

Perceived time requirements and case complexity for treatment of the pediatric dental patient in an operating room setting.

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BACKGROUND

Following the COVID-19 pandemic, hospitals have experienced deep revenue declines due to the lower volume of patient's being seen.

Therefore, once elective surgeries were allowed to resume, hospitals could be more inclined to mitigate the deficits by allowing higher production surgeries to proceed and in turn, placing unrealistic metric/goals on lower producing surgeries.

Pediatric dentists throughout the United States are having difficulties obtaining an adequate amount of time to provide dental care for their patients.

While there may be many reasons behind decreased OR access, such as financial, staffing post-pandemic, etc. As OR access has become a premium, it is likely that hospitals might favor those surgeons or dentists that are the most proficient, efficient, and have fewer delays.

OBJECTIVE

To determine how accurate the different levels of providers (years of experience) are in regard to their perceived time requirements and case complexity in treating pediatric patients for Full Mouth Dental Rehabilitation (FMDR) in an operating room setting.

MATERIALS AND METHODS

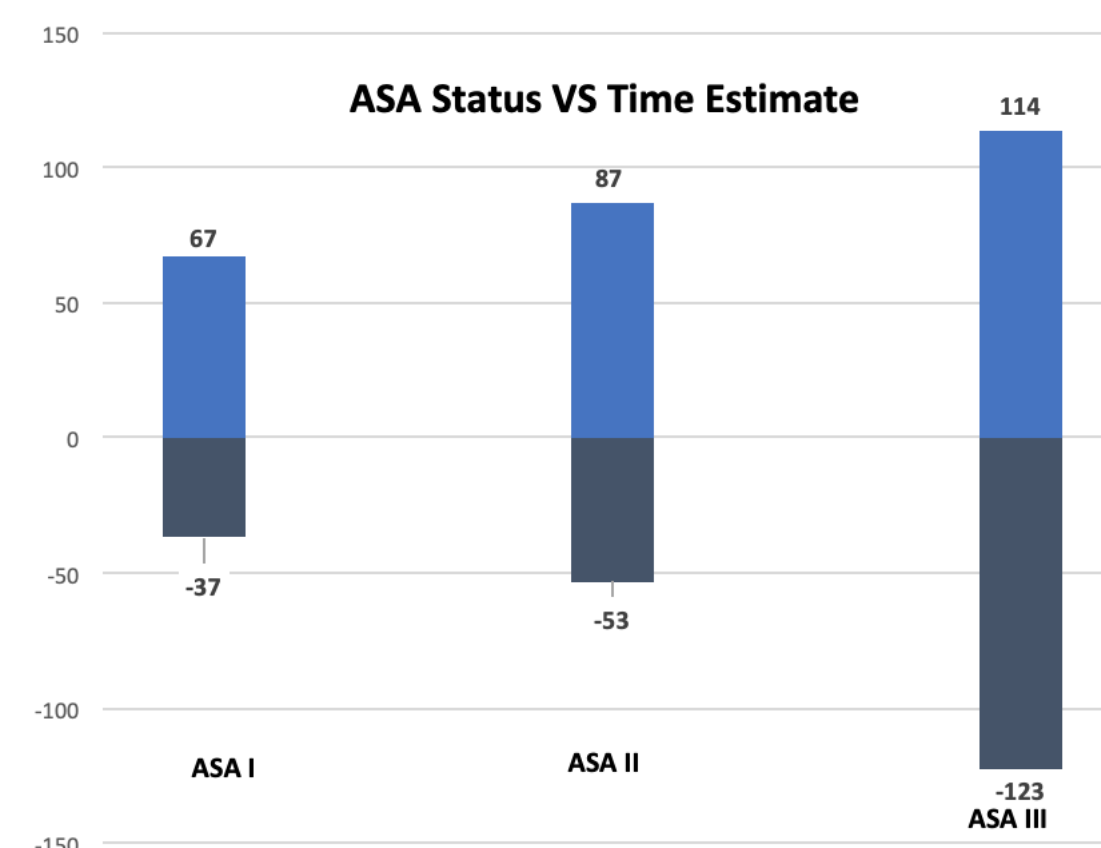
A retrospective review was conducted on all patients who were treated for full mouth dental rehabilitation at Children's Medical Center Dallas Main Operating Room between 1/1/19 – 12/31/19.

