



# Survey of Behavior Management Teaching in Predoctoral Pediatric Dentistry Programs

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## Abstract

**Purpose:** The purpose of this study was to survey directors of predoctoral pediatric dentistry programs regarding the teaching of behavior management techniques.

**Methods:** Surveys were mailed to all 56 dental schools in the United States. Follow-up mailings were sent to nonrespondents. The survey contained items on program demographics and the program's teaching of communicative and pharmacologic techniques. Information was also obtained on informed consent and parental presence in the operatory.

**Results:** Surveys were returned by 48 schools. Two schools declined to respond because they had not yet accepted or graduated students. The final response rate was 89%. The mean ( $\pm$ SD) percentage of total didactic time devoted to behavior management was 12% ( $\pm$ 6). Communicative techniques were taught as "acceptable" by 96% to 100% of programs, with the exception of the hand-over-mouth exercise (HOME). HOME was taught as "unacceptable" by 62% of programs. Active and passive immobilization of sedated and nonsedated children was taught as "acceptable" by 69% to 85% of programs. Sixty-seven percent to 98% of programs taught that pharmacologic techniques (nitrous oxide, conscious sedation, general anesthesia) are "acceptable." There was little evidence that the teaching of behavior management techniques had changed over the previous 5 years, nor that they were likely to change in the near future. Parental presence in the operatory was common for some procedures, particularly among younger children.

**Conclusions:** Predoctoral programs teach as acceptable communicative and pharmacologic management techniques, with the exception of HOME. Predoctoral program directors report they are not likely to increase the amount of curricular time devoted to behavior management in the near future. (*Pediatr Dent.* 2004;26:143-150)

**KEYWORDS:** BEHAVIOR MANAGEMENT, SURVEY, DENTAL EDUCATION, PEDIATRIC DENTISTRY

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Pediatric dentists enjoy a wealth of communicative and pharmacologic techniques for managing the behaviors of children in the dental setting.<sup>1</sup> Little information exists, however, on the extent to which these techniques are taught in dental schools to predoctoral students. In 1989, Waggoner<sup>2</sup> surveyed predoctoral programs regarding the degree to which conscious sedation was being taught. Posnick and Lanier<sup>3</sup> evaluated the extent to which predoctoral pediatric dental curriculum changed during the 1980s. Few data specific to behavior management were included, however. Belanger and Tilliss<sup>4</sup> provided the most comprehensive survey of the teaching of communicative and pharmacologic techniques at the predoctoral and postdoctoral levels. Their study indicated communicative management techniques were

emphasized in the predoctoral and postdoctoral curricula, but pharmacologic and immobilization techniques were more likely to be employed by pediatric dentists.

The purpose of the present survey was to provide data on the current teaching of communicative behavior management techniques, as defined in the American Academy of Pediatric Dentistry (AAPD) Reference Manual,<sup>1</sup> as well as pharmacologic techniques. In addition, directors of predoctoral pediatric dentistry programs were questioned about the changes in the teaching of these techniques that have occurred over the past 5 years, as well as expected changes over the next 2 to 3 years. They were also questioned about the use of informed consent for behavior management, as well as the presence of parents in the operatory.

**Table 1. Locations of Responding Dental Schools by AAPD Districts**

Locations of schools	N (%)
District I	6 (12)
District II	5 (10)
District III	12 (25)
District IV	12 (25)
District V	6 (12)
District VI	7 (15)

**Table 2. Hours of Didactic Curriculum Time Devoted to Behavior Management Topics as Reported by Predoctoral Pediatric Dentistry Programs**

Reported curriculum hours	N (%)
<5 hours	26 (54)
5-10 hours	19 (40)
11-15 hours	2 (4)
>15 hours	1 (2)

**Table 3. Didactic Teaching of Behavior Management Techniques in Predoctoral Programs**

Technique	N (%)
<b>Tell-show-do</b>	
Not taught	0 (0)
Taught as acceptable	48 (100)
Taught as unacceptable	0 (0)
<b>Nonverbal communication</b>	
Not taught	1 (2)
Taught as acceptable	46 (98)
Taught as unacceptable	0 (0)
<b>Voice control</b>	
Not taught	2 (4)
Taught as acceptable	46 (96)
Taught as unacceptable	0 (0)
<b>Positive reinforcement</b>	
Not taught	0 (0)
Taught as acceptable	48 (100)
Taught as unacceptable	0 (0)
<b>Distraction</b>	
Not taught	0 (0)
Taught as acceptable	48 (100)
Taught as unacceptable	0 (0)
<b>Hand-over-mouth exercise</b>	
Not taught	9 (19)
Taught as acceptable	9 (19)
Taught as unacceptable	29 (62)

