



Stretching the safety net too far: waiting times for dental treatment

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Abstract

Purpose: The objective of this study was to survey pediatric dentistry program directors on perceived resource needs and changes over the last 5 years in the characteristics of their patient population and on waiting times for dental treatment with sedation or general anesthesia (GA) for children with complex dental and medical histories in hospital- and dental school-based training programs.

Methods: A 47-question survey was sent electronically to all pediatric dentistry program directors in the United States using the University of Washington's Catalyst Tools program. Two reminder messages were sent. After 3 months, the data was downloaded and descriptive statistics were performed using the SPSS for Windows version 8.0.

Results: Twenty-eight of 54 program directors responded with 26 useable survey responses (48%). Thirty-one percent reported outpatient clinics located in a dental school, 31% reported that their clinics were in a hospital, and 38% had clinics in both settings. Program directors perceive that the number of new, recall and emergency patients and the number of pre-school aged children and children with special health care needs had increased in their programs in the last 5 years. Payment by Medicaid was the most common insurance for children cared for in these settings. The mean waiting time for scheduling treatment with GA for a child in pain is 28 days; without pain 71 days. The mean waiting time for scheduling treatment with sedation is 36 days. The majority of program directors reported they had an adequate number of faculty and residents (61% and 66%, respectively) even though 52% of the directors were presently actively recruiting faculty.

Conclusions: 1. Dental school and hospital-based training programs are an important source for an increasing number of children with complex dental needs; 2. The majority of patients treated in the programs are Medicaid beneficiaries; 3. Average waiting times for complex dental care for children in pain is 28 days with GA; without pain and need for GA 71 days; 4. There was an average 36-day wait for treatment with sedation. (*Pediatr Dent* 24:6-10, 2002)

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According to the recent U.S. Surgeon General's Report¹ limited access to dental care is a major barrier to improved oral health in this country. Children with complex dental and medical problems, and particularly those who are also poor, face additional barriers to accessing dental care. Families of children with complex problems often must rely on a relatively small number of "safety net" dental providers located at some community sites and primarily in hospital-based and dental school training programs.

Anecdotal reports suggest substantial increases in the number of patients seeking care and the length of time children must wait for treatment at dental training programs. We sought to confirm, through a survey of pediatric dentistry program directors, the number of children cared for at dental training institutions and the typical waiting times for dental care with sedation or general anesthesia at these institutions. Additionally, we were interested in how the number of patients and waiting times are perceived to have changed in the prior five years and if steps were being taken

Table 1. Characteristics of Patient Populations and Perceived Changes in Last Five Years

Variable	Response
Setting for outpatient clinics	Dental college: 31% Hospital: 31% Both dental school and hospital: 38%
New patients	Mean number/year: 2,423 (range 128-6,000) Compared to 5 years ago, number increased 92%
Recall patients	Mean number/year: 4,009 (range 158-12,000) Compared to 5 years ago, number increased 65%
Emergency patients	Mean number/year: 1,524 (range 11-7,500) Compared to 5 years ago, number increased 76%
Under three years of age	Mean percentage of patients: 22% (range 3%-65%) Compared to 5 years ago, number increased 85%
Children with special health care needs	Mean percentage of patients: 23% (range 5%-66%) Compared to 5 years ago, number increased 54%
Mean percentage of patients with various types of insurance	Private insurance: 13% (range 0-40) Medicaid: 65% (range 20-95) Cash: 17% (range 2-40) Free care: 6% (0-25)

to increase resources available for pediatric dental care at these training institutions.

Methods

The University of Iowa Institutional Review Board approved all study activities. All pediatric dental program directors in the United States (n=54) were contacted to participate in this survey. Using the list serve for this group, participants received an electronic letter explaining the purpose of the study and instructing them on how to access the online survey using the URL web address. If they preferred, list serve members could request a paper copy of the survey from the investigators rather than completing the online survey.

