

Wait Times for General Anesthesia and Extractions in Pediatric Population

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INTRODUCTION:
The purpose of this analysis is to determine if the number of extractions have increased because of increased wait times for complete oral rehabilitation under general anesthesia in the pediatric population. Previous literature has highlighted that hospitals have denied or decreased operating room time for pediatric dental treatment and prioritized surgeries that are more profitable and necessary due to financial concerns.^{1,6} As a result of increased wait time for general anesthesia, children's school performance and sleep are negatively affected as well as there are more emergency room visits.⁵ If the carious lesions have already progressed to the inner dentin, restorability and vitality of a tooth could be in jeopardy and extraction may be required because of long wait time for dental treatment.^{4,7}

METHODS:
Charts of 492 children seen in the OR under general anesthesia in the month of October between 2018 and 2023 were reviewed to determine the wait time and the number of extractions performed during the patient's complete oral rehabilitation. A chart was excluded if the patient was an emergency add-on or the patient was referred by an orthodontist for the extractions. The Pearson correlation coefficient and the coefficient of determination were calculated for all cases between 2018 and 2023 to determine the association of all cases. Also, the Pearson correlation coefficient was calculated for the monthly aggregated data instead of the total aggregated data.

RESULTS:
A Pearson correlation coefficient of all October cases between 2018 and 2023 (yearly aggregated) was calculated to be 0.070, while the coefficient of determination was 0.355. The Pearson correlation coefficient for the monthly aggregated data was 0.622 suggesting a stronger relationship when data is compared as a whole yearly.

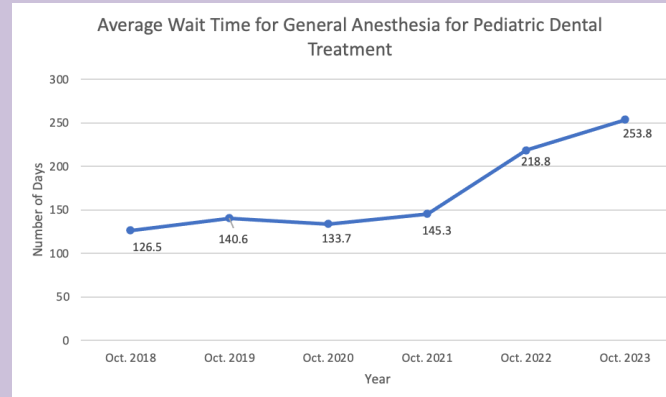


Figure 1.

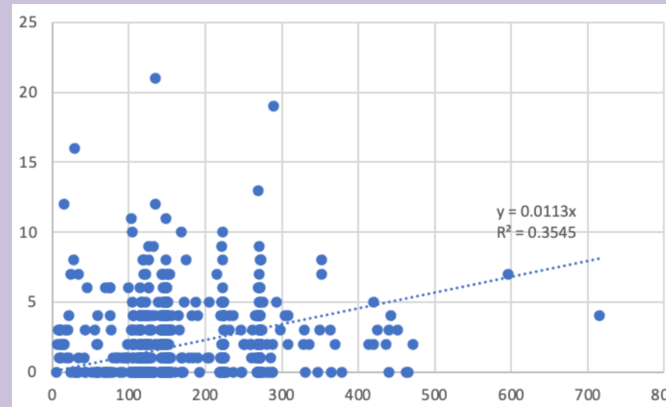


Figure 2.

DISCUSSION:
Operating room availability for pediatric complete oral rehabilitation has been limited and even decreased despite the increase in demand for general anesthesia for treatment. With longer wait times for general anesthesia, one rightfully can assume that dental caries continue to progress from the time of evaluation until treatment. This analysis reveals that there is a weak correlation between wait time for complete oral rehabilitation with general anesthesia and the number of extractions when looking at the data as a whole. Only 35.5% of the variability in the number of teeth extracted is explained by the wait list. The other 64.55% of the variability is unaccounted for and could be due to other sources of variation and other factors. However, a 0.622 Pearson correlation coefficient of the data for each year means that that as the average wait time gets longer as a whole, more teeth are extracted.

One limitation of this analysis is selection bias. To improve this analysis, additional inclusion and exclusion criteria for patient charts to be selected should be considered. For example, specific age groups, type of dentition (primary or mixed dentition), and limit the number of providers. Also, to understand and address the wait times for general anesthesia for pediatric dental treatment, the study should include charts prior to 2018. Future studies are needed to explore how treatment plans evolved from the time of evaluation to the time of complete oral rehabilitation with general anesthesia.

CONCLUSION:
This analysis reveals the importance of advocating for more operating room time for pediatric dentistry, prioritizing patients with more severe carious lesions, and to monitor children waiting for general anesthesia for signs and symptoms of infection and pain.

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