**Table 3 Continued**

<b>Active immobilization for nonsedated child</b>	
Not taught	6 (12)
Taught as acceptable	41 (86)
Taught as unacceptable	1 (2)
<b>Passive immobilization for nonsedated child</b>	
Not taught	10 (21)
Taught as acceptable	36 (77)
Taught as unacceptable	1 (2)
<b>Active immobilization for sedated child</b>	
Not taught	15 (31)
Taught as acceptable	33 (69)
Taught as unacceptable	0 (0)
<b>Passive immobilization for sedated child</b>	
Not taught	13 (27)
Taught as acceptable	35 (73)
Taught as unacceptable	0 (0)
<b>Conscious sedation</b>	
Not taught	16 (33)
Taught as acceptable	32 (67)
Taught as unacceptable	0 (0)
<b>Nitrous oxide/oxygen inhalation sedation</b>	
Not taught	1 (2)
Taught as acceptable	47 (98)
Taught as unacceptable	0 (0)
<b>General anesthesia</b>	
Not taught	11 (24)
Taught as acceptable	35 (76)
Taught as unacceptable	0 (0)

## Methods

The survey was developed from fall 2002 to spring 2003. It was pretested by faculty at the Medical College of Georgia, Baylor College of Dentistry, and Ohio State University, none of whom were involved in the original development of the instrument. Based on comments from the pretesters and the

study statistician, changes were made to the survey to improve clarity and validity. The study was approved by the Human Assurance Committee of the Medical College of Georgia.

The mailing list of US dental schools was obtained from the Commission on Dental Accreditation (CODA).

**Table 4. Percentage of Dental Students Who Receive at Least 1 Hands-on Experience With Specific Behavior Management Techniques, as Reported by Predoctoral Programs**

Technique (%)	N (%)
<b>Tell-show-do</b>	
<25	0 (0)
25-75	2 (4)
>75	45 (96)
Not taught	0 (0)
<b>Nonverbal communication</b>	
<25	1 (2)
25-75	7 (15)
>75	39 (83)
Not taught	0 (0)
<b>Voice control</b>	
<25	15 (31)
25-75	17 (35)
>75	16 (33)
Not taught	0 (0)
<b>Positive reinforcement</b>	
<25	0 (0)
25-75	1 (2)
>75	47 (98)
Not taught	0 (0)
<b>Distraction</b>	
<25	2 (4)
25-75	10 (21)
>75	36 (75)
Not taught	0 (0)
<b>Hand-over-mouth exercise</b>	
<25	6 (12)
25-75	0 (0)
>75	0 (0)
Not taught	42 (88)

The survey coordinator assigned each survey a 3-digit number to track responses. The researchers were blind to program identity. In June 2003, the surveys were mailed with a letter of explanation to the chairperson of the pediatric dentistry department or division at each school. The department chair/division head was asked to forward the survey to the faculty member with primary responsibility for the predoctoral program. Follow-up surveys were mailed to nonresponders in mid-July. Next, nonresponders were contacted by e-mail and telephone and encouraged to submit completed surveys.

Predocutorial program directors were questioned about the teaching of communicative and pharmacologic behav-

**Table 4 continued**

<b>Active immobilization for nonsedated child</b>	
<25	25 (52)
25-75	13 (27)
>75	1 (2)
Not taught	9 (19)
<b>Passive immobilization for nonsedated child</b>	
<25	20 (42)
25-75	12 (25)
>75	3 (6)
Not taught	13 (27)
<b>Active immobilization for sedated child</b>	
<25	20 (42)
25-75	0 (0)
>75	1 (2)
Not taught	27 (56)
<b>Passive immobilization for sedated child</b>	
<25	16 (33)
25-75	2 (4)
>75	1 (2)
Not taught	29 (60)
<b>Conscious sedation</b>	
<25	21 (45)
25-75	14 (30)
>75	8 (17)
Not taught	4 (8)
<b>Nitrous oxide/oxygen inhalation sedation</b>	
<25	12 (26)
25-75	1 (2)
>75	1 (2)
Not taught	32 (70)
<b>General anesthesia</b>	
<25	13 (28)
25-75	1 (2)
>75	1 (2)
Not taught	31 (67)
<b>Formal assessment of competency with techniques</b>	
Yes	17 (37)
No	29 (63)

ior management techniques to dental students. They were given the definitions of 8 nonpharmacologic behavior management techniques taken from the AAPD Clinical Guideline on Behavior Management.<sup>1</sup> Active immobilization was defined as restraint by another person. Passive immobilization was defined as the use of restraining devices. No definitions for pharmacologic techniques were

