Respiratory Care Management of Patients with Suspected/Positive COVID-19

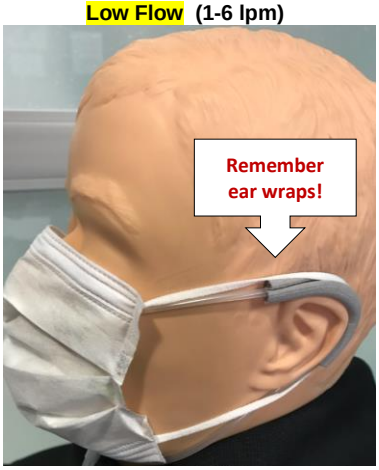
UPDATED 5/8/20 (changes are highlighted and pictures with a star throughout document).

***Standard PPE includes gown, gloves, N95 + face shield.**
****PAPR is an alternative to the standard PPE*, where readily available.**

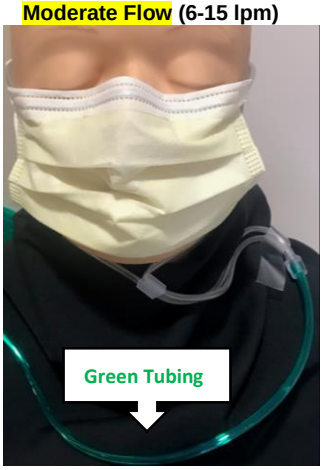
Oxygen Devices: Nasal Cannula*

IMPORTANT: Patient must wear a surgical mask for transport and in close contact with health care providers.

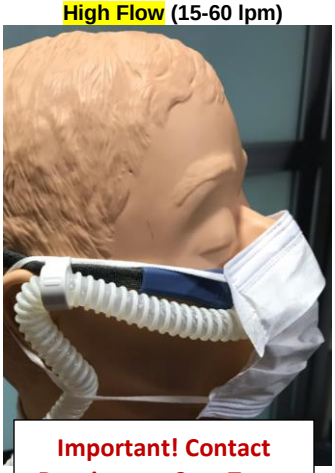
Low Flow (1-6 lpm)



Moderate Flow (6-15 lpm)



High Flow (15-60 lpm)



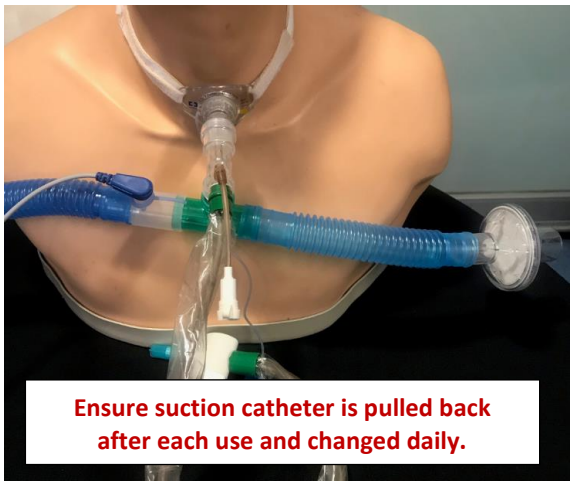
Important! Contact Respiratory Care Team for transport.

Non-Rebreather Mask

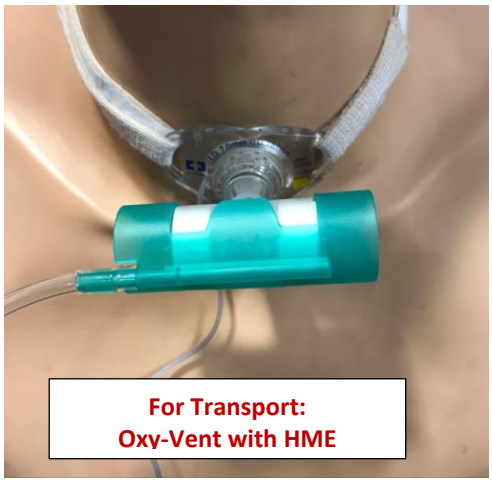
For transport or short term (4-6 hours) use only
(Ensure tight fit with mask)

