



Novel Coronavirus (COVID-19)

SARS-CoV-2 Testing Strategies for Skilled Nursing Facilities

Background

It has been documented through mass testing that when a single or small number of symptomatic cases are identified, there are many additional asymptomatic or mild cases in other residents and staff.¹ Experience within Shasta County has shown that despite HCP symptom screening, when COVID-19 cases are identified in a nursing home, there may be HCP with asymptomatic SARS-CoV-2 infection. HCP likely contribute to introduction and further spread of SARS-CoV-2 within nursing homes. Therefore, a comprehensive testing plan for Skilled Nursing Facilities (SNFs) in Shasta County is strongly recommended.

A proactive testing strategy allows for earlier detection and intervention in outbreaks in skilled nursing facilities (SNF). More laboratory testing capacity is now available in Shasta County for SARS-CoV-2, the virus that causes COVID-19, and can be used by SNFs as follows:

- Making decisions about cohorting of residents and healthcare personnel* (HCP) within facilities
- Discontinuing transmission-based precautions
- Identifying HCP testing positive for SARS-CoV-2 infection for exclusion from work
- Allocation of resources based on burden of SARS-CoV-2 infection across different units or facilities

Testing should not supersede existing infection prevention and control interventions

Testing conducted at nursing homes² should be implemented *in addition to* existing infection prevention and control measures recommended by the Centers for Disease Control and Prevention (CDC), California Department of Public Health (CDPH), and CalOSHA, including visitor restriction, cessation of communal dining and group activities, monitoring all HCP and residents for signs and symptoms of COVID-19, and universal masking as source control. See CDPH guidance in AFL 20-25.2 on [Preparing for Coronavirus Disease 2019 \(COVID-19\) in California Skilled Nursing Facilities](#)³ and AFL 20-53 on [Coronavirus Disease 2019 \(COVID-19\) Mitigation Plan Recommendations for Testing of Health Care Personnel \(HCP\) and Residents at Skilled Nursing Facilities \(SNF\)](#)⁴ for more details.

* HCP include, but are not limited to, emergency medical service personnel, nurses, nursing assistants, physicians, technicians, therapists, phlebotomists, pharmacists, students and trainees, registry staff, contractual staff not employed by the healthcare facility including adjunct medical providers who enter the facility to provide patient care, and persons not directly involved in patient care but who could be exposed to infectious agents that can be transmitted in the healthcare setting (e.g., clerical, dietary, environmental services, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel).

Testing Stages

The following guidelines are **minimum recommendations** for SNFs in Shasta County. Shasta County Health and Human Services Agency, Public Health Branch (SCPH) may revise testing guidance to be more stringent in the event of increasing levels of community transmission.

Regular testing of residents and staff may be undertaken in three stages dependent on the presence of COVID-19:

- Baseline testing for facilities with no current COVID-19 cases
- Screening testing: Conduct weekly sampling of asymptomatic HCP and immediate testing of any symptomatic or exposed residents and HCP.
- Response-driven testing: After detection of a confirmed case of COVID-19, implement broader testing and retesting of both residents and staff until no cases are detected within the facility for two sequential rounds of weekly testing.

Stage 1: Baseline testing for facilities with no current COVID-19 cases

- SNFs were directed to conduct baseline testing for all SNF residents and HCP for any facility that did not have a positive case and report the results to CDPH by June 30, 2020. The baseline testing results can be found at the [SNF baseline testing website](#).

Stage 2: Routine screening in facilities with no COVID-19 cases

- a. Implement a minimum weekly screening of all HCPs. If test positivity exceeds 10% in the Shasta County community, conduct screening of all HCPs *twice per week* per CMS guidelines in QSO 20-38-NH.⁵ Check <https://www.co.shasta.ca.us/covid-19/data> for the most current 7-day average test positivity rate.
- b. Immediately test any resident or HCP who are exposed to a COVID-19 positive individual or who develop symptoms consistent with COVID-19.
- c. HCP with a previous positive test:
 - i. HCP who had a positive test over 3 months ago should be included in weekly screening, regardless of symptoms.
 - ii. HCP who had a positive test at any time and become symptomatic after recovering from the initial illness should be excluded from work and considered for alternative diagnoses. If other diagnoses are ruled out, the HCP may be re-tested and should be excluded from work.
- d. In facilities with a positive COVID-19 case, implement response-driven testing (Stage 3), as described below.

