

Infection Control and Prevention

There is a critical shortage of personal protective equipment (PPE) across all healthcare settings, including nursing homes. The CDC has general recommendations for infection control and prevention related to COVID-19, for infection prevention and control for long-term care settings, and for conserving PPE.

- [Strategies to Prevent the Spread of Infection in Long-Term Care Facilities](#)
- [Interim Infection Prevention and Control Recommendations for Healthcare Settings](#)
- [Strategies for Optimizing Supply of N95 Respirators](#)
- [Healthcare Supply of Personal Protective Equipment](#)
- [Checklist for Healthcare Facilities: Strategies for Optimizing the Supply of N95 Respirators](#)
- [Release of Stockpiled N95 Filtering Facepiece Respirators Beyond the Manufacturer-Designated Shelf Life](#)
- [Personal Protective Equipment \(PPE\) Burn Rate Calculator](#)

• ***We are running low on personal protective equipment (PPE). What can we do?***

We recommend that facilities adopt stewardship practices for PPE in accordance with [CDC guidance on strategies to optimize PPE supply](#).

Immediate steps you can take (detailed below) are:

- Minimize face-to-face visits
- Make use of telehealth visits whenever possible
- Limit laboratory studies to only those that are medically necessary
- Change from nebulizer to metered dose inhalers and consider oral albuterol
- Limit or eliminate point of care capillary blood sugars
- Allow staff to wear one face mask for the entire shift
- Decrease the frequency of medication administration

Nursing homes that are part of a larger network may share the same supply resources as hospitals within their network. Individuals responsible for allocating supplies at a systems level may attempt to prioritize hospitals. We recommend working

with these individuals and with senior level administrators to advocate for a supply of PPE for nursing homes as well. Stress the risk of outbreak among vulnerable elders living in a communal setting as well as the increased risk of death due to COVID-19 among adults aged ≥ 70 years (8% mortality for those aged 70-79; 15% for those ≥ 80 years).

We recommend that clinicians minimize face-to-face visits with residents for routine matters. Further, we recommend that clinicians also, for now, limit routine visits and laboratory studies. While blood draws are important for residents on coumadin, lipid tests, glycosylated hemoglobin and thyroid studies can likely be delayed for weeks to months.

Clinical staff should also consider limiting the frequency of other processes that involve direct interactions with residents, such as point-of-care capillary blood sugars, nebulizer treatments, etc.

We recommend that nursing facilities should offer telehealth whenever possible. They should encourage telehealth visits in lieu of outside appointments with specialists and other necessary clinical evaluations.

Facemask may be worn throughout an entire shift and do not need to be changed when going from resident to resident. If a facemask becomes soiled, wet, torn, or no longer covers the nose and mouth, it should be discarded.

- **We are critically short on PPE of all types---face masks, gowns, gloves. Any suggestions?**

Allow personnel caring for several people with the same respiratory illnesses to use the same face mask or N-95 as they move between residents. Some places are conserving N95 masks by covering them with a cloth mask and discarding cloth masks at the end of the shift. Cloth masks alone aren't shown to prevent transmission.

We recommend a new gown and gloves when moving between residents. If this is not possible due to a critical shortage of PPE supplies and there is an outbreak of possible COVID-19 in your building, healthcare personnel can also use the same gown when caring for several individuals with COVID-19 and no other MDROs, but change the gown if moving to COVID-negative rooms.

Should those individuals require contact precautions for other reasons, such as a drug-resistant bacteria, we suggest starting with the residents with the least burden of potential pathogens first and working with those with the most potential

pathogens last. Further, use hand hygiene and don new gloves between individuals to reduce the risk of disease transmission.

Should even gloves need to be rationed, alcohol hand rub may be applied to gloves between tasks and activities for the same resident, rather than changing gloves as is recommended when going from dirty to clean tasks, such as during dressing changes. Gloves should not be used in the care of more than one resident.

- **We are completely out of gowns. Now what?**

Some places are using rain ponchos, garbage bags, or coveralls from a hardware store in place of gowns. The rain ponchos and garbage bags can be wiped down. Washable cloth gowns are also a consideration.

While one gown may work for multiple residents, we do not recommend reusing a gown until it has been cleaned. It is too difficult to remove the gown without contaminating the side worn toward the body. When a used gown is put back on, the side facing the body now becomes a means to transmit fomites to the person who can transmit fomites to themselves, other staff and other residents.

- **We are completely out of gloves. Now what?**

Encourage hand hygiene with alcohol hand rub or soap and water.

- **We are completely out of surgical masks. Now what?**

Some places are using cloth masks sewn and donated by community members. Patterns for these are available through sites on-line.

