

Survey of Behavior Management Teaching in Pediatric **Dentistry Advanced Education Programs**

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Abstract

Purpose: The purpose of this study was to survey pediatric dentistry advanced education program directors regarding the teaching of behavior management techniques. Methods: Surveys were mailed to all (65) advanced education programs 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 54 programs. Two programs declined to respond because they had not yet accepted or certified residents. The final response rate was 86%. The mean percentage (± SD) of total didactic time devoted to behavior management was 13% (±9.5). Communicative techniques were taught as "acceptable" by 98% of programs, with the exception of the hand-over-mouth exercise (HOME), which was taught as "unacceptable" by 54% of programs. Active and passive immobilization of sedated and nonsedated children was taught as "acceptable" by 76% to 98% of programs. All 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 it is likely to change in the near future. Parental presence in the operatory was common for some procedures, particularly among younger children.

Conclusions: Most programs do not teach HOME as an acceptable behavior management technique. The amount of curricular time devoted to behavior management is not likely to change appreciably in the near future. (*Pediatr Dent.* 2004;26:151-158)

> KEYWORDS: BEHAVIOR MANAGEMENT, SURVEY, DENTAL EDUCATION, ADVANCED EDUCATION, PEDIATRIC DENTISTRY

Thild behavior management in the dental setting, while based on scientific principles, requires skills in expressive communication, empathetic listening, and coaching.1 It is in an advanced education program in pediatric dentistry that future specialists extend their knowledge of the scientific principles and begin to refine the art of behavior management. The Accreditation Standards for Advanced Specialty Education Programs in Pediatric Dentistry² mandate that communicative and pharmacologic child behavior be taught at an in-depth level. Further, the standards require that programs provide sufficient clinical experience to allow pediatric dentistry residents to become proficient in the use of these techniques to manage child behavior.

Over the past 14 years, several surveys have examined various facets of behavior management teaching in pediatric

postdoctoral programs. Davis and Rombom³ evaluated the use of and rationale for the hand-over-mouth exercise (HOME) and restraint in postdoctoral programs in 1979. They found that both techniques were well accepted by program directors, and that almost 90% of the responding programs taught the techniques. However, only 30% of programs taught the use of hand-over-mouth with airway restriction (HOMAR). Wilson and McTigue⁴ surveyed the conscious sedation practices in postdoctoral programs and found substantial variation among programs in the teaching of sedation, monitoring, and management of emergencies. Acs et al⁵ found that nearly 80% of the respondents indicated that HOME was used to control hysterical or tantrum-like behavior. Physical restraint was used in 70% to 94% of programs, depending on the clinical circumstances presented in the survey.

Table 1. Locations	and Types of Programs
Variable	n (%)
Location of school (AAPD dis	strict)
District I	16 (30)
District II	8 (15)
District III	10 (18)
District IV	9 (17)
District V	6 (11)
District VI	5 (9)
Commission on Dental Accre	ditation Classification
University-based	30 (55)
Hospital-based	22 (41)
Not reported	2 (4)

Acs et al⁶ also reported that the teaching of sedation and restraint in residency programs had decreased over the previous 5 years, principally because of a decrease in parenteral sedation techniques. The survey also documented a decrease in the use of HOME and HOMAR in 44% and 39% of responding programs, respectively. Belanger and Tilliss⁷ reported in 1993 that pediatric dentistry residents were more frequently expected to develop didactic and clinical proficiency with behavior management techniques than were predoctoral students. Little future curricular change in behavior management was forecast by the program directors.

The purpose of the present survey was to provide data on the current teaching in postdoctoral programs of communicative behavior management techniques, as defined in the American Academy of Pediatric Dentistry (AAPD) Reference Manual, ¹ as well as pharmacologic techniques. In addition, directors of postdoctoral pediatric dentistry programs were questioned about the changes in their teaching of these techniques 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.

Methods

The survey was developed in the fall of 2002 and spring of 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, the survey was modified for improved clarity and validity. The study was approved by the Human Assurance Committee of the Medical College of Georgia.

