

**PUBLIC HEALTH SERVICES  
COMMUNICABLE DISEASE CONTROL**

**COVID-19 Testing Recommendations for Orange County Providers**

**Key points:**

- **COVID-19 disease rates are increasing countywide. Private gatherings have been a primary source of disease clusters. All Orange County residents, particularly healthcare providers, need to take measures inside and outside of the workplace to slow its spread.**
- **Any person with symptoms consistent with COVID-19 should be tested as soon as symptoms develop.**
- **Patients with positive results from either PCR or antigen testing are reportable to public health. Laboratories are to report both PCR and antigen positive results. Providers need to promptly report all cases with positive antigen tests that will not be reported by laboratories.**

Fever or chills, cough and shortness of breath are the most common initial symptoms of COVID-19. Fatigue, muscle pain, headache, new loss of taste or smell, vomiting or diarrhea, sore throat and/or nasal congestion are also seen. CDC recommendations for clinical evaluation can be found at:

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care.html>

Providers are particularly recommended to test symptomatic patients in high risk groups, including:

- Hospitalized patients
- Persons 65 years of age or older or with underlying health conditions
- Residents of congregate settings such as skilled nursing facilities, homeless shelters, and jails
- Healthcare workers
- Persons caring for the elderly

Asymptomatic patients should be tested if they are:

- Residents of a congregate living facility (SNF, homeless shelter) as part of routine screening
- Known close contact of a case
- Hospitalized, prior to admission if possible

**COVID-19 PCR Testing**

Detection of SARS-CoV-2 RNA by reverse transcription polymerase chain reaction (RT-PCR) of a respiratory sample is the recommended method for testing for acute infection.

Available evidence indicates:

- PCR testing of nasal or nasopharyngeal (NP) specimens are the preferred first-line testing methods
- Testing of nasopharyngeal (NP) specimens is the most sensitive method, while nasal specimen testing has similar sensitivity and is better tolerated.
- Oropharyngeal specimen testing has generally been found to be less sensitive than nasal or NP testing, though is also acceptable for initial testing.
- Lower respiratory samples (tracheal aspirate or bronchoalveolar lavage) may have better yield than upper respiratory samples and should be obtained when available in suspect cases if upper respiratory specimens are negative.

CDC testing guidance can be found at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html#diagnostic-testing>

Infectious Disease Society of America testing guidance can be found at: <https://www.idsociety.org/practice-guideline/covid-19-guideline-serology/>

### **COVID-19 Antigen Testing**

Antigen tests detect the nucleocapsid protein of SARS-CoV-2 from a nasal passage swab. Antigen tests are generally less sensitive than PCR tests, but can be utilized if PCR is not available.

Dry swabs should be used for all antigen tests. Transport medium should *not* be used. False positive test results have been reported when swabs are placed in viral transport medium prior to testing.

Rapid antigen tests are most useful when testing persons who are:

- Symptomatic
- OR
- Asymptomatic but have a recent history of close contact to a confirmed case, or reside in a congregate living site or other distinct group experiencing an outbreak.

Clinical laboratories should report all antigen positive tests. When rapid antigen testing is positive when performed in any clinic setting, the clinician staff should report the case by calling OCHCA at 714-834-8180.

### **False Positive and False Negative Results from COVID-19 Testing**

- False positive and false negative results can occur with both COVID-19 PCR and antigen tests.
- While false positive results can occur, a symptomatic patient who tests positive by either PCR or antigen test should generally be managed as a case and reported to OCHCA. Additional testing is not necessary.
- Routine antigen test screening of asymptomatic persons with no known exposure has been associated with an unacceptably high false positivity rate. Mass screening in congregate living settings such as in SNFs, dorms, or homeless shelters should be performed using PCR tests.

- The false-negative rate for PCR testing varies according to timing of the test, and has been estimated to be lowest at 20% when performed 3 days after symptom onset.<sup>1</sup> If a patient has an illness that is consistent with COVID-19 but tests negative, retesting in the next few days should be considered. Patients with close contact to a known case should be tested to confirm infection, but should be treated as a COVID-19 case even if results are negative.
- Antigen tests are generally less sensitive than PCR.

<sup>1</sup> Kucirka, LM et al .Variation in False-Negative Rate of Reverse Transcriptase Polymerase Chain Reaction–Based SARS-CoV-2 Tests by Time Since Exposure. <https://doi.org/10.7326/M20-1495>