Stage 3: Response-driven testing in facilities with confirmed cases of COVID-19

- a. As soon as possible after one (or more) COVID-19 positive individuals (resident or HCP) is identified in a facility, serial retesting of all residents and HCP who test negative upon the prior round of testing should be performed every seven days until no new cases are identified **among residents** in two sequential rounds of testing (14 days).

- b. Immediately test any resident or HCP who are exposed to a COVID-19 positive individual or who develop symptoms consistent with COVID-19.
- c. Residents and HCP with a previous positive test:
 - i. Residents and HCP with a positive test over 3 months ago should be retested as part of facility-wide testing, regardless of symptoms.
 - ii. Residents and HCP who had a positive test at any time and become symptomatic after recovering from the initial illness should be considered for alternative diagnoses. If other diagnoses are ruled out, Residents and HCP may be re-tested and placed back on the appropriate Transmission-Based Precautions or excluded from work, respectively.
- d. If serial weekly testing of residents (at 7 and 14 days) is negative while HCP response testing remains positive, the facility may discuss with SCPH a more targeted approach to testing and contact tracing.
- e. If testing capacity is not sufficient for retesting all residents, retest those who frequently leave the facility for dialysis or other services and those with known exposure to infected residents (such as roommates) or HCP.
- f. Use retesting to inform decisions about when residents with COVID-19 can be moved out of COVID-19 wards. See CDC guidance on Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 in Healthcare Settings for additional information.
- g. When no new cases have been detected among residents or HCP for two sequential rounds of weekly testing (14 days), switch to routine screening strategy (Stage 2).

Additional recommendation for taking a proactive approach to early COVID-19 detection

- Conduct screening testing of asymptomatic residents who frequently leave the facility for dialysis or other services.

Logistics

- Routine testing should be obtained from a laboratory using a molecular amplification detection test, such as reverse-transcriptase polymerase chain reaction (RT-PCR) with at least 95% sensitivity and 90% specificity.
- While Shasta County Health and Human Services Agency, Public Health Branch (SCPH) may support SNFs with no readily accessible alternatives in accessing testing to implement these strategies, **individual facilities should make plans to initiate testing themselves**. The large scope of the pandemic will require facilities to use their own resources to obtain testing results more rapidly. **Facilities should develop relationships with commercial laboratories.**
- The following is a list of available testing options within Shasta County:
 - OptumServe testing site (Redding)
 - Dignity testing site (Redding)
 - Shasta Community Health Center testing site (Redding)
 - Mountain Valleys Health Centers testing site (Burney/Fall River Mills)
 - Rite Aid #06097 (Eureka Way, Redding)

- Commercial laboratories: <https://testing.covid19.ca.gov/covid-19-testing-task-force-laboratory-list/>
- Shasta County Public Health Laboratory
- Acceptable specimens include NP, OP, or mid-turbinate swab by HCP collection, or mid-turbinate or anterior nares by either supervised onsite self-collection or HCP collection. Multiple specimens may be taken with a single swab and swabs from two anatomic locations may be placed in the same vial. See [FDA FAQ on Diagnostic Testing for SARS-CoV-2](#) and [CDC Interim Guidelines for Collecting, Handling and Testing Clinical Specimens for COVID-19](#).

