Emergency Dental Care in a Paediatric Hospital During COVID-19

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Background

As a result of the COVID-19 pandemic, non-essential and elective dental services were suspended in Ontario, Canada, on March 15, 2020. Only emergency dental management was permitted with the appropriate personal protective equipment. Dentists were instructed by the Royal College of Dental Surgeons of Ontario (RCDSO) to manage their own patients and were advised to not refer patients to hospital dental departments.

Disparities in oral health and access to oral healthcare exists across social groups in Canada[1]. The COVID-19 pandemic may have further complicated access. Patients that are unable to obtain or afford dental care in the community may rely on their local hospital emergency department (ED) for management of compromised oral health outcomes[2].

Due to the recent burden of COVID-19, the literature on the effects of the pandemic in pediatric dentistry remains limited.

Objectives

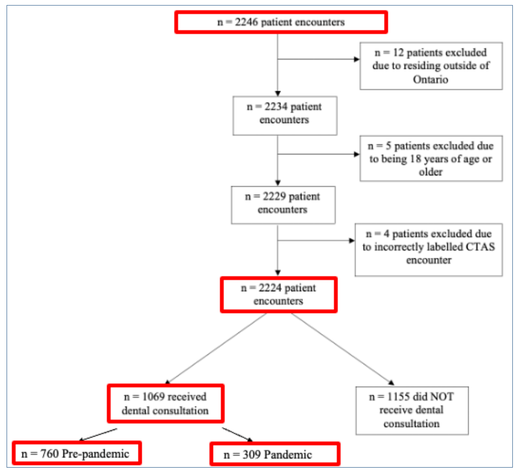
1. To examine changes in demographic characteristics of patients that presented for dental-related emergency complaints in the ED during the pandemic in comparison to before the pandemic
2. To examine changes in presenting dental conditions and provision of emergency dental services during the pandemic in comparison to before the pandemic

Methodology

A retrospective chart review of dental-related ED visits at the Hospital for Sick Children, Toronto, were reviewed and compared between June 2, 2018 and March 15, 2020 for the pre-pandemic group, and March 16, 2020 to March 15, 2021 for the pandemic group.

Date of visit, time of triage, and demographic data was collected for all patients that registered at the ED. Clinical data, which included primary presenting condition and management, was collected only for patients who received an in-person consultation by the dentist on-call.

T-test and Chi-square tests examined differences between the two time periods.



Results

Dimension	Pre-pandemic	Pandemic	p-value
Dependency	-0.38	-0.44	.15
Deprivation	0.21	0.36	.019
Ethnic Concentration	1.00	1.06	.23
Instability	0.41	0.43	.71

Table 1. Ontario Marginalization index factor scores for all patient encounters

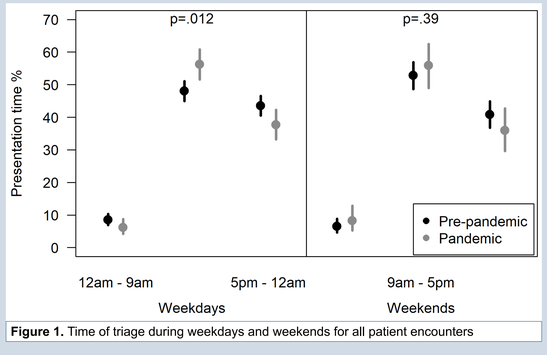


Figure 1. Time of triage during weekdays and weekends for all patient encounters

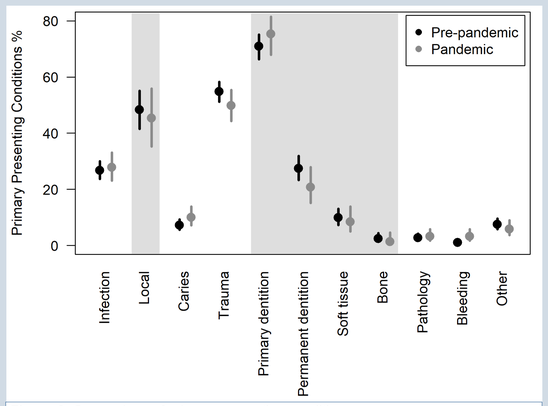


Figure 2. Comparison of primary presenting conditions

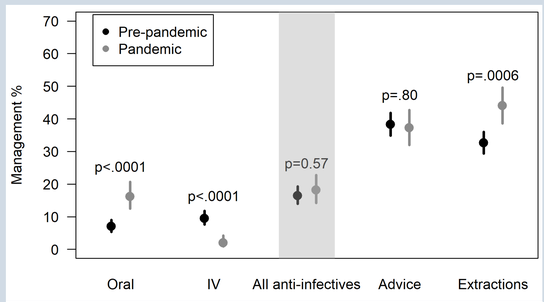


Figure 3. Comparison of management provided

Discussion

The pandemic disproportionately affected those who are more marginalized as there was a significant increase in patients of lower socioeconomic status who visited the ED during the pandemic. Many individuals lost their jobs, which can include loss of income and/or dental insurance, resulting in the inability to afford the out-of-pocket expense to visit a dentist in the community[3,4].

During the pandemic, patients more commonly triaged between the hours of 9am to 5pm on weekdays. This is likely a reflection of parents working from home and children remote learning[5]. Also, parents may have been home if they were let go of their jobs.

Despite overall global reduction in ED visits during the pandemic, the type of primary presenting condition did not change for dental-related complaints. In contrast, medical emergencies at hospital EDs saw increases in high-acuity illness and late presentation of critical illness[6].

This study demonstrated an increase in the prescription of oral anti-infectives. This could be a reflection of preserving hospital resources, as is evident by the significant decrease in IV anti-infective use in the emergency department. During the pandemic PPE supplies were limited and there were staff shortages.

Restrictions of aerosol-generating procedures were imposed by the RCDSO during the lockdown of the pandemic. A simple dental extraction is a procedure that creates less aerosols than standard handpieces, thereby reducing the possible risk of COVID-19 transmission in the ED setting[7,8]. Further, during the lockdown there was uncertainty about the duration of restrictions put in place which may have led the dentist to provide more definitive treatment with extractions.

Clinical Significance

These findings should encourage dentists in the community, both paediatric and general, to triage and manage dental emergencies of their own patients. Therefore, decreasing the burden on local hospital EDs, as well as conserving the associated hospital resources that otherwise would be involved for each patient that visits the ED.

Most importantly, the findings of this study further highlight the pre-existing oral health disparities in a Canadian context. Policymakers and health planners can create better structured services to improve access to dental care.

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