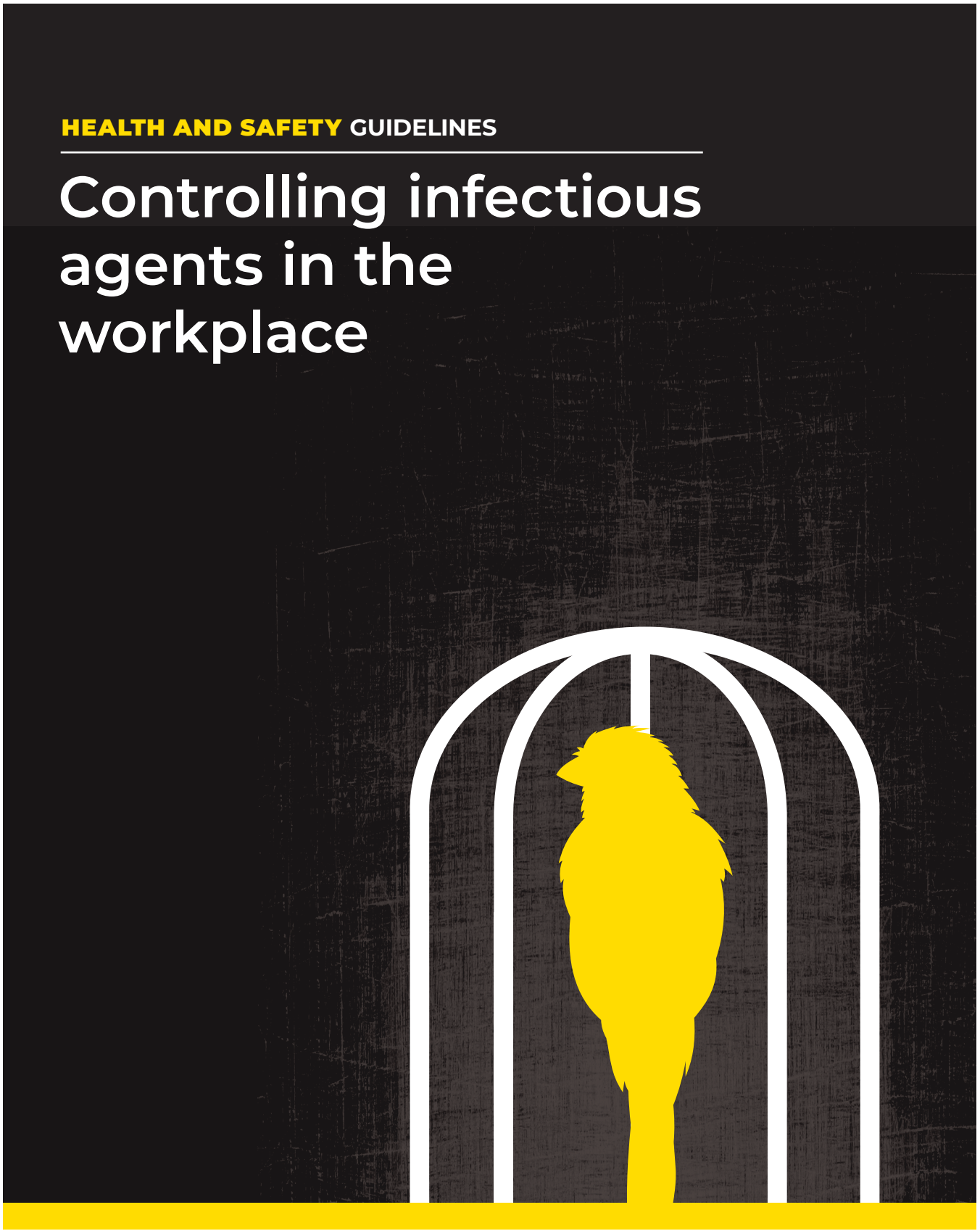
HEALTH AND SAFETY GUIDELINES

Controlling infectious agents in the workplace



CUPE

IMPORTANT NOTE: This guide is a resource to help workers identify and recognize unsafe work practices and unsafe working conditions that could lead to exposure to infectious agents. It provides guidance about how to take action to reduce exposure through infection control and other workplace safety measures. This guide does not provide clinical information about diseases or any medical diagnoses.

If your local has concerns about exposure to infectious agents or workplace safety, please report this immediately to your supervisor and occupational health and safety representative. Prompt reporting helps protect everyone.

Contents

List of Acronyms

HVAC	**Heating, Ventilation and Air Conditioning**
HSC	**Health and Safety committees**
HSR	**Health and Safety representatives**
IPAC	**Infection Prevention and Control Program**
PPE	**Personal Protective Equipment**
SARS	**Severe Acute Respiratory Syndrome**

Introduction

Infectious diseases are a health and safety concern in CUPE workplaces. Some of our members are exposed to infectious diseases by working closely with infected patients, while others encounter hazards in environments contaminated with pathogens, such as those found in outdoor settings. This document provides workers with information on how to identify and manage these hazards effectively.

The 2002-03 SARS outbreak revealed significant gaps in Canada's infectious disease preparedness and public health systems, leading to a public inquiry in Ontario chaired by Justice Archie Campbell.

Many lessons learned from SARS were not put into practice for COVID-19

Justice Campbell's investigation highlighted the lack of proactive measures to protect health care workers during the outbreak. He strongly advocated for the precautionary principle, emphasizing that "reasonable steps to reduce risk should not await scientific certainty." This means we should err on the side of caution and take preventive measures to safeguard workers, even if we don't yet have proof that something is definitely harmful.

