

Ontario Health Care Health and Safety Committee Under Section 21
of the Occupational Health and Safety Act

Guidance Note for Workplace Parties # 5

Application of Hazard Control Principles, including the Precautionary Principle, to Infectious Agents

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October 2026

Preamble:

This Guidance Note has been prepared to assist the workplace parties in understanding their obligations under the *Occupational Health and Safety Act* (OHSA) and the regulations. It is not intended to replace the OHSA or the regulations and reference should always be made to the official version of the legislation.

It is the responsibility of the workplace parties to ensure compliance with the legislation. This Guidance Note does not constitute legal advice. If you require assistance with respect to the interpretation of the legislation and its potential application in specific circumstances, please contact your legal counsel.

While this Guidance Note will also be available to Ministry of Labour, Immigration, Training and Skills Development (MLITSD) inspectors, they will apply and enforce the OHSA and its regulations based on the facts as they may find them in the workplace. This Guidance Note does not affect their enforcement discretion in any way.

Process:

This document has been reviewed by the management and labour representatives of the Ontario Health Care Health and Safety Committee under Section 21 of the OHSA to ensure that appropriate, consistent information is made available to healthcare workplaces, and to support them in their review of legislative requirements and assessing and implementing best practices.

Health Care Guidance Notes are intended for all healthcare organizations, to provide guidance to workplace parties related to legislative requirements and best practices applicable to the prevention of illness and injury to health care workers. Health Care Guidance Notes may be of assistance to all organizations that provide healthcare, treatment, diagnostic services, personal care and/or supportive services in all healthcare organizations, home and community service agencies and emergency medical services.

The intent of Guidance Notes is to assist the workplace parties in sharing best practices. Guidance Notes are also intended to assist other parties who have decision-making roles that ultimately impact occupational health and safety (OHS) in the health care sector.



Health Care Section 21 Committee[1]

Guidance Note for Workplace Parties #5

Application of Hazard Control Principles, including the Precautionary Principle, to Infectious Agents

Purpose of this Guidance Note

To help workplace parties understand how to select appropriate controls to protect workers from infectious diseases and biological hazards that may occur at a workplace by using a risk based and precautionary approach.

Introduction

Employers have a general duty under the Occupational Health and Safety Act (OHSA) to take every precaution reasonable in the circumstances to protect workers from hazards in their workplaces. This document was developed to offer guidance to workplace parties related to protecting workers from hazards associated with infectious agents. The approach to controlling hazards related to infectious agents should follow an appropriate risk assessment, and the selection of controls should be guided by a hierarchy of controls. The selection of appropriate controls may, depending on the circumstances, also take into consideration Justice Archie Campbell's recommendations concerning the precautionary principle as expressed in his final report on Severe Acute Respiratory Syndrome (SARS), entitled "Spring of Fear".

In his report, Justice Campbell states: "We cannot wait for scientific certainty before we take reasonable steps to reduce risk".

The precautionary principle in this guidance note is an approach for protecting workers in circumstances of scientific uncertainty, reflecting the need to take prudent action in the face of potentially serious hazards without having to await complete scientific proof that a course of action is necessary.

[1] The Ontario Health Care Health and Safety Committee under Section 21 of the *Occupational Health and Safety Act* (the "Health Care Section 21 Committee") was announced by the Minister of Labour (as they were then) on September 18, 2006. The July 11, 2006, Terms of Reference set out the mandate of the Health Care Section 21 Committee. The Objective of the Health Care Section 21 Committee is to advise and make recommendations to the Minister of Labour, Immigration, Training and Skills Development on matters relating to occupational health and safety of all health care workers in Ontario. The Scope of the Health Care Section 21 Committee is to review occupational health and safety issues related to health care workers that have provincial impact.

Requirements under the Occupational Health and Safety Act and Regulations

The terms “precautionary principle” and “risk assessment” are not defined in the OHSA or its regulations. Rather, employers are required under clause 25(2)(h) of the OHSA to “take every precaution reasonable in the circumstances for the protection of a worker”. This is one of the guiding principles regarding occupational health and safety in Ontario.

In complying with this general duty requirement in the OHSA, it is best practice to consider the precautionary principle when making decisions about appropriate protective measures and procedures. When referenced in this document, the implementation of the “precautionary principle” is considered best practice and is not a requirement under the OHSA.

