

INFECTIOUS DISEASE AND INFECTION PREVENTION AND CONTROL COVID-19 COMMITTEE

Bulletin #92c – COVID-19 – ID-IPC – Mask Guidance – Dec 1 2020

Face masks for health care workers use during COVID-19

Last week, the Regional Infectious Diseases Infection Prevention and Control (ID-IPC) COVID-19 Committee updated the guidance related to Horizon's [face mask for health care workers use during COVID-19](#). This update reflects research on best practices and Health Canada recommendations related to personal protective equipment (PPE).

The update ensures all health care workers (HCW) in Horizon facilities have access to the mask required for their working conditions. Currently, some HCWs are using a Level 3 mask when an approved Level 1 mask meets standards.

Prior to this change, a variety masks were being used across the organization, some of which no longer meet current standards.

We have not downgraded PPE for employees and physicians.

Now all HCWs are supplied with American Society of Testing and Materials (ASTM) masks. Health Canada and the World Health Organization advise that ASTM level face masks (1 to 3) are fluid resistant medical grade face masks and are safe for use when providing care to suspect / confirmed COVID-19 patients.

All masks worn across the organization now meet the specifications required by the ASTM standards and are accessible to HCWs to be used for the proper indication following the HCW's Point of Care Risk Assessment.

The protective level of the mask required for each situation will continue to be available. When Level 2 or 3 medical face masks are required for higher risk procedures such as Operating Room Theatres, the Emergency Department, Intensive Care Units and some outpatient clinics (Ambulatory care), they will be available.

Any face masks in stock in Horizon facilities that do not meet the ASTM standards are now considered non-medical face coverings.

Horizon's ID-IPC COVID-19 Committee is working diligently to ensure Horizon's practices continue to align with evolving national standards and other jurisdictions across the country.

Your safety and the safety of our patients and communities has been and remains Horizon's number one focus.

Thank you for your continued diligence, as we work through the ongoing outbreak. We know proper mask use and hand hygiene are instrumental in the fight against COVID-19.

If you have any questions about accessing PPE, please contact your manager.



Infection Prevention and Control Guidance: Face Mask for Healthcare Workers Use During COVID-19 All Phases

Infection Prevention and Control Guidance: Face Mask Use for Healthcare Workers During COVID-19

Horizon Health Network requires all Healthcare Workers (HCWs), patients and visitors within our facilities to wear a face mask at all times. HCWs adhere to the [Infection Prevention and Control Guidance: Continuous Use of Masks for Full Shifts](#) exceptions to this directive apply when HCWs:

- are in individual workstations
- are in offices
- are eating with physical distancing maintained
- have difficulty wearing the level 1 surgical/procedure mask and following consultation with Employee Health Services may be accommodated and permitted to wear an alternative facial covering
- work in high humidity areas such as the dish room (these HCWs may wear a face shield).

The World Health Organization June 2020 notes; "The use of face masks is part of a comprehensive package of the prevention and control measures that can limit the spread of certain respiratory viral diseases, including COVID-19". A face mask alone will not prevent the spread of COVID-19 but when combined with frequent hand hygiene and physical distancing, these infection prevention and control measures have been identified as an effective way to prevent the spread of respiratory infections.

Types of Face masks

A medical grade face mask (includes surgical or procedure face masks) is a Class 1 medical device which covers the mouth, nose and chin ensuring a barrier that limits the transmission of an infective agent between the HCWs and patients. It is not designed to fit tightly against the face.

A N95 respirator is a Class 1 medical device designed to reduce the risk of inhaling hazardous airborne particles and aerosols.

Respirators:

- achieve a minimum filtration efficiency of 95%
- when worn properly, the edges of the face mask form a seal around the nose and mouth
- are produced in many different styles, such as: flatfold, duckbill, cup-style

A Non-medical face mask can be homemade or purchased and should be made of a least 3 layers (2 layers should be tightly woven material fabric, such as cotton or linen and the third (middle) layer should be a filter-type fabric, such a non-woven polypropylene fabric). A well-designed and well-fitting mask provides protection to others by containing the respiratory droplets or saliva exhaled by the wearer through speaking, coughing or sneezing.

They are not:

- standardised
- medical devices
- regulated like medical face masks and respirators
- made from the same fabrics found in surgical face masks or respirators
- designed to form a seal around the nose and mouth

Non-medical grade face masks are only provided at the Main and Emergency Department Entrances to outpatients and visitors who do not have their own community masks.

