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. This testing is a priority to help inform clinical care and infection prevention and control (IPC) practices in LTC facilities.

Experience from LTC facilities with COVID-19 cases in Minnesota and other states suggests that when symptomatic residents with confirmed 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, and guide additional prevention and control efforts designed to further limit transmission among LTC residents and staff. This document refers only to RT-PCR testing, which detects the nucleic acid from SARS-CoV-2 virus, not other antigen tests or antibody tests.

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. All of these other considerations must be in place for effectively applying testing to reduce transmission.

COVID-19 Testing Key Points

- RT-PCR-based 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.
- Testing may be used to discontinue Transmission-based Precautions for residents who have tested COVID-19 positive.
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.

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 and existing response plans and capacity.

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**


**Specimen Type**

Nasopharyngeal (NP) and 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 surgical facemask (or N95 respirator, if available and the wearer is fit-tested), eye protection, gloves, and a gown. If respirator supplies are limited, respirators should be prioritized for other procedures with higher risk for producing infectious aerosols (e.g., CPR).

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.

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 or subjective) and symptoms of COVID-19 (shortness of breath, new or change in cough, chills, sore throat, muscle aches). In addition, routine use of pulse oximetry to screen for new or worsening hypoxia may identify infected residents. Older adults with COVID-19 may not show typical symptoms, such as fever or respiratory symptoms. Atypical symptoms may include new or worsening malaise, new dizziness, headache, vomiting, abdominal pain, diarrhea, or altered mental status.

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 test-based strategy or a non-test-based strategy. Both of these strategies are described in MDH: Interim Guidance for Hospital Discharge to Home or Admission to Congregate Living Settings and Discontinuing Transmission-Based Precautions (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.

Residents with persistent symptoms should be placed in, and restricted to, a private room and should wear a facemask during care activities until symptoms are completely resolved or until 14 days after illness onset, whichever is longer.

The test-based strategy to discontinue Transmission-based Precautions consists of:
Symptom- and time-based strategies to discontinue Transmission-based Precautions consist of:

- For immune-competent individuals with confirmed or suspected COVID-19, Transmission-based Precautions should be maintained until both of the following criteria are met:
  - At least 10 days have passed since symptom onset AND
  - 3 days have passed since recovery, which is defined as resolution of fever without fever-reducing medication and improvement in respiratory symptoms (e.g., cough, shortness of breath).

- For immune-competent individuals with confirmed COVID-19 who are asymptomatic at the time of testing and remain asymptomatic during follow-up, Transmission-based Precautions should be maintained until at least 10 days have passed since date of positive test.

- Residents 75 years of age and older, or those with persistent symptoms, should remain in Transmission-based Precautions until:
  - At least 14 days have passed since symptom onset AND
  - 3 days have passed since recovery, defined as fever resolution without fever-reducing medication and improvement in respiratory symptoms (e.g., cough, shortness of breath).

- Residents with immunocompromising conditions (e.g., medical treatment with immunosuppressive drugs, bone marrow or solid organ transplant recipients, inherited immunodeficiency, poorly controlled HIV) should remain in Transmission-based Precautions until:
  - At least 21 days have passed since symptom onset AND
  - 3 days have passed since recovery, defined as fever resolution without fever-reducing medication and improvement in respiratory symptoms (e.g., cough, shortness of breath).
  - Depending on nature of immunosuppression and concern about continued placement in Transmission-based Precautions, residents with immunocompromising conditions could use a test-based strategy. In this case, consider consultation with an expert in infectious diseases.

**Routine Testing of High-risk Residents**

If testing capacity is not sufficient for the facility-wide approaches referred to below, testing should be prioritized for symptomatic and 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 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 or subjective), acute respiratory symptoms (e.g., cough, shortness of breath, sore throat), and muscle aches, or 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.

Asymptomatic staff can also 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 intimate contact with confirmed or suspected COVID-19. If a staff member is found to be positive for COVID-19, testing can be considered for coworkers 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 (PDF) (https://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. Residents and staff should be included in the PPS if it has been ≥8 weeks since their symptom onset. Or, if they never developed symptoms, ≥8 weeks since the date when the positive specimen was collected.

A PPS should include both residents and staff, because each of these groups is a key factor in transmission within a facility. 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 3 days of no fever without fever-reducing medications and improvement of symptoms, whichever is longer), and a minimum of 10 days after the date of testing, if asymptomatic.

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

- One or more residents are confirmed to have COVID-19.
- A cluster (≥2) of residents and/or staff develop symptoms consistent with COVID-19.
- A staff member tests positive for COVID-19 and worked in the facility while ill, worked in the 48 hours prior to developing symptoms, or worked in the 48 hours prior to testing (if asymptomatic).
- 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 (<72 hours). Repeat PPS testing of **negative residents and staff** should be conducted, 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 consider repeating the PPS at least twice, 7 days and 14 days later, including only residents and staff who tested negative on the previous round.
- 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.
If day 7 and 14 testing rounds reveal no new positive tests, no additional PPS rounds are needed at that time. However, if new positive tests are returned on day 7 or 14 testing, the facility should continue to test negative residents and staff approximately every 7 days, until a minimum of two rounds return no new positive residents or staff.

As more data become available, MDH will update recommendations, if appropriate.

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 consecutive rounds without detecting positive residents or staff, facilities will need to periodically test staff and will need to test 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) that might indicate undetected infection. This could be done facility-wide or on a unit-specific basis. Any loosening of visitor restrictions will also necessitate changes to the PPS approach and frequency.

**Testing of Units or Wards by PPS**

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

**Isolation of Residents**

COVID-19-positive residents should be isolated in a private room with a private bathroom, where possible. Other considerations for isolation include:

- As possible, placement of COVID-19-positive residents on units with the fewest number of residents requiring intensive daily care from staff.
- COVID-19-positive residents should not be placed with residents who require mechanical ventilation or are significantly immunocompromised.
- Because it is difficult to restrict residents in memory care to their rooms, COVID-19-positive residents in memory-care units should be moved to isolation rooms in other units.

**Cohorting Concepts**

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.
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.

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 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.
- Cohorting staff to the COVID-19 unit, so that they do not take shifts elsewhere in the facility, to help reduce opportunities for indirect contact transmission.
- Advising cohorted staff that they should not work at other facilities.

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 (PDF) (https://www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.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
(https://www.health.state.mn.us/diseases/coronavirus/hcp/ltctesting.html)

- Includes general guidance and PPS testing resources such as Frequently Asked Questions about State Mobile Team Testing and Planning and Preparedness Checklist for Testing at Your Facility by a State Mobile Team.

MDH: Interim Guidance for Hospital Discharge to Home or Admission to Congregate Living Settings and Discontinuing Transmission-Based Precautions (PDF)
(https://www.health.state.mn.us/diseases/coronavirus/hcp/hospdischarge.pdf)

MDH: COVID-19 Recommendations for Health Care Workers (PDF)
(https://www.health.state.mn.us/diseases/coronavirus/hcp/hcwrecs.pdf)

References
