



AT THE FOREFRONT

UChicago
Medicine

COVID19 in the Nursing Home: PPE & Physical Environment

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Disclosures

- I have no disclosures to report.

Overview

Necessary PPE and safe alternatives

Additional supplies to order

Appropriate donning/doffing of PPE
for COVID-19 patients and PUI

Role of environmental services

Personal Protective Equipment

Employers should select appropriate PPE and provide it to HCP

HCP must receive training on and demonstrate an understanding of:

- When to use PPE
- What PPE is necessary
- How to properly don, use, and doff PPE in a manner to prevent self-contamination
- How to properly dispose of or disinfect and maintain PPE
- Limitations of PPE.

Any reusable PPE must be properly cleaned, decontaminated, and maintained after and between uses. Facilities should have policies and procedures describing a recommended sequence for safely donning and doffing PPE

Necessary PPE and Safe Alternatives (as per CDC)

Personal Protective Equipment - LTCF staff *must* be provided with the personal protective equipment (PPE) needed to keep themselves and the residents safe, including gloves, gowns, facemasks, respirators (if available and fit-tested), and eye protection.

According to the CDC, for known or suspected COVID-19 cases, respirators (eg, N95 masks) should be “prioritized for procedures that are likely to generate respiratory aerosols” (such as collecting respiratory specimens) and “facemasks are an acceptable alternative when the supply chain of respirators cannot meet the demand.”

If respirators are available, facilities should immediately conduct fit testing of healthcare provider staff.

Necessary PPE and Safe Alternatives (as per CDC)

It is important to note that the presence of PPE may frighten residents, particularly those who are cognitively impaired.

- Staff should introduce themselves at the resident's doorway prior to donning PPE and notify the resident that they will be entering the room with their face covered.

Staff should receive training on how to select, don, and doff PPE, and they should demonstrate competence before being allowed to return to work.

- This should include all staff who provide direct resident care (eg, nurses or nurses aides) and others who might come in contact with residents or their environment (eg, environmental services, food services, maintenance workers).

Respirator or Facemask

Put on a respirator or facemask (if a respirator is not available) before entry into the patient room or care area.

N95 respirators or respirators that offer a higher level of protection should be used instead of a facemask when performing or present for an aerosol-generating procedure (AGP)

- AGP examples: nebulizer treatments, high flow oxygen, manual ventilation, open suctioning, CPR, intubation/extubation, bronchoscopy, NIV/BiPAP/CPAP, etc

Disposable respirators and facemasks should be removed and discarded after exiting the patient's room or care area and closing the door. Perform hand hygiene after discarding the respirator or facemask

If reusable respirators (e.g., powered air purifying respirators [PAPRs]) are used, they must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use.

Appropriate Mask Use

Standard is to use a new N95 mask for each patient encounter, and to discard it after the patient encounter

In case the quantity of N95 masks is insufficient:

- Guidelines for extended use (one single continuous use)
- Guidelines for reuse (donning and doffing the same mask multiple times)

For full details regarding extended use and reuse of masks, please see ppt titled Healthcare Worker Safety

Note: Extended use is preferred to reuse

FIT testing

Staff PPE should be based on guidance from the CDC but develop a plan to have ALL STAFF FIT TESTED

This may be an area where health systems or the Dept of Health can support our local Nursing Homes by offering support for staff FIT Testing

Eye protection

Put on eye protection (i.e., goggles or a disposable face shield that covers the front and sides of the face) upon entry to the patient room or care area.

Personal eyeglasses and contact lenses are NOT considered adequate eye protection.

Remove eye protection before leaving the patient room or care area.

Reusable eye protection (e.g., goggles) must be cleaned and disinfected according to manufacturer's reprocessing instructions prior to re-use. Disposable eye protection should be discarded after use.

Gloves

Put on clean, non-sterile gloves upon entry into the patient room or care area.

- Change gloves if they become torn or heavily contaminated.

Remove and discard gloves when leaving the patient room or care area, and immediately perform hand hygiene.

Vinyl gloves can be very difficult to slip over hands that have been sanitized with alcohol-based sanitizer. Nitrile gloves are much easier to use.

Gowns

Put on a clean isolation gown upon entry into the patient room or area

- Change the gown if it becomes soiled

Remove and discard the gown in a dedicated container for waste or linen before leaving the patient room or care area

- Disposable gowns should be discarded after use
- Cloth gowns should be laundered after each use.

One option mentioned by the Department of Health is to use cloth gowns assigned to each room. May hang on a hook inside the door

Gowns

If there are shortages of gowns, they should be prioritized for:

- aerosol-generating procedures
- care activities where splashes and sprays are anticipated
- high-contact patient care activities that provide opportunities for transfer of pathogens to the hands and clothing of HCP. Examples include:
 - dressing
 - bathing/showering
 - transferring
 - providing hygiene
 - changing linens
 - changing briefs or assisting with toileting
 - device care or use

Other supplies to order:

Isolation carts

- May need 2 or 3 times the number you normally have

Isolation trash cans – double or triple your numbers as well

- Will also need the same increase in red bags for bio-waste and yellow bags for linen
- Your biohazard disposal company should be ready to receive 2-3x the usual amount of waste. Make sure they are.

