



CORRECTIONAL SERVICE CANADA

CHANGING LIVES. PROTECTING CANADIANS.



COVID-19 Update Personal protective equipment

MAY 13, 2020



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Document History

Revision Date	Document Section	Description of Revisions
April 8, 2020		Document was created.
May 1, 2020	Throughout document.	Updates to reflect Public Health Agency of Canada recommendations on all-shift masking, as well as further guidance issued on PPE for nasopharyngeal swab collection, disposal of used PPE, working in COVID-19 Transitional Units or contaminated zones, and performing seal checks on KN95 Masks.
May 13, 2020	Appendix B.	Updated to ensure consistency with BC CDC's advice on reusing face shields.
May 13, 2020	Throughout document.	Minor editorial changes, such as grammar.

COVID-19 Update: Personal Protective Equipment

Preamble

CSC has taken an active approach to the prevention and containment of COVID-19 over the last several weeks and will continue to introduce additional measures as new evidence emerges and best practices are identified.

In the absence of effective drugs or a vaccine, continued vigilance in the implementation of infection prevention and control measures is essential.

The body of knowledge around COVID-19 is rapidly evolving and public health advice can change as more is learned about this new virus.

That said, the fundamentals of infection prevention remain the same. We know that the following measures are effective and must continue to be consistently implemented:

- Physical distancing (2 metres or more), whenever feasible;
- Frequent hand washing;
- Covering cough/sneezes with a tissue then properly disposing of the tissue or coughing/sneezing into the bend of the arm;
- Quickly identifying and isolating symptomatic individuals; and
- Enhanced cleaning with a focus on high touch surfaces.

In addition, CSC is implementing further interim measures, in accordance with Public Health Agency of Canada direction, including:

- Implementing **masking** for the full duration of shifts for all staff and contractors in all institutions;
- Implementing **masking and eye protection** for the full duration of shifts for all staff and contractors in institutions with an active COVID-19 outbreak, where an outbreak is defined as one or more confirmed COVID-19 case(s).

NHQ Health Services staff are working closely with provincial and federal public health authorities to help guide decisions about PPE.

Virus Transmission – Key Findings

Current evidence continues to indicate that droplet and contact precautions are appropriate for the routine care (within 2 metres) of COVID-19 symptomatic or confirmed individuals.

Airborne precautions should be used when aerosol generating procedures are planned or anticipated (i.e.: CPAP machine, drilling by the dentist, and CPR) with COVID-19 symptomatic or confirmed individuals.

An emerging body of evidence also suggests that asymptomatic and pre-symptomatic individuals may be responsible for some transmission of COVID-19. This has led to the implementation of

masks for all staff and contractors, in all CSC institutions, at all times. Staff are required to wear their masks at all times unless they are in a closed space by themselves or if there is a physical barrier between them and another individual. The intent of this masking approach is to protect staff and inmates from individuals who may unknowingly have COVID-19 and be shedding the virus. Given the limited movement within CSC, staff/contractors, not offenders, are most likely to be asymptomatic/pre-symptomatic carriers and unintentionally spread the virus. It is for this reason that staff/contractors are being prioritized for mask distribution for asymptomatic use, as a method of source control (preventing the worker from spreading the illness to others). As masks have become more accessible, CSC is also extending mask distribution to asymptomatic inmates. Priority is being given to asymptomatic inmates at institutions with active COVID-19 outbreaks, and non-outbreak sites will distribute masks to asymptomatic inmates wherever possible, prioritizing non-medical masks and taking into account the local PPE supply.

In institutions with an active COVID-19 outbreak – defined as one or more confirmed COVID-19 case(s) – CSC is implementing the use of **masks and eye protection for all staff and contractors, at all times.** Asymptomatic inmates at outbreak sites are distributed medical/procedural masks for their protection, and staff/contractors must instruct inmates on how to wear masks properly (including proper hand hygiene when placing the mask and removing it). In outbreak sites, non-medical masks may only be considered if the site has established distinct contaminated and non-contaminated zones.

Guiding Ethical Principles in Pandemics

Public health pandemics such as COVID-19 have the potential to overwhelm any jurisdiction's available human and material resources. While all decisions need to be grounded in the best available scientific literature, leaders and decision-makers must also include key ethical considerations in their decision-making processes.

