

Suncoast Community Health Center Mobile Dental Program was effective in establishing dental homes for pediatric patients with and without caries



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INTRODUCTION

Dental caries is the most common chronic disease in children. According to the American Academy of Pediatric Dentistry (AAPD), 45% of children in the United States ages 6-11 have caries. The AAPD defines a dental home as, “the ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health care delivered in a comprehensive, continuously accessible, coordinated, and family-centered way”. It is recommended that a dental home is established by 12 months of age in order to provide anticipatory guidance, preventive, acute, and comprehensive oral health care. Empirical evidence suggests that children in a dental home are more likely to receive appropriate preventive and routine oral health care, thereby reducing the risk of preventable dental/oral disease.

Mobile dental programs increase access to care in the community but are only truly effective if patients establish a dental home, where they can receive comprehensive oral health care. A systematic review done in 2019 on mobile dental school based dental screenings found that there was a 16% increase in dental appointment attendance by children following a screening compared to those who did not have a screening. In 2010, Suncoast Community Health Center in Brandon, Florida opened its Mobile Dental Program to reach low-income, vulnerable children who are at the highest risk for tooth decay. The mobile dental program travels to schools in Hillsborough County to provide dental services including oral hygiene instructions, screening/assessment, application of fluoride, oral prophylaxis, nutrition counseling, and dental sealants performed by a dental hygienist. Patients in the mobile dental program also receive a referral to the Suncoast Pediatric Dental Clinics for a comprehensive examination by a dentist with the intention of helping patients establish a dental home.

STUDY METHOD

A retrospective chart review was conducted at Suncoast Community Health Center (SCHC) Pediatric Dentistry Department.

Electronic dental records were obtained from a random selection of 100 patients (six to ten years old) who were seen in the SCHC Mobile Dental Program between January 1, 2018 and December 31, 2021.

Data extracted included information on patient’s age, date of service in mobile dental program, suspected caries status, scheduled appointments with a Suncoast dentist, appointment attendance, time from mobile dental appointment to an appointment with a Suncoast dentist, treatment needs, when treatment was started and completed, and recall appointment attendance.

Univariate analysis of all variables was conducted and a bivariate chi-square test of association was performed in order to determine the association between variables.

For the purpose of this study, if a patient attended their new patient appointment with a Suncoast dentist and one additional appointment, whether for treatment or for their subsequent recall, they have established a dental home.

PURPOSE

The purpose of this study was to assess how effective the Suncoast mobile dental program is in helping patients in the community, with and without caries, establish a dental home. The results of this study will help highlight the role of mobile dental programs in increasing access to dental care for pediatric patients.

RESULTS

A random sample of 100 patients was obtained and analyzed. The average age of patients seen in the mobile dental program was 7.83 years (+/- 1.1). Sixty (60%) of these patients had suspected caries and 40 (40%) did not have suspected caries.

Appointments with a Suncoast dentist following their visit to the mobile dental clinic were made by 34 (34%) of the patients at either the Brandon or Plant City Clinic. Of the scheduled appointments, 26 (76%) patients showed up. The average appointment was made 8.31 (+/- 9.41) months after the patient was seen at the mobile dental clinic. Seven (20%) appointments were made in less than one month after being seen at the mobile clinic while one (2.9%) appointment was 38 months after being seen at the mobile clinic, which was the longest time period.

It was determined that 18 of the 26 patients that showed up to their appointment for an examination by a Suncoast dentist needed treatment (69%) while 8 patients did not need treatment (31%). Of the 18 patients that needed treatment, all 18 started treatment but only 50% finished treatment (n=9). 19 of the 26 patients that showed up for their initial appointment also attended a subsequent recall appointment (73%).

Based on the criteria for this study, 22 (22%) of the 100 patients include in the study established a dental home. Fifteen (68%) of the patients that established a dental home had caries while 7 (32%) did not have caries (p=0.37).

CONCLUSION

Utilizing mobile dental programs as a mechanism to increase access to care for pediatric dental services is effective. Based on this study’s results, children with caries that were seen on the mobile dental clinic established a dental home more frequently than those without caries, but the difference was not statistically significant.

REFERENCES

Hill BJ, Meyer BD, Baker SD, et al. State of Little Teeth Report. 2nd ed. Chicago, IL: Pediatric Oral Health Research and Policy Center, American Academy of Pediatric Dentistry; 2019.

American Academy of Pediatric Dentistry. Definition of dental home. The Reference Manual of Pediatric Dentistry. Chicago, Ill.: American Academy of Pediatric Dentistry; 2021:15.

American Academy of Pediatric Dentistry. Policy on the dental home. The Reference Manual of Pediatric Dentistry. Chicago, Ill.: American Academy of Pediatric Dentistry; 2021:43-4.

Sanjeevan V, Janakiram C, Joseph J. Effectiveness of school-based dental screening in increasing dental care utilization: A systematic review and meta-analysis. Indian J Dent Res 2019;30:117-24