Introduction

Testing a group of individuals at a single time (e.g., on one day or over two days) is referred to as a “point prevalence survey,” or PPS. The PPS approach provides information on the overall number of affected individuals in the facility at that point in time. A successful PPS requires planning among different stakeholders, perhaps including the facility, corporate group (if relevant), Minnesota Department of Health (MDH), local public health, laboratory, and medical advisors. This document includes considerations for conducting a COVID-19 PPS in long-term care (LTC) settings, including skilled nursing and assisted living facilities. 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.

Facility-driven and State-supported testing

This document and the additional toolkit components provide broad recommendations to plan for, conduct, and respond to a PPS in LTC. Content is detailed enough for a facility to carry out testing on its own if supplies and specimen collection capacity are available. Facilities receiving State support for testing supplies, laboratory coordination, and specimen collection teams might be given guidance for
planning and testing that differs somewhat from what is described here. A majority of the content in this document is relevant for all facilities, whether conducting testing on their own or with State support.

If you are receiving State support for testing (e.g., State testing teams or supplies), there might be additional recommendations or requirements. Please refer to [MDH: Long-term Care Testing: COVID-19](https://www.health.state.mn.us/diseases/coronavirus/hcp/ltctesting.html).

**Why conduct a PPS?**

Residents of LTC facilities are at high risk for infection, serious illness, and death from COVID-19. In Minnesota, people who live and work in LTC facilities are a priority for COVID-19 testing. 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. The PPS approach can be used to describe the scope and magnitude of outbreaks and inform additional prevention and control efforts designed to further limit transmission among nursing home residents and health care providers.

Situations in which it is appropriate to conduct PPS 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., shared staff with a COVID-19-positive facility, close to other LTC facilities experiencing outbreaks) to provide situational awareness in the facility and potentially identify asymptomatic cases early.

**Important points to consider before beginning a PPS**

Testing must include both residents and staff because each of these groups is a key factor in transmission within a facility. If undertaking PPS, facility leadership must be prepared for the likely detection of multiple asymptomatic residents and staff who test positive.

- Plan to provide staff with appropriate PPE to care for all COVID-19-positive residents and training on PPE use, donning, and doffing.
- Develop plans for cohorting COVID-19-positive residents, considering scenarios in which a small number of cases and in which ≥30% residents are positive.

Facilities should prepare for potential short-term staffing shortages that result from detection of positive staff members.
Road Map for Conducting a COVID-19 Point Prevalence Survey (PPS)

- 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. 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.

A negative test only indicates that an individual, unit, or facility, did not have detectable virus at the time of testing. A negative test result at one point in time should not instill a false sense of security. 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 consider repeating the PPS at least twice more, 7 days and 14 days later, each time 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 cohort positive residents, exclude positive staff, and test negative residents and staff approximately every 7 days, until a minimum of two rounds return no new positive residents or staff. The laboratory turnaround time for PPS results must be short (< 72 hours) to ensure positive cases can be managed quickly.

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.

Consult with the testing laboratory to determine their capacity and requirements for collection materials, storage, laboratory forms, and shipping. The facility must have a plan for communicating test results to residents and staff, as relevant, and connecting people with clinical care.

Complete State Electronic Form for Testing Support

LTC facilities that need testing support should fill out an electronic form to request State support (supplies and/or testing teams) for specimen collection. Please fill out the online form at [MDH: COVID-19 Testing Requests and Allocations for Long Term Care](https://redcap.health.state.mn.us/redcap/surveys/?s=FXNEEE7PXX).
Billing and State Reimbursement for Testing

Information about billing, reimbursement, and insurance for resident and staff testing with State support is available in [MDH: Frequently Asked Questions: COVID-19 testing information for long-term care facilities](https://www.health.state.mn.us/diseases/coronavirus/hcp/ltctestfaq.pdf).

Before Testing Day

Schedule laboratory testing

Facilities with capacity to collect specimens without assistance of a State specimen collection team should work with their regular laboratory to obtain supplies and schedule testing.

- If the regular laboratory does not have capacity for testing, facilities may arrange for supplies and sample testing from Mayo Clinic Laboratories. Send requests to Mayo Lab Inquiry: mcl@mayo.edu.