The COVID-19 pandemic demonstrated that lessons from past infectious disease outbreaks haven't been learned. Adequate protective measures, aligned with the precautionary principle, were not sufficiently implemented, exposing workers to potential harm.

This document emphasizes the need to use the precautionary principle. It provides practical guidelines to help protect workers from infectious diseases. By following these guidelines, we can help ensure that CUPE members are as well-prepared and as safe as possible.

Establishing an infection prevention and control program and policies

No single approach can solve the problem of infectious agents in the workplace. However, recent events have demonstrated that it is possible to control them. There is no reason to expect that work will make you sick. Health and safety committees[1] and health and safety representatives[2] should review the suggestions in this document and decide which are appropriate for their particular situation.

Every jurisdiction has different requirements for infection prevention and control programs and related policies. Regardless of local laws, health and safety committees and health and safety representatives should develop recommendations to help employers establish workplace programs and policies. These initiatives are essential for preventing exposure to infectious agents and managing disease in the workplace. It is crucial to ensure clearly defined roles and responsibilities for management, employees, health and safety committees, and health and safety representatives.

This guide details three steps that should form the basis of any infection prevention and control program:

1. Identify infectious agents
2. Assess risks
3. Determine appropriate controls

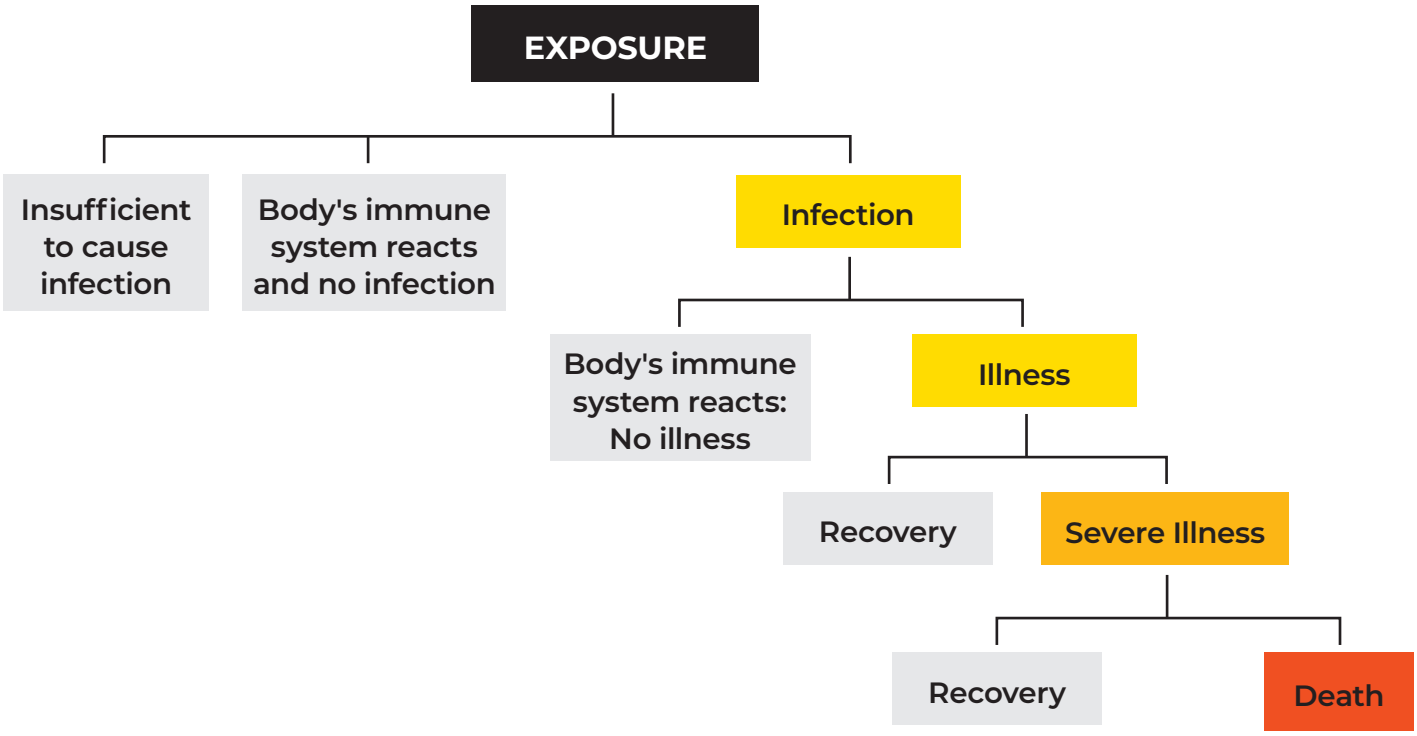
[1] For this guideline, health and safety committee will refer to the legislatively required committees or committees required by collective agreements. Other names for these committees include Joint Occupational Health and Safety committees (JOHS) or workplace committees (WPC)

[2] Health and safety representative refers to the person who has been chosen by the local to bring health and safety-related concerns to the employer in locations where there is no health and safety committee. Where only the committee is mentioned in this guide, it should be expected that the health and safety representative would be the person to carry out the work where no committee exists.

Important Concepts

Exposure vs. infection

Not every exposure to an infectious agent leads to infection. While every disease is different, there is a threshold of exposure that is required for an agent to establish itself and overcome the body's defenses. Factors that influence whether exposure leads to an infection include an individual's health and immune response as well as the characteristics of the infectious agent.