**Table 5. Change Over Past 5 Years in Curriculum Time Devoted to Behavior Management Techniques\***

Technique	N (%)
<b>Tell-show-do</b>	
Less time	0 (0)
Same amount of time	42 (89)
More time	5 (11)
<b>Nonverbal communication</b>	
Less time	0 (0)
Same amount of time	42 (89)
More time	5 (11)
<b>Voice control</b>	
Less time	3 (6)
Same amount of time	39 (83)
More time	5 (11)
<b>Positive reinforcement</b>	
Less time	0 (0)
Same amount of time	42 (89)
More time	5 (11)
<b>Distraction</b>	
Less time	3 (6)
Same amount of time	39 (81)
More time	6 (13)
<b>Hand-over-mouth exercise</b>	
Less time	10 (50)
Same amount of time	8 (40)
More time	2 (10)
<b>Active immobilization for nonsedated child</b>	
Less time	7 (18)
Same amount of time	30 (77)
More time	2 (5)

given. Program directors were asked about the current teaching of behavior management techniques in their programs (“not taught,” “taught as acceptable,” “taught as unacceptable”). They were asked to consider procedure definitions in their responses. Questions were asked about changes in the time devoted to teaching behavior management over the past 5 years and next 2 to 3 years. Predoctoral program directors were also asked about the use of informed consent for behavior management by dental students and their use of parental presence in the operatory.

The survey coordinator coded the returned questionnaires and entered the data into a spreadsheet. All coding and data entry were reviewed by the principal investigator and corrected where necessary prior to analysis. Descriptive statistics were calculated for all variables.

**Table 5 Continued**

<b>Passive immobilization for nonsedated child</b>	
Less time	8 (21)
Same amount of time	29 (74)
More time	2 (5)
<b>Active immobilization for sedated child</b>	
Less time	4 (15)
Same amount of time	21 (81)
More time	1 (4)
<b>Passive immobilization for sedated child</b>	
Less time	4 (15)
Same amount of time	23 (85)
More time	0 (0)
<b>Conscious sedation</b>	
Less time	2 (4)
Same amount of time	35 (80)
More time	7 (16)
<b>Nitrous oxide/oxygen inhalation sedation</b>	
Less time	4 (15)
Same amount of time	23 (85)
More time	0 (0)
<b>General anesthesia</b>	
Less time	3 (10)
Same amount of time	26 (87)
More time	1 (3)

\*Responses from only those programs teaching the techniques.

## Results

Surveys were mailed to 56 dental schools on the CODA list. However, 2 new schools that had not yet graduated any students declined to complete the survey. Surveys were returned from 48 of the remaining 54 schools, for a response rate of 89%. The geographic distribution of responding schools, self-reported by the AAPD trustee district, is indicated in Table 1. The locations† of nonresponding departments of pediatric dentistry were: (1) 2 from District I; (2) 1 from District II; (3) 2 from District III; and (4) 1 from District V.

The majority of predoctoral programs reported that they devote fewer than 5 hours of classroom time to behavior management techniques (Table 2). The mean ( $\pm$ SD) percentage of total didactic time devoted to behavior management techniques as estimated by predoctoral program directors is 12% ( $\pm$ 6), with a range of 1% to 30%.

All programs teach as acceptable tell-show-do, positive reinforcement, and distraction. The majority of predoctoral programs teach as acceptable all other techniques, with the exception of the hand-over-mouth exercise (HOME). Of predoctoral programs, 62% teach that HOME is an unacceptable technique (Table 3).

