Considerations for Personal Protective Equipment (PPE) and Cohorting during COVID-19 Response in Long-Term Care Facilities

Standard Precautions should be followed for every resident all the time. Symptom screening remains an important strategy to identify anyone who could have COVID-19 so appropriate precautions can be implemented. Source control measures (well-fitting cloth masks, facemasks, or respirators), physical distancing when possible (maintaining at least 6 feet between people), and hand hygiene should be adhered to by everyone while in the facility. Transmission from asymptomatic or pre-symptomatic residents with SARS-CoV-2 infection can occur in healthcare settings, particularly in geographic areas with moderate to substantial community transmission. When responding to a newly identified SARS-CoV-2 infection among residents or staff, HCP should care for residents using an N95, eye protection (i.e., goggles or a face shield that covers the front and sides of the face), gloves, and gown. In order to help stop the spread of COVID-19 during an outbreak, residents may be moved to and housed in designated units or areas based on their COVID-19 status. These designated units or areas may be called Cold, Warm, and Hot, based on the COVID-19 status of the residents.

Indications for PPE when NO COVID-19 Outbreak (Standard Precautions)	**Hand Hygiene**	**Facemask**	**Gloves**	**Gown**	**Eye Protection**	**Fit-tested Respirator**
All residents, all the time	X	X				
Within resident room or care area	X	X	X			
High contact activity	X	X	X	X	X	
Splash/spray possible	X	X	X	X	X	
Aerosol-generating procedure[1]	X	X	X	X	X	X[2]
Indications for PPE During COVID-19 Outbreak	**Hand Hygiene**	**Facemask**	**Gloves**	**Gown**	**Eye Protection**	**Fit-tested Respirator**
All residents in the facility during the outbreak (until 14 days from the last positive test).	X	X	X	X	X	X[2]
Cold Unit/Area	Designated unit/area for **current, healthy, asymptomatic residents**.					
Warm Unit/Area	Designated unit/area **for observing and managing symptomatic residents who tested negative for COVID-19, residents/roommates who may have been exposed to someone with COVID-19, and new admissions and readmissions whose COVID19 status is unknown*.**					
Hot Unit/Area	Designated unit/area for care of residents with **confirmed COVID-19** (those who test positive), who have not met criteria for discontinuation of transmission-based precautions.					

***** Newly admitted and readmitted residents who are fully vaccinated, or within 3 months of a SARS-CoV-2 infection, and have not had prolonged close contact (within 6 feet for a cumulative total of 15 minutes or more over a 24-hour period) with someone with SARS-CoV-2 infection in the prior 14 days are not required to quarantine. Fully vaccinated residents in healthcare settings should continue to quarantine following prolonged close contact (within 6 feet for a cumulative total of 15 minutes or more over a 24-hour period) with someone with SARS-CoV-2 infection. "Fully vaccinated" refers to a person who is ≥2 weeks following receipt of the second dose in a 2-dose series, or ≥2 weeks following receipt of one dose of a single-dose vaccine.

[1]Such as suction, ventilation, CPR, nebulizer treatments, etc. (See https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html#infection-Control for a description of aerosol generating procedures)
[2]If available and fit-tested, otherwise wear a facemask
[3]If PPE shortages exist implement strategies to optimize PPE supply on the unit:

- Bundle care activities to minimize the number of staff entries into a room.
- Consider extended use of respirators (or facemasks if respirators are not available), and eye protection. Extended use of respirators, facemasks, and eye protection, which refers to the practice of wearing the same respirator or facemask and eye protection for the care of more than one resident (e.g., for an entire shift).
- Care must be taken to **avoid touching the respirator, facemask, or eye protection**. If this must occur (e.g., to adjust or reposition PPE), staff should perform hand hygiene immediately after touching PPE to prevent contaminating themselves or others.
- Consider prioritizing gowns for high-contact resident care activities and activities where splash or spray exposures are anticipated. If extended use of gowns is implemented as part of crisis strategies, the same gown should not be worn when caring for different residents unless it is for the care of residents with confirmed COVID-19 who are cohorted in the same area of the facility and these residents are not known to have any co-infections (e.g., ***Clostridioides difficile***).

Important steps to consider when designating hot, warm, and cold units during a COVID-19 outbreak:

COVID-19 Care Unit (Hot Unit): During a COVID-19 outbreak, a separate unit/area for the care of residents with confirmed COVID-19 (those who test positive), who have not met criteria for discontinuation of transmission-based precautions.