Finding accurate information

Effective infection control programs and policies require accurate information on infectious agents. CUPE recommends consulting reliable sources like the Canadian Centre of Occupational Health and Safety, Health Canada, the World Health Organization and the Centers for Disease Control and Prevention. There is also extensive information in Pathogen Safety Data Sheets managed by the federal government. You can also find information on common infectious agents at cupe.ca. Social media may provide inaccurate information and should not be considered a reliable source.

Prioritizing

When allocating resources for infectious disease prevention, workplaces should prioritize diseases that cause severe harm and can spread easily among workers due to their mode of infection or transmission. Health and safety committees should also assess and prioritize issues based on how they can be most effectively addressed.

Looking for more information?

CUPE has a wide range of health and safety resources available on the topics covered in this guideline. Visit cupe.ca or contact CUPE's health and safety branch for more details.

Step 1: Identify infectious agents

Hazard identification and assessment

Identifying workplace hazards involves assessing both the nature of the hazard as well as the likelihood and severity of harm (risk).

Employers, along with the health and safety committee or health and safety representatives, are responsible for conducting initial and ongoing assessments of workplace hazards and risks.

Infectious agents are one type of workplace hazard. Assessments should identify relevant infectious agents in your workplace and determine which workers are at risk and why.

Type of infectious agents

Infectious diseases can be categorized by the agents that cause them, such as viruses, bacteria, fungi and parasites:

Viruses are tiny organisms that reproduce inside living cells. They can reprogram cell functions to multiply, causing a wide range of symptoms. Few treatments are effective against viruses. Common viral infections include seasonal flu (influenza), COVID-19, chickenpox and measles to name just a few.

Bacteria are single-celled organisms that are larger than viruses. They can damage the body directly and by producing toxins. Antibiotics can treat bacterial infections but are ineffective against viruses. Common bacterial infections include strep throat, pneumonia, tuberculosis and meningitis.

Fungi are organisms that thrive in decaying material. They produce spores that can infect the lungs or skin, especially in individuals with weakened immune systems. Common infections include ringworm (which is not actually a worm) and athlete's foot (tinea pedis).

Parasites live off a host and can cause severe diseases through consumption of contaminated food or water, or environmental exposure like insect bites or soil contact. There are many small worms that infect humans (for example, round and pinworms), but also lice and ticks are considered parasites.

Identifying sources

Employers, along with the health and safety committee or health and safety representatives, should identify sources of potential exposure based on the work environment. This includes infectious agents that are present in the local region, agents that are common to specific job types and agents that are present in areas where workers may travel. Continuous monitoring for new outbreaks is necessary.

Identifying unknown illnesses

Sometimes a workplace may experience an outbreak of an unknown illness. In such circumstances, employers and health and safety committees and representatives can refer to CUPE's resources on incident and occupational disease investigations found on cupe.ca. Steps include assessing potential infection-related hazards, conducting health assessments through questionnaires and interviews and performing environmental testing like air and water sampling.

Step 2 – Assess risks

To establish effective controls, we need to understand how an infectious agent might impact the workplace. This requires consideration of the following characteristics of the infectious agent:

- **Transmissibility:** How easily the infectious agent spreads
- **Viability:** How long the agent remains infectious on surfaces
- **Infectivity:** How likely an infectious agent is to infect a host after exposure
- **Route of entry:** How the infectious agent enters the body, such as inhalation, ingestion or skin contact
- **Signs, symptoms and virulence:** Observable effects and severity of infection
- **Incubation period:** Time between exposure and symptom onset
- **Transmission window:** Time during which an infected person can transmit the disease to others

Transmissibility

To control infectious agents, we need to know how they spread. Infectious agents can be either communicable or non-communicable. Communicable infectious diseases, like the flu, spread from person to person. This makes them challenging to control in workplaces due to their potential to be reintroduced. Non-communicable infectious diseases, like Legionnaires' disease, are associated with environmental sources and don't spread from person to person. Effective control of non-communicable infectious diseases often involves removing the source of the infectious agent from the environment. For example, Legionella, the bacteria that causes Legionnaires' disease, is found in water. You can stop the spread of Legionnaires' disease by treating contaminated water and eliminating the bacteria.

Viability

Viability refers to an infectious agent's ability to stay infectious outside of a host. Some infectious agents can remain viable on surfaces, in the air or in water. How long they remain viable affects the likelihood of contact and infection. For example, the bacteria MRSA can remain viable on a dry surface for months. HIV (human immunodeficiency virus), on the other hand, dies within seconds after exposure to light and air. The viability of infectious agents determines controls such as the frequency of cleaning and disinfection.

Infectivity

Infectivity describes an infectious agent's likelihood to infect a host after exposure. The higher the infectivity, the lower the exposure required for the agent to cause infection. Highly infectious agents require stricter control measures.

Routes of entry

There are a few main ways that infectious agents can enter the body:

- Inhalation of small particles like droplets, aerosols or other fine particles that contain the infectious agent
- Vector transmission, such as an insect bite
- Ingestion (swallowing)
- Contact transmission through open wounds, membranes or skin breaks like needle punctures

We need to understand these routes of entry in order to develop appropriate control measures in the workplace, like wearing PPE or sterilizing surfaces.

