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ASA/APSF Statement on Perioperative Testing for the COVID-19 Virus

Patients who are infected with SARS-CoV-2, the virus responsible for the COVID-19 disease, have higher perioperative morbidity and mortality.⁽¹⁻³⁾ Unexpected progression to acute respiratory distress syndrome, cardiac injury, kidney failure and even deaths has been observed in patients infected with SARS-CoV-2 who have undergone surgical procedures.^(1, 4)

Additionally, aerosolizing procedures place operating room staff at greater risk of being infected with SARS-CoV-2. As a result, a robust screening and testing program to detect SARS-CoV-2 is essential for the safety of patients, health care workers and the general public.

Screening for SARS-CoV-2 via careful symptom history is important, yet imperfect. A population screening study performed in Iceland demonstrated that 43% of patients who tested positive for SARS-CoV-2 were asymptomatic.⁽⁵⁾ In a letter to the editor, 29/214 women who delivered in two New York hospitals were positive for SARS-CoV-2 and were asymptomatic.⁽⁶⁾ Screening should include an assessment of:⁽⁷⁾

- Exposure to someone diagnosed with COVID-19 in the past 14 days; or,
- Unexplained fever, cough, shortness of breath, chills, muscle pain, headache, sore throat, and/or new loss of taste or smell within the prior two weeks. Other less common symptoms, including gastrointestinal symptoms like nausea, vomiting, or diarrhea, have been reported.

The ability of testing to detect SARS-CoV-2 is dependent on sampling technique, fluid sampled, the test performed and the timing of the test relative to the infectious course.⁽⁸⁾ The reported sensitivity of SARS-CoV-2 testing is approximately 70% to 90%, meaning that up to 30% of infected patients will be reported as free of the virus.⁽⁹⁾ Viral transmission may occur up to three days before patients may become symptomatic. Viral shedding is generally undetectable by 21 days following infection; however, it may occur beyond that in severe infections.⁽⁸⁾

The Centers for Disease Control and Prevention (CDC) guidance “Discontinuation of Transmission-Based Precautions and Disposition of Patients with COVID-19 in Healthcare Settings (Interim Guidance)” advises that transmission based precautions may be discontinued by healthcare facilities when patients have resolution of fever and respiratory symptoms and: have two negative SARS-CoV-2 tests more than 24 hours apart; or resolution of fever and respiratory symptoms for at least 72 hours and at least ten days since initial symptom presentation.⁽¹⁰⁾ CDC recommends using the test-based strategy for hospitalized patients and those who are severely immunocompromised (e.g. organ transplant recipients or medical treatment with immunosuppressive medications).

Currently, antibody testing does not have a role in perioperative screening and risk stratification. Antibodies develop in the second week of symptoms and not all patients who are infected with SARS-CoV-2 develop detectable antibodies.^(11, 12) Additionally, antibody tests have the potential of cross-reaction with other coronaviruses, resulting in false-positive results.^(12, 13) As a result, antibody testing should not be performed during routine preoperative screening.

Recommendations:

A population risk assessment identifying the prevalence of SARS-CoV-2 should be reviewed. When there is local or regional presence⁽¹⁴⁾ of SARS-CoV-2:

- 1) All patients should be screened for symptoms prior to presenting to the healthcare facility. Patients reporting symptoms should be referred for additional evaluation. All other patients should undergo nucleic acid amplification testing (including PCR tests) prior to undergoing non-emergent surgery.
- 2) If a patient tests positive for SARS-CoV-2, elective surgical procedures should be delayed until the patient is no longer infectious and has demonstrated recovery from COVID-19. A patient may be infectious until either:
 - a. CDC recommended test-based strategy
 - i. Resolution of fever without the use of fever-reducing medications; and,
 - ii. Improvement in respiratory symptoms; and,
 - iii. Negative results from two SARS-CoV-2 tests \geq 24 hours apart
 - b. CDC non-test based strategy
 - i. At least 72 hours since resolution of fever without the use of fever-reducing medications and improvement in respiratory symptoms; and,
 - ii. At least 10 days since symptoms first appeared.
- 3) Recommendations regarding the definition of sufficient recovery from the physiologic changes from SARS-CoV-2 cannot be made at this time; however, evaluation should include an assessment of the patient's heart and lung function using exercise capacity (metabolic equivalents or METS).
- 4) Providers should review PPE guidance from CDC,⁽¹⁵⁾ ASA, and other major medical societies.

When there is little or no regional presence of SARS-CoV-2:

- 1) All patients should be screened for symptoms before presenting to the healthcare facility.
- 2) Patients reporting symptoms should be referred for further evaluation.

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