

Technical Review
Advisory relating to COVID-19 as an addendum to the current
COCOO Infection Control Standard
Updated: April 23, 2020

EXECUTIVE SUMMARY:

PPE shortages are currently, and for the foreseeable future posing an immense challenge to healthcare systems worldwide. Considering this, WHO released the Rational Use of Personal Protective Equipment for Coronavirus disease (COVID-19) and Considerations during Severe Shortages on April 6th, 2020.

College members are having difficulty accessing the required PPE¹ and in many cases have closed their offices in response. The COVID-19 pandemic continues to generate new information daily that sometimes can lead to misinterpretation and misinformation. Unfortunately, this as well as other factors has contributed to a heightened sense of fear and anxiety for Members of the College of Chiropractors of Ontario (COCOO).

The COCOCO Standards and Guidelines committee has reviewed the best and most current available evidence and guidelines on COVID-19 infection prevention and control from the World Health Organization (WHO), the Centers for Disease Control (CDC) and Public Health Ontario (PHO)

In consideration of the College mandate to protect the public, and prevent the transmission of COVID-19 within our clinical settings, as well as provide the public with the safest access to Chiroprody and Podiatry Urgent/Emergency Care the following key updates were approved by the College.

KEY UPDATES:

- Continued triple screening of ALL patients (enhanced)
- Continued treatment of only patients without symptoms of COVID-19 or Acute Respiratory Infections (ARI)
- Continued use and monitoring of engineering and administrative control measures
- Continued organizational and point of care risk assessment (enhanced)

¹ COCOCO Survey Availability of PPE to members of the College of Chiropractors of Ontario during the COVID-19 pandemic April 2020

- Adapting standard precautions with additional droplet precautions (*use of gloves, mask, and eye protection*) at all times in consultation/treatment room
- Use of contact precautions (*use of gloves, mask, gown, and eye protection*) only when indicated from outcome of risk assessment
- Implementation of universal masking for patients in order to receive Chiropody and Podiatry Care
- Continued hand hygiene by patient upon entering and exiting the practice/clinic
- Extended use of procedure/surgical masks
- Extended use and reprocessing of reusable goggles/eye wear/face shield protection

PURPOSE:

The College evaluated additional precautions required in management of patients without symptoms suggestive of COVID-19 and considered current issue of severe shortages of PPE equipment in all health sectors including Chiropody and Podiatry

BACKGROUND:

- A state of emergency was declared in Ontario on March 17th, 2020 in response to the COVID-19 pandemic².
- On March 23rd, 2020, COCOO provided a Quick Reference Guide in response to COVID-19.³
- Currently COCOO has stated that following screening and determination of urgent care, **Droplet and Contact** precautions were strongly recommended.²
- On April 2nd and April 7, 2020, protocols through COCOO Executive have been provided along with an algorithm and flow-chart to facilitate

² <https://news.ontario.ca/opo/en/2020/03/ontario-enacts-declaration-of-emergency-to-protect-the-public.html>

³ <http://coccoo.on.ca/covid-19-novel-coronavirus/>

members' decision if able to provide adequate COVID screening and patient care².

- Public has access to Chiropractic and Podiatry care through virtual care and telehealth- with access to clinical care for urgent/emergency conditions only.
- A risk assessment must be done before each interaction with a patient or their environment in order to determine which interventions are required to prevent transmission during the interaction
- Member must wear all and necessary PPE and meet PIDAC standards⁴

INTRODUCTION:

College members are having difficulty accessing the required PPE⁵ and in many cases have closed their offices in response. The COVID-19 pandemic continues to generate new information daily that sometimes can lead to misinterpretation and misinformation. Unfortunately, this as well as other factors has contributed to a heightened sense of fear and anxiety for Members of the College of Chiropractors of Ontario (COCOO).

The aim of this Advisory is to assist COCOO Members safely and efficiently to prevent the spread of COVID-19 during their patient interactions. To be clear, Members are responsible to ensure that to EVERY extent possible there is no transmission of the virus from their offices. It is a primary reason the Government of Ontario Ministry of Health has instructed that currently; Regulated Health Professionals should only be treating patients in need of urgent and emergency care. The positions of the College are carefully considered, having regard for the protection of the public, your patients, your staff, and you.

