COVID-19 Testing
Recommendations for Long-term Care Facilities

Long-term care (LTC) populations, in this context including those in skilled nursing and assisted living, are at high risk for infection, serious illness, and death from COVID-19. Reverse transcription polymerase chain reaction (RT-PCR) testing is used to detect SARS-CoV-2, the virus that causes COVID-19. RT-PCR testing is the gold standard test for COVID-19 at this time. The Minnesota Department of Health (MDH) recommends use of RT-PCR testing whenever possible. Information about the appropriate use of point of care antigen-based tests, including confirmatory testing with RT-PCR, is available in MDH: Using Antigen-based Point of Care Testing for COVID-19 in Long-term Care Facilities (www.health.state.mn.us/diseases/coronavirus/hcp/ltcantigentest.pdf).

Testing is a priority to help inform clinical care and infection prevention and control (IPC) practices in LTC facilities. Experience from LTC facilities in Minnesota and other states suggests that when symptomatic residents with COVID-19 are identified, asymptomatic residents often test positive as well. Testing can help facility leaders assess the scope (e.g., presence in one or several units) and magnitude of outbreaks. It also helps to guide additional prevention and control efforts designed to further limit transmission among LTC residents and staff.

Testing is one component of a broad-based response strategy that includes triage and clinical consultation, IPC measures, resident and staff health screening, exclusion of ill staff, and planning for staffing surge capacity in case of staff shortages. These other components must be in place to effectively use testing to reduce transmission.

COVID-19 testing key points

- Testing can inform clinical decision-making.
- All residents and staff in a LTC facility should be promptly tested if symptomatic.
- Testing is used to inform specific IPC actions, such as determining infection burden across different units, cohorting residents, identifying positive staff for work exclusion, and enabling staff to return after infection.
- A negative RT-PCR test only indicates that an individual did not have detectable virus material present at the time of testing, and repeat testing might be needed. Widespread community transmission and movement of staff and residents in and out of a facility result in a continuous risk of introduction.
People that receive an “indeterminate” RT-PCR test result should be treated as positive until re-testing can be completed.

Testing complements existing IPC interventions but does not replace good IPC.

Test strategies should be developed in the context of each facility’s physical space, existing response plans and capacity, and the current risk of COVID-19 introduction posed by staff, visitors, and residents that leave the facility.

Facility-wide resident and staff testing can be used to support prevention efforts but should not be used as an isolated strategy. Preparations should be made for the potential impact on staffing levels, need for enhanced IPC strategies, including cohorting, and communication with residents, families, and staff.

Even with a comprehensive strategy, facilities will experience illness and death because of COVID-19. The goal of this guidance is to help reduce, not eliminate, the burden of COVID-19 in long-term care and assisted living facilities.

Specimen collection and processing


Specimen type

Nasopharyngeal (NP) and anterior nasal swabs are recommended specimen types for COVID-19 testing. However, nasal swabs are preferred for testing in LTC settings, given the discomfort associated with NP swab collection and the growing evidence that viral load in the nasal cavity is likely sufficient for detection. Use of nasal swabs will facilitate compliance with the repeated testing approaches described in this document. Use of self-collected nasal swabs might be feasible and appropriate, depending on the population of residents (e.g., assisted living versus skilled nursing facility residents) and the staff available to conduct and/or observe testing (e.g., clinical versus support staff). Nasal swabbing of employees can be conducted by clinical staff or by self-swab. Place swab in a sterile tube containing acceptable transport media and store at refrigeration temperature before transporting to the laboratory for testing.

PPE use and IPC during specimen collection

When collecting diagnostic respiratory specimens from a person with possible COVID-19, consider the following:

- Procedure should be performed in a resident’s room or other designated space with the door closed.
- Staff in the room should wear a medical-grade face mask (or N95 respirator, if available), eye protection, gloves, and a gown.
- Only staff who are essential to collect the specimen should be present.
- Surfaces should be cleaned and disinfected in the room where specimens are collected.
Laboratory turnaround time

It is important for test results to be returned promptly, or have a short “turnaround time.” In accordance with Centers for Medicaid and Medicare Services (CMS) rules, federally certified nursing facilities are required to obtain test results within 48 hours.