**Table 6. Anticipated Changes in Near Future in Curriculum Time Devoted to Teaching Behavior Management Techniques\***

Technique	N (%)
<b>Tell-show-do</b>	
Less time	0 (0)
Same amount of time	46 (96)
More time	2 (4)
<b>Nonverbal communication</b>	
Less time	0 (0)
Same amount of time	45 (94)
More time	3 (6)
<b>Voice control</b>	
Less time	1 (2)
Same amount of time	44 (92)
More time	3 (6)
<b>Positive reinforcement</b>	
Less time	0 (0)
Same amount of time	42 (88)
More time	6 (12)
<b>Distraction</b>	
Less time	3 (6)
Same amount of time	40 (83)
More time	5 (10)
<b>Hand-over-mouth exercise</b>	
Less time	5 (28)
Same amount of time	12 (67)
More time	1 (5)

**Table 6 Continued**

<b>Active immobilization for nonsedated child</b>	
Less time	5 (12)
Same amount of time	32 (76)
More time	5 (12)
<b>Passive immobilization for nonsedated child</b>	
Less time	6 (15)
Same amount of time	31 (76)
More time	4 (10)
<b>Active immobilization for sedated child</b>	
Less time	5 (17)
Same amount of time	22 (73)
More time	3 (10)
<b>Passive immobilization for sedated child</b>	
Less time	5 (16)
Same amount of time	24 (75)
More time	3 (9)
<b>Conscious sedation</b>	
Less time	0 (0)
Same amount of time	35 (74)
More time	12 (26)
<b>Nitrous oxide/oxygen inhalation sedation</b>	
Less time	7 (22)
Same amount of time	21 (66)
More time	4 (12)
<b>General anesthesia</b>	
Less time	2 (6)
Same amount of time	28 (85)
More time	3 (9)

\*Responses from only those programs teaching the techniques.

†District I: Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, and the Canadian provinces of Newfoundland, Nova Scotia, Prince Edward Island, New Brunswick, and Quebec.

District II: Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, members in the Federal Services, and foreign countries not specifically cited.

District III: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia, and the Commonwealth of Puerto Rico.

District IV: Illinois, Indiana, Iowa, Ohio, Michigan, Minnesota, Nebraska, North Dakota, South Dakota, Wisconsin, and the Canadian provinces of Ontario and Manitoba.

District V: Arkansas, Colorado, Kansas, Louisiana, Missouri, New Mexico, Oklahoma, Texas, and Mexico.

District VI: Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming, and the Canadian provinces of Saskatchewan, Alberta, British Columbia, Northwest Territories, Nunavut, and Yukon Territory.

Predoctoral program directors were asked the degree to which each technique is taught in their clinics by estimating the percentage of dental students who receive at least 1 hands-on experience with the technique. The respondents were asked to choose from <25% (eg, few), 25% to 75% (some), >75% (most), or “not taught.” As seen in Table 4, a majority of programs estimated >75% of dental students receive at least 1 hands-on experience with tell-show-do, nonverbal communication, positive reinforcement, and distraction. Active immobilization for nonsedated children is experienced by <25% of students in 52% of programs. HOME is not taught in the clinic by 88% of responding programs. With regard to pharmacologic techniques, most programs indicated their students receive no hands-on experience with general anesthesia or nitrous oxide/oxygen inhalation sedation. It is interesting to note, however, that students in 92% of programs receive

**Table 7. Frequency of Parental Presence in the Operatory for Selected Appointment Types, as Reported by Programs**

Technique (%)	N (%)
<b>Routine examinations/prophys</b>	
0	6 (12)
1-25	20 (42)
>25-75	7 (15)
>75	15 (31)
<b>Emergency examinations</b>	
0	5 (11)
1-25	13 (28)
>25-75	10 (21)
>75	19 (40)
<b>Restorative procedures</b>	
0	5 (10)
1-25	21 (44)
>25-75	11 (23)
>75	11 (23)
<b>Surgical procedures</b>	
0	8 (17)
1-25	23 (48)
>25-75	10 (21)
>75	7 (15)
<b>Sedation procedures</b>	
0	22 (50)
1-25	11 (25)
>25-75	5 (11)
>75	6 (14)
<b>Assist with restraint</b>	
0	8 (17)
1-25	22 (46)
>25-75	9 (19)
>75	9 (19)
<b>Parent of special needs child</b>	
0	5 (11)
1-25	9 (19)
>25-75	10 (21)
>75	23 (49)

some hands-on experience with conscious sedation. Formal assessment of dental student competency with any behavior management technique was reported by 37% of predoctoral program directors.

