

Revision to Pre-Procedure COVID-19 Testing of Asymptomatic Patients at VUMC

In 2020, numerous infection prevention actions were taken to limit the spread of SARS-CoV-2 at VUMC. Balancing the precautionary principle with the limited data on virus transmission, these actions were appropriately extensive, numerous, and leaned toward the side of caution. As the role of asymptomatic infection and silent transmission became apparent, one such action was the extensive use of universal laboratory testing of asymptomatic patients (a.k.a., “asymptomatic screening”) before a procedure that may generate aerosols (so called aerosol-generating procedure [AGPs]). With increased population immunity to SARS-CoV-2, vaccination, milder clinical outcomes, and an increased amount of published experience around asymptomatic screening, it is important to assess the impact of universal laboratory testing of asymptomatic patients (a.k.a., “asymptomatic screening”) and how it should fit into infection prevention programs moving forward.

- Many procedures that at the start of the COVID-19 pandemic were classified as aerosol-generating procedures (AGPs) **have been shown to generate far fewer aerosols than routine tidal breathing and coughing**, arguing against this classification. Examples include:
 - Elective intubation and extubation¹
 - Subglottic airway insertion^{2,3}
 - Nasal endoscopy, flexible laryngoscopy, and suctioning⁴
- Professional societies (e.g., the American Gastroenterological Association) have now retracted prior recommendations for pre-procedure testing due to the availability of an effective COVID-19 vaccine, a better understanding of SARS-CoV-2 transmission, and negative impacts and unintended patient harms related to testing.⁵
- Detection of aerosols **does not necessarily equate** to transmission of the SARS-CoV-2 virus.
- Prevention of viral transmission in healthcare relies on use of numerous interventions (layers of control), such as symptom screening of patients, use of universal PPE/masking, enhanced ventilatory standards (i.e., air exchanges), patient and provider vaccination, etc.
- While addition of pre-procedure screening to these layers has identified asymptotically infected patients, the **number of cases found have usually been low**.⁶⁻¹¹
- An **impact of asymptomatic screening on other measures** (occupationally-acquired infections, nosocomial transmission as measured by healthcare-associated COVID-19) has **not** been identified in the medical literature to date.
- Asymptomatic screening often uses PCR or NAAT-based testing, which can detect viral materials for prolonged periods, long after the ability to recover culturable virus. Several asymptomatic screening studies have noted that a **majority of identified cases were deemed non-infectious** (using Ct values and serology).^{7,12,13}
- Pre-procedure testing at VUMC was required for some procedures due to the concern for possible need for intubation and other airway management, an event that is infrequent/rare with these procedures and does not generate aerosols as noted above.
- Pre-procedure and other asymptomatic screening has been **noted to have several unintended consequences**.¹⁴ These include:
 - Delay of important medical care/procedures
 - Increased costs
 - Strain on testing and personnel resources
 - Burdensome process for patients
 - Unnecessary isolation of patients

New VUMC Guidelines:

As rates of COVID-19 infection in the community have dropped and with the growing literature on the use of asymptomatic screening as an infection prevention tool, **the VUMC pre-procedure screening program will change as follows:**

- Pre-procedure testing for SARS-CoV-2 is **only necessary during times of substantial or high community transmission[†] for patients who:**
 - 1) Are unvaccinated or significantly immunocompromised AND**
 - 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)
- 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.
- Remove elective non-emergent intubation and extubation from the official list of AGPs.
- 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-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

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