Facilities that need State testing support should fill out the electronic testing form (see link above) to request:

- Specimen collection kits only, if your facility has arranged the collection team and laboratory.
- A team to collect specimens at your facility and train your staff to conduct PPS.
  - State-contracted teams can provide baseline testing for both low risk facilities (no laboratory confirmed COVID-19 cases) and higher risk facilities.
  - On a case-by-case basis, State teams will return as needed to assist with testing on days 7 and 14 for facilities that identified positive cases during day 0 testing.
  - State testing teams will teach facility staff how to perform nasal swab collection. This is a good opportunity to train multiple staff members. Facilities will then be prepared to do subsequent testing.

State-supported testing teams and supplies are prioritized based on available capacity and the COVID-19 situation of requesting facilities. After required information has been entered, you will receive email confirmation that your request was received and information about next steps.

As described above, all facilities conducting PPS should complete the State electronic testing form to ensure State-level laboratory coordination.

Communicate with local partners

Each community has access to unique resources to support LTC during COVID-19. Consider connecting locally with the following organizations.

- Health care services contracted to work with your facility may be able to assist with staffing for PPS.
Health Care Coalitions are key partners in addressing resource requests, leading and engaging in information sharing, and coordination during COVID-19. [MDH: Health Care Coalitions](https://www.health.state.mn.us/communities/ep/coalitions/index.html).

Some local public health departments are able to serve as facility “testing liaisons,” providing support during the initial round of PPS testing by facilitating communication between facility and State testing teams (e.g., MN National Guard) and helping to implement a smooth and efficient testing operation.

- Facilities receiving State support will be contacted directly by the local testing liaison.
- Facilities conducting testing on their own can find contacts for local public health at [MDH: Find a local health department or community health board](https://www.health.state.mn.us/communities/practice/connect/findlph.html).

MDH Public Health Preparedness Consultants (PHPCs) can also provide support to facilities during PPS testing. [MDH: Public Health Preparedness Consultants (PHPCs)](https://www.health.state.mn.us/about/org/ch/epr/phpc/index.html).

**Prepare the site**

- Confirm date and time for swabbing.
  - It can take up to 1 hour to swab 20 residents on the first round. Your team will become quicker as you gain practice.
- Assign staff to testing teams and identify roles.
- Confirm whether staff will be tested.
- Provide COVID-19 educational materials and health resources to residents, families, and staff.
- Generate a list of residents (with unit and room number) and staff. Note whether each person on the list is “resident” or “staff.”
- Print out a facility layout diagram. Along with the list, this will help when completing laboratory submission forms and planning the order in which residents will be swabbed.
- Confirm supply needs and protocols with laboratory, and order adequate laboratory supplies.
- Identify a secured non-food refrigerator to store samples.
- Order PPE supplies for swabbing.
- Conduct staff training/re-training (e.g., PPE donning and doffing, hand hygiene, specimen collection, and processing).

**Organize teams and identify roles**

Identify who will take on the following tasks.

- Notify residents and families about COVID-19 testing.
- Arrange logistics with commercial laboratory.
Order testing, receive and communicate test results.

Identify people to take on the following test-day roles:

- **Testing Teams.** The number of teams needed will depend on the number of residents and staff to be tested. Plan to use one team per 20 residents to be swabbed. At least one member of the testing team should be a staff member who is able to identify the residents and who is known by the residents. Each team should be comprised of a Swabber, Assistant, and Testing Manager.
  - Swabber will collect specimens.
  - Assistant will observe specimen collection, check off resident list, fill in symptom sheet (if used), package the specimen tube, and match specimen name with laboratory form.
  - Testing Manager to observe, support, and address questions from team and residents.

- **Runners.** Runners should be available to assist testing teams as needed. There would ideally be one Runner per floor.

- **Infection Preventionist.** Someone knowledgeable about infection prevention and control (IPC) should oversee the testing operation.

Health care providers and other medically trained staff (e.g., RN, NA, LPN) can collect specimens for COVID-19 testing. Staff should be trained, and competency evaluated, by an RN or health care provider. Specimen collection and training should be conducted in accordance with [CDC: Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for COVID-19](https://www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html).

