

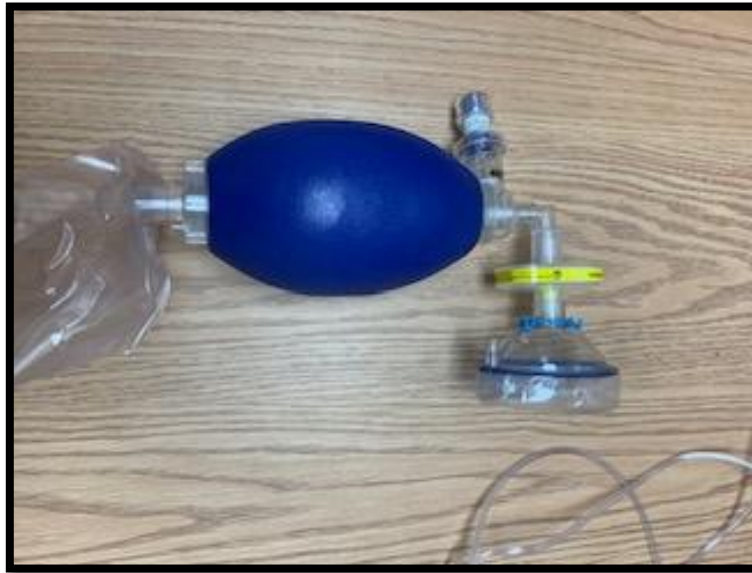
COVID-19

<b>CHANGES TO CLINICAL PRACTICE FOR COVID-19+ PATIENTS AND PATIENTS UNDER INVESTIGATION (PUIS)</b>	
<b>BACKGROUND</b>	<ul style="list-style-type: none"> <li>• THE COVID-19 PANDEMIC NECESSITATES CHANGES TO RESPIRATORY THERAPY CLINICAL PRACTICE.</li> <li>• OUR DEPARTMENTAL PROTOCOLS WILL CONTINUE TO EVOLVE AS WE OBTAIN ADDITIONAL INFORMATION AND NEW EVIDENCE EMERGES FOR BEST PRACTICES.</li> <li>• LEADERSHIP WILL CONTINUE TO UPDATE INFORMATION TO ASSOCIATES AND PROVIDE GUIDANCE AND TRAINING, WHEN NEEDED.</li> </ul>
<b>OBJECTIVES</b>	<ol style="list-style-type: none"> <li>1. DECREASE THE RISK OF VIRAL SPREAD AMONG ASSOCIATES PROVIDING BEDSIDE CARE TO PUI OR PATIENTS WHO ARE COVID-19+.</li> <li>2. DECREASE THE HEALTHCARE ASSOCIATED SPREAD OF INFECTION DURING CLINICAL PRACTICE, WHILE MAXIMIZING THE USE OF MEDICAL SUPPLIES.</li> </ol>
<b>PERSONAL PROTECTIVE EQUIPMENT (PPE) IN COVID-19+ PATIENTS AND PUIS</b>	<ol style="list-style-type: none"> <li>1. IN ALL COVID-19+ AND PUI PATIENT ROOMS, WEAR A N95 RESPIRATOR PLUS ISOLATION GOWN, GLOVES, AND EYE PROTECTION.</li> <li>2. WHEN INTUBATING OR EXTUBATING PATIENTS, REGARDLESS OF THEIR COVID STATUS, THE PROVIDER OR RT WHO IS PERFORMING THE PROCEDURE SHOULD WEAR AN N95 RESPIRATOR PLUS ISOLATION GOWN, GLOVES, AND EYE PROTECTION</li> </ol> <p>NOTE – A NEGATIVE PRESSURE ROOM IS RECOMMENDED FOR PATIENTS RECEIVING AEROSOL GENERATING PROCEDURES.</p> <p>**AEROSOLIZING PROCEDURES INCLUDE NEBULIZER THERAPY, INTUBATION/EXTUBATION, BRONCHOSCOPY, NASOTRACHEAL SUCTIONING OR TRACHEAL SUCTIONING <u>WITHOUT</u> IN-LINE CATHETER</p> <p>***NOTE ALL VENTED COVID+ PATIENTS OR PUIS SHOULD HAVE INLINE SUCTION.</p>
<b>IMPROVING OXYGENATION &amp;/OR VENTILATION</b>	<p><u>METHODS TO IMPROVE OXYGENATION/VENTILATION</u></p> <ol style="list-style-type: none"> <li>1. <b>WHEN POSSIBLE, PRIORITIZE THE FOLLOWING FOR COVID-19+ PATIENTS AND PUIS:</b> <ol style="list-style-type: none"> <li>A. NASAL CANNULA</li> <li>B. NON-REBREATHER (PREFERRED OVER OXYMASK TO DECREASE RISK OF VIRAL SPREAD)                             <ul style="list-style-type: none"> <li>➤ AVOID NIV (HIGHER RISK OF VIRAL SPREAD)</li> </ul> </li> <li>C. NRB WITH NC</li> <li>D. HIGH FLOW NASAL CANNULA O2 – SEE HFNC PRACTICE GUIDELINE</li> </ol> </li> <li>2. <b>EARLY INTUBATION</b> FOR PATIENTS IN HYPOXEMIC AND/OR HYPERCAPNIC RESPIRATORY FAILURE                       (REFER TO COVID-19 CLINICAL CARE GUIDANCE, TREATMENT AND PROCEDURE GUIDELINES, MANAGEMENT OF MILD TO MODERATE HYPOXEMIA, AND MANAGEMENT OF MODERATE TO SEVERE HYPOXEMIA DUE TO COVID 19)</li> </ol> <p>Medstar has several ventilators which can be used to manage our patients who require mechanical ventilation. The ventilators in the system that are used most often are Servo, Puritan Bennett, LTV and Vela, ventilators. The LTV and Vela should be considered when ventilating non-covid patients, as suggested by Medstar corporate leadership.</p>