Antigen testing

Rapid Point of Care (POC) antigen testing may be substituted for molecular testing under the following scenarios:

- Symptomatic individuals within the manufacturer’s window after symptom onset and a positive test would inform immediate, specific clinical, infection control, or public health action.
- During an outbreak, defined as the presence of one or more cases within the previous 14 days, particularly when PCR testing is limited or turnaround time is prolonged, e.g. >72 hours.
- Among asymptomatic individuals, only if repeat testing is done at least weekly to alleviate the lower sensitivity of antigen tests.
- **Results from antigen tests should always be interpreted in the context of the exposure history and clinical presentation.** For an algorithm to guide interpretation of antigen test results including circumstances that warrant confirmatory testing, visit <https://www.cdph.ca.gov/Programs/CHCQ/LCP/CDPH%20Document%20Library/AFL-20-53-Attachment-01.pdf>.

Additional antigen testing guidelines

- SNF must have a CLIA Certificate of Waiver or a Certificate of Compliance. The person performing the POC test must be trained to perform the test including conducting quality control.
- Dry swabs should be used for all tests, and transport medium should NOT be used. False positive test results have been reported when swabs are placed in viral transport medium prior to testing.
- Follow manufacturer’s instructions for the specified number of days since symptom onset, if symptomatic.

Reporting antigen test results

- Positive and non-positive (negative, indeterminate, etc.) antigen test results must be reported to SCPH by the SNF in the California Reportable Diseases Information Exchange (CalREDIE) via the Manual Laboratory Reporting Module (MLRM) or Electronic Laboratory Reporting (ELR). To request access to the MLRM, complete an account request form at the link below and email to calrediehelp@cdph.ca.gov. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/MLR_Account_Request_Form.pdf

- Review the CalREDIE MLRM Quick Start Guide for reporting instructions.
https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/MLR_Quickstart_Guide.pdf

Use of test results to guide cohorting of HCP and residents

Healthcare personnel

- When cohorting is implemented, assign dedicated HCP to work only on the COVID-19 care unit. These HCP should ideally have a restroom, break room, and work area that is separate from HCP working in other areas of the facility.⁶
- HCP testing positive for SARS-CoV-2 should be excluded from work until [Return-to-Work Criteria for Healthcare Workers](#)⁷ are met.
- If the facility is facing critical staffing shortages, see CDC [Strategies to Mitigate Healthcare Personnel Staffing Shortages](#)⁸ and consult with SCPH for additional guidelines where asymptomatic COVID-positive HCP may be allowed to work.
 - If implementing crisis capacity staffing strategies in coordination with SCPH, asymptomatic COVID-positive staff must only work with COVID-positive residents and staff, and work areas for these staff must be kept separate from work areas for COVID-negative staff. Other than work, these individuals should adhere to home quarantine requirements.

Residents

- Residents who test positive should be isolated for 10 days after symptom onset and 24 hours fever free and improvement in symptoms if symptomatic, or 10 days after test date if asymptomatic. Patients with [severe to critical illness](#)⁹ or who are severely immunocompromised should be isolated for at least 10 days and up to 20 days since symptom onset and at least 24 hours fever free and symptom improvement.
- If feasible, place residents with suspected or confirmed COVID-19 in single occupancy rooms with the door closed in a single area within the facility.
- If single-occupancy rooms are not available, cohorted patients can be roomed together strictly by cohort (only COVID-negative with other COVID-negative residents and COVID-positive with other COVID positive residents).
- COVID positive and COVID negative cohorts should not share common areas or bathrooms.
- Cohorting should be done with as much separation as possible (e.g. separate buildings, floors, or wings for separate cohorts). If there is no way to separate cohorting areas, then temporary physical barriers (screens, etc.) with clear signage posted should be used.
- Staff, equipment, etc. should be dedicated to a cohort (positive or negative) and should not be shared.
- Exposed residents who have symptoms consistent with COVID-19, but test negative should still be presumed to have COVID-19 in the absence of a verifiable alternative diagnosis, given the sensitivity of the SARS-CoV-2 PCR may be around 70%. These residents should be placed on standard, contact, and droplet precautions, and isolated away from both the COVID-positive and COVID-negative residents if possible. Re-testing may be performed if available and then a disposition can be chosen based on the retesting results.

