Evaluation of Oral Healthcare for Vulnerable and SHCN Population by Utilization of Teledentistry in Patient Care

Pallvi Goomer BDS MDS, Oscar Padilla DDS, Patrick Hardigan Ph.D., MBA

Nova Southeastern University, College of Dental Medicine

INTRODUCTION

- SARS-CoV-2 has significantly impacted the global health care system.
- Oral health care services were among the most affected healthcare services that suspended elective procedures.
- People from racial and ethnic minorities, mentally or physically challenged and those from lower-income households, particularly children, are especially hard hit due to decreased access to dental care.
- As health care workers all over the world are looking for alternative ways to assist in reducing the transmission of SARS-CoV-2, Teledentistry, the equivalent method to telemedicine in dental medicine is one of the methods used during the outbreak.
- CDC Interim Guidance for Dental Settings has recommended the use of tele-dentistry as an option to in-office care to limit the spread of SARS-CoV-2 infection
- The potential safety measure of distant health care gave providers a secure way to provide health care for patients.
- This pandemic of SARS-CoV-2 gives us a unique opportunity to build a more accessible and well-connected system that is viable even after the immediate crisis subsides. Tele-dentistry can connect patients and providers in different geographical locations, as well as enable different specialists who treat the same patients to share information. This may improve dentistry's integration into larger health care delivery system through inter-professional communications.
- According to a study over a three-year period in Florida, there were more than 489,000 visits to hospital EDs for oral conditions, and roughly 4 in 10 visits were reimbursed by its Medicaid program. Use of Emergency department for non-urgent or preventable medical conditions can disrupt more urgent need in the time of crisis. Telehealth can help many people receive services through a virtual platform and avert visits that lack urgency to hospital ED's.
- Teledentistry may be used as an effective alternate to in office visit to provide high quality care to vulnerable and underserved child populations with SHCN during the outbreak of Covid-19 pandemic and at times where in office visits are not feasible.

OBJECTIVES

The purpose of our study was to evaluate the practical implications of Teledentistry in providing high quality, comprehensive oral health care visits for vulnerable and underserved children with SHCN at NSU pediatric dental clinics with telehealth consultations.

METHODS

In this retrospective study, we extracted telehealth data from EHR (Electronic health records) starting from March 2020 through June 2021.

Inclusion Criteria:

1. Patient who had telehealth visits.
2. Patients from 0-21 years of age.

METHODS (cont.)

3. All patients visiting NSU Dental Clinics:
a) Kids in Distress
b) Joe Dimaggio Pediatric Dental Clinic
c) NSU Pediatric Dental Clinic at Mailman Segal Center for Human Development.

The common parameters evaluated, based on the records, were

- Age of the patient
- Sex of the patient
- Special needs
- Reason for telehealth consultation
- Treatment/ Referral provided

Extraction of telehealth data was done from the Axium's EHR (Electronic Health Record):
D0140 (Limited oral eval, problem- focused), D0170 (Re-eval, limited, problem-focused), D0171(Re-evaluation-post-operative-visit), D9992 (Dental case mgmt- case coordination), D9995 (Teledentistry, synchronous real-time encounter, and D9996 (Teledentistry - asynchronous ; info stored & frwd to dentist)

RESULTS

Demographics

	Special Needs No (N=25)	Yes (N=15)	Overall (N=40)	P.Value*
Age				0.919
Mean (SD)	9.64 (4.32)	9.80 (5.09)	9.70 (4.56)	
Median [Min, Max]	10.0 [3.00, 18.0]	7.00 [3.00, 17.0]	9.50 [3.00, 18.0]	
Sex				0.502
Female	10 (40.0%)	4 (26.7%)	14 (35.0%)	
Male	15 (60.0%)	11 (73.3%)	26 (65.0%)	
Race				0.998
Hispanic or Latino	10 (40.0%)	6 (40.0%)	16 (40.0%)	
Other	15 (60.0%)	9 (60.0%)	24 (60.0%)	

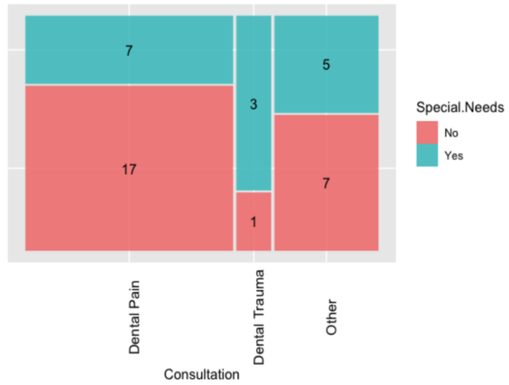
Clinical consultation and treatment

	Special Needs No (N=25)	Yes (N=15)	Overall (N=40)	P.Value*
Consultation				0.218
Dental Pain	17 (68.0%)	7 (46.7%)	24 (60.0%)	
Dental Trauma	1 (4.0%)	3 (20.0%)	4 (10.0%)	
Other	7 (28.0%)	5 (33.3%)	12 (30.0%)	
Treatment				0.311
Provided Emergency Treatment	6 (24.0%)	4 (26.7%)	10 (25.0%)	
Provided Referral	7 (28.0%)	1 (6.7%)	8 (20.0%)	
Triage and Deferred Treatment	12 (48.0%)	10 (66.7%)	22 (55.0%)	

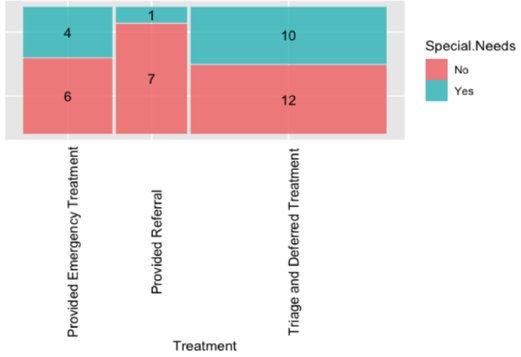
*** For the continuous variable Age, a Welch T-test was used to compare groups. For all categorical measures, a Fishers Exact Test have been employed.**

STATISTICS

Consultation



Treatment



CONCLUSIONS

- For a total of 40 patients, demographics and dental consultation/ treatment data was collected and analyzed.
- The mean age of the patients was 9.7 years (SD = 4.56 & range = 3-18).
- The gender breakdown is 65% males and 35% females.
- 37.5% patients were special needs patients.
- 60% of the patients consulted for dental pain and 40% for dental trauma and other related issues.
- The race breakdown includes 40% Hispanic/ Latino and 60% others.

CONCLUSIONS (cont.)

- From these consultations 55% of patients were triage and deferred treatment, 25% were provided emergency treatment and referral provided for the remaining 20%.
- There was no significant difference observed between the group of patients with and without special needs for all the observed factors.
- This suggests both the groups have comparable results in terms of utilization of Teledentistry. More research with a bigger sample size and comparison with non telehealth visits for the compared groups is required to establish that there is more benefit achieved by patients with special needs.
- This preliminary analysis suggests that Teledentistry may prove to be an important adjunct to traditional in office dental visits for special needs patients during crisis like SARS-CoV-2 outbreak and when traditional in office visit is not feasible.

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