VUMC GUIDELINES FOR COVID-19 TESTING

VUMC is testing patients for COVID-19 using the SARS-CoV-2 PCR test. Testing requires collection of a nasopharyngeal, oropharyngeal, or bilateral nares specimen. This document includes information on the following topics:

- **General Recommendations on Testing**
- **Testing Upon Hospital Admission**
- **Pre-Procedure Testing (UPDATED)**
- **COVID-19 IgG Serology Testing**
- **Frequently Asked Questions**

GENERAL RECOMMENDATIONS ON TESTING

- **Test patients with any of the following new symptoms: fever, cough, shortness of breath, loss of taste or smell, diarrhea/vomiting, or flu-like symptoms** (chills, body aches, headache, sore throat).
- **Testing of asymptomatic patients who present to clinic is generally not recommended at VUMC unless** prior to an approved procedure (see updated list below) or a VUMC employee approved for testing by VUMC Occupational Health.
- Assess patients with symptoms of a respiratory infection for other respiratory virus infections (such as influenza or RSV). An eStar order panel has been created to help providers determine the recommended testing for viral respiratory infections depending on patient characteristics and location.
- CDC recommends that **patients who have had confirmed COVID-19 infection and have recovered should not be routinely tested for 30 days (UPDATED by CDC and FDA)** after the initial positive test due to lingering detection of viral RNA that does not represent contagiousness or recurrent infection; however, patients may require repeat testing in certain situations as directed by a provider, such as new onset symptoms without an alternative diagnosis in a patient who had previously recovered. The CDC recommends that any testing of symptomatic persons days 31-90 after recent COVID-19 infection should be tested using an antigen test (vs. PCR/NAAT) if available.
- Repeat COVID-19 testing of previously negative outpatients should be avoided unless patients develop new symptoms concerning for newly acquired infection or worsening symptoms.
- **All swabs for testing will need to be transported to the lab in viral transport media (VTM). This includes specimens for rapid testing. Dry swabs are no longer used.**

TESTING UPON HOSPITAL ADMISSION

Ordering of COVID-19 Testing on Admission

- It is very important to specify in the eStar order whether COVID-19 testing is being done for diagnosis in a patient with symptoms consistent with COVID-19 (such as new cough, fever, dyspnea, diarrhea, or loss of smell/taste) or for asymptomatic screening. **Only patients marked with an indication noting clinical concern for a SYMPTOMATIC patient will be placed on isolation at the time of ordering.**
- **Admission testing is NO LONGER RECOMMENDED for fully vaccinated patients who are not significantly immunocompromised (see Box) unless they are admitted to a positive pressure inpatient unit (VUAH: 11N, 10CCT; VCH: 6A).**

> **SIGNIFICANTLY IMMUNOCOMPROMISED:** Patients with primary immune deficiency [e.g. Common Variable Immune Deficiency], HIV infection with CD4 count ≤200, solid organ or stem cell transplant, Cytotoxic Chemotherapy in the past 90 days, or significant immunosuppressant use, including ≥ 20 mg/day prednisone [or equivalent] for ≥14 days or other oral/injectable/intravenous immunosuppressive agents such as rituximab, mycophenolate mofetil

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- Non-fully vaccinated patients **still require** asymptomatic admission testing unless they have been diagnosed with COVID-19 within the past 90 days
- Significantly immunocompromised patients, regardless of vaccination status, **still require** asymptomatic admission testing
- Patients with symptoms consistent with COVID-19 (if not already tested as part of their current illness) **should be tested** regardless of vaccination status or prior COVID-19 infection diagnosis
- Those collecting the sample should **refer to the eStar order Nursing Instructions to determine how to label the specimen**. All swabs for testing will need to be transported to the lab in viral transport media (VTM). This includes specimens for rapid testing. **Dry swabs should not be used**.

