

**Medical Control Guideline: PROTECTION AGAINST POTENTIAL
COMMUNICABLE DISEASES**

PURPOSE: To describe processes for protection against communicable diseases including, personal protective equipment (PPE), isolation of the ambulance patient compartment, and decontamination of the ambulance post call.

DEFINITIONS:

Airborne Transmission: Transmission of a communicable disease via residue from evaporated droplets or dust particles containing microorganisms which remain suspended in the air.

Communicable Disease: A disease that is transmitted from human to human.

Contact Transmission: Transmission of a communicable disease via direct contact of the infected person or via an object or material that can carry infectious particles.

Donning: The process of applying PPE to oneself.

Doffing: The process of removing PPE from oneself.

Droplet Transmission: Transmission of a communicable disease via respiratory droplets that are too large to be airborne for long periods of time, and quickly settle out of air.

Emerging Infectious Disease (EID): Infectious diseases that have newly appeared in a population or have existed but are rapidly increasing in incidence or geographic range, or that are caused by one of the National Institute of Allergy and Infectious Diseases (NIAID) Category A, B, or C priority pathogens.

Personal Protective Equipment (PPE): Specialized equipment worn to protect oneself from communicable diseases.

PRINCIPLES:

1. Exposure to communicable diseases in emergency medical response is a hazard that can be mitigated by proper use of PPE, implementation of strategies to isolate or increase airflow in the compartment, and decontamination of equipment after each patient encounter.
2. Modes of transmission vary by microorganism. Transmission may occur via contact, respiratory droplets, and/or airborne particles.
 - a. Standard (i.e., unknown transmission or no known communicable disease)
 - b. Contact (i.e., infected areas of the person's body such as skin infections, diarrhea)
 - c. Droplet (i.e., COVID-19, influenza, meningitis, bronchiolitis, other respiratory viruses)
 - d. Airborne (i.e., measles, varicella (chicken pox), disseminated herpes zoster, or tuberculosis)
3. Standard precautions, formerly known as universal precautions, are the minimum PPE worn for every patient encounter.

4. The appropriate strategies, including the use of PPE beyond standard precautions, are selected by anticipating which communicable disease may be present on scene and the route by which that communicable disease is transmitted.
5. During periods of respiratory illness or emerging infectious disease surge, it is prudent to apply the highest level of PPE and mitigation strategies until additional information is known about the transmission route and communicability of the disease.
6. Donning appropriate PPE is an essential part of provider safety and takes precedence over expediting patient care.
7. Donning and doffing should be performed in the presence of a partner to ensure proper technique.

GUIDELINES:

1. Perform hand hygiene prior to donning PPE.
2. Don PPE in the following sequence from first on to last on: gown, mask or respirator, eye protection, gloves. If two-glove technique used don first pair of gloves first and second pair of gloves last.
3. Don the appropriate PPE and take the following precautions during care of a patient with a confirmed or suspected communicable disease, see Table 1.
4. For all precautions, limit the number of providers in the patient compartment to only essential personnel to minimize exposures.
5. Maintain PPE throughout the patient encounter. Doff PPE once the patient encounter is complete.
6. Doff PPE in the following sequence from first off to last off: gown, gloves, goggles or face shield, mask or respirator. If two-glove technique used doff first pair of gloves first and second pair of gloves last.
 - a. Contaminated surfaces of the PPE are the outer glove surface, front portion of the gown/raincoat, front portion of the eye protection, and front portion of the mask and any other surfaces that knowingly came into contact with the patient or were otherwise contaminated. Clean surfaces of the PPE include the rear portion of the gown/raincoat, eye protection straps, and mask straps.
 - b. PPE should be doffed by clean hands coming into contact with clean portions of the PPE only.
7. Dispose of doffed PPE in a biohazard container.
8. Perform proper hand hygiene.
9. Refer to the CDC for on additional guidance on donning and doffing PPE:
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/using-ppe.html>

10. After each patient encounter decontaminate all surfaces of durable medical equipment using Environmental Protection Agency (EPA) approved disinfectant and dispose of all disposable medical equipment that came in contact with the patient or the scene per provider agencies protocols. If a raincoat is used as a gown, wipe down with EPA approved disinfectant and hang up to air dry.

Table 1. PPE and Mitigation Strategies for Communicable Disease Precautions

Type of Transmission	Minimum PPE Required	Mitigation Strategies
Standard	Gloves	<ul style="list-style-type: none"> • Perform hand hygiene • Clean and disinfect surfaces
Contact	Gloves, gowns (as available)	
Droplet	Gloves, surgical mask, eye protection, gowns (as available)	<ul style="list-style-type: none"> • Perform hand hygiene • Clean and disinfect surfaces • Place surgical mask on patient (and caregiver) • Use viral filters during positive pressure ventilation • Ask ambulatory patients to move outside of residence • Open windows of transport vehicle, weather permitting • Adjust the transport vehicle's ventilation system to the highest air changes per hour
Airborne	Gloves, respirator (N95, P100, or PAPR), eye protection, gowns	