

# High Consequence Pathogens

(Respiratory Diseases, SARS, MERS-CoV, CoVID-19)

The Missouri Department of Health and Senior Services (DHSS) activated a statewide public hotline for citizens or providers needing guidance regarding the novel coronavirus, or COVID-19. The hotline can be reached at **877-435-8411**. The hotline is being operated by medical professionals and is available 24 hours a day, 7 days a week.

## 911 Emergency Dispatch Center

- Does victim have risk for Emerging Infectious Disease with chief complaints:  
**Flu-Like Symptoms, Respiratory Illness(cough, difficulty breathing), Breathing Problem, Headache, Sick Person**
- Listen to medical dispatch ask the following questions or ask for calls not transferred to EMS Dispatch Centers:  
**In the past 14 days have you been to affected areas or been exposed to someone who has traveled to affected areas?** (Not needed once disease is in this area)  
**Have you or a victim had close contact with a person being with or being evaluated for the illness or a confirmed illness?**

### If Yes:

- |   |                                 |
|---|---------------------------------|
| Do you or victim have a fever?            | Do you or victim have chills?   |
| Do you or victim have unusual sweating?   | Do you or victim have headache? |
| Do you or victim have unusual body aches? |                                 |

YES

NO

### Do not rely solely on Dispatch personnel to identify a potential exposure patient:

- Dispatch may be constrained by time and caller information
- Obtain a travel history / exposure history and assess for signs and symptoms
- Limit number of responders necessary for aid and limit potential exposures

### Immediate Concern

- Traveler from area with known disease with or without symptoms
- Traveler from affected area within past 14 days

AND

- |                          |                            |                                     |
|--------------------------|----------------------------|-------------------------------------|
| <b>Fever</b>             | <b>Headache</b>            | <b>Joint or Muscle Aches</b>        |
| <b>Weakness, Fatigue</b> | <b>Vomiting / Diarrhea</b> | <b>Cough / Difficulty Breathing</b> |

**WARN FIRST RESPONDERS**  
of Possible Infectious Disease

First Responder / EMS Protective Equipment / Limit to Essential Personnel only  
**KEEP GREATER THAN 2 METER FOR INITIAL ASSESSMENT**

### Patient:

- Place surgical mask on patient
- Use Non-rebreather mask if Oxygen needed
- Chest only CPR with NRB mask at 15L if no N95 available

### Providers:

- Contact and Droplet Precautions as detailed on page 2
- Reminder: Driver needs to remain in appropriate level mask and eye protection while driving and in the driver compartment
- Window or divider should be closed between the driver compartment and patient care compartment

### Aerosol generating procedures (Airborne):

- No nebulizer treatments. Consider terbutaline or epinephrine
- No CPAP or BiPAP
- Supraglottic airway, Intubation, suctioning and ventilator management
- Go to airborne precautions listed on page 2

### Patients Transported to the ED:

- Do not take patient through triage if possible
- Identify patient as high risk in report

EMS Treatment Considerations

 **Notify Destination or Contact Medical Control** 

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## Driver:

- Should wear full PPE as described when caring for patient.
- Remove all PPE, except mask (N95 preferred or PAPR for airborne) and perform hand hygiene prior to entering cab of vehicle to prevent contamination of driver's compartment.

## Wash hands:

- Thoroughly after transferring patient care and/or cleaning ambulance

## Maintain records:

- Of all prehospital providers who were in the room with the patient at the scene and who were in ambulance during transport (self-monitoring for symptoms for 14 days is recommended, even if wearing appropriate PPE).
- This does not mean the providers can no longer work.
- If all prehospital provider names (students, observers, supervisors, first response etc.) are listed in the Patient Care Report then this is a sufficient

## Safely clean vehicles used for transport:

- Follow standard operating procedures for the containment and disposal of regulated medical waste.
- Follow standard operating procedures for containing and reprocessing used linen.

## Wear appropriate PPE when:

- Removing soiled linen from the vehicle. Avoid shaking the linen.
- Clean and disinfect the vehicle in accordance with agency standard operating procedures.
- Personnel performing the cleaning should wear a disposable gown and gloves (a respirator should not be needed) during the clean-up process; the PPE should be discarded after use.
- All surfaces that may have come in contact with the patient or materials contaminated during patient care (e.g., stretcher, rails, control panels, floors, walls, work surfaces) should be thoroughly cleaned and disinfected using an **EPA-registered disinfectant** appropriate for SARS, MERS

