

Society for Pediatric Sedation (SPS)
Consensus Guidelines

Pediatric Procedural Sedation during the COVID-19 pandemic and beyond

A. Disease prevention via mitigation of transmission risk remains the preferred approach.

1. Transmission risk factors:

- a. Respiratory transmission in form of droplets (5-10 μm) or aerosols (droplet nuclei $<5 \mu\text{m}$ in size, can travel $>1 \text{ m}$ and can remain airborne for up to 3 hours) and person-person contact spread are the most common and plausible methods of transmission. The clinical significance of transmission of SARS-CoV-2 from inanimate objects remains unclear.¹
- b. Fine droplet aerosol-generating procedures (AGPs) are more likely to transmit the virus to caregivers in close proximity to the patient.^{2,3}
- c. Studies from the Pediatric Sedation Research Consortium have reported a low incidence of natural airway sedation adverse events requiring interventions such as bag-mask ventilation, suctioning and unanticipated intubation.⁴⁻⁶
- d. Procedures commonly used during natural airway procedural sedation such as airway repositioning, oral airway placement and oxygen support via low-flow nasal cannula have not been categorized as AGPs as they are not believed to be associated with significant aerosol generation.⁷ It is currently unclear if nitrous oxide administration is an aerosol-generating procedure.⁸

2. Personal Protective Equipment (PPE): The use of appropriate PPE is a critical line of defense in mitigating disease transmission

- a. Adverse events related to procedural sedation are primarily respiratory but may not require aerosol-generating interventions, especially with a single agent like dexmedetomidine. At a minimum, an isolation mask, face shield/goggles, gown and gloves should be worn, with an N95 mask immediately available should an aerosol-generating intervention be performed.^{9,10}
- b. Meticulous hand hygiene with soap or alcohol-based hand sanitizers should occur after contact with the patient or surfaces the patient may have touched.

B. Patient Screening optimizes patient selection:

1. Patient screening:

- a. All patients should be initially screened for COVID-19 risk factors prior to and on arrival.

- a. Screening for COVID-19 can be performed using CDC COVID-19 screening and triage protocol.¹¹
- b. COVID-19 symptoms include recent fever, cough, chills, sore throat, muscle pain, difficulty breathing, or new loss of taste or smell, as well as gastrointestinal symptoms such as nausea, vomiting, or diarrhea.¹²
- c. Exposure to a close contact with confirmed COVID-19 in the past 14 days.¹¹

2. SARS-CoV-2 Testing:

The optimal time frame for testing before procedural sedation remains unknown. Most institutions within the SPS perform RT-PCR for SARS-CoV-2 within 72 hours before procedural sedation for outpatients.¹³

PRACTICE GUIDELINES: *Due to the novel nature of the SARS-CoV-2 virus and the ongoing research and dissemination of information about COVID-19 infectivity, these practice guidelines reflect our consensus based on current literature available at the time of this publication. Lack of SARS-CoV-2 testing, unavailable test results, varying patient exposure or symptoms as well as institutional policy may further impact use of these guidelines. Early consultation with an anesthesiologist is always prudent and please refer to the most up-to-date CDC recommendations.*

Elective Cases: *Elective procedures are defined as procedures that are not urgent or emergent.*

1. *If the child's procedure is elective and the child has a positive RT-PCR test for SARS-CoV-2, with symptoms:* Sedation should be deferred for 10-20 days since symptom onset and patient is afebrile x 24 hours (without fever-reducing medications) and with improved symptoms. A testing strategy (negative SAR-CoV-2 RT-PCR) with no fever/improved respiratory symptoms for 24 hours may also be considered before proceeding with procedural sedation.

2. *If the child's procedure is elective and if the child has a positive RT-PCR test for SARS-CoV-2 without symptoms:* Sedation should be deferred for 10-20 days since positive test and patient remains afebrile x 24 hours and has not developed symptoms. A testing strategy (testing negative by SAR-CoV-2 RT-PCR) with no fever/ respiratory symptoms for 24 hours may also be considered before proceeding with procedural sedation.

3. *If a child's procedure is elective and the child has symptoms suggestive of COVID-19 or has had close contact with a person with COVID-19:* Sedation should be deferred for 10-20 days after symptom onset or contact with a COVID-19-positive individual. At that juncture, the patient may undergo procedural sedation if afebrile for 24 hours (without fever-reducing medications) and improved symptoms. A testing strategy (testing negative by SAR-CoV-2 RT-PCR) with no fever/ respiratory symptoms for 24 hours may also be considered before proceeding with procedural sedation. If there is no access to testing or the results are unavailable, procedural sedation may be considered using appropriate PPE including N95 respirator mask.

4. *If the child's procedure is elective and the child has a negative RT-PCR test for SAS-CoV-2 with no symptoms or other concerns no routine screening:* Proceed with natural airway sedation following the institutional PPE requirements.

Urgent Cases: *Urgent procedures are procedures required in a timely fashion to optimize treatment and cannot be delayed, often within 24 – 48 hours.*

1. *If the child's procedure is urgent and the child has a positive RT-PCR test for SARS-CoV-2, with symptoms:* Refer the patient to an anesthesiologist. If the patient's illness is mild, may consider natural airway sedation using an appropriate analgo-sedative regimen with use of appropriate PPE including N95 respirator mask only after consultation with the anesthesiologist.

2. *If the child's procedure is urgent and the child has a positive RT-PCR test for SARS-CoV-2, without symptoms:* Referral to anesthesia is highly recommended. Consider natural airway sedation using an appropriate analgo-sedative regimen with use of appropriate PPE including N95 respirator mask only after consultation with the anesthesiologist.

3. *If the child's procedure is urgent and the child has symptoms suggestive of COVID-19 or close contact with a COVID-19-positive individual:* Obtain a rapid RT-PCR test of a nasopharyngeal swab if possible. If the test is negative or will not be available, consider proceeding with natural airway sedation using an appropriate analgo-sedative regimen. Ensure sedation team members use appropriate PPE consisting of an N95 respirator mask, face shield/eye protection, isolation gown, and gloves. Early consultation with an anesthesiologist is highly recommended.

4. *If the child's procedure is urgent and the child has a negative RT-PCR test for SARS-CoV-2 without symptoms:* Proceed with natural airway sedation following the institutional PPE requirements.

**Sedation providers should be aware of the sedation implications in patients with the multisystem inflammatory syndrome in children (MIS-C) due to SARS-COV-2 antibodies. Children may have cardiac dysfunction without respiratory distress and consultation with a cardiologist is highly recommended prior to procedural sedation in this cohort.

References:

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