**Communicate the testing plan**

Notify residents and families about COVID-19 testing.

- Prepare in advance, so you can describe the benefits of PPS while explaining that testing may identify many previously unknown COVID-19-positive residents and staff. The early identification of pre-symptomatic and asymptomatic positive people will lead to actions that prevent transmission and can save lives.
- Explain how test results will be shared with residents and families.
- Develop a plan for communicating changes to residents and staff which might occur after test results are received.

All residents and staff should be included in PPS testing, if at all possible. 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. In addition to all regular staff, facilities might consider inclusion of contract staff, volunteers, and essential caregivers. If your facility testing approach does not include staff testing, let staff know how they can also be tested (e.g., on another day for onsite staff testing or by their regular provider).

Facility leaders should be prepared to answer the following common questions:
Who will cover the cost of staff testing?
Will swabbing occur on staff shift time or off time?
Where will staff testing be conducted (e.g., in the facility, parking lot, drive-through site)?
Who will order the test and have access to test results (private health information)?

Prepare for the PPS

Determine who will be tested.

- 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 3 months and who are now asymptomatic do not need to be retested as part of PPS. These individuals can be included 3 months after the prior date of symptom onset, or date of testing, if asymptomatic. Consider swabbing residents or staff with a pending COVID-19 test if the specimen was collected and submitted more than 2 days before the PPS date.

Prepare to obtain verbal or written consent for testing.

Develop a list of all residents, units, and room numbers.

- A paper list can be used to track completed collections, and to document consent/refusal and symptoms (if desired) at the time of specimen collection. A template printable testing list is included in this toolkit.
- This information can also be recorded in an electronic format.

Develop a swabbing plan (by wing, by floor), using the facility diagram and resident list with room numbers to make sure all planned areas are covered.

- Swabbing of multiple residents should not be performed in the same room at the same time, unless appropriate separation between swabbing stations can be maintained.
- When multiple staff are to be tested, this can be done outside (e.g., drive through or parking lot setup) or in a room large enough to ensure spacing.

 Assign the Testing Teams and other personnel to defined areas of the facility (e.g., wings, floors).

Print out (if relevant) and complete laboratory submission forms for each person to be tested. Write “resident” or “staff” clearly on the top of each form to help the laboratory return organized results.

Pre-label specimen collection tubes with resident or staff member last name, first name, DOB, and collection date.

Assemble necessary supplies for each testing team, which include:

- Swab kits (swabs, specimen tubes/containers with saline or viral transport media, pre-written labels, pre-completed laboratory forms).
- Biohazard lab specimen bags for specimen containers (supplied by laboratory).
- PPE, including gloves, gowns, face shield (or other front and side eye protection), and N95 respirator (if available) or surgical mask.
Alcohol-based hand rub (ABHR), packaged in sufficient amounts for each team to conduct hand hygiene during PPE donning and doffing and between each specimen collection.

- Garbage bags for swab packaging waste and used gloves.
- Cooler/ice packs as directed by laboratory. Specimens should be stored at 2–8°C (35-47°F).
- Disinfectant wipes.
- Cart for moving materials room to room.
- Printed or electronic lists of residents and staff and pens, as needed.

**Prepare for testing outcomes**

Develop plans for detection of additional COVID-19-positive residents (e.g., make a plan for 10, 20, 30, or more cases).

- Use your facility diagram to plan for cohorting positive residents, dedicating staff to that COVID-19 unit, and establishing safe spaces for PPE donning and doffing.

Prepare to address staffing shortages (e.g., 5–30% of staff may be positive, with higher rates in facilities with multiple resident cases).

- Positive staff might work in all areas, including ancillary departments such as dietary, environmental services, etc.
- Consider asking staff tested offsite to provide a copy of their results to the facility occupational health point person.


