Emergency Protocol – COVID-19 Version 5

Signs and Symptoms

Symptoms may appear 2 – 14 days after expsoure to the virus. People with these symptoms or combinations of symtoms may have COVID-19:

- Fever or chills
- Cough
- Shortness of breath of difficulty breathing
- Fatigue
- Muscle or body aches
- Head ache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea
- Altered mental status or delirium in the elderly

Risk Factors

Epidemiologic factors that may help guide evaluation decisions:

- History of travel from affected geographic areas within 14 days of symptom onset.
- Any persons, including healthcare workers, who have had unprotected **close contact** with a laboratory-confirmed or suspicion of COVID-19 patient within 14 days of symptom onset.

Close contact is defined as:

- Being within approximately 6 feet of a laboratory-confirmed or suspicion of COVID -19 patient for a duration of greather than 15 minutes (cumulative).

Recommendations for EMS Providers and Medical First Responders

EMS provider practices should be based on the most up-to-date COVID-19 clinical recommendations and information from appropriate public health authorities and EMS medical direction.

Required Personal Protective Equipment (PPE)

All patient contacts are required to have a miminum level of PPE as oulined in the Emergency Protocol – Personal Protective Equipment. In addition, EMS providers who directly care for a patient with suspected or confirmed COVID-19 **and/o**r are performing high-risk or aerosol generating procedures should take these additional precautions:

- N-95 or higher-level respirator (if available)
  - N-95 or higher-level respirator should be used when performing or present for any aerosol-generating or high-risk clinical procedures.
- Patient examination gloves. Double gloving is preferred.
- Isolation gown.
  - If there are shortages of gowns, they should be prioritized for aerosol-generating procedures, care activities where splashes and sprays are anticipated, and high-contact patient care activities that provide opportunities for transfer of pathogens to the hands and clothing of EMS clinicians (e.g., moving patient onto a stretcher).

Protocol Continues

Protocol Continues

Patient Assessment

- EMS providers should exercise appropriate precautions when responding to any patient with signs or symptoms of a respiratory infection. Initial assessment should begin from a distance of at least 6 feet from the patient, if possible. Patient contact should be minimized to the extent possible until a facemask is on the patient. If COVID-19 is suspected, all PPE as described in this protocol should be used.
- During transport, limit the number of providers in the patient compartment to essential personnel to minimize possible exposures.

EMS Transport of a Person Under Investigation (PUI) or Patient with Confirmed COVID-19 to a Healthcare Facility (including inter-facility transport)

If a patient with an exposure history and signs and symptoms suggestive of COVID-19 requires transport to a healthcare facility for further evaluation and management (subject to EMS medical direction), the following actions should occur during transport:

- Isolate the ambulance driver from the patient compartment and keep pass-through doors and windows tightly shut.

EMS Transport of a Person Under Investigation (PUI) or Patient with Confirmed COVID-19 to a Healthcare Facility (including inter-facility transport) – continued

- When possible, use vehicles that have isolated driver and patient compartments that can provide separate ventilation to each area.
  - Close the door/window between these compartments before bringing the patient on board.
  - During transport, vehicle ventilation in both compartments should be on non - recirculated mode to maximize air changes that reduce potentially infectious particles in the vehicle.
  - If the vehicle has a rear exhaust fan, use it to draw air away from the cab, toward the patient - care area, and out the back end of the vehicle.
  - Some vehicles are equipped with a supplemental recirculating ventilation unit that passes air through HEPA filters before returning it to the vehicle. Such a unit can be used to increase the number of air changes per hour (ACH).
- If a vehicle without an isolated driver compartment and ventilation must be used, open the outside air vents in the driver area and turn on the rear exhaust ventilation fans to the highest setting. This will create a negative pressure gradient in the patient area.
- Follow routine procedures for a transfer of the patient to the receiving healthcare facility (e.g., wheel the patient directly into an examination room).