Surgical face masks may be taken off carefully and re-used. People can write their names on the outside of the mask. The side of the mask that faces the residents or patients is the “dirty” side.

The individual should use hand hygiene before removing the mask and then carefully straighten the mask before storing it. After the mask is stored, they should practice hand hygiene again.

A removed mask can be hung from a peg with the patient-facing side toward the wall. If there is not sufficient area to hang the masks, then it can be placed, patient-facing side down, on a paper towel placed on a counter. The towel is discarded after the mask is re-donned. A mask can also be placed in a paper (not plastic) bag. The patient-facing side will contaminate the inside surface of one side of the paper bag; the bag should be discarded after one use.

- **I heard we can re-use N95s. How do we do that?**

Some places are using cloth masks sewn and donated by community members. Patterns for these are available through sites on-line. These can be worn over the N95 masks.

N95 masks may be taken off carefully and re-used. People can write their names on the outside of the mask. The side of the mask that faces the residents or patients is the “dirty” side.

The individual should use hand hygiene before removing the mask. After the mask is stored, they should practice hand hygiene again.

A removed mask can be hung from a peg with the patient-facing side toward the wall. If there is not sufficient area to hang the masks, then it can be placed, patient-facing side down, on a paper towel placed on a counter. The towel is discarded after the mask is re-donned. A mask can also be placed in a paper (not plastic) bag. The patient-facing side will contaminate the inside surface of one side of the paper bag; the bag should be discarded after one use.

The CDC has provided some guidance on decontamination methods and reuse of filtering facepiece respirators:

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/decontamination-reuse-respirators.html>

- **What are some of the basics for infection prevention and control that we can do?**

Increase the availability and accessibility of alcohol-based hand sanitizer (ABHS), tissues, no touch receptacles for disposal, and facemasks at healthcare facility entrances, waiting rooms, patient check-ins, etc. Ensure ABHS is accessible in all resident-care areas including inside and outside resident rooms.

Increase signage for vigilant infection prevention, such as hand hygiene and cough etiquette.

Properly clean, disinfect, and limit sharing of medical equipment between residents and areas of the facility.

Provide additional work supplies to avoid sharing (e.g., pens, pads) and disinfect workplace areas (nurses' stations, phones, internal radios, etc.) frequently. We recommend at least once daily and advocate for at least once per shift.

• What kind of personal protective equipment (PPE) should we use when caring for someone with a respiratory viral illness?

We recommend standard, contact, and droplet precautions with eye protection. This means wearing a gown and gloves, together with a facemask and goggles or a face shield. In case of PPE shortages, eye protection should be prioritized to staff administering any respiratory treatment that may result in aerosolization of viral particles.

We recommend that staff use N-95 mask (or facemask if a respirator is not available) and eye protection in addition to other PPE when obtaining respiratory samples in individuals with suspected COVID-19.

• How do I know if I am using PPE correctly?

We recommend training and practicing proper use of PPE with your staff. Use a buddy system to help catch common errors. In a training scenario, it is okay to reuse gowns.

The CDC has posters that show how to put on and take off (don and doff) PPE: [Sequence for Putting on Personal Protective Equipment \(PPE\)](#)

There are also videos available through the University of Nebraska: [Hospital PPE - Infection Control: Donning and Doffing](#)

[Video on appropriate use of face mask through World Health organization](#)

• What can we do to help our staff use PPE correctly?

Post signs on the door about the type of precautions needed with the required PPE.

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Updated May 6, 2020

Ensure that PPE is readily accessible. Ideally, supplies should be made available immediately outside the resident's room. Assign someone to check and restock supplies each shift.

Staff should be trained to don and doff their PPE at the entrance to the resident's room. A trash can should be placed near the door of the room to discard the PPE. Alcohol- based hand wash should be accessible for use after doffing the PPE.

• **Can equipment like stethoscopes, blood pressure cuffs or pulse oximetry devices transmit COVID-19?**

Yes. COVID-19 is thought to be transmitted through respiratory droplets. The risk of transmission by fomites is also a concern. Respiratory droplets that land on surfaces near an individual and are later touched by a healthcare worker may lead to transmission.

In addition to following standard infection control practices on cleaning common equipment to assess residents, like thermometers or pulse oximeters, staff should be asked to clean personal equipment, such as stethoscopes before and after examining an individual, and to clean their personal devices, like cellphones, frequently.

• **We do not have negative pressure or airborne infection isolation rooms (AIIR) in our building. What should we do for a resident with possible COVID-19 infection?**

We recommend that the resident should remain in their room, with the door closed. We also recommend engineering controls such as pulling curtains and using consistent staffing assignments to limit the number of individuals to whom residents and healthcare staff have exposure. We recommend that staff close bedside curtains when performing respiratory procedures in semiprivate rooms.

