Purpose:

This document is designed to provide Emergency Medical Services (EMS) practitioners, agencies and systems with interim guidance regarding the outbreak of 2019 Novel Coronavirus (2019-nCoV) that began in Wuhan City, Hubei Province, China on December 2019.

This guidance should be considered for the development of response plans and is not intended to supersede any infectious disease response plan that has been developed and approved by local, State or Federal authorities legally charged to do so. This guidance does not constitute a response protocol but serves as a reference for general considerations and the protection of responders.

EMS agencies are encouraged to adopt policies and procedures regarding response and treatment of all patients with communicable diseases. EMS agencies should assure that all personnel are provided with information regarding the outbreak of 2019-nCoV and any necessary personal protective equipment (PPE), such as N95 respirators, including guidelines for the use of such PPE.

For updates and additional information regarding this 2019-nCoV outbreak, please visit the following web pages:


For questions regarding information in this advisory or information you’ve received about this outbreak from other sources, please contact the Bureau of Emergency Medical Services and Trauma Systems.

Epidemiology:

This is a rapidly evolving situation. EMS practitioners, agencies and systems should visit the CDC website for the most up to date information at https://www.cdc.gov/coronavirus/2019-nCoV/hcp/index.html.

Assessment & Screening:

The CDC clinical criteria for a 2019-nCoV Patient Under Investigation (PUI) have been developed based on what is known about the MERS-CoV and the SARS-CoV and are subject to change as additional information becomes available. EMS practitioners, agencies and systems should visit the Policy 20-02 2019-nCoV “Wuhan Coronavirus” (v2.0)
Infection Control:

To expedite public health containment strategies, EMS providers should implement appropriate infection control measures, including airborne precautions when 2019-nCoV is suspected.

- EMS providers should institute Standard, Contact, Airborne Precautions, and eye protection including the use of an N95 respirator and goggles or face shield.
- 2019-nCoV PUIs should don a surgical mask and, when transporting a patient through the hospital or other common areas, the patient should remain masked. Transport through the hospital should be minimized.
- The receiving facility must be notified prior to arrival so that appropriate infection prevention and control precautions can be implemented, as the preferred placement for patients being evaluated for 2019-nCoV is in an airborne infection isolation room (AIIR).

Personal Protective Equipment (PPE):

PPE carried by EMS agencies shall be utilized to provide protection from a patient suspected to have 2019-nCoV. EMS practitioners should use PPE appropriately, and for all interactions involving contact with the patient or the patient’s environment. EMS practitioners should don PPE prior to patient contact and properly discard PPE immediately after patient contact to contain pathogens.

In addition to these considerations, EMS providers are required to follow their local infectious disease emergency response plan. The following PPE is recommended for use by EMS when treating a patient with suspected 2019-nCoV infection:

- Standard Precautions;
- Contact Precautions, including gown and gloves;
- Eye protection (goggles or face shield);
- Disposable NIOSH-approved, fit-tested N95 respirator;
  - EMS agencies may use PAPRs with full hood and high efficiency particulate air (HEPA) filter for Airborne Precautions for employees that cannot safely fit test on N95 respirators due to facial hair, facial structure, etc.
- Provide a surgical mask (N95 is not recommended) for all suspected 2019-nCoV patients;
  - Patients who are intubated should be ventilated with a bag-valve device or ventilator equipped with a HEPA filter on exhalation port
- Provide tissues to patients for secretion control and encourage patient hand hygiene and cough etiquette practices.


Transport Considerations:

- Standard transportation to appropriate hospital receiving facility.
- It is recommended to have the patient compartment exhaust vent on high and to isolate the driver compartment from the patient compartment. It is also recommended to have the driver compartment ventilation fan set to high without recirculation.
- If driver/pilot compartment is not isolated from the patient compartment, the vehicle operator should don a NIOSH-approved, fit-tested N95 respirator or a PAPR.
- The receiving facility must be notified prior to arrival so that appropriate infection prevention and control precautions can be implemented.

Policy 20-02 2019-nCoV “Wuhan Coronavirus” (v2.0)
• When providing hospital notification, please indicate if any family or support persons are accompanying the patient, as they too may need to be isolated. EMS agencies should have a plan for family members wishing to accompany the patient that prevents crew exposures.

EMS personnel must notify the receiving hospital before arrival if they are transporting a patient with suspected 2019-nCoV, to their facility.

Agency officers should speak with hospital personnel in advance to discuss what procedures are in place for accepting such patients. Hospitals may request EMS personnel deliver such patient(s) through a separate secure entrance.

A hospital may not refuse patients with suspected coronavirus infection unless a municipal response plan designed to do so has been activated.

Decontamination Considerations:

At this time, routine disinfection procedures for rooms, equipment and ambulances are recommended. Any waste generated is not considered Category A waste. Use disposable or dedicated patient-care equipment (e.g., blood pressure cuffs). If common use of equipment for multiple patients is unavoidable, clean and disinfect such equipment before use on another patient according to the equipment and disinfectant manufacturers’ instructions for use.

• Remove and dispose of contaminated PPE and perform hand hygiene prior to transporting patients. Don clean PPE to handle the patient at the transport location.
• Any visibly soiled surface must first be decontaminated using an Environmental Protection Agency (EPA)-registered hospital disinfectant according to directions on the label.
• Disinfect all potentially contaminated/high touch surfaces including the stretcher with an EPA-registered hospital disinfectant according to directions on the label. More information about disinfectants can be found on CDC’s infection control web page: https://www.cdc.gov/coronavirus/2019-nCoV/hcp/infection-control.html.
• Medical equipment (stethoscope, blood pressure (BP) cuff, etc.) making patient contact should be disposable or cleaned and disinfected before use on another patient according to the equipment and disinfectant manufacturers’ instructions for use.
• It is not known how long 2019-nCoV remains infectious in the air. Therefore, the current recommendation is to use a time period consistent with airborne pathogens such as measles or tuberculosis. This means that the ambulance used to transport a patient with suspected 2019-nCoV infection should not be used for a period of two (2) hours after the patient exits the vehicle. Additional factors may be considered in the development of decontamination policies and procedures to reduce vehicle downtime. EMS agencies are encouraged to consult with the ambulance manufacturer to determine the vehicle’s passenger compartment air changes per hour (ACH) for 99.9% removal of airborne contaminants to establish a safe time period for reintroduction of the vehicle less than the 2-hour recommendation.¹

If an EMS agency is using less than 2-hour recommendation after speaking with the ambulance manufacturer, documentation from the ambulance manufacturer and the agency policy and procedure should be maintained on file.

¹ Table B1 “Air changes/hour (ACH) and time required for airborne-contaminant removal by efficiency” from the 2003 Guidelines for Environmental Infection Control in Health-Care Facilities (https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#tableb1).