

COVID-19 Testing Recommendations for Long-term Care Facilities

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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 \(www.health.state.mn.us/diseases/coronavirus/hcp/lcagentest.pdf\)](https://www.health.state.mn.us/diseases/coronavirus/hcp/lcagentest.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 has found that when symptomatic residents with COVID-19 are identified, asymptomatic residents often test positive as well.¹⁻⁴ 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, placing residents into cohorts, 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.

- Facility-wide resident and staff testing (referred to as a point prevalence survey, or PPS) must be conducted in all LTC facilities upon detection of a COVID-19 case in a resident or staff member who worked while potentially infectious.
- PPS 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 placing residents into cohorts, and communication with residents, families, and staff.
- PPS should not be delayed because of staffing concerns. Delay will facilitate continued transmission and a larger outbreak, impacting more staff and residents.
- 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.
- 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

Facilities should refer to [CDC: Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for COVID-19 \(www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html\)](https://www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html).

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 facemask (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.

- [CMS: QSO-20-38-NH \(www.cms.gov/files/document/qso-20-38-nh.pdf\)](https://www.cms.gov/files/document/qso-20-38-nh.pdf)

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 ($\geq 100.0^{\circ}\text{F}$) 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 $>99.0^{\circ}\text{F}$ 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 have a fever or other 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 \(www.health.state.mn.us/diseases/coronavirus/hcp/hospdischarge.pdf\)](https://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, residents who have been exposed to a positive staff member, and residents who leave the facility regularly for dialysis or other essential medical services. In addition, residents who left the facility and were in close prolonged contact (within 6 feet for ≥ 15 minutes) with people other than staff or residents during a time of high community transmission, should be tested. Test on or after day 5 after a resident's potential exposure.

Testing of staff

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 \(www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.pdf\)](http://www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.pdf).

Diagnostic testing of symptomatic staff

Active screening should be conducted for all staff when reporting to work. This includes active assessment for fever ($\geq 100.0^{\circ}\text{F}$), 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 ($< 100.0^{\circ}\text{F}$) 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.

Staff should not work while sick, even 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, get tested, and stay out of work.

Routine testing of all staff

Federally licensed nursing facilities are required to test all staff according to the 14-day county COVID-19 positivity rate. Information on this required staff testing and county-level positivity rates can be accessed from CMS or MDH. Facilities should select one data source (i.e., CMS or MDH) and check that same data source every other week. County positivity rates released by CMS and MDH might differ; it is important to use the same source consistently. CMS staff testing requirements are outlined in [CMS: QSO-20-38-NH \(www.cms.gov/files/document/qso-20-38-nh.pdf\)](http://www.cms.gov/files/document/qso-20-38-nh.pdf).

CMS county percent positivity data can be found at:

- [CMS: COVID-19 Nursing Home Data \(data.cms.gov/stories/s/bkwz-xpvg\)](http://data.cms.gov/stories/s/bkwz-xpvg)

MDH data can be downloaded from:

- [MDH: Weekly Percent of Tests Positive by County of Residence \(CSV\)](http://www.health.state.mn.us/diseases/coronavirus/stats/wtrmap.csv)
(www.health.state.mn.us/diseases/coronavirus/stats/wtrmap.csv)

The 14-day county test-positivity rate can be determined from MDH data by using the weekly test-positivity dataset downloaded from the MDH website. Add together the percent of positive tests from the county’s two most recent weeks (e.g., Week 39 and Week 38 from Aitkin County is 3.1% + 2.2% = 5.3%). Then divide by two (e.g., 5.3% / 2 = 2.65%). The result is the 14-day positivity rate.

Although routine all-staff testing is not required in assisted living settings, it is encouraged. Assisted living facilities should use MDH county percent positivity data to guide routine staff testing unless staff are shared with an affiliated nursing facility that is already using CMS. In the latter situation, both the assisted living and skilled nursing facility should use CMS data.

- **Low-risk category (<5%):** Once monthly testing is required for all staff in federally certified nursing facilities.
- **Medium-risk category (5%–10%):** Once weekly testing is required for all staff in federally certified nursing facilities.
- **High-risk category (>10%):** Twice weekly testing is required for all staff in federally certified nursing facilities.

Routine testing of high-risk staff

If routine testing of all staff is not possible in an assisted living facility, routine testing can be considered for staff members who:

- Have had close prolonged contact (within 6 feet for 15 minutes or more) with a household member or social contact with COVID-19.
- Had a known high-risk exposure (e.g., PPE breach) while working with a resident with COVID-19.
- Had a known high-risk exposure to a coworker with COVID-19 while potentially infectious (i.e., 48 hours prior to onset of symptoms, or test date if asymptomatic, through the last work date of the employee with COVID-19).
- Worked within 14 days at another facility that has COVID-19 cases.

Facilities should consider testing asymptomatic staff who continue to work multiple times in the 14 days following a high-risk exposure (e.g., days 3, 5, 7, 10, and 12).

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. 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. Consultation with an expert in infectious disease can help determine the isolation period for those who are immunocompromised.

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) is required by CMS for all federally licensed nursing facilities and has been identified as a health standard of care for Minnesota assisted living-type facilities. Testing should be conducted immediately after the first COVID-19 case is detected. Although a PPS might detect multiple positive staff, leading to a staffing shortage, PPS should not be delayed because of staffing concerns. Delay will facilitate continued transmission and a larger outbreak, impacting more staff and residents.

- [CMS: QSO-20-38-NH \(www.cms.gov/files/document/qso-20-38-nh.pdf\)](https://www.cms.gov/files/document/qso-20-38-nh.pdf)
- [Minnesota Home Care Provider/Assisted Living Visitation and Activities Guidance Throughout the COVID-19 Pandemic \(www.health.state.mn.us/diseases/coronavirus/hcp/lcvisit.pdf\)](https://www.health.state.mn.us/diseases/coronavirus/hcp/lcvisit.pdf)

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

- 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.

