

INFECTIOUS DISEASES – BLOODBORNE AND AIRBORNE

INTRODUCTION

Occupational exposure to infectious diseases presents public agencies with a particularly challenging problem because pathogen sources are often unanticipated and exposures can be difficult to control. Both bloodborne and airborne diseases have the potential to cause severe illness and death, with significant impacts on individuals, organizations, and entire societies.

Examples of employees who may reasonably be expected to be exposed to bloodborne, airborne, or other potentially infectious material include:

- health care and mental health care providers; laboratory facility workers;
- law enforcement, fire, EMS, and corrections personnel; lifeguards;
- laundry, janitorial, and maintenance workers;
- any employees who may be called upon to administer first aid as part of their job descriptions.

BLOODBORNE INFECTIOUS DISEASES

MIOSHA Part 554 Bloodborne Infectious Diseases addresses control of bloodborne infectious diseases in the workplace. Under *Part 554*, all employers must identify and document whether there is any actual or reasonably-expected employee exposure to blood or other potentially infectious material as a job requirement. Employers with such employees must create and annually review and update a written Exposure Control Plan. Stringent compliance with MIOSHA's requirements is the best defense against occupational exposure to diseases such as HIV or Hepatitis B.

Exposure Control Plan

MIOSHA Part 554 establishes that an Exposure Control Plan must include the following:

- 1) *General Policy Statement*: A general statement that addresses who, what, and why employers must implement this program.
- 2) *Exposure Determination*: Employers who have employees with occupational exposure must conduct an exposure determination. To do this, the employer must evaluate job descriptions as well as routine and reasonably anticipated tasks and procedures to determine whether specific jobs have a risk of exposure.

- 3) *Classification of employees as Category A or Category B:*
- Category A: This category includes employees who:
 - perform procedures or job-related tasks that involve exposure or reasonably anticipated exposure to blood or other potentially infectious material;
 - have jobs that involve a likelihood for spills or splashes of blood or other potentially infectious material: or
 - perform procedures or tasks conducted in non-routine situations as a condition of employment.
 - Category B: The category includes employees who:
 - have positions that do not involve exposure to blood or other potentially infectious material on a routine or non-routine basis as a condition of employment;
 - do not perform or assist in emergency medical care; and
 - are not reasonably anticipated to be exposed in any other way.
- 4) *Universal Precautions:* A method of infection control based on the concept that all human blood and other potentially infectious materials are capable of transmitting HIV, HBV, and other bloodborne pathogens.
- 5) *Engineering Controls & Work Practice Controls:* Engineering and work practice controls shall be used to eliminate or minimize employee exposure to blood and other potentially infectious material. Where occupational exposure remains after the institution of these controls, personal protective equipment shall also be used. Engineering controls shall be examined and maintained or replaced regularly to ensure their effectiveness.
- Work practice controls must ensure that all personal protective equipment (PPE) is removed and stored or disposed of before leaving the work area; garments penetrated by blood or other potentially infectious materials shall be removed immediately or as soon as feasible; proper handwashing or antiseptic hand cleaning supplies are provided by the employer; employees wash their hands as quickly as possible after removal of PPE or exposure to blood and other potentially infectious material; used needles and other contaminated sharps are disposed of properly; eating and drinking, smoking, applying cosmetics or lip balm, or handling contact lenses are prohibited in laboratories or other areas with potential exposure; food and drink are not stored in refrigerators, freezers, shelves, cabinets, or on countertops or benchtops where blood or other potentially infectious material is present or in other areas of possible contamination; procedures with blood or other infectious material are performed in a manner that minimizes splashing, spraying, and aerosolization; mouth pipetting or suctioning are prohibited.
- 6) *Personal Protective Equipment:* Where there is an occupational exposure, the employer must provide appropriate personal protective equipment at no cost to the employee and assure that the employee uses it. It must be in proper sizes and accessible at the worksite or issued to employees.

Equipment is appropriate if it prevents blood or other potentially infectious materials from penetrating the employee's clothes or undergarments. The equipment must also prevent blood or other infectious material from reaching the employee's skin, eyes, mouth, or other mucous membranes. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to employees who are allergic to the gloves typically provided.