The precautionary principle is recognized in other legislation. Under the *Health Protection and Promotion Act*, the Chief Medical Officer of Health must consider the “precautionary principle” when issuing a directive relating to an infectious or communicable disease outbreak and worker health and safety (protective clothing, equipment, device). However, workplace parties should be aware that the OHSA and its regulations may require additional or higher measures for control. Workplace parties should be aware that where there is conflict, the provisions of the OHSA and its regulations prevail over other Acts and regulations.

Employers and other workplace parties are reminded that it is their obligation to comply with all of the requirements of the OHSA and its regulations (such as Ontario Regulation 67/93: Health Care and Residential Facilities) at all times. Guidance on specific issues related to legislation should be sought from appropriate legal counsel or people with expertise in occupational health and safety.

Hazards and Risk Assessment

Employers must identify the hazards present in their workplaces and assess the risk posed to workers from these hazards. Accordingly, employers should complete an objective assessment of the hazard and the risk posed to workers when developing policies, programs, measures, procedures and training related to infection prevention and control.

When making decisions about appropriate workplace infection prevention and control measures and procedures, it is good practice to assess the nature and level of risk to which workers may be exposed.

A risk assessment can be described as a process of identifying hazards and assessing the severity of harm associated with the hazards and the likelihood that harm will occur (Jeynes, 2002).

The Canadian Centre for Occupational Health and Safety further describes risk assessment as a process that will assist workplace parties with:

- identifying the hazards (looking for hazards which have the potential to cause harm and identifying workers who may be exposed to the hazard)
- analyzing or evaluating the risk associated with a specific hazard, including workers who may be at greater risk such as pregnant women or workers with pre-existing medical conditions
- determining appropriate ways to eliminate or control the hazard

Hazard – something with the potential to cause harm or injury
Risk – the likelihood that it will actually cause harm or injury
Risk assessment – the process of identifying hazards and assessing the severity of harm and likelihood it will occur

Workers in health care settings often encounter infectious agents during the course of their work. Many potential exposures are apparent, such as:

- Health care workers providing direct care dealing with patients/residents/clients with known infections.
- Laboratory workers who are working with specimens.
- Handling potentially infectious equipment and materials

Others are less apparent, such as:

- Situations where a body substance is encountered where there is no identification of disease.
- Instances where a patient/resident/client has symptoms of illness but a diagnosis is not known.
- The presence of a potential reservoir of infection (e.g. animal feces, stagnant water), but no specifics of infection are known.

Perhaps most concerning are those situations where there is potential for infection but there is no clear information regarding the potential for harm.

There are many styles and forms of risk assessment. Workplace parties are encouraged to adopt a risk assessment approach that suits their particular organization and engage appropriate expertise with respect to the scope and complexity of the hazards and risks that exist at the workplace. Examples of risk assessment strategies are readily available from a variety of different experts and reputable organizations.

Precautionary Principle

When conducting a risk assessment and determining the control of hazards, the precautionary principle should apply where there is scientific uncertainty regarding either the severity of the hazard itself and the harm it may cause, or the likelihood that the hazard will affect workers. In these instances, the precautionary principle should guide workplace parties in the selection of the most appropriate controls related to the hazard.

This is highlighted by the following definition of precautionary principle as found in the 2008 edition of the Encyclopedia of Public Health:

> *The precautionary principle implies that when an activity raises a reasonable suspicion of causing harm to … human health, though there is no scientific evidence, precautionary measures should be taken just as if proofs of its damage actually existed. (Kirch, 2008)*

The precautionary principle should apply in situations where there is no definitive scientific evidence regarding the risk posed by a hazard. In these cases, it should be applied prudently and in the context of a hierarchy of controls.