Oxygen Devices: Tracheostomy*

- **O_2/Air blender (10-15 lpm), closed suction, T-piece connector, extension tubing & filter.**



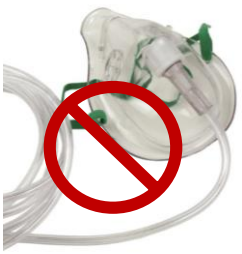
Ensure suction catheter is pulled back after each use and changed daily.



For Transport: Oxy-Vent with HME

Oxygen Devices NOT Recommended:

Simple Mask**



Venturi Mask**

Face Tent**

Trach Collar**

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Bronchodilators*

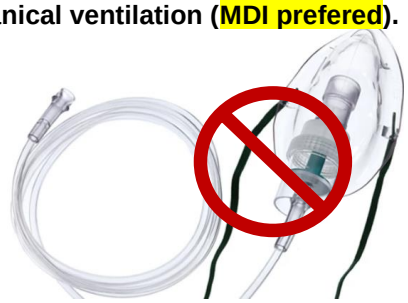
Important: Aerosol/Nebulizer treatments are NOT recommended to administer.

- **Albuterol is NOT indicated and does not improve shortness of breath with COVID-19.**
- **MDI/DPI will be administered to patients with Asthma/COPD with active wheezing.**
- **Albuterol Titration Protocol is highly recommend for Asthma/COPD exacerbation with suspected/positive COVID-19.**

Titration Protocol Dosing Range Table

	Without an Artificial Airway	With an Artificial Airway
Age up to 4 years	4-12 puffs	8-24 puffs
Age 4 years and up	4-20 puffs	8-40 puffs

- **Nebulized medications may be administered during mechanical ventilation (MDI prefered).**



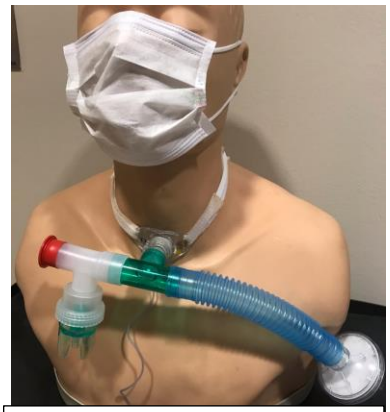
- **Adminstration of medications NOT available in MDI/DPI form (indicated & emergent):**

Utilize mask with straps if patient can tolerate.

Turn off flow before mask is removed.

ONLY for antibiotics and amphotericin

Only use in breath actuated mode



Inflate trach cuff if available
If unable, use mask on patient

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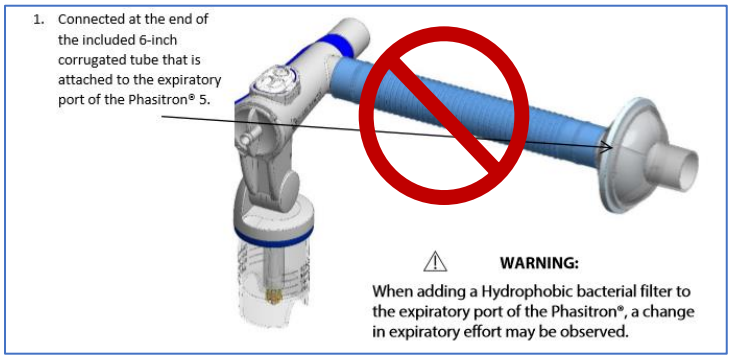
Bronchial Hygiene*

Important: Cough producing procedures are NOT recommended.