Note: Non-medical face masks with exhalation vents or valves are not recommended. These masks do not protect others from COVID-19 or limit the spread of the virus. This is because they allow infectious respiratory droplets to spread outside the mask.

Clear mask: Transparent Face Mask

The Medical Devices Directorate at Health Canada support the use of clear mask noting that it is a unique device intended to serve a distinct purpose for hearing impaired or interact with people who use lip reading to communicate. It does not fit into the more common categories of respirators or surgical masks. Regulators (US and Canada) have defined it as a face mask, because it cannot be tested against the standards for a surgical mask. Similarly, it is not a face shield as it does not cover your eyes. It is a barrier to liquids but does not provide complete protection because of its lack of eye protection. It is intended to assist with communication in a non-infectious environment however it provides droplet protection, if combined with goggles for example.

Note: Use of these masks in a surgical setting, or where significant exposure to liquid bodily or other hazardous fluids may be expected, is not recommended.

Face Masks:

Medical grade face masks are able to perform the following functions:

- when worn by asymptomatic patients/HCWs who may be shedding an infectious organism before they become symptomatic, provide protection to patients and other HCWs.
- protect HCWs from sprays, splashes and act as a barrier from infectious droplets
- provide a barrier when a HCW performs an aseptic/sterile procedure

All medical grade face masks/respirators identified as safe for use with suspect/confirmed COVID-19 patients must comply with the ASTM international standard "*F2100-19: Standard Specification for Performance of Materials Used in Medical Face masks.*" **or** the European Standard EN 14683 TYPE IIR.

Medical grade face masks are to be worn by HCWs in all areas. The only exemption is for HCWs in non-COVID-19 areas who have received special dispensation through Employee Health Services under duty to accommodate. Community masks can be worn upon entering and exiting the facility.

ASTM Levels of Face mask Protection:

There are three unique levels of protection with ASTM-rated medical face masks:

- Level 1 (low) – can resist splash or spray at venous pressure (e.g. use for general procedures and respiratory etiquette)
- Level 2 (moderate) – Can resist splash or spray at arterial pressure
- Level 3 (high) - Have the highest fluid resistance (high-velocity procedures, orthopedic surgery or trauma)

For greater clarity on the differences, refer to the ASTM and the EN 14683 Type IIR testing information outlined below:

NOTE: An EN 14683 Type IIR face mask can only be used in place of an ASTM Level 1 or 2 face mask.

TEST	LEVEL 1 (LOW) BARRIER: 80 mm Hg	*LEVEL 2 (MODERATE) BARRIER: 120 mm Hg	LEVEL 3 (HIGH) BARRIER: 160 mm Hg	EN 14683 Type IIR
BFE (Bacterial Filtration Efficiency) at 3.0-micron ASTM F2101	≥ 95%	≥ 98%	≥ 98%	≥98
PFE (Particulate Filtration Efficiency) at 0.1-micron ASTM F2299	≥ 95%	≥ 98%	≥ 98%	Not Required
Delta P (Differential Pressure) MIL-M-36954C, mm H ₂ O/cm ²	< 5.0	< 6.0	< 6.0	< 5.0
Fluid Resistance to Synthetic Blood ASTM 1862, mm Hg	80	120	160	120
Flame Spread 16 CFR part 1610	Class 1	Class 1	Class 1	N/A

*An ASTM level 3 medical mask will be used when the performance level required for specific procedures corresponds with ASTM level 2 or 3. This would apply to critical care areas such as OR Theatres, ER, ICUs and some Ambulatory clinics. Medical masks ASTM Level 1 can be used when not in the OR Theatre.

Face masks for Patients/Visitors

- **Asymptomatic Outpatients/Visitors who present without face mask/face covering**
 - Non-Medical Grade face mask
- **Symptomatic Outpatients**
 - Level 1 Medical Grade face mask
- **Inpatients transferring from room to room or who leave Nursing Unit for testing/therapies**
 - Level 1 Medical Grade face mask
- **Inpatients who cannot maintain physical distance (Addictions/Mental Health)**
 - Level 1 Medical Grade face mask