## **Pearls**

- Transport: All occupants of the vehicle should wear appropriate level mask for CoVID19 (see below). Limit number of providers in vehicle required to provide patient care in order to limit exposures. Ensure use of all PPE for crew and passengers when aerosol generating procedures utilized.**
- Negative Pressure in care compartment:** Door or window available to separate driver's and care compartment space: Close door/window between driver's and care compartment and operate rear exhaust fan on full. No door or window available to separate driver's and care compartment space: Open outside air vent in driver's compartment and set rear exhaust fan to full. Set vehicle ventilation system to non-recirculating to bring in maximum outside air. Use recirculating HEPA ventilation system if equipped.
- Airborne precautions:** Standard PPE with fit-tested N95 mask (or PAPR respirator) and utilization of a gown, change of gloves after every patient contact, and strict hand washing precautions. This level is utilized with Aspergillus, Tuberculosis, Measles (rubeola) Chickenpox (varicella-zoster), Smallpox, Influenza, Rhinovirus, Norovirus, and Rotavirus, or zoster (shingles). **(For CoVID19 with aerosol generating procedures)**
- Contact precautions:** Standard PPE with utilization of a gown, change of gloves after every patient contact, and strict hand washing precautions. This level is utilized with GI complaints, blood or body fluids, C diff, scabies, wound and skin infections, MRSA. Clostridium difficile (C diff) is not inactivated by alcohol-based cleaners and washing with soap and water is indicated.
- Droplet precautions:** Standard PPE plus a standard surgical mask for providers and a surgical mask or NRB O2 mask for the patient. This level is utilized when Influenza, Meningitis, Mumps, Streptococcal pharyngitis, Pertussis, Adenovirus, Rhinovirus, SARS, and undiagnosed rashes. **(For CoVID19 when NOT using aerosol generating procedures)**
- All-hazards precautions:** Standard PPE plus airborne precautions plus contact precautions. This level is utilized during the initial phases of an outbreak when the etiology of the infection is unknown or when the causative agent is found to be highly contagious (e.g. SARS, MERS-CoV, COVID-19).
- COVID-19 (Novel Coronavirus): For most current criteria to guide evaluations of patients under investigation:** <http://www.cdc.gov/coronavirus/2019-nCoV/clinical-criteria.html>

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The following **alternate care guidelines** should be utilized during an ongoing or suspected outbreak of a high consequence pathogen with the understanding that any variation from what is listed below will significantly increase the risk of disease transmission:

- ❑ Airway and breathing:
  - ✓ A surgical face mask should be placed on any patient with suspected high consequence pathogen, even over the top of oxygen delivery devices. DO NOT utilize a N-95 for this purpose.
  - ✓ Aerosolizing procedures (intubation, BVM, supraglottic airways, airway suctioning, inhalers) should be performed with extreme caution, and only once PPE has been escalated to Airborne Precautions.
  - ✓ CPAP and BiPAP treatment should be eliminated.
  - ✓ Nebulized breathing treatments should be eliminated.
  - ✓ Instead of nebulized treatments, the provider should consider:
    - Utilization of **terbutaline** .25mg SQ (Pediatrics: 0.01mg/kg SQ up to 0.25mg) q15 min x 2 doses, OR;
    - Utilization of **epinephrine 1:1000** 0.3mg IM (Pediatrics 0.15mg IM) in severe patients under 50 years with no cardiac hx, OR;
    - Utilization of **epinephrine 1:100,000** (Push Dose) 10mcg IV q10 min (Pediatrics 0.1mc/kg IV) in severe patients under 50 years with no cardiac hx.
  - ✓ Infectious disease airway circuits with proper filtration should be utilized any time airway control is necessary.
  - ✓ Continuous filtered suction should be used when available with airway procedures.
- ❑ Respiratory failure with or without cardiac arrest:
  - ✓ Advanced airway procedures should be withheld, and chest compressions with NRB with surgical mask over the NRB performed until other higher priority ALS interventions have been completed (defibrillation, IV/IO access, etc.).
  - ✓ ET tube should be cuffed and infectious disease airway circuits with proper filtration should be utilized. If placing an ET tube during CPR, chest compressions should be stopped during intubation and infectious disease airway circuit utilized. RSI with deep paralysis is preferred. Nasotracheal intubation should not be utilized.
  - ✓ If iGel is utilized and not able to safely be switched to an ET tube, infectious disease airway circuits with proper filtration should be utilized.
  - ✓ Provider N-95 mask required for all aerosolizing procedures and should be continued through the remainder of that patient's care.
- ❑ General Care and PPE:
  - ✓ High suspicion for disease with initial evaluation greater than 2 meters for all patients.
  - ✓ Surgical mask, eye protection, droplet and contact precautions should be used in any encounter of suspicion.
  - ✓ Follow local guidance given on the reuse or extended use of surgical masks and N-95 respirators, as needed.
  - ✓ If providers reuse face masks or respirators, ultimate care should be given to follow proper donning and doffing guidelines to include frequent hand hygiene and storage of the mask between uses to avoid cross contamination to the extent possible.

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**TERBUTALINE** (Brethine)

Pregnancy Category B

<b>ACTIONS</b>	Relaxes bronchial smooth muscle by stimulating beta 2 receptors
<b>INDICATIONS</b>	Bronchospasm
<b>CONTRAINDICATIONS</b>	1. Known hypersensitivity 2. Cardiac arrhythmias
<b>PRECAUTIONS</b>	1. Cardiovascular disease 2. Seizure disorders
<b>SIDE EFFECTS</b>	Nervousness, tachycardia, tremor, arrhythmias, drowsiness, diaphoresis, dizziness, nausea and vomiting, headache, hypertension, weakness, diaphoresis
<b>ADULT DOSAGE</b>	0.25 mg SQ q 20 min x 2 doses
<b>PEDIATRIC DOSAGE</b>	0.01 mg/kg SQ to a max of 0.25 mg q 20 min x 2 doses