

Relationship between first dental visit and the COVID-19 pandemic

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Introduction

- Early childhood caries most infectious disease for US children
- Impacted by social determinants of health, including SES, caregiver education, value placed on oral health, access to care; (4)
- Need to identify high risk individuals at an early age (1)
- Factors involved in acceptability and establishment of dental home include long appointment times, perception that dental care was expensive, notion that deciduous teeth do not need care, impression that insurance will not cover dental procedures, unawareness of location of dental centers, child did not want to go, and children are difficult to handle during dental procedure (3)
- Aforementioned barriers existed prior to the COVID-19 pandemic which halted elective dental care at Eastman Dental on March 16, 2020

Purpose and Hypothesis

- It has been observed that patients of the Division of Pediatric Dentistry at EIOH lacked dental care during COVID-19 pandemic
- Our hypothesis is that age of first dental exam will be later post-pandemic than pre-pandemic
- This retrospective study included children 0 to 19 years of age who completed new patient exams at Eastman Dental between March 13, 2019-March 13, 2020, and between March 13, 2021, and March 13, 2022.
- Purpose of this study was to examine the age of first dental visit pre-pandemic and post-pandemic

Methods

Inclusion Criteria

1. Children must have presented between March 13, 2019-March 13, 2020, and between March 13, 2021-March 13, 2022, for a comprehensive exam(D0150) or oral evaluation under 3 (D0145)
2. Children must have been seen at the Division of Pediatric Dentistry at Eastman Institute for Oral Health
3. Children must have been aged 0-19 years at the time of the exam

Exclusion Criteria

Children who had a limited exam(D0140) as a result of a new patient referral from another dentist

Study Design:

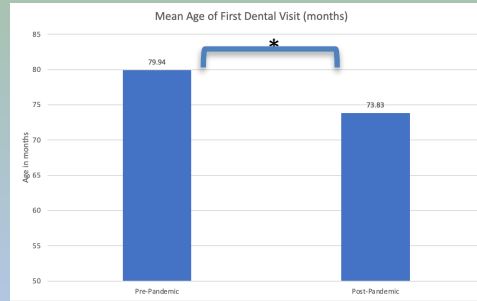
2749 charts were identified that met the inclusion criteria were included for analysis. The information from 2749 charts was collected and extracted and then de-identified for confidentiality.

Statistical Analyses: Patient's age of first dental exam were summarized with descriptive statistics by pre-pandemic and post-pandemic groups and compared using two sample t-tests. To control for potential confounding effect, multiple linear regression models were fitted with age as the dependent variable and time as the independent variable. Proximity to clinic and gender were adjusted as covariates. All statistical analyses were conducted using the SPSS System.

Results

Table 2.
Multiple regression predicting age of first dental visit

	B(SE)	Beta	p
Treatment Date	-7.66(2.54) *	-.06	.003
Insurance Type (0=Private, 1=Medicaid)	-15.64(4.45) *	-.07	<.001
Estimated Distance to Eastman	0.07(0.03) *	.05	.019
Patient Sex (0=female, 1=male)	0.95(2.14)	.01	.658
Patient Ethnicity (0=non-Hispanic, 1=Hispanic)	-2.35(2.96)	-.02	.427
Patient Race (Reference group=White)			
African American	-13.11(2.59) *	-.12	<.001
American Indian	-26.44(13.72) *	-.04	.054
Asian	-11.18(4.00) *	-.06	.005
Native Hawaiian	48.15(27.21) †	.03	.077
Multiracial Asian and White	-53.65(22.24) *	-.05	.016
Multiracial Asian and African American	-34.02(38.43)	-.02	.376
Multiracial African American and White	-9.06(5.92)	-.03	.126
Multiracial American Indian and White	-59.44(38.42)	-.03	.122



Post pandemic children had significantly lower ages($P=.003$) of first dental exam and this was consistent when controlling for patient demographic characteristics.

Our results demonstrated that African American, Asian, and Multi Asian White patients are coming in at a younger age than white kids. Additionally, patients with Medicaid insurance are coming in at younger age for their first dental visit than patients with private insurance. Finally, as distance from Eastman dental increases, the age of first dental exam increases. In this way, longer distances to Eastman have higher ages of first dental exam.

Conclusion

Age of first dental visit was lower after the COVID-19 pandemic, contrary to our hypothesis. Some reasons why this may have occurred are due to an increase in doctor visits or more public health campaigns post COVID-19 pandemic. Increased numbers of parents with more flexible work schedules including working from home might have increased dental visits. Higher number of patients qualifying for government sponsored insurance post pandemic, combined with decreased community providers accepting government sponsored insurance might have increased new patient visits at the EIOH Pediatric clinic.

Some limitations of our study include that we are only looking at patients at EIOH. In this way, we can not assume that our results will relate to the rest of the country. We are unsure if this is limited to only Eastman pediatric patients as compared to private practice patients.

Implications of our study are to continue to encourage pediatric patients to come to the dentist early to have better dental outcomes. By establishing a dental home earlier, we can provide anticipatory guidance earlier to prevent caries and help dental outcomes.

References

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