Testing of individual residents

Diagnostic testing of symptomatic residents

Active screening of residents should be conducted when they are admitted and, thereafter, at least once daily for fever (≥100.0°F) and symptoms of COVID-19 (shortness of breath, new or change in cough, chills, sore throat, muscle aches). Older adults with COVID-19 might not show common symptoms such as fever or respiratory symptoms. Less common symptoms can include new or worsening malaise, headache, new dizziness, nausea, vomiting, diarrhea, loss of taste or smell, new confusion, or altered mental status. More than two temperatures >99.0°F might also be a sign of fever in this population. In addition, routine use of pulse oximetry to screen for new or worsening hypoxia may identify infected residents.

All residents who are positive for fever or symptoms should be isolated, placed under Transmission-based Precautions, and tested for COVID-19. Clinicians are encouraged to test for other causes of respiratory illness in addition to COVID-19.

Discontinuation of transmission-based precautions and movement of residents out of a COVID-19 dedicated unit

The decision to discontinue Transmission-based Precautions can be made by using a time- and symptom-based strategy. Except for rare situations, a test-based strategy is no longer recommended to determine when to discontinue Transmission-Based Precautions. These strategies are described in MDH: Interim Guidance for Discharge to Home or New/Re-Admission to Congregate Living Settings and Discontinuing Transmission-Based Precautions (www.health.state.mn.us/diseases/coronavirus/hcp/hospdischarge.pdf). Recommendations on this topic are subject to change as we learn more about prolonged shedding of SARS-CoV-2.

Routine testing of high-risk residents

In addition to prompt testing of symptomatic residents, testing should be prioritized for high-risk residents, such as residents who have been admitted from a hospital or other facility (whether or not the referring facility has known COVID-19 cases), roommates of known positive or symptomatic residents, and residents who leave the facility regularly for dialysis or other essential medical services.
Testing of individual staff

Active screening should be conducted for all staff when reporting to work. This includes active assessment for fever (≥100.0°F), acute respiratory symptoms (e.g., cough, shortness of breath, sore throat), loss of taste or smell, muscle aches, and chills. Further evaluation should also be considered for lower temperatures (<100.0°F) or other symptoms not attributable to another diagnosis, including headache, nausea, vomiting, diarrhea, abdominal pain, runny nose, and fatigue. Staff of LTC facilities are a priority group for COVID-19 testing in Minnesota and should be referred for testing immediately.

Federally licensed nursing facilities are required to test all staff according to the county COVID-19 positivity rate. Information on this required staff testing and county-level positivity rates can be accessed on the CMS website.


In settings where routine staff testing is not required, asymptomatic staff can be considered for testing if they have worked within 14 days at another facility that has COVID-19, have a known high-risk PPE breach while working with a COVID-19-positive resident, or have a household member or social contact with confirmed or suspected COVID-19. If a staff member is found to be positive for COVID-19, testing can be considered for co-workers who had contact with the positive staff member starting at 48 hours prior to onset of symptoms through the positive employee’s last work date.

Staff should not work while sick, even if presenting with mild signs or symptoms. If illness develops while at work, staff must immediately separate themselves from others, alert their supervisor, and leave the workplace. If they become ill at home, they should be advised to report symptoms and stay out of work.

Staff who have a positive COVID-19 test should not work. Asymptomatic staff with a positive COVID-19 test should not work. Guidance for return to work for ill staff, with positive or negative COVID-19 testing results, can be found in MDH: COVID-19 Recommendations for Health Care Workers (www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.pdf).