- 7) *Housekeeping*: Employers should ensure the workplace is clean and sanitary. The employer must (1) develop and implement an appropriate written schedule for cleaning and (2) develop appropriate decontamination methods for each location within the facility. Cleaning methods must be appropriate for the type of surface requiring cleaning, the type of soil present, and the tasks employees perform in the area.
- 8) *Infectious Waste Disposal*: Employers must ensure that all employees dispose of infectious or potentially infectious waste safely and by the standard. Employers must provide appropriate containers and implement procedures to protect the safety of employees and others during the disposal of such wastes.
- 9) *Laundry*: Employers must establish laundry practices that minimize the risk of exposure to blood or other potentially infectious materials. When an employer follows universal precautions in the handling of all soiled laundry, alternative labeling or color coding is sufficient if it permits all employees to recognize the containers that are required to comply with Universal Precautions. If the facility ships laundry to a second facility that does not employ Universal Precautions, the facility generating the contaminated laundry must place it in containers color-coded by the standard.
- 10) *Vaccinations and Post-Exposure Follow-up*: Employers must offer and provide the hepatitis B vaccine and vaccination series to all employees with occupational exposure. In addition, employers must give post-exposure evaluation and follow-up to all employees who experience an exposure incident. Employers must make the vaccine series available to all employees with exposure within ten working days of initial assignment. This rule does not apply if employees have previously received vaccinations or have taken an antibody test that reveals they are immune or have medical conditions that would prevent vaccination.
- 11) *Communication of Hazards to Employees*: Employers are responsible for ensuring that required locations and objects have warning labels. These include containers of regulated waste, freezers, refrigerators containing blood or other potentially infectious materials, and any other containers used to store, transport, or ship blood or other potentially infectious material.
- 12) *Recordkeeping*: Employers must establish and maintain accurate records for each employee in accordance with the standard. An employer shall ensure that medical records contain, at a minimum, all of the following: A copy of the employee's hepatitis B vaccination status; a copy of all results of examinations, medical testing, and follow-up procedures; the employer's copy of the physician's written opinion; a copy of the information provided to the physician. An employer shall maintain employee medical records for not less than the duration of employment plus 30 years. An employer shall ensure that employee medical records are kept confidential and are not disclosed or reported without the employee's express written consent to any person within or outside the workplace.

- 13) *Employee Information and Training*: Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours. Employers must facilitate and document this training following the standard.

AIRBORNE INFECTIOUS DISEASES

Tuberculosis

Mycobacterium tuberculosis (TB) continues to present a serious potential risk to employees in Michigan and the United States. Nationwide, at least several hundred employees have become infected with TB and have required medical treatment. Approximately 10% of normally healthy people who are infected will develop active TB disease during their lifetime.

Recently, drug-resistant strains of TB have become a severe concern and cases of multi-drug resistant (MDR-TB) have occurred in forty states. When organisms resist drugs, treatment courses increase from 6 months to 18-24 months, and the cure rate decreases from 100% to 60% or less.

To protect workers from TB, MIOSHA enforces the provisions set by Section 5(a)(1) of the federal Occupational Safety and Health (OSH) Act, which requires that employers must provide their employees a place of employment free from recognized hazards that cause or are likely to cause death or serious physical harm.

It is OSHA's policy that an employer's adherence to the most recent CDC [Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Settings \(2005\)](#) would meet the provisions of the general duty clause.

The CDC TB guidelines identify the following workplaces where employees have a greater risk and/or incidence of TB infection than the general population:

- health care facilities, including hospitals where patients with confirmed or suspected TB are treated or to which they are transported,
- correctional institutions,
- long-term care facilities for the elderly,
- homeless shelters,
- drug treatment centers.

The CDC TB guidelines apply to the following personnel as well:

- personnel in non-hospital healthcare settings (i.e. doctors' offices, local public health facilities, clinics, etc.) who would be present during high-hazard procedures on suspect or active TB patients,
- home healthcare providers if they provide care to suspect or active TB patients,

- dental health care personnel if they perform dental treatment on suspect or active TB patients,
- Emergency Medical Services personnel while performing high-hazard procedures on a known or suspect TB individual or transporting suspect or confirmed infectious TB individuals in a closed vehicle,
- law enforcement officers while working with known or suspected TB detainees in jail cells..

