

Effective administrative control measures to prevent the transmission of infection require the support of leadership in the healthcare organization, in consultation with management and HCWs through the Joint Health and Safety Committees or health care representative to provide the necessary organizational procedures, resources, education and training to effectively apply the controls and the commitment of HCWs and other users to comply with their application.

Examples of administrative controls include electronic alert systems with infectious disease flags for hospitals for early detection of respiratory illness. Active screening, passive screening (signage) and restricted visitor policies are other examples of administrative control measures used in health care settings. In addition, administrative controls include policies regarding restricting entrances, cohorting of staff and patients and designated centres for screening or treating patients.

Personal Protective Equipment

Although the use of PPE controls are the most visible in the hierarchy of controls, PPE controls is the last tier in the hierarchy and should not be relied on as a stand-alone primary prevention program. The PPE tier refers to the availability, support and appropriate use of physical barriers between the HCWs and an infectious agent/infected source to minimize exposure and prevent transmission. Examples of PPE barriers include gloves, gowns, facial protection (including surgical masks and N95 respirators) and/or eye protection (including safety glasses, face shields or masks with visor attachments). The healthcare organization plays a critical role in ensuring HCWs have access to appropriate PPE for the task to be performed and the necessary education and training to ensure competency on the appropriate selection, use and disposal of PPE to prevent exposure to infection.

Patient Accommodation

Patients with suspected or confirmed COVID-19 should be cared for in a single room. The use of an AIIR is the recommended standard of care when performing an AGMP (see below). If an AIIR is not available, a single room with the door closed should be used for the procedure. The collection of a nasopharyngeal swab or a throat swab is NOT considered an AGMP.

Aerosol Generating Medical Procedures

Procedures Generating Droplets/Aerosols

- Endotracheal intubation, including during cardio-pulmonary resuscitation¹
- Cardio-pulmonary resuscitation
- Open airway suctioning
- Bronchoscopy (Diagnostic or Therapeutic)
- Surgery and autopsy
- Sputum induction (Diagnostic or Therapeutic)
- Non-invasive positive pressure ventilation for acute respiratory failure (CPAP, BiPAP3-5)
- High flow oxygen therapy

Source: Adapted from Routine Practices and Additional Precautions in Ontario In All Health Care Settings, 3rd edition, Provincial Infectious Diseases Advisory Committee (PIDAC). Available at: <https://www.publichealthontario.ca/en/health-topics/infection-prevention-control/routine-practices-additional-precautions>

Summary of PPE Recommendations

This guidance is intended to inform minimum expectations for PPE; however, HCWs should refer to and follow their own institutional or organizational infection prevention and control policies and procedures on PPE. Additionally, HCWs should perform a PCRA for patient encounters. **For every patient and/or patient environment encounter, apply the Four Moments for Hand Hygiene**

(<https://www.publichealthontario.ca/-/media/documents/bp-hand-hygiene.pdf?la=en>)

Setting	Individual	Activity	Type of PPE or procedure
Healthcare Facilities - Inpatient facilities			
Patient room	Healthcare workers	Providing direct care to patients with suspect or confirmed COVID-19, including nasopharyngeal and oropharyngeal swab collection	Droplet and Contact precautions, including: <ul style="list-style-type: none"> • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
		Aerosol-generating medical procedures performed on suspect or confirmed COVID-19 patients	Airborne, Droplet and Contact precautions, including: <ul style="list-style-type: none"> • N95 respirator (fit-tested, seal-checked) • Isolation gown • Gloves • Eye protection (goggles or face shield) • Negative pressure room, if available
	Environmental service workers	Entering the room of patients with suspected or confirmed COVID-19	Droplet and Contact precautions, including: <ul style="list-style-type: none"> • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
	Visitors	Entering the room of a patient with suspected or confirmed COVID-19 Visitors should be kept to a minimum	Droplet and Contact precautions, including: <ul style="list-style-type: none"> • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)

Setting	Individual	Activity	Type of PPE or procedure
Other areas of patient transit (e.g., wards, corridors)	All staff, including healthcare workers	Any activity that does not involve contact with patient suspected or confirmed COVID-19	Routine practices and Additional Precautions based on risk assessment.
Triage	Healthcare workers	Preliminary screening not involving direct contact	If able to maintain spatial distance of at least 2 m or separation by physical barrier: <ul style="list-style-type: none"> No PPE required Otherwise, droplet and contact precautions, including: <ul style="list-style-type: none"> Surgical/procedure mask Isolation gown Gloves Eye protection (goggles or face shield)
	Patients suspected or confirmed to have COVID-19	Any	Maintain spatial distance of at least 2 m or separation by physical barrier. Provide surgical/procedure mask if tolerated by patient. Patient to perform hand hygiene.
Administrative areas	All staff, including healthcare workers	Administrative tasks that do not involve contact with patients	<ul style="list-style-type: none"> No PPE required