- **Oscillatory PEP with filter if patient is able to perform (NO minimum IS % of predicted required to perform).**
- **Instruct patients to wear a surgical mask while performing therapy for CPT and Vest Therapy.**

Bronchial Hygiene Devices NOT Recommended

IPV is strongly NOT recommended due to high aerosol producing procedure, frequent disconnects via mechanical ventilation, loss of PEEP and safety of ventilator settings not being returned prior to therapy.



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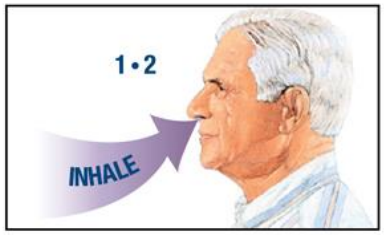
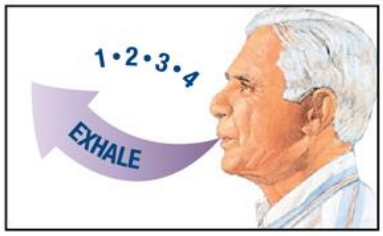
Lung Volume Expansion*

Proactive Proning & breathing exercises is the preferred method for all patients!

- **Incentive Spirometry if patient is able to perform (NO minimum IS % predicted required to perform).**





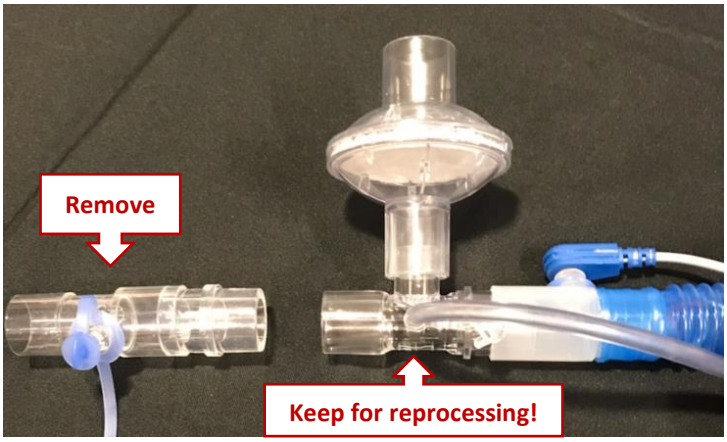
EzPAP is NOT recommended, add filter, mask and head strap if therapy is necessary.

Non-Invasive Ventilation (NIV)**

Important: Intubate for acute respiratory failure!

- **For UNSTABLE patients, recommend initiating Nasal High Flow Therapy (see NEW guidelines).**
- **For STABLE patients that wear NIV at home, wait until testing results are confirmed prior to initiating therapy.**
- **Recommend patients bring in home device, switch to hospital mask & add exhalation port with filter.**

For invasive ventilation with a single limb circuit, replace existing with the exhalation port adaptor with filter.