- **For care of residents with confirmed COVID-19 (those who test positive) during a COVID-19 outbreak, who have not met criteria for discontinuation of transmission-based precautions.**
- The unit should be physically separated from other rooms or units housing residents without suspected or confirmed COVID-19.
- Residents should only be placed in a COVID-19 care unit if they have confirmed SARS-CoV-2 infection. Placing a resident without confirmed SARS-CoV-2 infection (i.e., with symptoms concerning for COVID-19 pending testing or with known exposure) in a dedicated COVID-19 care unit could put them at higher risk of exposure to SARS-CoV-2.
- Note: If it is not possible to create a dedicated COVID-19 care unit, the resident should be housed in a single room with a dedicated bathroom. The door should remain closed when possible; assign dedicated staff for the shift to care for the resident; personnel entering the room should adhere to standard precautions and use a NIOSH-approved N95 or equivalent or higher-level respirator, gown, gloves, and eye protection; limit transport and movement of the patient outside the room to medically essential purposes; resident should wear well-fitting source control during transport if possible.
- In general, it is recommended that the door to the room remain closed to reduce transmission of SARS-CoV-2. This is especially important for residents with suspected or confirmed SARS-CoV-2 infection being cared for outside of the COVID-19 care unit. However, in some circumstances (e.g., memory care units), keeping the door closed may pose resident safety risks and the door might need to remain open. If doors must remain open, work with facility engineers to implement strategies to minimize airflow into the hallway.

- Depending on facility capacity (e.g., staffing, supplies) to care for affected residents, the COVID-19 care unit (Hot Unit) can be a separate floor, wing, or cluster of rooms. A plastic partition, a temporary wall with a door, or another means of physical separation at the entry to the unit may be utilized. The physical barrier provides awareness to anyone entering the area.
- Limit points of entry and exit. Ideally there should be a separate exit for staff to leave the area to avoid reentering the main facility.
- Place clear signage at the entrance to the COVID-19 care unit (Hot Unit) that instructs staff they must wear eye protection and an N95 or higher-level respirator (or facemask if a respirator is not available) at all times while on the unit. Gowns and gloves should be added when entering resident rooms.
- Assign dedicated staff (cohort) to work only on the COVID-19 care unit. Dedicated means that staff are assigned to care only for these patients during their shifts. Staff should not cross to other areas to the extent possible during their shift.
- It might not be possible to distinguish patients who have COVID-19 from patients with other respiratory viruses. As such, patients with different respiratory pathogens might be cohorted on the same unit. However, only patients with the same respiratory pathogen may be housed in the same room. For example, a patient with COVID-19 should not be housed in the same room as a patient with an undiagnosed respiratory infection or a respiratory infection caused by a different pathogen.
- Staff working on the COVID-19 care unit should ideally have a restroom, break room, and work area that are separate from staff working in other areas of the facility.
- When personnel such as Occupational Therapy, Physical Therapy, Wound Care Specialist, Nurse Practitioner, or other Providers, cannot be dedicated to the hot unit and services cannot be delayed, consider scheduling these resident visits to the hot unit at end of the day.
- Ensure staff practice source control measures and social distancing in the break room and other common areas (i.e., staff wear a facemask and sit more than 6 feet apart while on break). If all staff in the break room or common area have received the COVID-19 vaccine, facemasks and physical distancing are not required, however, if anyone is unvaccinated, facemasks are to be worn and the unvaccinated staff member should maintain a 6-foot distance from others while in the break room).
- Develop a schedule to ensure that high-touch surfaces in staff break rooms and work areas are frequently cleaned and disinfected (e.g., each shift).
- Perform hand hygiene by using alcohol-based hand rub (ABHR) with 60-95% alcohol or washing hands with soap and water for at least 20 seconds. Use ABHR for hand hygiene in most clinical situations. If hands are visibly soiled, use soap and water before returning to ABHR. Perform hand hygiene at appropriate times before and after all patient contact, contact with potentially infectious material, and before putting on and after removing PPE.
- 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.
- Educate residents about COVID-19, how it is spread, and the importance of hand hygiene, wearing face coverings/masks, and social distancing.
- Encourage residents to restrict themselves to their rooms to the extent possible. Residents may remove their source control when in their rooms but should put it back on when around others (e.g., HCP or visitors enter the room).