Summary

- Health Canada and the World Health Organization advise that ASTM Level face masks (1 to 3) and the EN 14683 Type IIR are fluid resistant medical grade face masks and are safe for use when providing care to suspect/confirmed COVID-19 patients.
- N95 respirators are necessary for airborne pathogens (e.g. TB), and are used for AGMPs in COVID-19 patients
- Medical grade face masks and N95 respirators should be made available for HCWs and patients who are suspect or confirmed COVID-19
- Unrated face masks are not ASTM rated but serve to protect in the transmission of infection from asymptomatic people
- In the OR setting, the ORNAC Standards 14th Edition 2019 notes:
 - All personnel shall wear a single surgical mask in restricted areas and/or in the presence of open sterile supplies (Rothrock, 2019; Phillips, 2017). The type of mask that offers the most appropriate protection for the specific circumstance shall be worn.
 - For routine surgery, "masks with a microbial filtration efficiency of 95% or greater should be selected. The filtration efficiency of masks should ensure protection against aerosol particles that are 0.1 um or larger" (Rothrock, 2019, p. 327).
 - For surgery where chemical or particulate contaminants are expected, i.e. surgical smoke, laser plume, airborne infection, masks which provide protection for particles smaller than 0.1 um should be selected (Rothrock, 2019). N95 masks need to be fit tested according to Occupational Health and Safety Regulations and hospital policy.

Recommended face mask used by Unit/Area:

Face mask/N95 Respirator Ordering

All face masks/N95 Respirators identified for use within each department/area are available through local Area Stores departments. Ordering requisitions must include appropriate authorization and the item number listed in [Appendices I and II](#). Face mask/respirator inventory will be managed by Logistics as per the recommendations for use outlined in this document.

Nursing Units

- Mask Procedure Earloop Level 1
- Mask N95 Respirator (as Indicated)
- Clearmask: Transparent face mask (as indicated)

ICUs/CCUs/NICUs/NNICUs/EDs:

- Mask Procedure Earloop Level 1
- Mask Procedure Earloop Level 3 (Trauma or Procedures When Risk for Splash Or Spray At Arterial Pressure)
- Mask N95 Respirator (as Indicated)
- Clearmask: Transparent Face Mask (as Indicated)

ORs

- Mask Procedure Earloop Level 1 (Outside OR Theatre)
- Mask Surgical with Ties Level 3 (Within OR Theatre)
- Mask N95 Respirator (as Indicated)
- Clearmask: Transparent Face Mask (as indicated outside of OR Theatre)

Ambulatory Clinics (Dialysis, Endoscopy, Interventional Radiology)

- Mask Procedure Earloop Level 1
- Mask Surgical with Ties Level 3
- Mask Procedure Earloop Level 3 (Trauma or Procedures When Risk for Splash Or Spray At Arterial Pressure)
- Mask N95 Respirator (as Indicated)
- Clearmask: Transparent Face Mask (as Indicated)

Oncology

- Mask Procedure Earloop Level 1
- Mask N95 Respirator (as Indicated)
- Clearmask: Transparent Face Mask (as Indicated)

Pharmacy

- Mask Procedure Earloop Level 1
- Mask N95 Respirator (when cleaning spills or doing deep cleaning of the hoods)

Professional Services (Laboratory, Respiratory, Electrodiagnostics, Therapeutic Services)

- Mask Procedure Earloop Level 1
- Mask N95 Respirator (as Indicated)
- Clear mask: Transparent face mask (as indicated)

Community Health

- Mask Procedure Earloop Level 1

Assessment Centers

- Mask Procedure Earloop Level 1
- Mask N95 Respirator (as Indicated)

Registration Areas

- Mask Procedure Earloop Level 1

Support Services (Environmental, Linen, Portering, Nutrition and Food Service, Facilities Management)

- Mask Procedure Earloop Level 1
- Mask N95 Respirator (Environmental and Facilities Management)

Non-Patient Care Areas, Volunteers, Auxiliary, Pastoral Care

- Mask Procedure Earloop Level 1

Main and Emergency Department Entrances

- Non-medical grade face masks. Available upon approval of the Regional Lead, Security, Parking and Safety Services /Emergency Management Coordinator or delegate.
- Mask Procedure Earloop Level 1

Appendix I Face Mask Ordering Information by Local Area

Location	Item Number	Description
Fredericton	0139393	MASK PROCEDURE EARLOOP LEVEL 1
	0135403	MASK SURGICAL WITH TIES LEVEL 3
	6169692	MASK PROCEDURE EARLOOP LEVEL 3
	0141047	CLEARMASK: TRANSPARENT FACE MASK
Miramichi	0139393	MASK PROCEDURE EARLOOP LEVEL 1
	0135403	MASK SURGICAL WITH TIES LEVEL 3
	6169692	MASK PROCEDURE EARLOOP LEVEL 3
	0141047	CLEARMASK: TRANSPARENT FACE MASK
Moncton	0139393	MASK PROCEDURE EARLOOP LEVEL 1
	0135403	MASK SURGICAL WITH TIES LEVEL 3
	6169692	MASK PROCEDURE EARLOOP LEVEL 3
	0141047	CLEARMASK: TRANSPARENT FACE MASK
Saint John	0139393	MASK PROCEDURE EARLOOP LEVEL 1
	0135403	MASK SURGICAL WITH TIES LEVEL 3
	6169692	MASK PROCEDURE EARLOOP LEVEL 3
	0141047	CLEARMASK: TRANSPARENT FACE MASK

