

COVID-19 Aerosol Generating Medical Procedures (AGMP): Frequently Asked Questions

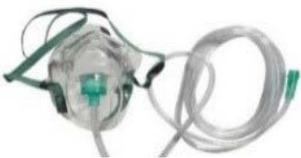
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Sites: NH All Sites

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?

LOW FLOW DEVICES – Non-aerosol Generating Medical Procedures			
Oxygen Therapy Device	Flow Rate	AGMP	Other alternatives
 <p>Nasal Prongs</p>	<p>LOW FLOW 1-6 LPM (FiO₂ range=24-38% approx.)</p>	No	<p>*It is not advised to humidify the oxygen using a bubble humidifier</p>
 <p>Simple Mask</p>	<p>LOW FLOW 6-10 LPM (FiO₂ range=50-70% approx.)</p>	No	<p>Consider placing a surgical face mask under the simple mask for additional precautions from coughing etc.,</p>

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<p>Non-Rebreather Mask (NRB)</p>		<p>LOW FLOW 10-15 LPM</p> <p>(FiO2 range=70-100% approx.)</p>	<p>No</p> <p>Consider placing a surgical face mask under the simple mask for additional precautions from coughing etc.,</p>
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HIGH FLOW DEVICES and Other Aerosol Generating Medical Procedures			
Oxygen Therapy Device	Flow Rate	AGMP	Other Alternatives
<p>Bag Mask Ventilation (Bagger)</p> 	<p>Greater than 15LPM and positive pressure when the bag is squeezed</p>	<p>YES</p>	<p>Filter the bagger and ensure airborne PPE is worn by all staff. Verify good seal with patient face using two hand technique to minimize exposure to patients exhaled breaths Do not use a PEEP valve</p>
<p>Single and Double Flow via large volume nebulizer to a Face Mask or Tracheostomy Mask</p> 	<p>30-50LPM</p>	<p>YES</p>	<p>Choose a High Flow option such as Optiflow, Airvo or Vapotherm. Use in single patient rooms, ideally with negative pressure ventilation. Airborne PPE required.</p>

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<p>Heated High Flow Humidity Systems – Optiflow, Airvo and Vapotherm</p> 	<p>Greater than 30LPM</p>	<p>YES ** ** Considered AGMP but evidence is showing that High flow Oxygen may have an important place in the care pathway of COVID-19 patients</p>	<p>Use with caution: ideally in negative pressure rooms and PPE requires airborne precautions. If no negative pressure room is available, then in isolation room with door closed.</p> <p>**Maintain a high level of vigilance for intubation need in patients with increasing or “creeping” oxygen needs on High Flow.</p>
<p>Oxygen Therapy Device</p> <p>Nebulizer</p> 	<p>Flow Rate</p> <p>6-10 LPM but aerosolizes bronchodilators</p>	<p>AGMP</p> <p>YES</p>	<p>Other Alternatives</p> <p>Use MDI and Spacer for administration of bronchodilators If medication is not available in MDI format and must be nebulized, use a negative pressure room or isolation room and airborne PPE. Consider use of Respirgard Filtered Nebulizer set.</p>

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

- An ICU consult (or consult with MRP at non acute sites) should be considered for all suspected and positive COVID 19 patients requiring greater than 6 LPM nasal prongs (or >50% oxygen) to assess for pending deterioration and to prepare for early intubation.
- If the patient is not an ICU candidate and requires greater than 6 LPM Nasal Prongs, High Flow Nasal Cannula 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 LPM or Non-Rebreather Mask at 10-15 LPM. These are not AGMP and require droplet and contact precautions. Consider a mask placed under the Non Rebreather/Simple mask on the patient.

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.

- 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).

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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. Consider temporarily discontinuing nocturnal PAP therapy in patients who can tolerate it. Have the patient sleep with head of bed tilted up and apply oxygen as required. If this is not tolerated by the patient due to severe OSA, hypoventilation syndromes etc., then apply the sleep pressure therapy with caution as described above using Airborne precautions and isolation rooms whenever possible.

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. Airborne precautions would then apply.

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.