Scientific Article

Practices and Opinions of Pediatric and General Dentists in Connecticut Regarding the Age 1 Dental Visit and Dental Care for Children Younger Than 3 Years Old

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Abstract: ***Purpose:*** *This study aimed to determine the percentage of general and pediatric dentists in Connecticut that were aware of, and practice, the current AAPD guidelines for the age one dental visit and to determine the services they provide to 0-2-yr-old patients.* ***Methods:*** *A survey was mailed to Connecticut general and pediatric dentists seeking information on practice type, years in practice, training, ages of children seen, procedures performed and opinions regarding the age one dental visit.* ***Results:*** *The response rate was 42% for general dentists and 84% for pediatric dentists, giving a sample of 113 and 60 dentists, respectively. All responding pediatric dentists reported seeing 0-2-yr-olds as compared to 42% of general dentists. Although not statistically significant, general dentists who were female or in practice less than 10 years were more likely to see 0-2-yr-olds. The majority of pediatric dentists reported performing all procedures surveyed, however, only just over half of general dentists provided topical fluoride or restorative care. Among pediatric dentists, 98% were aware of the AAPD guidelines and 92% agreed with them compared to 41% and 45% of general dentists respectively.* ***Conclusions:*** *Nearly all Connecticut pediatric dentists are caring for 0-2-yr-olds compared to 42% of Connecticut general dentists.* *(Pediatr Dent 2008; 30:348-51)* *Received March 16, 2007 / Last Revision July 6, 2007 / Revision Accepted July 18, 2007*

KEYWORDS: PEDIATRIC DENTISTS, GENERAL DENTISTS, AGE 1 DENTAL VISIT

According to the Centers for Disease Control and Prevention, dental caries is the most common chronic disease in children in the United States, affecting 5 times more children than does asthma.[1] Untreated tooth decay leads to pain and discomfort, life-threatening infections, and many missed days of school. Timely identification of risk factors and appropriate intervention, however, can prevent this disease. The American Academy of Pediatric Dentistry (**AAPD**) advocates early intervention with the first dental visit no later than 12 months of age.[2] Such early intervention allows identification of high-risk children, implementation of preventive regimes, and education of parents on oral health.

Pediatricians and other pediatric health professionals who have initial access to new mothers are uniquely situated to identify high-risk children and provide appropriate referral for oral evaluation. The American Academy of Pediatrics (**AAP**) advocates oral health assessment by a pediatrician or other qualified pediatric health care professional by 6 months of age, with referral to a dentist for high-risk children between 6 and 12 months of age.[3] Furthermore, the majority of pediatricians and family physicians agree that they play an important role in identifying dental problems and counseling families about preventing caries.[4]

A consistent concern among pediatricians and family physicians regarding the age 1 dental visit has been the lack of dental providers willing to see these young children. Pediatric dentists are trained to see these young children, but there are insufficient numbers to address the need. Furthermore, it appears that fewer than half of pediatric dentists are performing infant examinations.[5] Due to their greater number, general dentists are a critical component in providing oral health care to these young children. Proportionately, however, even fewer general dentists than pediatric dentists see young children.[5] Additionally, many general dentists are either unaware of, or do not agree with, the policy on the age of the first dental visit.[6] Discerning current relative differences and attitudes between general and pediatric dentists is not possible, as the last direct comparison was made in 1994—before the present AAP guidelines were published.[7]

The purposes of this study were to determine:

1. the percentage of general and pediatric dentists in the state of Connecticut who were aware of, and practice, the current American Academy of Pediatric Dentistry policy for the age 1 dental visit;
2. what types of procedures and services are being performed by dentists for children 0 to 2 years old and the reasons reported for not seeing these patients.

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Methods

In January 2006, a survey was mailed to all pediatric dentists (N=72) and, using an alphabetized list, to every fifth general dentist (N=267) in the state of Connecticut. The survey, which was developed from other previous surveys, was pretested by 7 dentists prior to mailing and included 17 closed-answer questions eliciting information on: (1) type of practice; (2) years in practice; (3) training; (4) ages of children seen; (5) types of procedures performed; and (6) opinions regarding the age 1 dental visit. Surveys were designed as refolding postage-paid mailers. Five weeks after the initial mailing, nonresponders were sent a second mailing. Returns were considered complete 8 weeks after the original mailing. All surveys were identified by a numeric identifier to aid in tracking survey returns. After the 8-week period, the file linking the names and numeric identifiers was destroyed and data entry was started, thereby keeping all responses anonymous. Institutional Review Board approval was sought and the study was awarded exempt status. A Health Insurance Portability and Accountability Act (HIPAA) waiver was granted, as all data were deidentified.

Data from returned surveys were entered into a computerized database. Statistical differences between groups for categorical data were calculated using chi-square analysis. For continuous data, a *t* test was used. A level of significance of $P<.05$ was used for both tests.

