

Pandemic Response Phase 1, #1

This protocol is specific to the 2020 COVID-19/SARS-CoV-2 response. It is authorized by the authority of the MDPB by the Maine EMS Medical Director for use during times of severe strain on the healthcare system. This is NOT a standing protocol, but will be enacted when significant strain is recognized within the EMS or hospital system. Strain may occur due to lack of staff, lack of resources, or both. Services are asked to collaborate **CLOSELY** with their partner hospitals as well as with Maine EMS, who would consider enacting parts of this protocol based on demonstrated need.

This protocol is divided into steps which are on unique pages. Maine EMS, the MDPB, and the State Medical Directors will use the elements of the following protocol that are most likely capable of addressing the community in question's needs.

Phase 1: Trigger: Preparation for pandemic and upon first reported cases in Maine.

EMT/ADVANCED EMT/PARAMEDIC

Step 1: EMD surveillance for all callers based on symptoms and contact with presumed positive COVID-19 patients.

Rationale: *Allows EMS providers situational awareness prior to arrival.*

Step 2: Limit the number of providers that interact directly with the Person Under Investigation (PUI). Consider safety, operations and patient needs. If possible, limit the number of EMS providers who come into contact with the patient.

Rationale: *Experience with SARS (also a coronavirus) demonstrated increased transmission when three or more healthcare workers attended a patient. Also assists in preserving PPE.*

Step 3: Assess for symptoms (fever and/or symptoms of lower respiratory illness, e.g., cough or shortness of breath) using a combination of social distancing (when clinically or operationally indicated) and PPE.

Rationale: *Confirms patient is a PUI for COVID-19, protects EMS workforce through social distancing (minimum of 6 feet) and preserves Personal Protective Equipment (PPE) when possible.*

Step 4: Providers should use proper PPE for all patients who screen positive for a PUI for COVID-19 based on clinical symptoms (above) and/or epidemiologic risk factors (exposure to a laboratory-confirmed COVID-19 patient within the past 14 days). Proper PPE is AIRBORNE precautions, including gloves, gown, eye protection, and N-95 or equivalent respirator.

Rationale: *Protects EMS workforce.*

Step 5: Place surgical mask on all PUIs.

Rationale: *Limits spread of virus through the respiratory route.*

Step 6: Decontaminate the ambulance and all equipment per CDC Guidelines.

Rationale: *Prevents transmission of disease to EMS providers and other patients. Details may be found in the Maine EMS Clinical Updates found on the Maine EMS website.*

E A P

Phase 1, #2, Management of Acute Respiratory Symptoms during COVID-19 Pandemic

Follow PPE guidelines as outlined in Phase 1.1 Step #4 and alert hospital that patient is suspected to have COVID-19

All patients presenting with acute respiratory symptoms, especially respiratory failure, should be considered to be infected with SARS-CoV-2 which causes the disease COVID-19. This includes patients with known asthma, COPD and CHF. This protocol is written to minimize exposure of the disease to the provider.

EMT

1. O₂ as appropriate to maintain SpO₂ > 93%
 - a. Nasal cannula (NC) with surgical mask placed over the cannula is the preferred method. May use higher than normal flow rates (up to 7 L/min) if needed to maintain desired oxygen saturation
 - b. If persistently hypoxic despite NC, apply nonrebreather (NRB)
2. Assist patient with their own albuterol or albuterol/ipratropium MDI^{*, **} with a spacer, if available
 - a. 6-8 puffs per dose of MDI, may repeat every 20 minutes, as needed
3. If needed, assist ventilations with BVM with 100% O₂; BVM should be equipped with a HEPA filter
4. Request ALS