For example, influenza viruses are very contagious not only because they spread through respiratory secretions like coughing and breathing, but also because the viruses can remain viable on surfaces for hours. Workers in the vicinity of an infected person can easily inhale infected droplets or touch a contaminated surface, increasing their risk of exposure. This means that control measures will include respiratory protection, gloves, personal hygiene practices and additional cleaning.

Conversely, viruses like Hepatitis B and HIV require direct contact with infected blood or bodily fluids. This means workers can only become infected if they have open cuts or abrasions that come into direct contact with infected bodily fluids, or if they prick themselves with a contaminated needle.

Sign, symptoms and virulence

A sign of infection, such as fever or vomiting, is a health issue that can be observed by others, whereas a symptom, like headache pain, is the subjective experience that can't be observed by a third party. Signs and symptoms can make an infected person's condition worse. For example, vomiting can lead to dehydration.

Virulence describes the potential severity or harmfulness of an infectious agent once a person is infected. Some infectious agents, like Ebola, generally cause more serious health outcomes compared to others, like the seasonal flu. However, the severity of many infections can also be greatly influenced by the infected person's health status. The more virulent an infectious agent can be, the more effort should be put into preventing exposure.

Incubation period and transmission window

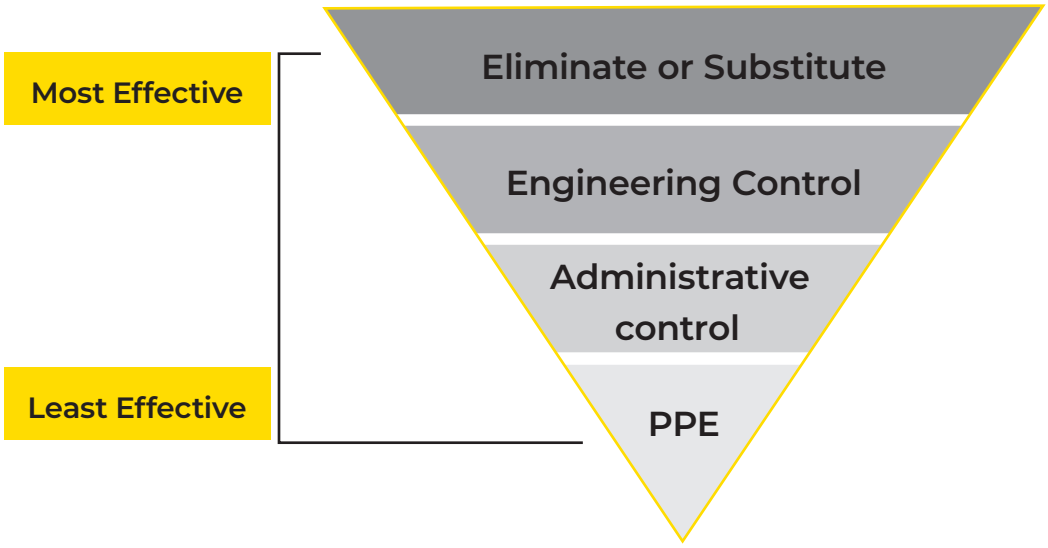
The incubation period is the time between exposure to an infectious agent and the onset of signs and symptoms. If the infectious agent can't be transmitted person to person before signs and symptoms appear (as with pink eye or smallpox), it is easier to isolate the infected individual and prevent further spread. However, if the infectious agent can be transmitted before signs and symptoms are present (as with COVID-19 or measles), the disease can spread undetected. This increases the likelihood of transmission and requires different protective measures and screening.

Step 3: Determine appropriate controls

Hierarchy of controls

Once hazards are identified, health and safety committees and representatives should review each hazard to ensure that adequate controls are in place.

It is important to consider the hierarchy of controls when selecting protective measures. In the context of workplace health and safety, "controls" are safety measures implemented to eliminate or minimize exposure to hazards. The hierarchy of controls rates these safety measures from most to least effective. Health and safety committees and representatives should start by implementing the most effective controls and layer additional controls as needed.



- **Elimination or Substitute of the Hazard**

  Removing a hazard through elimination is always the preferred approach, as it eliminates the risk to workers. While some infectious agents can be removed from the workplace (as is the case with Legionella), others can't. Substituting a hazard with something that is not hazardous or is a hazard that is easier to control is also an effective control. Examples of substitution can be when a researcher in a university uses a less dangerous agent for research.

- **Engineering controls**

  Engineering controls are changes to the physical environment that prevent employees from being exposed to hazards. For example, during the COVID-19 pandemic, plexiglass barriers and other materials like vinyl were commonly installed at points of contact with clients or other staff, and ventilation systems were upgraded to increase their effectiveness in removing or diluting infectious agents in the air.

- **Administrative controls**

  Administrative controls are workplace rules, standard operating procedures or policies that determine how work is performed. Examples of administrative controls to mitigate the spread of an infectious agent can include scheduling changes, working from home and health screenings, among other measures.

- **Personal protective equipment (PPE)**

  PPE is worn by individuals to prevent or reduce exposure when a worker is likely to be in close contact with an infectious agent. Despite the heavy media focus on PPE shortages during the pandemic, PPE should not be seen as a first choice, but rather as a last resort. While PPE is important, it is the least effective control when dealing with infectious agents. CUPE members, locals and health and safety activists should advocate for the strongest protections.