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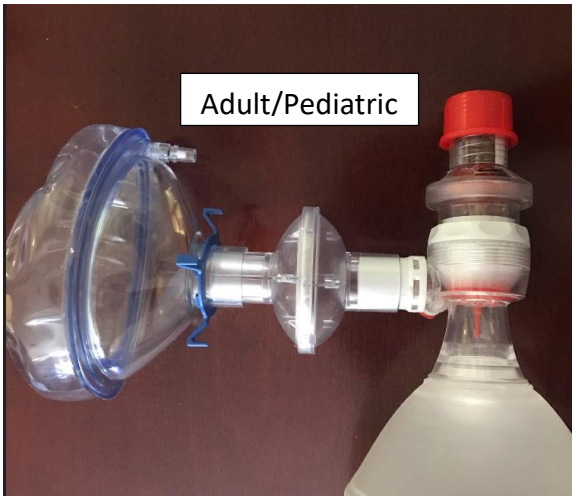
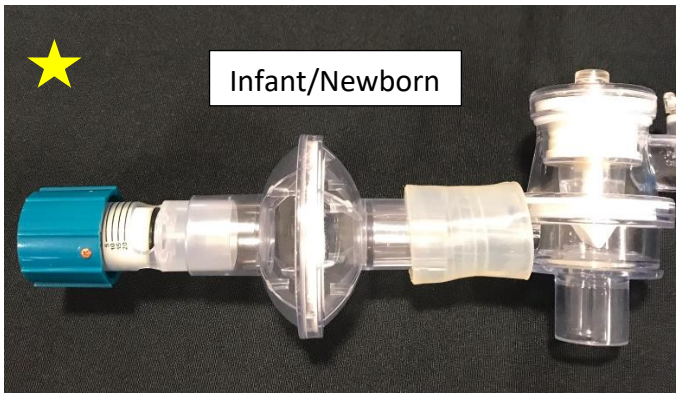
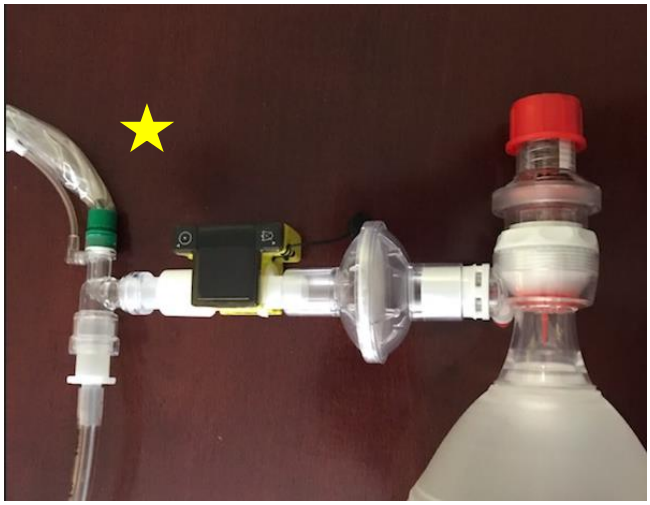
Manual Bag Ventilation**

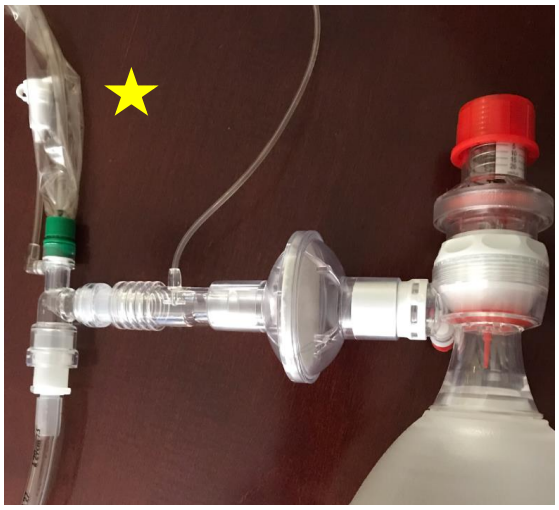
- **Utilize the Portex® face mask if readily available to improve seal over the patient's face.**
- **May use HEPA filter for adults if available, viral filter to pediatrics/infant resuscitation bags.**





- **Place $ETCO_2$ prior to filter to ensure accurate measurement.**
- **Consider clamping the ET tube ONLY if patient is actively breathing/coughing during transfer to/from bag/vent or on high PEEP.**