Population-based testing to guide IPC practice and cohorting

Facility-wide testing by point prevalence survey

Testing a group of individuals on a single day is referred to as a “point prevalence survey,” or PPS. This approach provides information on the overall number of affected individuals in the facility. If testing capacity allows, a facility-wide PPS of all residents and staff should be considered in facilities with suspected or confirmed cases of COVID-19. The PPS can help a facility identify symptomatic and asymptomatic infected residents, who can be grouped on a dedicated unit or could be transferred to a COVID-19-specific facility to limit transmission within a facility. Residents and staff who have had laboratory-confirmed COVID-19 may not need to be included in the PPS. Individuals who had their initial
positive viral test in the past three months and who are now asymptomatic do not need to be retested as part of facility-wide testing. Testing should be considered again (e.g., in response to an exposure or as part of PPS) three months after the date of onset of the prior infection.

A PPS should include both residents and staff, because each of these groups is a key factor in transmission within a facility. In assisted living settings, testing should include residents as well as other tenants (e.g., spouses of residents) living in the facility who do not receive care services. If undertaking facility-wide PPS, facility leadership must be prepared for the likely detection of multiple asymptomatic residents who test positive for SARS-CoV-2. Plans should be made to provide staff with appropriate PPE to care for all COVID-19-positive residents and training in PPE use, donning, and doffing. Facilities should also develop plans for cohorting COVID-19-positive residents, considering scenarios with a small number of cases and a scenario of 10 or more cases. Facilities should prepare for potential short-term staffing shortages that result from detection of positive staff members. Staff with COVID-19 must stay out of work for a minimum of 10 days after onset of symptoms and at least 24 hours of no fever without fever-reducing medications and improvement of symptoms. Asymptomatic staff with COVID-19 must stay out of work for a minimum of 10 days after the date of testing. For patients with severe or critical illness, or who are severely immunocompromised, it is recommended that they stay out of work for 20 days after symptom onset or, for asymptomatic severely immunocompromised patients, 20 days after their initial positive SARS-CoV-2 diagnostic test.

Situations in which it is appropriate to conduct facility-wide testing of residents and staff include, but are not limited to:

- There is an outbreak in the facility, as defined by:
  - One or more residents are confirmed to have COVID-19 OR
  - A staff member tests positive for COVID-19 and worked in the facility while potentially infectious (i.e., worked while ill, worked in the 48 hours prior to developing symptoms, or worked in the 48 hours prior to testing, if asymptomatic).
- A cluster (≥2) of residents and/or staff develop symptoms consistent with COVID-19.
- If testing resources allow, a PPS might be warranted in LTC facilities with no known COVID-19-positive residents or staff if it is located in a high-risk area (e.g., close to other LTC facilities experiencing outbreaks, shared staff with a COVID-19-positive facility) to provide situational awareness in the facility and potentially identify asymptomatic cases early.

Federally licensed nursing facilities are required to conduct a PPS of all residents and staff in response to an outbreak (i.e., a new COVID-19 case in any staff member who worked while potentially infectious or a facility-onset case in a resident). Information on this required testing can be accessed on the CMS website.


A negative test only indicates that an individual, unit, or facility did not have detectable virus at the time of testing, and repeat testing might be needed. A negative test at one point in time should not instill a false sense of security. Because of this, the turnaround time for PPS testing must be short (<48 hours).
Facilities that had no known COVID-19 case(s) in residents or staff prior to conducting a PPS, and did not detect positive people during the PPS, do not need conduct repeated rounds of testing.

Facilities that conducted a PPS in response to a confirmed positive resident or staff member and/or that detected new cases during PPS testing should conduct repeat PPS testing of negative residents and staff, with the following considerations:

- Although there is no period of time when one can be guaranteed not to miss infected individuals, MDH recommends that a facility repeat the PPS every three to seven days until 14 days have passed since the last facility exposure to a COVID-19-positive individual.
- Only residents and staff who tested negative on the previous round should be included in the subsequent round of testing.
- The interval between repeated PPS might be longer or shorter, depending on the facility’s population changes (e.g., frequency of admissions).
- As additional positive residents are detected during each PPS round, they should be immediately identified for implementation of Transmission-based Precautions and for cohorting, if relevant for the facility. Positive staff should be excluded from work.
- As more data become available, MDH will update recommendations, if appropriate.