This Advisory is a supplement to the current COCOO Infection Control Standard and does not replace the current COCOO Infection Control Standard⁶

The COCOO assumes that Members are following these COVID-19 protocols from the WHO which includes:

⁴ PIDAC Routine Practices and Additional Precautions in All Health Care Settings, 3rd Ed.
(<https://www.publichealthontario.ca/-/media/documents/bp-rpap-healthcare-settings.pdf?la=en>)

⁵ COCOO Survey Availability of PPE to members of the College of Chiropractors of Ontario during the COVID-19 pandemic April 2020

⁶ <http://cocoo.on.ca/standards-of-practice/>

- *If possible, maintain a physical distance (a minimum of 1 metre) from other individuals.*
- *Perform hand hygiene frequently with an alcohol-based hand rub if available and if your hands are not visibly dirty or with soap and water if hands are dirty*
- *Avoid touching your eyes, nose, and mouth.*
- *Routine cleaning and disinfection of environmental and other frequently touched surfaces.*

The COCOO Standards and Guidelines committee has reviewed the best and most current available evidence and guidelines on COVID-19 infection prevention and control from the World Health Organization (WHO), the Centers for Disease Control (CDC) and Public Health Ontario (PHO).

PRESENT ACCESS TO CHIROPODY AND PODIATRY CARE IN ONTARIO:

- There is limited access to Chiropractic and Podiatry care to the public in Ontario due to the COVID-19 crisis⁷
- Members have limited access to procurement of PPE items such as gowns and masks at this time, many without access to isolation gowns needed in order to follow current College Requirement of following Contact and Droplet Precautions for urgent patient care performed during this state of emergency.⁶
- As of April 19th, 2020, 52% (85/163) clinics are closed and approximately 97% (158/163) of clinics with more than half of the visits reduced due to the directives from the Government of Ontario.⁶
- As of April 19, 2020, 67% (107/161) clinics have less than a day/no supply of gowns.⁶

⁷ COCOO Survey Availability of PPE to members of the College of Chiropractors of Ontario during the COVID-19 pandemic April 2020

- The need for our members' care will continue to grow and an increase in demand for urgent care will continue with the increase in length of time since a patient's last appointment.

TRANSMISSIBILITY OF COVID-19:

Current information suggests two main routes of transmission of the COVID-19 virus, respiratory droplets, and contact⁸. The understanding of the transmission of COVID-19 virus continues to improve with the evolution of the outbreak. WHO has summarized reports of transmission of the COVID-19 virus and provided current evidence on transmission from symptomatic, pre-symptomatic, and asymptomatic people infected with COVID-19⁹. Studies suggest that people were most infectious beginning 2-3 days before the onset of symptoms, with infectiousness peaking right before symptoms began, or 0.7 days before onset¹⁰. During this "pre-symptomatic" period, some infected persons can be contagious². Therefore, transmission from a pre-symptomatic case can occur before symptom onset¹¹.

OPTIMIZATION STRATEGIES FOR PPE:

Optimization strategies for PPE offer options for use when PPE supplies are stressed, running low, or absent. Contingency strategies can help stretch PPE supplies when shortages are anticipated, for example if members have enough supplies now but are likely to run out soon. Crisis strategies can be considered during severe PPE shortages and should be used with the contingency options to help stretch available supplies for the most critical needs. As PPE availability returns to normal, members should promptly resume standard practices^{12 13}.

The following temporary measures could be considered independently or in combination, depending on the local situation:

⁸ Advice on the use of masks in the context of COVID-19 Interim guidance 6 April 2020

⁹ https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200402-sitrep-73-covid-19.pdf?sfvrsn=5ae25bc7_2

¹⁰ He, X., Lau, E.H.Y., Wu, P. et al. Temporal dynamics in viral shedding and transmissibility of COVID-19. Nat Med (2020).