Survey responses were anonymous. No links to participant names or addresses were included on the surveys. After the initial electronic letter to the list serve, two reminder letters were sent two weeks apart to the entire list serve. Each version of the reminder letter reiterated the option of requesting a paper copy of the survey should this be preferred over the online survey.

The online survey contained 47 questions and was created using the Catalyst Tools program at the University of Washington. The questions focused on the patient population cared for at the participants' institution and how it had changed over the last five years, on the average time patients had wait to receive certain types of care, on characteristics of staff and facilities, and whether there were adequate numbers of staff members in the clinics. No attempt was made to define "adequate" as we were interested in respondents' overall perceptions. Certain questions inquired specifically about "children with special health care needs", which we defined in the survey as "any child with an underlying medical, surgical, or psychiatric diagnosis."

There were 28 multiple choice questions that included such questions as: "Compared to five years ago, would you say that the number of emergency patients care has: 1) increased; 2) decreased; 3) stayed the same?" Participants were instructed to choose one answer. There were 16 "fill-in-the blank" questions where respondents were asked to give a number or percentage. For example, "Please estimate the percentage of patients you care for who are under the age of three years."

There were three short-answer questions that asked participants to comment on any discussions that they had with their dean over the need for additional resources, on difficulties that had been encountered in obtaining additional operating time, and a final question at the end

of the survey that asked for elaboration on any topics contained in the survey. Both authors reviewed the answers given to the open-ended questions and agreed on the common themes expressed there.

After completion of the survey on the computer, participants were instructed to click on the "submit" button at the bottom of the survey. This transmitted the survey to the investigators. All data were then downloaded into database format. Descriptive statistics were performed using SPSS for Windows version 8.0.

Results

Twenty-eight participants responded to the survey (52%); however, two respondents did not answer a sufficient number of questions to be included in the analysis, giving a final response rate of 48%. Of the respondents, 31% reported that their outpatient clinics were located in a dental school and 31% reported that their clinics were in a hospital. Thirty-eight percent reported they had clinics in both hospital and dental school settings. The average number of new, recall, emergency, young, and special-needs patients seen annually is presented in Table 1. The majority of respondents perceived that the number of patients in each category had increased over the last five years. Table 1 also includes information on the percentage of patients with various forms of insurance. The largest proportion of patients cared for at respondents' institutions were Medicaid beneficiaries, comprising an average of 65% of the respondents' patient populations.

On average, participants saw 60 patients per day in their clinics. Most perceived this was an increase relative to five years ago. Data on the number of patients scheduled for treatment in the operating room and under conscious

sedation and the average waiting time to receive these types of care are presented in Table 2. The majority of respondents perceived both that the number of patients and length of time patients had to wait for care had increased over the last five years. Some respondents expressed frustration with this situation in their comments made to the open-ended question at the end of the survey. Example comments from two respondents include:

“Since 1995 we have had an increase from 12,000 to 26,000 patients. The average age of the typical patient for each resident is 3.7 years old. We are seeing a tremendous rise in the number of young, poor children who have early childhood caries...No one else will treat these kids. We are the end of the line. We need help.”

“We’ve seen a significant increase in emergency patients after hours. Our city has closed a number of safety net clinics that have been serving underserved groups, particularly Medicaid, and the result is decreased access to routine care and an increase in emergent care. We turn down 10 to 15 calls per week for new patient visits as we can’t accommodate the demand from underserved groups, especially Medicaid and CHIP.”

The average waiting time was 28 days before a child in pain and discomfort who required general anesthesia for treatment could be scheduled into the operating room. Half of the respondents perceived that this waiting time had remained approximately the same over the last five years. While 81% of respondents had requested additional operating room time, only 46% reported that they had been successful in this request. Of the 8 respondents who made comments to the open-ended question on difficulties obtaining additional operating room time, 7 stated that the limiting factor was the availability of operating room space and staff. Of these 7, there were 3 respondents who specifically noted that the difficulty in scheduling more patients was due to anesthesiologists who refused to take additional cases because of inadequate Medicaid reimbursement rates. Examples of comments from two respondents include:

“(Our) anesthesiology department does not want to give us more time because they are poorly paid by Medicaid, our primary source of revenue for most patients.”