- Encourage residents to wear face coverings or masks (if possible) when they must leave their rooms, and to perform hand hygiene when leaving and returning to their rooms.
- To the extent possible, restrict access of ancillary personnel (e.g., dietary) to the unit. To help conserve PPE and prevent transmission of COVID-19, you may consider having dietary trays delivered to the unit (nurse station/central location) and dispersed to resident rooms by staff dedicated to the unit.
- Assign environmental services [EVS] staff to work only on the unit. If there are not a sufficient number of EVS staff to dedicate to this unit despite efforts to mitigate staffing shortages, restrict their access to the unit. Also, assign staff dedicated to the COVID-19 care unit to perform cleaning and disinfection of high-touch surfaces and shared equipment when in the room for resident care activities. Staff should bring an Environmental Protection Agency (EPA)-registered disinfectant (e.g., wipe) from List N into the room and wipe down high touch surfaces (e.g., light switch, doorknob, bedside table).
- Assign dedicated resident care equipment (e.g., vitals machine, BP cuff, weighing scales) to the cohort unit. Cleaning and disinfection of shared equipment should be performed between residents and the equipment should not leave the cohort unit.
- Ensure staff have been trained on when to perform Hand Hygiene and the steps of proper donning and doffing of PPE. Post signage with steps of proper donning and doffing.
- Consider assigning a person to observe staff for proper PPE donning and doffing, and provide just in time education.
- If PPE shortages exist implement strategies to optimize PPE supply on the unit:
  - Bundle care activities to minimize the number of staff entries into a room.
  - Consider extended use of respirators (or facemasks if respirators are not available), eye protection, and gowns. Limited reuse of PPE may also be considered.
  - Consider prioritizing gown use for high-contact resident care activities and activities where splash or spray exposures are anticipated
- When considering when to transfer a recovered resident out of the Hot Unit, follow CDC guidelines for discontinuation of isolation and consult with the medical director.
- Once the patient has been discharged or transferred, HCP, including environmental services personnel, should refrain from entering the vacated room until sufficient time has elapsed for enough air changes to remove potentially infectious particles (more information on clearance rates under differing ventilation conditions is available). After this time has elapsed, the room should undergo appropriate cleaning and surface disinfection before it is returned to routine use.

Observation Unit (Warm Unit): Separate area/unit for observing and managing symptomatic residents who tested negative for COVID-19, residents/roommates who may have been exposed to someone with COVID-19, and new admissions and readmissions whose COVID19 status is unknown*.

***** Note: Newly admitted and readmitted residents who are fully vaccinated and have not had prolonged close contact (within 6 feet for a cumulative total of 15 minutes or more over a 24-hour period) with someone with SARS-CoV-2 infection in the prior 14 days are not

required to quarantine. Fully vaccinated residents in healthcare settings should continue to quarantine following prolonged close contact (within 6 feet for a cumulative total of 15 minutes or more over a 24-hour period) with someone with SARS-CoV-2 infection.

- **Separate area/unit for observation and care of symptomatic residents who tested negative for COVID-19, residents/roommates who may have been exposed to someone with COVID-19, and new admissions and readmissions whose COVID19 status is unknown*.**

  - Roommates of residents with SARS-CoV-2 infection should be considered exposed and potentially infected and, if at all possible, should not share rooms with other residents while they are in quarantine (i.e., for the 14 days following the date their roommate was moved to the COVID-19 care unit). Exposed residents may be permitted to room share with other exposed residents if space is not available for them to remain in a single room.
  - The warm/observation unit should be physically separated from other rooms or units housing residents with confirmed COVID-19 (Hot Unit) and from those of residents who are known to be COVID-19 negative.
  - Depending on facility capacity (e.g., staffing, supplies) to care for affected residents, the Warm Unit can be a separate floor, wing, or cluster of rooms. A plastic partition, a temporary wall with a door, or another means of physical separation at the entry to the unit may be utilized. The physical barrier provides awareness to anyone entering the area.
  - Limit points of entry and exit.
  - Place clear signage at the entrance to the Warm Unit that instructs staff they must wear eye protection and an N95 or higher-level respirator (or facemask if a respirator is not available) at all times while on the unit. Gowns and gloves should be added when entering resident rooms.
  - Assign dedicated staff (cohort) to work only on the Warm Unit. Staff should not cross to other areas to the extent possible during their shift.
  - Staff working on the Warm Unit should ideally have a restroom, break room, and work area that are separate from staff working in other areas of the facility.
  - Ensure staff practice source control measures and social distancing in the break room and other common areas (i.e., staff wear a facemask and sit more than 6 feet apart while on break). If all staff in the break room or common area have received the COVID-19 vaccine, facemasks and physical distancing are not required, however, if anyone is unvaccinated, facemasks are to be worn and the unvaccinated staff member should maintain a 6-foot distance from others while in the break room).
  - Develop a schedule to ensure that high-touch surfaces in staff break rooms and work areas are frequently cleaned and disinfected (e.g., each shift).
  - Perform hand hygiene by using alcohol-based hand rub (ABHR) with 60-95% alcohol or washing hands with soap and water for at least 20 seconds. Use ABHR for hand hygiene in most clinical situations. If hands are visibly soiled, use soap and water before returning to ABHR. Perform hand hygiene at appropriate times before and after all patient contact, contact with potentially infectious material, and before putting on and after removing PPE.
  - 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.
  - Educate residents about COVID-19, how it is spread, and the importance of hand hygiene, wearing face coverings/masks, and social distancing.