Personnel should not move from unit to unit during their assignments. Medication carts and other medical equipment should not be shared with other units. Staff from other units should not come into the COVID-19 unit. This may include flexible staffing and roles to minimize movement of staff throughout the building.

- **When should we use N-95 respirators? We have a few and want to conserve them.**

We recommend using N-95 respirators (or their equivalents) when doing procedures that may generate aerosols.

If N-95 masks are in limited supply to PALTC providers, we recommend staff prioritize use of N-95 masks during respiratory procedures used in the care of residents with a possible respiratory viral infection that likely to result in aerosolization of viral particles. During all other lower-risk care, surgical masks should be utilized.

We recommend that staff use N-95 mask (or facemask if a respirator is not available) and eye protection in addition to other PPE when obtaining respiratory samples in individuals with suspected COVID-19.

- **What procedures generate aerosols?**

Examples of respiratory treatments that may lead to aerosolization of viral particles include, suctioning, and tracheostomy care. Also, the application or adjustment of oxygen masks, bilevel positive airway pressure (BiPAP), and continuous positive airway pressure (CPAP) masks are also aerosol generating procedures. It is unclear, if use of nebulizers or high flow oxygen results in infectious aerosol. The CDC address this topic in its FAQ section:
<https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-faq.html>

Collecting samples to test for influenza, RSV, and COVID-19 also carry the risk as there may be droplet exposure at very close range when residents cough or sneeze.

We recommend that staff close bedside curtains when performing respiratory procedures in semiprivate rooms.

Limit procedures that involve manipulation of mucosal cavity, e.g., dental cleaning, denture fitting, fiberoptic evaluation of

swallowing. If the study is thought to be urgent, the need should be weighed against the elevated risk of transmission due to these procedures.

• Is there a way to reduce the use of nebulizers?

Most residents can be switched from nebulizers to metered-dose inhalers. For those that cannot be taught how to use a metered-dose inhaler (MDI), use a spacer. Metered-dose inhalers, with or without the use of a spacer, are not aerosol-generating procedures. In residents who are unable to use MDI even with spacers, oral albuterol can be considered. All PRN use of nebulizer should be discontinued. This is to ensure that increased need of nebulizer, as a surrogate symptom for COVID-19 is not overlooked.

We recommend that the continued need for nebulizer therapy in all residents be periodically reassessed; if no longer required, it should be discontinued.

• One of our residents is scheduled to be fitted for dentures next week. Should we let the dentist into the building?

Limit procedures that involve manipulation of mucosal cavity, e.g., dental cleaning, denture fitting, fiberoptic evaluation of swallowing. If the procedure is thought to be urgent, the need should be weighed against the elevated risk of transmission due to these procedures.

• Our speech therapist recommended a fiberoptic evaluation for a resident who recently had a stroke. I'm reluctant to have this done. What do you recommend?

Limit procedures that involve manipulation of mucosal cavity, e.g., dental cleaning, denture fitting, fiberoptic evaluation of swallowing. If the study is thought to be urgent, the need should be weighed against the elevated risk of transmission due to these procedures.

• Do we need to use PPE for all of our residents who get respiratory care? Some of them have a tracheostomy and need pulmonary toilet every shift.

For residents who require routine respiratory care such as daily nebulizers or who have a tracheostomy, continue to use the

same infection control measures previously in place for those individuals. Should they manifest a change in symptoms, such as fever, increased sputum production, or increased oxygen requirements, this may indicate the development of an acute respiratory illness. Assess the resident for influenza, RSV and, working with state and local healthcare authorities, for COVID-19. Have a high index of suspicion. Early detection is crucial.

We recommend that staff close bedside curtains when performing respiratory procedures in semiprivate rooms.

• We do not have any COVID-19 in our building but it is in our community. I am concerned about asymptomatic shedding by our staff. What are some options?

We strongly recommend active surveillance for respiratory illness and fever of both residents and staff members when there is evidence of community- wide transmission. This includes screening all staff upon entry into the building.

To reduce the risk of asymptomatic staff infecting their residents, we recommend universal facemasks and glove use as a precaution. The situation in King County, WA indicates that residents shed COVID-19, even without symptoms. Staff may similarly shed virus.

• Some of our staff work at multiple buildings. What should we do?

Transmission of COVID-19 across long-term care facilities through staff working at multiple facilities has been reported. Facilities should keep a log of names of all other health care settings where staff members are working. They should continually assess and attempt to mitigate the cross exposure risk for COVID-19 through staff transmission.

Staff that provide direct resident care on a daily basis should be advised to only work at one building. Staff working at multiple buildings was part of how the outbreak spread in King County, Washington. If those personnel insist on working in more than one setting, they should work with their supervisors to arrange a schedule to minimize their transitions. Scheduling in blocks (e.g., a week in one building, a week in another building) is one option.