Results

Of the 339 surveys mailed, 176 were returned, yielding a response rate of 51%. The return rate for pediatric dentists was 84% and for general dentists was 42%. Three surveys were excluded from all data analysis and reporting, as they indicated neither a general nor a pediatric dentistry practice. General dentists had an older mean age, were more likely to have been in practice for greater than 20 years, and were less likely to be female than pediatric dentists. Among both pediatric and general dentists, a relatively small percentage of the responders were female (Table 1).

Table 1. DEMOGRAPHICS OF SURVEYED CONNECTICUT GENERAL AND PEDIATRIC DENTISTS

	Pediatric dentists	General dentists
Total sampled (N)	**72**	**267**
Surveys returned (N)	60	113
Response rate (%)	84	42
Mean age* (ys)	47	51
Years in practice: †		
<5 (%)	17	4
6-10 (%)	14	10
11-20 (%)	25	22
>20 (%)	45	65
% female †	32	15

* Difference by practice type significant by *t* test ($P=.02$)

† Difference by practice type significant by chi-square ($P=.01$)

Table 2. CARE PROVIDED FOR 0- TO 2-YEAR-OLDS BY DENTISTS SEEING CHILDREN IN THIS AGE RANGE (DATA EXPRESSED AS A PERCENTAGE OF RESPONDENTS)

	Pediatric dentists (N=60)	General dentists (N=47)
Exam	100	100
Prophylaxis	92	75
Application of topical fluoride	87	57
Restorative treatment	92	59
Oral health education	100	86

All pediatric dentists in Connecticut who responded to the survey reported seeing 0- to 2-year-old children. By contrast, only 42% of the general dentists who responded to the survey reported seeing this age group. Although neither factor reached significance, general dentists who had been in practice fewer years and who were female were more likely to see 0- to 2-year-olds. Sixty-three percent of female general dentists reported seeing 0- to 2-year-olds compared to 39% of male dentists.

All pediatric and general dentists in the sample who reported seeing 0-2-year-old children performed infant examinations. Most pediatric dentists provided all procedures surveyed. Only 75% of general dentists provided prophylaxis, however, and only just over half provided topical fluoride or restorative care (Table 2).

Among the general dentists who did not see children from birth to 2 years of age, the most common reasons reported for not seeing these children were that the children were too young to cooperate, the dentist normally referred these children, or the dentist reported a lack of training (Table 3).

Table 3. REASONS REPORTED BY GENERAL DENTISTS IN CONNECTICUT FOR NOT SEEING 0-2-YEAR-OLDS (N=65)*

Children too young to cooperate	55%
Refer to another dental provider	42%
Not adequately trained to see children ages 0-2	40%
Do not believe children this young need to see dentist	26%
Parents don't see the value/no demand	22%
Don't enjoy treating children	11%
Not financially rewarding	5%
Practice too busy	5%
Other	2%

* Respondents could select more than one reason.

When the dentists were asked about knowledge of the policy regarding the age 1 dental visit, there were significant differences between pediatric and general dentists. Ninety-two percent of pediatric dentists agreed with the AAPD policy and 98% were aware of it, compared to 45% and 41% of general

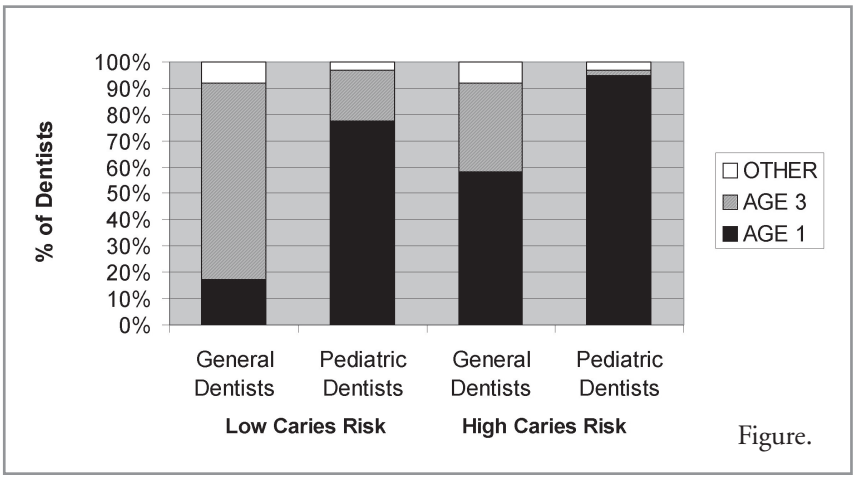

Figure. Recommended age of first dental visit by caries risk*

* Difference in distribution by practice type significant by chi square (p=.022).

dentists, respectively (P<.001). Among general dentists in practice for fewer than 10 years, 69% agreed with the age 1 dental visit compared with 36% of those in practice over 20 years (P=.03). A similar trend was seen regarding awareness, but it did not reach significance.