Surveys were mailed to the 65 pediatric dentistry advanced education programs accredited by the Commission on Dental Accreditation. The survey coordinator assigned each questionnaire a 3-digit number to track responses. The researchers were blind to the identities of the responding programs. The surveys

Table 2. Hours of Didactic Curriculum Time Devoted to Behavior Management Topics (Pharmacologic and Nonpharmacologic)

otal classroom hours	N (%)
<5 hours	0 (0)
5–10 hours	5 (9)
>10-15 hours	7 (13)
>15-20 hours	5 (9)
>20 hours	37 (68)

were mailed to the directors of postdoctoral programs with a letter of explanation in June 2003. Follow-up E-mails were sent approximately 1 month later. A second mailing was sent approximately 6 weeks after the first.

Program directors were asked about the teaching of communicative and pharmacologic behavior management techniques to pediatric dentistry residents. They were given the definitions of the communicative behavior management techniques found in the AAPD Clinical Guideline on Behavior Management.1 Active immobilization was defined as restraint by another person. Passive immobilization was described as the use of restraining devices. Definitions of pharmacologic management techniques were not given. Program directors were asked about the current didactic teaching of those techniques in their programs ("not taught," "taught as acceptable," "taught as unacceptable"), as well as the clinical experience of their residents. They were asked to consider the procedure definitions in their response. Program directors were also asked about changes in the time devoted to teaching behavior management over the past 5 years and over the next 2 to 3 years. They also responded to questions about informed consent practices in their programs and their programs' approaches to the presence of parents in the operatory.

Returned questionnaires were coded by the survey coordinator, who also 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.

Results

Of the 65 programs contacted, 2 had not yet accepted/certified residents, so the final sample was 63 programs. Surveys were returned by 54 programs for a response rate of 86%. Of the 9 nonresponders, 6 were hospital-based programs. The breakdown by AAPD district† of the nonrespondents was: (1) 2 District I; (2) 1 District II; (3) 1 District III; (4) 3 District IV; and (5) 2 District VI.

Table 1 gives descriptive statistics for the responding programs by location and type. Table 2 gives descriptive statistics regarding the classroom/didactic time spent by programs in teaching pharmacologic and nonpharmacologic behavior management to their residents. The majority of programs indicated they spend more than 20 classroom hours on these subjects. No program indicated that it spends less than 5

Technique	N (%)	
Tell-show-do	1 (70)	
Not taught	1 (2)	
Taught as acceptable	53 (98)	_
Taught as unacceptable	0 (0)	_
Nonverbal Communication	0 (0)	
Not taught	1 (2)	_
Taught as acceptable	53 (98)	
Taught as unacceptable	0 (0)	
Voice control		
Not taught	1 (2)	
Taught as acceptable	53 (98)	
Taught as unacceptable	0 (0)	
Positive reinforcement		
Not taught	1 (2)	
Taught as acceptable	53 (98)	
Taught as unacceptable	0 (0)	
Distraction		
Not taught	1 (2)	
Taught as acceptable	52 (98)	
Taught as unacceptable	0 (0)	
Hand-over-mouth exercise		
Not taught	10 (18)	
Taught as acceptable	15 (28)	
Taught as unacceptable	29 (54)	

Table 3	Continued	
Active immobilization for non	sedated child	
Not taught	2 (4)	
Taught as acceptable	49 (91)	
Taught as unacceptable	3 (6)	
Passive immobilization for nor	nsedated child	
Not taught	2 (4)	
Taught as acceptable	51 (94)	
Taught as unacceptable	1 (2)	
Active immobilization for seda	ted child	
Not taught	8 (15)	
Taught as acceptable	41 (76)	
Taught as unacceptable	5 (9)	
Passive immobilization for sed	ated child	
Not taught	1 (2)	
Taught as acceptable	53 (98)	
Taught as unacceptable	0 (0)	
Conscious sedation		
Not taught	0 (0)	
Taught as acceptable	53 (100)	
Taught as unacceptable	0 (0)	
Nitrous oxide/oxygen inhalatio	on sedation	
Not taught	0 (0)	
Taught as acceptable	54 (100)	
Taught as unacceptable	0 (0)	
General anesthesia		
Not taught	0 (0)	
Taught as acceptable	54 (100)	
Taught as unacceptable	0 (0)	

†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.

hours on behavior management. The mean percentage of the programs' total didactic hours devoted to behavior management, as estimated by the program directors, was 13% (±9.5), with a range of 3% to 50%.

As seen in Table 3, a majority of programs responded that they currently teach as acceptable almost all communicative behavior management techniques and immobilization. All programs indicated they teach as acceptable conscious sedation, nitrous oxide/oxygen inhalation sedation, and general anesthesia. Only 28% teach HOME as an acceptable technique, and another 18% do not teach the technique. Table 3 lists the responses for each technique.