¹¹ Can people with asymptomatic or pre-symptomatic COVID-19 infect others: a systematic review of primary data Nelson Aguirre-Duarte medRxiv 2020.04.08.20054023; doi:

¹² <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html>

¹³ <https://www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/respiratory-diseases/novel-coronavirus/what-we-know>

- I. *PPE extended use (using for longer periods of time than normal according to standards)*
- II. *Reprocessing followed by reuse (after cleaning or decontamination/sterilization) of either reusable or disposable PPE)*
- III. *Considering alternative items compared with the standards recommended by WHO*

EYE PROTECTION:

The use of eye protection is strongly recommended as part of droplet precautions as follows:

- Disposable face shields, goggles, and visors (attached to surgical masks) that are disposed after each patient interaction is the optimal choice¹⁴
- Reusable goggles, safety glasses (trauma glasses) with extensions to cover the side of the eyes, face shields (must be designed to cover the side of the face and to below the chin) that are removed after each patient treatment and reprocessed is the second choice¹³
- Extended use of disposable face shields, goggles, and visors (*attached to surgical masks*)
- Alternative – local production of face shields (risk is suboptimal quality, including inadequate shape to ensure face protection)¹³

Reprocessing of reusable eye protection:¹³

- The reuse of eye protection without appropriate decontamination/sterilization is strongly discouraged.
- Clean goggles, safety glasses, face shields with soap/detergent followed by disinfection using either sodium hypochlorite 0.1% (followed by rinsing with clean water) or 70% alcohol wipes

¹⁴ [https://www.who.int/publications-detail/rational-use-of-personal-protective-equipment-for-coronavirus-disease-\(covid-19\)-and-considerations-during-severe-shortages](https://www.who.int/publications-detail/rational-use-of-personal-protective-equipment-for-coronavirus-disease-(covid-19)-and-considerations-during-severe-shortages)

- Goggles, safety glasses, face shields may be cleaned immediately after removal and hand hygiene is performed OR placed in designated closed container for later cleaning and disinfection.
- Ensure cleaning of eye protection takes place on a clean surface by disinfecting the surface before cleaning of eye protection
- Appropriate contact time with disinfectant (e.g. 10 minutes when using sodium hypochlorite 0.1%) should be adhered to before reuse of goggles, safety glasses, face shields.
- After cleaning and disinfection, they must be stored in a clean area to avoid recontamination.

Risks of extended use and reusable eye protection:

- The removal, storage, re-donning, and reuse of the same, potentially contaminated PPE items without adequate reprocessing is one of the principal sources of risk to health care workers.¹³
- Extended use of goggles, safety glasses, face shields may increase the discomfort and fatigue of health care workers
- Skin tissue damage may occur to face with prolonged use

Removal criteria and precautions:¹³

Follow the safe procedure for removal of goggles, safety glasses, face shields to prevent contamination of eyes

- Use of the same goggles, safety glasses, face shields by a health care worker between a patient with COVID-19 and a patient who does not have COVID-19 is not recommended due to the risk of transmission to another patient who would be susceptible to COVID-19
- Remove, reprocess, and replace if goggles, safety glasses, face shields are contaminated by splash of chemicals, infectious substances, or body fluids

- Remove, reprocess, and replace If goggles, safety glasses, face shields obstruct health care worker safety or visibility of health care environment or become loose

FACE MASKS:

Guiding principles of masks:

- Wearing a mask only is not PPE.
- Masks alone do not protect all the mucous membranes of the face of the wearer (i.e. *the eyes*).
- Hand hygiene is to be performed before putting on and after removing or otherwise handling masks
- Members should continue to discard surgical face mask after every patient contact when supply of and access to surgical / procedure face masks is **NOT** limited

FACIAL COVERING IN COMMUNITY SETTING:

