

 <b>Shared health</b> <b>Soins communs</b> Manitoba	<b>A09 - AEROSOL GENERATING MEDICAL PROCEDURES</b>	
	Version date: 2024-12-20	Effective Date: 2025-04-30 (0700)
EMR / PCP / ICP / ACP		ALL AGES

NOTES
<ol style="list-style-type: none"> <li>ERS paramedics are required to adhere to the Shared Health Routine Practices Protocol (H07.1). This includes the wearing of appropriate personal protective equipment (PPE) for all patient encounters.</li> <li>For the purposes of this care map, a patient will be considered <b>COVID positive</b> if they have tested positive for the virus (either by PCR or self-administered RAD) within the last ten days, regardless of the presence or absence of COVID symptoms or signs (table B). Likewise, a patient should be considered <b>COVID suspect</b> if they have one or more COVID symptoms or signs and these are unlikely to be due to an alternative diagnosis, such as trauma or a chronic health condition.</li> <li>If respiratory symptoms are present, paramedics must consider the possibility that another transmissible respiratory infection (TRI), such as influenza A or B, an influenza-like illness (ILI), respiratory syncytial virus (RSV), or mycobacterium tuberculosis (TB) may be present.</li> <li>Aerosol-generating medical procedures (AGMP) carry an increased risk of transmission for many respiratory pathogens. Strategies to reduce that risk should be implemented.           <ol style="list-style-type: none"> <li>Carefully analyze the risks (H07.2) and benefits to performing the AGMP.</li> <li>Consider alternatives.</li> <li><u>Perform only necessary AGMP.</u></li> <li>Anticipate and plan for potential AGMP. <i>For example, if cardiopulmonary resuscitation (CPR) might become necessary during transport, paramedics should don appropriate PPE prior to transporting.</i></li> </ol> </li> <li>If an AGMP must be performed, consider strategies to minimize risk (H07.3) which include ensuring appropriate PPE is worn by all personnel; limiting the number of personnel involved in the procedure; directing bystanders to move well away from where the procedure is being performed; and utilizing an appropriate space to perform the procedure.</li> <li>Table A lists medical procedures currently consider to be aerosol generating. If any of these must be performed on a patient who is COVID positive or suspect, or has a known or suspected TRI, <u>appropriate eye protection and a fit-tested N-95 respirator is required PPE.</u></li> <li>If manual bag-mask ventilation (BMV) is required on a patient who is COVID positive or suspect, or has a known or suspected TRI, a closed system (including a sealed airway) should be established as soon as possible. A closed system can be approximated by using a two-hand mask seal or by attaching the bag to a well-fitted CPAP mask (appendix A).  Manual BMV can be performed during newborn resuscitation without a sealed airway. The risk of disease transmission is very low in an apneic newborn.</li> </ol>

8. For a young child with an asthma exacerbation who may not be able to cooperate with a metered-dose inhaler (MDI) or a youngster with croup, the risk of aerosol generation is likely lower with nebulizer administration than that from an agitated, coughing patient.
9. Sedation may be considered for advanced airway maneuvers to decrease agitation and decrease the risk of aerosolization. Drug-assisted intubation may be an option by qualified practitioners.
10. If providing CPAP or BiPAP ventilation on a patient with known or suspected COVID, notify the receiving emergency department (ED) well in advance of arrival.
11. Chest compressions and defibrillation during cardiopulmonary resuscitation (CPR); oxygen supplementation with nasal cannula or a non-rebreather mask (flow less than 15 liters per minute); thoracentesis for pneumothorax; suctioning of an intubated patient; and routine tracheostomy care (cleaning, dressing, changing inner cannula) are not considered AGMP. However, out of an abundance of caution, use of an N95 respirator is recommended for COVID positive or suspect patients.
12. For a patient who is neither COVID positive or suspect, nor has a known or suspected TRI, the procedures listed in table A can be performed with an N-95 respirator, medical mask, or no mask depending on the clinical situation.

**TABLE A: MEDICAL PROCEDURES CONSIDERED TO BE AEROSOL GENERATING**

Manual bag-mask ventilation <sup>7</sup>
Medication administration by nebulization <sup>8</sup>
Cardiopulmonary resuscitation with airway manipulation
High-flow nasal cannula oxygenation (Optiflow)
Continuous positive airway pressure (CPAP) ventilation
Bi-level positive airway pressure (BiPAP) ventilation
Blind airway device insertion (iGel, LMA) <sup>9</sup>
Endotracheal intubation <sup>9</sup>
Endotracheal suctioning
Laryngoscopy (below the vocal cords)
Tracheostomy emergency procedures (open or percutaneous)

**TABLE B: SYMPTOMS & SIGNS SUSPICIOUS FOR COVID INFECTION**

- Fever / chills
- Cough (or increased severity of chronic cough)
- Shortness of breath / difficulty breathing
- Hypoxemia / hypoxemia \*
- Sore throat / hoarse voice \*
- Runny nose
- Headache \*
- Muscle aches \*
- Loss of smell / taste
- Conjunctivitis
- Nausea / Loss of appetite
- Poor feeding in infants
- Diarrhea / vomiting for more than 24 hours
- Fatigue
- Skin rash of unknown cause

(\*) Not due to trauma, exercise, or sport

**LINKS / REFERENCES**

- H07.1 - Shared Health Routine Practices Protocol
- H07.2 - Shared Health COVID-19 Point of Care Risk Assessment Tool
- H07.3 - Shared Health Provincial Guidance for Aerosol Generating Medical Procedures

**APPROVED BY**


EMS Medical Director



EMS Associate Medical Director

**VERSION CHANGES (refer to X01 for change tracking)**

- Revised as a general AGMP protocol for all transmissible respiratory infections
- Aligns with Shared Health Routine Practices protocol for COVID PPE

## APPENDIX A

TWO-HAND MASK SEAL



CPAP MASK SEAL