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

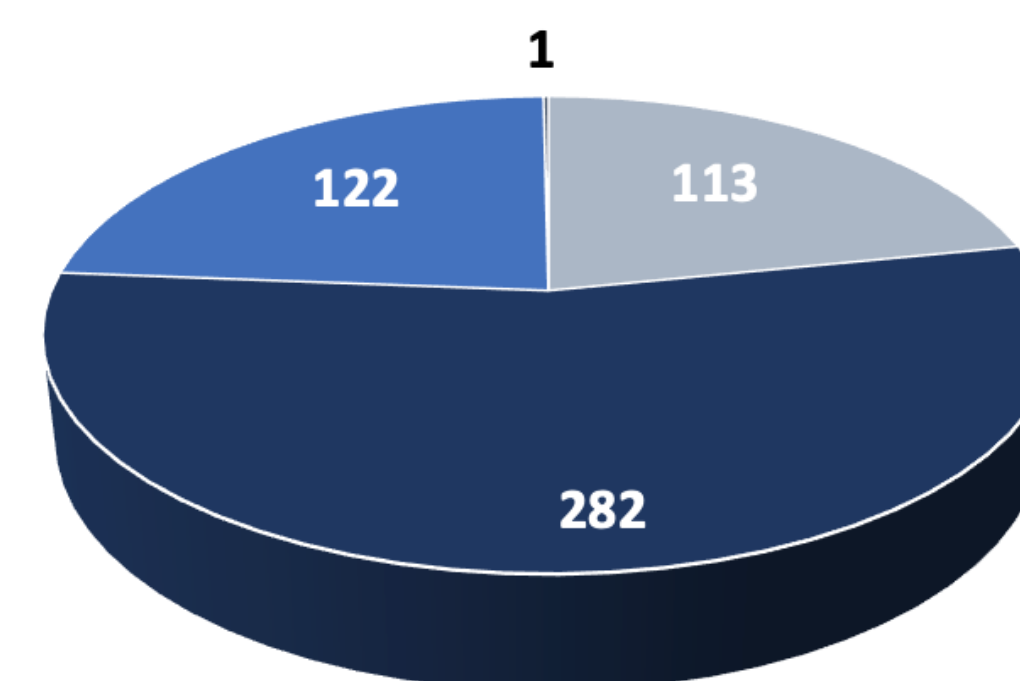
Inclusion criteria was determined to set at a minimum of 10 cases per year within Children's Main OR . "Combination cases" were excluded from the data.

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

RESULTS



ASA Status



■ ASA I ■ ASA II ■ ASA III ■ ASA IV

ASA status is correlated with a less accurate procedure time estimation.
ANOVA: P=0.056 F=2.530

Initial data resulted in 6248 cases that were treated for Full Mouth Dental Rehabilitation in the Main OR and Pavilion Surgical Center (PSC) at Children's Medical Center in Dallas, Texas.

Inclusion and exclusion criteria resulted in 884 qualifying cases in the Main OR for the selected timeline. Random selection of 60% of the cases yielded a total of 518 cases to be evaluated.

- 22 dentists met the inclusion criteria and a random sampling of 60% of their total cases were reviewed for 518 total cases.
- There were 9 cases completed by practitioners <5 years of experience,
- 141 cases completed by practitioners 6-10 years of experience,
- 368 cases completed by practitioners >11 years of experience.

DISCUSSION

As expected, there is a positive correlation between more medically complex patients and less predictability in procedure time. This is likely due to the higher unplanned treatment from inability to properly perform a thorough clinical exam.

While there was a positive correlation between more years of experience and the likelihood of treating more medically complex patients in the OR setting, this could be due to how the hospital assigns its credentialing/ privileges.

This study, with the limited dataset did not find a correlation between years of experience and predictability of procedure case duration the wide array of varying complexities that arise during routine dental care and alteration of planned treatment while in an operating room setting may have contributed.

CONCLUSIONS

1. The more medically complex the dental patient, the larger variance in predicted surgery times.
2. Inclusion of the data from the PSC may provide better analysis of the effect of dental practitioner's experience with prediction of surgical time, as most all patients are ASA I or II.

REFERENCES

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