

Comparison of Pediatric Dental Clinical Care Before and After Covid-19 Pandemic

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Purpose

The purpose of this study is to better understand the effects of the Pandemic on pediatric dentistry provision and approach to care. In order to achieve this, the clinical care provided to pediatric dental patients as measured by both quantities of specific procedures (codes) completed, as well as specific types of procedures (codes) completed, will be compared both before and after the Covid-19 pandemic.

Background

By interfering with the application of in-person care, the Covid-19 pandemic affected widespread and potentially lasting change to the pediatric dental sector in 2020. In response to the rise in cases nationwide at the time, Nova Southeastern University closed dental clinics from March 2020 to May 2020. As Covid-19 is “most abundant in the nasopharyngeal region and the salivary secretions in infected individuals,” (3) its effect in the realm of dentistry was particularly devastating. In the case of pediatric dentistry, pandemic treatment issues were even more exacerbated since the often asymptomatic or milder nature of Covid-19 in children allowed this population to act as silent “vectors in community transmission.” (3) Although delays of care were necessary during the Pandemic, such restrictions on and delays of care during this period served also to “increase the already overloaded demand and overburden services in the future” (1) within the pediatric dental community.

In the “post-pandemic” phase, the virus remained a threatening presence despite quarantine relaxations. “New features and ever-changing evidence-based guidelines have become part of the dental practice daily routine in order to contain the viral spread” (2) of Covid-19. Safety measures including social distancing and spacing of appointments, disinfection and sterilization protocols, additional PPE and an emphasis on minimally invasive dentistry, may all alter treatment time. By comparing treatment codes completed pre-pandemic to post-pandemic, this study will attempt to recognize the extent to which this altered approach has affected treatment. Given the chronic and progressive nature of dental disease, the pandemic’s disruption and delay of care is likely to contribute to poorer oral health and long-term problems among children everywhere, and especially the less fortunate due to disparate barriers to access and a dearth of providers in low-income and rural areas. (2) In reviewing whether pediatric dentists are providing more or less treatment than their pre-pandemic rates, this study will be beneficial in assessing the current state of pediatric dentistry as well as the potentially long-lasting effects caused by the pandemic. Such information is crucial to ensure that effective changes are made to provide adequate and properly allocated dental care to this vulnerable population. Perhaps more than ever, pediatric patients require the dental care that is critical for early detection, prevention and control of oral pathologies.

Methods

Study sample:

- The data set includes completed treatment codes of all pediatric patients at the JDM and KID clinics affiliated with Nova Southeastern University, College of Dental Medicine from one of the two accepted date ranges below coinciding with these clinics’ temporary closure in March 2020, and their subsequent reopening in early June 2020.
- The first date range, “pre-pandemic” period, set from March 1, 2018 to February 28, 2020.
- The second date range, the “post-pandemic” period, set from June 1, 2020 to May 30, 2022.
- Estimated sample size of patient charts reviewed is N=200

Data collection and analysis:

- Procedure codes completed at the above-mentioned clinics within the given time ranges were included, with codes being broken into Diagnostic, Preventative, Restorative, Behavior Management, Extractions, and Total codes completed.
- Procedures completed were then compared based on the characteristics of patients receiving the procedures, with patient characteristics of age, sex, race, ethnicity, marital status of parents, language spoken at home, and whether patient is special needs being included.
- SPSS version 28 was used to generate descriptive statistics including frequencies and percentages. Descriptive statistics will be used to report dental visit treatment completion between varying treatment types and patient demographics.

Anticipated Results and Significance

- It is expected that the quantity of clinic codes completed will be lower post-pandemic due to new regulations and infection protocols. Similarly, quantity of diagnostic, preventative, restorative, behavior management and extraction subdivided codes completed will be lower “post-pandemic” than “pre-pandemic
- The significance of this study will be in determining how the pandemic affected speed of care and provision of care.
- Future direction could be aimed towards determining how best to accelerate pediatric dental care while maintaining similar quality standards, or towards increasing access to care, as currently the scope of care is more limited amongst certain subgroups of the pediatric population.

References

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