**Educate staff**

Educate staff on the following:

- PPE donning and doffing, including hand hygiene and changing gloves between residents.
- Specimen collection technique, putting swabs in tubes, packaging tubes, storage, and transport. A walk-through demonstration of the process at the cart with equipment can be helpful. Confirm processes with the laboratory, if needed.
- Procedures for completing laboratory forms and other testing paperwork, including critical fields that must be completed accurately on the forms.
- Walk through the testing format decided (e.g., room to room, parking lot) to identify areas needing improvement or changes.
Day of Specimen Collection

Before starting

- Review procedures for donning and doffing PPE and the location of donning and doffing stations. Distribute PPE supplies to teams.
- Review and practice hand hygiene with ABHR.
- Review roles and responsibilities for Swabbers, Assistants, and Testing Managers in collecting specimens and supervising the activity.
- Assign staff to regularly collect specimen bags and place the bags in the cooler with ice packs. Specimens should be stored at 2–8°C (35-47°F).

Collect specimens

PPE use:

All staff and others (e.g., local public health) present for testing day should practice universal masking with medical-grade face masks and universal eye protection that covers front and sides (e.g., face shield, goggles).

The Swabber, Assistant, and Testing Manager should wear an N95 respirator (if available) or medical-grade face mask, face shield, gown, and gloves during specimen collection.

- The same face mask or N95 respirator and face shield can be worn while collecting specimens from multiple people.
- If there are sufficient supplies of re-usable gowns, a clean gown can be donned upon entry into each resident room. If there is insufficient supply, and no resident care is being provided beyond specimen collection, the same gown can be worn for specimen collection from multiple people.
  - If any contamination or soiling occurs on a gown, it should be doffed and discarded or decontaminated, as appropriate.
- Face masks, N95 respirators, gloves, and disposable gowns should always be discarded once contaminated (e.g., by contacting resident during specimen collection, getting coughed or sneezed on, or touching one’s own mask with contaminated hands) or visibly soiled.
- If soiled, face shields can be doffed, disinfected, and donned, as long as the integrity of the equipment is maintained.
- Hand hygiene must always be observed before donning and after doffing PPE.

The following recommendations are relevant for specimen collection from residents and staff, but “residents” is used here for simplicity.

- Between each resident tested, the Swabber should change gloves, conduct hand hygiene with ABHR, and put on new gloves.
In the process described below, the Assistant and Testing Manager need only remove gloves and conduct hand hygiene between residents if they come into contact with a resident, resident body secretions, the direct resident room environment, a filled specimen collection container, or if the gloves become otherwise contaminated.

If a process other than that outlined here is used, where the Assistant has contact with equipment used during specimen collection or handles specimen containers after swabbing, the Assistant should remove gloves after each resident, conduct hand hygiene and put on a new pair of gloves before the next resident.

**Steps for collection of specimens:**

1. Move from one resident room to the next to collect specimens. Swab collection should be conducted in each resident’s room, after acquiring consent.

2. Upon arriving to a resident’s room, the Assistant should record whether the resident agrees to specimen collection, is not present in their room, or refuses testing. If the facility is collecting symptom information, the Assistant should record symptoms.

3. The cart used to transport materials should remain in the hallway and not be brought into resident rooms. The Assistant stays in the hall with the cart.

4. The Swabber dons a clean pair of gloves, picks up the specimen kit with container pre-labeled with the resident’s name, and collects the specimen. The Swabber puts the swab in the collection container (containing appropriate viral transport media), snaps off and discards the end of the swab, and puts the cap on the collection container. The Swabber drops the capped container into a biohazard bag, held open by the Assistant.

5. The Assistant does not touch the filled container, closes the biohazard bag and pairs it with the correct pre-written laboratory form, and places the bag into a cooler where it is held at refrigeration temperature until arrival at the laboratory for testing.

6. The Swabber removes and discards gloves and conducts hand hygiene before moving to the next resident room. The Assistant can continue with same gloves unless contaminated (as described above).

7. The Team moves to the next room. The Assistant finds the correct specimen collection container and laboratory form, and the process begins again.

8. Throughout, the Team Manager observes the process, looking out for points of contamination for the Swabber and Assistant, confirms resident identification, and answers questions from the Team and residents.

9. All disposable PPE should be doffed when leaving any unit or floor and at the end of the testing round. Hand hygiene should be conducted after doffing.

