen collection/laboratory personnel, false security from a negative result and cost.

   Testing for COVID-19 (and/or other respiratory viruses) will now focus on patients with symptoms or who have a high-risk recent exposure within the past 7 days (household contact, congregate setting with an active outbreak), as per the COVID-19 Testing Algorithm.

   For patients who have symptom or exposure criteria, a PCR test will be performed by the provincial laboratory at the Dr. Georges-L.-Dumont University Hospital Centre. Testing should be performed 48-72 hours prior to surgical date.

   Testing once per week is satisfactory for inpatients who meet testing criteria and require multiple surgeries during the week.

GeneXpert COVID-19 rapid test:
GeneXpert Rapid Tests are valid for the same 48–72-hour period as PCR tests performed by the provincial laboratory at the Dr. Georges L. Dumont University Hospital Centre. This platform may be utilized in lieu of provincial laboratory testing when a rapid PCR result is required (patient meets testing criteria on day of OR based upon symptoms or exposure, but pre-op PCR not obtained).

Testing of Previously Positive COVID-19 Patients
PCR tests can remain positive for more than 12 weeks following infection with COVID-19. As reinfections are rare within 6 weeks and uncommon within 12 weeks of a COVID-19 infection, symptomatic patients do not require pre-operative testing for COVID-19 within 30 days of their last infection (testing for other respiratory viruses should be strongly considered in this circumstance, particularly influenza A/B and RSV during epidemics). For the same reason, preoperative COVID-19 testing should not be performed in asymptomatic patients who have been infected within the past 90 days.

Medical Microbiology can be consulted to adjudicate in situations where a positive test is of indeterminate significance.

5. **Active Screening**
   Patients will be actively screened at the time of booking, upon entrance to the hospital, and in pre-op area prior to surgery.

6. **Risk Factors on Day of Surgery**
   Patient will be considered suspect or COVID-19 positive if he/she answers yes to one or more of the following questions:
   a) Is this patient COVID-19 positive? **OR**
   b) Was preoperative COVID-19 testing indicated but not obtained? **OR**
   c) Does the patient have new onset or worsening of one Category A symptom or two Category B symptoms? **OR**
   d) Has the patient had close contact with a known case (household contact, hospital unit outbreak, LTC/Correctional Facility outbreak)? **OR**
   e) Has the patient been instructed to self-isolate by Public Health?

COVID-19 Pre-operative PCR Testing Not Required (asymptomatic and No Risk Factors on the Day of Surgery)
For General or Spinal Anaesthesia

1. Regular OR Theatre will be set up as per OR standards following Routine Precautions.
2. Patients will be managed as per Routine OR Precautions during anaesthesia and surgery.
3. The regular OR cleaning protocol will be followed.
4. Patient will then be taken to PACU for recovery following Routine Precautions.
5. Routine Precautions will be followed during hospital stay.

COVID-19 Suspect (with symptom or exposure Risk Factors) AND a Negative Rapid Test on Day of Surgery
For General or Spinal Anaesthesia

1. Regular OR Theatre will be set up as per OR standards following Routine Precautions.
2. Patients will be managed with Droplet/Contact Precautions during anaesthesia and surgery. (Full precautions in regular OR theatre required if alternative acute respiratory virus infection (i.e., influenza) is identified, surgery cannot be delayed and an AGMP is anticipated.
3. Patient will then be taken to PACU for recovery following Droplet/Contact Precautions.
4. Routine cleaning as per OR protocol will be followed.
5. The transferring service and receiving unit are notified ahead of transfer of the type of isolation precautions required.
6. If extubated, Droplet/Contact Precautions will be followed during transport and initial hospital stay.
7. If patient remains intubated, Full Precautions will be followed during transport and initial hospital stay.

COVID-19 Positive or Suspect (NO Negative Rapid Test on The Day of Surgery)
For Spinal and General Anaesthesia

A. Spinal Anaesthesia

1. Regular OR Theatre will be set up as per OR standards following Routine Precautions.
2. Patient will be managed with Droplet/Contact Precautions during anaesthesia and surgery.
3. Routine OR cleaning (Terminal cleaning as per OR protocol will be followed at end of day).
4. Patient will be taken to PACU for recovery following Droplet/Contact Precautions.
5. The transferring service and receiving unit are notified ahead of transfer of the type of isolation precautions required.
6. Droplet/Contact Precautions will be followed during initial hospital stay.

B. General Anaesthesia

1. Regular OR will be setup as per OR standards following Routine Precautions.
2. HCWs directly involved in the intubation will be permitted in the OR Theatre following Full Precautions. Following intubation, other HCW's may enter the theatre without regard for settle time as long as they follow Full Precautions.
3. During surgery, HCWs may enter and exit the OR Theatre following Full Precautions. Traffic should be kept to an absolute minimum.
4. Following completion of the surgery, all HCWs will exit the room, except those directly involved in extubation and immediate postoperative care of the patient. These HCWs will follow Full Precautions, as will any other HCW's who enter the OR before settle time has elapsed.
5. Once the airway is stable post extubation (no longer coughing), place a medical grade face mask and oxygen delivery device on the patient and transport to PACU for recovery following Droplet/Contact precautions. Transportation to PACU can be performed before settle time has elapsed.
6. If patient remains intubated, Full Precautions will be followed by HCWs during patient transport and initial part of hospital stay while intubated. Can switch to Droplet/Contact precautions once extubated after appropriate settle time has elapsed.
7. Routine precautions can be followed if it is later determined that: a) COVID-19 positive and infection resolved (as per the IPC Guidance - Strategy for Discontinuing IPC Precautions) b) COVID-19 ruled out and 7 days since last exposure.
8. The transferring service notifies the receiving unit of the type of isolation precautions required.
9. Routine cleaning as per OR protocol will be followed with terminal cleaning at end of day.
10. All HCWs who enter the room before the appropriate settle time has elapsed must follow Full Precautions.