- Health Canada is now advising the public that wearing a facial covering/non-medical mask in the community can be an additional measure to protect others around them even if they have no symptoms. It can be useful for short periods of time, when physical distancing is not possible in public settings ¹⁵
- WHO currently indicates patients use facemasks when in outpatient settings in consultation rooms who have symptoms of COVID-19 (Appendix I) ¹⁶
- There is evidence in favour of widespread mask use to reduce community transmission: non-medical masks use materials that obstruct droplets of

¹⁵ <https://www.canada.ca/en/health-canada/services/drugs-health-products/medical-devices/activities/announcements/covid19-notice-home-made-masks.html>

¹⁶ [https://www.who.int/publications-detail/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-detail/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)

necessary size; people are most infectious in the initial period post-infection, where it is common to have few or no symptoms¹⁷

UNIVERSAL MASK USE IN HEALTH CARE:^{18 19}

Universal masking versus personal protective equipment (PPE):

Universal masking means wearing a mask always. Masks used as part of universal masking are used to protect others from the wearer. Personal protective equipment, and clothing are worn to minimize exposure to hazards and prevent illnesses and infection to the worker. It is used to help protect the wearer from others.²⁰

Masks are worn to protect others from potential infectious secretions of the wearer. Persons wearing a mask must also ensure physical distancing of at least two metres (six feet) to prevent exposing themselves to droplets from others. Masks are to be discarded if visibly soiled, damp, damaged or difficult to breathe through. After use, masks are to be handled in a manner that minimizes the potential for cross-contamination.

Extended use and re-use of masks:^{18 21}

- Under extreme supply limitations, a single mask may be worn for an extended *period (e.g., donned at the beginning of the shift, and continued to be worn)* as long as it is not visibly soiled, damp, damaged or difficult to breathe through. Masks are to be discarded at the end of the shift/day.
- The mask is to be donned when entering the facility/home and removed when eating or leaving the facility/home at the end of the shift/day.

¹⁷ https://www.researchgate.net/publication/340603522_Face_Masks_Against_COVID-19_An_Evidence_Review

¹⁸ <https://www.publichealthontario.ca/-/media/documents/ncov/ipac/report-covid-19-universal-mask-use-health-care-settings.pdf?la=en>

¹⁹ PHO Coronavirus Disease 2019 (COVID-19) Universal Mask Use in Health Care Apr 22 2020

²⁰ Universal Masking in Hospitals in the Covid-19 Era D 2020/04/01 J New England Journal of Medicine R 10.1056/NEJMp2006372

²¹ <https://www.publichealthontario.ca/-/media/documents/ncov/covid-wwksf/what-we-know-reuse-of-personal-protective-equipment.pdf?la=fr>

- Ideally, masks are to be discarded once removed, but if supplies are limited, these may be re-used if they are not visibly soiled, contaminated, wet or otherwise damaged.
- If a mask is to be re-used, it must be kept from being contaminated by storing it in a clean paper bag, or in a cleanable container with a lid.
- Paper bags are to be discarded after each use.
- Reusable containers are to be cleaned and disinfected after each use.
- Bags and containers are to be labelled with the individual's name to prevent accidental misuse.
- Do not store masks where they can become damaged or contaminated. Damage can impact the mask's effectiveness.
- Change the mask when it is wet or soiled.
- Change the mask when it is hard to breathe through.
- Change the mask when it becomes contaminated

Patient mask/Face covering:

Use of mask/face covering by Patients is a form of UNIVERSAL MASK USE ²² ²³
Masks/face coverings are used to protect others from the wearer's droplets. Patients MUST wear some form of face covering during their visit to Members' facilities. Patients must be informed of this requirement at the time of procuring an appointment. This is essential for droplet control originating from the patient, and therefore protection of the Member. The mask that the patient wears is NOT required to be a medical/surgical mask. Examples include: homemade masks, scarves, bandanas, etc.

If the members have enough supply of face masks, they can provide the patient with a single use face mask should they arrive without one. However, medical masks should be reserved for medical staff

²² https://www.researchgate.net/publication/340603522_Face_Masks_Against_COVID-19_An_Evidence_Review

²³ <https://www.publichealthontario.ca/-/media/documents/ncov/ipac/report-covid-19-universal-mask-use-health-care-settings.pdf?la=en>

If the patient is unable or refuses to wear a mask it must be considered that the rationale for patient use of face coverings is for the Member's protection, it is well within the rights of the Member to refuse or arrange alternate care of the patient in question.