COVID-19

	<p>We should note, all our ventilators are fully functional and capable of providing necessary support to patients during the covid pandemic.</p>														
<p><b>INHALED MEDICATION DELIVERY</b></p>	<ol style="list-style-type: none"> <li>1. <u>DURING INVASIVE MECHANICAL VENTILATION IN COVID-19+ PATIENTS AND PUIs:</u> USE INHALED MEDICATIONS VIA A NEBULIZER (WHEN INDICATED).</li> <li>2. <u>SPONTANEOUSLY BREATHING PATIENTS:</u> STRONG PREFERENCE FOR PRESSURIZED METERED-DOSE INHALERS (PMDI) THERAPY OVER NEBULIZER THERAPY (TO MINIMIZE RISK OF VIRAL SPREAD AND TO SAVE RT/RN TIME AND N95 MASKS).</li> </ol>														
	<table border="1"> <thead> <tr> <th>PATIENT-GROUP</th> <th>PREFERRED METHOD FOR DELIVERING INHALED MEDS</th> <th>ADDITIONAL OPTIONS FOR DELIVERING INHALED MEDS</th> </tr> </thead> <tbody> <tr> <td><i>STANDARD (NON-COVID-19+, NON-PUI)</i></td> <td> <ul style="list-style-type: none"> <li>• COMMON CANISTER (SPACER STAYS WITH PATIENT)</li> <li>• RTO R SPECIALLY TRAINED NURSE TO USE STANDARD PMDIS</li> </ul> </td> <td>           NEBULIZER (MAY WANT TO MAKE FIRST CHOICE IF PMDI SUPPLY BECOMES LIMITED)         </td> </tr> <tr> <td><i>COVID-19+</i></td> <td> <ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM PHARMACY VIA SPACER</li> <li>• PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM</li> <li>• RT OR SPECIALLY TRAINED RN DELIVERS TREATMENTS</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• NEBULIZER (ONLY IF PMDIS EXTREMELY SCARCE OR CLINICAL DECOMPENSATION AS THESE ARE HIGHEST RISK PATIENTS FOR VIRAL SPREAD WITH NEBS)</li> </ul> </td> </tr> <tr> <td><i>PUI</i></td> <td> <ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM PHARMACY VIA SPACER</li> <li>• PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM</li> </ul> </td> <td> <ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM HOME (ONLY IF PMDI SHORTAGE AND HOME MED VALIDATED BY PHARMACY; PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM)</li> <li>• RT DELIVERS TREATMENTS</li> <li>• 3<sup>RD</sup> OPTION: NEBULIZERS</li> </ul> </td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• AT URGENT CARE/AMBULATORY SITES PROVIDING RESPIRATORY TREATMENTS, COVID-19+ PATIENTS AND PUIs SHOULD BE TREATED WITH PMDIS IF AVAILABLE (COMMON CANISTER LIKELY DIFFICULT GIVEN PREDOMINANCE OF PUIs).