- Encourage residents to restrict themselves to their rooms to the extent possible. Residents may remove their source control when in their rooms but should put it back on when around others (e.g., HCP or visitors enter the room).
- Encourage residents to wear face coverings or masks (if possible) when they must leave their rooms, and to perform hand hygiene when leaving and returning to their rooms.
- To the extent possible, restrict access of ancillary personnel (e.g., dietary) to the unit.
- Assign environmental services [EVS] staff to work only on the unit. If there are not a sufficient number of EVS staff to dedicate to this unit despite efforts to mitigate staffing shortages, restrict their access to the unit. Also, assign staff dedicated on the Warm Unit to perform cleaning and disinfection of high-touch surfaces and shared equipment when in the room for resident care activities. Staff should bring an Environmental Protection Agency (EPA)-registered disinfectant (e.g., wipe) from List N into the room and wipe down high touch surfaces (e.g., light switch, doorknob, bedside table) before leaving the room.
- Assign dedicated resident care equipment (e.g., vitals machine, BP cuff, weighing scales) to the cohort unit. Cleaning and disinfection of shared equipment should be performed between residents and the equipment should not leave the cohort unit.
- Ensure staff have been trained on the steps of proper donning and doffing of PPE. Post signage with steps of proper donning and doffing.
- If PPE shortages exist implement strategies to optimize PPE supply on the unit:
    - Bundle care activities to minimize the number of staff entries into a room.
    - Consider extended use of respirators (or facemasks if respirators are not available), eye protection, and gowns. Limited reuse of PPE may also be considered.
    - Consider prioritizing gown use for high-contact resident care activities and activities where splash or spray exposures are anticipated
- All recommended COVID-19 PPE should be worn during care of residents under observation, which includes use of an N95 or higher-level respirator (or facemask if a respirator is not available), eye protection (i.e., goggles or a disposable face shield that covers the front and sides of the face), gloves, and gown.
- If staff PPE supply is limited, implement strategies to optimize PPE supply, which might include extended use of respirators, facemasks, and eye protection and limiting gown use to high-contact care activities and those where splashes and sprays are anticipated.
- Monitor residents and screen for fever and symptoms for 14 days after admission or after exposure to a positive COVID-19 resident.
- For a resident with new-onset of suspected COVID-19, ensure the resident is isolated pending results of SARS-CoV-2 testing. If the resident is confirmed to have COVID-19, transfer the resident to the COVID-19 care Hot Unit.
- Residents can be transferred out of the observation area or from a single to a multi-resident room if they remain afebrile and without symptoms for 14 days after their last exposure (e.g., date of admission).

COVID-19 Negative (Cold Unit): During an outbreak of COVID-19, a designated unit/area for current, healthy, asymptomatic residents.