Other supplies to order:

Hand sanitizer

- Hand hygiene supplies should be readily available to all personnel in every care location
- HCP should perform hand hygiene by using ABHR with 60-95% alcohol or washing hands with soap and water for at least 20 seconds. If hands are visibly soiled, use soap and water before returning to ABHR.
- HCP should perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and after removing PPE, including gloves. Hand hygiene after removing PPE is particularly important to remove any pathogens that might have been transferred to bare hands during the removal process.

Bleach wipes

- Hard to keep isolation carts stocked with these, but just important as hand sanitizer
- Good for surfaces & stethoscopes
- Not good for pulse oximeters and touchless thermometers
- Can sanitize pulse oximeters with bleach wipes and then wipe them after a minute with computer screen wipes to remove the film

Other supplies to order:

To safely accommodate frequent vital signs testing in NH patients, especially temperature and pulse ox, increase equipment including portable thermometers and pulse oximeters

- TIP: proactively remove fingernail polish from all current residents to enhance pulse ox accuracy
- Ideal: vitals equipment dedicated to each room
- Next to ideal: cohort vitals equipment along wards

Touchless thermometers are quick but must be decontaminated between patients

- Ideally a touchless thermometer would be dedicated to each patient with confirmed or suspected COVID.
- If staffing is an issue, forgo BP checks and focus on pulse oximetry/pulse rate and temperatures.

Use Personal Protective Equipment (PPE) When Caring for Patients with Confirmed or Suspected COVID-19

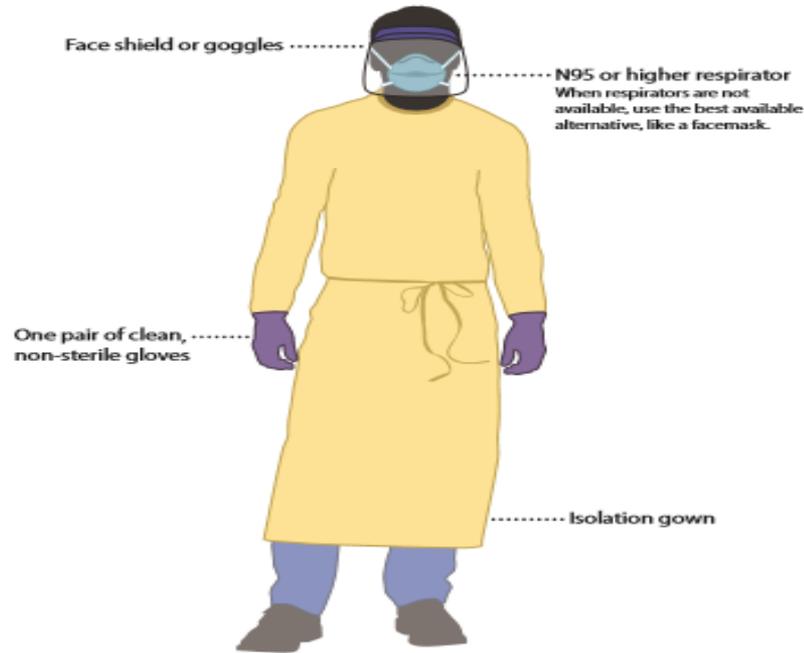
Before caring for patients with confirmed or suspected COVID-19, healthcare personnel (HCP) must:

- **Receive comprehensive training** on when and what PPE is necessary, how to don (put on) and doff (take off) PPE, limitations of PPE, and proper care, maintenance, and disposal of PPE.
- **Demonstrate competency** in performing appropriate infection control practices and procedures.

Remember:

- PPE must be donned correctly before entering the patient area (e.g., isolation room, unit if cohorting).
- PPE must remain in place and be worn correctly for the duration of work in potentially contaminated areas. PPE should not be adjusted (e.g., retying gown, adjusting respirator/facemask) during patient care.
- PPE must be removed slowly and deliberately in a sequence that prevents self-contamination. A step-by-step process should be developed and used during training and patient care.

Preferred PPE – Use N95 or Higher Respirator



Acceptable Alternative PPE – Use Facemask



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www.cdc.gov/coronavirus

Donning (putting on the gear):

More than one donning method may be acceptable. Training and practice using your healthcare facility's procedure is critical. Below is one example of donning.

