

# COVID-19 update for pediatric surgical patients

Jerrold Lerman MD, FRCPC, FANZCA  
Oishei Children's Hospital,  
Buffalo, NY

With the COVID-19 pandemic in the rear-view mirror, the endemic phase of the virus has settled into our communities. Three years since this nasty virus struck fear into the hearts of most healthcare providers, the risks associated with anesthetizing patients harboring the virus have decreased dramatically. For healthcare providers, multiple vaccinations have provided a layer of protection against severe and occasionally fatal COVID-19 variants as well as possibly reducing the risk of acquiring long-term COVID-19. With viruses other than COVID-19 infecting the community, it is near-impossible to identify which virus a particular child is suffering with when they present with an upper respiratory infection: Influenza, COVID-19 or RSV. Reviewing the vaccination rates for these viruses in children does not help us to identify either the virus or its potential effects because by October 2023, the vaccination rates according to the CDC for both the flu and COVID-19 vaccines were the same in children, 50%. And as of February 2024 according to the CDC, only 12% of children had received the updated 2023/24 COVID-19 vaccines. So, if a child presents to their pediatrician before an elective surgery with an upper respiratory infection, he or she may order a COVID-19 test. If the results prove negative and the child is well enough, the surgery may proceed. However, if the COVID-19 test is positive, a decision must be made with respect to proceeding or deferring with the elective surgery.

The studies that reported perioperative outcomes and that formed the basis for formulating guidelines to manage children who tested positive for COVID-19 were early in the pandemic phase of COVID-19 at a time when the majority of children were unvaccinated. Since today's vaccination rates are more encouraging, it is reasonable to review the guidelines and update the recommendations.

Current evidence indicates that the morbidity from COVID-19 in 2022/23 has diminished with fewer hospital admissions, fewer ICU admissions and a reduced mortality rate compared with the first wave of COVID-19. Given this trend and the fact that COVID-19 is primarily a virus infecting the respiratory system, the American Society of Anesthesiologists and the Anesthesia Patient Safety Foundations, the Royal Australasian College of Surgeons and the Australia and New Zealand College of Anaesthetists, and the Royal College of Surgeons of England and the Royal College of Anaesthetists have recommended the following guidelines for children with a COVID-19 positive test result:

With a **positive test** for COVID-19 and **mild or no symptoms**, elective surgery should be deferred for 2 weeks. If the surgery or patient's comorbidities increase the risk if the surgery were delayed, then consideration should be given to proceeding after informing the parents of the increased risks.

With a **positive test** for COVID-19 and **moderate to severe symptoms** or **ongoing COVID-19 symptoms**, elective surgery should be **delayed for 7 weeks or more**, although one study recommended a **4 week delay** with no further benefits accrued from delays beyond 4 weeks. Children with ongoing respiratory symptoms and a high fever preoperatively are at greater risk for oxygen desaturation in PACU and as such surgery should be delayed to mitigate those risks. If the delay increases either the risks to the child and/or compromises the surgery, consideration should be given to proceeding after the surgeon, anesthesiology provider and parents discussed the risk/benefits of proceeding.

The definitions for the clinical severity of COVID-19 are\*:

- **Asymptomatic:** Positive SARS-CoV-2 test with no symptoms
- **Mild:** Slight COVID-19 symptoms without shortness of breath
- **Moderate:** Evidence of lower respiratory disease (e.g. shortness of breath) during clinical or imaging assessment; peripheral blood oxygen saturation (SpO<sub>2</sub>) ≥94% on room air
- **Severe:** Signs and symptoms of severe lower respiratory disease necessitating hospitalization; usually oxygen therapy and SpO<sub>2</sub> ≤94% on room air
- **Long COVID:** Signs and symptoms that:
  - Continue or develop usually 3 months from the onset of COVID-19 infection
  - Lasts >2 months
  - Cannot be explained by an alternative diagnosis

\*NSW Agency for Clinical Innovation. Timing of surgery after COVID-19 in adults. Sydney: ACI; 2023

#### REFERENCES:

1. Glasby JC, et al. Can patients with asymptomatic SARS-CoV-2 infection safely undergo elective surgery? BJA 2022:128;909
2. El-Boghdady K, Cook TM, Goodacre T, et al. Timing of elective surgery and risk assessment after SARS-CoV-2 infection: 2023 update. A multidisciplinary consensus statement on behalf of the Association of Anaesthetists, Federation of Surgical Specialty Associations, Royal College of Anaesthetists and Royal College of Surgeons of England. Anaesthesia 2023:78;1147
3. Zhao D, Liu W, Zhang Z, et al. Timing of general anesthesia for pediatric patients recovering from COVID-19: a prospective cohort study. BMC Anesthesiology 2024:24;11
4. Qudaisat IY, Toubasi AA, Obaid YY, et al. The delaying of elective surgeries after COVID-19 infection decreases postoperative complications. Asian J Surg 2023:46;4308

*The views presented in this article are the views of the author and do not represent those of either Great Lakes Anesthesiology or any partner medical organization. J. Lerman*