Exclusions to COVID-19 Testing on Admission Include the Following:
- Patients who had a SARS-CoV-2 PCR test collected in the 72 hours prior to admission
  - Result must be pending or available in eStar or outside written result available
  - SARS-CoV-2 serologies and verbal reports of SARS-CoV-2 PCR testing are not acceptable
  - Positive SARS-CoV-2 **antigen** tests from outside facilities in the past 20 days in patients with symptoms consistent with COVID-19 are acceptable. Positive antigen tests in patients with no symptoms consistent with COVID-19 should be confirmed with a SARS-CoV-2 PCR, but the patient should be placed in appropriate isolation while the confirmatory test is pending. Negative antigen tests are not acceptable, and a SARS-CoV-2 PCR should be ordered on admission.
- Inborn infants admitted to Neonatal ICU or Newborn Nursery with maternal SARS-CoV-2 PCR testing in L&D.
- Patients who are fully vaccinated and who are not significantly immunocompromised.

Admission COVID-19 Testing Refused by Patient
- Counsel patient that options for testing include a sample obtained from the nares or oropharynx (which are typically less uncomfortable than nasopharyngeal sampling)
  - If patient continues to decline testing and is being admitted electively, consideration should be made to postponing admission.
  - If patient continues to decline testing and is being admitted urgently, proceed with admission. Staff should wear a procedural/surgical mask and, if not fully vaccinated, eye protection. Patient should wear fabric mask (or as per policy).

Recommendations for Repeating COVID-19 Testing in Inpatients After an Initial Negative Result
- Repeat testing of COVID-19 negative inpatients should be reserved for patients who the clinician has a 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.
- Checking additional COVID-19 tests 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 patient's concerning symptoms.
- Contact Infection Prevention if there are questions about continuing inpatient isolation after a negative COVID-19 test result.
- **Patients who previously tested negative for COVID-19 in the past 14 days *during the same admission* do not need repeat testing prior to a procedure** as per pre-procedure guidance below (unless they become symptomatic).
- Repeat COVID-19 testing may be needed prior to post-acute care placement as recommended by case management.

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Isolation Needed Based on COVID-19 Test Results in Asymptomatic Patients

- <u>COVID-19 pending</u>: Caregivers should wear procedural/surgical masks and, if not fully vaccinated, eye protection. Patients should wear fabric masks (or as per policy). Patients may be admitted to an inpatient room if a test is pending; patients with a pending test cannot be admitted to a semi-private room or placed in a hallway bed.
- <u>COVID-19 negative</u>: Caregivers should wear procedural/surgical masks and (if caregiver is not fully vaccinated) eye protection. Patients should wear fabric masks (or as per policy).
- <u>COVID-19 positive</u>: Place on patient on airborne, contact, and eye precautions. For aerosol-generating procedures, patients should be placed into an airborne infection isolation room (negative pressure), if available.

<u>PRE-PROCEDURE TESTING</u>

SARS-CoV-2 PCR testing for pre-procedure clearance for the procedures noted below is not recommended within 30 days   of a prior positive test (unless a patient has developed new symptoms concerning for reinfection).

If enough lead time is present prior to a scheduled elective procedure, proceduralists should encourage their   patients to be vaccinated against COVID-19 as soon as possible in order to protect the patient from COVID-   19-related complications.