An overview of the relevant ethical considerations with respect to the deployment of PPE in response to COVID-19 are attached in Annex A.

Point of Care Assessments

All staff must work proactively to identify suspect or confirmed cases of COVID-19 in inmates. All staff/contractors who are required to be within 2 metres of an inmate to provide care/perform other tasks must conduct a point of care assessment to determine, to the best of their ability, if the inmate is experiencing COVID-19 symptoms. Non-medically trained staff should ask the inmate if they are experiencing any of the following:

- Fever;
- Any respiratory symptoms (such as cough, shortness of breath, runny nose or sneezing, nasal congestion, hoarse voice, sore throat, or difficulty swallowing); or
- Any strange symptoms (such as chills, muscle aches, diarrhea, headache, loss of taste or smell).

Medically trained staff/contractors should follow their clinical training to determine if an inmate is symptomatic prior to providing care that requires they be within 2 metres of the inmate. If symptoms are present, PPE should be adjusted accordingly prior to initiating any contact and the protocol for suspected COVID-19 should be followed.

PPE Requirements

Taking into consideration infection and prevention principles and recognizing that supply chains are struggling to keep up with global demands, the following guidance is meant to provide the greatest degree of effective protection and prevention for staff/contractors and inmates as possible. In addition to the guidance below, additional measures, including PPE, may be implemented on a case by case basis in the event of an outbreak.

Universal Masking for All Asymptomatic Staff and Contractors at All Sites & Universal Masking and Eye Protection for All Staff and Contractors at Outbreak Sites

As an interim measure to contain the transmission of COVID-19, all staff and contractors are required to wear masks for the full duration of their shift, across all CSC institutions. Staff are required to wear their masks at all times unless they are in a closed space by themselves or if there is a physical barrier between them and another individual. In non-outbreak sites, preference should be given to wearing non-medical masks in order to preserve medical/procedural masks for higher risk activities.

For any sites with an active COVID-19 outbreak, medical/procedural masks and eye protection are to be worn by all staff and contractors for the full duration of their shifts. Non-medical masks may only be considered if the site has established distinct contaminated and non-contaminated zones; where the non-contaminated zones may use non-medical masks in place of medical/procedural masks.

The following are best practices when implementing universal masking and eye protection measures:

- Masks are not a replacement for physician distancing – staff and contractors must continue to maintain at least two metres of separation from inmates and other staff, whenever possible, even when following universal masking measures.
- Given resource supply limitations, a single mask may be worn for an extended period of time (e.g. donned at the beginning of the shift and continued to be worn throughout the shift) as long as it is not visibly soiled, damp, damaged, or difficult to breathe through. All staff should endeavour to maximize the longevity of each mask. See Annex C for guidelines on the extended use/reuse of masks.
- Masks are to be donned when entering the institution and removed only when eating/drinking (note: physical distancing is imperative when masks are removed for eating/drinking) or when leaving the institution at the end of the shift. In outbreak sites, the same guidance applies to the use of masks and eye protection.
- Proper hand hygiene is imperative, including before and after removing the mask. Avoid touching and manipulating the mask (if it is necessary to readjust, hand hygiene should be performed before and after adjusting the mask). Masks should not be dangled under the chin, around the neck, or placed on top of the head.
- All staff and contractors must be trained and monitored for compliance with donning, doffing, and wearing masks – and eye protection at outbreak sites – for the duration of their shift, as well as properly assessing the need for additional PPE (as per the guidance for COVID-19 positive and symptomatic inmates below).

Institutional Heads will establish a process to track and regularly monitor PPE training, the issuing of masks and eye protection, as well as the proper use of PPE (including appropriate donning, doffing, and wearing of mask and eye protection), in collaboration with Health Services.