**Testing of units or wards by PPS**

In situations where there are not enough resources to conduct facility-wide PPS, performing PPS should be prioritized for units that have had a positive resident or staff, units with symptomatic residents, and then units with shared staff. If new resident(s) or staff with COVID-19 are identified, consider expanding the PPS to additional units or facility-wide. Facilities should consult with MDH when testing capacity is a concern.

**Ongoing testing strategies**

Because of ongoing community transmission in Minnesota, there will be a need for ongoing testing. Symptomatic residents and staff should be tested as recommended above. Because staff, rounding health care providers, and some residents move in and out of the facility, the risk of introducing COVID-19 will be ever present. Even after completing a PPS series, with no detection of new positive residents or staff in consecutive rounds, facilities will need to periodically test staff (e.g., required serial testing of staff for federally licensed nursing facilities) and high-risk residents, such as those who leave the facility for medical care (e.g., dialysis). If a facility has sufficient testing capacity, PPS could be conducted on a routine schedule or when a change is noted (e.g., increase from baseline of the number of residents transferred to hospitals for any cause, increase in number of unexplained deaths, increase in local community transmission) that might indicate undetected infections. This could be done facility-wide or on a unit-specific basis. Loosening of visitor restrictions may also necessitate changes to the PPS approach and frequency.
Testing in response to an outbreak or respiratory cluster

Nursing homes are required to conduct a PPS of all residents and staff if there is an outbreak in the facility (i.e., a new COVID-19 case in any staff member who worked while potentially infectious or a facility-onset case in a resident). As described above, PPS should be repeated for all previously negative individuals every three to seven days until testing identifies no new cases of COVID-19 among staff or residents for a period of at least 14 days since the last positive resident or staff might have exposed others in the facility.

If viral testing capacity for PPS is limited, first direct testing to residents and staff who are close contacts (e.g., on the same unit or floor) of a resident with a new confirmed case of COVID-19. Because staff often work in multiple parts of the facility, residents and staff in several parts of the facility might be close contacts. If testing capacity for subsequent PPS rounds is limited, facilities should direct repeat rounds of testing to:

- Residents with known COVID-19 exposure (e.g., roommates of positive residents or those cared for by a known positive staff member)
- All residents on affected units only, especially if PPS rounds through day 14 demonstrate no transmission beyond a limited number of units
- Residents who leave and return to the facility (e.g., for outpatient dialysis)
- Staff who work at other facilities with known COVID-19 cases
- Staff who have household or social contacts with confirmed COVID-19

In response to an outbreak, assisted living facilities should consider whether facility-wide PPS is indicated or whether unit-specific PPS or a targeted testing plan would be sufficient. Factors for consideration include movement habits of a positive resident (e.g., spends considerable time in common areas or enters other resident rooms), work duties and location of a positive staff member (e.g., has direct contact with residents or works in multiple facility units), and facility structure (e.g., open access or restricted entry into floors and units).

Ongoing testing of residents and staff in LTC facilities

Considerations for testing residents include:

- Routine testing of higher-risk residents, including residents who:
  - Leave the facility regularly for dialysis or other essential medical services.
  - Have been admitted from a hospital or other facility (whether or not the referring facility has known COVID-19 cases).
  - Are roommates of symptomatic residents and residents confirmed to have COVID-19.
- Testing of all residents in response to an increase in the number of residents transferred for higher acuity care.
Considerations for testing staff include:

- Federally licensed nursing facilities are required to test all staff according to the county COVID-19 positivity rate (see additional information above).
- Routine testing of all staff once weekly or every other week can be considered in other LTC settings as well. Because COVID-19 transmission cannot be prevented or stopped promptly by screening and symptom-driven testing alone, this approach should be considered by all facilities. Self-swabbing might be employed to ensure that testing does not overwhelm facility capacity and that staff participation remains high. Work with your laboratory to determine whether testing of nasal self-swabs is an option. Routine testing of all staff should be strongly considered by facilities located in communities experiencing high-incidence transmission.
- Regular testing of staff who work at other health care facilities.
- Testing of staff who have had close contact with a household member or social contact with confirmed COVID-19.
- Testing of staff who have had a higher-risk exposure to a co-worker or resident with confirmed COVID-19.
- Testing of all staff in response to an increase in the number of staff calling out sick.

When a single case of COVID-19 is detected in a resident or staff member, the facility is experiencing an outbreak and should refer to the guidance on testing in response to an outbreak, outlined above.

Resident placement: cohorting and isolation

Grouping of residents, or “cohorting,” should be done when possible to separate COVID-19-positive residents from residents who are not yet affected. Because of the considerable potential for asymptomatic infection, testing should be used to guide the cohorting process. COVID-19-positive residents should be placed in a private room with a private bathroom, when possible.

To minimize transmission risk, there should be dedicated staff working on a COVID-19 unit who are not assigned to work in other areas of the facility. Staff working in a COVID-19 unit might pose a risk to other facilities at which they work.

Because LTC facilities are not just a place to receive health care, but also a home, moving residents to a new room is neither easy nor trivial. Plans to cohort should be carefully established in advance, before testing results are received, and they should be centered on implementing robust IPC practices. Some principles to consider include:

- Dedicating a unit or part of a unit as the care location for residents with confirmed COVID-19, including those with and without current symptoms of illness. This unit should be used for COVID-19-positive residents only who do not require a higher level of care (i.e., hospitalization), including:
  - Current residents with COVID-19, detected through diagnostic testing or PPS.
  - New residents with confirmed COVID-19 who have been admitted/re-admitted from other facilities, including discharging hospitals, that have not met requirements to discontinue Transmission-based Precautions.
Consider potential risks and benefits of moving residents out of the memory care unit to a designated COVID-19 care unit. Refer to CDC: Considerations for Memory Care Units in Long-term Care Facilities (www.cdc.gov/coronavirus/2019-ncov/hcp/memory-care.html).

Other general recommendations

- Maintain a very low threshold for testing of residents and staff.
- Use a line list to track residents and staff with signs and symptoms consistent with COVID-19, dates of symptom onset, test dates, and results.
- Report to MDH individual residents or staff identified with confirmed COVID-19.
- Do not allow staff who test positive for COVID-19 to work in any area of the facility, and base their return to work on guidance available in MDH: COVID-19 Recommendations for Health Care Workers (www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.pdf).
- Recommendations to address staffing shortages are provided in Appendix C of the MDH: COVID-19 Toolkit: Information for Long-term Care Facilities (www.health.state.mn.us/diseases/coronavirus/hcp/ltctoolkit.pdf).
- Because the PPS approach involves a significant amount of coordination and logistical support, have a clear plan to identify how the PPS will be conducted, who will collect the specimens, and how the data will be used prior to testing.

Resources

  - Includes general guidance and PPS testing resources such as a PPS Toolkit, Frequently Asked Questions, and Preparedness Checklist for Testing at Your Facility by a State Mobile Team.
- MDH: Interim Guidance for Discharge to Home or New/Re-Admission to Congregate Living Settings and Discontinuing Transmission-Based Precautions (www.health.state.mn.us/diseases/coronavirus/hcp/hospdischarge.pdf)
- CDC: Considerations for Memory Care Units in Long-term Care Facilities (www.cdc.gov/coronavirus/2019-ncov/hcp/memory-care.html)
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