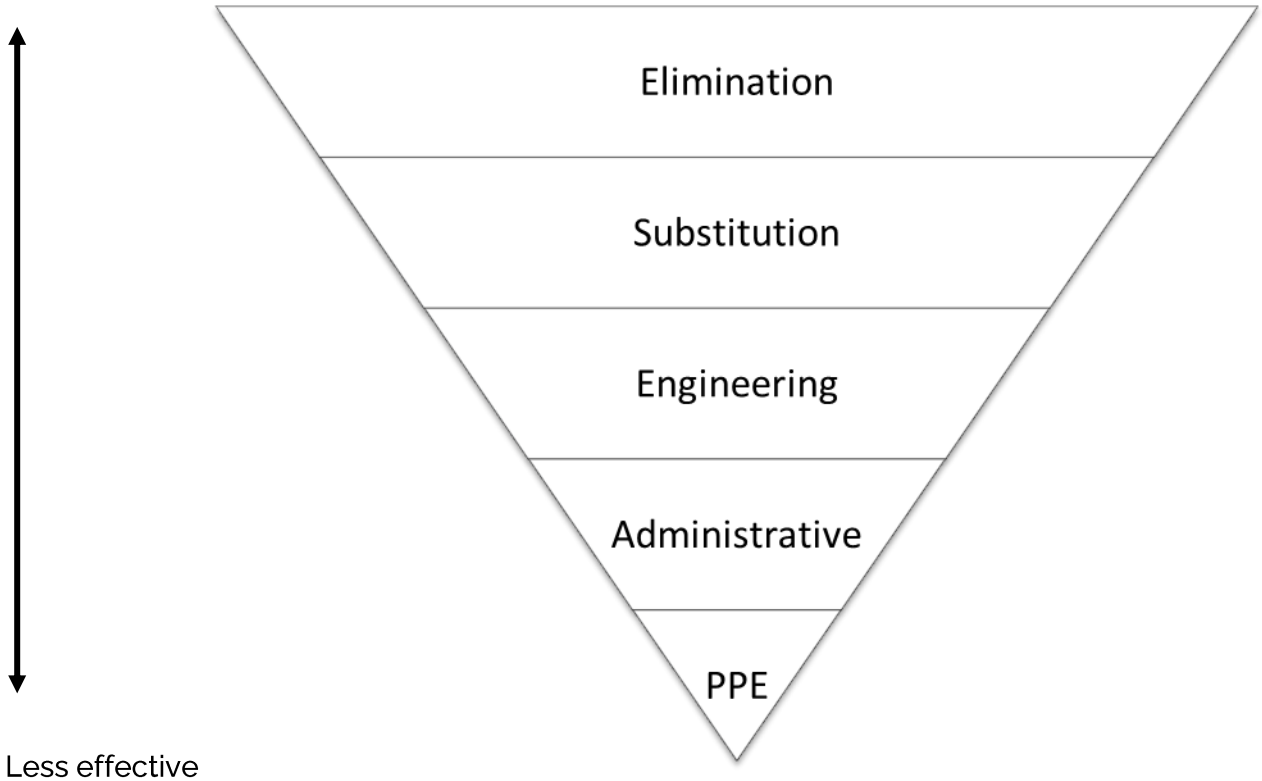
Hazard Control Measures using the Hierarchy of Controls

Risk assessments help to provide workplace parties with information about the actual or potential hazards in a workplace so that appropriate controls can be identified. The selection is based on a hierarchy of controls.

The hierarchy of controls is a “model” for hazard control, which has a long standing tradition in workplace safety. The hierarchy of controls describes control measures for any hazard as being directed either at the source of the hazard, along the path to the workers, or at the workers themselves.

The model holds that the most effective strategy to control any hazard is at the source of the hazard itself. When elimination of the hazard is not practical, then controls should be placed as close as possible to the source of the hazard, along the “path” to the worker. Where a control at the source or along the path between the hazard and the worker is not reasonably possible, controlling a hazard at the worker themselves may be the only alternative. The model is a hierarchy of controls because there is a preferential selection of controls where control at the hazard source is most effective while implementing controls further from the hazard source toward the worker is considered less effective.

Most effective



Less effective

The use of the hierarchy of controls for any hazard is considered a best practice when dealing with the hazards of infectious agents. The hierarchy of controls can be described as hazard control measures in descending order of effectiveness; these hazard control measures would include such measures as: (1) elimination of a hazard; (2) engineering controls; (3) administrative controls (including training) and work practices; and, (4) personal protective equipment. The following provides some examples of the hierarchy of controls:

Elimination of potential exposures to workers:

Eliminating the potential source of exposure to hazards ranks highest in the hierarchy of controls. Examples of controls in this category include:

- Taking steps to minimize visits to a workplace by people with known infections, thereby reducing/eliminating potential exposure of the workers to infectious agents. For example, postponing non-essential visits to health care facilities by patients with suspected or confirmed influenza until they are no longer infectious.

Engineering controls:

Engineering controls rank second in the hierarchy of controls. They are particularly effective because they reduce or eliminate exposures at the source and many can be implemented without placing primary responsibility of implementation on individual workers.

Examples of engineering controls include:

- Installing partitions in triage areas and other public spaces to shield workers and other patients from ill patients/residents/clients, thereby reducing their potential exposure to infectious agents.
- Using closed suctioning systems for airway suction in intubated patients.
- Ensuring appropriate ventilation is in place, such as negative pressure ventilation, for airborne isolation rooms.
- Inspecting mechanical ventilation systems at least every 6 months as required by the Health Care and Residential Facilities regulation.[1] It is a best practice for HVAC systems to meet applicable standards.[2]
- Using biological safety cabinets for certain laboratory procedures.