N95 RESPIRATORS:

- According to College IPAC Standards of Practice, the purpose of N95 respirators in the profession is for nail debridement in the absence of dust extraction or water spray.²⁴
- N95 respirators are used when an AGMP (Aerosol Generating Medical Procedure) is being performed on a probable or confirmed case of COVID-19.²⁵
- ***The procedures under our scope of practice are not considered AGMP.***

*Medical N95 respirators do not have valves. If the N95 respirator has a valve, you must wear a procedure mask over top to ensure droplet control as the valve only filters inhalation, not exhalation.*²⁶

Reprocessing of Face Masks:

The reprocessing of face masks documented applies to N95 respirators ONLY.²⁷

This is not recommended as an initial protocol but may be considered if the supply of N95 respirators is low. Reprocessing must have a component of testing the efficacy of the N95 after reprocessing and the proof of effectiveness of removing the pathogens from the respirators. Again, due to our scope of practice, this should not be required, as the use of these respirators is limited in the profession.

²⁴ <http://cocoo.on.ca/standards-of-practice/>

²⁵ <https://www.publichealthontario.ca/-/media/documents/ncov/ipac/report-covid-19-aerosol-generation-coughs-sneezes.pdf?la=en>

²⁶ <https://multimedia.3m.com/mws/media/17945720/surgical-n95-vs-standard-n95-which-to-consider.pdf>

²⁷ <https://www.publichealthontario.ca/-/media/documents/ncov/covid-wwksf/what-we-know-reuse-of-personal-protective-equipment.pdf?la=fr>

When procuring masks in these times of shortage, reputable sources should be used as there are counterfeit masks being marketed as medical PPE.

ISOLATION GOWNS:

Challenges & Evidence:

- On April 6, 2020, the World Health Organization (WHO) published the “Interim Guidance - Rational Use of Personal Protection Equipment for COVID-19 and Considerations during Severe Shortages”.²⁸ This document addresses outpatient facilities, such as Chiropody/Podiatry offices, and the use of PPE for HCP and patients with and without symptoms of COVID-19
- Centre for Disease Control (CDC) and the WHO have also implemented extended use of PPE including gowns during times of “known shortage of isolation gowns”^{29 30}
- Health Canada is advising the public that wearing a facial covering/non-medical mask in the community can be an additional measure to protect others even if they are asymptomatic. It can be useful for short periods of time, where physical distancing is not possible³¹. There is evidence in favour of wide-spread non-medical mask use to reduce community transmission
- The WHO currently indicates for patients with suspected or confirmed COVID-19 to wear a face mask when in outpatient, consultation rooms³⁰
- There is currently limited access to Chiropody/Podiatry care and the need will continue to grow with an increase in demand for urgent care
- On April 6th, 2020 WHO published an Interim Guidance- Rational Use of Personal Protective Equipment for Coronavirus Disease (COVID-19) and Considerations during Severe Shortages.³⁰ Outpatient facilities and use of

²⁸ [https://www.who.int/publications-detail/rational-use-of-personal-protective-equipment-for-coronavirus-disease-\(covid-19\)-and-considerations-during-severe-shortages](https://www.who.int/publications-detail/rational-use-of-personal-protective-equipment-for-coronavirus-disease-(covid-19)-and-considerations-during-severe-shortages)

²⁹ <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/isolation-gowns.html>

³⁰ [https://www.who.int/publications-detail/rational-use-of-personal-protective-equipment-for-coronavirus-disease-\(covid-19\)-and-considerations-during-severe-shortages](https://www.who.int/publications-detail/rational-use-of-personal-protective-equipment-for-coronavirus-disease-(covid-19)-and-considerations-during-severe-shortages)

³¹ <https://www.canada.ca/en/health-canada/services/drugs-health-products/medical-devices/activities/announcements/covid19-notice-home-made-masks.html>

PPE for health care providers and patients with and without symptoms of COVID were evaluated (Appendix I).