“In our state, reimbursement for anesthesia services by Medicaid is low and they (anesthesiologists) are not anxious to take on more care. It is actually cheaper for them not to work than to take what Medicaid pays. In hospitals, when

Table 2. Average Numbers of Patients Seen and Waiting Times for Procedures

Variable	Response
Patients seen per day	Mean: 61 patients/day (range 10-160)
Patients per week scheduled into the operating room	Mean: 5.5 patients/week (range 1-20) Compared to 5 years ago, number increased 73% Mean waiting time between presentation and receipt of care in operating room Child with non-emergent problem: 71 days (range 7-210) Child with pain and discomfort: 28 days (range 1-150)
Patients per week scheduled for sedation management (other than nitrous oxide)	Mean: 7.7 patients/week Compared to 5 years ago, number increased 69% Mean waiting time between presentation and receipt of care using sedation management 36 days (range 0-90)

Table 3. Perceived Adequacy of Staff Numbers and Facilities

Variable	Response
Ancillary staff	We have an adequate number of ancillary staff Percent who agree or strongly agree: 31%
Faculty attendings/residents	We have an adequate number of faculty attendings Percent who agree or strongly agree: 61% We have an adequate number of residents Percent who agree or strongly agree: 66%
Additional operating room time	Percent requested additional OR times: 81% Percent successfully obtained additional operating room time: 57%

the ORs can be filled with commercial, high turnover cases, rather than long Medicaid dental cases that are inadequately reimbursed, OR time is difficult to come by!”

Data on perceived adequacy of staff numbers and facilities are presented in Table 3. The majority of respondents agreed that they had adequate numbers of attending dentists and dental residents in their clinics. However, most felt they had inadequate numbers of ancillary and support staff. The majority had discussions with their dean or administrators about increasing resources directed towards dentistry. Yet, these requests achieved varying degrees of success. Participants had the least success when requesting additional resources to enlarge their clinics.

Discussion

Dental school and hospital-based training programs are an important source of dental care for children in the United States. Results of this study indicate that these centers are treating increasing numbers of patients, many who are poor, very young or with special health care needs. In some cases, resources are not adequate to provide timely care to patients in need. It is concerning that children with dental pain may be waiting on average one month and in some cases up to three months to receive care. This is the first time that waiting times for dental care with sedation or general anesthesia for children has been documented.

Dental training programs serve two major populations of children: 1) children with special health care needs whose medical and dental problems may be so complex that they require expertise found only at these centers; and 2) children with less severe medical or dental problems who encounter financial or other barriers to accessing appropriate dental care in the community. These two groups of children comprise a substantial portion of the pediatric population in the United States. The first group, children with special health care needs, defined as those with one or more chronic health problem requiring services beyond that required by children generally, comprise 18% of U.S. children under 18 years of age or 12.6 million children.² The second group is even larger. Twenty six million children in the U.S. lack dental insurance and an additional 15 million children are Medicaid beneficiaries.³

Although dental care is a mandated benefit for children on Medicaid, it is difficult for low-income children to access dental care in the community. A recent study of state Medicaid offices by the General Accounting Office found that, in the majority of states that responded, fewer than 50% of the dentists in the state cared for any Medicaid patients in 1999.³ Since only half of federally supported community and migrant health centers include dental care in their services, much of the burden of providing dental treatment to poor children falls on dental training programs.³

Moreover, the two groups of children served by dental training centers are more likely to have dental problems and/or to require extensive dental services. According to the recent Surgeon General's Report on oral health, poor children suffer twice as much dental caries as their more affluent peers.¹ Among children who receive Medicaid, it is estimated that 20% need substantial or very extensive dental treatment.⁴ Children who are disabled often require special accommodations and additional staff even for routine dental care, and may require sedation or general anesthesia for dental treatment.³

Despite the substantial number of patients they must care for, the majority of respondents felt they had an adequate number of faculty and residents dentists. This is surprising, given recent reports of faculty shortages in dental schools. The 1999 publication of the American Association of Dental Schools President's Task Force on Future Dental School Faculty⁵ reported that the number of unfilled, budgeted dental faculty positions approaches 400. This, combined with an aging dental school faculty and the small number of dental school graduates interested in an academic career, has led to substantial concerns for the future of academic dentistry. As more dentists retire in the coming decade, even those programs that currently perceive an adequate number of staff, may feel the effect of faculty shortages.

