

# IPC Recommendations for Suspected or Confirmed COVID-19 Patients requiring Urgent or Emergent Surgery

Note: If you have any questions or comments regarding this Information Sheet please contact IPC at [ipcstvdadmin@ahs.ca](mailto:ipcstvdadmin@ahs.ca).

Area	Tasks/Responsibilities
<p><b>Applicability</b></p>	<ul style="list-style-type: none"> <li>• These recommendations apply to staff working in the Operating Room (OR) with patients with suspected or confirmed COVID-19 who require urgent or emergent surgery. According to <a href="#">Current Criteria</a>, any non-urgent scheduled or elective procedure should be postponed until the patient has been cleared of COVID-19</li> <li>• These recommendations are based on the current evidence available and are subject to revision as further evidence emerges.</li> <li>• These recommendations do not replace clinical judgement based on a point of care risk assessment. Staff should make their best clinical decisions about the most appropriate Infection Prevention and Control (IPC) measures, including Personal Protective Equipment (PPE) to use in a particular situation.</li> </ul>
<p><b>COVID-19 transmission</b></p>	<p>SARS-Coronavirus-2, the virus that causes COVID-19, is transmitted by respiratory droplets and direct and indirect contact. It is not an airborne infection, see <a href="#">Media Response</a>.</p>
<p><b>General infection prevention and control and control principles</b></p>	<p>All staff should continue to use <a href="#">Routine Practices</a> for infection prevention and control. The recommendations within this document apply to all persons working in the Operating Room with a suspected or confirmed COVID-19 patient.</p> <p>The decision to operate should not be made based on a patient's COVID-19 status. Surgical decisions should be made based on the guidelines for urgent, emergent, and oncological procedures currently in use.</p> <p>For patients who have not tested positive for COVID-19 and are asymptomatic, a careful <a href="#">Point of Care Risk Assessment (PCRA)</a> will be undertaken to screen for any COVID-19 symptom. Based on a negative PCRA, patients will be classified as non-COVID-19.</p> <ul style="list-style-type: none"> <li>• Note that a PCRA in this context is broader than only a symptom history. It needs to incorporate all elements of potential higher risk exposure such as travel, contacts, lack of social distancing, and exposure to a long-term care (LTC) facility or congregate living setting.</li> <li>• If a patient is classified as non-COVID-19, the procedure may be done in a non-COVID-19 OR.</li> <li>• It is recognized that there is growing concern regarding <a href="#">asymptomatic or pre-symptomatic COVID transmission</a>. In Alberta, the chances of this are low, but this is not completely understood and information continues to emerge. For this reason, the following will apply:             <ul style="list-style-type: none"> <li>○ For non-COVID-19 patients, continuous surgical masks and usual PPE are most appropriate as there is an extremely low risk to healthcare providers of spread of COVID-19 with carefully screened patients.</li> <li>○ Recognizing the ongoing concern healthcare providers have about possible asymptomatic transmission, healthcare providers may judiciously use N95 respirators in addition to PPE used for <a href="#">Contact and Droplet Precautions</a> at their own discretion during Aerosol Generating Medical Procedures (<a href="#">AGMP</a>), and for the remainder of the procedure, as per the IPC PCRA. These procedures may be done in a non-COVID-19 OR.</li> </ul> </li> </ul>