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Intubation**

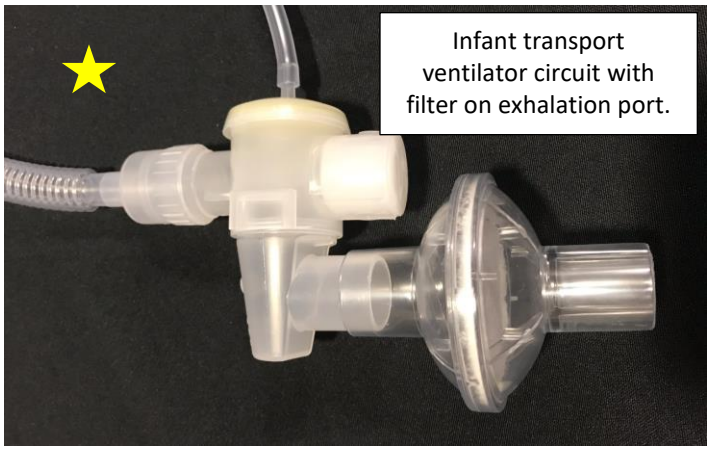
- **Utilize the video laryngoscope for all intubations if readily available.**
- **Bring in the minimum amount of intubation supplies in the room for intubation**
- **Note: COVID intubation bags are located in the ED instead (do NOT bring airway carts into the room).**

Extubation**

- Prepare equipment. Place towel on patient's chest. Suction mouth and airway.
- Instruct patient to take a deep breath in, place the ventilator in standby, deflate cuff and remove the tube.
- After tube has been removed, encourage the patient to deep breathe and cough.

Transport Ventilators*

- **Hamilton: Remove HME and place a filter between suction catheter and flow sensor/circuit.**
- **Place filter on exhalation port on circuit.**
- **Pause or place on standby so flow from ventilator circuit is not entering the room.**



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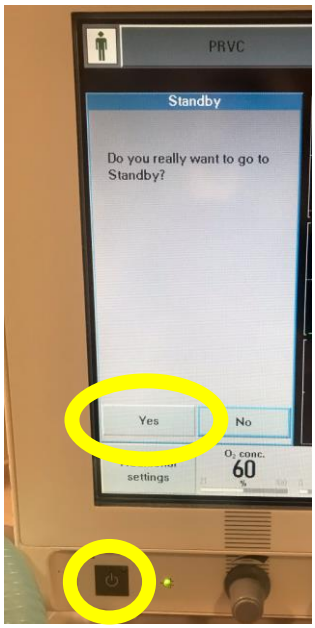
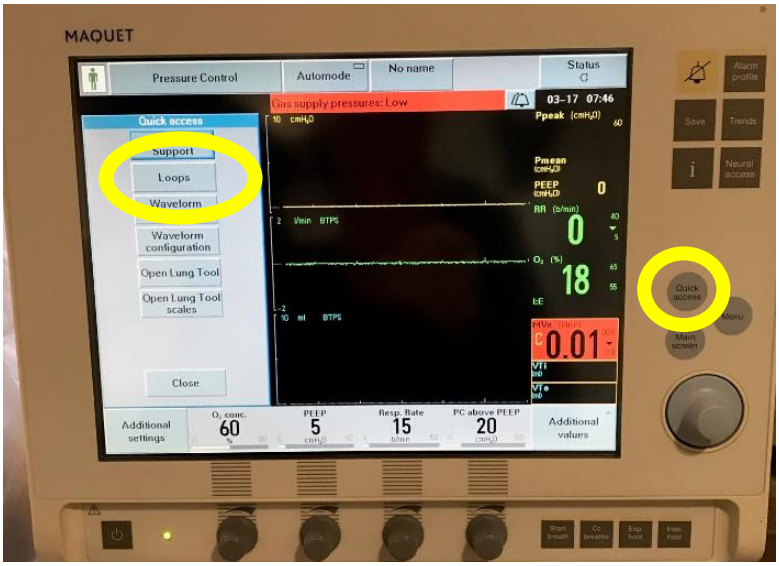
Mechanical Ventilation*

- **IMPORTANT! BEFORE DISCONNECTING FROM THE VENTILATOR:**
- **Press the Standyby button on the lower left corner; the screen will ask you "Do you really want to go to Standyby?" Press "Yes".**
- **Press "Quick Access" button to the right of the screen, then select "Suction Support". This will STOP the flow from the ventilator to avoid aerosol spray from the circuit.**





- **Inspiratory/Expiratory Filter**
- **Important: Pull off circuit <u>with</u> filter attached when disconnecting from ventilator.**

Add 2nd expiratory filter during medication administration;
2nd filter not required with heated filter.

