

Introduction

The prevalence of children diagnosed with special health care needs (SHCN) has increased over time.^{1,3} The American Academy of Pediatric Dentistry (AAPD) defines SHCN as "any physical, developmental, mental, sensory, behavioral, cognitive, or emotional difference or limiting condition that requires medical management, healthcare intervention, and/or use of specialized services or programs."² Children with SHCN are considered a high-risk and vulnerable population, particularly in relation to oral health challenges.³

Dental caries and gingival disease, rank among the most significant unmet healthcare needs for children with SHCN.^{4,6,7} Oral health is often deprioritized due to competing medical complexities.¹¹ Furthermore, children with SHCN face unique barriers such as reliance on caregivers for oral hygiene, oral aversions, and hypersensitivity to taste, texture, and noise.⁵ Access to care is further limited, as many dentists report discomfort or inadequate training in treating these patients.^{1, 5, 7}

Given these barriers, it is likely that children with SHCN are not meeting the recommended AAPD guideline of having their first dental visit by age one.⁸ The literature has shown that children without SCHN already are failing to meet this recommendation, with less than 10% of surveyed children having their first dental visit between zero to one year.^{9, 10} Children with SHCN are likely experiencing even lower adherence rates. Due to the added challenges previously outlined, prevention at an early age becomes especially critical for this high-caries-risk population.

Past research in Turkey, Saudi Arabia, Brazil, and Poland has cited dental-related pain or caries as the primary reasons for the first dental visit among children without SHCN.^{5, 9, 10} Given the additional challenges faced by children with SHCN, they may be even more likely to present with active caries and poor oral hygiene at the time of their first dental visit. Furthermore, their limited ability to communicate discomfort may allow dental disease to progress before it is addressed.⁵ These factors suggest that children with SHCN may not only present for their first dental visits at an older age than recommended but also present with higher rates of caries.

Objectives

Primary Objective:
Evaluate the age at first dental visit among children with special health care needs.

Secondary Objectives:

- Assess the primary reason for the initial dental visit (routine exam vs emergency visit)
- Assess the presence of dental caries at the initial visit
- Assess the differences between patients with and without documented SHCN case management

Study Design and Methods

This study was a retrospective chart review to evaluate the age and reason for the first dental visit among children with and without special health care needs (SHCN).

Electronic dental records were reviewed for patients who presented for their first comprehensive dental examination during the study period. Patients were identified using procedure codes for comprehensive oral evaluation and first dental visits.

Data collected included age at the first dental visit, presence of dental caries, visit type (exam or emergency), and SHCN status. SHCN status was identified using the appropriate clinical coding designation in the electronic health record. Patients were categorized into two groups: those with SHCN and those without SHCN.

Descriptive statistics were used to summarize patient characteristics. A Wilcoxon rank-sum test was used to compare age at first visit between groups. Fisher's exact test or Pearson's chi-squared test was used to compare categorical variables, including caries prevalence and visit type. Statistical significance was defined as $p < 0.05$.

Tables

Table 1. Patient Characteristics (N=343)

Characteristic	Value
Median Age at First Visit (IQR)	3 years (2–4)
Patients with Caries	120 (35%)
Visit Type	
• Routine Exam	327 (96%)
• Emergency Visit	15 (4.4%)
Special Health Care Needs (SHCN)	32 (9.4%)

Table 2. Comparison of Patients with and without Special Health Care Needs

Characteristic	No SHCN (n = 310)	SHCN (n = 32)	p-value
Median Age at First Visit (IQR)	2 years (2–4)	5 years (3–7)	<0.001
Caries Present	105 (34%)	15 (47%)	0.14
Emergency Visit	13 (4.2%)	2 (6.3%)	0.60

Results and Discussion

A total of 343 patients met the inclusion criteria for analysis, of whom 32 patients (9.4%) were identified as having special health care needs (SHCN). The overall median age at first dental visit was 3 years. Among all patients included in the study, 35% presented with dental caries, and 4.4% of visits were classified as emergency visits.

Children with special health care needs (SHCN) presented for their first dental visit at a significantly older age compared with children without SHCN. The median age at first visit was 5 years for children with SHCN versus 2 years for children without SHCN, representing a three-year delay in establishing dental care ($p < 0.001$).

Although not statistically significant, children with SHCN also demonstrated higher rates of dental caries (47% vs 34%) and slightly higher frequencies of emergency visits (6.3% vs 4.2%) compared with children without SHCN. These trends suggest that children with SHCN may be more likely to present for dental care after disease or symptoms have already developed.

These findings are consistent with previous literature describing barriers to dental care for children with SHCN, including medical complexity, caregiver burden, and limited access to dental providers experienced in treating this population.

As this was a pilot study with a small number of children with SHCN in the sample population, the results should be interpreted with caution. However, the observed delay in age at first dental visit highlights the importance of early dental referrals and improved access to preventive dental care for children with special health care needs. Future studies with larger sample sizes are needed to evaluate disparities in dental care access and oral health outcomes in this population.