- There is a worldwide shortage of raw materials used to manufacture isolation gowns due to shared usage of raw materials in manufacturing of prioritized N95 masks for healthcare providers performing aerosol generating procedures³²
- There is no timeline available as to when availability will increase for gowns and manufacturing adjustments will be made³²
- WHO and CDC have implemented extended use of PPE including gowns that have already been implemented due to the 'Crisis Capacity' in place due to known shortage of isolation gowns at this time (See Appendix II)^{29 30}
- Due to shortages- PHO allows extended use of isolation gowns when treating patients all infected with the same pathogen^{33 34}

Key Changes:

- For COCOO to change the DROPLET and CONTACT precautions to DROPLET only
- Development of a clinically relevant, chiropody/podiatry-focused risk assessment tool e.g. additional questions such as:
 - *Do you work in a grocery store/high-traffic environment?*
 - *Are you living with someone who has symptoms?*
 - *Will the patient require help with donning and doffing hosiery, footwear or jackets?*
 - *Will the patient require assistance with transfer?*

³² <https://www.hponline.com/infection-prevention/disposables-kits-drapes-ppe-instruments-textiles-etc/article/21134666/premier-survey-shows-isolation-gowns-replacing-n95-masks-as-top-shortage-concern-among-hospitals>

³³ <https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en>

³⁴ <https://www.publichealthontario.ca/-/media/documents/ncov/covid-wwksf/what-we-know-reuse-of-personal-protective-equipment.pdf?la=fr>

- Based on the risk assessment, members should determine if CONTACT precautions should be taken as stated in COCOO Standard of Infection Control.
- Patients must wear a face mask/barrier and perform hand hygiene upon entering the office or consultation room.
- Members MUST continue to follow standards of practice and additional DROPLET precautions: mask, eye protection (face shield and/or goggles/safety glasses), gloves
- If CONTACT precaution is determined to be necessary, use of isolation gown in addition to PPE use in Droplet precautions COCOO Standard of Infection Control.
- In instances where isolation gowns are not available- best practice would be to NOT provide care as the Member does not have appropriate PPE.

ADDITIONAL SOURCES:

1. PHO COVID-19 Droplet and Contact Precautions - Non-Acute Care Facilities (<https://www.publichealthontario.ca/-/media/documents/ncov/ipac/ipac-additional-precautions-non-acute-care.pdf?la=en>)
2. PIDAC Routine Practices and Additional Precautions in All Health Care Settings, 3rd Ed. (<https://www.publichealthontario.ca/-/media/documents/bp-rpap-healthcare-settings.pdf?la=en>)
3. PHO IPAC Recommendations for Use of Personal Protective Equipment for Care of Individuals with Suspect or Confirmed COVID-19 (<https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en>)
4. CDC COVID-19 - Strategies for Optimizing the Supply of Isolation Gowns (<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/isolation-gowns.html>)
5. CDC Infection Control - Background G. Laundry and Bedding (<https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html#g6>)
6. PHO COVID-19 - What We Know So Far About... Reuse of Personal Protective Equipment (<https://www.publichealthontario.ca/-/media/documents/ncov/covid-wwksf/what-we-know-reuse-of-personal-protective-equipment.pdf?la=fr>)
7. WHO Rational Use of Personal Protective Equipment for Coronavirus Disease (COVID-19) and Considerations during Severe Shortages (<https://www.who.int/publications-detail/rational-use->

[of-personal-protective-equipment-for-coronavirus-disease-\(covid-19\)-and-considerations-during-severe-shortages\)](#)