- **Pre-Procedure COVID Testing Required:** Pre-procedure testing for SARS-CoV-2 is **only necessary during times of** substantial **or** high **community transmission[‡] for patients who:**
  1) Are unvaccinated <u>or</u> significantly immunocompromised <u>AND</u>
  2) Are undergoing procedures where there is a risk of increased aerosol generation.
  These procedures are as follows:
    - Bronchoscopy
    - Methacholine challenge testing
    - Dental procedures involving ultrasonic scalers or high-speed dental hand pieces, air/water syringes, air polishing, and air abrasion
    - ECT (given occurrence in shared procedure room)
- COVID-19 testing must be obtained **within 72 hours** of the approved, scheduled procedure.
- If a patient previously tested positive for COVID-19 refer to the [Guidance for Clearance of COVID patients for Surgery](#) document.
- When ordering pre-procedure COVID-19 testing, consider using diagnosis code Z11.52 ("encounter for screening   for COVID-19"). **Order must be placed prior to sending outpatients to a testing location.**
    - Nursing staff under the direction of the proceduralist/surgeon may enter order using "standing order" mode with co-signature by the provider.
- Patients will be asked to wear a mask when they present for their procedure.
- Patients admitted after their procedure will need admission testing as per the guidance below.
- The VUMC Department of Infection Prevention will utilize CDC metrics on COVID-19 case burden and transmission[‡] to determine the ability to stop or restart testing for these higher risk procedures.
- Elective non-emergent intubation and extubation are not considered aerosol-generating procedures (AGP) and do not require pre-procedure testing.
- Universal masking and use of routine perioperative PPE use should continue. Individuals may choose to wear N95 or other respirators, as informed by their perceived individual risk assessment and their potential for developing severe disease.
- Patients should be screened pre-procedure for any signs or symptoms of acute infection and tested for SARS-

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CoV-2 as appropriate.
- Patients with symptoms suggestive of or a confirmed diagnosis of active COVID-19 infection should undergo SARS-CoV-2 testing (symptomatic) and be assessed for deferral of their procedure as per prior VUMC guidance.
- These changes do not affect the decisions to test individual patients to assess their personal risk assessment for post-surgical complications.

‡ https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=all_states&list_select_county=all_counties&data-type=Risk&null=Risk

COVID-19 testing locations for pre-procedure outpatients
- For VUMC testing locations, see Preprocedural Testing Site Locations.
- For patients too far from VUMC to access VUMC screening sites
  - Scheduler reviews options for VUMC sites and counsels that VUMC testing is preferred as 3rd party testing can be less reliable. Scheduler reminds patient that the only acceptable COVID-19 test option is the SARS-CoV-2 PCR or nucleic acid amplification test. Antigen (Ag) testing is not acceptable.
  - Patients requesting 3rd party testing must provide documentation of negative PCR or nucleic acid amplification test result time stamped within 72 hours of procedure.
    - **Verbal test results, SARS-CoV-2 serologies/antibody, or COVID-19 antigen (Ag) results (with the exception of patients reporting a prior COVID-19 infection within 90 days of the procedure) are NOT acceptable.**
      - **Note that both COVID-19 antigen and PCR/nucleic acid tests may be "rapid" so turnaround time of the test should not be used to determine test result acceptability.**
- All patients are expected to self-isolate after sample collection and before the procedure.
- VUMC test results will be automatically placed into the EMR. Third party testing will need to be scanned into eStar.

COVID-19 test result reporting in pre-procedure patients
- Clinical staff associated with the proceduralist/surgeon will follow up outpatient results as per other pre-op testing.
  - COVID-19 negative: Results will be available to outpatients via MyHealth@Vanderbilt.
  - COVID-19 positive: The proceduralist/surgeon will decide whether to proceed with the procedure based on the urgency of the procedure. Refer to the Guidance for Clearance of COVID patients for Surgery document for additional instructions.

Implications of COVID-19 test results (PPE, cancellation policy, location) in pre-procedure pts
- COVID-19 negative: Providers are not recommended to wear N95 respirators
- COVID-19 positive:
  - **Cases should be cancelled unless medically necessary**
    - If procedure is cancelled, proceduralist/surgeon or their designee will notify OR and patient and educate patient around self-isolation and to notify primary provider if they develop symptoms.
    - After a 10-20 day period of self-isolation, as specified in the Guidance for Clearance of COVID patients for Surgery document, the patient may be scheduled for the procedure/surgery.
  - If procedure is to proceed immediately after a positive COVID-19 test, proceduralist/surgeon will communicate with procedure site and manage patient as COVID-19 positive.
    - Procedure can proceed only at a main campus location with COVID-19 PPE use guided by VUMC policies.
    - Patients with a positive COVID-19 will not be operated on at ASCs or free-standing facilities.

