

HOME VISIT PPE PROCEDURE FOR PATIENTS WITH RESPIRATORY ILLNESSES

This procedure was developed by a workgroup of the Division of Palliative Care, Department of Family Medicine at McMaster University, Hamilton, Canada, with input from regional Infectious Disease experts. An iterative, consensus-based approach was used that included regional and national webinars.

Workgroup: Drs Brian Kerley MD, Lana Tan MD, Denise Marshall MD, and Jose Pereira MD (Co-Authors), with input from Infectious Disease experts and many clinicians who regularly do home visits, using an iterative, consensus-based process.

GOAL OF THE PROCEDURE

This procedure is intended to allow a health care worker to make a safe home visit to a patient with respiratory symptoms who may or may not have Covid-19. It is not intended to be a protocol for visits to lower risk patients (situations where the patient and everyone in their home pass screening). In lower risk situations, the provider is advised to consider what degree and amount of Personal Protective Equipment (PPE) to use. This may vary according to local protocol and availability of the various elements of PPE. It is also assumed that the provider knows how to correctly don PPE.

IMPORTANT!

- **ENSURE** you are **ACQUAINTED WITH** and **APPLY** your **regional and the provincial health authority and public health agency guidelines on WHEN AND WHEN NOT TO USE PPE**. For Ontario, see http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/2019_guidance.aspx
- **Monitor your local, provincial and national guidelines on an ongoing basis as these may be updated.**
- **Similarly, monitor the website of the Division of Palliative Care (fhs.mcmaster.ca/palliativecare/) as this procedure may also undergo future modifications. Please share any improvements you may see to the steps so we can continue improving to ensure the safety to patients and health care professionals. Please send suggestions to palcare@mcmaster.ca**
- **VIRTUAL VISITS suffice in many situations. Home visits should be done only when clinically required (acquaint yourself with the province's guidelines and resources on this)**
- **The procedure requires that you are acquainted with the sequence of donning and doffing PPE. There are a number of different recommended sequences from various local, provincial, national and international organizations e.g. <https://youtu.be/bG6zISnenPg>**

PROCEDURE

Phase 1: PREPARING

- 1) **Pre-visit screening:** All care providers should self-monitor prior to the visit using current provincial and employer screening practices.
- 2) Conduct a virtual visit or telephone call prior to going to the home. Do history taking and as much discussion as you can over the phone or video, so that only a physical exam will take place in the home and whatever discussion is needed as a result of your clinical assessment. Request that a family member or caregiver be in the home to help you exit the home safely afterwards.
- 3) Ask the family/caregivers to
 - place a garbage bin lined with a garbage bag just inside the entrance of the home/apartment.
 - ensure the patient is wearing a surgical mask when you arrive. The family/caregivers should also put on surgical or cloth masks when you arrive. (Remember to bring extra masks in case they do not have any)
 - if they have hand sanitizer, have the patient do hand hygiene when you arrive.
 - keep pets and children in a separate area, away from the front door where you will set up your workstation, and ask them to request that other people not visit while you are there. Try to limit the number of people in the home to the patient and one caregiver, if possible, during your visit. Advise them that you will need to maintain physical distancing as much as possible during your visit.
- 4) Print 2 copies of the DOFFING PPE CUE SHEET, one for outside the door and one for inside the door.
- 5) Bring with you:
 - a container of alcohol based hand rub (ABHR)¹,
 - a container of disinfectant wipes (or ziplock bag containing 2-3 disinfectant wipes),
 - a large plastic garbage bag,
 - a small plastic bag (for carrying supplies into the home),
 - 2 empty pails - one labelled CLEAN and one DIRTY (a lid for the dirty pail would be ideal),
 - extra earloop masks for patient and caregivers if they do not have any),
 - 2 copies of the DOFFING PPE CUE SHEET (See appendices),
 - your PPE², and
 - 2-3 extra sets of gloves in a second ziplock bag,
 - Any diagnostic equipment you need (eg. stethoscope, oximeter).

Phase 2: ENTERING THE HOME

- 1) Call the house from the driveway and confirm that the family has a mask for the patient and any caregivers in the house. If they do have masks, you do not need to bring spare masks into the home. Ask everyone to don their masks.
- 2) Place the empty pails outside the door with lid(s) off, with the CLEAN pail closest to the door so that it can be easily reached from the threshold. Put one of the cue sheets on the ground next to the pails, secured so it doesn't blow away
- 3) Don PPE outside the home.
- 4) Enter the home carrying the small plastic bag in which you have placed the disinfectant wipes, the spare gloves, the large plastic garbage bag, the ABHR, the spare mask (if needed) and your diagnostic equipment.
- 5) Place the small plastic bag on the floor inside the doorway.