Program directors were asked about the degree to which each technique was taught to residents in the clinical setting. Responses included "not taught," "observation only," or "hands-on." With the exception of HOME, residents in the great majority of programs receive hands-on experience of the techniques (Table 4). Clinical experience with HOME was reported by only 19% of programs. However, among

Table 4. Clinical Teachir Tec	ng of Behavior Management hniques
Technique	n (%)
Tell-show-do	
Not taught	0 (0)
Observation only	3 (6)
Hands-on	51 (94)
Nonverbal communication	
Not taught	0 (0)
Observation only	3 (6)
Hands-on	51 (94)
Voice control	
Not taught	0 (0)
Observation only	2 (4)
Hands-on	52 (96)
Positive reinforcement	
Not taught	0 (0)
Observation only	4 (7)
Hands-on	50 (93)
Distraction	
Not taught	1 (2)
Observation only	2 (4)
Hands-on	51 (94)
Hand-over-mouth exercise	
Not taught	40 (75)
Observation only	3 (6)
Hands-on	10 (19)

Table 4	Continued
Active immobilization for nor	nsedated child
Not taught	3 (6)
Observation only	0 (0)
Hands-on	51 (94)
Passive immobilization for no	nsedated child
Not taught	2 (4)
Observation only	1 (2)
Hands-on	51 (94)
Active immobilization for sed	ated child
Not taught	11 (20)
Observation only	0 (0)
Hands-on	43 (80)
Passive immobilization for sec	lated child
Not taught	1 (2)
Observation only	1 (2)
Hands-on	52 (96)
Conscious sedation	
Not taught	0 (0)
Observation only	1 (2)
Hands-on	53 (98)
Nitrous oxide/oxygen inhalati	on sedation
Not taught	0 (0)
Observation only	1 (2)
Hands-on	52 (98)
General anesthesia	
Not taught	1 (2)
Observation only	1 (2)
Hands-on	52 (96)

those programs that teach HOME, most reported hands-on experience by residents. Among program directors, 54% indicated they formally assess the proficiency of their residents with 1 or more behavior management techniques.

The next set of questions dealt with the program's history of teaching behavior management techniques. For each technique, program directors were asked whether the technique was "never taught" in their program, whether it had been taught in the past but is "not currently taught," or whether the program is spending "more time," "less time," or the "same amount of time" teaching the technique compared to 5 years ago. Among the programs that currently teach the techniques, the large majority of programs are spending the same amount of time as they did 5 years previously (Table 5). Of programs teaching HOME, 50% indicated they are spending less time teaching the technique than they did 5 years ago.

Program directors were asked to forecast changes in the teaching of behavior management techniques over the next 2 to 3 years (Table 6). Of the programs currently teaching the techniques, the great majority predicted they would

spend the same amount of curriculum time with most of the techniques. Significant minorities of programs indicated they would likely spend more time teaching conscious sedation, nitrous oxide/oxygen inhalation sedation, and general anesthesia. Of programs that teach HOME, 39% indicated they would spend less time teaching the technique.

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), >25–75% (frequently), and >75% (routinely). Sizable majorities of programs reported that parents are routinely present in the operatory for special needs children and emergency examinations. In 56% of programs, parents are frequently present with their children for routine examinations. Parents are excluded from the operatory during sedation appointments in 41% of programs. For other procedures (restorative, surgical, and to assist with restraint), the percentage of times that parents are present were roughly equally divided between infrequently, frequently, and routinely.

Table 5. Change Over Past 5 Years in Curriculum Tim	e
Devoted to Behavior Management Techniques*	

Technique	n (%)
Tell-show-do	
Less time	1 (2)
Same amount of time	49 (96)
More time	1 (2)
Nonverbal Communication	
Less time	0 (0)
Same amount of time	48 (94)
More time	3 (6)
Voice control	
Less time	4 (8)
Same amount of time	45 (88)
More time	2 (4)
Positive reinforcement	
Less time	0 (0)
Same amount of time	49 (96)
More time	2 (4)
Distraction	
Less time	0 (0)
Same amount of time	46 (90)
More time	5 (10)
Hand-over-mouth exercise	
Less time	10 (50)
Same amount of time	9 (45)
More time	1 (5)
Active immobilization for nonse	dated child
Less time	5 (11)
Same amount of time	42 (89)
More time	0 (0)