In contrast to perceptions about numbers of dental faculty and residents, the majority of respondents felt their clinic had an inadequate number of ancillary staff. That fewer programs were attempting to recruit ancillary staff may mean that this area has received less administrative attention

compared to that focused on recruiting faculty. Certainly, there must be a balance between the number of ancillary and professional staff for training programs to function efficiently. Inadequate numbers of front office, dental assistant, dental hygiene and dental laboratory technician personnel will limit the number of patients who can be cared for by the dental faculty and residents.

Likewise, inadequate clinic space will limit the number of patients that can be seen in dental training programs. More than half of the respondents had requested resources to increase their clinic size, but of these, less than one-third were successful in their requests. Given the substantial numbers of uninsured or publicly insured children who rely on academic dental centers for their care, it is not surprising that many dental training centers are underfunded.

Lack of anesthesia and other operating room staff also appears to be interfering with the timely delivery of dental care for children with complex medical and dental problems. This is the first time this barrier to dental care has been documented. To what degree limited anesthesiologist availability and refusal to provide care for Medicaid patients is a more widespread problem is unclear and is deserving of further study.

There are several limitations to this study. First, this survey utilized a new online technology with which participants may not have been comfortable. This may have contributed to the low response rate. Second, in some questions we asked for participants' perceptions, thereby imposing some subjective nature to the results. Third, as with any survey, there is the potential for responder bias. It is possible that those who responded were those most frustrated with increased number of patients, decreased resources, and prolonged patient waits. Nevertheless, it is concerning that there are centers where patients are experiencing such prolonged waits for care as is reported here.

Dental school and hospital-based training programs are an important source of dental care for increasing numbers of children who are poor and/or who have complex medical and dental needs. In this survey, we have documented that some dental training centers do not have adequate resources to manage their large and costly patient care load. The result is that our dental care safety net has been stretched too far and children are suffering while they wait for care.

Conclusions

The results of this study demonstrate the importance of both dental school and hospital-based training programs as sites for managing poor children with complex dental and medical histories.

Program directors report increasing numbers of patients, including very young children and children with special health care needs, with inadequate ancillary staffs to manage this large and costly patient care load.

Lastly, it was documented that the average waiting time for children in pain and discomfort to be scheduled for treatment in the OR was 28 days and for sedation 36 days.

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ABSTRACT OF THE SCIENTIFIC LITERATURE



A TREATMENT DECISION-MAKING MODEL FOR INFRAOCCLUDED PRIMARY MOLARS

This paper reviews findings in the literature relative to treatment of infraoccluded primary molars and provides guidelines for long-term treatment planning. The authors point out that this is primarily a clinical diagnosis with the level of severity defined by the position of the occlusal surface relative to the interproximal contact points. Decision-making models are discussed based on whether or not the infraoccluded molar has a permanent successor. Treatment is based on time of onset of infraocclusion (early or late), time of diagnosis (early or late), speed of root resorption (slow or fast) and movement of adjacent teeth (tipping or not). Decision trees are presented to help the practitioner select the best treatment for each scenario. Early diagnosis and intervention simplifies the treatment plan but is not always possible. Treatment options include occlusal build-ups, extraction and space maintenance and orthodontic uprighting of adjacent teeth. **RS**

Comments: This is a useful, concise presentation of the treatment dilemmas associated with infraoccluded primary molars along with an easily followed decision-making model. The decision trees are a valuable reference for anyone who treats children and adolescents.

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