Utilization of Emergency Dental Services during COVID-19 Pandemic at a Federally Qualified Health Center (FQHC)

Anisha Sehgal, DMD[1], Fadra Whyte DMD, MPH[1,2], Wai-Yin Chan DMD, MPH, MS[1,2],
NYU Langone Dental Medicine, Advanced Education in Pediatric Dentistry Residency, San Diego, CA
San Ysidro Health Medical Center, San Diego, CA

INTRODUCTION

- Due to the onset of the COVID-19 Pandemic, California issued a Shelter in Place order on March 19th, 2020 to curb the spread of the respiratory virus[1]
- Because of the close proximity between patients and providers during treatment and aerosol generation by dental procedures, the American Dental Association (ADA) recommended postponing elective dental treatment[2].
- To reduce the burden of hospital emergency department admissions secondary to dental infections, the community health center began treating dental patients on an emergency basis only from March 19, 2020- August 18,2020.
- The effect of the global pandemic on dental emergency management has been documented by various institutions with results showing increases in dental infections, decreases trauma. Additionally, they noted reduction in uses of emergency services due to strict adherences in social distancing policies[3,4,5].
- Our retrospective study looks to analyze the use of emergency dental services at a community health center in San Diego, CA during the time period they were only offering emergency care from March 19, 2020- August 18, 2020 and comparing it to the previous year time frame from March 19, 2019- August 19, 2019

PURPOSE

The primary objective of this study is to compare the prevalence of emergency dental visits at a community health center in San Diego, CA from March 10-August 18, 2020 with emergency dental visits from the previous year during the same time period.

METHOD

Participants

- 404 charts were reviewed of children ages 0 –17 from March 19, 2019- August 18, 2020. Charts were broken into to two periods: pre-pandemic March 19th, 2019-August 18th, 2019 (n=210) and during pandemic March 19th, 2020-August 18th, 2020 (n=194)
- Inclusion criteria: (1) patients between the ages 0-17, (2) whose dental charts have dental codes that include emergency treatment and limited exams during the time
- Exclusion criteria: (1) patients who were seen for routine dental examinations (2) Patients above the age of 17

Procedure

- Data collected included demographics (age, gender, race, ethnicity, insurance), dental diagnosis, treatment rendered (antibiotics, aerosolized procedure, non aerosolized procedure, no treatment), ordered COVID 19 test and documented results if available.

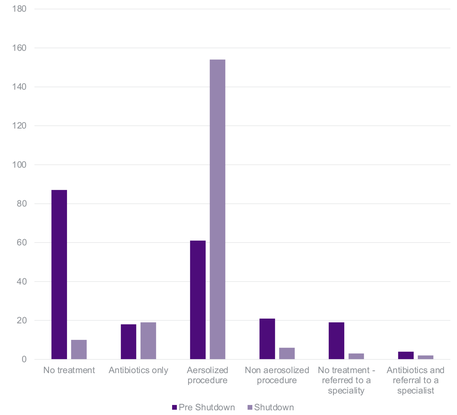
Statistical Analysis:

- Data was stored in RedCap and statistical analysis was completed by NYU Statisticians.

Table 1: Demographics of Patients pre- shutdown and during shutdown

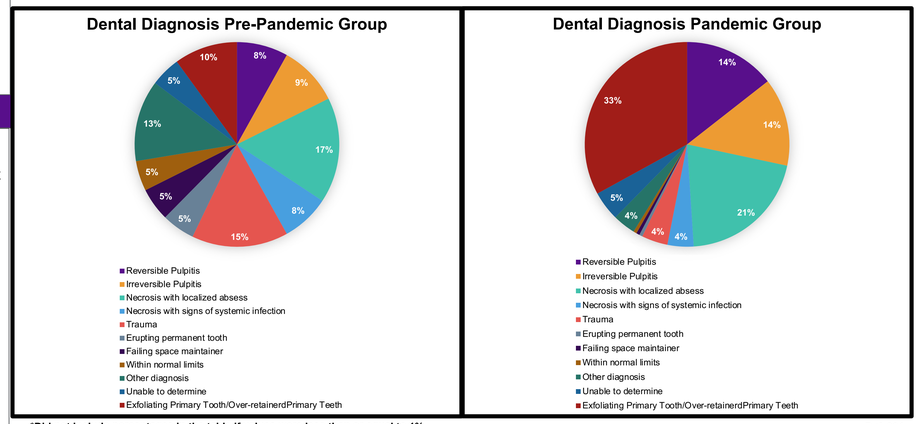
	Group		
	Pre-shutdown	Shutdown	p-value
Age, mean(SD)	7.1	8	0.05, t-test
Gender			
Male	98 (46.7)	89 (45.9)	
Female	112 (53.3)	105 (54.1)	
Race			0.372, chi test
White	124 (81.6)	78 (84.8)	
Black/African American	13 (8.6)	9 (9.8)	
Asian	14 (9.2)	4 (4.3)	
Pacific Islander/Hawaiian	0 (0.0)	1 (1.1)	
Multi	1 (0.7)	0 (0.0)	
Ethnicity			<0.05, chi test
Non-Hispanic	74 (42.0)	34 (22.4)	
Hispanic	102 (58.0)	118 (77.6)	
Insurance			0.115, chi test
Private	12 (5.7)	5 (2.6)	
Denti Cal	192 (91.4)	187 (96.4)	
Uninsured	6 (2.9)	2 (1.0)	

Figure 2: The Effect of COVID 19 Upon Treatment Modalities



P<0.001

Figure 3: Dental Diagnosis Prior to COVID-19 Pandemic & During COVID-19 Pandemic



*Did not include percentages in the table if values were less than or equal to 1% (Erupting permanent teeth, Failing Space Maintainer, and Within Normal Limits)

P<0.001

RESULTS

- Patients in the pandemic period were significantly older and more likely to be of Hispanic ethnicity (P<0.001; Table 1)
- There was a significant difference in the dental diagnoses, with more exfoliating primary teeth and over-retained teeth, and significantly less dental trauma, erupting permanent teeth, failing space maintainers, and within normal limits in the pandemic period (P<0.001; Figure 1).
- There were significant differences in the treatments with patients less likely to receive no treatment, a non aerosolized procedures and referral to a specialist during the pandemic period (P<0.001; Figure 2)
- Patients were much more likely to receive an aerosolized treatment in the pandemic period (79%) versus 29% pre-pandemic period (p<0.001; Figure 3)

LIMITATIONS AND STRENGTHS

- **Strengths**: This was a single reviewer study with any discrepancies reconciled by the research team.
- **Limitations:** The dental exams were completed by several different providers with varying level of details in chart notes. Therefore, at times dental diagnosis was difficult to determine. The increase in aerosolized procedures in the pandemic period is most likely due to the fact that in this study aerosolized included non surgical extractions.

CONCLUSIONS

A retrospective chart review of a dental clinic in a community health center in San Diego, CA demonstrated differences in the types of emergencies, treatment rendered, and patient demographics during the COVID-19 pandemic. Further research is needed to better understand why these differences occurred and their long term implications on pediatric dental health.

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