



# General Anesthesia Utilization and Referral Patterns in Pediatric Dental Patients

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## ABSTRACT

**Purpose:** Pediatric patients requiring dental rehabilitation under general anesthesia (GA) may receive care in a variety of different settings. This study evaluated factors influencing GA referrals at Children's Mercy Hospital (CMH) in Kansas City.

**Methods:** A retrospective review of dental clinic appointments over six months was conducted for patients referred for GA. Variables included age, American Society of Anesthesiologists (ASA) classification, referral patterns, and follow-up status. Data were analyzed descriptively.

**Results:** Most referrals involved children aged 4–7 years and were managed internally. Medically complex patients (ASA III or higher) comprised the majority. While most patients completed treatment at CMH, a substantial portion remained incomplete, with few completing care externally.

**Conclusion:** Findings support expansion of internal surgical capacity at CMH. Increasing operating room availability or establishing a dedicated dental surgery center may improve access to care and reduce delays in treatment completion.

## INTRODUCTION

Children's Mercy Hospital (CMH) in Kansas City provides comprehensive pediatric dental care to a diverse patient population with varying medical and behavioral needs. While many patients are treated in the outpatient setting, some require advanced behavior guidance. According to the AAPD, GA is indicated for patients unable to cooperate due to age, developmental status, or medical conditions. These cases may be managed in a hospital operating room or referred to an ambulatory surgery center. Timely access to GA is critical to prevent disease progression; however, limited operating room availability and challenges with external referrals may delay treatment completion. This study evaluates GA utilization, referral patterns, and patient characteristics at CMH to identify gaps in care and opportunities to expand internal surgical capacity and improve access to treatment.

## METHODS

Data was collected and based upon patient appointments and treatment notes from January 1, 2024, to June 30, 2024, at the Children's Mercy Hospital dental clinic. This project was reviewed and determined not to meet the criteria for human subjects research by the institutional IRB. Referrals to the hospital operating room or ambulatory surgery center, follow-up status, and patient demographics (age and ASA classification) were recorded in Microsoft Excel. Data analysis: Descriptive statistics were used to compare GA needs across our given population at the CMH dental clinic.

## RESULTS

A total of 382 pediatric patients were referred for dental rehabilitation under general anesthesia over a six-month period.

- The largest proportion of patients were between 4–7 years old (52%)
- Most cases were managed internally, with 21% referred to external providers
- Medically complex patients (ASA III or higher) comprised the majority (55%)
- Treatment outcomes:
  - 66% completed treatment at CMH
  - 30% remained incomplete
  - 4% completed treatment at outside facilities

These findings demonstrate high utilization of internal GA services and persistent gaps in treatment completion.

