CONSIDERATIONS FOR INTERPRETATION OF ANTIGEN TESTS IN LONG-TERM CARE FACILITIES

**ASYMPTOMATIC**

Does individual have symptoms consistent with COVID-19?

**ANTIGEN NEGATIVE**

Perform confirmatory NAAT

- Residents: Isolate in single room, not in COVID-19 unit
- HCP: Exclude from work

**ANTIGEN POSITIVE**

- Discardant Ag+NAAT
- Concordant Ag+NAAT+

**Discardant Ag+NAAT-**

Non-outbreak AND no known contact

- Residents: Go to regular room
- HCP: go to work

Continue serial HCP testing per expanded screening strategy

**Concordant Ag+NAAT+**

Outbreak OR close contact

- If outbreak, continue TBPs as part of outbreak response and continue serial testing every 3-7 days per recommendations
- If close contact, residents continue quarantine for 14 days and HCP return to work per risk assessment

**CONCORDANT Ag-NAAT-**

Non-outbreak AND no known contact

- Residents: return to regular room
- HCP: return to work

Continue serial HCP testing per CMS regulations or expanded testing guidance

**Discordant Ag-NAAT+**

Outbreak OR close contact

- If outbreak, continue TBPs as part of outbreak response and continue serial testing every 3-7 days per recommendations
- If close contact, residents continue quarantine for 14 days and HCP return to work per risk assessment

**SYMPTOMATIC**

Residents: Immediately isolate in single room, not in COVID-19 unit

HCP: Exclude from work

**ANTIGEN NEGATIVE**

Perform confirmatory NAAT

- Residents: Isolate in COVID-19 unit
- HCP: Exclude from work

**ANTIGEN POSITIVE**

- Concordant Ag-NAAT-
- Discardant Ag-NAAT+

**Concordant Ag-NAAT-**

Residents: return to regular room

HCP: return to work

In non-outbreak facilities: initiate outbreak response

**Discordant Ag-NAAT+**

Residents: Isolate on COVID-19 unit

HCP: Exclude from work

In non-outbreak facilities: continue TBPs as part of outbreak response

- If outbreak, continue TBPs as part of outbreak response and continue serial testing every 3-7 days per recommendations
- If close contact, residents continue quarantine for 14 days and HCP return to work per risk assessment

**NAAT:** nucleic acid amplification test, including reverse-transcriptase polymerase chain reaction (RT-PCR). **Ag:** antigen. **TBPs:** Transmission-based precautions.

This algorithm should be used as a guide, but clinical decisions may deviate from this guide if indicated. Contextual factors, including community incidence, characteristics of different antigen testing platforms, and availability and turnaround times of NAAT, further inform interpretation of antigen test results.

Confirmatory tests may be considered at any time if concerns about false negative or positive results arise (e.g., multiple unexpected positives results). If confirmatory tests are performed, facilities should perform the test within 2 days of the initial test and optimize sensitivity of the confirmatory test by choosing a platform (e.g., NAAT) and specimen source (e.g., nasopharyngeal swab) with high sensitivity. Facilities may consider discussing discordant results with local public health department to determine the most appropriate action. Facilities should routinely review operation of antigen test to ensure optimization and minimize cross-contamination of samples.

1. Asymptomatic people who test antigen positive may not need confirmatory testing if they have high pre-test probability (e.g., person resided with another infected individual in a facility with a large outbreak, such as prevalence >20%).
2. If single room is not available, keep the resident in the same room with transmission-based precautions. Do not transfer to a room with a new roommate.
3. Some antigen platforms have higher sensitivity when testing individuals soon after symptom onset. Use clinical discretion to determine if confirmatory NAAT is warranted when such platforms are used or if individual has low likelihood of SARS-CoV-2 infection (e.g., non-respiratory systemic symptoms post-vaccination of residents and HCP with no known exposures in a non-outbreak facility).

4. For symptomatic people who test antigen positive, confirmatory testing may be considered if there are other unexpected positive results from testing that day or if the person has a low likelihood of SARS-CoV-2 infection (e.g., no known exposures in non-outbreak facility in low-incidence community).

5. People who reside or work in a facility with an outbreak and test negative should continue serial testing per CDC and CMS recommendations. In general, this entails testing every 3-7 days until no new cases are identified for 14 days. These residents may still need to be on transmission-based precautions per recommendations for responding to an outbreak or known exposure. HCP should use recommended TBPs for the care of all residents (both symptomatic and asymptomatic) on affected units (or facility-wide if cases are widespread). Asymptomatic HCP without a known close contact may continue working.

6. Residents with a known exposure should follow quarantine recommendations, be cared for in transmission-based precautions (not on COVID-19 unit) and may not require further testing. If HCP has a known exposure, facility should follow HCP risk assessment guidance. Options to reduce quarantine duration for individuals with known close contact are generally not a preferred option for HCP and LTCF residents, but if pursued, see guidance on use of antigen testing for this purpose and when a negative antigen test result indicates not infected with SARS-CoV-2.

7. Frequency of serial HCP testing per CMS regulations or expanded testing guidance.