• What about our medical providers? They work at multiple nursing homes and have outpatient practices.

Encourage and support the use of telehealth so clinicians can avoid bringing COVID-19 into buildings or exposing themselves.

If the clinicians are providing outpatient care in addition to nursing home rounding, we recommend asking clinicians to visit the building first thing the morning rather than at the end of the day. Also, if staffing permits, have clinicians limit their visits to one building. If this is not possible, then ask clinicians to only visit one building each day. The rationale for rounding in the morning is that the clinicians will have had overnight to know if they are starting to feel ill and can self-quarantine if needed.

Clinicians should also practice universal masking and gloving while seeing residents.

• We have not done telehealth previously and don't have the equipment. What can we do?

The Centers for Medicare and Medicaid (CMS) has expanded access to telehealth services in response to the COVID-19 pandemic. Medicare will now pay for telehealth visits across a variety of settings (e.g., skilled nursing facility, office, hospital) and providers (e.g., physicians, nurse practitioners, clinical psychologists, and licensed clinical social workers). These visits will be reimbursed at the same rate as regular, in-person visits. CMS has also broadened acceptable platforms to perform telehealth by waiving enforcement of HIPAA health privacy law violations. In addition to current telehealth platforms, providers are now able to utilize common communication tools such as FaceTime and Skype.

[Additional details and billing advice are available here.](#)

• We have done telehealth before but do not want to bring the machine into the room of a COVID-19 positive resident. What should we do?

One potential solution is to designate a dedicated portable device, such as a tablet (e.g., iPad) or smartphone for COVID-19 positive or persons under investigation (PUI). If possible, have the device covered with a water resistant covering so that it can be wiped down after use. Have a Certified Nursing Assistant (CNA) – in appropriate personal protective equipment (e.g., contact and respiratory precautions) -- carry the device into the room so the resident does not have to hold the device. After completion of the visit the CNA can wipe down the device. Of course, the CNA should practice good hand hygiene and change PPE in accordance with the facility's current policy.

Environment Cleaning

- **How do we clean the room of a resident with possible or confirmed COVID-19?**

We recommend that to minimize the exposure and optimize use of PPE, only essential clinical staff enter the rooms of residents with suspected or confirmed COVID-19. CDC recommends that nursing staff taking care of residents perform the daily cleaning of frequently touched surfaces inside the resident's room (such as door handles, bedrails, tabletops, light switches, elevator buttons [inside and out], computers, remotes, phones etc.) with an EPA-registered, hospital-grade disinfectant that has an emerging viral pathogens claim for use against SARS-CoV-2. Staff assignment should account for extra services that the staff is providing to allow effective care of the residents.

[List N: Disinfectants for Use Against SARS-CoV-2 CDC Infection Prevention and Control FAQ for COVID-19](#)

- **Are there special protocols for shared medical equipment?**

All non-dedicated, non-disposable medical equipment used for patient care should be cleaned according to facility policies.

For buildings with a COVID-19 unit or floor, we recommend dedicating some equipment for the care of residents with known COVID-19 and leaving that equipment in a designated unit.

- **Should we do something different to clean the rest of the building?**

Environmental service staff should clean the frequently touched surfaces like handrails, doorknobs and door handles, and surfaces at the nurses' stations at least twice daily and more frequently as needed.

They should continue to clean the other resident rooms as their routine practice and should ensure that an adequate supply of alcohol-based hand sanitizers is in the dispensers. There should be a process in place to refill empty dispensers and restock PPE.

- **One of our residents with COVID-19 has gone home. What should we do for terminal cleaning of that room?**

Environmental service staff should observe contact and droplet precautions when cleaning residents' rooms. Educate staff on proper use of PPE and appropriate choice of disinfectant. A facemask and eye protection should be added if splashes or sprays during cleaning and disinfection activities are anticipated. Standard practices using an EPA-registered, hospital-grade disinfectant with an emerging viral pathogens claim are recommended for use against SARS-CoV-2.

[List N: Disinfectants for Use Against SARS-CoV-2 CDC Infection Prevention and Control FAQ for COVID-19](#)

- **Do we need any special precautions for laundry?**

There are no special recommendations for management of laundry, food service utensils, and medical waste. Follow routine procedures.

- **Several of our family members do laundry for our residents. Should we stop that?**

We do not recommend that family members continue to do laundry for their loved ones at present. While this is clearly an act of caring and helps reduce the burden on staff, the risk of transmission of COVID-19 from a household to the building or vice versa outweighs the potential benefit. We recommend that friends and families

use videos, emails and text messages to stay connected to their loved ones during this trying time.