



## How to complete a risk assessment for infectious diseases

### Purpose

The purpose of this document is to explain the key principles of carrying out a risk assessment for infectious diseases in the workplace. Infectious diseases are caused by organisms such as bacteria, viruses, fungi, and parasites that cause negative health effects on our bodies. There are several different types of infectious diseases to which a worker can be exposed. However, having controls in place will assist in the prevention of a worker getting an infectious disease.

### Why complete a risk assessment?

When trying to determine the right type of controls needed in the workplace, one of the first steps that we need to take is to carry out a risk assessment. A risk assessment is a formal document that helps to identify all the tasks that may put a worker at risk. When completing a risk assessment, factors such as severity and likelihood are considered.

In this document, since our topic is infectious diseases, we will use the risk assessment proposed by the Public Services Health and Safety Association.

### Key Terminology

Before we get into the actual risk assessment, let's take note of some definitions.

- **Hazard:** any object, act, or task that has the potential for harm or an adverse effect. This includes health effects, equipment losses, property damage/losses, environmental damage, etc.
- **Risk:** the chance or probability that harm or an adverse effect will occur.
- **Mode of transmission:** the way a disease-causing agent is spread (e.g., contact, droplets, airborne, vector, or vehicle).
- **Severity:** the extent of consequence experienced from the hazard identified.
- **Likelihood:** the probability of being exposed to the hazard.

## Important Factors to Consider

1. Determine which tasks can lead to a worker being exposed to an infectious disease.
  - Examples include working in an open concept office, providing first aid, working outside, cleaning the workplace, etc. Consider looking into the history of company lost-time claims and related trends. Review job descriptions, job hazard analyses, Joint Health and Safety Committee (JHSC) minutes, etc.
  - Consider looking into surveillance reports and any public advisories by **Public Health Ontario**. For example, Public Health Ontario has a report highlighting the risk areas within the province for Lyme Disease. In addition, an interactive tool is available for **infectious disease trends** in the province. These can be referenced as you carry out your risk assessment to determine the likelihood of exposure.
2. Think about the different modes of transmission (i.e., how does the infectious disease spread?) Can the disease spread through animals, insects, humans, contaminated surfaces, etc.?

Modes of transmission include the following.

- Contact – can it be transmitted via physical contact?
  - Droplets – can it be transmitted by large respiratory droplets (e.g., sneezing, coughing, exhaling)?
  - Airborne – can it be transmitted by small respiratory droplets?
  - Vector – can it be transmitted through a living organism, such as an insect or other animal?
  - Vehicle – can it be transmitted through water, food, or air?
3. Think about the current controls you already have in place to avoid the hazard that has been identified.
  4. Think about contributing factors that may increase the likelihood or severity of the hazard. Examples of contributing factors include the number of people in a room, how long a worker is carrying out the identified task, the location of the task (e.g., indoors vs. outdoors, or ventilated vs. non-ventilated rooms), worker demographics, etc.
  5. Consider the likelihood and severity ratings to determine the overall risk level. How likely is it that a worker will be exposed to a specific infectious disease, as well as what the consequence may look like for that infectious disease.

Use the following guideline.

Likelihood of Exposure		Severity of Being Exposed	
Very Likely	Continuous close contact all day	Negligible	Some discomfort
Likely	Close contact several times an hour	Minor	Short-term illness
Possible	Close contact several times a day	Moderate	Reversible damage
Unlikely	Minimum contact several times a day	Severe	Irreversible damage
Highly Unlikely	Minimal contact once a day	Critical	Fatality

Once you have identified the likelihood of exposure and severity of being exposed, use the chart below to determine risk.

Risk Assessment Matrix					
	Severity Rating				
Likelihood Rating	Negligible	Minor	Moderate	Severe	Critical
Very likely	Medium	Medium	High	High	High
Likely	Medium	Medium	Medium	High	High
Possible	Low	Medium	Medium	Medium	High
Unlikely	Low	Low	Medium	Medium	Medium
Highly Unlikely	Low	Low	Low	Medium	Medium

**Risk Level Legend:**  
L=Low M=Medium H=High

- Consider practical controls that can work in your workplace. Use the Hierarchy of Controls when selecting controls for your workplace. [Click here](#) for further information on the hierarchy of controls.

Infectious Diseases  
Risk Assessment

Below is a sample risk assessment for infectious diseases\*.

Identify Risk			Analyze Risk			Assess Risk	Manage Risk
Task	Potential Risk of Exposure	Mode of Transmission	Existing Controls	Contributing Factors	Applicable Standards	Risk Level	Proposed Controls
<i>[Insert identified task for when staff can be exposed to an infectious disease]</i>	<i>[Insert description of the risk]</i>	<i>[Decide what the mode of transmission is – how is the disease spreading?]</i>	<i>[Insert the current controls you have in place]</i>	<i>[Insert the factors which can affect the risk level]</i>	<i>[Insert standards or regulations which are applicable]</i>	<i>[Calculate the risk level, using the Risk Matrix]</i>	<i>[Identify additional controls which you can implement to reduce your risk level]</i>
<b>Example</b> Working in an office cubicle near other workers during flu season	Staff member is coughing and sneezing in close proximity to other workers	Droplets	Hand and hygiene facilities  Daily janitorial services	Number of staff in office  No sick leave policy  Workers coming to work sick	OHSA (2)(h)	Severity = Moderate  Likelihood = Possible  Risk = <b>Medium</b>	Illness reporting policy  Screening  Handwashing  Staying at home when sick  Benefit plan for workers to support stay at home

\*This risk assessment tool has been developed by the Public Services Health and Safety Association

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Identify Risk			Analyze Risk			Assess Risk	Manage Risk
Task	Potential Risk of Exposure	Mode of Transmission	Existing Controls	Contributing Factors	Applicable Standards	Risk Level	Proposed Controls
Working outside in the summer; in Kingston, Ontario	Kingston is identified as a hot spot for Black-Legged Ticks.	Vector	Hand and hygiene facilities	Number of hours spent outside  Lack of awareness of hazard  Wearing sleeves/short sleeve shirts	OHSA (2)(h)	Severity = Moderate  Likelihood = Possible  Risk = <b>Medium</b>	Clothing policy – wearing long pants and long-sleeved shirts  Having tick repellent available onsite for all workers

Example

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Risk Assessment