¹ ABHR sanitizer must be at least 60% ethanol.

² PPE = Personal Protective Equipment, and in this instance will include an isolation gown, a mask (a surgical mask will suffice, unless there will be aerosol generating procedures in the home such as deep nasopharyngeal or tracheal suctioning (but not oral suctioning), CPAP, BIPAP or high flow oxygen >6 lpm by nasal prongs, in which case an N95 respirator is needed), eye protection (goggles, faceshield, or a mask with an integrated visor) and gloves

- 6) Lay the unopened large garbage bag flat on the floor next to the patient's garbage bin just inside of the front of the home. This will serve as a clean work surface. Remove from the small plastic bag the disinfectant wipes, the ABHR, the spare gloves and the second copy of the DOFFING PPE CUE SHEET and place these on the clean work surface.
- 7) Bring the small plastic bag containing your diagnostic equipment and mask for patient (if needed) to the patient's room. Ensure the patient is wearing a mask and does hand hygiene with their own ABHR if they have not already done so. Do NOT offer your own ABHR for this purpose.
- 8) Perform physical exam then place the used equipment back in the small plastic bag.

Phase 3: LEAVING THE HOME

- 1) With full PPE still on, bring the small plastic bag with used equipment to the front door. Lay the plastic bag on the floor BESIDE the clean large garbage bag work surface so as not to contaminate the work surface.
- 2) Perform hand hygiene on your gloves with the ABHR (remember, you have now contaminated the ABHR container). Alternatively, gloves may be removed and discarded into the patient's garbage bin, hand hygiene is performed with ABHR, then fresh gloves are donned. The spare sets of gloves may also be useful if a glove is torn in the process.
- 3) With a disinfectant wipe, clean your diagnostic equipment and lay the clean equipment on the large garbage bag. If still wet, use the same disinfectant wipe to clean the container of ABHR, the ziplock bag containing the spare gloves, and the inner door handle to the home.
- 4) After a minute, repeat step 3 with a fresh wipe.
- 5) Touching only the clean door handle, open the door and drop the clean equipment and ABHR into the clean pail outside the door. Keep the ABHR accessible as you will need it again.
- 6) Discard the small bag that had contained the equipment and the empty ziplock bag that had contained the disinfectant wipes into the patient's garbage bin.
- 7) Doff gown and gloves inside the front door and put in the patient's garbage bin. Don't push down.
- 8) Exit the house touching only the cleaned door handle, leaving behind the DOFFING PPE CUE SHEET on the large flat garbage bag.
- 9) Outside of the door, perform hand hygiene with ABHR.
- 10) If wearing goggles or faceshield with separate mask, remove goggles or face shield by touching only the most posterior parts of the arms, and place in the DIRTY pail.
- 11) Remove mask touching only the back of the earloops, and put it in the DIRTY pail with the eyewear. If you have a used N95 mask, it may be prudent to save your mask, as techniques for reprocessing N95 masks may be coming. If so, place it in the DIRTY pail to bring with you for later reprocessing.
- 12) Put the outdoor copy of the DOFFING PPE CUE SHEET in the dirty pail.
- 13) Hand hygiene with ABHR.
- 14) Put the lid on the dirty pail. Don't touch the goggles/faceshield or mask.
- 15) Pack your car.

Phase 4: AFTER THE VISIT AND REPROCESSING

- 1) At your clinical base, don fresh gloves and eye protection. A face shield is ideal. Consider wearing a washable cloth gown also, in case of a splash.
- 2) Remove already cleaned equipment from the CLEAN pail then disinfectant wipe the pail.
- 3) Prepare a solution of 0.1% sodium hypochlorite (1 part household bleach to 49 parts water, e.g. 50 ml bleach added to 2450 ml of water).
- 4) With PPE still on, open the DIRTY pail, remove any masks and cue sheets and place in garbage, making sure you don't touch the outside of the garbage bin/box with the masks or gloves as these are considered contaminated. Consider placing N95 masks in a paper bag (such as a large leaf bag) for storage and potential future reprocessing.
- 5) Put some dish soap and water carefully in the DIRTY pail so as not to splash
- 6) Wash goggles, rinse with water then place in 0.1% sodium hypochlorite solution to soak for 10 minutes.
- 7) Wash out the pail thoroughly then disinfectant wipe it. Disinfectant wipe the dish soap bottle and your faceshield.
- 8) Remove gloves and dispose in garbage, and remove gown if worn.

9) Hand hygiene with ABHR.

