

Considerations for Use of SARS-CoV-2 Antigen Testing in Nursing Homes

Antigen tests are available as point-of-care (POC) diagnostics for SARS-CoV-2. They have a rapid turnaround time which is critical to the identification of the SARS-CoV-2 infection and rapid implementation of infection prevention and control strategies. These tests can augment other testing efforts especially in settings where RT-PCR testing capacity is limited or testing results are delayed (i.e., > 48 hours). In general, these POC antigen tests have a lower sensitivity, but similar specificity for detecting SARS-CoV-2 compared to reverse-transcriptase polymerase chain reaction (RT-PCR) tests.

As the sensitivity of antigen tests is generally lower than RT-PCR, the FDA EUA recommends that negative **POC antigen tests be considered presumptive**. Clinical staff in nursing homes should consider when confirmatory RT-PCR testing might be needed prior to making clinical decisions, cohorting residents or excluding HCP from work. When interpreting the results of antigen tests, test characteristics and probability of infection should be considered.

- Test sensitivity might vary between antigen testing platforms. Facilities should be aware of which platform is being used and the sensitivity of the test for the patient population to be tested. For example, the first two antigen tests have received FDA EUAs range in sensitivity from 84% to 97% when used within 5 days of symptom onset.
- Factors that increase the probability of infection include the presence of symptoms in the person being tested, recent exposure to someone diagnosed with COVID-19, and whether testing is being conducted in a nursing home with an outbreak or within a high-prevalence community. These factors assist in deciding whether confirmatory testing by RT-PCR is indicated following the antigen test.

In a confirmatory, an RT-PCR test is performed within 48 hours, individuals should be assumed infectious until the confirmatory test results are completed. For example, ***if a symptomatic resident tests presumptive negative on an antigen test and a RT-PCR is performed, the resident should remain in Transmission Based Precautions until the RT-PCR test results are received. If an asymptomatic HCP working in a nursing home without an outbreak and in a county with low community prevalence tests antigen positive, they should be excluded from work until a negative RT-PCR test is available.***

Reporting Requirements for SARS-CoV-2 Tests

Every COVID-19 testing site is required to report to the appropriate state or local public health department every diagnostic and screening test performed to detect SARS-CoV-2 or to diagnose a possible case of COVID-19. **POC testing may be performed with a Clinical Laboratory Improvement Amendment (CLIA) certificate of waiver**; but reporting of test results to state or local public health departments are mandated by the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

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Use of Antigen Testing in Nursing Homes

Antigen tests are used in the following circumstances:

- Testing of symptomatic residents and HCP
- Testing of asymptomatic residents and HCP in facilities as part of a COVID-19 outbreak response
- Testing of asymptomatic HCP in facilities with a COVID-19 outbreak as required by CMS recommendations

Testing in other circumstances are likely to occur, such as testing asymptomatic residents and HCP who were exposed to persons with COVID-19 outside of the nursing home (i.e., recent hospitalization or outpatient services) or through other screening activities. The principles described here can be used to guide the interpretation of antigen test results in those situations.

Antigen tests should NOT be utilized to determine the duration of Transmission Based Precautions nor when HCP can return to work. Test-based strategies are not generally recommended to determine duration of transmission-based precautions, nor to determine when HCP may return to work. If used, test-based strategies should rely only on RT-PCR.

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-antigen-testing.html>