Administrative controls and Work Practices:

Administrative controls and work practices are policies and practices aimed at preventing or minimizing hazard exposures. As a group, they rank third in the hierarchy of controls because their effectiveness is dependent on consistent implementation by management and workers.

[1] *O. Reg. 67/93 Health Care and Residential Facilities*, s. 19 (2)

[2] CSA Z317.2:19 - *Special requirements for heating, ventilation, and air-conditioning (HVAC) systems in health care facilities*- ANSI/ASHRAE/ASHE Standard 170-2017; ANSI/ASHRAE Standard 62.1

Examples of administrative controls and work practices include:

- Promoting and providing vaccination to workers.
- Promoting and using good worker (and visitor) hand hygiene practices.
- Taking steps to exclude or re-assign ill healthcare workers and other personnel while they are infectious.
- Implementing respiratory hygiene/cough etiquette strategies for workers and visitors.
- Screening for signs and symptoms of illnesses.
- Setting up triage stations and separate areas for patients who visit emergency departments with respiratory illness; managing patient flow.
- Providing appropriate training and communication to workers regarding the hazards of infectious agents and appropriate control measures to be taken.
- Co-horting patients/residents/clients with similar illnesses.
- Assigning dedicated staff to minimize the number of healthcare workers exposed to patients/residents/clients during an outbreak.

Personal protective equipment (PPE):

PPE ranks lowest in the hierarchy of controls. It is a last line of defence for workers against hazards related to infectious agents that cannot otherwise be eliminated or controlled. Examples of PPE include:

- appropriate masks
- eye protection
- gloves, gowns or other apparel
- respiratory protective devices such as N95 respirators

PPE must be used consistently by all workers who are required to use it. PPE is effective only if used throughout potential exposure periods. PPE will not be effective if adherence to its proper use is incomplete or when exposures to infectious patients or ill co-workers are unrecognized. PPE must be used and maintained properly to be effective.

PPE must be used in conjunction with other recognized controls. Where workers must use PPE, there may be requirements in applicable regulations. For instance, the Health Care and Residential Facilities Regulation requires that workers must be instructed in the use, care and limitations of the PPE, such as when and how to use PPE, how to dispose of PPE (if applicable), how to clean and disinfect the equipment and how to maintain it[3]. The Health Care and Residential Facilities Regulation also states the PPE must be inspected for damage or deterioration and stored in a convenient, clean and sanitary location when not in use[4].

Careful attention to elimination of workers' potential exposures to infectious agents, engineering controls, administrative controls and work practices will reduce workers' need to rely on PPE.

[3] O. Reg. 67/93 Health Care and Residential Facilities, s.10 (1)
[4] O. Reg. 67/93 Health Care and Residential Facilities,10 2 (c) (d)

Routine Practices for Infection Prevention and Control

The hierarchy of controls should always be used when controls are required to protect workers from the hazards of infection.

The hierarchy of controls complements current guidance regarding a standard approach to encounters with infection hazards known as “routine practices” (also known as “standard precautions” in the USA) and “additional transmission based precautions”. In the prevention of infections, routine practices are applied to all tasks regardless of whether a diagnosis is known; additional precautions are taken based on a patient’s/client’s/resident’s symptoms or on consideration of the potential agent involved; and, as a more clear diagnosis is learned, more specific precautions can be taken.

The principle of applying a set of routine infection control practices or precautions to a situation, even though the agent of infection is not known, has been well entrenched in literature and in practice guidance for many years.

Routine practices are always applied in situations where specific tasks are known to present a certain level of risk to a worker. Additional precautions (such as droplet precautions, contact precautions or airborne precautions) are taken when an infectious agent’s mode of transmission is known, or suspected.

The guidance regarding routine practices and additional precautions are well known, are well researched, are available in published documents, and are recommended as a basis for controls related to infection prevention.

An individual assessment should be done before each interaction with a patient/client/resident or with their environment to determine if additional precautions may be required.

Higher Degrees of Uncertainty

While routine practices and additional transmission-based precautions have been tied to scientific data and supportive documentation, there may be circumstances where published guidance does not address a particular issue. On rare occasions, healthcare and community care workplaces will be challenged with conditions beyond the norm. For example, with disease agents that are novel or with infectious agents where an expected clinical course is different or not understood. When there is scientific uncertainty related to an infection hazard in its infectivity, pathogenicity or mode of transmission to workers, the application of the precautionary principle should assist workplace parties, including management, to find an approach for protecting workers from the hazard.

