

Guide

**Recommendations:**

<b>Applies to:</b>	<ul style="list-style-type: none"> <li>• All Clinicians and Providers who require personal protective equipment (PPE) for doing aerosol-generating medical procedures (AGMPs) with patients.</li> <li>• All settings in which healthcare is provided.</li> </ul>
<b>Purpose:</b>	To confirm when additional PPE is required for AGMPs with patients suspected, confirmed or at risk of having COVID-19.

- Do NOT apply this document to other airborne pathogens (e.g., measles or tuberculosis).
- Do NOT apply this document to usual bedside care or procedures that are NOT AGMPs ([PPE](#)).

**The following are NOT AGMPs and do NOT apply to this document:**

- Nasopharyngeal swab collection
- Oxygen delivered at  $\leq 15$  L/min by any mechanism:
  - Nasal prongs
  - Simple or non-rebreather mask
  - Oxy mask
  - Optiflow/Airvo
- Medications delivered by metre dosed inhaler (MDI) with spacer device
  - Ventolin MDI
- Oral/mouth suctioning with Yankauer
- Feeding tube insertion
  - Nasogastric
  - Nasojejunal
  - Gastrotomy
  - Gastrojejunostomy
  - Jejunostomy
- BAIR huggers
- Procedures performed under local or regional anesthesia
- Electrocautery of low risk tissues (not listed as AGMP below)
- Extracorporeal membrane oxygenation (ECMO)
- Entonox

**Principles of AGMPs**

**General Principles:**

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| <ul style="list-style-type: none"> <li>✓ Emergent surgeries or procedures should not be delayed awaiting test results.</li> <li>✓ Defer non-essential AGMPs in symptomatic patients suspected or confirmed to have COVID-19.</li> <li>✓ Limit the number of healthcare workers involved in AGMPs.</li> </ul> |
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## Assessment of Patient Risk of COVID-19 for AGMPs

### SYMPTOMS:

Assess patient for symptoms, including:

- Fever
- Chills
- Cough – New or Worsening
- Shortness of breath
- Sore throat
- Loss of sense of smell or taste
- Headache
- Fatigue
- Diarrhea
- Loss of appetite
- Nausea and vomiting
- Muscle aches

\*Or exacerbation of chronic cough.

### EXPOSURES:

Assess patient for **high-risk** exposures within past 14 days:

- ***Prolonged close contact with, or provision of care of a suspected/confirmed COVID-19 case (within 2 metres) for more than 15 minutes (including multiple cumulative visits) without appropriate PPE<sup>§</sup>***  
**OR**
- ***Travel outside of Canada or informed to have been part of a declared cluster or outbreak or COVID-19 within the last 14 days***

<sup>§</sup> Does not include clients being discharged from acute care to congregate settings with 14 days of modified precautions

### Classify patient into their risk category: WHO is undergoing the AGMP?

Based on the risk factors listed above, classify patient into the appropriate risk category:

COVID-19 Signs/Symptoms	COVID-19 Exposure/Contacts	COVID-19 Test Result	Patient Risk Category
NO	NO	NOT REQUIRED	GREEN
NO	NO	TEST NOT REQUIRED/ IF TEST ORDERED-NEGATIVE	GREEN
NO	YES	NEGATIVE	GREEN
UNKNOWN	NO	NEGATIVE	GREEN
YES	NO	NEGATIVE	GREEN
YES	YES	NEGATIVE	GREEN
UNKNOWN*	UNKNOWN*	UNKNOWN*/PENDING	YELLOW
NO	YES	UNKNOWN*/PENDING	RED
YES	NO	UNKNOWN*/PENDING	RED
YES	YES	UNKNOWN*/PENDING	RED
-	-	<b>POSITIVE</b>	<b>RED</b>

\* UNKNOWN = No patient history available due to emergent/traumatic situation or cognitive impairment