8. Premier Survey Shows Isolation Gowns Replacing N95 Masks as top shortage concern among hospitals (<https://www.hpnonline.com/infection-prevention/disposables-kits-drapes-ppe-instruments-textiles-etc/article/21134666/premier-survey-shows-isolation-gowns-replacing-n95-masks-as-top-shortage-concern-among-hospitals>)
9. WHO Infection Prevention and Control During Health Care when COVID-19 is Suspected ([https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected-20200125](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125))
10. PHO Technical Brief: IPAC Recommendations for use of Personal Protective Equipment For Care of Individuals With Suspect or Confirmed COVID-19 (<https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en>)
11. PIDAC Best Practices for Hand Hygiene in All Health Care Settings, 4th edition (<https://www.publichealthontario.ca/-/media/documents/bp-hand-hygiene.pdf?la=en>)
12. PIDAC Infection Prevention and Control for Clinical Office Practice (<https://www.publichealthontario.ca/-/media/documents/bp-clinical-office-practice.pdf?la=en>)
13. Considerations in the Use of Homemade Masks to Protect Against COVID-19 (<https://www.canada.ca/en/health-canada/services/drugs-health-products/medical-devices/activities/announcements/covid19-notice-home-made-masks.html>)
14. Face Masks Against COVID-19: An Evidence Review (<https://www.preprints.org/manuscript/202004.0203/v1>)
15. Recommendation Regarding the Use of Cloth Face Coverings, Especially in Areas of Significant Community-Based Transmission (<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html>)

APPENDIX I

Table 1. Recommended PPE during the outbreak of COVID-19 outbreak, according to the setting, personnel, and type of activity

Setting	Target personnel or patients	Activity	Type of PPE or procedure
Health care facilities			
Outpatient facilities			
Screening/triage	Health care workers	Preliminary screening not involving direct contact	<ul style="list-style-type: none"> • Maintain physical distance of at least 1 metre. • Ideally, build a glass/plastic screen to create a barrier between health care workers and patients • No PPE required • When physical distance is not feasible and yet no patient contact, use mask and eye protection. • Perform hand hygiene
	Patients with symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> • Maintain spatial distance of at least 1 metre. • Provide medical mask if tolerated. • Perform hand hygiene
	Patients without symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> • No PPE required • Perform hand hygiene
Waiting room	Patients with symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> • Provide medical mask if tolerated. • Immediately move the patient to an isolation room or separate area away from others; if this is not feasible, ensure spatial distance of at least 1 metre from other patients. • Have the patient perform hand hygiene
	Patients without respiratory symptoms	Any	<ul style="list-style-type: none"> • No PPE required • Have the patient perform hand hygiene
Consultation room	Health care workers	Physical examination of patient with symptoms suggestive of COVID-19	<ul style="list-style-type: none"> • Medical mask • Gown • Gloves • Eye protection • Perform hand hygiene
	Health care workers	Physical examination of patients without symptoms suggestive of COVID-19	<ul style="list-style-type: none"> • PPE according to standard precautions and risk assessment. • Perform hand hygiene

	Patients with symptoms suggestive of COVID-19	Any	<ul style="list-style-type: none"> • Provide medical mask if tolerated. • Hand hygiene and respiratory etiquette
	Patients without symptoms suggestive of COVID-19		<ul style="list-style-type: none"> • No PPE required • Have the patient perform hand hygiene
	Cleaners	After and between consultations with patients with respiratory symptoms.	<ul style="list-style-type: none"> • Medical mask • Gown • Heavy-duty gloves • Eye protection (if risk of splash from organic material or chemicals). • Closed work shoes • Perform hand hygiene
Administrative areas	All staff, including health care workers	Administrative tasks	<ul style="list-style-type: none"> • Maintain physical distance of at least 1 metre between staff • No PPE required • Perform hand hygiene

Adapted from: WHO Rational Use of Personal Protective Equipment for Coronavirus Disease (COVID-19) and Considerations during Severe Shortages ([https://www.who.int/publications-detail/rational-use-of-personal-protective-equipment-for-coronavirus-disease-\(covid-19\)-and-considerations-during-severe-shortages](https://www.who.int/publications-detail/rational-use-of-personal-protective-equipment-for-coronavirus-disease-(covid-19)-and-considerations-during-severe-shortages))

**Table condensed to only include outpatient facilities*

APPENDIX II

COVID-19: Isolation Gown Use Review

When to use gowns?

