Impact of COVID-19 on Referral Outcomes at a Pediatric Dental Clinic in a Rural Academic Medical Center

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Abstract

Purpose: The purpose of this study is to analyze the referrals from in-house pediatricians to the dental clinic to assess number of referrals, number of completed appointments, and compare those findings to the impact of COVID-19 from March 2020 to March 2022.

Methods: Data was obtained retrospectively using electronic health record (EHR) system. Referred patients between the ages of 0-5 years were identified from April 2017 to July 2022. The timeframe for the impact of COVID-19 was designated to March 2020 to March 2022. The following data points were collected and analyzed including data of referral, completion of the appointment, type of treatment, and demographics. The COVID-19 data was compared to pre-COVID-19 timeframe, April 2017 to April 2020.

Results: Among 511 referrals received from the pediatricians between 2017 to 2022, 17% (88) have been documented to complete an appointment. Pre-COVID timeframe revealed 100 referrals and 66 (66%) completed appointments. COVID timeframe revealed 411 referrals and 5% (22) completed appointments. Data was compared using Chi Square and Exact Measures of Association.

Conclusion: Our pediatrician colleagues were able to provide virtual wellness visits during the pandemic, whereas the dental clinic was open for emergency visits only. Dentistry is also a procedure-based field and the ability to provide care virtually is limited. As we emerge from the pandemic, pediatric dental clinics may not have the capacity and staff to accommodate a surge of patient referrals from virtual visits and the return of their existing patients.

Discussion

Referred appointments increased 311% and completed appointments decreased 66% post COVID-19.

Medical clinic continued to see patients through virtual wellness visits and made appropriate dental referrals during the pandemic.

Dental clinic was open for emergency visits only between March 2020 to July 2020.

A surge of referrals (411) were received during COVID time frame.

The average age of a referred patient is 2.3 years old.

93% of patients are of low socioeconomic status.

Table 1. Results from pediatrician referrals & first completed dental appointment.
*p-value <0.00001

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<tr>
<td>No. Referrals</td>
<td>100</td>
<td>411</td>
<td>511</td>
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<td>No. Completed Appts*</td>
<td>66 (66%)</td>
<td>22 (5%)</td>
<td>88 (17%)</td>
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<td>Days in Between (mean, median)</td>
<td>69, 17</td>
<td>243, 274</td>
<td>112, 31</td>
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Table 2. Additional results from demographics and treatment type.

Conclusion

Our pediatrician colleagues were able to provide virtual wellness visits during the pandemic, whereas the dental clinic was open for emergency visits only. Dentistry is also a procedure-based field and the ability to provide care virtually is limited. As we emerge from the pandemic, pediatric dental clinics may not have the capacity and staff to accommodate a surge of patient referrals from virtual visits and the return of their existing patients.

References


The study was reviewed and approved by the East Carolina University & Medical Center Institutional Review Board. UMCIRB 20-002456.

Figure 1. Flow chart of referral system and paperwork.