

Exploring the utilization of Emergency Department at Boston Medical Center for non-traumatic dental conditions among children aged 0-21 years

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Background

- National estimates for total ED visits for all conditions increased approximately 13 percent from 2001 to 2008 while the number of ED dental visits increased over 41 percent in the same time period.¹
- Caries is the etiology of the problem prompting the emergency department visit in 73% of patients, and baby bottle caries accounted for 18% of all cases of caries.³
- Patients were treated empirically by the ER physicians according to their presenting signs/symptoms.
- Dental care provided in the ED is often incomplete and palliative.
- ED physicians treat pain and infection by prescribing antibiotics and/or analgesics, but do not perform restorative procedures or extractions.¹
- low socioeconomic status children continue to utilize emergency departments for dental conditions at higher rates than their peers.

Hypothesis 1. Lack of dental home is a predictor of NTDC ED use in pediatric patients at the Boston Medical Center.

First Aim: To evaluate the discrepancy in ED utilization based on SES, race, ethnicity, age, gender.

Second Aim: Understand the cause of ED utilization for NTDC.

Methods

Study population:

- This retrospective chart review was conducted on patients seen in the ED at Boston Medical Center (BMC) for non traumatic dental conditions between January 1st 2017 and Dec 31st 2021.
- Inclusion criteria: Subjects were included between 1 and 5 years of age, presenting for non traumatic dental conditions as identified by the appropriate ICD10 codes. Those who did not meet these criteria were excluded from the study.
- A total of 977 eligible subjects were identified, and 229 charts have currently been reviewed.

Data collection and analysis:

- De-identified data was imported from EPIC electronic medical record system.
- Data obtained were: Age, gender, race/ethnicity, dental and medical conditions, insurance type, and language spoken, and dental home identification.
- Statistical analysis will be performed using descriptive statistics and chi square test.

Results

	Dental home (n=141)	No Dental home (n=88)	**P value
	n(%)	n(%)	
MA	66(28.82)	40(17.47)	0.84
Other insurance	75(32.75)	48(20.96)	
Male	80(34.93)	46(20.09)	0.51
Female	61(26.64)	42(18.34)	
White	15(6.55)	10(4.37)	0.86
Black	75(32.75)	41(17.9)	0.33
Decline	26(11.35)	14(6.11)	0.62
Asian	7(3.06)	2(0.87)	~
Hispanic/Latino	15(6.55)	17(7.42)	0.07
Other	3(1.31)	4(1.75)	~

*N is total number of subjects reviewed

**Chi Square test used to determine significance

- 229 patients 1-5 years of age over the time period from January 2017-December 2021 utilized the ED for dental care
- Upon examining the records no significant difference was found between those who identified a dental home and those that did not
- No Significant difference was found when controlling for insurance type, gender or race.

Discussion

- Previous studies have shown that the emergency palliative care provided at the ED does not help alleviate the source of the discomfort and patients still need treatment at a dental clinic.
- Patients face many obstacles in receiving preventive and routine dental care and identifying these hurdles should help address the problem.
- This study helps us understand the trend for utilization of the ED at BMC for Non traumatic dental care.

Conclusions

- A dental home may not always be accessible for dental emergencies
- More education should be provided to medical colleagues on encouraging routine dental care
- More research needs to be done to determine why patients utilized the ED for dental care

References

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