- Closely monitor roommates and other residents who may have been exposed to an individual with COVID-19 and avoid placing unexposed residents into a shared space with them.
- Create a plan for managing new admissions and readmissions in the 14 days after admission or readmission.
 - Test newly admitted residents prior to admission, including transfers from hospitals or other healthcare facilities. If not tested within the 72 hours prior to admission, the SNF should test and quarantine upon admission. Results for asymptomatic patients tested in the hospital do not have to be available prior to SNF transfer. Residents newly admitted from the hospital should be quarantined in single rooms or a separate observation area ("yellow-observation") for 14 days from the date of last potential exposure and then retested. If negative, the resident can be released from quarantine.
 - SNFs may consider acute care hospital days as part of the quarantine observation period for new admissions as long as the following criteria are met:
 - SNF is in regular communication with their local health department (LHD) and/or the hospital infection preventionist and occupational health program, and there is no suspected or confirmed COVID-19 transmission among patients or staff at the hospital.
 - SNF has verified (via the LHD or hospital) that the hospital is implementing a process for screening new admissions and monitoring patients for hospital-onset COVID-19, and has designated COVID-19 unit(s) with dedicated staff and minimal cross-over.
 - Testing and quarantine are not required for residents readmitted after hospitalization, or who leave the SNF for ambulatory care (e.g., emergency department or clinic) visits unless there is suspected or confirmed COVID-19 transmission at the outside facility as verified with their SCPH.

Resources

Baseline, Symptomatic, Screening and Response COVID-19 Testing of SNF Residents and HCP

<https://www.cdph.ca.gov/Programs/CHCQ/LCP/CDPH%20Document%20Library/AFL-20-53-Attachment-01.pdf>

Considerations for Interpreting Antigen Test Results in Nursing Homes

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/hcp/nursing-home-testing-algorithm-508.pdf>

Frequently Asked Questions on Coverage of COVID-19 testing

<http://www.dmhc.ca.gov/Portals/0/Docs/DO/DMHC-FAQ-ForCOVID.pdf>

References

¹Kimball A, Hatfield KM, Arons M, et al. Asymptomatic and Presymptomatic SARS-CoV-2 Infections in Residents of a Long-Term Care Skilled Nursing Facility — King County, Washington, March 2020. MMWR Morb Mortal Wkly Rep 2020;69:377–381. DOI: <http://dx.doi.org/10.15585/mmwr.mm6913e1>

² Testing for Coronavirus (COVID-19) In Nursing Homes: Considerations for use of test-based strategies for preventing SARS-CoV-2 transmission in nursing homes. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-testing.html>

³ California Department of Public Health All Facilities Letter 20-25.2: Preparing for Coronavirus Disease 2019 (COVID-19) in California Skilled Nursing Facilities.

<https://www.cdph.ca.gov/Programs/CHCQ/LCP/Pages/AFL-20-25.aspx>

⁴ Coronavirus Disease 2019 (COVID-19) Mitigation Plan Recommendations for Testing of Health Care Personnel (HCP) and Residents at Skilled Nursing Facilities (SNF).

<https://www.cdph.ca.gov/Programs/CHCQ/LCP/Pages/AFL-20-53.aspx>

⁵ CMS Interim Final Rule (IFC), CMS-3401-IFC, Additional Policy and Regulatory Revisions in Response to the COVID-19 Public Health Emergency related to Long-Term Care (LTC) Facility Testing Requirements and Revised COVID-19 Focused Survey Tool <https://www.cms.gov/files/document/qso-20-38-nh.pdf>

⁶ Responding to Coronavirus (COVID-19) in Nursing Homes. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-responding.html>

⁷ Criteria for Return to Work for Healthcare Personnel with Suspected or Confirmed COVID-19 (Interim Guidance). <https://www.cdc.gov/coronavirus/2019-ncov/hcp/return-to-work.html>

⁸ Strategies to Mitigate Healthcare Personnel Staffing Shortages.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/mitigating-staff-shortages.html>

⁹ Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 in Healthcare Settings (Interim Guidance). <https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.html#definitions>

Adapted from Los Angeles County Department of Public Health, the Centers for Disease Control, and the California Department of Public Health