Considerations when choosing controls

- Eliminate risks effectively with controls that don't introduce new hazards.
- Use multiple layers from the hierarchy of controls to protect workers, not just one.
- Avoid relying solely on administrative controls and PPE as they are the least effective controls.
- Ensure that controls enable workers to perform tasks comfortably and without restrictions.
- Prioritize effectiveness over ease or cost when selecting controls.
- Focus less on the exact categorization of controls in the hierarchy and more on the level of protection they provide.

Specific occupational concerns

Job responsibilities with higher risk of exposure to infectious agents

Several job responsibilities have a greater risk of exposure to infectious disease, including:

- Working with patients who can transmit an illness or handling blood, body fluids, contaminated linens or waste
- Garbage removal and disposal
- Working in environments with exposure to raw sewage
- Animal handling
- Cleaning swimming pools
- Excavation work
- Public facilities maintenance
- Work that requires regular and close contact with the public or high-risk groups
- Working with infectious agents in research environments

Specific risk factors for health care and related fields

- Improper isolation of patients, equipment and areas
- Improper sterilization procedures
- Increased contact with high-risk groups in the workplace
- Lack of patient information due to insufficient or non-existent screening, poorly prepared case histories or missing information on charts or room doors (for example, no label saying "blood precautions" or "respiratory isolation")
- Improper labelling and handling of infectious materials, like soiled linens , leading to improper handling and disposal
- Inadequate immunization practices
- Poor training and follow-up
- Inadequate disposal practices for sharps (scalpels, needles, etc.) and waste
- Increased workloads and reduced staffing numbers which do not allow time for proper cleaning

Additional workplace risk factors

Workplaces may have specific practices that increase the risk of exposure to infectious agents. Workers should evaluate if any of the following apply to their work situation:

- Poor hygiene practices
- Poorly maintained humidifiers or cooling towers in HVAC systems
- Poorly maintained ventilation systems and cleaning procedures, as well as insufficient fresh air
- Reusing disposable equipment or materials due to budget constraints
- High-stress jobs that may weaken immune resistance
- Poor communication among staff
- Lack of proper protective clothing, facilities and equipment
- Lack of proper facilities or equipment
- Use of low-quality cleaning products and equipment as a cost-saving measure
- Inadequate staffing leading to unsafe workloads

Right to know and access to information

Workers have a right to know about the hazards they may encounter in the workplace. Employers must provide information on these hazards to workers. This is especially important with infectious agents, as workers may unknowingly encounter these hazards.

Information should include:

- **Hazard details:** Information on where workers can be exposed, transmission methods, symptoms, short- and long-term health effects and groups at high risk
- **Control details:** Information on the controls in place to prevent exposures in the workplace
- **Legal requirements and health guidelines:** Information about required legislative standards and guidelines from organizations like the World Health Organization, Health Canada or the Centres for Disease Control
- **Best practices:** Information about industry-specific best practices

Workers should be provided information through education and training programs funded by the employer.

The health and safety committee or representative should be actively involved in development of education and training programs. The health and safety committee or representative should:

- Have regular opportunities to present their concerns to management about educational requirements.
- Participate in selecting and prioritizing topics for education programs, campaigns, handouts and other materials.
- Work directly in developing educational materials or at least have the ability to review and veto materials that don't accurately reflect their concerns or cover issues thoroughly.

Education and training programs should have the following components:

- **Proper scheduling and environment:** Hold education sessions during working hours in a facility designed to facilitate learning.
- **Training materials:** Provide each participant with materials that include information on hazards, safety procedures, exercises and policies on infection control, notification, reporting and immunization.
- **Initial and ongoing training:** Train workers upon hiring and require annual refresher courses.
- **Notification of new hazards:** Notify workers of new or emerging hazards through updates to the training manuals or special programs for more specific issues, like new biohazard disposal methods.
- **Records:** Maintain records of training sessions and participant attendance.
- **Access to additional information:** Establish a health and safety library or resource centre to provide supplementary information beyond standard training programs.

Other ways to keep workers informed about important safety information may include:

- **Visual aids:** Display posters on employee bulletin boards or distribute brochures about specific hazards and controls.
- **Campaigns:** Organize campaigns around specific hazards or groups of hazards that emphasize preventive measures, not just changes in work practices.

Establishing an infection prevention and control program (IPAC)

The following steps should be followed in establishing an IPAC. Every step should involve the active participation of the health and safety committee or representative:

- Develop, implement and maintain a workplace IPAC.
- Allocate necessary resources (time and funding) to perform and document risk identification and assessments.
- Establish and periodically review control measures for effectiveness.
- Provide all necessary equipment, including PPE.
- Develop initial and ongoing training as well as awareness materials about potential infectious agents in the workplace.
- Provide resources on vaccination and paid time for employees to be vaccinated.
- Establish safe working procedures for dealing with known or potential work-related infectious agents.
- Monitor the workplace to ensure that safe work procedures are followed.
- Investigate and report exposures to infectious agents.
- Set up response procedures with appropriate levels of disinfection and cleaning when an infectious agent may have been introduced into the workplace.
- Develop a reporting mechanism that is straightforward and maintains confidentiality as much as possible.
- Periodically review the infection prevention program.
- Report exposures as required to the jurisdictional authorities.
- Determine potential exposure risks for infectious agents across all job classifications.

Record keeping

Disease incidents or outbreaks

Employers must keep accurate records of outbreaks of and exposures to infectious diseases. If no existing database is available, the union can advocate to create one to analyze all communicable disease-related incidents and identify trends.

If employers don't establish their own record-keeping systems, union representatives on the health and safety committee should consider setting up their own recording system. This provides additional documentation and is a way to monitor the effectiveness of the workplace infectious disease program.