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Area	Tasks/Responsibilities
<p><b>COVID-19 operating rooms</b></p>	<ul style="list-style-type: none"> <li>• Every surgical suite with more than one OR should have one or more <b>designated COVID-19 OR</b> with designated lead staff and a lead surgeon from each sub-specialty service who work to maintain and update relevant care pathways. All procedures performed on suspected or confirmed COVID-19 patients should be carried out in a COVID-19 OR.</li> <li>• Staff and physician leads should engage in <b>simulations</b> as feasible; these should include donning, doffing and changing of PPE. To preserve equipment, no actual, non-expired PPE should be used in these simulations.</li> <li>• <b>Educational materials</b> about donning and doffing should be provided at PPE stations outside the ORs, along with a place for charts and personal equipment (pagers/phones/bags) to be left, so they are not brought into the OR theatre.</li> <li>• <b>Appropriate signage</b> should be placed at the entrances to the designated COVID-19 OR when in use.</li> <li>• <b>Only required staff</b> should be present in the COVID-19 OR during the surgical procedure. Vendors and other guests should not be present. Traffic into and out of the theatre should be controlled to maintain adequate air exchanges and the laminar airflow.</li> </ul>
<p><b>Personal protective equipment (PPE)</b></p>	<p>All team members working in the COVID-19 OR should wear:</p> <ul style="list-style-type: none"> <li>• gloves;</li> <li>• surgical gown;</li> <li>• mask: either surgical mask (with ties) or an N95 respirator as appropriate;</li> <li>• eye/face protection;</li> <li>• <b>head covering</b>: head coverings are not required specific to COVID-19 or contact and droplet precautions. Head covers are designed to confine shedding of the healthcare provider's hair and should be used in accordance with existing OR practices.</li> <li>• <b>N95 respirators</b>: use of an N95 respirator should be considered if there is the potential for an anticipated or unanticipated <a href="#">Aerosol Generating Medical Procedure</a> (AGMP). AGMPs include (but are not limited to):             <ul style="list-style-type: none"> <li>○ endotracheal intubation and extubation;</li> <li>○ bronchoscopy;</li> <li>○ cardiopulmonary resuscitation (CPR);</li> <li>○ respiratory or airway suctioning when using an open system;</li> <li>○ accidental disconnection of a ventilation system.</li> </ul> </li> </ul> <p>All staff should ensure their current N95 respirator fit testing is up to date. Team leads should ensure that appropriate PPE has been donned by all team members prior to entering the COVID19-OR and that the correct steps of PPE <a href="#">donning</a> and <a href="#">doffing</a> are followed by all members of the team. For proper OR donning and doffing procedures, staff should follow existing established OR guidelines including those for removal of contaminated gloves or gowns.</p>

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Area	Tasks/Responsibilities
Pre-operative protocols	<ul style="list-style-type: none"> <li>• The patient should already be on <b>contact and droplet precautions</b>.</li> <li>• <b>The need for additional/isolation precautions</b> in the surgical suite should be communicated via the surgeon at the time of surgical booking and noted on the OR schedule or communicated via the nursing unit.</li> <li>• The OR should notify the <b>Post Anesthesia Care Unit (PACU)</b> in advance of all patients requiring isolation precautions to ensure appropriate staffing post-operatively.</li> <li>• <b>Staff and physicians should consider the following for patient transport to the OR:</b> <ul style="list-style-type: none"> <li>○ Stable patients that will not require intervention (usually transported by a porter): routine practices including continuous masking with additional PPE as indicated by the IPC PCRA.</li> <li>○ Ventilated patient or unstable patient who may require intervention: gloves, surgical gown, head covering, N95 respirator, eye/face protection.</li> <li>○ <b>Note:</b> Mechanical ventilation is a closed system and is not considered an AGMP. Due to accidental disconnections that may occur during transport, an N95 respirator may be worn by those within a 2m radius.</li> <li>○ During transport:           <ul style="list-style-type: none"> <li>▪ Non-ventilated patient must wear procedure mask (with ear loops).</li> <li>▪ Ventilated patient does not require mask.</li> </ul> </li> </ul> </li> <li>• The patient may be transported to and from the OR by patient porter services. A team member or protective services staff should clear the path to the OR. A "COVID elevator" may be considered.</li> <li>• The patient should bypass the holding area and be transported directly into the designated COVID-19 OR.</li> <li>• The OR theatre should maintain positive pressure airflow and at least 15 air exchanges per hour.           <ul style="list-style-type: none"> <li>○ The risk of a surgical site infection due to disruption of laminar airflow due to negative pressure is greater than the risk of infection due to aerosolized respiratory droplets during AGMPs.</li> </ul> </li> </ul>
Induction and intubations	<ul style="list-style-type: none"> <li>• <b>Room setup:</b> only essential equipment should be present with a separate mayo stand for the anesthesiologist to place intubating equipment, drugs and a separate container for laryngoscope blade and face mask. The use of in-line suction is recommended.</li> <li>• <b>For induction:</b> the anesthesiologist, an induction helper (respiratory therapist [RT] or nurse), and if possible another 'clean' helper should be the only personnel in the room. Bag mask ventilation is to be avoided when possible. For intubation, a video laryngoscope (if available) should be used for the first attempt by the most experienced provider to minimize failure to capture the airway.</li> <li>• Plan to remove the patient's mask in the OR just prior to induction and place face mask on immediately for pre-oxygenation.</li> <li>• If a planned disconnect is to occur, then either clamp the endotracheal tube or disconnect with filter still connected. Turn off the ventilator prior to disconnect.</li> </ul>

