

COVID-19 Emergency Department Respiratory Distress – January 21, 1544

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Introduction

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. The clinical assumption must be the patient with respiratory distress is positive for COVID-19.

Initial Respiratory Therapies⁶⁰⁻⁶⁷

1. Initial low flow nasal cannula to achieve SpO₂ 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% FiO₂
4. HFNC O₂ at 100% FIO₂ under a surgical mask minimizes aerosolization risk (Negative pressure room still preferred). Start at 20 LPM and titrate up to 60 LPM. Goal of SpO₂>88%
5. CPAP titrate up to 12-14 (Negative pressure room preferred)
 - o Falling FiO₂ requirements show it is helping
 - o Increasing FiO₂ is a sign of CPAP failure

Adjunct Therapies⁶⁰⁻⁶⁷

1. Allow for self proning. The patient can find position of comfort changing every hour changes in position may lead improvement in oxygenation.
2. If the patient has pleurisy that is affecting breathing treat pain [Low dose opioids or ketorolac (no evidence exists that NSAIDS cause harm)]
3. Bronchodilators: Prioritize MDI delivery over nebulizer therapy to avoid aerosolization if appropriate.
4. Consider steroids for all patients with hypoxia. Based on the RECOVERY trial, the initial dose given in the ED should be dexamethasone 6mg PO or IV. If the patient has wheezing/bronchospasm, consider 10mg PO or IV.

| Intubate For: | Avoid Intubating Only for: |
|---|--|
| <ol style="list-style-type: none"> 1. Mental status change 2. Increased work of breathing 3. PaCO₂ rising | <ol style="list-style-type: none"> 1. Hypoxia < 88% (O₂ saturations in 80s may be well tolerated while attempting other therapies) 2. Elevated respiratory rate (patients may be tachypneic but not in distress) |

Note: Reference Intubation Guideline for detailed intubation recommendations.

Mechanical Intubation and General Post Intubation Care⁶⁰⁻⁶⁷

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
 - o Tidal Volume: Start with 8 cc/kg IBW and titrate to achieve a Pplat <30 mmHg. (Driving pressure <15)
 - o FiO₂: Titrate to achieve SpO₂ >90% Start high, 80-100%
 - o PEEP: After setting tidal volume and higher FiO₂ start Peep at 5 and titrate up to effect.
3. H Phenotype – Treat like classical ARDS – low compliance lungs, very abnormal chest imaging
 - o Tidal Volume: 6-8 cc/kg IBW

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- FiO₂ and PEEP: Titrate up utilizing ARDS protocol, higher PEEP and lower FiO₂
Best Bet: Start at 8 cc/kg IBW; FiO₂ 100%; RR 16-18; PEEP at 5 and titrate up to affect. Goal SpO₂ of 92-95%