</li> </ul>			PATIENT-GROUP	PREFERRED METHOD FOR DELIVERING INHALED MEDS	ADDITIONAL OPTIONS FOR DELIVERING INHALED MEDS	<i>STANDARD (NON-COVID-19+, NON-PUI)</i>	<ul style="list-style-type: none"> <li>• COMMON CANISTER (SPACER STAYS WITH PATIENT)</li> <li>• RTO R SPECIALLY TRAINED NURSE TO USE STANDARD PMDIS</li> </ul>	NEBULIZER (MAY WANT TO MAKE FIRST CHOICE IF PMDI SUPPLY BECOMES LIMITED)	<i>COVID-19+</i>	<ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM PHARMACY VIA SPACER</li> <li>• PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM</li> <li>• RT OR SPECIALLY TRAINED RN DELIVERS TREATMENTS</li> </ul>	<ul style="list-style-type: none"> <li>• NEBULIZER (ONLY IF PMDIS EXTREMELY SCARCE OR CLINICAL DECOMPENSATION AS THESE ARE HIGHEST RISK PATIENTS FOR VIRAL SPREAD WITH NEBS)</li> </ul>	<i>PUI</i>	<ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM PHARMACY VIA SPACER</li> <li>• PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM</li> </ul>	<ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM HOME (ONLY IF PMDI SHORTAGE AND HOME MED VALIDATED BY PHARMACY; PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM)</li> <li>• RT DELIVERS TREATMENTS</li> <li>• 3<sup>RD</sup> OPTION: NEBULIZERS</li> </ul>
PATIENT-GROUP	PREFERRED METHOD FOR DELIVERING INHALED MEDS	ADDITIONAL OPTIONS FOR DELIVERING INHALED MEDS													
<i>STANDARD (NON-COVID-19+, NON-PUI)</i>	<ul style="list-style-type: none"> <li>• COMMON CANISTER (SPACER STAYS WITH PATIENT)</li> <li>• RTO R SPECIALLY TRAINED NURSE TO USE STANDARD PMDIS</li> </ul>	NEBULIZER (MAY WANT TO MAKE FIRST CHOICE IF PMDI SUPPLY BECOMES LIMITED)													
<i>COVID-19+</i>	<ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM PHARMACY VIA SPACER</li> <li>• PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM</li> <li>• RT OR SPECIALLY TRAINED RN DELIVERS TREATMENTS</li> </ul>	<ul style="list-style-type: none"> <li>• NEBULIZER (ONLY IF PMDIS EXTREMELY SCARCE OR CLINICAL DECOMPENSATION AS THESE ARE HIGHEST RISK PATIENTS FOR VIRAL SPREAD WITH NEBS)</li> </ul>													
<i>PUI</i>	<ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM PHARMACY VIA SPACER</li> <li>• PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM</li> </ul>	<ul style="list-style-type: none"> <li>• INDIVIDUAL PMDI FROM HOME (ONLY IF PMDI SHORTAGE AND HOME MED VALIDATED BY PHARMACY; PMDI LABELED AND STAYS WITH SPACER IN PATIENT ROOM)</li> <li>• RT DELIVERS TREATMENTS</li> <li>• 3<sup>RD</sup> OPTION: NEBULIZERS</li> </ul>													
<p><b>MANUAL RESUSCITATION</b></p>	<p><u>PROVISION OF MANUAL RESUSCITATION IN NON-INTUBATED AND INTUBATED PATIENTS</u></p> <ol style="list-style-type: none"> <li>1. <b>FOR NON-INTUBATED PATIENTS (SEE PICTURE BELOW):</b> <ol style="list-style-type: none"> <li>A. ATTACH A PEEP VALVE TO THE MANUAL RESUSCITATOR</li> <li>B. ATTACH A HEPA FILTER TO THE ADAPTER</li> <li>C. PLACE MASK ON THE HEPA FILTER</li> </ol> </li> </ol>														