AEMT

5. Albuterol or albuterol/ipratropium MDI^{*, **} with spacer, if available. **Use of the patient's own MDI is preferred.**
 - a. 6-8 puffs per dose of MDI, may repeat every 20 minutes, as needed
6. For patients who have moderate to severe respiratory distress/wheezing, consider:
 - a. **Adult:** EPINEPHrine 0.3 mg IM [0.3 mL of 1 mg/mL] in anterolateral thigh every 20 minutes, or
 - b. **Pediatric** EPINEPHrine (in anterolateral thigh every 20 minutes):
 - i. < 25 kg, 0.15 mg IM [0.15 mL of 1 mg/mL],
 - ii. > 25 kg, 0.3 mg IM [0.3 mL of 1 mg/mL]
7. Restrict nebulizer treatments to patients who are exhibiting signs of moderate to severe bronchospasm/wheezing. Again, MDI is the preferred route for medication administration.
 - a. Albuterol 2.5 mg by nebulization (use 3 mL premix or 0.5 mL of 0.5% solution mixed in 2.5 mL of normal saline)
8. Consider CPAP^{***} for patients in either of the following 2 categories:
 - a. Patients with a history of CHF whose symptoms are more consistent with an acute exacerbation of CHF (i.e. rales, elevated JVD, increasing lower extremity edema) or
 - b. Patients with COPD who fail to improve with increased O₂ flow rate, use of their own inhaler and/or IM EPINEPHrine.



If progression to CPAP is necessary in either of these instances, please alert OLMC.



PARAMEDIC

9. Do not administer corticosteroids in patients suspected to have COVID-19 unless they are critically ill.
10. Consider Magnesium Sulfate after use of MDIs and IM EPINEPHrine.
 - a. **Adult:** Magnesium Sulfate 2 grams IV/IO over 10 minutes, consider placing this medication on a pump
 - b. **Pediatric:** Magnesium Sulfate 50 mg/kg IV/IO with a MAX dose of 2 grams over 10 minutes; consider placing this medication on a pump.



Phase 1, #3, Management of Acute Respiratory Symptoms and Care Considerations during COVID-19 Pandemic

PEARLS for the Management of Acute Respiratory Symptoms during COVID-19 Pandemic

- *Nebulized medications should be avoided if at all possible due to aerosolization of the virus.
- **Metered dose inhalers (MDIs) with spacers are at least as effective, and likely more effective than nebulized medications. Albuterol MDIs are currently in shortage. Use of the patient's albuterol MDI conserves resources.
- ***CPAP is associated with **significantly** increased risk of coronavirus aerosol transmission and EMS provider exposure.
- Steroids are **not** recommended in these patients as it may slow down the clearance of the virus.

PEARLS for Airway Management and Management of Out of Hospital Cardiac Arrest during COVID-19 Pandemic

- Please avoid intubations whenever possible as this procedure generates a significant number of aerosolized particles. Please consider the goals of airway management (Oxygenation/Ventilation/Protection) and begin with less invasive means, pausing at the procedure that meets the patient's immediate needs. The most common clinical scenario that leads to intubation is out-of-hospital cardiac arrest (OHCA). Please consider basic measures (BVM with OPA/NPA) during resuscitation. If additional measures are required in the ROSC phase, begin with supraglottic airways. If this step meets the patient's needs, please do not proceed to intubation. Only consider intubation in the circumstance when the patient is not adequately oxygenated or ventilated or when concerned for airway protection.
- Please consider placing a HEPA filter on the exhalation port of BVMs to reduce exposure to aerosolized particles.
- Please consider pre-donning any necessary PPE to reduce time to EMS CPR.

PEARLS for Peripartum Care during COVID-19 Pandemic

- There have been some reports of increasing numbers of home births during the COVID-19 pandemic. While there have NOT been associated reports of increased calls for EMS assistance during this increase in home births, there are important nuances to the management of the newborn in the event that the mother is either a PUI for COVID-19 OR is laboratory confirmed to have the disease. Maine EMS expects that MOST of these instances will be managed in the hospital in an effort to oversee the complexities of this circumstance, however, in the event this is not the case and a child is born to a COVID-19 PUI mother or a mother confirmed to have COVID-19 please consider the following:
- The CDC and the American College of Obstetrics and Gynecology BOTH recommend that healthcare providers consider "temporarily separating" the newborn from the COVID-19 PUI mother or COVID-19 confirmed mother. The risks and benefits of temporary separation should be discussed with the mother prior to initiation. Should the mother refuse, document her refusal in the medical record and alert hospital staff on arrival. Consider allowing contact with non-infected immediate relatives if necessary. Follow all steps in the Maine EMS Protocols regarding transport of newborns, which includes the provision of transporting mother and newborn in different ambulances.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/inpatient-obstetric-healthcare-guidance.html>