

Introduction

Dental caries is a prevalent issue among children, surpassing asthma in frequency.¹ The American Association of Pediatric Dentistry (AAPD) recommends initiating dental visits at twelve months to establish a dental home, fostering a lasting relationship for comprehensive dental care and education. Dental homes play a critical role in preventive measures to reduce dental diseases and promote proper oral health practices.

Inspired by the medical home concept, dental homes aim to provide effective and economical care, countering the rising trend of dental-related emergency department (ED) visits in the United States, which pose challenges for hospitals. Approximately 2 million annual ED visits in the United States are related to dental problems, a trend that has been on the rise.² These escalating emergency room visits contribute to numerous challenges for hospitals, including unnecessary diagnoses and treatments, ED overcrowding, extended waiting times, and financial burdens.³

Many children seek help at the ED for dental issues, often due to untreated caries and infections causing pain. In such cases, efforts are made to stabilize patients until they can visit a dental clinic for radiographs and definitive treatment. Palliative care in these instances often involves prescribing antibiotics and pain medication, a practice that has faced substantial criticism, particularly for pediatric patients.⁵ The frequent use of antibiotics for dental conditions in the ED underscores the imperative of accessing dental care and establishing dental homes.⁶ While EDs offer palliative care such as antibiotics and pain medication, establishing dental homes is crucial to access proper treatment and reduce reliance on emergency care.

Limited availability of dental services poses a challenge to preventive care, but educating families about dental homes can decrease ED visits. Furthermore, pediatric dentists in hospital-based programs can assess and evaluate patients, aiming to establish dental homes and reduce future ED presentations. Understanding why patients prefer ED care over dental clinics can inform strategies to improve access and care delivery.

Objectives

This study aims to analyze various types of dental-related issues among pediatric patients presenting to the ED and determine the incidence of ED visits specifically related to dental caries. Additionally, it will evaluate follow-up compliance and the rate at which patients continue care at the pediatric dental clinic.

Study Design & Methods

This retrospective chart review analyzed data collected from patients who visited the ED at Montefiore for dental emergencies and were consulted by the pediatric dental department between July 1st, 2021, and March 15th, 2024. The pediatric dental resident call log served as the primary source for identifying patients seeking ED care for dental pain. Subsequently, records were accessed to determine whether the patients completed follow-up treatment in a Montefiore pediatric dental clinic, continued routine care at Montefiore pediatric dental, or missed the recommended follow-up appointment.

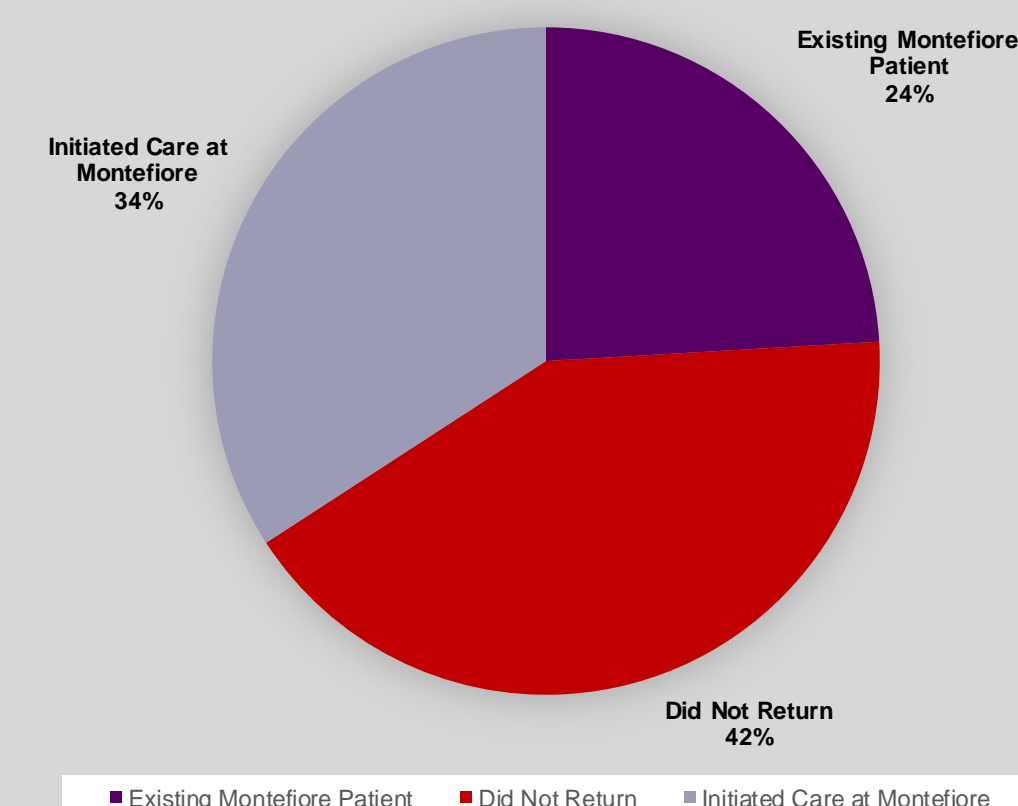
The collected data included the patient's age and gender, reason for the ED visit, clinical symptoms (such as pain, swelling, etc.), treatment administered, prescribed medications, follow-up instructions (including recommended timing), and compliance with follow-up. No exclusions were made based on gender, race, or ethnicity.