Workers in all health care settings may work with, or be exposed to, a variety of infectious agents, or work in environments where there may be infectious agents, that are beyond the “norm” of what can be reasonably expected. While it is impossible to anticipate all potential iterations of these, some examples might include:

- The emergence of novel disease agents that have not been previously encountered.

Well known examples include the viruses responsible for-SARS, COVID-19, Ebola and H1N1 in Ontario. Other pandemic viruses are also a concern.
- The re-emergence of disease agents from the past, perhaps with new characteristics e.g. antibiotic resistance.
- Zoonotic or animal diseases, like COVID-19 and MERS, which have made the leap to cause diseases in a human host.
- Disease causing agents in research laboratories that have had their normal characteristics changed through genetic manipulation or genetic re-organization.
- Disease causing agents that have been manipulated to make them more harmful in order to carry out criminal or terrorist acts.

If scientific certainty is not available, interim management actions may be necessary to address any significant risks. In these situations, the precautionary principle should be applied when selecting appropriate worker protection.

Public health authorities provide guidance on new or emerging disease threats and can issue orders and directives under relevant legislation where necessary. Employers are responsible for complying with the OHSA and the MLITSD is responsible for inspections and enforcement under the OHSA. Directives or guidelines issued by a public health authority may set out case definitions, testing protocols, and the minimum precautions required based on the type of risk. These should be considered when determining what precautions are reasonable in the circumstances. However, workplace parties should be aware that the OHSA and its regulations may require additional or higher measures for control. Workplace parties should be aware that where there is conflict, the provisions of the OHSA and its regulations prevail over other Acts and regulations.

Hazard Control

Hazard control measures should be targeted as precisely as possible at the specific issue or concern using existing and reasonably obtainable scientific knowledge.

In situations where there is scientific uncertainty regarding a hazard, workplace parties should err on the side of safety and apply the highest control measures reasonable in the circumstances for the protection of workers. As more information is gathered about the hazard and scientific uncertainty is no longer a concern, these measures can be scaled back if necessary. This approach is more protective in the face of uncertainty rather than implementing “the least intervention” and increasing levels of protection as more evidence is gathered about routes of transmission, virulence and/or pathogenicity.

Measures taken to protect workers must be proportionate to the risk. That is, the higher the degree of uncertainty, the greater the control measures taken in response to the risk. In circumstances when science is not clear, the precautionary principle should be applied to provide the highest control measures reasonable in the circumstances for the protection of workers.

Guidance for Workplace Parties

Operational Guidelines

Workplace parties should consider the following as operational guidelines for worker protection with respect to infectious agents:

- Hazard controls related to infectious agents should be selected based on the hierarchy of controls.
- Known, well understood principles such as "routine practices" for infection prevention and control are necessary in order to protect workers, even when an infectious agent is not known.
- Scientific certainty is not required before reasonable hazard controls, including protective measures for workers, are implemented.
- In situations where the scientific knowledge or evidence about an infectious agent is uncertain, any decision in the selection of controls should favour worker protection. That is, a higher level of protection or hazard control should be selected.
- A higher level of hazard control and worker protection should remain in place until new scientific knowledge and/or evidence about the infectious agent indicates that workers would continue to be protected at a reduced or lower level of protection.

Written Measures and Procedures

For workplaces that fall under the Regulation for Health Care and Residential Facilities (O. Reg. 67/93), employers are required under sections 8 and 9 of the Regulation to develop and implement written measures and procedures for the protection of workers, in consultation with the joint health and safety committee or health and safety representative (if any).

The measures and procedures shall be reviewed and revised, in consultation with the joint health and safety committee or health and safety representative (if any), at least annually. The review and revision of measures and procedures can occur more frequently in light of current knowledge or practice or if there is a change in circumstances that may affect the health and safety of a worker.

For all other workplaces not subject to the Regulation for *Health Care and Residential Facilities,* it is considered good practice, based on a risk assessment, for employers to develop and implement protective measures and procedures in consultation with the joint health and safety committee or health and safety representative (if any). Other legislation may include requirements for employers to implement protective measures and procedures; e.g., *Fixing Long-Term Care Act, 2021* and regulations*, Retirement Homes Act, 2010*, etc.

The control measures applied should be relevant and in keeping with the operational guidelines listed above.