Employers to which the CDC TB guidelines apply must take the following actions to reduce the risk of tuberculosis transmission:

- 1) implement a Respiratory-Protection Program,
- 2) train employees on the nature, extent, and hazards of TB,
- 3) provide rapid diagnostic services,
- 4) provide appropriate curative and preventive therapy,
- 5) maintain physical measures to reduce microbial contamination of the air,
- 6) provide isolation rooms for persons with, or suspected of having, infectious tuberculosis,
- 7) screen health-care facility employees for tuberculosis infection and tuberculosis,
- 8) investigate and control outbreaks promptly.

Although eliminating the risk of tuberculosis transmission in the work environment may be impossible, adhering to these guidelines should minimize the risk to persons in these settings.

COVID-19 (Severe Acute Respiratory Syndrome Coronavirus 2, aka SARS-CoV-2)

On March 10, 2020, the Michigan Department of Health and Human Services identified Michigan's first two presumptive-positive cases of COVID-19. This prompted issuance of Executive Order 2020-4, which declared a state of emergency and required all Michigan residents and employers to suspend activities that are not necessary to sustain or protect life. MIOSHA was responsible for enforcing the Executive Order and subsequently issued the *COVID-19 Emergency Workplace Rules*.

On June 22, 2021, MIOSHA rescinded the *COVID-19 Emergency Workplace Rules* and adopted the federal [OSHA COVID-19 standards for healthcare](#). Currently, only employees who provide healthcare services in healthcare settings are subject to these federal standards.

As a reminder, Michigan employers are subject to MIOSHA's *General Duty Clause*, meaning they are still expected to make reasonable efforts to protect their employees from pandemic hazards measured against Centers for Disease Control and Prevention (CDC) guidelines.

INFORMATION RESOURCES

MIOSHA

Part 554. Bloodborne Infectious Diseases

[BSR-STD- \(michigan.gov\)](https://www.michigan.gov/BSR-STD-)

Centers for Disease Control (CDC)

Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings, 2005

<https://www.cdc.gov/mmwr/pdf/rr/rr5417.pdf>

OSHA Instruction CPL 02-02-078 (2015)

Enforcement Procedures and Scheduling for Occupational Exposure to Tuberculosis

https://www.osha.gov/sites/default/files/enforcement/directives/CPL_02-02-078.pdf

MIOSHA

Part 505. Coronavirus Disease 2019 (COVID-19) For Healthcare

https://www.michigan.gov/leo/-/media/Project/Websites/leo/Documents/MIOSHA/Standards/General-Industry/leo_miosha_GI_CS_Part505.pdf?rev=243ecb3241d14ccaa8d213269d83191e&hash=E9D4865FD3EAA67DD82AAAB1164735E5

U.S. Centers for Disease Control and Prevention (CDC)

COVID-19 Guidelines

<https://www.cdc.gov/coronavirus/2019-nCoV/index.html>

***Contact MML Risk Management Services Staff
or your Loss Control Consultant for more information.***



Important Phone Numbers

MML Risk Management Services	734.662.3246 or 800.653.2483
Loss Control Services	800.482.0626
Michigan Department of Public Health	517.335.8250

Note:

This document is not intended to be legal advice.

It only identifies some of the issues surrounding this topic.

***Public agencies are encouraged to review their procedures with an expert
or a competent attorney who is knowledgeable about the subject.***

SELF ASSESSMENT:

INFECTIOUS DISEASES – BLOODBORNE AND AIRBORNE

The Occupational Safety and Health Administration (OSHA) and the Michigan Occupational Safety and Health Administration (MIOSHA) require employers to comply with regulations safeguarding employees who can reasonably be expected to be exposed to bloodborne or airborne pathogens.

Organization Name

Completed by

Date

Does Your Organization:

(A response of “No” may require further analysis and/or an action plan for correction.)

