

COVID-19 is a new disease with limited information regarding risk factors for severe disease. Older adults and others of ALL ages who have serious underlying medical conditions might be at higher risk for severe illness:

65 years and older, live in a congregate setting (e.g. skilled nursing facility, homeless encampments), chronic lung disease, asthma, smoking, heart disease/conditions, immunocompromised, obesity, diabetes, kidney disease, liver disease, pregnancy, sickle cell disease.

SYMPTOMS (may appear 2-14 days after exposure to the virus) **fever, cough, fatigue, shortness of breath or difficulty breathing, new loss of taste or smell**, chills, repeated shaking with chills, muscle pain, headache, sore throat, aches and pains, nasal congestion, runny nose, abdominal pain, nausea/vomiting, diarrhea, OR any combination of the above.

UNIVERSAL PRECAUTIONS

- **PPE - PROVIDER** (CDC recommended) Appropriately don face mask (N95 or equivalent) respirator, eye protection (goggles or face shield) gown, gloves, HEPA Filter for use with CPAP, BVM, BV-ET, BV-SGA, ventilator, (head/hair and shoe covers are optional)
- **PPE - PATIENT** Apply surgical mask

OPERATIONS

- Involve least number of EMS personnel required to minimize potential exposures
- Optimize vehicle ventilation to maximize air exchange
- Family members and other contacts of patients should NOT ride in vehicle, if possible. If riding, they should wear a face covering.



ASSESSMENT

- Thorough H & P including SPO2, BP, Pulse, RR, ETCO2, lung sounds, temperature, ECG, 12-Lead if indicated
 - SPO2 may be unusually LOW (< 90%) with minimal distress and may present with LOW ETCO2
- Assess POLST/Advanced Directive status

TREATMENT (All values are guidelines and not substitutes for sound medical judgement.)

*While aerosolizing-generating procedures increase exposure risk, consider these treatments when necessary.

RESPIRATORY DISTRESS-SOB

- Lung sounds CLEAR
 - SPO2 < 94% - NC up to 6 LPM
 - SPO2 < 90% - NR up to 15 LPM
- Lung sounds – Mild-moderate wheezes with or without crackles
 - Consider Albuterol* 5mg/6ml NS, hand-held, in-line OR
 - Albuterol* MDI with Spacer (patient MDI preferred) if available. (Use with NC, NR, CPAP*)
- Lung sounds – Severe wheezes
 - Consider Albuterol* 5mg/6ml NS
 - Consider Epinephrine 1mg/ml, 0.01mg/kg IM (max dose 0.5mg) for patients with no history of CAD or HTN
- NO improvement with O2 or medication therapies: SPO2 < 90%
 - Consider trial of CPAP*. If ineffective, discontinue CPAP*. **AND/OR**
 - Consider Alternate Positioning
(Right or Left Lateral if tolerated In an **Awake Patient**)
 - ✓ Patient must be able to **self-move** to the Alternate Position
 - ✓ **Discontinue Alternate Positioning if patient's condition deteriorates**

RESPIRATORY DISTRESS-SOB – BP < 90mmHg

- Adult: NS up to 500 ml, Pediatrics: NS up to 10 ml/kg
- Consider Epinephrine 0.01mg/ml, 5 mcg IV/IO push q3 minutes
- Maintain BP > 90 mmHg (suspect sepsis and or cardiogenic shock)

RESPIRATORY FAILURE - LOW SPO2 - ALOC (with increased or lack of breathing effort)

- Proper airway positioning, simple airway adjuncts, suctioning*, BVM* 10 breaths/min.
- Consider advanced airway management* (i-gel preferred)

GI-NAUSEA/VOMITING-DIARRHEA

- Nausea - Zofran 4mg
- Orthostatic, Poor Perfusion, BP < 90 mmHg – NS up to 500ml IV/IO



