

TECHNICAL

April, 2021

COVID-19/SARS CoV-2 Testing Guidance

Antigen testing for SARS CoV-2 is now available through Methodist Health System, performed using the Diasorin Liaison SARS CoV-2 at the main campus. This antigen test will be primarily recommended for screening asymptomatic patients. This will allow asymptomatic patients requiring screening for school/work, sports, travel, pre-procedural screening, etc. or following a low risk exposure to have testing performed within the Methodist Health System.

Polymerase Chain Reaction/Nucleic Acid Amplification Testing (PCR/NAAT) will continue to be recommended as the first line diagnostic test for symptomatic patients and/or patients with high risk exposures.

Comparison of PCR/NAAT and Antigen

	PCR/NAAT	Antigen
Order:	COVID PCR	COVID Antigen
Indication:	Symptomatic patient	Asymptomatic
Specimen:	Nasopharyngeal swab in VTM	Nasal Swab in inactivation buffer
TAT:	Within 24 hours	Within 24 hours
Detects:	COVID-19 nucleic acid	COVID-19 viral antigen (protein)

The COVID-19 Antigen test is performed on a Nasal swab, which can be safely collected in the clinic setting as this is not considered an aerosol generating procedure.

The clinical sensitivity and specificity of the available test methods including PCR/NAAT and antigen testing are not well established. Generally, nucleic acid testing is more sensitive for the presence of viral material in a sample. A nucleic acid test is more likely to remain positive in the days-weeks following recovery from virus when a patient is no longer infectious.

When to order PCR/NAAT vs. Antigen

The appropriate test will depend on the clinical context. Consider the following when deciding whether to order PCR/NAAT vs. Antigen testing in your patient:

Is the test for diagnosis or for screening?

- **Diagnostic testing** for SARS-CoV-2 is intended to identify current infection at the individual level and is performed when a person has signs or symptoms consistent with COVID-19, or when a person is asymptomatic but has recent known or suspected exposure to SARS-CoV-2.
- **Screening testing** for SARS-CoV-2 is intended to identify infected persons who are asymptomatic and without known or suspected exposure to SARS-CoV-2. Screening testing is performed to identify persons who may be contagious so that measures can be taken to prevent further transmission.

Is the patient symptomatic or asymptomatic?

- **Patients for PCR/NAAT testing:**
 - Symptomatic
 - Asymptomatic with high-risk exposure
- **Patients for Antigen testing:**
 - Asymptomatic patients
 - Pre-procedure; OB; travel requirements
 - Asymptomatic employees with low-risk exposure

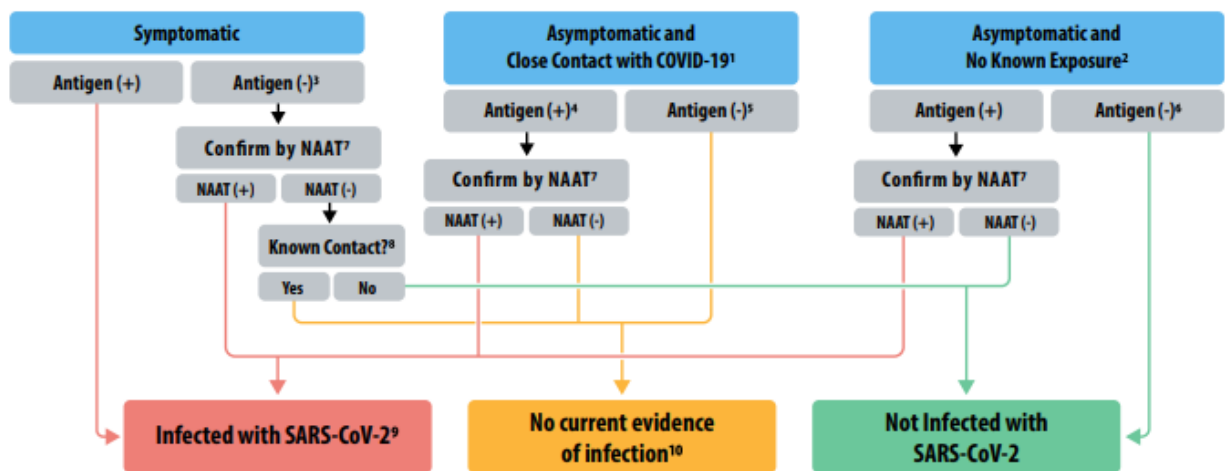
What is the likelihood that my patient will be positive?

Likelihood of COVID is low (i.e. asymptomatic patient being screened prior to travel/sports/medical procedure/etc., asymptomatic patient with a lower risk exposure)

- Positive predictive value of the antigen test is low & a positive test should be confirmed by a more specific test (PCR/NAAT)**
- Negative predictive value of the antigen test is high and a negative test does not require confirmation.

Likelihood of COVID is high (i.e. symptomatic patient, high risk exposure)

- Positive predictive value of the antigen test is high & positive test does not require confirmation
- Negative predictive value of the antigen test is low & a negative test should be confirmed by a more sensitive test (PCR/NAAT).
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** If Confirmation is required, a second specimen (NP swab in VTM) must be collected.