The next series of questions asked predoctoral program directors whether their programs spend “more time,” the “same amount of time,” or “less time” teaching each technique compared to the time spent 5 years previously. Program directors were also given the option to note that a specific technique, taught 5 years earlier, is “not taught

**Table 8. Reasons Chosen by Predoctoral Program Directors to Explain the Increased Frequency of Parents in the Operatory\***

Reason	N (%)
Parents request to be present	22 (80)
Students can consult with parent while treating	17 (55)
Concern about legal action	10 (32)
Students invite parents without consulting faculty	4 (13)
Other	5 (16)

\*Respondents were allowed to indicate more than 1 reason.

currently,” or had “never been taught.” Table 5 displays the responses from programs that currently teach the techniques. Of those programs, the majority spends the same amount of time, compared to 5 years ago, teaching all techniques except HOME. Of programs teaching HOME, 50% indicated that they spend less time teaching it now.

Predoctoral program directors were then asked to estimate changes in the teaching of specific techniques likely to take place over the next 2 to 3 years. Choices included “more time,” “less time,” “the same amount of time,” or “technique not taught.” Of the programs currently teaching the techniques, 50% or more did not envision future changes in curricular time (Table 6). Of the programs teaching HOME, two thirds indicated that they will likely spend the same amount of time teaching the technique, while 28% indicated they would devote less time. Of predoctoral program directors, 26% stated they will likely spend more time teaching conscious sedation.

Table 7 details the responses to a series of questions about the percentage of time parents are present in the operatory for various procedures. Responses included 0% (eg, never), 1% to 25% (infrequently), >25% to 75% (frequently), and >75% (routinely). Forty-nine percent of programs indicated that parents of special needs patients are frequently present. Forty percent of programs indicated that parents were frequently present for emergency visits. Parental presence was less common for other procedures, especially sedation.

Of predoctoral programs, 79% indicated that parents of children <3 years of age are allowed in the operatory. The percentages allowing the presence of parents of children in older age groups declined to 58% for ages 3 to 5, 37% for ages 6 to 12, and 31% for children >12 years. Over half (56%) of predoctoral programs indicated that the frequency of parents in the operatory had increased over the past 4 years, with only 1 program (2.1%) indicating a decrease. Of the programs reporting an increase in this practice, the 2 most frequently chosen reasons were:

1. “parents request to be present”; and
2. “students can consult with the parent while they are treating the child.” (Table 8).



**Table 9. Informed Consent of Behavior Management Techniques, as Reported by Programs**

Technique	N (%)
<b>Tell-show-do</b>	
No consent	40 (87)
Oral consent	3 (6)
Written consent	3 (6)
<b>Nonverbal communication</b>	
No consent	43 (93)
Oral consent	1 (2)
Written consent	2 (4)
<b>Voice control</b>	
No consent	32 (71)
Oral consent	6 (13)
Written consent	7 (16)
<b>Positive reinforcement</b>	
No consent	40 (87)
Oral consent	1 (2)
Written consent	5 (11)
<b>Distraction</b>	
No consent	41 (89)
Oral consent	1 (2)
Written consent	4 (9)
<b>Hand-over-mouth exercise</b>	
No consent	0 (0)
Oral consent	2 (25)
Written consent	6 (75)

**Table 9 Continued**

<b>Active immobilization for nonsedated child</b>	
No consent	3 (8)
Oral consent	18 (49)
Written consent	16 (43)
<b>Passive immobilization for nonsedated child</b>	
No consent	1 (3)
Oral consent	15 (44)
Written consent	18 (53)
<b>Active immobilization for sedated child</b>	
No consent	0 (0)
Oral consent	8 (40)
Written consent	12 (60)
<b>Passive immobilization for sedated child</b>	
No consent	0 (0)
Oral consent	4 (18)
Written consent	18 (82)
<b>Conscious sedation</b>	
No consent	1 (2)
Oral consent	18 (45)
Written consent	21 (52)
<b>Nitrous oxide/oxygen inhalation sedation</b>	
No consent	0 (0)
Oral consent	1 (5)
Written consent	17 (94)
<b>General anesthesia</b>	
No consent	0 (0)
Oral consent	0 (0)
Written consent	20 (100)

The next series of questions dealt with the type of informed consent obtained, if any, for the various behavior management techniques. As shown in Table 9, the large majority of programs does not obtain consent for most communicative techniques. Oral or written consent is obtained by a majority of programs for immobilization and pharmacological techniques. Of the few predoctoral programs using HOME in the clinic, all obtain consent—primarily written consent.