Results

A total of 444 records met the stated inclusion criteria and were reviewed. The patients ranged in age from 13 months old to 12 years old; the average age was 6 years old. Of those, 116 patients (26.1%) presented to the ED with chief complaints of pain or abscess/swelling due to untreated dental caries.

Of these 116 patients, 86 (74.1%) were prescribed antibiotic therapy. 77 patients (66.3%) followed instructions to return to the pediatric dental clinic the next business day; 5 patients (4.3%) stated they were going to follow up with their non-Montefiore dental providers.

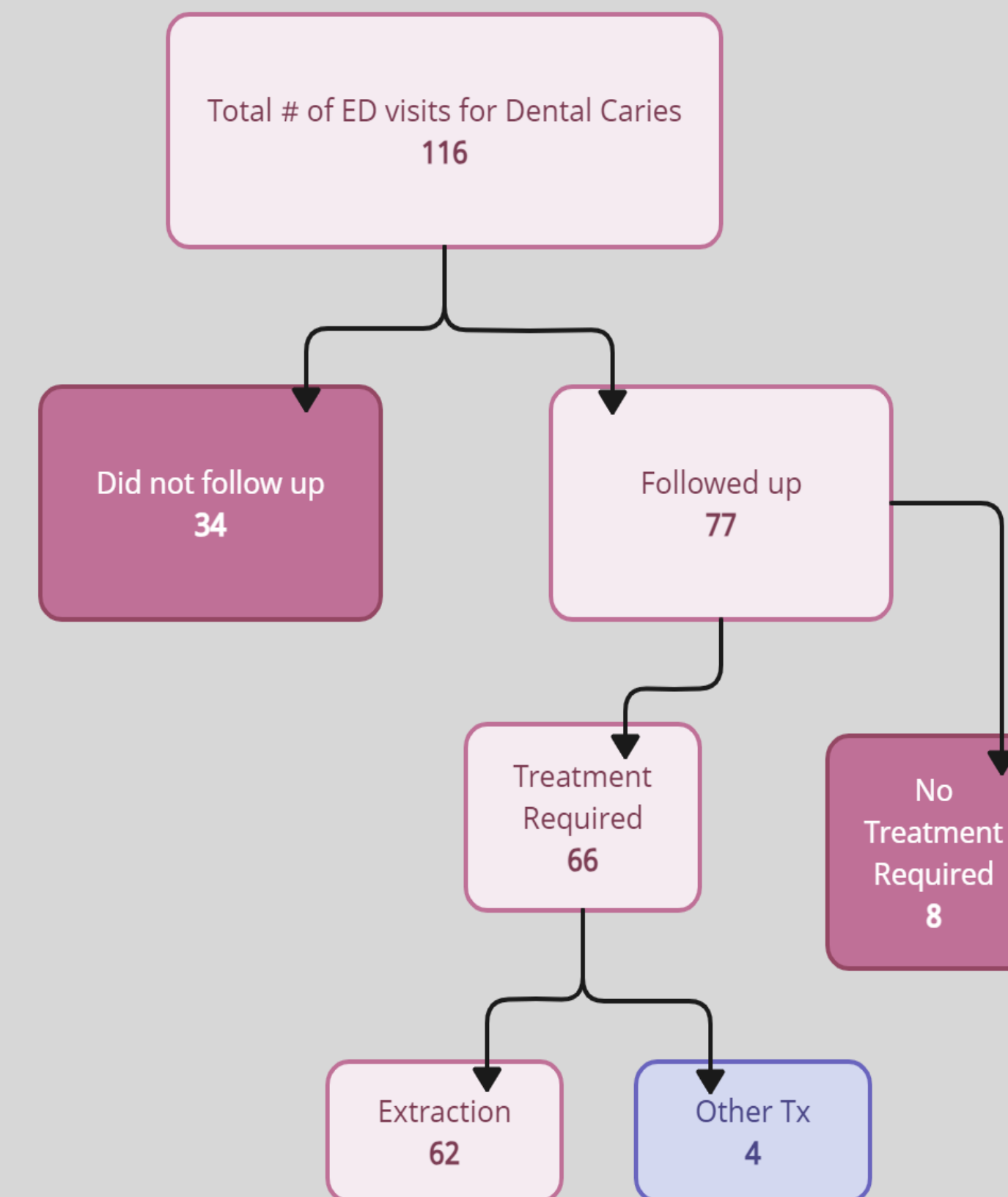
Figure 1



Results

Of the patients who returned for follow up (Figure 1), 24% were already established Montefiore patients, 34% initiated and continued dental care at Montefiore, and 42% did not return for any additional care after the initial follow up visit.

Figure 2



The figure above (Figure 2) depicts the breakdown of patient follow-up after their Emergency Department (ED) visit. Among the 77 patients seeking follow-up care, 66 patients (85.7%) required immediate treatment on the same day, with the majority of the treatment rendered being extractions (n=62, 93.9%).

Discussion and Conclusion

This study illustrates the significant burden of dental-related emergencies among pediatric patients, with a total sample size of 444 individuals presenting to the pediatric emergency room. Dental issues, including infection, pain, and trauma, were prevalent among this population, with 26% reporting dental pain attributable to caries as their chief complaint.