- **PHO:** Wearing a long-sleeved gown for direct care to patients with **suspected or confirmed COVID-19** (i.e. washing the patient, turning the patient, changing clothing, dressing changes, care of open wounds/lesions) when skin or clothing become contaminated
- **PIDAC:** Gown is worn when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions or excretions
- **IPAC:** When performing preliminary screening on patients with **suspected or confirmed COVID-19** not involving direct contact if spatial distance of 2m is not maintained or if physical barrier is absent
- **IPAC:** When performing physical examination on patients with **suspected or confirmed COVID-19** in the consultation room
- **WHO:** When caring for patient with **symptoms suggestive of COVID-19**

What type of gowns should be used?

- **PHO:** Long-sleeved gown for direct care to patients with **suspected or confirmed COVID-19**
- **PIDAC:** Long-sleeved, protecting the forearm and clothing from splashes and soiling. Should be cuffed and offer full body coverage (from neck to mid-thigh or below)
- **CDC:** Conventional capacity
 - Non-sterile, disposable patient isolation gowns can be used by health care workers to care to patients with **suspected or confirmed COVID-19**
- **CDC:** Contingency capacity (during expected isolation gown shortages)
 - Cloth (polyester or polyester-cotton) isolation gowns can be used and laundered
 - Medical coveralls providing 360-degree protection can be used
- **CDC:** Crisis capacity (during periods of known isolation gown shortages)
 - Extended use of disposable or cloth isolation gown
- **WHO:** Cotton gowns can be worn and reprocessed (see below)

Can I reuse gowns?

- **PIDAC:** No. Gowns should only be worn immediately before and after providing care
- **CDC:** Crisis capacity (during periods of known isolation gown shortages)
 - Cloth or disposable isolation gowns can be used by the same health care practitioners when interacting with more than one patient known to be infected with the same infectious disease, who are housed in the same location (i.e. ward/isolation cohort)
- **PHO:** In situations where supply is limited, extended use and reuse may be considered when caring for patients with **suspected or confirmed COVID-19**
 - When providing care to patients infected with the same pathogen
 - Cites the CDC regarding reusing and laundering cloth gowns
- **WHO:** Extended use of gowns as temporary measure due to shortage of PPE
 - When providing care to a cohort of patients **with COVID-19**
 - Not recommended between COVID-19 and non-COVID-19 patients

In the event of severe shortage of gowns, what are appropriate alternatives?

- **PIDAC:** Clinical and lab coats and jackets are not a substitute for gowns where a gown is indicated
- **CDC:** When no gowns are available, the following can be used as “last resort” for care of COVID-19 patients as single use:

Disposable	Reusable (Washable)	Combination of Clothing
Lab coats Aprons	Lab coats Patient gowns	Long sleeve apron + long sleeve patient gowns/lab coats Open back gowns + long sleeve patient gowns/lab coats Sleeve covers with apron + long sleeve patient gowns/lab coats

- None of the above are considered PPE
- Preferable features include long sleeves and closures (i.e. snaps, buttons)
- **WHO:** Disposable lab coats can be worn for brief contact with patient but not to be used for prolonged contact or during aerosol-producing procedures
- **WHO:** Disposable impermeable aprons can be worn but not to be used during aerosol-producing procedures
- **WHO:** Reusable (washable) patient gowns and lab coats can be worn and laundered (see below)

How do I launder reusable gowns and lab coats properly?

CDC	WHO	WHO
<ol style="list-style-type: none"> 1. Soaps and detergent 2. Hot water of at least 160F (71C) for a minimum of 25 minutes 3. Chlorine bleach 4. Mild acid during the last rinse cycle 	<ol style="list-style-type: none"> 1. Machine wash with warm water (60-90C) 2. Laundry detergent 	<ol style="list-style-type: none"> 1. Soak in hot water and soap 2. Stir with a stick 3. Soak with 0.05% chlorine for approximately 30 minutes 4. Rinse with clean water 5. Let dry in sunlight