

# Emergency Departments Respiratory Distress during COVID-19 Guideline - April 23, 2020 1016

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**Introductions:** Acute respiratory distress is a common patient presentation to the ED. With an increasing incidence of community COVID-19, we must prepare to manage undifferentiated respiratory distress while ensuring safety of providers. Assumption **must** be the patient is positive for COVID-19.

## Respiratory Therapies

1. Initial low flow nasal cannula to achieve SpO<sub>2</sub> 90-95% are ideal. (1-6 LPM)
2. Saturations in the 80s may be tolerated if the patient is comfortable giving time to try different modalities of oxygenation
3. NRB or NRB plus NC at 10-15L under a surgical mask will obtain near 100% FIO<sub>2</sub>
4. HFNC O<sub>2</sub> at 100% FIO<sub>2</sub> under a surgical mask minimizes aerosolization risk (Negative pressure room still preferred). Start at 20 LPM and titrate up to 60 LPM. Goal of SpO<sub>2</sub>>88%
5. CPAP titrate up to 12-14 (Negative pressure room preferred)
  - a. Falling FIO<sub>2</sub> requirements show it is helping
  - b. Increasing FIO<sub>2</sub> is a sign of CPAP failure

## Adjunct Therapies

1. Allow for self proning. Patient can find position of comfort changing every hour. May see improvement in oxygenation with position changes.
2. If the patient has pleurisy that is affecting breathing treat pain [Low dose opioids or Toradol (no proof NSAIDS cause harm)].
3. Bronchodilators: Prioritize MDI delivery over nebulizer therapy to avoid aerosolization if appropriate.
4. Consider Steroids for Asthmatics and patients with COPD.

## When to Move to Intubation

### Intubate for:

1. Mental status change
2. Increased work of breathing
3. PaCO<sub>2</sub> rising

### Avoid intubating solely for:

1. Hypoxia < 88% (O<sub>2</sub> saturations in 80s may be well tolerated while attempting other therapies)
2. Elevated respiratory rate (patients may be tachypneic but not in distress)

## Mechanical Ventilation and General Post-Intubation Care

1. COVID patients seem to have 2 phenotypes, L or H.
2. **L Phenotype** – Not a classical ARDS patient – Compliant lungs and less abnormal chest imaging
  - a. **Tidal Volume:** Start with 8 cc/kg IBW and titrate to achieve a Pplat <30 mmHg. (Driving pressure <15)
  - b. **FiO<sub>2</sub>:** Titrate to achieve SpO<sub>2</sub> >90% Start high, 80-100%
  - c. **PEEP:** After setting tidal volume and higher FiO<sub>2</sub> start Peep at 5 and titrate up to effect.
3. **H Phenotype** – Treat like classical ARDS – low compliance lungs, very abnormal chest imaging
  - a. **Tidal Volume:** 6-8 cc/kg IBW
  - b. **FiO<sub>2</sub> and PEEP:** Titrate up utilizing ARDS protocol, higher PEEP and lower FiO<sub>2</sub>

**Best Bet:** Start at 8 cc/kg IBW; FiO<sub>2</sub> 100%; RR 16-18; PEEP at 5 and titrate up to affect. Goal SpO<sub>2</sub> of 92-95%

Note: Recommendations for management of COVID-19 patients is rapidly changing. This information is felt to represent the best initial approach based on expert opinion and case report. View References<sup>51,54,55,56,82,83,84</sup>