One hundred percent of program directors indicated they allow parents of children under age 3 to be present in the operatory for at least some procedures. The percentages allowing the presence of parents of children in older age groups declined to 72% for ages 3 to 5, 30% for ages 6 to 12, and 19% for children >12 years. Almost two thirds of programs (65%) reported that the frequency of parents in the operatory had increased over the past 5 years. Those program directors were asked to choose from a list of possible reasons to explain that increase. The responses are given in Table 8 (note that program directors were free to choose more than one reason from the list). The most frequently chosen responses were:

- 1. "parents request to be present;"
- 2. "residents can consult with the parents while treating the child:" and
- "concern about legal action."

When asked to project changes over the next 2 to 3 years in the numbers of parents accompanying their children to

Table 5 Co	ontinued	
Passive immobilization for nonse	edated child	
Less time	4 (8)	
Same amount of time	44 (90)	
More time	1 (2)	
Active immobilization for sedate	d child	
Less time	5 (12)	
Same amount of time	38 (88)	
More time	0 (0)	
Passive immobilization for sedat	ed child	
Less time	2 (4)	
Same amount of time	46 (92)	
More time	2 (4)	
Conscious sedation		
Less time	1 (2)	
Same amount of time	43 (84)	
More time	7 (14)	
Nitrous oxide/oxygen inhalation	sedation	
Less time	4 (8)	
Same amount of time	33 (65)	
More time	14 (28)	
General anesthesia		
Less time	0 (0)	
Same amount of time	35 (69)	
More time	16 (31)	

^{*}Responses only from those programs that teach the techniques.

the operatory, 70% of program directors indicated there would likely be no change, 24% thought the numbers would increase, and 6% foresaw a decrease.

The next series of questions dealt with the type of informed consent obtained, if any, for the various behavior management techniques (Table 9). As expected, most programs indicated they do not obtain consent for most communicative techniques. However, all programs teaching HOME obtain oral or written consent. A noticeable minority obtains oral (37%) or written (7%) consent for the use of voice control. Oral or written consent is obtained by a majority of programs using immobilization. Oral or written consent is obtained with approximately equal frequency for conscious sedation. Virtually all programs obtain written consent for nitrous oxide/oxygen inhalation sedation, while all programs obtain written consent for general anesthesia.

Discussion

Communicative management techniques are widely taught and used in pediatric dentistry residency programs, with the exception of HOME. In 1993, Belanger and Tilliss7 found that all postdoctoral pediatric dentistry programs had didactic and clinical competency expectations for their residents with tell-show-do and positive reinforcement. Nearly all had

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

Technique	n (%)	
Tell-show-do		_
Less time	1 (2)	_
Same amount of time	49 (92)	_
More time	3 (6)	_
Nonverbal Communication		_
Less time	1 (2)	
Same amount of time	48 (91)	
More time	4 (8)	_
Voice control		_
Less time	4 (8)	_
Same amount of time	48 (91)	_
More time	1 (2)	_
Positive reinforcement		_
Less time	1 (2)	_
Same amount of time	47 (89)	_
More time	5 (9)	_
Distraction		_
Less time	1 (2)	
Same amount of time	46 (88)	_
More time	5 (10)	_
Hand-over-mouth exercise		_
Less time	9 (39)	_
Same amount of time	13 (56)	_
More time	1 (4)	

similar expectations for distraction. Davis and Rombom ³
reported that HOME was used in more than 83% of the
programs surveyed. Acs et al ⁵ in 1990 found that the use of
HOME had declined slightly to 80% of programs. Usage
was less among those programs whose directors had been in
place for more than 10 years. Belanger and Tilliss ⁷ in 1993
found that 32% and 64% of programs, expected their resi-
dents to demonstrate a basic or comprehensive didactic
competency level, respectively, with HOME. Thirty-two
percent and 52% of programs expected their residents to
demonstrate a basic or comprehensive clinical competency
level, respectively, with the technique. It appears that HOME
may have lost support in postdoctoral pediatric dentistry
programs over the past decade.

