**COVID-19 AGMP FAQs**

COVID-19 and Aerosol Generating Medical Procedures (AGMP)

**DATE:** April 2, 2020  
**SITES:** VCH ALL SITES

**Q: What is the definition of a low flow oxygen therapy device and a high flow oxygen therapy device?**

- **Low Flow** systems: the flow rate coming from the device is lower than the patient’s inspiratory flow rate
- **High Flow** systems: the flow rate coming from the device exceeds the patient’s inspiratory flow rate

A normal adult’s peak inspiratory flow rate is approximately 35 - 40 l/m.

**Q: Is oxygen therapy via the following delivery devices an AGMP for suspected and confirmed COVID-19 patients?**

<table>
<thead>
<tr>
<th>Oxygen Therapy Device</th>
<th>Flow Rate</th>
<th>AGMP</th>
<th>Other alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOW FLOW DEVICES – NON Aerosol Generating Medical Procedures</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal Prongs</td>
<td>LOW FLOW 1-6 l/m</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Simple Mask</td>
<td>LOW FLOW 6-10 l/m</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Non-Rebreather Mask (NRB)</td>
<td>LOW FLOW 10-15 l/m</td>
<td>No</td>
<td>HiOX Mask or FLO2 Max (NRB with filter) 10-15 l/m</td>
</tr>
<tr>
<td>Oxymask</td>
<td>LOW FLOW 1-15 l/m</td>
<td>No</td>
<td></td>
</tr>
</tbody>
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**HIGH FLOW DEVICES and Other Aerosol Generating Medical Procedures**
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<tr>
<td>Bag mask ventilation (bagger)</td>
<td>Greater than 15 l/m and positive pressure when the bag is squeezed</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Single and Double Flow via large volume nebulizer to a Face Mask or Tracheostomy Mask</td>
<td>30-50 l/m</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Heated High Flow Humidity Systems - Optiflow and Airvo</td>
<td>Greater than 30 l/m</td>
<td>Yes – at this time Optiflow and Airvo are considered AGMP</td>
<td></td>
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<tr>
<td>Nebulizer</td>
<td>6-10 l/m but aerosolizes bronchodilators</td>
<td>YES</td>
<td>Use MDI and spacer for administration of bronchodilators</td>
</tr>
</tbody>
</table>

Q: What are the options for oxygen delivery for a COVID 19 suspected or positive patients requiring greater than 6 l/m nasal prongs?

- An ICU consult (or consult with MRP at non acute sites) is required for all suspected and positive COVID 19 patients requiring greater than 4-6 l/m nasal prongs to assess for pending deterioration and to prepare for early intubation.

- If the patient is not an ICU candidate and requires greater than 6 l/m Nasal Prongs, Optiflow is preferred for all patients in a private room. Airborne precautions, including N95 mask and eye protection are necessary.

- Other oxygen delivery options include: Simple Mask at 6-10 l/m or Non-Rebreather Mask at 10-15 l/m. These are not AGMP and require droplet and contact precautions.

Q: What do I do for AGMPs for patients without suspected or confirmed COVID-19?

All HCW should perform a point of care risk assessment (PCRA) prior to any AGMP to select the appropriate personal protective equipment (PPE) and environmental controls.

- At minimum, eye protection and a surgical or procedure mask is required for any staff member within two meters of procedures generating aerosols, regardless of the patient’s infection status.

Q: What about other infection cases?

Only essential AGMP should be performed on the following infection cases.
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- Patients with known or suspected infection transmitted by the airborne route (tuberculosis, varicella zoster virus, measles).
- Patients with known or suspected viral hemorrhagic fever (e.g., Ebola)
- Patients with known or suspected influenza-like illness, novel respiratory pathogen, or for whom status of respiratory infection is unknown (including: novel/pandemic influenza, seasonal influenza, COVID-19, MERS and SARS coronavirus).

At minimum a procedure mask is required for non-influenza respiratory viruses, but an N95 respirator is recommended to reduce aerosol exposure (including but not limited to: RSV, adenovirus, parainfluenza, entero/rhinovirus, human metapneumovirus and bocavirus)

**Q: What about nocturnal CPAP and BIPAP – are these AGMPs?**

Yes – Nocturnal CPAP and BIPAP are aerosol generating – for all suspected and confirmed COVID-19 patients, airborne precautions including a N95 mask is required when caring for patients when on nocturnal CPAP and BIPAP. Ensure a good mask seal.

Patients **without** suspected or confirmed COVID-19 or other infections cases that require nocturnal CPAP or BIPAP:

- At minimum, eye protection and a surgical or procedure mask is required for any staff member within two meters of procedures generating aerosols, regardless of the patient’s infection status.

**Q: What about other respiratory therapies such as encouraging deep breathing and coughing?**

A natural cough is not an AGMP. If the cough is assisted by a manual thrust ([manual cough assist](#)) or using a cough assist machine (**MI-E**), it then becomes an AGMP.

**Q: What about any therapy which may cause a greater likelihood that the patient will cough, like mobilization, dysphagia assessments, or oral care?**

Again, a natural cough is not an AGMP. Droplet and contact precautions are required for all routine care with suspected and confirmed COVID-19 positive patients, including any therapy which may cause the patient to cough.