Offenders Diagnosed with COVID-19

Staff/contractors within 2 metres of inmate	Staff/contractors within two metres of inmate on CPAP or undergoing dental work <i>requiring drilling</i>	Inmate When out of Cell
Gloves	Gloves	Medical/Procedural Mask
Medical/Procedural Mask	N95 Mask	
Face Shield (preferred)/Eye Goggles	Face Shield (preferred)/Eye Goggles	
Gown	Gown	

Notes:

1. In order to preserve PPE supplies, staff/contractors should make efforts to provide care to more than one COVID-19 positive offender at a time in order to reduce the number of times staff/contractors are required to don and doff new PPE.
2. Staff/contractors should not change PPE when providing care/performing other tasks within 2 metres of offenders diagnosed with COVID-19 unless the PPE becomes damaged or soiled. Gloves are the only PPE that should be changed after contact with an inmate and before initiating contact with a different inmate. Hand hygiene should be performed before donning new gloves and gloves should cover the wrist/cuff of the gown.
3. Face Shields/goggles may be individually issued and reused if the face shield/eye goggles are in good repair and disinfected by the user (see Annex B).
4. Gowns, if cloth, are to be stored and laundered for reuse.
5. Gloves and masks should be safely disposed of after use.

Offenders with symptoms of COVID-19

Staff/contractors within 2 metres of inmate	Staff/contractors within two metres of inmate on CPAP or undergoing dental work <i>requiring drilling</i>	Inmate When out of Cell
Gloves	Gloves	Medical/Procedural Mask
Medical/Procedural Mask	N95 Mask	
Face Shield (preferred)/Eye Goggles	Face Shield (preferred)/Eye Goggles	
Gown	Gown	

Notes:

1. Staff/contractors must doff PPE after providing care/performing other tasks within two metres for an inmate with symptoms of COVID-19. **New PPE must be donned for each inmate in this group.**
2. Face Shields/goggles may be individually issued and reused if the face shield/eye goggles are in good repair and disinfected by the user (see Annex B).
3. Gowns, if cloth, are to be stored and laundered for reuse.

- Gloves and masks should be safely disposed of after use.

Collecting Nasopharyngeal Swabs for COVID-19 Testing

Regulated health professional collecting swab & any staff within 2 metres of inmate	Inmate*
Gloves	Medical/Procedural Mask
Medical/Procedural Mask	
Face Shield (preferred)/Eye Goggles	
Gown	

*This procedure should be followed regardless of the symptomatic/asymptomatic status of the inmate.

Notes:

- The health professional performing the test, along with any other staff within 2 metres, must don PPE prior to entering the room. The test should be performed in a closed room with as few people in the room as possible.
- The inmate should already be wearing a medical/procedural mask at all times while outside of their cell. For the procedure, the inmate should be instructed to perform hand hygiene, then lower their mask so that only their nose is exposed, with their mouth and chin remaining covered.
- Persons performing the specimen collection should stand to the side of the patient, not directly in front of them, and should move away from the patient (to more than 2 metres away) as soon as the procedure is complete.
- The inmate should be instructed to perform hand hygiene and immediately replace the mask to its proper position over the nose, mouth, and chin. If their mask has become contaminated or soiled (e.g. from coughing or sneezing), they should be given a new mask.
- Following the procedure, face shields/goggles that have been individually issued can be reused if they are in good repair and disinfected by the user (see Annex B)
- Gowns, if cloth, are to be stored and laundered for reuse.
- Gloves and masks should be safely disposed of after use.

CPR

First Responders	Patient*
Gloves	Medical/Procedural Mask
N95	
Face Shield (preferred)/Eye Goggles	
Gown	

*Patient refers to any staff, contractor or offender, regardless of symptomatic/asymptomatic status.

Notes:

- All first responders must don PPE prior to initiating CPR.
- A medical/procedural mask must also be placed on the patients face.
- Face Shields/goggles may be individually issued and reused if the face shield/eye goggles are in good repair and disinfected by the user (see Annex B).
- Gowns, if cloth, are to be stored and laundered for reuse.
- Gloves and masks should be safely disposed of after use.

An important element of infection prevention and control is proper donning and doffing of PPE, described in further detail later in this document.

