

# The Effect of the COVID-19 Pandemic on Operating Room Wait Times: A Retrospective Study

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## Background

- The COVID-19 pandemic caused widespread disruptions to healthcare systems, with pronounced impacts on dental services.
- Dental utilization decreased significantly and showed delayed recovery compared to medical services.
- Preventive care remained below pre-pandemic levels for nearly 2 years after pandemic onset, with increased demand for invasive procedures due to delayed treatment.
- Limited data exists on pandemic impact on hospital-based pediatric dental care under general anesthesia for children.
- Aim:** to evaluate the impact of the COVID-19 pandemic on access to pediatric dental care in the operating room (OR) setting by assessing the wait times to the OR in a large children's hospital.

## Methods

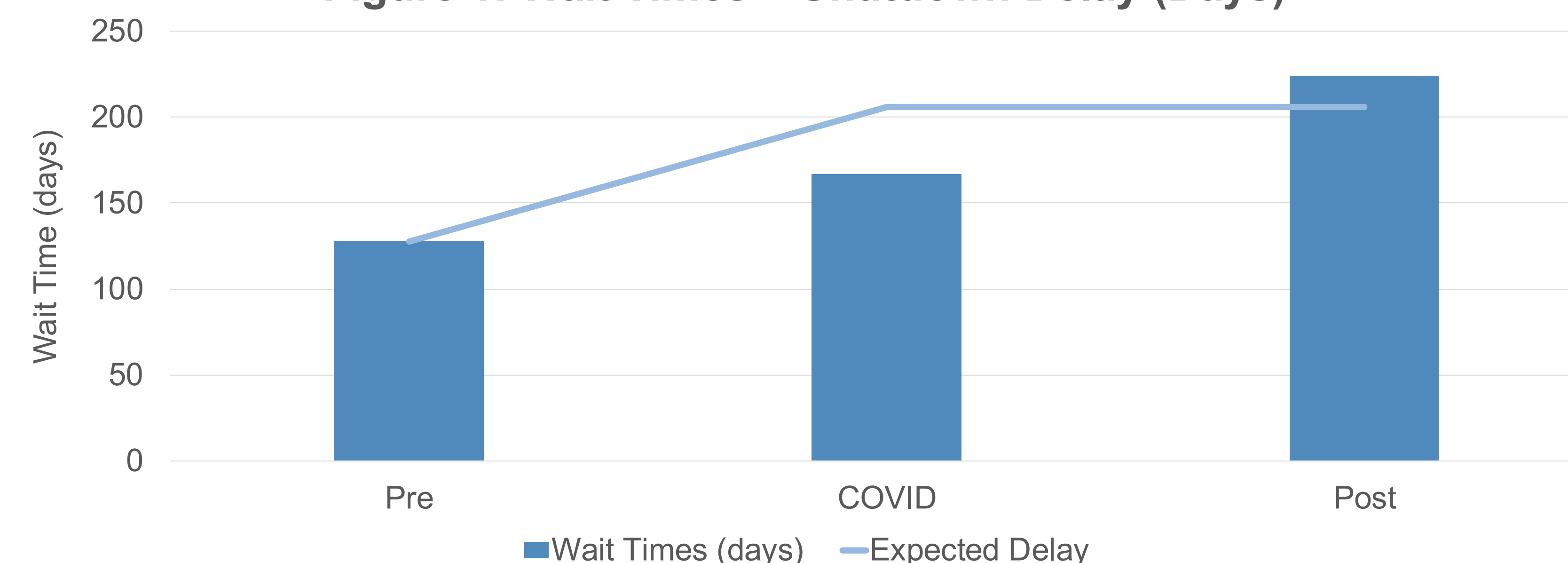
- Retrospective chart review of randomized selection of patients seen for dental rehabilitation under general anesthesia at the Children's Hospital of Philadelphia.
  - Inclusion criteria: Patients seen for sedation consultation and treated for dental rehabilitation in the operating room.
- Patients categorized into three groups based on date of consultation\*:
  - Pre-COVID:** January 2018 - March 2020
  - COVID:** April 2020 - May 2023
  - Post-COVID:** June 2023 - March 2025
- Data collected: consultation date, OR procedure date, patient age on OR date, sex, primary language, insurance type, ASA classification, case length, add-on/urgent cases, rescheduled cases.
- Outcome measures:
  - Primary outcome: wait time (days from consultation to OR date).
  - Secondary outcomes: (1) proportion of cases that were urgent add-on cases, and (2) number of cases that were rescheduled.
- Statistical analysis: descriptive statistics, One-way ANOVA, and Tukey post-hoc testing.

\*The pandemic period was defined according to the World Health Organization.

## Results

- 143 charts reviewed (Pre-COVID: 46; COVID: 46; Post-COVID: 51).
  - Demographics:
    - 60% male, 40% female
    - Mean age at OR visit: 7 years
    - 71% Medicaid coverage
    - 9% non-English speaking
    - Majority ASA III
- Mean wait times: Significant lengthening in wait times were seen between groups (**Figure 1**).
  - Pre-COVID: 127 days; COVID: 166 days; Post-COVID: 223 days.
  - ANOVA showed statistically significant differences across groups ( $p < 0.001$ ) with the Tukey post-hoc demonstrating the most significant difference between pre-COVID and post-COVID ( $p = 0.0001$ ); COVID to post-COVID was also significant ( $p = 0.02$ ).
- Routine dental care delivery in CHOP ORs was temporarily suspended during COVID (3/18/20 - 6/4/20):
  - Given a 78-day OR closure on top of a 127-day wait time during pre-COVID, a 205-day wait time was expected (**Figure 1**).
  - However, a wait time of 166 days during COVID reflect some gap closure.