- **The cold unit should be physically separated from other rooms or units housing residents with confirmed COVID-19 (Hot Unit), and from those whose COVID-19 status is unknown and residents/roommates who may have been exposed to someone with COVID-19 (Warm Unit).**
- Newly admitted and readmitted residents with COVID-19 who have met criteria for discontinuation of Transmission-Based Precautions can go to a regular/cold unit. If Transmission-Based Precautions have been discontinued, but the resident with COVID-19 remains symptomatic (i.e., persistent symptoms or chronic symptoms above baseline), they can be housed on a regular/cold unit but should remain in a private room until symptoms resolve or return to baseline. These individuals should remain in their rooms to the extent possible during this time period. If they must leave their rooms, facilities should reinforce adherence to universal source control policies and social distancing [e.g., perform frequent hand hygiene, have the resident wear a cloth face covering or facemask (if tolerated) and remain at least 6 feet away from others when outside of their room].
- Depending on facility capacity (e.g., staffing, supplies) to care for affected residents, the Cold Unit can be a separate floor, wing, or cluster of rooms. A plastic partition, a temporary wall with a door, or another means of physical separation at the entry to the unit may be utilized. The physical barrier provides awareness to anyone entering the area.
- Limit points of entry and exit.
- Place clear signage at the entrance to the Cold Unit that instructs staff they must wear eye protection and an N95 or higher-level respirator (or facemask if a respirator is not available) at all times while on the unit (during outbreak). Gowns and gloves should be added when entering resident rooms.
- Assign dedicated staff to work only on the Cold Unit. Staff should not cross to other areas to the extent possible during their shift.
- Staff working on the Cold Unit should ideally have a restroom, break room, and work area that are separate from staff working in other areas of the facility.
- Ensure staff practice source control measures and social distancing in the break room and other common areas (i.e., staff wear a facemask and sit more than 6 feet apart while on break). If all staff in the break room or common area have received the COVID-19 vaccine, facemasks and physical distancing are not required, however, if anyone is unvaccinated, facemasks are to be worn and the unvaccinated staff member should maintain a 6-foot distance from others while in the break room).
- Perform hand hygiene by using alcohol-based hand rub (ABHR) with 60-95% alcohol or washing hands with soap and water for at least 20 seconds. Use ABHR for hand hygiene in most clinical situations. If hands are visibly soiled, use soap and water before returning to ABHR. Perform hand hygiene at appropriate times before and after all patient contact, contact with potentially infectious material, and before putting on and after removing PPE.
- Educate residents about COVID-19, how it is spread, and the importance of hand hygiene, wearing face coverings/masks, and social distancing.
- Encourage residents to restrict themselves to their rooms to the extent possible.
- Encourage residents to wear face coverings or masks (if possible) when they must leave their rooms, and to perform hand hygiene when leaving and returning to their rooms.
- To the extent possible, restrict access of ancillary personnel (e.g., dietary) to the unit.

- Assign environmental services [EVS] staff to work only on the unit. If there are not a sufficient number of EVS staff to dedicate to this unit despite efforts to mitigate staffing shortages, restrict their access to the unit. Also, assign staff dedicated on the Cold Unit to perform cleaning and disinfection of high-touch surfaces and shared equipment when in the room for resident care activities. Staff should bring an Environmental Protection Agency (EPA)-registered disinfectant (e.g., wipe) from List N into the room and wipe down high touch surfaces (e.g., light switch, doorknob, bedside table) before leaving the room.
- Develop a schedule to ensure that high-touch surfaces in staff break rooms and work areas are frequently cleaned and disinfected (e.g., each shift).
- Assign dedicated resident care equipment (e.g., vitals machine, BP cuff, weighing scales) to the unit. Cleaning and disinfection of shared equipment should be performed between residents and the equipment should not leave the unit.
- Ensure staff have been trained on the steps of proper donning and doffing of PPE. Post signage with steps of proper donning and doffing.
- All recommended COVID-19 PPE should be worn during care of all residents during the outbreak, which includes use of an N95 or higher-level respirator (or facemask if a respirator is not available), eye protection (i.e., goggles or a disposable face shield that covers the front and sides of the face), gloves, and gown.
- If PPE shortages exist implement strategies to optimize PPE supply on the unit:
  - Bundle care activities to minimize the number of staff entries into a room.
  - Consider extended use of respirators (or facemasks if respirators are not available), eye protection, and gowns. Limited reuse of PPE may also be considered.
  - Consider prioritizing gown use for high-contact resident care activities and activities where splash or spray exposures are anticipated
- If staff PPE supply is limited, implement strategies to optimize PPE supply, which might include extended use of respirators, facemasks, and eye protection and limiting gown use to high-contact care activities and those where splashes and sprays are anticipated. See https://www.cdc.gov/coronavirus/2019-ncov/hcp/respirators-strategy/index.html for updated strategies for optimizing the supply of N95 respirators.
- Monitor residents and screen for fever and symptoms of COVID-19.
- For a resident with new-onset of suspected COVID-19, ensure the resident is isolated pending results of SARS-CoV-2 testing. If the resident is confirmed to have COVID-19, transfer the resident to the COVID-19 care Hot Unit.

References:

- https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html
- https://www.cdc.gov/coronavirus/2019-ncov/hcp/long-term-care.html
- https://www.vdh.virginia.gov/content/uploads/sites/182/2020/10/VDH-Guidance-for-Nursing-Homes_Table.pdf
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