In COVID-19 Transitional Units, or zones dedicated to only COVID-19 positive inmates, the same PPE can be worn as long as the staff/contractor stays within the unit or zone. The entirety of these areas are considered contaminated, and as such, gowns, masks, and eye protection only need to be changed if they become soiled or damaged. Gloves should be changed and hand hygiene should be performed after contact with an inmate and before initiating contact with a different inmate. **Staff must doff PPE, as well as perform hand hygiene, replace their mask, and replace or repurpose their eye protection (as per Annex B), before leaving these contaminated units or zones.** The goal is to prevent transmission of the virus from contaminated zones to areas of the site that are free from contamination. Donning and doffing should take place in designated areas – these areas should include: a hand washing station equipped with alcohol-based hand rub and/or soap and water; no-touch receptacles for the disposal of gloves and non-reusable face shields and gowns; and no-touch laundry hampers (ideally lined with plastic liners) for reusable gowns.

Donning and Doffing

Proper donning and doffing techniques must be followed at all times. Instructions for donning and doffing are included in Annex D.

Staff/contractors will receive instruction on how to don and doff PPE when wearing it for the first time. Institutional Heads will establish a process to track and regularly monitor PPE training, the issuing of masks and eye protection, as well as the proper use of PPE (including appropriate donning, doffing, and wearing of mask and eye protection), in collaboration with Health Services.

When donning and doffing prior to providing care/performing other tasks with symptomatic or COVID-19 positive offenders, all staff/contractors are required to have an observer (buddy) who will observe and verbally correct if the PPE is not being donned or doffed properly.

Institutional Heads, will establish a location close to the point of care for staff/contractors to doff PPE after providing care/performing other tasks with symptomatic inmates or inmates with a positive COVID-19 diagnosis. The area where PPE is donned should be separated from the area where it is removed and discarded. These areas should be clearly marked.

PPE must be properly disposed of to prevent the spread of infection. Point of care and doffing areas should be equipped with the following to allow for the proper disposal of contaminated PPE:

- Alcohol-based hand rub and/or designated hand washing sinks with soap and paper towels;
- An adequate number of no-touch waste receptacles for gloves, masks, non-reusable eye protection, non-reusable gowns, and paper towels;
- An adequate number of no-touch laundry hampers (with plastic liners) for reusable gowns;
- Accel wipes or Ultra Swipes cleaning products (or an alternate approved product) for the reprocessing of eye protection, if reusable (see Annex B).

N95 and KN95 Respirators

If an N95 mask is warranted, as per the guidance issued above, it is important to ensure the mask is the correct size (as per the user's mask fit test) and sealed properly around the nose and mouth. Users should perform seal checks, prior to entering the room or area where airborne precautions are required, as per their training.

If KN95 masks are used, they do not require the same fit testing as N95 masks. However, these masks still require the user to perform a seal check prior to entering the room or area where airborne precautions are required. See Annex E for instructions on how to don and seal check KN95 masks.

References

- Public Health Agency of Canada. (2020). COVID-19 Technical Brief: Masking and face shields for full duration of shifts in acute healthcare settings. <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/technical-brief-masking-face-shields-full-duration-shifts-acute-healthcare-settings.html>
- Public Health Agency of Canada. (2020). Infection Prevention and Control for COVID-19: Interim Guidance for Long Term Care Homes. <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevent-control-covid-19-long-term-care-homes.html>
- Public Health Agency of Canada. (2020). Infection Prevention and Control for COVID-19. Second Interim Guidance for Acute Healthcare Settings. <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/infection-prevention-control-covid-19-second-interim-guidance.html>

Annex A

Ethical Considerations for PPE Use During a Pandemic

- **Individual liberty:** Respect for an individual's autonomy may need to be restricted in order to protect the public from serious harm.
- **Proportionality:** Any restrictions to individual liberties that are taken to protect the public from serious harm should be least restrictive and not bring about greater harm.
- **Reciprocity:** This principle requires that society and organizations support those who face a disproportionate burden in protecting the public good and take steps to minimize that burden to the degree possible.
- **Equity:** This principle, like all principles, considers the needs of staff, contractors, volunteers and offenders. Decision makers need to preserve as much equity as possible to protect the safety and health of all groups.
- **Trust:** Decision-makers are often forced during pandemics to implement various control measures. Ensuring that PPE decisions are grounded in evidence, ethical principles, are transparent and include stakeholder input, to the greatest extent possible, will help engender trust.
- **Solidarity:** Pandemics highlight the interdependence within an organization, between organizations and between jurisdictions. There is a common purpose in promoting equitable care, including in PPE utilization, to ensure the greatest public health benefit both within an organization and across all jurisdictions.
- **Stewardship:** All decisions regarding resource allocation aim to provide the best possible outcomes for all individuals. Decision-makers should look to maximize the benefits when allocating resource and aim for good and equitable outcomes. The intent is to maximize good outcomes and minimize burdens in an equitable manner.

