

PURPOSE:

This advisory is an overlay to existing patient care protocols and applies to the management of patients diagnosed with or suspected of having COVID-19 or an influenza like illness (ILI) based on dispatch information, patient location/context (care facility, etc.), ongoing outbreak epidemiology, and provider obtained history, judgment and other information.

PROCEDURE:

High Risk Patients, Procedure Questions and Situational Awareness

1. Does the patient have a fever, cough, or respiratory distress?
2. Is the patient or facility suspected to have COVID-19?
3. Has the patient had prior contact with a known COVID-19 patient?
4. Is the patient from a high-risk facility (Assisted Care, AFH, Nursing home, clinic, jail)?
5. Could the patient require aerosol-generating procedures?

If the answer is “yes” to any of the above questions, the patient is a high-risk patient and could be considered a potential COVID-19 patient and considerations for PPE, treatment and procedure modifications should be made as indicated below and as directed by the agency medical director.

SYMPTOMS	SIGNS
1. Fever (observed or reported)**	1. Tachypnea (RR > 24/min)
2. Shortness of breath**	2. Tachycardia (HR > 100/min)
3. Cough**	3. Hypoxia (SpO ₂ < 94%)
4. URI symptoms with sore throat, rhinorrhea	4. Hypotension (MAP < 65mmHg or SPB < 90 mmHg)
5. Chest pain	
6. Confusion	
7. Headache	
8. Fatigue/Myalgia (muscle aches)	
9. Anorexia	
10. Nausea, vomiting, diarrhea	
**primary symptoms	

A. Universal Patient Care

HIGH-RISK AEROSOLIZING PROCEDURES	HIGH-RISK PPE REQUIREMENTS (required for all those within 6 feet of the patient)
Bag-Valve-Mask Ventilation	Gloves
Endotracheal Intubation	Eye Protection
Supraglottic Airway Placement	Highest Available Respiratory Protection
Nasal and Oral Airway Placement	Gown
Non-Invasive Positive Pressure Ventilation	
Nebulized Treatments	
Suctioning	

1. Wear appropriate PPE for the appropriate patient and situation.
2. Review information provided by dispatch and request additional information from dispatch as needed.
3. Although no longer strictly relevant, the patient should be questioned about a history of recent travel or contact with a known COVID-19 patient.
4. If possible, consider using reporting party (RP) phone number to communicate and obtain more information before entering a scene.
5. If possible, establish communication with the patient, family member(s) or caretaker(s), while maintaining at least 6 feet of distance.
6. If possible, have the patient move to an open area.
7. Equipment and bags (including drug boxes) should be kept >6 feet (or as far away from) the patient as possible.
8. Ensure proper provider donning/doffing for high-risk encounters/procedures. Ideally doffing should be done with a buddy to watch and ensure no personal contamination.
9. PIC should ensure or designate the role to an on-scene provider, that personnel are maintaining proper PPE and distancing themselves as much as possible from patient. If possible, personnel should stay out of the same room as the patient, if not actively providing hands-on care.
10. If possible, at a minimum, for patients with cough, shortness of breath, or fever, a simple surgical/medical mask should be given to the patient to wear over their mouth and nose.
11. If agencies have the capability to utilize remote technology (video - either onsite or remote context e.g. FaceTime, Skype, etc.) to initially screen and assess a patient, this can be considered.

12. When possible and safe, limit the number of personnel exposed to any known or potentially COVID-19 infected person. If safe for patient care, one provider should initially assess a patient.
13. When entering a care facility, including adult foster care homes, with known COVID-19 patients, consider the facility to be a high-risk area for both providers and patients and personnel exposure should be limited as feasible. Appropriate PPE should be worn inside the facility. EMS personnel are encouraged to ask facility staff to bring patients (wearing a simple mask) to a central area near the facility entrance for initial EMS evaluation.