Recognizing the limitations of emergency departments (EDs) in addressing dental problems comprehensively is crucial. While EDs can provide temporary relief through antibiotics and pain medication, definitive treatments such as extractions, X-rays, or restorative work may necessitate follow-up care in a dental facility. However, the study identified a concerning trend: 8 out of 116 patients returned to the ED for similar complaints of dental caries-related pain rather than seeking care at dental clinics, highlighting potential gaps in access to or utilization of dental services among this demographic.

It is notable that the majority of these patients presented with an abscess or facial swelling, indicative of chronic infection. This underscores the critical role of preventative care and regular dental visits in averting such emergent situations. Efforts should focus on enhancing awareness among both caregivers and healthcare providers about the importance of follow-up care in dental clinics for comprehensive treatment of dental emergencies.

Additionally, interventions aimed at strengthening the integration between emergency medical services and dental care facilities could facilitate seamless transitions and ensure that patients receive the necessary treatments promptly. Addressing barriers to dental care, such as financial constraints or limited availability of dental services, is crucial in mitigating the likelihood of patients resorting to repeat visits to the ED for dental issues. Ultimately, by addressing these challenges and promoting preventive oral healthcare measures, healthcare systems can work towards reducing the incidence of pediatric dental emergencies and improving overall oral health outcomes for children.

References

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