**COVID-19**



- 2. FOR INTUBATED PATIENTS (SEE PICTURE BELOW):**
- A. ATTACH PEEP VALVE IF NOT ALREADY IN PLACE
  - B. ATTACH HEPA FILTER TO ADAPTER
  - C. ATTACH HEPA FILTER DIRECTLY TO ETT



COVID-19

<p><b>CLEANING        VENTILATORS AND        OTHER EQUIPMENT</b></p>	<ul style="list-style-type: none"> <li>• <u>FOR COVID-19+ VENTED PATIENTS:</u> <ol style="list-style-type: none"> <li>1. DISCARD ALL DISPOSABLE RESPIRATORY EQUIPMENT IN THE ROOM.</li> <li>2. WIPE VENTILATOR WITH APPROPRIATE DISINFECTANT</li> <li>3. COVER VENTILATOR WITH PLASTIC</li> <li>4. PLACE SIGN STATING “COVID VENT” OR “WIPE WITH DISINFECTANT 2<sup>ND</sup> TIME” – THIS WILL NOTIFY STAFF THAT THIS WAS A COVID-19+ PATIENT.</li> <li>5. WIPE WITH APPROPRIATE DISINFECTANT A 2<sup>ND</sup> TIME, IN YOUR NORMAL CLEANING AREA.</li> <li>6. <u>REMOVE</u> SERVO-U EXPIRATORY CASSETTE AND SEND TO SPD IN A RED BAG FOR STERILIZATION. DO NOT SOAK, RINSE, OR WIPE PRIOR TO SENDING.</li> </ol> </li> <li>• ENSURE TERMINAL CLEANING OF NON-DISPOSABLE O<sub>2</sub> SATURATION MONITORS AND PROBES IN ROOMS OCCUPIED BY COVID-19+ PATIENTS OR PUIs</li> </ul> <p><i>PLEASE DIRECT QUESTIONS AND SUGGESTIONS TO EDWARD.A.PALMER@MEDSTAR.NET</i></p>
<p><b>OXYGEN THERAPY        GUIDELINES FOR        PATIENTS WITH        TRACHEOSTOMY</b></p>	<p>IN AN EFFORT TO MINIMIZE AEROSOLIZATION OF ANY TYPE, THE FOLLOWING GUIDELINES ARE RECOMMENDED TO DELIVER OXYGEN OR HUMIDIFICATION TO PATIENTS WITH A TRACHEOSTOMY, REGARDLESS OF THE PATIENT’S COVID STATUS</p> <ul style="list-style-type: none"> <li>• Use of Heat Moisture Exchanger (HME) should be used on <b>all</b> patients (regardless of COVID status) with tracheotomy tubes once the tracheotomy tube is disconnected from mechanical ventilation.</li> <li>• If patient requires humidification for secretions, a high humidity set up may be used, either heated or cool mist. The set up will include a T-piece with HEPA filter.</li> </ul> <div style="display: flex; justify-content: space-around;"> <div>  </div> <div>  </div> </div> <p>A. HME filter on tracheotomy tube.      B. T-piece with HEPA filter and in-line suction</p>
<p><b>EXTUBATION OF        PATIENT WITH        COVID</b></p>	<ol style="list-style-type: none"> <li>1) Ensure patient meets standard requirements for extubation</li> <li>2) Gather all equipment before entering room – such as cap for vent, NRB, syringe etc.</li> <li>3) Begin prep with gentle oral suctioning</li> <li>4) Suction with in line catheter with cuff inflated</li> <li>5) Set up NRB (or other mask), with flow.</li> </ol>

**COVID-19**

- |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ol style="list-style-type: none"><li>6) Remove ETT tie / anchor fast and hold in place</li><li>7) Turn off vent – may remove inspiratory limb from vent prior to turning off to minimize flow</li><li>8) Cap vent tubing, or place tubing to prevent spillage of fluid</li><li>9) Deflate cuff and remove tube</li><li>10) Immediately place oxygen mask on patient</li><li>11) Remove all disposable respiratory equipment from the vent</li></ol> |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|