Notification to authorities

Certain diseases must be reported to provincial, territorial or federal public health authorities. Reporting requirements vary by jurisdiction but may include HIV, meningococcal disease, rabies, tetanus, hepatitis (A, B and C), Lyme disease, listeriosis, and streptococcal infections, among many others.

Unions and health and safety committees or representatives should contact their provincial or territorial public health department or ministry to get a list of notifiable diseases. This information can also be found online using a search engine. You can use this information to see if your workplace is following local disclosure requirements.

In workplaces without infection control committees, it is important to treat infectious disease cases as reportable incidents, like accidents or near misses. All work-related infectious diseases are reportable and should be compensable under workers' compensation programs.

Right to refuse

Every worker has the right to refuse to work, tasks or equipment that they believe could cause injury or illness to themselves or others, unless that refusal puts the health and safety of another person directly in danger. This right ensures that workers don't have to choose between their job and their health and safety.

Exercising the right to refuse typically involves a series of steps to resolve the unsafe situation. Although these steps may vary slightly by jurisdiction, the typical procedure for refusing unsafe work involves the following:

- **Initial report:** Workers must inform their supervisor of their refusal to work, stating why they believe the work is unsafe.
- **Investigation:** If the situation is not immediately corrected, the worker, supervisor and a member of the health and safety committee or worker representative should investigate.
- **Resolution:** The worker can resume work if the unsafe condition is resolved with mutual agreement.
- **Escalation:** If the condition is not resolved, a government health and safety inspector must be called to investigate and provide a written decision.
- **Protection for others:** No other worker should be assigned to do the work unless they have been informed of the work refusal and the reasons for the refusal.

No worker can be disciplined for asserting their right to refuse unsafe work. Any disciplinary actions should be reported immediately to the local executive and CUPE national representative. For more detailed information on the right to refuse and specific requirements in your jurisdiction, contact your regional CUPE health and safety representative or visit cupe.ca.

Attendance management programs

Effective infectious disease control in the workplace must consider the impact of attendance management programs. These programs may impede the control of infectious agents by discouraging necessary sick leave.

Attendance management programs, also known as "attendance improvement programs," "attendance review programs" or "work improvement programs," and even "attendance support programs," typically use time clocks, timesheets and time tracking software to monitor how frequently employees attend work. Employers justify these programs by claiming that workers are abusing sick time. However, in many CUPE workplaces, these programs quickly become punitive, penalizing workers for unavoidable absenteeism due to legitimate illnesses—such as the flu or other contagious infections—that should be excused. This practice is especially concerning in the context of infectious disease control, as it discourages workers from taking sick time to recover fully, potentially leading to the spread of diseases.

The common approach of these programs is to implement "progressive discipline" for short-term sick leave, which refers to absences ranging from a day to a few weeks. This involves escalating penalties or corrective actions if an employee's absences continue.

Typically, the escalating actions are:

1. Establishing a standard for absenteeism
2. Initiating an attendance review process
3. Discipline
4. Dismissal

These programs can involve the use of various forms of intimidation and bullying to discourage workers from using sick leave to which they are legally entitled, threatening both their job security and health. Further, these programs typically fail to address the real causes of absenteeism, like high stress or poor conditions, focusing on penalizing workers rather than resolving the underlying workplace issues.

CUPE opposes attendance management programs because they undermine workers' rights. CUPE locals should work to ensure that attendance management systems don't undercut their bargained or legal rights to take necessary time off after becoming infected with an illness.

Collective agreement language

If workers have difficulty obtaining information on infectious disease hazards or getting the employer to set up education programs and adequate infection control policies, negotiating specific contract language may be necessary.

One strategy is to include clauses covering all health and safety information on all workplace hazards:

Example:

The employer shall provide to the union written information which identifies all the biological agents, chemicals, substances, by-products and physical hazards associated with the work environment. Where applicable, this information shall include information on known and suspected hazards, precautions to be taken, symptoms, medical treatment and antidotes.

Unions may also bargain more specific language to:

- Create an infection control committee
- Establish procedures for labelling, handling and disposing of contaminated samples, needles, linens and waste
- Create communicable disease screening procedures for patients
- Develop isolation procedures to warn workers of potential hazards

For assistance with bargaining relevant health and safety language into collective agreements, contact your CUPE national representative.

Appendix 1: General controls for infectious agents

When managing infectious diseases in the workplace, the effectiveness of various controls depends on factors such as the contagiousness, transmission method and entry route of the infectious agents. This appendix outlines general controls for managing these hazards.

During an active outbreak, the following measures can help mitigate the spread of infectious agents:

Remote work and virtual alternatives

When possible:

- Implement remote work policies.
- Cancel non-critical in-person programs.
- Use virtual platforms for conducting meetings and programs.

Screening

- Implement screening for everyone entering the building at a designated entrance.
- Conduct pre-screening before appointments.
- Use engineered barriers or provide appropriate PPE for screeners.
- Train designated employees to perform screening tasks.
- Develop a response plan for symptomatic individuals.
- Set up a designated area for individuals who are ill or suspected to be ill to be screened or sent home.
- Provide advance notices of screening expectations and use signage to support the process.
- Ensure confidentiality of collected information and specify how long it will be kept.
- Encourage staff to self-assess before coming to work and advise ill workers to stay home.