Annex B

Implementing extended use of eye protection.

Extended use of eye protection is the practice of wearing the same eye protection for repeated close contact encounters with several different patients. Extended use of eye protection can be applied to disposable and reusable devices.

- Eye protection should be removed and reprocessed if it becomes visibly soiled or difficult to see through or when you are removing it and planning to store it for later use.
 - If a disposable face shield is reprocessed, it should be dedicated to one employee/contractor and reprocessed whenever it is visibly soiled or removed (e.g., when leaving the isolation area) prior to putting it back on. See protocol for removing and reprocessing eye protection below.
- Eye protection should be discarded if damaged (e.g., if face shield can no longer fasten securely to the provider, if visibility is obscured and reprocessing does not restore visibility).
- Staff/contractors should make efforts to not to touch their eye protection. If they touch or adjust their eye protection they must immediately perform hand hygiene.

Process for cleaning and disinfecting eye protection (reprocessing):

When manufacturer instructions for cleaning and disinfection are unavailable, such as for single use disposable face shields, consider:

1. Perform hand hygiene and don gloves. If the eye protection is visibly soiled, wash first with soap and water and continue with the remaining steps for disinfection.
2. While wearing gloves, carefully wipe the *inside*, followed by the *outside* of the face shield or goggles using an Accel wipe or Ultra Swipe (or approved alternate product).
3. Carefully wipe the *outside* of the face shield or goggles using an Accel wipe or Ultra Swipe (or approved alternate product).
4. Wipe the outside of face shield or goggles with clean water to remove residue.
5. Fully dry (air dry or use clean absorbent towels).
6. Remove gloves and perform hand hygiene.
7. Store in a designated clean area.

Sources:

BC CDC: http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID19_EyeFacialProtectionDisinfection.pdf

Annex C

Guidance on Extended Use of Masks For Activities Involving Close Proximity to Asymptomatic Individuals

To remove facemask with intent to reuse:

1. Perform hand hygiene ;
2. Remove mask :
 - a. Ear-Loop mask style: Remove mask by holding the ear loops.
 - b. Tie Back: Remove mask by untying lower ties first. Untie upper ties last ;
3. After removing mask, visually inspect it. If soiled, torn, or saturated the mask should be discarded;
4. If the mask is not visibly soiled, torn or saturated, carefully store the mask in a safe location in a brown paper bag or between two pieces of paper/paper towel with your name on it and marked 'front' and 'back' on the two sides. Insert your mask so that the front of the mask faces the side of the bag labelled front; and
5. Perform hand hygiene.

To re-apply used mask:

1. Perform hand hygiene ;
2. Minimally handle the mask and re-apply; and
3. Perform hand hygiene.

A single mask can be worn between all activities requiring less than 2 metres of physical distancing so long as all individuals are asymptomatic.

Staff/contractors who are frequently required to be within 2 metres of other staff/contractors or offenders should wear their mask (as required) for 2 days before being replaced.

Staff/contractors who are able to carry out their duties and physically distance more consistently should aim to use the same mask for 5 days.

Given the international shortage of medical/procedural masks all staff/contractors should make every effort to maximize the longevity of each mask so that we can collectively preserve supply for higher risk activities.