Setting	Individual	Activity	Type of PPE or procedure
Healthcare Facilities – Ambulatory and outpatient facilities			
Consultation room/area	Healthcare workers	Physical examination of patients with suspected or confirmed COVID-19	Droplet and Contact precautions, including: <ul style="list-style-type: none"> Surgical/procedure mask Isolation gown Gloves Eye protection (goggles or face shield)

Setting	Individual	Activity	Type of PPE or procedure
	Patients suspected or confirmed to have COVID-19	Any	<ul style="list-style-type: none"> • Provide surgical/procedure mask if tolerated. • Perform hand hygiene
	Environmental service Workers	After and between consultations with patients suspected or confirmed to have COVID-19	Droplet and Contact precautions, including: <ul style="list-style-type: none"> • Surgical/procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
Waiting room	Patients suspected or confirmed to have COVID-19	Any	<ul style="list-style-type: none"> • Provide surgical/ procedure mask if tolerated. • Immediately move the patient to a single patient room or separate area away from others; if this is not feasible, ensure spatial distance of at least 2 m from other patients.
Administrative areas	All staff, including healthcare workers	Administrative tasks that do not involve contact with patients	<ul style="list-style-type: none"> • No PPE required.
Triage/Reception	Healthcare workers	Preliminary screening not involving direct contact	If able to maintain spatial distance of at least 2 m or separation by physical barrier: <ul style="list-style-type: none"> • No PPE required. Otherwise, Droplet and Contact precautions, including: <ul style="list-style-type: none"> • Surgical/ procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
	Patients suspected or confirmed to have COVID-19	Any	<ul style="list-style-type: none"> • Maintain spatial distance of at least 2 m or separation by physical barrier. • Provide surgical/procedure mask if tolerated.

Setting	Individual	Activity	Type of PPE or procedure
Other settings			
Home Care	Healthcare worker	Visiting clients/patients with suspected or confirmed COVID-19	Droplet and Contact precautions, including: <ul style="list-style-type: none"> • Surgical/ procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
Long-term care home	Healthcare worker	Providing direct care to suspect or confirmed COVID-19 residents, including nasopharyngeal and oropharyngeal swab collection	Droplet and contact precautions, including: <ul style="list-style-type: none"> • Surgical/ procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
	Healthcare worker	Providing CPAP and/or open suctioning to suspect or confirmed COVID-19 resident.	Droplet and Contact precautions using a N95 respirator when providing CPAP. Manage in single room with door closed. Keep the number of people in the room during the procedure to a minimum.
	Environmental service workers	When entering the room of a resident suspected or confirmed to have COVID-19	Droplet and contact precautions, including: <ul style="list-style-type: none"> • Surgical/ procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)
	Administrative areas	Administrative tasks that do not involve contact with resident suspected or confirmed to have COVID-19	<ul style="list-style-type: none"> • No PPE required.
	Visitors	Entering the room of a suspect or confirmed COVID-19 resident Should be kept to a minimum	Droplet and contact precautions, including: <ul style="list-style-type: none"> • Surgical/ procedure mask • Isolation gown • Gloves • Eye protection (goggles or face shield)

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario's government, public health organizations and health care providers. PHO's work is guided by the current best available evidence at the time of publication.

The application and use of this document is the responsibility of the user. PHO assumes no liability resulting from any such application or use.

This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to PHO. No changes and/or modifications may be made to this document without express written permission from PHO.

References

ASGE Ensuring Safety in the Gastrointestinal Endoscopy Unit Task Force, Calderwood AH, Chapman FJ, et al. Guidelines for safety in the gastrointestinal endoscopy unit. *Gastrointest Endosc.* 2014;79(3):363–372. doi:10.1016/j.gie.2013.12.015.

Ontario Agency for Health Protection and Promotion, Provincial Infectious Disease Advisory Committee. Annex B: Best Practices for Prevention of Transmission of Acute Respiratory Infection. Annexed to: Routine Practices and Additional Precautions in All Health Care Settings. Toronto, ON: Queen's Printer for Ontario; 2013. Available from: <https://www.publichealthontario.ca/-/media/documents/bp-prevention-transmission-ari.pdf?la=en>.

Smith JD, MacDougall CC, Johnstone J, Copes RA, Schwartz B, Garber GE. Effectiveness of N95 respirators versus surgical masks in protecting health care workers from acute respiratory infection: a systematic review and meta-analysis. *CMAJ.* 2016;188(8):567-74.

Tran K, Cimon K, Severn M, Pessoa-Silva CL, Conly J. Aerosol generating procedures and risk of transmission of acute respiratory infections to healthcare workers: a systematic review. *PLoS One.* 2012;7(4):e35797.