Ventilation

- Increase the ventilation rate to reduce the spread of airborne germs by bringing in more fresh air and improving filtration.
- Modify HVAC systems to increase outside air and reduce recirculation. Consider factors such as temperature, humidity, airflow, and air direction.
- Ensure modifications are performed by an HVAC technician or engineer to avoid improperly balanced systems, which can reduce air changes and spread contaminated air.

Reduce shared items

- Minimize the use of shared items (paper or other equipment) by using electronic documents, assigned equipment or single-use disposable items.

Personal hygiene

- Encourage workers to wash their hands regularly for at least 20 seconds, and provide the supplies to do so.
- When soap and water are unavailable, provide sanitizing liquid (at least 60% ethanol or 70% isopropanol).
- Ensure staff, clients, customers, students and other patrons wash or sanitize their hands upon entering the facility. Provide handwashing or sanitizing stations at building entrances.
- Display posters with graphics encouraging hand hygiene and the respiratory etiquette at entrances to the workplace and other visible areas.

Cleaning and disinfecting

- Establish a disinfection program to determine which surfaces to clean, how often, with what disinfectants and by whom.
- Enhance disinfecting of high-touch surfaces in workplaces, vehicles and equipment.
- Implement a tracking system for cleaning and disinfection activities.
- Close off areas during cleaning.
- Use damp cleaning methods to avoid distributing infectious agents into the air.
- Train workers to use hazardous products safely.
- Ensure workers are aware of the proper procedures for using the products (for example, contact time and dilutions).

Waste management

- Establish an appropriate waste management system for potentially contaminated waste like PPE and ensure workers know the process.
- Wash hands appropriately with soap and water after handling potentially contaminated items, even when wearing gloves.
- Double bag potentially contaminated items like PPE or disposable cleaning items before disposal.
- Wash reusable cleaning items with regular laundry soap and hot water (60–90°C).

Immunization programs

- Work with the health and safety committee to develop an immunization program focusing on diseases that pose a risk to your workplace.
- Assess each worker's immunization status upon employment and maintain complete immunization records. Please note that immunization records are personal medical information. Employers must ensure that only those designated to facilitate the program can access these records.
- Remind workers when boosters are due.
- Provide information on available vaccines, including general cautions, contraindications, adverse reactions and recommended use.
- Offer appropriate immunizations at the employer's expense. For example, school board and child care workers should be offered rubella and measles vaccines if they are not already immune.

Respirators, face masks and face coverings

Many workers are at risk of respiratory hazards from infectious agents. Respiratory protection equipment either supplies clean air or filters out infectious agents.

- **Respirators**

  Respirator must fit properly to be effective. Tight-fitting respirators require an individual fit test to ensure they seal correctly to the worker's face. This test, performed annually, ensures the respirator fits well, considering any changes in facial structure due to weight or other factors. It must be performed using the same size and model of respirator the worker will be using on the job.

- **Face masks and face coverings**

  Face masks and face coverings, such as dust masks, surgical masks and cloth masks, are non-fitted devices that create a barrier over the mouth and nose. While they can block splashes and large particles, they do not provide the same level of protection as respirators. These masks are primarily useful for source control, reducing the release of particles exhaled from an infected person.

Putting on and taking off personal protective equipment (PPE)

- **Putting on PPE**

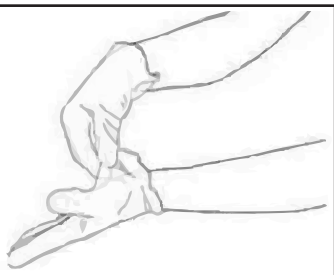
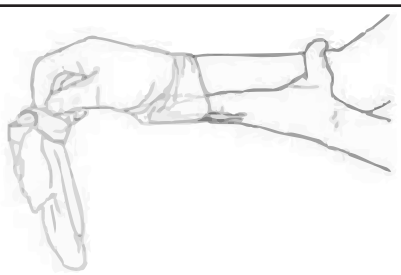
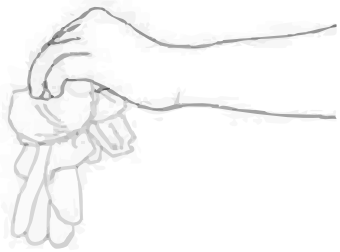
  All PPE must be put on before entering an area that may be contaminated with infectious agents. It is crucial to put on the equipment properly to ensure protection. Workers should be trained and tested to ensure they can use the equipment properly before they begin work.

- **Taking off PPE**

  Soiled or potentially soiled gloves should be removed first. Proper glove removal techniques are essential to prevent transferring infectious agents. Workers should be trained in these techniques, as outlined by the World Health Organization Guidelines on Hand Hygiene in Health Care.

  After gloves are removed, take off the rest of the PPE as directed by the manufacturer or workplace procedures.

Loose glove removal

		
Pinch the glove at the wrist without touching your forearm, then peel it off from the hand, turning it inside out as you go.	Hold the first glove with the gloved hand, then slide the fingers of your ungloved hand between the glove and wrist. Roll the second glove down off your hand and fold it inside the first glove.	Discard the gloves and clean your hands either by rubbing with an alcohol-based hand sanitizer or by washing with soap and water.