The Testing Team should conduct a quality assurance check mid-day to ensure swabs are labeled and forms completed correctly.

After finishing the collection rounds, the Testing Team may do a final round of specimen collection for residents who were unavailable and/or those who initially refused.
Organize specimens and debrief

- Review the master list of swabbed residents and match with lab forms (completed prior to specimen collection) and labels on bagged specimen containers.
- Deliver specimens to the laboratory or use a courier, following directions on storage and transport from the laboratory.
- Review the process with the team to determine what went well and what needs improvement for the next round of testing.
- Consider entering paper-based information (e.g., resident and staff testing/refusal, symptoms) into a spreadsheet, leaving space to record test results, if desired.

After Testing Day

Cohort positive residents and dedicate staff

- Implement the plan to cohort positive residents in a specific part of the facility as soon as test results are received.
- Make sure to dedicate staff to that part of the facility. Also be prepared to exclude any staff who have a positive test result, regardless of whether they have symptoms.

Manage untested residents

- Facilities should isolate untested roommates of COVID-19-positive residents to their current rooms and use Transmission-based Precautions.
- If a resident is asymptomatic and declines testing at the time of facility-wide testing, decisions on placing the resident on Transmission-based Precautions for COVID-19 or providing usual care should be based on whether the facility has evidence suggesting virus transmission.
- Residents who have not been tested should be closely monitored for change in condition that warrants COVID-19 testing and/or isolation.
- Facilities should continue to engage with residents about the importance of testing, including through rounding providers, if possible. Residents with unknown COVID-19 status pose a potential transmission risk to the rest of the facility.

Plan for subsequent PPS rounds

Plan follow-up testing of residents and staff who had a negative COVID-19 test after the first round. MDH recommends testing negative people every seven days until two rounds of testing with no new positive cases is detected. People with a positive test should not be included in subsequent rounds of testing.
Additional PPS Considerations

Tips for collecting specimens

- **Introduction and consent.** Knock on resident room door. Introduce yourself, confirm name of resident. Explain the purpose of your visit, and what you are going to do. Obtain the resident’s verbal or written consent.

- **Swabbing.** Assistant checks off name of resident on clipboard or in computer, asks about symptoms, and gives pre-labeled specimen kit to Swabber. Swabber collects specimen, places swab in tube, and drops tube into an open biohazard bag, which is held by the Assistant. Swabber discards waste from specimen kit into trash. Assistant does not touch tube directly, closes biohazard bag, includes laboratory form, and puts specimen into cooler.

- **PPE and hand hygiene.** Swabber removes gloves without contaminating other parts of the hands or arms, and puts them into trash. Swabber conducts hand hygiene with ABHR, moves to next room, and puts on new gloves. As long as Assistant does not touch the resident, resident environment, specimen collection tube, or become otherwise visibly or invisibly contaminated, gloves do not need to be changed. If gloves are changed, doffing must be followed by hand hygiene.

- **Preventing transfer of virus among residents.** The Testing Team should be considered potentially contaminated while moving through the facility. Only after conducting hand hygiene and donning a new pair of gloves should the Swabber touch residents, the resident environment, or collection equipment and materials. Care should also be taken to prevent contact of the gown with the resident during specimen collection.

  If face mask or face shield must be adjusted during the specimen collection period, remove gloves, conduct hand hygiene, adjust PPE, conduct hand hygiene, and put on new gloves before collecting specimen from the next resident.

  Any equipment used during collection of specimens (e.g., thermometer, pulse oximeter) must be cleaned and disinfected between residents by using an EPA-approved product for SARS-CoV-2.

  Whenever possible, always move from areas of the facility that have had no known COVID-19 cases into areas of the facility that have already had COVID-19 cases or areas where roommates of COVID-19-positive residents still reside. This reflects the “clean to dirty” concept of infection prevention intended to limit transfer of infectious agents from a contaminated area into a susceptible area.

Guidance Documents

  - Includes information on when to test residents and staff and considerations for cohorting positive residents.

Appendix C includes steps that LTC facilities should follow when normal means of filling shifts are exhausted.