

Analysis of Cause for Emergency Dental Appointments of Patients of Record and Referred Patients



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INTRODUCTION

- This retrospective study was conducted to evaluate whether having a dental home is associated with the reason a pediatric patient presents for an emergency dental visit.
- A dental home, as defined by the AAPD, is a continuous, comprehensive, and patient-centered relationship with a dental provider, ideally established by age one. It includes preventive, acute, and specialist care.
- The AAPD highlights the importance of emergency dental care and encourages providers to guide all emergency patients—whether existing or new—toward establishing a dental home.
- The dental home relationship helps ensure continuity of care and supports long-term oral health, reducing the likelihood of preventable emergencies in pediatric populations.

PURPOSE

- This study aims to explore whether having a dental home influences the reasons for emergency dental visits. Specifically, it investigates whether patients of record are more likely to present with miscellaneous concerns (e.g., eruption pain, dental appliance issues) rather than caries-related issues, in comparison to referred patients.
- It is hypothesized that patients with a dental home will have fewer emergency visits for caries and no significant difference in visits for trauma, supporting the importance of early and continuous dental care.

METHOD

- Researchers analyzed 576 emergency visits from July 2022 to July 2024 at Sun Life Pediatric Dentistry, a Federally Qualified Health Center.
- Visits were categorized as caries-related, trauma-related, or miscellaneous.
- Patients were grouped as either existing patients (patients of record) or referred (first-time patients).
- Statistical analyses were conducted by the NYU Langone statistics team. A univariate analysis was performed to assess the distribution of patient age, gender, referral status, and reasons for emergency visits. Subsequently, a bivariate analysis was carried out to examine the relationship between referral status (patient of record vs. referred patient) and the reason for the emergency visit.

RESULTS

- A total of 576 pediatric emergency dental visits were analyzed (Table 1). The mean age of patients at the time of the emergency appointment was 6.8 years (SD = 3.4). The sample included 303 females (53%) and 273 males (47%). Of the total participants, 418 (73%) were classified as patients of record, while 158 (27%) were identified as referred patients (Table 2).
- There was no statistically significant difference in mean age between patients of record and referred patients ($p = 0.2$). Similarly, gender distribution did not differ significantly between the two groups ($p = 0.3$).
- A statistically significant difference was observed in the reasons for emergency visits between patients of record and referred patients ($p < 0.001$). Among patients of record, the most common reason for emergency appointments was categorized as miscellaneous (55%), followed by caries-related (33%) and trauma-related (12%). In contrast, referred patients commonly presented with caries-related issues (55%), followed by miscellaneous (32%) and trauma-related concerns (13%).

TABLE 1. UNIVARIATE ANALYSIS

Characteristic	N = 576 [†]
Mean Patient Age as of Appointment Date	6.8, (3.4)
Patient Gender	
Female	303 (53%)
Male	273 (47%)
Patient of Record, or Referral?	
Patient of Record	418 (73%)
Referral	158 (27%)
Reason for Appointment	
Caries	225 (39%)
Trauma	72 (13%)
Misc	277 (48%)
Missing	2 (0%)

[†] Mean, (SD); n (%)

TABLE 2. BIVARIATE ANALYSIS BY RECORD/REFERRAL STATUS

Characteristic	Patient of Record	Referral	p-value [‡]
Mean Patient Age as of Appointment Date	N = 418 [†] 7.0, (3.3)	N = 158 [†] 6.6, (3.5)	0.2
Patient Gender			0.3
Female	226 (54%)	77 (49%)	
Male	192 (46%)	81 (51%)	
Reason for Appointment			<0.001
Caries	138 (33%)	87 (55%)	
Trauma	51 (12%)	21 (13%)	
Misc	227 (55%)	50 (32%)	
Missing	2 (0%)	0 (0%)	

[†] Mean, (SD); n (%)
[‡] Wilcoxon rank sum test; Pearson's Chi-squared test; Fisher's exact test

CONCLUSIONS

- The reasons for emergency dental visits differ significantly between patients of record and referred patients.
- Patients of record are more likely to present for emergency appointments due to miscellaneous issues, such as eruption pain or appliance-related discomfort, rather than caries.
- Referred patients are more likely to seek emergency care for caries-related concerns compared to miscellaneous issues.
- There is no significant difference in the proportion of trauma-related emergency visits between patients of record and referred patients.
- Establishing a dental home is associated with a reduced likelihood of emergency visits due to caries, underscoring the importance of continuous and preventive dental care.

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