Original Source: WHO Guidelines on Hand Hygiene in Health Care[3], p. 21

[3] http://apps.who.int/iris/bitstream/handle/10665/70126/WHO_IER_PSP_2009.07_eng.pdf

Sterile glove removal

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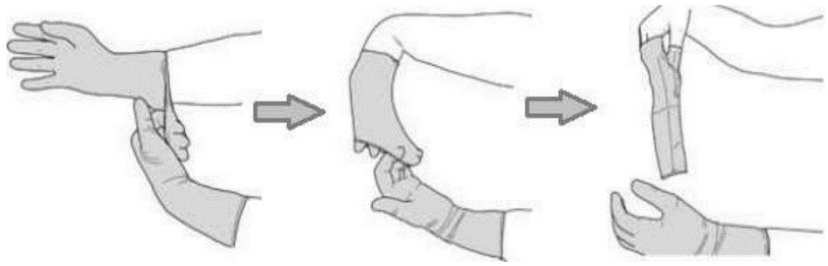
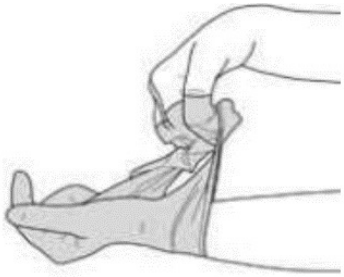
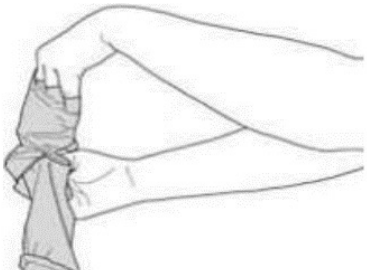
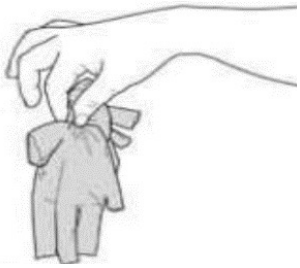
<tr><td colspan="3">  </td></tr>
<tr><td colspan="3">Remove the first glove by peeling it off with the fingers of your opposite hand. Roll the glove inside out up to your second finger joints, but don’t take it off completely.</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Remove the other glove by turning its outer edge with the fingers of the partially ungloved hand.</td><td>Remove the glove by turning it inside out so that only the inner surface of the glove touches your skin.</td><td>Discard the gloves and clean your hands either by washing with soap and water or by using an alcohol-based hand sanitizer.</td></tr>
</table>

Original Source: WHO Guidelines on Hand Hygiene in Health Care, p. 23

Appendix 2: Contagious illness controls

Contagious illnesses are diseases that can be easily spread from one person to another.

Transmission method	Elimination	Engineering	Administrative	PPE
Respiratory (aerosols, fine particles)	Keep workers out of the workplace	Use physical barriers	Reduce in-person meetings	Use respirators
	Implement sick leave policies	Control dust and particles	Conduct health screenings	
		Improve ventilation and filtration	Restrict travel	
		Arrange furniture to keep distance	Implement mandatory masking	
		Reduce worker numbers in an area	Practice hand hygiene	
			Practice cough/sneeze etiquette	
			Use separate equipment (no sharing)	
			Maintain physical distancing	
			Use one-way pathways to minimize close contact	
			Test for infection	
			Keep the same groups of workers together to limit spread	
			Separate infected or exposed individuals to prevent the spread	

Transmission method	Elimination	Engineering	Administrative	PPE
Contact with open wound, membrane or skin break	Replace used sharps and needles	Use puncture-resistant sharps containers	Clean and disinfect surfaces	Wear gloves (puncture-proof where appropriate)
	Find alternatives to injections		Practice hand hygiene	Wear goggles
			Use separate equipment (no sharing)	Use face shields
			Follow needlestick injury protocol	Wear protective clothing
Vector transmission (insect bites)	Drain standing water	Use insect removal devices	Conduct regular insect control surveys	Use insect repellent
	Flush or disinfect water systems			Take preventative medication
				Wear protective clothing
				Use mosquito nets
Ingestion (swallowing)		Use water filters	Clean and disinfect frequently used surfaces	Wear gloves
		Use temperature-controlled food storage	Reassign infected food workers to tasks that don't involve food preparation	Use face shields or masks
			Practice hand hygiene	Wear protective clothing
			Ensure safe food storage and preparations	

Appendix 3: Non-contagious illness controls

Non-contagious infectious illnesses are diseases that can't be spread easily from person to person. These illnesses are transmitted through contact with environmental sources or vectors that carry disease-causing pathogens.

Transmission method	Elimination	Engineering	Administrative	PPE
Respiratory (aerosols, fine particles)	Flush or disinfect water systems	Maintain proper ventilation	Test water systems regularly	Wear respirators
		Increase fresh air intake and filtration	Conduct air quality testing	
Contact with open wound, membrane or skin break	Replace used sharps and needles	Use puncture-resistant sharps containers	Clean and disinfect surfaces	Wear puncture-proof gloves
	Find alternatives to injections		Practice hand hygiene	Wear goggles
	Flush or disinfect water systems		Follow needlestick injury protocol	Wear protective clothing
Vector transmission (insect bites)	Flush or disinfect water systems	Use insect removal devices	Conduct regular insect control surveys	Use insect repellent
	Drain standing water			Take preventative medication
				Wear protective clothing
				Use mosquito nets
Ingestion (swallowing)		Use water filters	Clean and disinfect frequently used surfaces	Wear gloves
		Use temperature-controlled food storage	Reassign infected food workers to tasks that don't involve food preparation	Wear face shields or masks
			Practice hand hygiene	Wear protective clothing
			Ensure safe food storage and preparations	

FOR MORE INFORMATION, CONTACT:

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