Notes:

- a. You could consider bins lined with garbage bags instead of pails, but you would need to exercise caution in tying and untying the bags so as not to aerosolize virus with a puff of air as you gather the bag. You would need to have gloves on for closing and opening the bags and it would require hand hygiene after each step. Pails are easier to carry.
- b. You may need to modify your exit procedure, particularly the LEAVING HOME Step 3, depending on the configuration of the front door or doors of the house. This is where assistance from a family member is valuable.
- c. You may need to modify this procedure if you need to do multiple visits without returning to home or office in between. You will need several sets of PPE (one for each visit). If supplies of PPE are limited, it may be possible to use the same mask and eye protection for several successive visits, provided you do not touch either item while you are not wearing gloves, and provided that you can safely drive your car with both items on, however Ontario Health recommends that “once you exit the patient’s home you should immediately dispose of the mask in the appropriate receptacle”³. Once a mask and eyewear are removed, there is a risk of contaminating the skin when they are re-applied, so once removed they should be discarded or reprocessed as appropriate.
- d. 0.1% sodium hypochlorite solution should be mixed fresh every 24 hours
- e. We found varying opinions regarding the cleaning of used eye protection (goggles and face shields). Some suggest using only disinfectant wipes while others suggest a diluted bleach soak. Health Canada recommends cleaning with soap and water then disinfecting using an approved hard surface disinfectant with a DIN number, or alternatively, a bleach soak⁴. The theoretical advantage of the bleach soak is that it will penetrate the hinges and other small parts of the eye protection, and that it conserves disinfectant wipes as these may be in short supply. Health Canada states that eyewear may be disinfected (after appropriate cleaning with soap and water) using a 0.1% sodium hypochlorite solution soak (20 ml household bleach to 980 ml of water or 1 part bleach added to 49 parts water), which is an approved low-level disinfectant, for 10 minutes⁵. In a previous version of this protocol, we had suggested 0.5% sodium hypochlorite (1 part bleach to 9 parts water) which remains an approved high level disinfectant.

References:

1. NETEC Hand Hygiene and PPE video: <https://youtu.be/bG6zISnenPg>
2. The CDC Donning and Doffing PPE protocol
3. The Ontario Public Health Donning and Doffing PPE protocol
4. The HHS donning and doffing PPE protocol
5. OMA PPE recommendations: http://fhs.mcmaster.ca/palliativecare/documents/OMAPPE_Recommendations_FINAL.pdf
6. IPAC document: <https://www.publichealthontario.ca/-/media/documents/ncov/updated-ipac-measures-covid-19.pdf?la=en>
7. Ontario Health: Personal Protective Equipment (PPE) Use During the Covid-19 Pandemic, updated May 10, 2020: https://www.ontariohealth.ca/sites/ontariohealth/files/2020-05/Ontario%20Health%20Personal%20Protective%20Equipment%20Use%20During%20the%20COVID-19%20Pandemic_rev10May20%20PDF_v2.pdf
8. Updated: Public health management of cases and contacts associated with coronavirus disease 2019 (COVID-19) Updated April 10, 2020: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/interim-guidance-cases-contacts.html>

³ Ontario Health: Personal Protective Equipment (PPE) Use During the Covid-19 Pandemic, updated May 10, 2020: https://www.ontariohealth.ca/sites/ontariohealth/files/2020-05/Ontario%20Health%20Personal%20Protective%20Equipment%20Use%20During%20the%20COVID-19%20Pandemic_rev10May20%20PDF_v2.pdf

⁴ Public health management of cases and contacts associated with coronavirus disease 2019 (COVID-19) Updated April 10, 2020: <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/interim-guidance-cases-contacts.html>

⁵ Ibid

Phase 1: PREPARING CUE SHEET

1. **Prepare for the visit with a virtual visit or telephone call prior to going to the home.**
 - a. Do your history taking and as much discussion as you can over the phone or video.
 - b. Try to have a family member or caregiver in the home to help.
2. Ask the family to:
 - a. Place a large garbage bin lined with a garbage bag just inside the front door.
 - b. All family, caregivers and patient to put on masks when you arrive.
 - c. They and patient to do hand hygiene when you arrive.
 - d. Keep pets and children in a separate area, away from the front door, and other people not to visit while you are there.
 - e. Advise them you will need to maintain physical distancing as much as possible during your visit.
3. Print 2 copies of the DOFFING PPE CUE SHEET, one for outside the door and one for inside the door.
4. Bring with you:
 - a. a container of alcohol based hand rub (ABHR)⁶,
 - b. a container of disinfectant wipes (or ziplock bag containing 2-3 disinfectant wipes),
 - c. a large plastic garbage bag,
 - d. a small plastic bag (for carrying supplies into the home),
 - e. 2 empty pails - one labelled CLEAN and one DIRTY (a lid for the dirty pail would be ideal),
 - f. extra earloop masks for patient and caregivers if they do not have any),
 - g. your PPE⁷,
 - h. 2-3 extra sets of gloves in a second ziplock bag, and
 - i. Any diagnostic equipment you need (eg. stethoscope, oximeter).