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COVID-19 test pending or unavailable at time of procedure
- Procedure team will decide to postpone or proceed based on medical criteria. If postponed, decision will be made when test results available.

Pre-procedure COVID-19 testing refused by patient
- Patients who decline testing will be considered a person under investigation and not operated upon at ASCs or other free-standing facilities. If medically necessary, procedure may proceed with proper PPE at a suitable main campus location.

COVID-19 IgG Serology Testing

- COVID-19 IgG serology should NOT be ordered to explain a resolved illness consistent with COVID-19, to confirm immunity after vaccination (**including in immunosuppressed patients after vaccination**), or to inform decisions around returning to work or relaxing social distancing. The relationship between COVID-19 IgG and immunity is not yet defined, and a positive COVID-19 IgG result should not be interpreted as protection against infection/reinfection.
- The FDA has also released an advisory stating that serology should not be used to assess immunity after vaccination (https://www.fda.gov/medical-devices/safety-communications/antibody-testing-not-currently-recommended-assess-immunity-after-covid-19-vaccination-fda-safety)
- COVID-19 IgG testing is only allowed at VUMC for one of the following approved indications:
  - Suspected multisystem inflammatory syndrome in children or adults (MIS-C and MIS-A)
  - Unexplained myocarditis
  - Unexplained ARDS/severe respiratory illness with negative SARS-CoV-2 PCR
  - Unexplained recently diagnosed vasculitis with negative routine work up
  - Unexplained CNS thrombosis in a patient without risk factors
  - Other clinical situation in which management will change based on COVID-19 IgG result Indications for COVID-19 IgG testing are monitored. If samples are sent for testing on a patient who does not meet criteria, the sample will NOT be tested.

FREQUENTLY ASKED QUESTIONS

How do I order a COVID-19 test in eStar?
In eStar, order the "Combined SARS-CoV-2 Flu RPP Panel". You will be required to enter an indication for the test:
- "**Testing due to concern for SYMPTOMATIC COVID-19 or other symptomatic respiratory viral infection,**" should be selected for evaluation of patients presenting with a clinical picture concerning for COVID-19. This indication **WILL be linked** with orders for isolation precautions.
- "**Screening of ASYMPTOMATIC patient for COVID-19,**" should be used for screening testing in the absence of a COVID-compatible clinical picture. This indication **WILL NOT be linked** with orders for isolation precautions, and the ordering provider will be required to acknowledge this prior to order completion.

If screening of asymptomatic patients is the selected indication, you will be asked to also select the specific reason for screening. You will also need to acknowledge that isolation precautions will not be ordered for the patient. This safety check is to ensure that patients with clinical symptoms concerning for COVID-19 do not accidentally have the wrong indication (and as a result no isolation precautions) selected.

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Do inpatients without symptoms who are being tested for COVID-19 need isolation precautions?
No, isolation precautions do not need to be ordered unless needed for another infection. At this time providers should use surgical/procedural mask and, if not fully vaccinated, eye protection to see all patients. No additional PPE outside of usual standard precautions are necessary to collect the specimen. If the test returns positive, then the patient should be placed into COVID-19 isolation precautions (gown, gloves, N95 respirator, eye protection), and any staff who cared for the patient prior to placement into isolation precautions will be contacted by VUMC Occupational Health with additional instructions.

How will I know if a patient with a pending SARS-CoV-2 test is being tested as an asymptomatic screening test or for a concern of active symptomatic COVID infection?
You should look at the Infection flag in the patient chart (left side of chart). If the patient is being tested because of concern of a symptomatic COVID infection, the "COVID (Suspected)" red flag will be present (as will the BPA that alerts to the pending test, see picture). If they are being tested as part of the asymptomatic screening, there will not be any flag or BPA present.