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Aerosol Generating Procedure PPE Guide			
	GREEN PATIENT	YELLOW PATIENT	RED PATIENT
<b>AGMP PPE Requirements</b>	Routine Practice All staff wear: <ul style="list-style-type: none"> <li>• Surgical mask</li> <li>• Eye protection</li> </ul> <b>Note:</b> additional PPE may be required dependent on the AGMP task being performed	All staff wear AGMP PPE: <ul style="list-style-type: none"> <li>• N95 mask</li> <li>• Face shield</li> <li>• Gown</li> <li>• Gloves</li> <li>• Hood added for intubation and extubation, bronchoscopy, TEE, gastroscopy – see PPE for <a href="#">specific procedures</a></li> </ul>	All staff wear AGMP PPE: <ul style="list-style-type: none"> <li>• N95 mask</li> <li>• Face shield</li> <li>• Gown</li> <li>• Gloves</li> <li>• Hood added for intubation and extubation, bronchoscopy, TEE, gastroscopy – see PPE for <a href="#">specific procedures</a></li> </ul>
<b>Negative Pressure Room</b>	NO	PREFERRED	YES**
<b>Post-AGMP Cleaning Requirements* in ACUTE CARE</b>	Routine cleaning. Cleaning staff can enter the room immediately after the procedure.	Isolation cleaning using droplet and contact <a href="#">PPE</a> after proper air changes have occurred where relevant.	Isolation cleaning using droplet and contact <a href="#">PPE</a> after proper air changes have occurred where relevant.
<b>Post-AGMP requirements in a HOME ENVIRONMENT</b>	No special requirements. No wait time for HCWs to enter.	<b>3 hour wait time</b> for HCWs to enter. If not possible, staff to follow above AGMP PPE direction.	<b>3 hour wait time</b> for HCWs to enter. If not possible, staff to follow above AGMP PPE direction.

\*Usual ICU cleaning procedures still apply.

\*\*Negative pressure room should be used for RED patients where available, where not available, perform AGMP in a single room with the door closed.

## List of AGMPs:

### Non-Surgical AGMPs (in alphabetical order):

- Autopsy
- Bronchoscopy or endobronchial ultrasound (EBUS) and/or bronchoalveolar lavage
- Chest physiotherapy for airway secretion clearance (involving percussions and vibrations with an assisted cough)
- Chest tube insertion (not removal or management of indwelling tube)
- CPR – for airway management
- Bag valve mask ventilation
- Bilevel positive airway pressure (BiPAP)
- Continuous positive airway pressure (CPAP)
- Electrocautery of high risk tissues
  - Mucosal surfaces of the ear, nose and throat
  - Lungs
  - Bowels

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- Epistaxis control (large bleed)
- Gastroscopy
- High-frequency oscillatory ventilation
- Intubation and extubation procedures
- Intubated patient with ventilator circuit disconnection
  - Intentional disconnections, such as:
    - Airway suctioning (deep suction and open tracheal suctioning)
    - Bronchoscopy
    - Changing patient to portable ventilator for transport
  - Unintentional disconnection risks, such as:
    - Intubated patient at risk for self-extubation or damage to pilot tube
    - Physical proning of patient
    - Transferring or moving intubated patient
- Laryngectomy care
- Laryngoscopy
- Nasopharyngeal aspirates or washes
- Nasopharyngoscopy
- Nebulized therapy
- Oxygen therapy (>15L/min by any administration system; e.g., Optiflow or Airvo)
- Suctioning airway (upper airway suctioning, deep suctioning and open tracheal suctioning)
- Sputum induction
- Swallowing assessment
- Thoracentesis
- Transesophageal echocardiogram
- Tracheostomy care

**Note: This list is not exhaustive; consult infection prevention and control as required.**

## AGMPs in SURGICAL suites:

**Surgical/procedural AGMPs (in addition to above):**

- Dentistry:
  - High speed hand piece (for oral surgery)
  - Air-water syringe
- Ear, Nose and Throat (ENT) surgery:
  - Head and neck mucosal cancer surgery
  - Mastoid surgery
  - Sinonasal surgery
  - Tracheotomy
- Thoracic surgeries/procedures:
  - Bronchoscopy or endobronchial ultrasound (EBUS) and/or bronchoalveolar lavage
  - All thoracic surgery
- Gastrointestinal tract surgeries/procedures:
  - Upper GI endoscopy
  - Electrocautery of bowel or esophagus tissues
  - Intraoperative debridement devices with irrigation on bowel or esophageal tissues
  - Laparoscopic surgery with manipulation of bowel tissues if insufflation gases are NOT collected through a filtered exhaust system

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- Orbital/eye surgery:
  - Decompression of dacryoceles in neonate
  - Harvesting of mucous membrane, hard palate, nasal mucosal graft
  - Lacrimal surgery
  - Orbital abscess drainage
  - Orbital decompression for impending visual loss
  - Repair of displaced facial fractures
  - Repair of orbital fracture
  - Repair of eyelid/facial lacerations
  - Procedures that involve nasal/sinus mucosa, oral mucosa, or nasolacrimal system
- Interventional Radiology (IR):
  - Bronchial artery embolization
  - Esophageal/tracheal dilatation
  - Lung biopsy
  - Mediastinal biopsy

**Note: This list is not exhaustive; consult Infection Prevention and Control as required.**

Additional information - [Infection Prevention and Control \(IPC\) Protocol for Surgical Procedures During COVID-19](#)

## Guide

**References:**

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