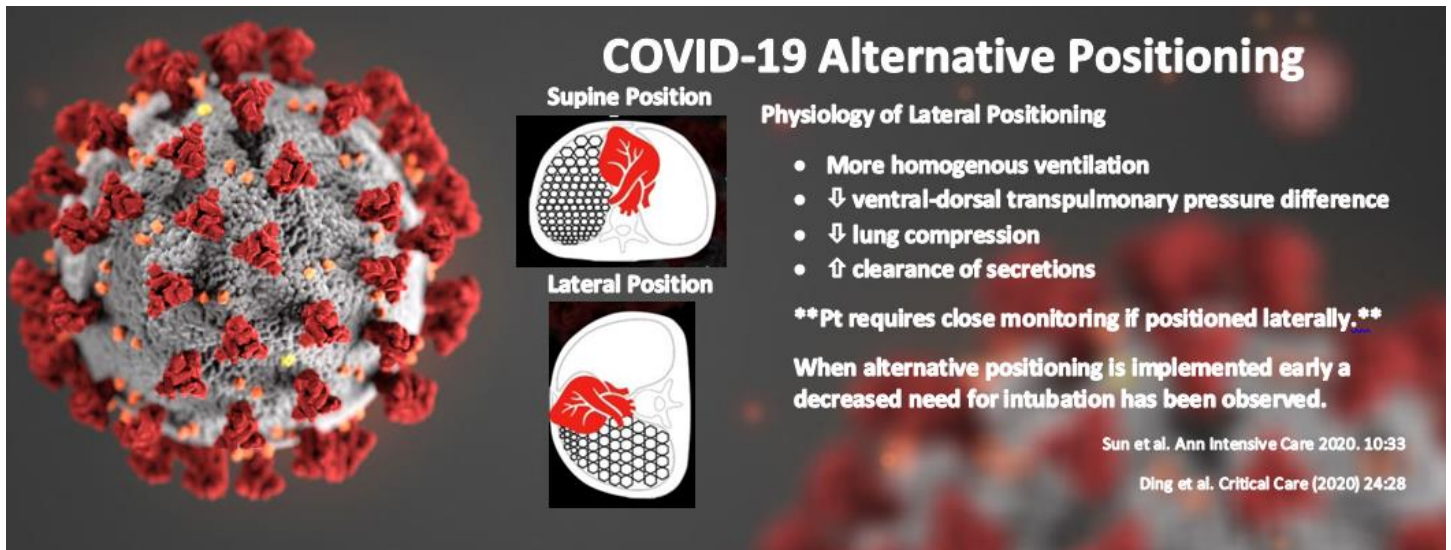
Alternate Positioning

RECEIVING HOSPITAL

- Notify as **EARLY** as possible to allow for patient care preparations

DECONTAMINATION

- Appropriately doff PPE
- Clean vehicle and reusable equipment with appropriate disinfectants



EARLY SELF-PRONING IN AWAKE, NON-INTUBATED PATIENTS IN THE EMERGENCY DEPARTMENT:

A SINGLE ED'S EXPERIENCE DURING THE COVID-19 PANDEMIC

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Abstract

Objective: Prolonged and unaddressed hypoxia can lead to poor patient outcomes. Proning has become a standard treatment in the management of patients with ARDS who have difficulty achieving adequate oxygen saturation. The purpose of this study was to describe the use of early proning of awake, non-intubated patients in the emergency department (ED) during the COVID-19 pandemic.

Methods: This pilot study was carried out in a single urban ED in New York City. We included patients suspected of having COVID19 with hypoxia on arrival. A standard pulse oximeter was used to measure SpO2. SpO2 measurements were recorded at triage and after five minutes of proning. Supplemental oxygenation methods included non-rebreather mask (NRB) and nasal cannula. We also characterized post-proning failure rates of intubation within the first 24 hours of arrival to the ED.

Results: Fifty patients were included. Overall, the median SpO2 at triage was 80% (IQR 69 to 85). After application of supplemental oxygen was given to patients on room air it was 84% (IQR 75 to 90). After 5 minutes of proning was added SpO2 improved to 94% (IQR 90 to 95). Comparison of the pre- to post-median by the Wilcoxon Rank-sum test yielded P=0.001. Thirteen patients (24%) failed to improve or maintain their oxygen saturations and required endotracheal intubation within 24 hours of arrival to the ED

Conclusion: Awake early self-proning in the emergency department demonstrated improved oxygen saturation in our COVID-19 positive patients. Further studies are needed to support causality and determine the effect of proning on disease severity and mortality.

Summary of Changes - Revision 2

- **COVID Risk Factors** – Added smoking, pregnancy, sickle cell disease
- **Symptoms** – Modified **new loss of taste or smell** (increased emphasis in bold)
- **CPAP** – Modified to “Trial of CPAP*. If ineffective, discontinue CPAP*.”
- **Limited Fluid Administration** – Added “up to 10ml/kg NS” for pediatric hypotension