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	<ul style="list-style-type: none"> <li>No settle time is required between intubation and other staff entering the COVID19-OR as this virus is not airborne.</li> </ul>
<b>Spinal and regional anesthesia</b>	<ul style="list-style-type: none"> <li>The patient should wear a surgical mask throughout procedure.</li> <li>Team members should wear gloves, surgical gown, surgical mask (with ties), eye/face protection and head covering.</li> <li>An N95 respirator is not required; however, if there is a potential for rapid conversion to general anesthesia, an N95 respirator should be worn.</li> </ul>
<b>Post-operative protocols</b>	<ul style="list-style-type: none"> <li>During extubation:               <ul style="list-style-type: none"> <li>extubate directly to face mask. Once airway stable (no coughing) place procedure mask (with ear loops) on patient followed by simple O2 mask. Remove oxygen as soon as feasible.</li> </ul> </li> <li>The patient should not be recovered in PACU. Extubate and recover the patient in the OR theatre.</li> <li>Staff not required for extubation or postoperative recovery should leave the theatre before extubation and should not re-enter.</li> <li>Doors to the COVID-19 OR should be kept closed except when moving patients and supplies in or out to ensure adequate air exchanges are maintained.</li> <li>If not intubated, ensure the patient is wearing a procedure mask (with ear loops) during transport to an isolation room on an inpatient unit.</li> <li>If the patient is to remain intubated or is to be transported to the Intensive Care Unit (ICU):               <ul style="list-style-type: none"> <li>Ensure a tight connection between all elements of the circuit to reduce the risk of disconnection.</li> <li>Ideally, clean PPE is worn for transport from the OR to the ICU. This can be achieved by the COVID-19 OR team doffing used PPE and donning clean PPE or by use of a separate team with newly donned PPE. Note that repeated doffing increases the risk of an exposure due to a doffing breach/error.</li> <li>If neither of these options are possible then the anesthesiologist and RT from the OR may transport the patient to the ICU and remain in their existing PPE. A team member should <b>clear the path</b>.</li> <li>All individuals on transport should wear PPE (including a respirator) as there is a possibility of a circuit disconnect.</li> <li>Once handover is complete, members of the team can doff PPE.</li> </ul> </li> <li>It is essential to ensure that the proper <u>doffing</u> process for PPE is followed. Use of a doffing checklist with a doffing buddy is highly recommended.</li> </ul>
<b>Environmental cleaning</b>	<ul style="list-style-type: none"> <li>The usual environmental cleaning processes between cases should be followed.</li> <li>Computer touch screens and keyboards in the OR theatre should be cleaned between cases. This is currently the responsibility of the end user (i.e., not Environmental Services or OR service workers).</li> </ul>

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Area	Tasks/Responsibilities
<b>Monitoring of pressure differential, alarms and testing</b>	<ul style="list-style-type: none"> <li>• Room pressurization alarms for the OR should be incorporated into a central monitoring system to verify the alarms are working at all times through manual test or alarm and subsequent verification.</li> <li>• Testing and calibration should be setup in the facility maintenance and engineering's preventative maintenance program to be done quarterly. Test results should be recorded.</li> </ul>
<b>Notes</b>	<ul style="list-style-type: none"> <li>• Any patient with symptoms should be managed as a suspected COVID-19 patient.</li> <li>• Any patient with unknown symptom history (e.g., trauma) should be managed as a suspected COVID-19 patient.</li> <li>• Initiate or maintain other additional precautions as indicated by symptoms or history.</li> <li>• Ensure that specimens are appropriately labeled if COVID-19 is suspected or confirmed.</li> </ul>

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### References

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