Yes	No		Bloodborne Infectious Diseases
<input type="checkbox"/>	<input type="checkbox"/>	1.	Have a Bloodborne Infectious Disease Exposure Control Plan?
<input type="checkbox"/>	<input type="checkbox"/>	2.	Evaluate each position to determine its potential for bloodborne exposures and classify employees as Category A or Category B?
<input type="checkbox"/>	<input type="checkbox"/>	3.	Require Universal Precautions?
<input type="checkbox"/>	<input type="checkbox"/>	4.	Use engineering and work practice controls to eliminate or minimize employee exposure?
<input type="checkbox"/>	<input type="checkbox"/>	5.	Require use of personal protective equipment where occupational exposure remains after the institution of engineering and work practice controls?
<input type="checkbox"/>	<input type="checkbox"/>	6.	Provide employees with appropriate personal protective equipment at no cost and assure its use?
<input type="checkbox"/>	<input type="checkbox"/>	7.	Assure employees maintain good housekeeping practices?
<input type="checkbox"/>	<input type="checkbox"/>	8.	Provide appropriate infectious waste disposal containers and implement procedures to ensure that employees dispose of infectious or potentially infectious waste safely?
<input type="checkbox"/>	<input type="checkbox"/>	9.	Establish safe laundry practices?
<input type="checkbox"/>	<input type="checkbox"/>	10.	Offer and provide Hepatitis B vaccinations and post-exposure evaluation and follow-up?
<input type="checkbox"/>	<input type="checkbox"/>	11.	Communicate hazards to employees, including affixing signs and labels as required?
<input type="checkbox"/>	<input type="checkbox"/>	12.	Establish and maintain employee medical records in accordance with MIOSHA standards?
		13.	Provide for all employees with potential occupational exposure trainings that cover:
<input type="checkbox"/>	<input type="checkbox"/>		Your Bloodborne Infectious Disease Exposure Control Plan, including a copy of the plan?
<input type="checkbox"/>	<input type="checkbox"/>		Universal Precautions?
<input type="checkbox"/>	<input type="checkbox"/>		Use of Personal Protective Equipment?
<input type="checkbox"/>	<input type="checkbox"/>		Good housekeeping practices?
<input type="checkbox"/>	<input type="checkbox"/>		Safe laundry practices?
<input type="checkbox"/>	<input type="checkbox"/>		Proper infectious waste disposal practices?
<input type="checkbox"/>	<input type="checkbox"/>		Notification of hazards that exist in the work place?

Yes	No		Bloodborne Infectious Diseases
<input type="checkbox"/>	<input type="checkbox"/>	15.	Are employee trainings on infectious disease documented?
			Airborne Infectious Diseases / Tuberculosis
		16.	If you operate a health care facility or have employees who may be routinely exposed to tuberculosis, do you have a program for preventing its spread that, in addition to the above:
<input type="checkbox"/>	<input type="checkbox"/>		Follows the Center for Disease Control Guidelines available from MIOSHA?
<input type="checkbox"/>	<input type="checkbox"/>		Investigates outbreaks and provide rapid diagnostic and preventive therapy?
<input type="checkbox"/>	<input type="checkbox"/>		Reduces contaminated air?
<input type="checkbox"/>	<input type="checkbox"/>		Provides isolated rooms for persons suspected of infection?
<input type="checkbox"/>	<input type="checkbox"/>		Screens health care staff for infection?

CONCLUSIONS



If you can honestly answer “yes” to all applicable questions, your risk management program for Infectious Diseases is on solid footing – congratulations! Following the recommended practices reduces your organization’s exposure to future claims in this area. Remain vigilant for new or changing risks and address them promptly.



If you answered “no” to one or more questions, your organization faces increased exposure to claims and the associated direct and indirect costs. Each “no” response indicates a possible deficiency in your risk management program. You should consider these carefully and take one or more of the actions below:

- Correct any deficiency that may exist;
- Contact the Michigan Department of Labor – see numbers below;
- Contact MML Risk Management Services;
- Contact MML Loss Control Services.

***Contact MML Risk Management Services Staff
or your Loss Control Consultant for more information.***



Important Phone Numbers

MML Risk Management Services	734.662.3246 or 800.653.2483
Loss Control Services	800.482.0626
Michigan Department of Labor SET Division:	517.322.1809
Bureau of Occupational Health Division:	517.335.8250

Note:

This document is not intended to be legal advice.

It only identifies some of the issues surrounding this topic.

***Public agencies are encouraged to review their procedures with an expert
or a competent attorney who is knowledgeable about the subject.***