Management of COVID-19 patients on mechanical ventilator s/p tracheostomy tube placement

**DISCLAIMER:**
This protocol was created for internal Montefiore clinical purposes only and cannot be construed to serve as general recommendations or guidelines for anyone outside of Montefiore.

These treatment protocols are recommendations for caring for patients with COVID while Montefiore is operating under its Emergency Procedures for the declared state of emergency for the COVID pandemic. Additionally, these protocols may change as more research data becomes available. Please frequently check for updates. Clinicians should always rely on the specific patient’s medical condition for clinical decision-making, even if that requires a deviation from the protocol.

**COVID-19 patient with respiratory failure requiring mechanical ventilation for ≥ 10 days, who is clinically improving but failing spontaneous breathing trials**

**Recommend tracheostomy by ENT, Pulmonary or General Surgery**

**Monitor for immediate Post-Tracheostomy complications**
- Follow up CXR if patient is hypoxic, in respiratory distress or has subcutaneous emphysema (r/o pneumothorax, pneumomediastinum)
- Monitor for signs of tracheal, airway and stomal bleeding

**Post-Tracheostomy management**
- If SARS-CoV2 PCR positive should place a surgical mask on patient’s face (when trach cuff is deflated)
- Gentle closed in-line endotracheal suctioning with full PPE as needed for secretions management. Avoid circuit disconnection
- Avoid ipratropium nebs to prevent thickening of secretions
- Avoid tracheostomy tube changing until SARS-CoV2 PCR negative or medically necessary (for eg. malfunction)
- Discontinue sedation unless medically indicated (for eg. ventilator dyssynchrony, high PEEP or FiO2 requirements, agitation)
- Pain related to tracheostomy typically lasts for ~24-48 hours. Consider prn iv boluses of opioids, if pain is a concern, instead of a drip
- Aspiration precautions (eg. head above bed, oral care)
- Regular nursing tracheostomy/stomal care. Clean inner cannula every 2-3 days or sooner if necessary (for eg. mucus plugging, thick secretions)
- GI prophylaxis while on mechanical ventilation

**Monitor for Late Post-Tracheostomy complications**
- Monitor for signs of VAP, tracheitis or skin infection/ulcer around stoma
- Mucus plugging (tachypnea, respiratory distress and hypoxia while on ventilator)
- Cuff leak (difference of > 100 ccs between inspiratory and expiratory tidal volumes on ventilator)

If troubleshooting of the tracheostomy tube is needed call consulting service that placed it
Ventilator weaning in COVID-19 patients post tracheostomy

Daily assessment for pressure support trials
- Awake, alert and following commands
- Minimal endotracheal secretions
- Improvement in underlying respiratory failure
- On minimal ventilator settings (for eg. FIO2 40% and PEEP of 5)

Consult Pulmonary to assist with pressure support trials
- Place patient on pressure support 15 and PEEP 5
- If tolerating well can decrease support over hours to days to target minute ventilation generated on full support
- Close monitoring after placing on pressure support to assess comfort, tachypnea and tachycardia

Consult Pulmonary to assist with pressure support trials
- Place patient on pressure support 15 and PEEP 5
- If tolerating well can decrease support over hours to days to target minute ventilation generated on full support
- Close monitoring after placing on pressure support to assess comfort, tachypnea and tachycardia

Patient tolerates pressure support 5/5 for ~ 8 hours (comfortable, RR < 30 and HR < 100)

Discuss with Pulmonary to assess readiness for trach collar
- Should be done initially with 1:1 sitter and/or continuous O2 monitoring
- If SARS-CoV2 PCR positive should place a surgical mask on patient’s face
- Avoid humidified air to minimize aerosolization
- Teams should be in full PPE while in the room

Request respiratory therapy to place patient on trach collar
- Should be done initially with 1:1 sitter and/or continuous O2 monitoring
- If SARS-CoV2 PCR positive should place a surgical mask on patient’s face
- Avoid humidified air to minimize aerosolization
- Teams should be in full PPE while in the room

Patient tolerates trach collar for 2-3 days (comfortable, RR < 30 and HR < 100)

Discuss with Pulmonary to assess readiness for cuffless trach/speech valve/capping trial
- Patient tolerates cuffless trach/speech valve/capping trial for 2-3 days

Discuss with consult team that placed tracheostomy tube for deccanulation