- 1. Identify and gather the proper PPE to don.** Ensure choice of gown size is correct (based on training).
- 2. Perform hand hygiene using hand sanitizer.**
- 3. Put on isolation gown.** Tie all of the ties on the gown. Assistance may be needed by another HCP.
- 4. Put on NIOSH-approved N95 filtering facepiece respirator or higher (use a facemask if a respirator is not available).** If the respirator has a nosepiece, it should be fitted to the nose with both hands, not bent or tented. Do not pinch the nosepiece with one hand. Respirator/facemask should be extended under chin. Both your mouth and nose should be protected. Do not wear respirator/facemask under your chin or store in scrubs pocket between patients.*
 - » **Respirator:** Respirator straps should be placed on crown of head (top strap) and base of neck (bottom strap). Perform a user seal check each time you put on the respirator.
 - » **Facemask:** Mask ties should be secured on crown of head (top tie) and base of neck (bottom tie). If mask has loops, hook them appropriately around your ears.
- 5. Put on face shield or goggles.** Face shields provide full face coverage. Goggles also provide excellent protection for eyes, but fogging is common.
- 6. Perform hand hygiene before putting on gloves.** Gloves should cover the cuff (wrist) of gown.
- 7. HCP may now enter patient room.**

How to Don a Respirator

Select a fit tested respirator, preferably

Place over nose, mouth and chin

Fit flexible nose piece over nose bridge

Secure on head with elastic

Adjust to fit

Perform a fit check:

- Inhale –respirator should collapse
- Exhale –check for leakage around face

Doffing (taking off the gear):

More than one doffing method may be acceptable. Training and practice using your healthcare facility's procedure is critical. Below is one example of doffing.

1. **Remove gloves.** Ensure glove removal does not cause additional contamination of hands. Gloves can be removed using more than one technique (e.g., glove-in-glove or bird beak).
2. **Remove gown.** Untie all ties (or unsnap all buttons). Some gown ties can be broken rather than untied. Do so in gentle manner, avoiding a forceful movement. Reach up to the shoulders and carefully pull gown down and away from the body. Rolling the gown down is an acceptable approach. Dispose in trash receptacle.*
3. **HCP may now exit patient room.**
4. **Perform hand hygiene.**
5. **Remove face shield or goggles.** Carefully remove face shield or goggles by grabbing the strap and pulling upwards and away from head. Do not touch the front of face shield or goggles.
6. **Remove and discard respirator (or facemask if used instead of respirator).*** Do not touch the front of the respirator or facemask.
 - » **Respirator:** Remove the bottom strap by touching only the strap and bring it carefully over the head. Grasp the top strap and bring it carefully over the head, and then pull the respirator away from the face without touching the front of the respirator.
 - » **Facemask:** Carefully untie (or unhook from the ears) and pull away from face without touching the front.
7. **Perform hand hygiene after removing the respirator/facemask** and before putting it on again if your workplace is practicing reuse.

**Facilities implementing reuse or extended use of PPE will need to adjust their donning and doffing procedures to accommodate those practices.*

Environmental Services

Environmental services can be provided regularly and safely by trained staff

Environmental services staff have all necessary training and wear appropriate PPE for exposure to disinfectants and patients with COVID-19

EPA-registered disinfectants from List N are used according to label instructions

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

Cleaning and Disinfection

Environmental services staff would perform both daily and terminal cleaning:

- Wipe-down of all floors and horizontal surfaces at least once daily
- Immediate clean-up of all spills of blood or body fluids
- Regular disinfection of high-touch surfaces (e.g., doorknobs)
- At least daily cleaning of bathrooms

Environmental Infection Control

Dedicated medical equipment should be used when caring for patients with known or suspected COVID-19.

- All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer's instructions and facility policies.

Ensure that environmental cleaning and disinfection procedures are followed consistently and correctly.

Routine cleaning and disinfection procedures (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product's label) are appropriate for SARS-CoV-2 in healthcare settings, including those patient-care areas in which aerosol-generating procedures are performed.

Management of laundry, food service utensils, and medical waste should also be performed in accordance with routine procedures

Moving patients

Do not underestimate how much time and personnel will be involved in moving patients.

- Increase staff and hours in housekeeping
- They will need to be prepared to quickly deep clean any room vacated by COVID-positive or suspected patients

Designate personnel to move beds

- Ideally this would not involve your nursing or CNA staff
- You will receive test results in the afternoon, just when your 9-5 staff is going home. Make a contingency plan to move 3-5 patients per day at 4pm or later.

Think about portable storage containers (PODS) in which to store patient belongings. You can also disinfect belongings in these containers

Resources

Centers for Disease Control and Prevention. Interim infection prevention and control recommendations for patients with suspected or confirmed coronavirus disease 2019 (COVID-19) in healthcare settings. Last reviewed March 19, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html>.

Centers for Disease Control and Prevention. Nursing home care. Last reviewed March 11, 2016. <https://www.cdc.gov/nchs/fastats/nursing-home-care.htm>. Accessed March 19, 2020.

Centers for Disease Control and Prevention. Preparing for COVID-19: long-term care facilities, nursing homes. Last reviewed March 21, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/prevent-spread-in-long-term-care-facilities.html>. Accessed March 23, 2020.

For the most up-to-date infection control guidance for healthcare facilities, visit CDC coronavirus website at <https://www.cdc.gov/coronavirus/2019-ncov/healthcarefacilities/index.html>

For general infection control training resources, please visit: <https://www.cdc.gov/longtermcare/>