What happens if an asymptomatic inpatient tests positive for COVID-19? Am I at risk because I didn't wear full PPE before the patient's COVID-19 status was known?
With the use of procedural/surgical masks and, if not fully vaccinated, eye protection for all direct patient care encounters, usual hand hygiene practices after direct patient care, vaccination of clinical staff and the lack of symptoms that can promote spread (like coughing), you would be at low risk for exposure.

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What should I say to asymptomatic patients who are being tested for COVID-19 on admission?
Tell them that this is being performed as an extra precaution because people have been reported to have COVID-19 infection without symptoms and may be able to spread the virus to others. As result, we are checking our patients to identify those patients with asymptomatic infection. This will allow us to put in place special infection prevention precautions and to manage the COVID-19 infection. Also, because the testing involves a bilateral nares, nasopharyngeal, or oropharyngeal swab, make sure to prepare the patient for the process of specimen collection.

What if a patient or guardian refuses COVID-19 testing?
Please remind the patient or guardian of the option of collecting samples from the bilateral anterior nares. This method is more comfortable than the nasopharyngeal sample collection. If they continue to refuse and are scheduled for a non-urgent procedure, then the procedure may be postponed or cancelled. If the patient is admitted to the hospital, then they should wear a mask at all times.

How do I collect a swab?
For information about how to collect a bilateral nares, nasopharyngeal, or oropharyngeal swab, see
https://www.vumc.org/coronavirus/clinical-guidance

What's the expected turn-around time for testing?
Estimating turn-around times is impacted by ordered indication for testing, volume of testing, and available resources. Currently estimated turnaround times for COVID-19 test results are < 24 hours for all indications.

Can we use results from COVID-19 testing from an outside facility?
If the patient has positive SARS-CoV-2 PCR results from an outside facility within the preceding 20 days, the patient should be placed into COVID-19 isolation precautions as a confirmed infection. Please contact infection prevention to assist with this process. If the patient has negative SARS-CoV-2 PCR test results from an outside facility, these may be used as a screening test if collected within the 72 hours prior to admission or procedure. If the results are older than 72 hours, the testing must be repeated unless the patient has been fully vaccinated and is not significantly immunocompromised. Positive COVID-19 antigen tests from an outside facility are acceptable in patients with symptoms consistent with COVID-19. Negative COVID-19 antigen test results should be confirmed by SARS-CoV-2 PCR testing at VUMC in patients who are significantly immunocompromised or have not been fully vaccinated. Asymptomatic patients with a positive COVID-19 antigen test should be placed on isolation precautions pending the confirmatory test.

When should we send a respiratory pathogen panel (RPP) with a COVID-19 test?
The same swab used for collecting a COVID-19 test can be used for the Respiratory Pathogen Panel (RPP) when respiratory symptoms are present at the time of admission. RPP testing cannot be "added on" to a swab already in the lab. If RPP testing is needed, it should be ordered at the same time as the SARS-CoV-2 PCR. If RPP testing is needed after the SARS-CoV-2 PCR is resulted, then a new sample must be sent to the lab. When no symptoms are present, an RPP is not necessary.

How long can a patient have a positive SARS-CoV-2 PCR? Does this mean they are still contagious?
There have been reports of COVID-19 positive patients having a positive PCR test for weeks after symptom onset; however, recovery of live virus in such patients occurs up to day 10 of symptoms for those with mild/moderate infection and up to day 20 in severely ill patients and immunocompromised patients. For this reason, patients with mild/moderate infection who are clinically improving, fever-free for at least 24 hours, and 10 days or more from positive test result are considered not contagious. For those whose illness was severe [including those who were hospitalized] or who are significantly immunocompromised, they are not considered contagious after day 20, if clinically improving and fever-free for at least 24 hours.