### Discussion

Virtually all communicative behavior management techniques are taught as acceptable in the great majority of dental schools, with the exception of HOME. Belanger and Tilliss<sup>4</sup> in 1993 reported that 4 communicative management techniques were taught at a “comprehensive” didactic level in most (74% to 94%) of predoctoral programs. Further, 48%

to 70% of predoctoral program directors expected clinical “proficiency” rather than “basic competency” with these techniques. In their study, HOME was not taught didactically or clinically by 15% and 40%, respectively, of the responding predoctoral programs. None of the program directors expected clinical proficiency with HOME, and almost half (47%) indicated students were taught to refer potential HOME cases to specialists.

Results from the present survey indicated that the majority of predoctoral programs believe HOME is a technique not suited for general dentists without training and experience beyond dental school. Belanger and Tilliss<sup>4</sup> found even less support for hand-over-mouth with airway restriction (HOMAR) in the predoctoral program responses to their survey. The present survey did not ask about that technique, since it is not included in the AAPD guideline.<sup>1</sup>

Substantial minorities of programs do not teach immobilization techniques to predoctoral students. Belanger and Tilliss<sup>4</sup> found similar percentages of predoctoral programs not teaching immobilization, though substantial majorities (63% to 91%) taught these techniques at a basic didactic level. Very few programs, however, expected students to develop clinical proficiency with immobilization.

Belanger and Tilliss<sup>4</sup> found that 70% of predoctoral programs taught nitrous oxide/oxygen inhalation sedation at a basic didactic level, and 61% expected dental students to reach basic clinical competency with the technique. They also found that 73% of predoctoral programs expected dental students to have basic didactic knowledge of conscious sedation using oral medications only. Only 7% of programs expected students to reach basic clinical competency with that type of conscious sedation, however Waggoner<sup>2</sup> reported in 1986 that 56% of predoctoral pediatric dentistry programs used oral conscious sedation. Sixty-five percent of responding programs indicated, however, that fewer than 25% of dental students obtained clinical exposure to conscious sedation. Of the programs, 78% indicated that 1 to 2 hours of the predoctoral didactic curriculum was devoted to conscious sedation. In the present study, one third of responding programs indicated that they do not teach conscious sedation. Forty-five percent of programs indicated that fewer than 25% of students receive any clinical exposure to the technique. It appears that pharmacologic techniques may be presented in didactic courses as acceptable techniques, but dental students have few opportunities to use pharmacologic techniques in the clinic.

The amount of time spent teaching the various behavior management techniques has not changed greatly over the past 5 years, with the exception of HOME. There appears to be little impetus for changing the amount of time spent teaching the techniques over the next 2 to 3 years, with the possible exception of conscious sedation. Belanger and Tilliss<sup>4</sup> in 1993 found that most programs had anticipated no future curricular changes at that time, too. Posnick and Lanier<sup>3</sup> found that, among 48 responding dental schools, 29 had updated their behavior management curricular materials from 1980 to 1989, and 26 had updated their pharmacologic management information over the same time period. Increases in curriculum time could not be inferred, however.

Belanger and Tilliss<sup>4</sup> found parental presence in the operatory to be a common practice in predoctoral programs,

with the exception of sedation appointments. Sixty-four percent to 72% of programs indicated that they taught parental presence at a basic level for information/introduction visits, emergency visits, and routine operative visits. About the same percentages of programs taught parental presence at a basic clinical competency level for those same procedures. Only 49% taught parental presence at a basic didactic level for sedation visits, while 40% of programs reported they did not teach parental presence for those visits.

The limitations of this study include those inherent to surveys, such as the limits on the nature and quality of the information imposed by the survey design. Predoctoral program directors were asked to consider the definitions of communicative behavior management techniques as adapted from the AAPD Reference Manual.<sup>1</sup> The extent to which the programs' teaching of the techniques corresponded with those definitions could affect the validity of their answers.

## Conclusions

The responses to this survey by directors of predoctoral pediatric dentistry programs indicate that:

1. In the majority of predoctoral pediatric dentistry programs, communicative and pharmacologic behavior management techniques are taught as acceptable techniques, with the exception of HOME.
2. Most dental students receive some clinical experience with all communicative techniques, with the exception of HOME. Dental students receive less clinical experience with pharmacologic techniques.

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