B. PPE

1. For patient encounters with known or suspected COVID-19 infection, minimum PPE will include gloves, eye protection, and mask (N95 or greater if available). Consider gown or coveralls if in physical contact with patient.
- 2. If high-risk aerosolizing procedures are being performed, airborne-precautions and PPE must be used. This means, the above PPE with the addition of gowns and N95 or higher respiratory protection.**

C. Patient Transport Instructions

1. Contact the receiving facility as soon as possible and advise them that you have a patient needing isolation, if available. Do not enter the ED or other patient care area until directed by the ED staff. This may include alternate locations within the facility such as temporary shelters and treatment areas.
2. Family members and contacts of patients with possible COVID-19 shall not ride in the transport vehicle except for pediatric patients or other vulnerable or special needs patients.
3. Isolate the driver from the patient compartment if possible; if unable, the driver should wear appropriate mask and eye protection.
4. During transport, vehicle ventilation settings in both compartments should be on non-recirculated mode. Open the outside air vents in the driver area and turn on the ventilation fans to the highest setting.
5. If possible, place patient in yellow emergency blanket to minimize contamination of the ambulance.

TREATMENT:

A. Cardiac Arrest

1. All cardiac arrest patients are high-risk and high-risk PPE should be worn.
2. See airway management instructions and ETI guidance.

B. Respiratory Distress

1. Airborne precautions (high-risk PPE) are needed for any aerosol generating procedures as defined previously.
2. If using a nasal cannula or NRB, a simple mask should be applied over for this equipment on a patient's face if possible.
3. All personnel in the room with a patient receiving any high-risk procedures should use appropriate high-level PPE before treatment is initiated.
4. Nebulized meds should be used as a last resort - consider other appropriate treatments first. A patient with severe respiratory distress and wheezing can still receive nebulized treatments. Perform treatments on scene and outside if possible. Nebulizer treatments should not be performed during transport.
5. Instead of nebulized treatments for asthma, consider epinephrine (0.3mg - 0.5 mg Epi 1:1000 IM every 5 minutes, repeated once). Consider using lower doses (0.1 - 0.3 mg IM) for patients > 40 years old or with known coronary artery disease.
6. If available, use an albuterol Metered Dose Inhaler (MDI) in lieu of nebulizer treatments. If patient has their own MDI, consider bringing it with you for use in route. 4 puffs of an albuterol MDI is equivalent to 1 nebulized treatment; if available, use a spacer.
7. Avoid steroid administration in suspected COVID-19 patients.
8. When treating for suspected SCAPE, IV NTG bolus may be preferred over CPAP/BiPaP to decrease exposure risk to providers from COVID-19 possible patients.
9. BVMs should be equipped with Viral/HEPA filters, as available.
10. Maximize area ventilation during these procedures as able: open doors, use exhaust fans, etc.

C. General Airway Management

1. The most experienced provider should assume control of airway management in known or suspected COVID-19 patients.
2. The use of SGAs is considered a continuously aerosolizing procedure.
3. When using a BVM, a viral/HEPA filter must be placed between the mask and the bag, if available.

D. Non-Invasive Positive Pressure Ventilation (CPAP/BiPaP)

1. This is an aerosolizing procedure and should be considered when performing advanced airway management and donning appropriate PPE. Attempt to minimize the performance of this procedure to only when necessary for respiratory distress.
2. **DO NOT** discontinue CPAP/BiPaP upon entering the ED.

E. Advanced Airway Management

1. If advanced airway management is needed in a possible COVID-19 patient, the most experienced provider on-scene is encouraged to be the person in charge of the airway.
2. Preferred pre-oxygenation method is with a BVM with proper facemask-seal with viral/HEPA filter. Consider DSI as the preferred method of intubation if unable to achieve proper preoxygenation levels. If no issue with preoxygenation, RSI can be used.
3. Do not squeeze BVM bag before intubation attempt but hold facemask with good two-handed technique with PEEP set at 5-10 cmH₂O until initiating advanced airway attempt to maximize recruitment of alveoli.
4. Ensure viral/HEPA filter is attached to BVM before intubation attempt, if available.
5. Intubation with video laryngoscopy (VL) and bougie is strongly preferred over direct laryngoscopy (DL). This is to maximize the distance from patient and limit exposure.
6. Endotracheal intubation is preferred over SGA.
7. If a patient responds to supplemental oxygen with SpO₂ levels above 90% (and can maintain adequate airway) defer advanced airway management and notify the hospital of a potential need for airway management upon arrival.
8. After intubation, make sure that you have the viral/HEPA filter in place on the BVM, as able, to attach to the tube. Inflate the cuff before bagging the patient.
9. Confirm tube placement using standard verification methods, including EtCO₂ waveform capnography.

F. Suctioning

Suctioning is a high-risk aerosolizing procedure.