



DENTISTRY
TEXAS A&M UNIVERSITY

Perceived Time Requirements for Treatment of the ASA I/II Pediatric Dental Patient in an Operating Room Setting

Amin, S; Wong, L; and Kerins, C

Children's Medical Center and Texas A&M School of Dentistry, Dallas, TX



BACKGROUND

During and following the COVID-19 pandemic, the operating room(OR) access for full mouth dental rehabilitations across the nation was limited. There are a variety of reasons for this: reimbursement rate compared to medical procedures, the nature of dentistry as an aerosol generating procedure, and reassignment of operatories to accommodate overcapacity hospitals.

Children's Medical Center Dallas has two OR sites. Pre-pandemic, there were 6 available rooms per day for dental surgery. Following the pandemic, CMC Dallas was down to one OR room per day at the Main campus. This single OR block has been the sole provider open to pediatric dental patients in need of dental treatment with general anesthesia. Scheduling preference has been given to those patients with tertiary medical needs, or ASA III/ASA IV status. This has increased the waiting time for healthy (ASA I and II) patients from weeks to months.

Due to the backlog of OR cases following the COVID-19 pandemic, cases are often "stacked" with one dentist following another. Therefore, to facilitate this process efficiently, the dentist needs to be accurate in his/her assessment of case time and turnover between cases.

OBJECTIVE

To determine how accurate providers were in estimating time requirements for treating healthy (ASA I and II) pediatric patients in an operating room setting and whether this accuracy varies with years of experience.

MATERIALS AND METHODS

A retrospective chart review was conducted on all healthy patients who were treated for full mouth dental rehabilitation at Children's Medical Center Pavilion Operating Room between 1/1/19 – 12/31/19.

Data collected: Patient ASA status determined by the treating anesthesiologist, provider name, providers' number of cases treated for the selected timeline, requested time for treatment, actual duration of treatment provided, and the providers' years of practice.

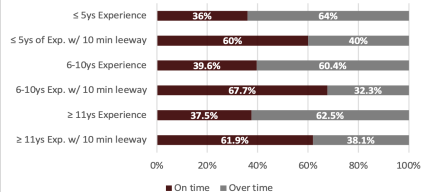
For a dentist to be included in the study, they needed to treat 10 or more cases per year within Children's Pavilion OR. "Combination cases" and resident cases were excluded from the data.

Due to the large dataset generated, a random number generator was utilized to evaluate 60% of each provider's cases.

Given the "fast" turnover time between cases at the PSC, surgical time overage ≤ 10 minutes was included as another data point as a surgeon could theoretically stay on time for the day even if the case ran slightly over.

RESULTS

Providers' requested vs actual OR time



Average time over requested time

≤ 5 Yrs of Experience	21.5 minutes
6-10ys of Experience	15 minutes
≥ 11 ys of Experience	17.2 minutes

Initial data resulted in 3117 cases that were treated for Full Mouth Dental Rehabilitation in the Pavilion Surgical Center (PSC) at Children's Medical Center in Dallas, Texas.

Inclusion and exclusion criteria resulted in 2843 qualifying cases in the Pavilion OR for the selected timeline. A minimum of 10 or random selection of 60% of each providers' cases yielded a total of 1723 cases to be evaluated.

- 41 dentists met the inclusion criteria and a random sampling of 60% of their total cases were reviewed for 1723 total cases.
- 100 cases completed by practitioners <5 years of experience,
- 449 cases completed by practitioners 6-10 years of experience,
- 1174 cases completed by practitioners >11 years of experience.

DISCUSSION

There was no correlation between more experienced clinicians and predictability of procedure time. This is likely due to greater success of obtaining prior diagnostic radiographs and exams in healthy children, unlike with special needs children requiring general anesthesia. Additionally, the unequal number of cases per experience group may have yielded unreliable results. This study, with the limited dataset, did not find a correlation between years of experience and predictability of procedure case duration.

CONCLUSIONS

1. Years of experience did not significantly change the accuracy of time needed to complete a FMDR case.
2. The inclusion of the remaining 40% of data may provide a better analysis of the effect of dental practitioners' experience with the prediction of OR surgical time of healthy patients.

REFERENCES

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