Appendix II: N95 Respirator Ordering Information by Local Area

Location	Item Number	Description
Fredericton	0125429	MASK N95 RESP & SURG FLAT FOLD
	6067073	MASK N95 DUCKBILL REGULAR
	6067074	MASK N95 DUCKBILL SMALL
	6169212	MASK N95 RESPIRATOR REGULAR
	6169255	MASK N95 RESPIRATOR SMALL
	6169263	MASK N95 RESPIRATOR 3M1870
Miramichi	0125429	MASK N95 RESP & SURG FLAT FOLD
	6067073	MASK N95 DUCKBILL REGULAR
	6067074	MASK N95 DUCKBILL SMALL
	6169212	MASK N95 RESPIRATOR REGULAR
	6169255	MASK N95 RESPIRATOR SMALL
	6169263	MASK N95 RESPIRATOR 3M1870
Moncton	0048322	MASK N95 X-SMALL CONTOUR CONE
	0049591	MASK N95 PARTICULATE FILTER
	0109872	MASK N95 VFLEX PLEAT REGULAR
	0109875	MASK N95 VFLEX PLEAT SMALL
	0125429	MASK N95 RESP & SURG FLAT FOLD
	6067073	MASK N95 DUCKBILL REGULAR
	6067074	MASK N95 DUCKBILL SMALL
	6169212	MASK N95 RESPIRATOR REGULAR
	6169255	MASK N95 RESPIRATOR SMALL
	6169263	MASK N95 RESPIRATOR 3M1870
Saint John	0125429	MASK N95 RESP & SURG FLAT FOLD
	6067073	MASK N95 DUCKBILL REGULAR
	6067074	MASK N95 DUCKBILL SMALL
	6169212	MASK N95 RESPIRATOR REGULAR
	6169255	MASK N95 RESPIRATOR SMALL
	6169263	MASK N95 RESPIRATOR 3M1870

References:

The ORNAC Standards, Guidelines, and Position Statements for Perioperative Registered Nurses Section 2 Infection Prevention and Control (14th Edition)

The World Health Organization (WHO): Advice on the use of masks in the context of COVID-19 Interim guidance June 5, 2020

[https://www.who.int/publications/i/item/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-\(2019-ncov\)-outbreak](https://www.who.int/publications/i/item/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak)

NSW Clinical Excellence Commission: Infection Prevention and Control Application Of PPPE During COVID-19 Version 2.3: August 2020

http://www.cec.health.nsw.gov.au/_data/assets/pdf_file/0006/590307/Application-of-PPE-in-COVID-19.pdf

Alberta Health Services: Personal Protective Equipment (PPE) and Non-medical Masks for Non-Health Care Settings

<https://www.alberta.ca/assets/documents/covid19-types-of-masks-eye-protection.pdf>

BC Centre for Disease Control Masks: Face masks can be worn to help protect those around you and should be worn by people who are sick.

<http://www.bccdc.ca/health-info/diseases-conditions/covid-19/prevention-risks/masks>

Hamilton Health Sciences: COVID-19 Update: PPE Update Ensuring teams get access to the right Supplies

<https://www.hamiltonhealthsciences.ca/wp-content/uploads/2020/04/PPE-conservation-and-unit-stocks-April-20-all-staff.pdf>

American Society for Testing and Materials international standard 2019:

F2100–19: Standard Specification for Performance of Materials Used in Medical Face masks

World Health Organization: COVID-19 Technical Specifications for Personal Protective Equipment and related IPC Supplies. August 7, 2020.

Province of New Brunswick: The Office of the Chief Medical Officer of Health October 16, 2020 - Mandatory Masks – FAQ

<https://www2.gnb.ca/content/dam/gnb/Departments/eco-bce/Promo/covid-19/MandatoryMasksFAQ.pdf>

COVID-19: Non-medical masks and face coverings-Canada.ca

<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/about-non-medical-masks-face-coverings.html>