There was a significant difference in the recommended age of the first dental visit by practitioner type for high and low caries risk patients (P=.02). Most pediatric dentists tended to recommend the first dental visit at age 1, regardless of caries risk. More than 50% of general dentists recommended age 1 for a first dental visit in high caries risk children. For low caries risk children, however, age 3 for a first dental visit was still recommended by many general dentists (Figure).

Discussion

Recommending and promoting early oral health assessment and dental visits for young children has been a prominent activity of the AAP and AAPD in recent years. There is, however, limited dental literature examining the practicing dentists' attitudes and practices regarding these recommendations. Understanding attitudes and practices is important for determining future strategies to make early oral health intervention successful and universal.

The present study surveyed all the pediatric dentists in the state of Connecticut, along with 20% of the general dentists, and received return rates of 84% and 42%, respectively. Unfortunately, because data were limited only to name and address, no analysis between responders and nonresponders could be carried out. The return rate among both pediatric and general dentists was higher than those reported in other similar surveys, where response rates of 61% for pediatric dentists[5] and 24%[6] and 28%[8] for general dentists were reported. Even with relatively good response rates, it must be remembered that there is likely to be a positive bias toward dentists who see and treat younger children participating in the survey.

All pediatric dentists who responded reported seeing 0- to 2-year-old children, with 98% being aware and 92% agreeing with the age 1 dental visit. In comparison, a previous national survey of pediatric dentists in 1996 found that only 47% of pediatric dentists practiced the AAPD policy and 73% agreed with the policy.[5] These differences may be because it has been almost 10 years since this 1996 survey.

Connecticut general dentists appear to be similar to dentists nationally regarding the likelihood of seeing children younger than 3 years of age. In Connecticut, 42% of general dentists see 0- to 2-year-olds, compared to 39% nationally[6] and just over 30% in an Ohio study.[9] Several factors consistently appeared to influence whether general dentists saw younger children both in the present study and other studies. Female dentists were more likely than males to report seeing younger children, and practitioners with fewer years in practice were more likely to see younger children.[5,6,9] Among the general dentists who see 0- to 2-year-olds, although 100% performed examinations, far fewer performed fluoride treatments, prophylaxis, and restorative care. This finding has been reported in other studies. As first dental visit ages get younger and the procedures become more difficult, the number of general dentists willing to complete these procedures decreases.[8,9]

Similar to other papers, the present study found that general dentists who are aware of the AAPD policy are more willing to perform infant exams.[6] Many general dentists, however, remain unaware of the policy—with 59% of dentists in the present study unaware of the policy and 47% of general dentists nationally unaware.[6] This lack of awareness may contribute to the low number of general dentists who agree with the age 1 dental visit. In the present study, only 45% agreed, even for high caries risk patients—similar to the 40% figure reported nationally.[6]

The lack of general dentists seeing this younger age group of patients may be due to the dentists' training experiences. It has been found that general practitioners who have had relevant hands-on and lecture experience in dental school are significantly more likely to treat children compared to those who had only lectures.[6,8] Even as recently as 2001, while 86% of dental schools teach infant oral exams, only 51% provide hands-on experience with infant oral exams.[10]

The present study shows that a significant gap remains between practice recommendations supported by the national academies and the ability and willingness of their members to implement these recommendations. Ensuring that children are seen for their first dental visit at the appropriate age will require further changes in both dental education at the undergraduate level as well as ongoing efforts to change practice behaviors within the community of practicing dentists.

Conclusions

Based on this study's results, the following conclusions can be made:

1. Pediatric dentists in Connecticut appear to fully embrace the concept of the age 1 dental visit, yet general dentists do not appear to be providing this service on a regular basis.
2. Ensuring early access to care for young children is going to require additional strategies to engage both existing and future general dentists.

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Abstract of the Scientific Literature

Influence of marketing of infant formula through hospitals on breastfeeding

The purpose of this study was to assess the influence of distributing commercial hospital discharge packages (CHDP) to postpartum mothers on the duration of exclusive breastfeeding. Data came from the 2000 and 2001 Oregon Pregnancy Risk Assessment Monitoring System, an ongoing population based survey of postpartum women. A total of 3895 women participated. However, 1211 were excluded for various reasons yielding a final sample of 2684 mothers. The key question was whether "the staff at the hospital or birthing center where your baby was born gave mothers a gift pack with formula." The duration of exclusive breastfeeding was determined by asking participants to report how old their infant was when they first fed their child something other than breastmilk.Sixty-seven percent of respondents indicated they had received a CHDP at the time of time of discharge from hospital. Women who received packages that contained infant formula exclusively breastfed for a significantly shorter duration than those who did not receive them. Further, when the data were adjusted for maternal age, ethnicity, family income, and education, mothers who received CHDP were significantly more likely to exclusively breastfeed for < 10 weeks than those not receiving packages (adjusted OR=1.39).

Comments: *It appears that distributing CDHPs that contain and market infant formula to mothers of newborns can interfere with breastfeeding practices.* ***RJS***

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