**Figure 1: Wait Times + Shutdown Delay (Days)**



- Rescheduling rates in the Pre-COVID group was 18% (8/46). The rates were the highest during COVID (9/46, 20.5%) and lowest in the Post-COVID period (7/51, 14%) (**Figure 2**).

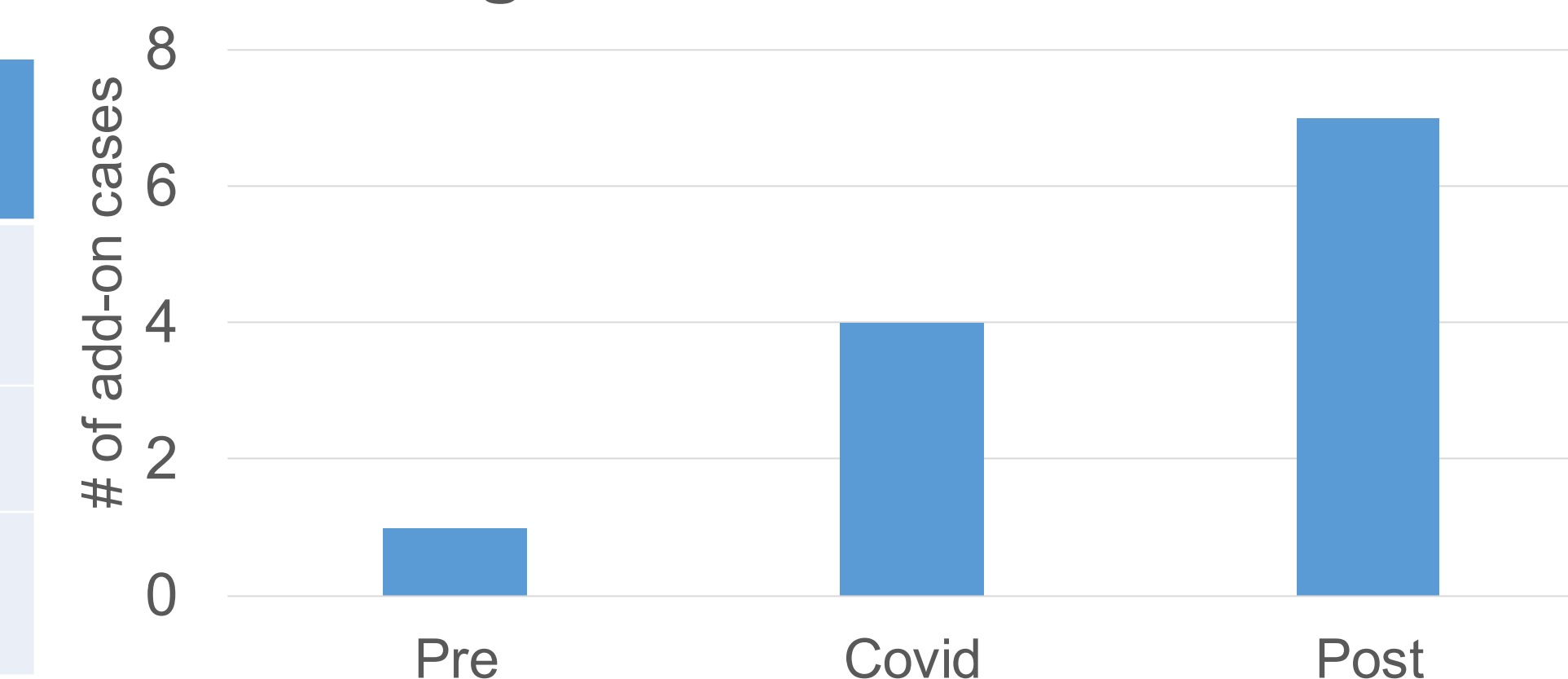
## Results

- Add-on/urgent cases progressively increased across all three periods over time (Pre-COVID: 1; COVID: 4; Post-COVID: 7) (**Figure 3**).

**Figure 2: Rescheduling Rate**

Group	Total	Rate
Pre	8/46	18.2%
Covid	9/46	20.5%
Post	7/51	14.0%

**Figure 3: Add-on Cases**



## Discussion

- The results demonstrate that timely access to pediatric OR dental care worsened significantly across pandemic timeline.
- No recovery in wait times was observed following the pandemic, and the largest delays occurred in post-COVID period.
- A divergent pattern was seen between rescheduling rates and wait times going from the COVID group to the Post-COVID group: lowered cancellation rates vs. increased wait times
- The progressive increase in add-on cases is consistent with what is demonstrated in the literature: a delayed access to definitive care and lack of preventive care utilization, resulting in a need for more invasive treatment.
  - In children, an increase in invasive treatment can translate to an increased need for services under general anesthesia.
- Results highlight the need for targeted strategies to address elevated OR wait times and ensure equitable access for children dependent on hospital-based dentistry.

## References

Please refer to the QR code for references.