Hand Hygiene Cue Sheet

Palms

Backs of hands

Fingers interlaced

Thumbs

Cupped fingers

Tips of fingers

Rub till done

Ref: National Emerging Special Pathogen Training and Education Center <https://youtu.be/bG6zISnenPg>

Phase 2: ENTERING THE HOME CUE SHEET

- 1. Call the house from the driveway and confirm patient and family/caregivers are wearing masks. Take in spare masks if they don't have masks).**
- 2. Place the empty pails outside the door with lid(s) off, with the CLEAN pail closest to the door (easily reachable from the threshold).**
- 3. Put one of the DOFFING PPE CUE SHEETS on the ground next to the pails, secured so it doesn't blow away**
- 4. Don PPE outside the home.**
- 5. Enter the home carrying the small plastic bag containing your equipment (disinfectant wipes, the spare gloves, the large plastic garbage bag, the ABHR sanitizer, the spare mask(s) if needed and your diagnostic equipment).**
- 6. Place the small plastic bag on the floor inside the doorway.**
- 7. Lay the unopened large garbage bag flat on the floor next to the patient's garbage bin just inside the doorway (this is now your clean work surface).**
- 8. Remove from the small plastic bag the disinfectant wipes, the ABHR, the spare gloves and the second copy of the DOFFING PPE CUE SHEET and place these on the clean work surface.**
- 9. Bring the small plastic bag containing your diagnostic equipment and mask for patient (if needed) to the patient's room.**
- 10. Patient to put on the earloop mask and do hand hygiene with their own ABHR sanitizer if they have not already done so. Do NOT offer your own ABHR.**
- 11. Perform physical exam, and then place the used equipment back in the small plastic bag.**

Phase 3: DOFFING PPE CUE SHEET

- 1. Glove hygiene with ABHR OR doff gloves into garbage, do hand hygiene & don fresh gloves.**
- 2. Wipe diagnostic equipment and place on large garbage bag.**
- 3. Wipe ABHR container, ziplock bag containing spare gloves, and inner door handle.**
- 4. Wait 1 minute then repeat step 3.**
- 5. Open door touching only the clean handle and drop the cleaned equipment and ABHR container in the CLEAN pail outside the door. Keep the ABHR accessible, you will need it again.**
- 6. Discard small bag that had contained equipment and the ziplock bag that had contained disinfectant wipes into the big garbage can.**
- 7. Doff gown and gloves inside the front door and put in big garbage can. Don't push down.**
- 8. Exit house, leaving behind this cue sheet and the large flat garbage bag on the floor. Touch only the clean door handle.**
- 9. Hand hygiene with ABHR.**
- 10. If wearing goggles/faceshield and separate mask, remove goggles/faceshield by touching only the most posterior parts of the arms, and place in the empty "DIRTY" pail.**
- 11. Remove mask by touching only the elastic loops & put in "DIRTY" pail.**
- 12. Put this cue sheet in "DIRTY" pail and put lid on pail.**
- 13. Hand hygiene.**
- 14. Pack your car.**

Phase 4: AFTER THE VISIT CUE SHEET

REPROCESSING CUE SHEET AT OFFICE/WORKPLACE

- 1. Don fresh gloves, faceshield and cloth gown.**
- 2. Remove clean equipment from the CLEAN pail and wipe out the pail with disinfectant wipes.**
- 3. Prepare a solution of 0.1% sodium hypochlorite (1 part household bleach to 49 parts water or 50ml bleach to 2450 ml water.)**
- 4. With PPE still on, open the DIRTY pail, remove cuesheet and masks and place in garbage (or if N95, in paper bag for later reprocessing).**
- 5. Put some dish soap and water carefully in the pail so as not to splash.**
- 6. Wash dirty eyewear, rinse with water then place in 0.1% sodium hypochlorite solution to soak (10 min).**
- 7. Wash out the DIRTY pail thoroughly then disinfectant wipe it. Wipe dishsoap bottle and faceshield.**
- 8. Remove vinyl exam gloves, and gown.**
- 9. Hand hygiene with ABHR.**