

SARS-CoV-2 (COVID-19)

Adult Testing Guidance & FAQs for Clinicians

General Recommendations for Testing of Adults:

- Test patients with any of the following new symptoms: fever, cough, shortness of breath, loss of taste or smell, diarrhea, or flu-like symptoms (chills, body aches, headache, sore throat).
- Testing of asymptomatic patients who present to clinic is generally not recommended at VUMC; although this may be an option at testing sites outside VUMC.
- Testing of targeted populations of asymptomatic patients (e.g. prior to transplant, immunosuppressive chemotherapy, or certain procedures) is allowed at VUMC. See *COVID-19 Asymptomatic Patient Screening Tests* on www.vumc.org/coronavirus for more details
- Assess for other respiratory virus infections (such as influenza) in patients with respiratory tract infection symptoms.
- The Tennessee Department of Health recommends testing patients for COVID-19 even if other viral tests are positive.

Recommendations for Adult Inpatients Who Develop Symptoms After Admission:

1. Only consider testing for COVID-19 in inpatients with the new onset of the symptoms noted above.
2. Check a CBC with differential.
 - Many patients with COVID-19 have leukopenia (~1/3) or lymphopenia (~2/3).
3. Obtain a Chest X-ray.
 - Many patients will have findings consistent with a viral pneumonia, including patchy infiltrates.
4. Assess the available data.
 - If a patient has other clinical reasons for their new symptoms, in the absence of concerning findings on CBC with diff or Chest X-ray, proceed with current standard of care.
 - If a patient does not have other clinical reasons for their new cough or dyspnea or has concerning findings on CBC with diff or Chest X-ray, place patient on precautions (Droplet + Contact + Eye Protection) and proceed with testing for SARS-CoV-2 PCR.

Recommendations for Repeating COVID-19 Testing in Adults After an Initial Negative Result:

- Inpatients:
 - Repeat testing of COVID-19 negative inpatients should be reserved for patients who the clinician has a continued high index of suspicion in the presence of a negative COVID-19 test result, a negative respiratory pathogen panel (RRP), and a lack of alternative diagnosis. Examples include the following:
 - Patient has developed additional or worsening symptoms since the time of initial testing, such a development of a new fever in a patient with a persistent cough.
 - Patient has persistent symptoms, such as cough, AND consistent chest imaging or lab results (e.g. lymphopenia).
 - Checking additional COVID-19 tests from a nasopharyngeal source for a patient who has already had two negative tests is not recommended, unless the patient clearly develops new symptoms which may indicate a *newly acquired* COVID-19 infection.
 - Before repeat COVID-19 testing, consider ID or pulmonary consult for additional consideration of other possible causes of the patients concerning symptoms.
 - Contact infection prevention if there are questions about continuing inpatient isolation after a negative COVID-19 test result.
- Outpatients: Repeat COVID-19 testing of outpatients should be avoided unless patients develop new symptoms concerning for newly acquired infection or worsening symptoms which may indicate need for admission.

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How is the test ordered?

Testing does not require approval by Infection Prevention. Please note, all providers can order the test; however, not all locations may be approved to collect the specimen. Approved locations include Ambulatory Assessment Sites, Inpatient Units, and Emergency Departments. The name of the test in eStar is "SARS-CoV-2 PCR." For more details on ordering the test (including noting the indication for testing), see

<https://www.vumc.org/coronavirus/sites/default/files/COVID%20Documents/Asymptomatic%20Screening%20Guidance.pdf>.

How should a swab for COVID-19 testing be collected?

A bilateral nares, single nasopharyngeal, or single oropharyngeal swab can be used. **NP:** Insert a swab into the nostril parallel to the palate. For a best practice video visit <https://www.youtube.com/watch?v=DVJNWefmHjE>. Leave the swab in place for a few seconds to absorb secretions. **OP:** Insert swab into the posterior pharynx and tonsillar areas. Rub swab over both tonsillar pillars and posterior oropharynx and avoid touching the tongue, teeth, and gums. **Nares:** Insert the swab at least 1 cm (0.5 inch) inside the nostril and firmly sample the nasal membrane by rotating the swab and leaving in place for 10 to 15 seconds. Sample both nostrils with same swab. For a best practice video visit: <https://vumc.box.com/s/t4jztxv0zux4ppejs0ehqamr7hwrnd>

Those collecting the swab on patients with symptoms should wear the recommended PPE for COVID-19 suspects (gown, gloves, surgical mask and eye protection). Those collecting the swab on patients as part of asymptomatic screening should wear standard precautions PPE (gloves, surgical mask and eye protection).

How should the specimen be transported to lab?

Seal the closed specimen-container within a 95kPa biohazard transport bag. If such as bag is unavailable, double-bag the specimen within traditional specimen transport bags. Place the bagged specimen within a hard styrofoam container and refrigerated cold pack or in a bag of ice (do not freeze). For patients on-site at VUMC, hand deliver the specimen to the Clinical Microbiology Laboratory in 4524 TVC. For off-site clinic patients, specimens should be delivered directly to 4524 TVC by courier. The clinics should store the specimen in a refrigerator until the courier arrives.

How is SARS-CoV-2 testing performed at VUMC?

This qualitative test is based upon PCR amplification and detection of viral nucleic acid. The reagents and methods of the SARS-CoV-2 test at VUMC specifically emulate the assay developed by the CDC for US public health laboratories.

Can we send tests for other respiratory viruses, like the respiratory pathogen panel?

Yes, the same swab collected for COVID-19 testing can be used for the Respiratory Pathogen Panel (RPP) testing (you do not need to send separate swabs).

Do we have ability to test for antibodies to SARS-CoV-2 (serology)?

Unfortunately, it is not yet clear whether the presence of antibodies against SARS-CoV-2 implies that a person is protected from reinfection by this virus – that is, immunity. Given the emerging and dynamic nature of the pandemic, more clinical data is needed to determine if a recovered patient is susceptible to reinfection and how mild or severe such an infection might be. In addition, false positive and false negative results can occur with these tests. At this very moment such testing is not available at VUMC, although several methodologies are currently under intense evaluation. We anticipate offering serologic testing for *select* patient populations in the near future, although all of the relevant details have not yet been determined (due to the dynamic nature of the situation). Institutional guidance will likewise be provided on what clinical conclusions/actions should (and should not) be taken based on serologic results. This guidance will be updated as more evidence emerges on the above questions, including the relationship between seropositivity and immunity.

How long can a patient have a positive NP swab for SARS-CoV-2 RNA? Does this mean they are still infectious?

There have been reports of COVID+ patients having a positive NP swab PCR test for weeks after symptom onset; however, recovery of live virus in such patients has only occurred up to day 10 of symptoms. It is unclear if prolonged detection of viral RNA is due to detection of dead virus or if these patients can still spread the virus.