

Guidelines for the Use of Physical Barriers During COVID-19 Pandemic

Scope

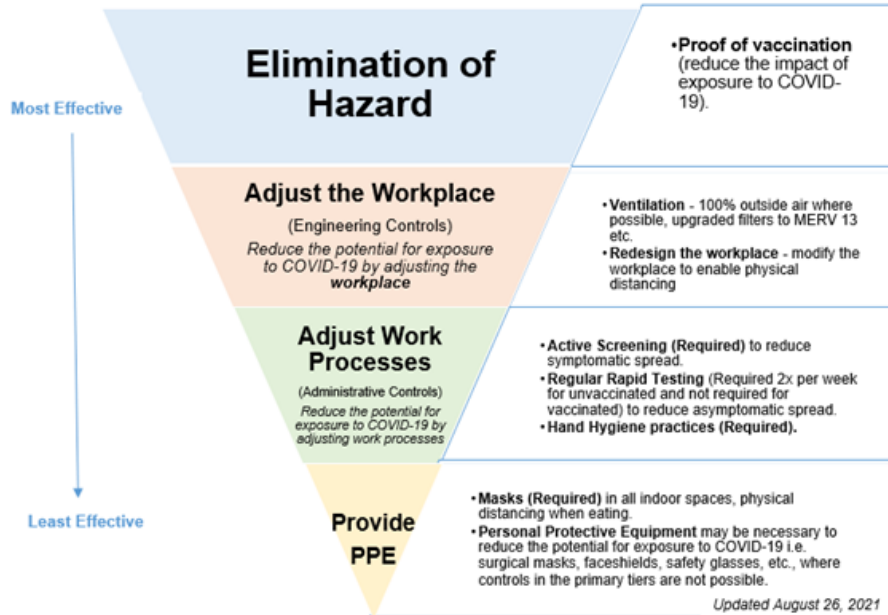
The guidelines outlined in this document will assist in the development of Standard Operating Procedures (SOPs) related to **Barrier Use** and will help to ensure the appropriate COVID-19 health and safety considerations for the protection of all members of the McMaster community.

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Hierarchy of Hazard Control

Hazard mitigation should always focus on implementing control measures to eliminate or reduce risk. For this purpose, the hierarchy of controls must be considered. This hierarchy can be applied to any hazard in the workplace including COVID-19. A brief overview of this concept is highlighted below.



Considerations

- Engineering Controls:** Includes designs or modifications to classrooms, workstations, systems or processes that reduce the source of exposure.
- Administrative Controls:** Controls that alter the way the work is done, including timing of work, policies and procedures, and work practices such as standards operating procedures (including training, housekeeping, and equipment maintenance, and personal hygiene practices).
- Personal Protective Equipment:** Equipment worn by individuals to reduce exposure to the hazard (gloves, masks, etc.).

It is important to remember that Elimination (working remotely), Engineering and Administrative Controls must always be considered and not to solely rely on personal protective equipment (PPE) to eliminate/reduce the risk. Face coverings or masks are required in all indoor spaces at all McMaster locations.

Physical barriers should not be placed in such a way as to interfere with proper building ventilation.

When to Use Physical Barriers

When employees will frequently be in close contact with others – closer than 2 m or 6 ft – and this contact is not brief in nature.

Barriers are only to be considered for workstations that cannot be appropriately spaced. Barriers do not replace the need for face coverings. If after other considerations (spacing workstations, rotational schedules, etc.) barriers are necessary, submit a work order with Facility Services (or location-specific building services) for materials and installation.

Why a Barrier?

- visual and physical separation between people which prevents contact
- provides an additional control measure to further minimize risk

Materials for Use

Barriers can be made from any material that prevents the flow of air through it, preventing the transmission of droplets; however, consideration of flame retardant and non-combustible materials should be a high priority.

In many cases, transparent materials are preferred so as not to obstruct the view of those on either side of the barrier or where an unobstructed view is necessary such as when driving in a vehicle with a passenger. However, an opaque barrier may be preferred in some setting such as library carrels or student offices.

Materials such as plexiglass (acrylic) or polycarbonate plastics are frequently used. They are light and flexible, making them easy to work with and install. An advantage of polycarbonate plastics, is they will not shatter when bumped, dropped or hit.

Dimensions

Barriers need to extend 30cm in every direction away from the individual's breathing zone. If different people are working behind the same barrier, it must be sufficiently high or low to protect each person. If people will stand and sit behind it, the barrier must extend vertically to accommodate this.

The barrier must be wide enough to prevent people speaking around it or avoiding it and take into consideration the persons movements behind and extend to protect the person over this area.

Barriers should be as wide as the surface, desktop or that the countertop will allow.

Openings

Some barriers may require openings to allow for the passage of materials through the barrier. These openings should be as small as possible and for papers could be a small slot in the base of the barrier as far away from the breathing zone as possible.

Larger openings or openings required where one is seated on the opposite side should be off set so as not to be directly in line with a person's face or breathing zone.

Do not install speaking ports or grates in the barrier.

Mounting Considerations

Safety should be the first consideration when deciding on how best to mount or install your barriers. Surface-mounted barriers with small openings and wings/surrounds are ideal.

Barriers should never prevent escape in an emergency or impede movement. Free standing barriers should be positioned so that they do not prevent egress.

Hanging barriers that swing can waft air from one side to another and may be harder to clean.

Barriers mounted in vehicles cannot impair the driver's ability to see or move freely. They should not prevent the driver or passengers from exiting the vehicle in an emergency.

Cleaning and Sanitizing

The frequency of cleaning will depend on the amount of contact or time people spend at these barriers – those in front of cashiers for example may become contaminated more quickly with high numbers of patrons standing and talking in front of the barrier.

At a minimum, barriers should be sanitized twice a day using appropriate sanitization products. Note that all products may not be appropriate as they may react with the material causing it to go cloudy and or cause damage. Health Canada has created [a list of disinfectants for use against COVID-19](#). However, [many common disinfectants](#) are known to damage acrylic or polycarbonate surfaces, causing them to crack or become cloudy. When in doubt soap and water is safe and readily available. If using reusable cloths, ensure they are laundered after usage.

Summary

- Choose dimensions that protect the breathing zone of the tallest person using the barrier. The breathing zone can be thought of as bubble with a radius of 30 cm extending out from the mouth and nose.
- Pass-throughs or openings should be as small as possible and not located in the breathing zone of either user; do not include speaking ports or grates.
- Install the barrier securely, such that it cannot tip or fall; do not block or impede emergency egress.
- Surface-mounted barriers with small openings and wings/surrounds are preferred over hanging barriers that can swing or waft air.
- Clean the barrier at least daily with mild soap and water or a compatible disinfectant; discard or launder the cloths used for cleaning.

References

- [Physical Barriers for COVID-19 Infection Prevention and Control in Commercial Settings](#)
- [COVID-19 Health and Safety: Designing Effective Barriers](#)
- [Using Physical Barriers in Workplaces: Toronto Public Health](#)
- [Public Health of Ontario](#)
- [Government of Ontario](#)
- McMaster University COVID-19 [Guidelines](#) and [Posters](#)