

COVID-19: AEROSOL-GENERATING PROCEDURES

Revised 5/14/2020

Aerosol –generating procedures (AGPs) should be performed in **negative pressure room if available**.

PPE per Clinician Portal guidelines.

Refer to subsequent pages for Respiratory Procedures Tip Sheet and Equipment Reference

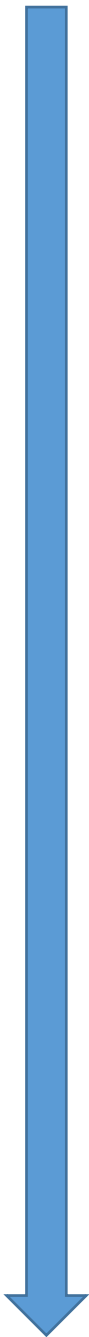
- Airway suctioning
- BiPAP/CPAP
- Bronchoscopy
- Cardiopulmonary resuscitation
- Chest physiotherapy/bronchopulmonary hygiene
- Chest tube for pneumothorax
- Endotracheal intubation/extubation
- Heated high flow O2 (>6L/nc or >15L by any delivery method)
- Nasopharyngeal swab collection
- Nebulizer treatments
- Placement of NG, OG or post-pyloric tube
- Pleural drain
- Pulmonary Function Tests (PFT)
- Sputum induction
- Thoracentesis
- Tracheostomy/trach care
- Transesophageal Echo (TEE)
- Upper endoscopy/fiberoptic endoscope
- Vapotherm
- Ventilation (manual or mechanical)

These should be considered interim recommendations issued in the interest of prompt and clear instructions that can be used now in the setting of this rapidly growing and changing pandemic. They are based as much as possible on available medical evidence, considering appropriate use of critical resources in limited supply and accommodating where possible professional society guidance.

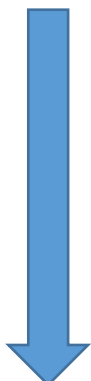
This is not an all-inclusive list for respiratory procedures; Facility RTs can assist with any questions.

<i>Oxygen Therapy Devices</i>				
Low Flow Device – Non AGP		Flow Rate	AGP	Recommendations
Nasal Cannula 		Low Flow: 1-6 LPM	No	
Nasal Cannula "Hi Flo" 		Low Flow (Green Tubing): 1-15 LPM	No	
Oxymask 		Low Flow: 1-15 LPM	No	
Simple Mask 		Low Flow: 6-10 LPM	No	
Non-Rebreather Mask (NRB) 		Low Flow: 10-15 LPM	No	

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High Flow Devices and Other AGP		Flow Rate	AGP	Recommendations
Venturi Mask 	All high flow devices should be placed in a negative pressure room, if available. 	Variable; based on patient's needs	Yes	
Heated High Flow Humidity System 		High Flow: Typically use 16 - 60 LPM	Yes	Recommended use not to exceed 30 LPM; Evaluate need for NIV.
Hi-VNI (Vapotherm) 		High Flow: 20 - 40 LPM	Yes	Hi-VNI not recommended
Trach collar 		Variable; based on patient's needs	Yes	Trach Collar not recommended
Bag Mask Ventilation 		Flowmeter set to 15 LPM	Yes	Minimize use. Add a viral filter between mask and bag or ETT and bag.

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Nebulizer 		6-10 LPM	Yes	Use MDI and spacer/ aerosolchamber for administration. Neb not recommended for use. If MD and RT deem necessary with evaluation of risk, utilize filtered neb, if available.
Ventilation Devices				
Non-Invasive Ventilation (NIV)	Place in a negative pressure room if available	Flow Rate, if applicable	AGP	Recommendations
BiPAP & CPAP (Hospital owned units) 	Early controlled intubation is recommended.	Variable; based on patient's needs	Yes	If MD and RT deem necessary with evaluation of risk, add a viral filter between the mask and circuit or use filtered circuit.
BiPAP & CPAP (Patient home units) 		Variable; based on patient's needs	Yes	Not recommended for use. Wait until results are confirmed prior to initiating. If negative, patient may use. If positive, please use hospital unit.
Invasive Ventilation				
Ventilator 	Place in a negative pressure room, if available.	Variable; based on patient's needs	Yes	

Bronchopulmonary Hygiene Devices*

Also available is the Metaneb and pneumatic compressor. Follow same guidelines listed below.

			AGP	Recommendations
Aerobika 			Yes	Not recommended for use. If necessary, add a viral filter to the exhalation side and provide patient with a tissue and/or sputum cup to collect mucus.
CPT Vest 	A natural cough is not an AGP. If the cough is assisted by a manual thrust or using a cough assist machine, it then becomes an AGP.		Yes	Not recommended for use. If necessary, provide patient with a tissue and/or sputum cup to collect mucus.

Lung Volume Expansion Devices*

Not an all-inclusive list.

			AGP	Recommendations
Incentive Spirometry 			No	Ask patient to use a tissue when they cough.
EzPAP without nebulizer 			Yes	Not recommended for use. Add viral filter between mouthpiece and device.

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<i>Other Respiratory Procedures*</i> Not an all-inclusive list.				
			AGP	Recommendations
Therapist Driven Protocol (TDP)			No	Ask patient to use a tissue when they cough.
ABG			No	
Tracheostomy Care			Yes	
Pulmonary Function Tests (PFT)			Yes	Only perform on negative patients unless approved via Pulmonary Medical Director. If approved, perform bedside PFT in a negative pressure room. Ask all patients to use a tissue when they cough. Utilize an MDI with aerochamber when bronchodilator is needed.