Protocol Continues

Protocol Continues

Precautions for Aerosol-Generating Procedures

- **EMS providers should exercise caution if an aerosol - generating procedure [e.g., non-rebreather mask,bag valve mask (BVM) ventilation, oropharyngeal suctioning, endotracheal intubation, nebulizer treatment, continuous positive airway pressure (CPAP), bi-phasic positive airway pressure (biPAP) or resuscitation involving emergency intubation or cardiopulmonary resuscitation (CPR)] is necessary.**
  - BVMs and other ventilatory equipment should be equipped with HEPA or other viral filter (if available) to filter expired air.
    - When performing BVM ventilations, lower tidal volumes are preferred.
  - EMS organizations should consult their ventilator equipment manufacturer to confirm appropriate filtration capability and the effect of filtration on positive-pressure ventilation.
- If available, place a **CLEAR** drape (medical drape, shower curtain, or drop cloth) over the patient's face and head to reduce exposure to aerosolized secretions.
- If possible, the rear doors of the transport vehicle should be opened and the HVAC system should be activated during aerosol - generating procedures. This should be done away from pedestrian traffic.
- If possible, consult with medical control before performing aerosol - generating procedures for specific guidance

Patient Treatment – Procedures

Cardiac Arrest

- For patients WITHOUT suspicion of COVID-19 infection, for example a sudden collapse in someone who is otherwise well, follow Cardiac Arrest Protocols 3.2A and 3.2P in New Hampshire Patient Care Protocols Version 8.0.
- For patients with known recent history of respiratory illness and fever or possible COVID-19 infection, those that are known COVID-19 positive, and those whose history is unclear, treat according to Cardiac Arrest Protocols **AND:**
  - Immediately place a nasal cannula at 7 lpm and place a surgical mask over the nasal cannula. **DO NOT** start compressions until this is done.
  - After 4 cycles of CPR (8 minutes), switch to BVM ventilation with a viral filter (if available) and consider placement of a superglottic airway with viral filter (if available).
  - Pause compressions for any of these airway interventions.
  - When CPR is being performed, only necessary personnel should be next to the patient. Personnel should distance themselves when not performing interventions.
- Patients in continuous cardiac arrest should not be transported from the scene with CPR in progress. If possible, resuscitation should either be terminated on scene or ROSC sustained for greater than 10 minutes before moving the patient to the patient compartment of an ambulance.

Continuous Positive Airway Pressure (CPAP), bi-phasic Positive Airway Pressure (biPAP)

- **Should be used with caution in suspected COVID-19 patients**. CPAP/BiPAP is associated with a significantly increased risk of coronavirus aerosol transmission and EMS provider exposure.
- Should still be considered in the patient who has another more obvious reason for their respiratory failure such (for example, in the setting of recent weight gain, edema, and history of cardiac disease).
- If EMS providers feel it is essential, consider contacting medical control.

Protocol Continues

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Endotracheal Intubation

- **Should be avoided , if possible, in suspected COVID-19 patients**. Intubation is associated with a significantly increased risk of coronavirus aerosol transmission and EMS provider exposure.
- Intubation is best performed using video laryngoscopy under a **CLEAR** drape to maximize distance between provider and patient.
- If you do not have video laryngoscopy or the ability to perform rapid sequence intubation consider placement of a supraglottic airway with viral filter (if available) under a **CLEAR** drape.
- This is an incredibly high-risk procedure in terms of transmission and is best performed in a negative pressure room with the highest provider level and most experienced provider.
- If EMS providers feel it is essential, consider contacting medical control.
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Fire Risk: If using a drape, ensure that it does not accumulate oxygen and that defibrillation pads are not under the drape during defibrillation.

EMT STANDING ORDERS- ADULT & PEDIATRIC

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Oxygenation

- Maintain SpO2 >90%
- Nasal Cannula (NC) with surgical mask placed over the cannula is the preferred method of oxygenation.
  - May use higher than normal flow rates (up to 7 lpm) if needed to maintain desired oxygen saturation.
- If persistently hypoxic despite NC, apply nonrebreather (NRB), then apply surigical mask over NRB.

Nebulization Therapy

- Metered Dose Inhaler (MDI) with spacer, if available, is preferred route for medication administration.
  - Consider 4 - 6 puffs per dose of MDI with spacer, if available, may repeat every 5 minutes, as needed.
- Use of patient's MDI with spacer, if available is preferred.

ADVANCED EMT STANDING ORDERS- ADULT

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Nebulization Therapy

- Restrict nebulizer treatments to patients who are exhibiting signs of moderate to severe bronchospasm/wheezing. Nebulizer therapy is associated with a significantly increased risk of coronavirus aerosol transmission and EMS provider exposure.

Epinephrine for Impending Respiratory Failure

- Consider epinephrine (1 mg/mL) 0.3 mg (0.3 mL) IM, lateral thigh preferred.

PARAMEDIC STANDING ORDERS- ADULT

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Corticosteroids

- Corticosteroids may be harmful in non-critically ill, non-hypoxic patients with suspected or confirmed COVID-19; however if the patient is hypoxia or critically ill, strongly consider adminstering dexamethasone 10 mg PO/IV/IM even in the absence of brochospasm.