March 16, 2020

Re: Clinical Treatment of Patients Suspected of COVID-19 Exposure or Infection, protocol update

From: The Office of Clinical Issues and Training
Brent Dyer, Deputy Chief - EMT-P
Sumner County EMS

Authorization: Ray Pinkston, MD, FA
Physician - Medical Director
Greg Miller, Ed.S., EMT-P
Chief of EMS

The following recommendations will apply in regards to treating patients who are suspected of being exposed to or infected by COVID-19. Here are the signs/symptoms and risk factors for suspected "high risk" patients:

- Exposure time frame of 2-14 days prior to S/S developed
- Fever (defined as >100 F), cough, and dyspnea (presents with acute respiratory illness)
- Recent travel in airports, cruise ships, or other high risk areas
- Any recent travel outside the United States, especially Europe and Asia

Here are EMS treatment considerations / guidelines for managing patients suspected of COVID-19 exposure or infection:

- Wear all PPE and wear it properly when intubating or performing other skills that place the provider in close proximity to the patient’s nose or mouth. - Use droplet precautions
- When intubating, consider using a video laryngoscope (if available) even on technically easy patients. This allows the operator to intubate while increasing the distance of the paramedic from the oropharynx.
- The recommendation is to not use nebulizers or CPAP in an ambulance on any patient who is at "high risk" for COVID. Carefully assess the increased risk of exposure to providers with how bad the patient really needs the aerosolized medication. Nebulizer treatments can place a higher percentage of exhaled droplets/contaminants into the patient compartment, increasing exposure to the provider(s).
- If the patient is "low risk" for COVID and requires aerosolized medications, follow these guidelines:
  - Per State EMS, it is recommended to give aerosolized medications outside of the ambulance to prevent exposure to personnel and contamination of the ambulance.
  - You can use the bacterial/particulate filters supplied for ventilator circuits to help minimize exhaled droplet exposure to personnel. (See instructions below)
  - Consider earlier intubation of the patient if warranted in cases where significant respiratory distress/failure presents. This would also allow use of the filter integrated into the BVM.

--- Continued on next page... ---
The use of filters while treating the patient in the ambulance is for low risk patients and after intubation of the high risk patients. Here are various options for use of the supplied bacterial / viral particulate airway filters:

- **Standard Nebulizer** - Place either type filter on the distal end of the nebulizer reservoir tube. This will not impede patient exhalation. It will be required that the patient keep their mouth sealed around the mouthpiece to deliver treatment (if absolutely necessary). To do this, let the patient get the therapy as needed without disturbing the process to answer questions, etc that would make them turn to speak.

- **Bag Valve Mask** - Place either type filter between the mask and the self-inflating bag to create a filtration of exhaled air coming back out of the ventilated patient.

- **BVM onto Endotracheal Tube (ETT)** - Use the wider disc style filter by Ventlab (REF - FH603003). The larger connection (22mm) will go to the BVM and the smaller connection (15mm) to the ETT.

- **CPAP system** - Use the more narrow style filter by Ventlab (REF - BF102). The larger connection (30mm) will go to the CPAP circuit and the smaller connection (19mm) will go to the mask.

- **CPAP system with nebulizer used** - You will need to use the same filter noted above for CPAP use, but cannot use the built-in nebulizer port in the CPAP circuit if using a filter. Instead, you will need to place a standard nebulizer proximal to the patient mask, and then place the filter distal of the T-piece connection, with the filter between the nebulizer and CPAP circuit. In order for the patient to receive medication, the nebulizer must be closer to their mask than the filter.

**Discontinue CPAP and nebulized treatments prior to entering any health care facilities at this point.**

*(Photos of each system with integrated filters will be attached to the email with this update)*

This update may be considered protocol / standing order effective immediately. Personnel will be provided further updates as recommendations and orders come from our Medical Director and other officials as new information develops. **Our focus is to protect the well being of our providers as valued members of the healthcare community.** We are also proud to research and develop protocols and acquire necessary equipment that allows us to maintain a high standard of care to the patients we serve while minimizing the risks to all personnel. Recommendations are welcome and should be sent to the Office of Clinical Issues and Training for consideration.

-BND (DC910), authority of MD1