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 to 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 must conduct additional PPS rounds, including only negative residents and staff, with the following considerations:

- Repeat the PPS every three to seven days until 14 days have passed since the last facility exposure to a COVID-19-positive individual. This series of rounds is referred to as a PPS cycle.
- 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 testing capacity and ability to divert staff to help with testing while still performing other critical IPC measures.
- Use of a shorter interval (e.g., three days) early in the PPS cycle (i.e., in the first two weeks) will help you to identify and isolate additional cases more quickly. The interval between PPS rounds can be lengthened (e.g., to 7 days) after the first two weeks. As an example, testing would occur on day 0 (day the first case is identified), days 3, 6, 9, and 12, and then on days 19, 26, etc.
- As additional residents with COVID-19 are detected during each PPS round, they should be immediately identified for implementation of Transmission-based Precautions, isolation, and for cohorting, if relevant for the facility. Staff with positive test results 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, testing should be expanded to additional units or facility-wide. Facilities should consult with MDH when testing capacity is a concern.

Testing of individuals who previously tested positive

Because individuals can test positive, persistently or intermittently, following COVID-19 infection, CDC recommends that asymptomatic individuals be excluded from routine screening (e.g., weekly staff testing, PPS testing) for three months after initially testing positive by RT-PCR. However, given the potential for false-positive antigen test results, individuals who tested positive by antigen test without confirmatory RT-PCR testing and were asymptomatic during the initial infection should continue to be

included in routine screening. Any asymptomatic individual that tests positive on a screening antigen test should have confirmatory RT-PCR conducted. After testing RT-PCR positive, individuals should be excluded from routine testing for three months.

Exclude individual from routine screening for three months following initial positive test if:

- Individual was positive by RT-PCR testing, regardless of symptoms during the initial infection.
- Individual was positive by antigen test (with or without RT-PCR confirmation) AND was symptomatic at time of testing or developed symptoms during the initial infection.

Continue to include individual in routine screening after initial positive test if:

- Individual was positive by antigen test (without confirmatory test) AND individual had no symptoms during the initial infection.*
- Individual was positive by antigen test but determined to be a false positive after obtaining a negative confirmatory RT-PCR test (within 48 hours of antigen specimen collection) and a second negative RT-PCR test at least 24 hours after the first.

*Although these individuals will not be excluded from testing after their infection, they should be treated as positive. Staff should be isolated, including exclusion from work for a minimum of 10 days, including at least 24 hours fever-free and with improving symptoms. Residents should be placed into transmission-based precautions.

Isolating and placing residents into cohorts

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, who 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 \(www.cdc.gov/coronavirus/2019-ncov/hcp/memory-care.html\)](https://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 \(www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.pdf\)](https://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 \(www.health.state.mn.us/diseases/coronavirus/hcp/ltctoolkit.pdf\)](https://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

- [MDH: Long-term Care Testing: COVID-19 \(www.health.state.mn.us/diseases/coronavirus/hcp/ltctesting.html\)](https://www.health.state.mn.us/diseases/coronavirus/hcp/ltctesting.html)
 - Includes general guidance and PPS testing resources such as a PPS Toolkit, Antigen Testing, Frequently Asked Questions, and Preparedness Checklist for Testing at Your Facility by a State Mobile Team.
- [MDH: Using Antigen-based Point-of-Care \(POC\) Testing for COVID-19 in Long-term Care Facilities \(www.health.state.mn.us/diseases/coronavirus/hcp/ltcantigentest.pdf\)](https://www.health.state.mn.us/diseases/coronavirus/hcp/ltcantigentest.pdf)
- [MDH: Reporting Results of COVID-19 Tests Performed Inside Your Long-term Care Facility \(www.health.state.mn.us/diseases/coronavirus/hcp/ltcantigenreport.pdf\)](https://www.health.state.mn.us/diseases/coronavirus/hcp/ltcantigenreport.pdf)
- [MDH: Interim Guidance for Discharge to Home or New/Re-Admission to Congregate Living Settings and Discontinuing Transmission-Based Precautions \(www.health.state.mn.us/diseases/coronavirus/hcp/hospdischarge.pdf\)](https://www.health.state.mn.us/diseases/coronavirus/hcp/hospdischarge.pdf)
- [MDH: COVID-19 Recommendations for Health Care Workers \(www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.pdf\)](https://www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.pdf)
- [CDC: Interim Guidance on Testing Healthcare Personnel for SARS-CoV-2 \(www.cdc.gov/coronavirus/2019-ncov/hcp/testing-healthcare-personnel.html\)](https://www.cdc.gov/coronavirus/2019-ncov/hcp/testing-healthcare-personnel.html)
- [CDC: Responding to Coronavirus \(COVID-19\) in Nursing Homes \(www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-responding.html\)](https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-responding.html)

- [CDC: Performing Facility-wide SARS-CoV-2 Testing in Nursing Homes \(www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-facility-wide-testing.html\)](https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-facility-wide-testing.html)
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- [CDC: Considerations for Memory Care Units in Long-term Care Facilities \(www.cdc.gov/coronavirus/2019-ncov/hcp/memory-care.html\)](https://www.cdc.gov/coronavirus/2019-ncov/hcp/memory-care.html)
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- [CDC: Infection Control Guidance for Healthcare Professionals about Coronavirus \(COVID-19\) \(www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control.html\)](https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control.html)
- [CMS: QSO-20-38-NH \(www.cms.gov/files/document/qso-20-38-nh.pdf\)](https://www.cms.gov/files/document/qso-20-38-nh.pdf)
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