Worker Education and Training

The OHSA requires all employers to provide information, instruction and supervision to a worker

to protect the health or safety of the worker. For workplaces that fall under the Regulation for Health Care and Residential Facilities, employers are required to develop, establish and provide the necessary training and education in consultation with the joint health and safety committee or health and safety representative (if any). For all other workplaces not subject to the Regulation for Health Care and Residential Facilities, it is considered good practice to consult with the joint health and safety committee or health and safety representative (if any) in developing, establishing, and providing training and education. For further details please see the OHS Education and Training Guidance Note.

References

Campbell, Hon. Mr. Justice Archie, 2006, *The Independent Commission to Investigate the Introduction and Spread of SARS: Spring of Fear (final report)*. Viewed 3 January 2011, The SARS Commission - Final Report

Canadian Centre for Occupational Health and Safety, *Risk Assessment.* Viewed 3 January 2011, http://www.ccohs.ca/oshanswers/hsprograms/risk_assessment.html.

Jeynes, Dr. Jacqueline, 2002. *Risk Management: 10 Principles*. Butterworth Heinemann, Oxford. Kirch, Wilhelm (Ed.), 2008, *Encyclopedia of Public Health*, Springer Science+Business Media, New York.

Provincial Infectious Diseases Advisory Committee (PIDAC), 2010, *Routine Practices And Additional Precautions In All Health Care Settings.* Ontario Ministry of Health and Long-Term Care/Public Health Division, Toronto. Routine Practices and Additional Precautions in All Health Care Settings

Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, *2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings.* Centers for Disease Control. Viewed 3 January 2011, http://www.cdc.gov/ncidod/dhqp/pdf/isolation2007.pdf

Statutes

Readers are encouraged to review the OHSA and its applicable regulations, focusing particular attention on the duties of workplace parties, when developing training, measures and procedures using the best available information.

Current versions of the OHSA and its regulations are available for free download from the Government of Ontario e-Laws site:
http://www.e-laws.gov.on.ca/navigation?file=home&lang=en



Appendix A

Legislation, Codes, Standards and Guidelines

Workplace parties when following this guidance note should consider existing legislation, codes, standards and good practices such as the following:

Ministry of Labour, Immigration, Training and Skills Development Publications
Readers are encouraged to review the OHSA and its applicable regulations, focusing particular attention on the duties of workplace parties, when developing training, measures and procedures using the best available information.
Current versions of the OHSA and its regulations are available for free download from the Government of Ontario e-Laws site:
http://www.e-laws.gov.on.ca/navigation?file=home&lang=en

Guidance Notes
Pandemic 21 GN2 (updated April 2022)
OHS Education and Training GN3 (updated January 2020)
Effective Communications OHS Processes Section 21 GN1 (updated November 2019)

Group Resources
Web sites of the various healthcare unions, employers, associations and Health and Safety Associations also have additional information, including documents that outline a step-by-step process to help joint health and safety committees and health and safety representatives ensure workplace compliance, and sample written recommendations that can be tailored to the needs of individual workplaces.

PHO – Public Health Ontario
OHCOW – Occupational Health Clinics for Ontario Workers
PSHSA – IPAC assessments
CCOHS – Canadian Center for Occupational Health and Safety
Government of Canada – What is good ventilation, MERV, “atmosphere of concern”,



The Committee membership includes:

Members for Organized Labour:

- Unifor *http://www.unifor.org/en*
- Canadian Union of Public Employees (CUPE) *http://www.cupe.on.ca*
- Ontario Federation of Labour (OFL) *http://www.ofl.ca*
- Ontario Nurses' Association (ONA) *https://ona.org*
- Ontario Public Service Employees Union (OPSEU) *http://www.opseu.org*
- SEIU Healthcare *http://www.seiuhealthcare.ca/*

Members for Employers:

- AdvantAge Ontario *https://www.advantageontario.ca/*
- Ontario Health at Home (OHAT): *http://healthcareathome.ca/home*
- Ontario Community Support Association (OCSA) *http://www.ocsa.on.ca*
- Home Care Ontario (OHCA) *http://www.homecareontario.ca*
- Ontario Hospital Association (OHA) *https://www.oha.com*
- Ontario Long Term Care Association (OLTCA) *http://www.oltca.com*

Observers:

- Ministry of Health (MOH)
- Ministry of Long-Term Care (MLTC)
- Ministry of Children, Community and Social Services (MCCSS)
- Public Services Health and Safety Association (PSHSA)

Facilitator:

- Ministry of Labour, Immigration, Training, and Skills Development (MLITSD)