1st Choice (limited filters available) Change heated filter every 48 hours or more frequent as

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Tracheal Aspirate*

- **Tracheal aspirate is the preferred route to obtain a sample.**
  - **Obtain sample via cough induced or nasal suctioning.**
  - **Hypertonic is NOT recommended to administer for sputum induction.**

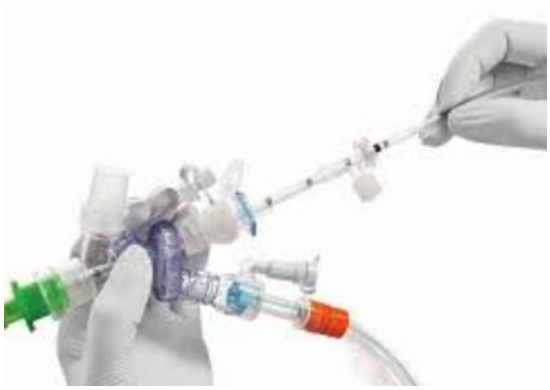
- **Recommend tracheal aspirate right after intubation with clean/new suction catheter.**

Bronchoscopy**

- **Only recommended if the patient is intubated and there is a need to visualize the lungs and/or for mucus plugging unable to clear with regular suctioning and bronchial hygiene therapy.**

Mini BAL** – NOT recommended due to the following reasons:

- **Multiple disonnections before and after procedure**
- **Large amount of saline (60-100 ml) that is needed to obtain the sample**
- **The large amount of "spray" that occurs from the connector during retraction and instilling the saline**
- **Challenge with controling sedation with patient coughing during the procedure**



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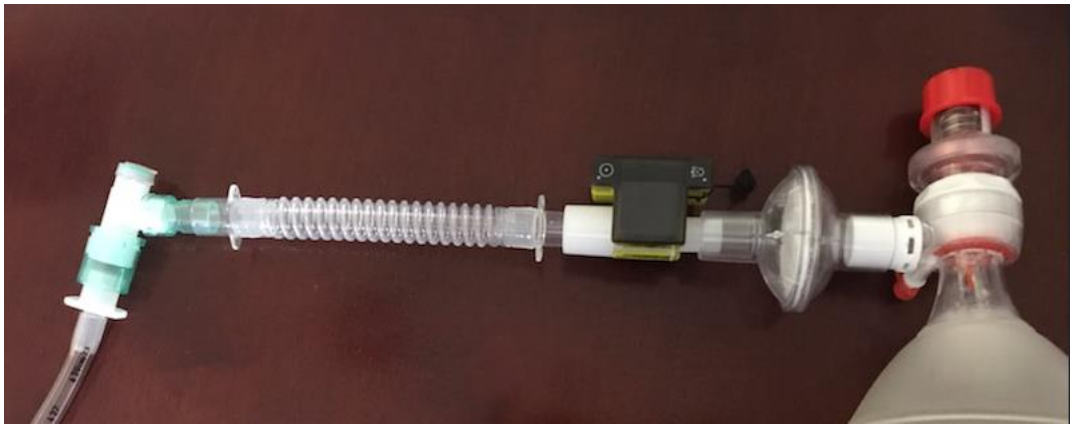
Bedside Tracheotomy**

- **Set-up for procedure includes the following supplies:**
  - Green port adaptor, extension tubing, ETCO2, viral filter.
- **Tips prior to the procedure:**
  - NOTE: Remove zip tie from the bite block so you can easily adjust the tube and holder.



- **Set-up for patient during procedure receiving nebulized prostaglandins:**
  - Green port adaptor, extension tubing, 15 mmID x 22mmID adaptor, Aerogen®, $ETCO_2$, viral filter.
- **Important**: Keep Aerogen® controller within reach to pause during visualization with bronchoscope.