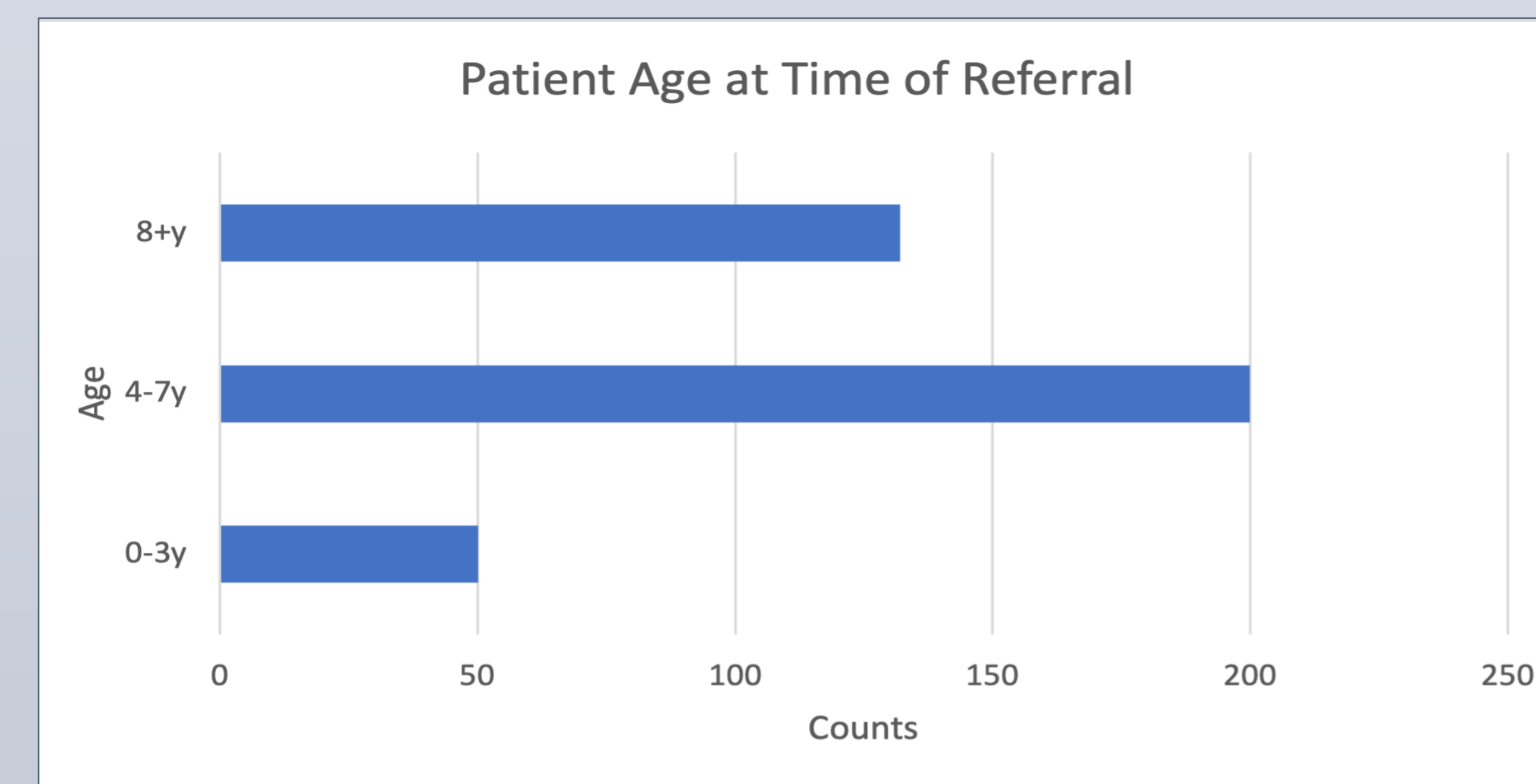


Figure 1: Patient age at time of referral

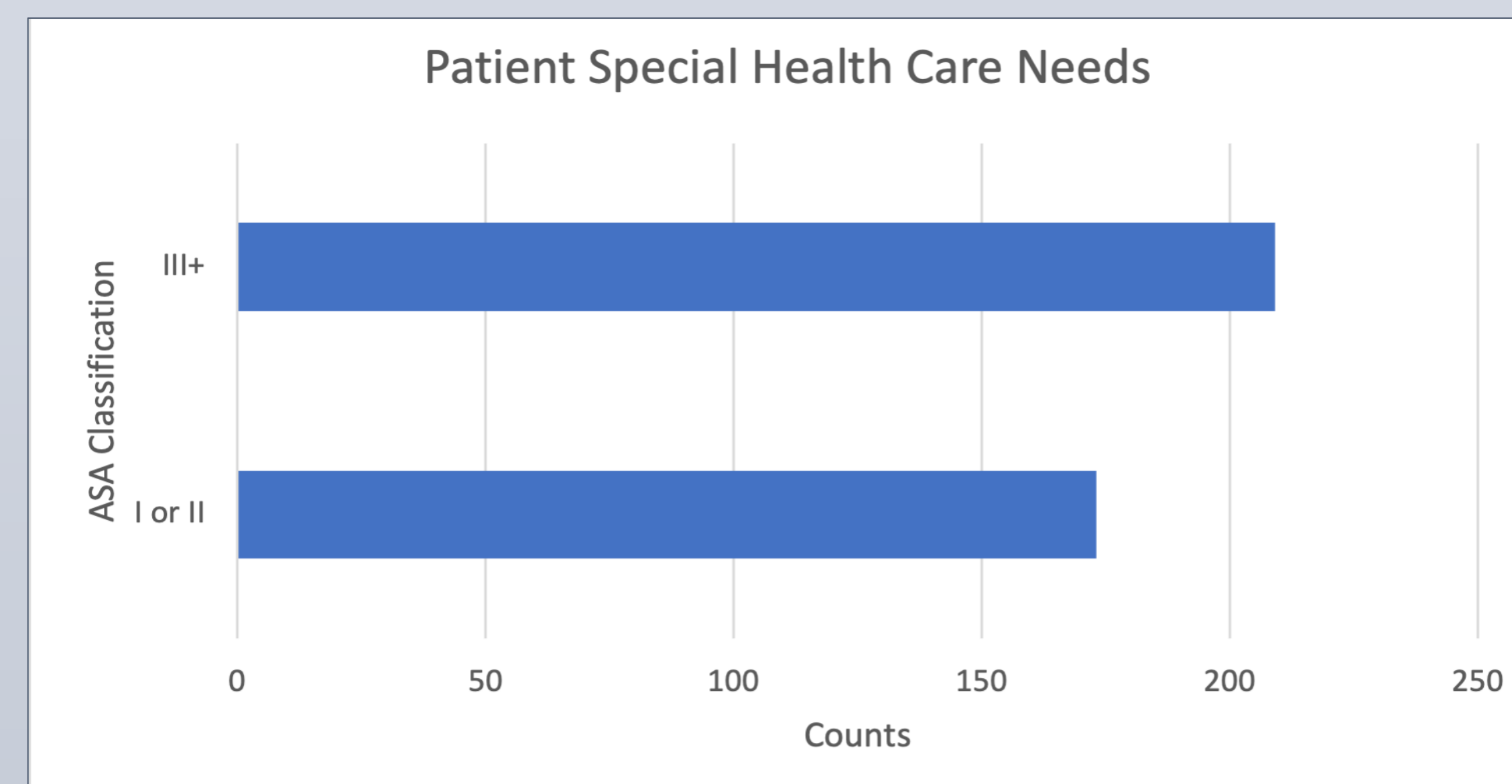


Figure 2: Patient ASA classification

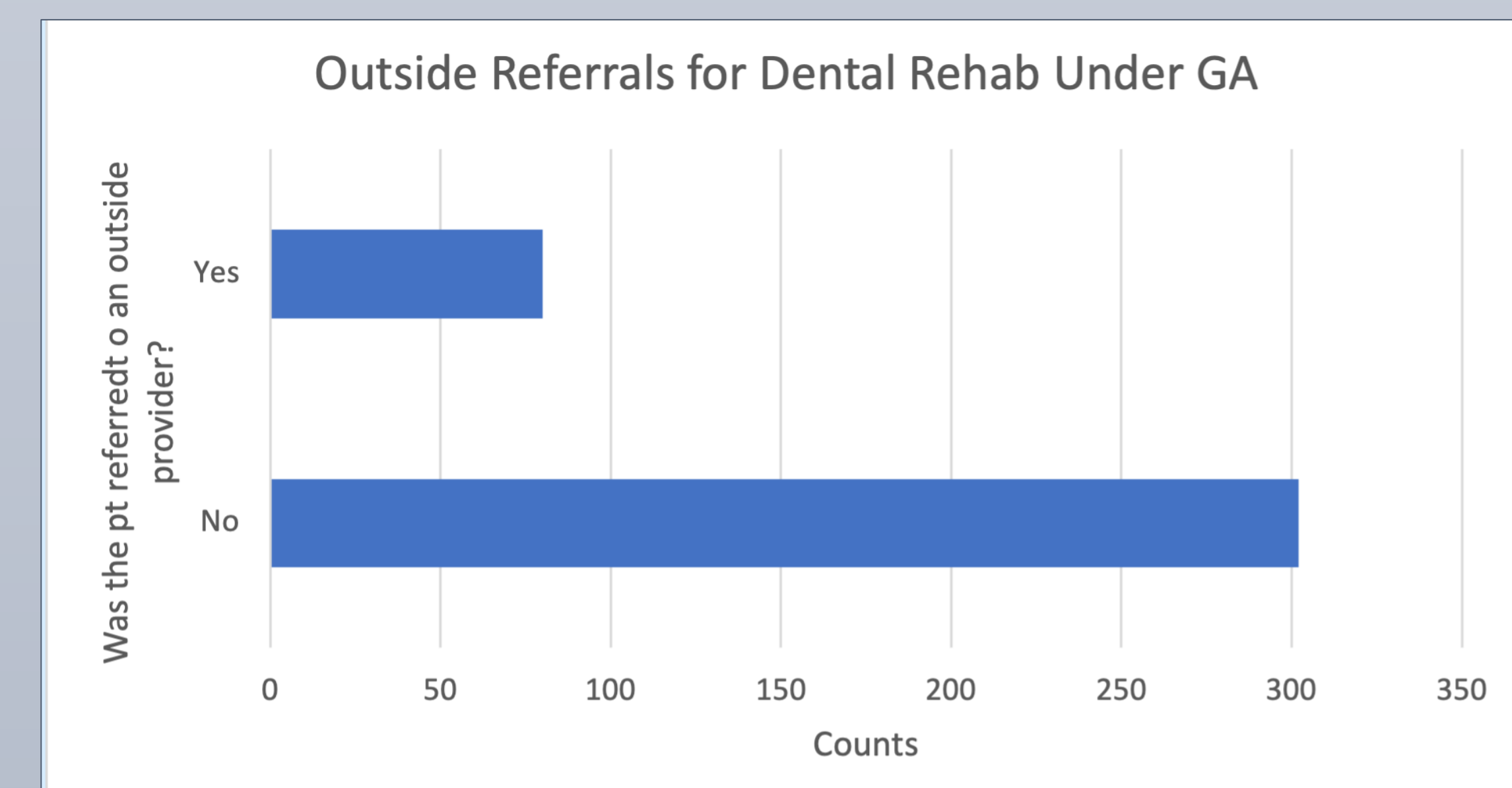


Figure 3: Outside referral for GA

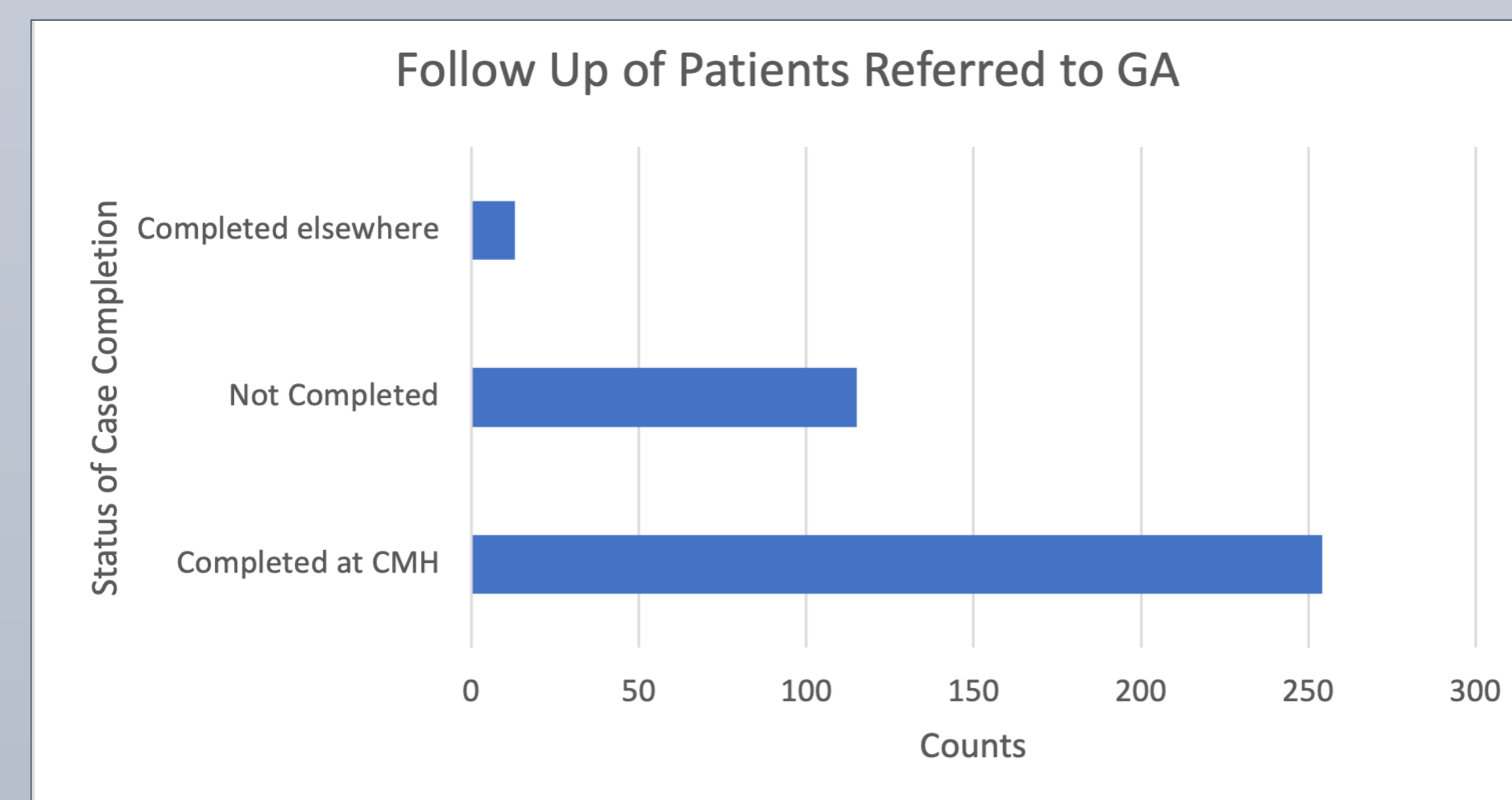


Figure 4: Follow up of patients referred to GA

## DISCUSSION/CONCLUSION

The surgical setting where a patient receives dental treatment under GA is decided by multiple influences, including the dentist, anesthesia provider, parent preference, and third-party reimbursement. Despite most patients completing treatment at CMH, a notable percentage of cases remained incomplete, suggesting potential barriers to timely care. These may include limited operating room availability, scheduling challenges, and delays associated with coordinating care for medically complex patients. Additionally, the relatively low rate of external treatment completion indicates that referral to outside facilities may not effectively mitigate these barriers.

Overall, these findings support the need to expand internal surgical capacity, such as increasing operating room block time or developing a dedicated dental surgery center. Enhancing in-house resources may reduce delays, improve treatment completion rates, and increase access to comprehensive dental care for both healthy and medically complex pediatric patients.

Future studies should further analyze the average wait time for scheduling and completion of dental rehabilitation under GA. Additional data should be obtained to update the results reported, as this study was completed using data collected over a relatively short period of time.

## REFERENCES

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