



Training Bulletin

Los Angeles Port Police

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Pathogens

PURPOSE:

The purpose of this Training Bulletin is to review how the transmission of pathogens can occur and how we can prevent the spread of pathogens. (CCR Title 8, Sec. 5193, also requires this training annually)

INTRODUCTION:

Peace officers and all others within the EMS system must take appropriate precautions at all times when in direct contact with blood, bodily fluids, or other potential infectious materials.

Pathogens - Infection and disease are caused by **pathogens** that are spread through the air or by contact with another person's blood or bodily fluids.

Bacteria are microscopic organisms that can live in water, soil, organic material, or within the bodies of plants, animals, and humans. The human body contains a number of both beneficial and harmful bacteria. Only when a bacteria is harmful would it be considered a pathogen.

A **virus** is a submicroscopic agent that is capable of infecting living cells. Once inside the cells of plants, animals, or humans, viruses can reproduce and cause various types of illness or disease.

Transfer of Pathogens - There are two primary means by which pathogens can be transferred from one human being to another:

- **Airborne pathogens** are spread by tiny droplets sprayed during breathing, coughing, or sneezing. Airborne pathogens can be absorbed through the mucous membranes (e.g., eyes, mouth) or when contaminated particles are inhaled.
- **Blood borne pathogens** may be spread when the blood or other body fluids (e.g., semen, phlegm, mucus, etc.) of one person comes into contact with an **open wound** or sore of another.

CHAIN OF TRANSMISSION:

Chain of transmission is how pathogens are spread such as:

- Infectious agent (bacteria, viruses, fungi, and parasites)
- Reservoir/ source;
- Portal of exit;

- Means of transmission;
- Portal of entry; and,
- Susceptible host.

EXPOSURE:

Because of the nature of their occupation, peace officers and security personnel are at a high risk of being exposed to both airborne and blood borne pathogens.

NOTE: Exposure does not necessarily mean an individual will contract the illness.

PERSONAL PROTECTIVE EQUIPMENT:

By using personal protective equipment (PPE), peace officers using body substance isolation (BSI) can break the chain of transmission and prevent possible exposure and infection. For equipment to be effective, it must be used and cared for properly.

PPE	Examples	Additional Information
Protective Gloves	<ul style="list-style-type: none"> • Vinyl • Latex • Other synthetic materials 	<ul style="list-style-type: none"> • For <i>single use</i> only • Should be: <ul style="list-style-type: none"> -Put on before any contact with the victim; -changed between victims; and, -disposed of properly. <p>NOTE:</p> <ul style="list-style-type: none"> • Leather gloves may not be an effective barrier to prevent contamination; and, • Some individuals have a severe allergy to latex
Eye Protection	<ul style="list-style-type: none"> • Protective glasses • Goggles • Clip-on side protectors • Face shields 	<ul style="list-style-type: none"> • Used to prevent splashing, splattering, or spraying of a victim's body fluids into a person's eyes; • Should provide protection from both the front and the sides; and, • Must be cleaned and sanitized after exposure or disposed of properly.

PPE	Examples	Additional Information
Masks	<ul style="list-style-type: none"> • Surgical-type masks • Approved particulate masks • Face shields • Particulate air respirators 	<ul style="list-style-type: none"> • Used to prevent splashing, splattering, or spraying of a victim's bodily fluids into a person's nose or mouth; • Only certain masks and respirators will filter airborne pathogens; • Disposable surgical-type masks; • Reusable masks, shields, and respirators should be cleaned and sanitized after exposure or contamination; and, • N-95 masks.
Gowns	<ul style="list-style-type: none"> • Disposable gowns 	<ul style="list-style-type: none"> • Used to protect clothing and bare skin from spilled or splashed fluids; and, • Should be used only once and disposed of properly.
Ventilation Devices	<ul style="list-style-type: none"> • Portable pocket masks and one-way valve and filters 	<ul style="list-style-type: none"> • Contain valves to control direction of airflow and filters to reduce chances of contamination; and, • Used when applying cardiopulmonary resuscitation (CPR).

PPE	Examples
General Supplies and Equipment	<ul style="list-style-type: none"> • Soap; • Specialized cleaning solutions and disinfectants. (e.g., bleach, germicide, etc.); • Prepackaged antimicrobial skin wipe towelettes; • Leak proof disposable bags; • Biohazard disposable bags; and, • Puncture resistant disposable containers (e.g., sharps containers, evidence containers, etc.).

PPE DISPOSAL:

Gloves, along with other equipment intended for single use, must be disposed of in an approved manner according to manufacturer recommendations after use or contamination. Disposal may include but not be limited to use of:

- Biohazard bags;
- Sharps containers; and,
- Liquid proof containers.

NOTE: Employees are responsible for being aware of and complying with their agency's policies and Occupational Safety and Health Administration (OSHA) guidelines regarding the disposal of hazardous PPE and materials.

DECONTAMINATION CONSIDERATIONS:

When performing decontamination procedures officers should follow their agency's blood borne pathogens control plan.

- Use proper cleaning procedures to disinfect and decontaminate any equipment that may have been exposed (e.g., vehicle steering wheel and interior, uniform, firearm, radio, etc.); and,
- Use extra caution when handling broken glass or sharp objects.

NOTE: A solution of one part bleach and ten parts water can be used when disinfecting equipment. (OCOP has made this cleaning solution available throughout the Department.)

UNIVERSAL PRECAUTIONS:

Along with using PPE, there are a number of universal precautions that peace officers and other first responders in the EMS system should take.

- **Treat all body fluids as if they are contaminated!**
- If possible, wash hands thoroughly with warm water and soap before and after each exposure, even when gloves are worn
- Use hand sanitizer if hand washing is not available
- Use **bandages** or other cover protections when open cuts or sores exist

PERSONAL PREVENTIVE MEASURES:

Employees should also be aware of personal preventive measures they may take to remain healthy and support their own immune systems. Staying in good physical condition can help breach the chain of transmission of pathogens to which they may be exposed.

DOCUMENTATION TO EXPOSURE:

If an employee is exposed to an infectious pathogen (or even suspects exposure), no matter how slight, that officer should report the exposure verbally and in writing as soon as possible to his or her immediate supervisor.

NOTE: Employees should be aware of and comply with their agency policies or guidelines regarding reporting exposure information should be in compliance with Health Insurance Portability and Accountability Act (HIPAA) and OSHA regulations and specific actions to be taken.

CONCLUSION:

Employees, especially first responders, must recognize they have a responsibility to act in good faith and to provide emergency medical services (EMS) to the best of their abilities and within the scope of their training. It is important to remember to take precautions when dealing with pathogens. (CCR Title 8, Sec. 5193, also requires this training annually).

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