Donning Personal Protective Equipment (PPE)

Preparation

- Ensure that PPE is not damaged and is the right size
- Remove all jewellery and tie back long hair
- **WASH HANDS**

1 Gown

- Put on gown, tie at neck and waist



2 Mask or N95

Mask

- Cover nose and mouth with surgical/procedural mask, tie or secure straps around ears
- Shape the mask to your nose



N95

- Hold the N95 in the palm of your hand, with the straps hanging on either side
- Place mask over your chin and then nose
- Secure the upper strap on the top of the head first, then bring the lower strap over the first strap and secure at neck/under hair
- Shape the mask to your nose and check for a good seal with fingers



3 Face Shield

- Cover eyes with protective glasses or face shield



4 Gloves

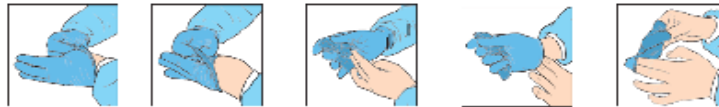
- Insert hands into gloves
- Extend to cover the wrist of the gown



Doffing Personal Protective Equipment (PPE)

1 Gloves

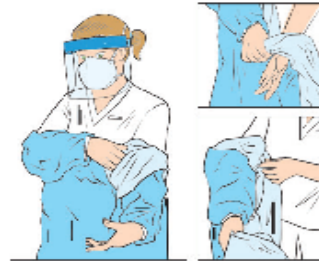
- Grasp the outer surface of palm area of one glove and peel off
- Rumples glove into a ball and hold in the gloved hand
- Slide the bare fingers under the band of the other glove without touching the outside and peel off
- Dispose of the gloves in the appropriate container



Perform hand hygiene

2 Gown

- Unfasten ties without contamination
- Touching only the inside of the gown, pull the gown forward
- With one hand grasp the inside of the opposite sleeve, slide it forward without turning it over to release the hand
- With your free hand, proceed in the same way to remove the other hand
- Turn gown inside out and roll into a bundle
- Dispose of the gown in the appropriate container



Perform hand hygiene

3 Face Shield

- Handle the face shield or protective goggles from the sides or back, avoid touching the front
- Dispose of the face shield or goggles in the appropriate container



Perform hand hygiene

4 Mask or N95

Mask

- Detach the top and bottom ties or remove straps from ears
- Pull mask forward avoiding touching the front
- Dispose of mask in the appropriate container



Perform hand hygiene

N95

- Tilt head slightly forward, pass the lower strap over the head and then the top strap, avoiding touching the filter
- Bring respirator away from face
- Dispose of N95 in the appropriate container



Perform hand hygiene

Annex E







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Instructions for masks with ear loops (note, images may differ from actual product):

<p>1. Donning this mask involves proper placement of the straps around the ears. Hold the mask by the ear loops, with nosepiece up. Place a loop around each ear.</p>	
<p>2. These masks are equipped with a nosepiece that is meant to be molded to the user's facial structure. Using your index fingers press gently against the metal strip until it molds to a snug fit.</p> <p>3. Ensure you adjust the nosepiece. Placing fingers from both hands on top side of nosepiece. Place both thumbs on underneath side of nosepiece and bend slightly at center of nosepiece.</p> <p>4. Ensure a good fit around your face by pulling the bottom of the mask over your mouth and ensure your chin is inside the mask.</p>	
<p>5. After donning the filtering face piece, perform a face fit check while wearing any accessories (e.g., glasses, goggles, jewelry) that will be worn during use to verify a snug fit around the contour of the mask.</p> <ul style="list-style-type: none"> • Completely cover the outside of the mask with both hands. Do not push the mask against your face. With your hands in place on the surface of the mask, exhale or breathe out sharply. If you feel air blowing on your face or eyes, the mask needs to be adjusted. To adjust, repeat steps 2 to 5. When mask is a good fit, you will not feel any air blowing on your face or eyes. If you can't get a good fit, try a different model mask. 	
<p>6. Remove the mask by carefully drawing both ear loops away from the ears then forward away from the face. The front may be contaminated, so remove slowly and carefully.</p>	
<p>7. Note, this product is not a NIOSH approved N95 respirator.</p>	

TEST RESULTS: To expand the availability of N95 masks and respirators during the pandemic, this product has been tested by the Public Health Agency of Canada against GB2626-2006 to determine its acceptability. This standard the NIOSH equivalent that is used outside of North America to approve KN95 masks. This is in accordance with Health Canada policies (<https://www.canada.ca/en/health-canada/services/drugs-health-products/medical-devices/masks-respirators-covid19.html#a4>). This product was tested at the same flowrate and particle concentration used by NIOSH for N95 filtering facepiece devices and found to have a particle filtration efficiency of greater than 95%.