

COVID-19 PRACTICE ALERT

COVID-19 and Aerosol Generating Medical Procedures (AGMP)

This Practice Alert applies to patients with suspected and confirmed COVID-19

DATE: March 24, 2020

SITES: VCH ALL SITES

SITUATION / BACKGROUND:

Medical procedures that generate aerosols or droplet nuclei in high concentration present a risk for opportunistic airborne transmission of pathogens that otherwise are not spread by the airborne route and increase the risk for transmission.

A full list of high risk and other AGMPs are found [here](#). Common AGMPs in the context of COVID-19 include:

- Endotracheal intubation and extubation
- Bag mask ventilation
- Breaking closed ventilation systems intentionally or un-intentionally
- Bronchoscopy
- Direct Laryngoscopy
- BIPAP and CPAP (including nocturnal)
- Airway suctioning (deep suction and open tracheal suctioning)
- High Flow Oxygen Therapy (including single and double high flow O2 neb set ups, Optiflow and Airvo)
- Chest Physiotherapy (manual and mechanical cough assist device (MI-E))
- Tracheostomy Care
- CPR
- Administration of nebulizing medications
- Lung autopsy

ACTION / RECOMMENDATION:

- 1) Minimize [AGMP](#) wherever possible. Use alternative procedures if available.
- 2) If AGMP is clinically indicated:
 - [Airborne precautions](#) with N95 mask and eye protection are required for all AGMPs of suspected and diagnosed patients COVID-19.
 - Whenever possible, AGMP should be performed in a private or procedure room with the door closed.
 - Limit the number of health care workers in the room or patient care area (privacy curtains) to only those necessary for the procedure.

FOR MORE INFORMATION:

- [Infection Prevention and Control Best Practices Guideline on Aerosol Generating Medical Procedures](#)
- [Appropriate Use of Procedure Masks and N95 Respirators](#)
- [Infection Prevention & Control COVID-19 Resources for Healthcare Providers](#)

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



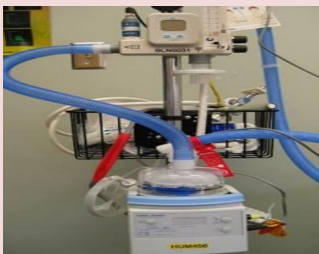

A normal adult's peak inspiratory flow rate is approximately 35 - 40 l/m.

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

Oxygen Therapy Device	Flow Rate	AGMP	Other alternatives
LOW FLOW DEVICES – NON Aerosol Generating Medical Procedures			
Nasal Prongs 	LOW FLOW 1-6 l/m	No	
Simple Mask 	LOW FLOW 6-10 l/m	No	
Non-Rebreather Mask (NRB) 	LOW FLOW 10-15 l/m	No	HiOX Mask or FLO2 Max (NRB with filter) 10-15 l/m 
Oxymask 	LOW FLOW 1-15 l/m	No	
HIGH FLOW DEVICES and Other Aerosol Generating Medical Procedures			


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Oxygen Therapy Device	Flow Rate	AGMP	Other alternatives
Bag mask ventilation (bagger) 	Greater than 15 l/m and positive pressure when the bag is squeezed	YES	
Single and Double Flow via large volume nebulizer to a Face Mask or Tracheostomy Mask 	30-50 l/m	YES	
Heated High Flow Humidity Systems - Optiflow and Airvo  	Greater than 30 l/m	Yes – at this time Optiflow and Airvo are considered AGMP	

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Oxygen Therapy Device	Flow Rate	AGMP	Other alternatives
Nebulizer 	6-10 l/m but aerosolizes bronchodilators	YES	Use MDI and spacer for administration of bronchodilators

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.