Immobilization is taught as an acceptable technique by a large majority of programs. Somewhat fewer programs consider active immobilization acceptable for sedated chil-

Table 6 Continued			
Active immobilization for nonsedated child			
Less time	7 (14)	_	
Same amount of time	42 (87)	_	
More time	0 (0)		
Passive immobilization for nonse	edated child		
Less time	8 (16)		
Same amount of time	41 (80)		
More time	2 (4)		
Active immobilization for sedate	ed child		
Less time	5 (12)		
Same amount of time	38 (88)		
More time	0 (0)		
Passive immobilization for sedat	ed child		
Less time	2 (4)		
Same amount of time	48 (92)		
More time	2 (4)		
Conscious sedation			
Less time	2 (4)		
Same amount of time	43 (81)		
More time	8 (15)		
Nitrous oxide/oxygen inhalation	sedation		
Less time	4 (8)		
Same amount of time	35 (66)		
More time	14 (26)		
General anesthesia			
Less time	1 (2)		
Same amount of time	41 (77)		
More time	11 (21)		

^{*}Responses only from those programs currently teaching the technique.

dren. This may reflect a concern for the safety of the individuals providing the restraint, and a tendency for parents, who might provide restraint to be excluded from the operatory during sedation procedures. Davis and Rombom³ found that immobilization was recommended most often with certain disabled children (67%) and very young patients (53%). Acs et al⁵ found that those percentages had increased to 94% and 85%, respectively, similar to the responses in the present survey. Acs et al⁵ also found higher usage of immobilization than did Davis and Rombom³ for sedated patients (91% vs 31%). Belanger and Tilliss⁷ reported that 74% to 89% of programs expected their residents to demonstrate clinical proficiency with various types of active and passive restraint.

Pharmacologic techniques were reportedly taught as acceptable modalities by all programs responding to the present survey. No definitions were given in the survey for

Table 7. Frequency of Parental Presence
in the Operatory for Selected
Appointment Types

Procedure/frequency of parental presence	N (%)
Routine examination/prophylaxis (%)	
0	0 (0)
1–25	7 (13)
>25–75	17 (31)
>75	30 (56)
Emergency examination	
0	0 (0)
1–25	6 (11)
>25–75	13 (24)
>75	35 (65)
Restorative procedures	
0	1 (2)
1–25	13 (24)
>25–75	22 (41)
>75	18 (33)
Surgical procedures	
0	3 (6)
1–25	20 (37)
>25–75	15 (28)
>75	16 (30)
Sedation procedures	
0	22 (41)
1–25	14 (26)
>25–75	10 (18)
>75	8 (15)
Assist with restraint	
0	1 (2)
1–25	21 (40)
>25–75	13 (24)
>75	18 (34)
Parent of special needs child	
0	1 (2)
1–25	5 (9)
>25–75	9 (17)
>75	38 (72)

the techniques, so no inferences can be drawn about various drugs or mode of delivery for conscious sedation. Acs et al⁶ in 1990 found that 35% of program directors reported a decrease in the use of sedation and an increase in the use of general anesthesia. Belanger and Tilliss⁷ reported that 89% of postdoctoral programs expected clinical proficiency from their residents with the use of nitrous oxide/ oxygen inhalation sedation and conscious sedation with

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

Reason	N (%)
Parents request to be present	36 (95)
Residents can consult with parent while treating	20 (53)
Concern about legal action	19 (50)
Residents invite parents without consulting faculty	8 (21)
Residents are more comfortable	4 (10)
Patients behave better with parent present	2 (5)
Other	3 (1)

^{*}Respondents were allowed to indicate more than 1 reason.

oral medications only. The corresponding percentages of programs that expected comprehensive didactic abilities from their residents were 91% and 87%, respectively.

Apparently, there has been little change in the time devoted to teaching most behavior management techniques, especially communicative techniques. Similarly, few programs foresaw changes in the time that will be spent teaching behavior management techniques over the next 2 to 3 years. A possible exception to this is HOME, for which 39% of programs that teach the technique expect to spend less time in the near term. Belanger and Tilliss⁷ also found that postdoctoral program directors anticipated no future curricular changes in 1993.

According to the present survey, parents are frequently or routinely present for restorative and surgical procedures in many residency clinics. Belanger and Tilliss⁷ found that 73% to 82% of postdoctoral programs expected clinical proficiency from their residents in the management of parents in the operatory for initial visits, emergency visits, and routine restorative procedures. Sixty-one percent of programs expected the same level of clinical skill with regard to parental presence during sedation visits.

The limitations of this study are those inherent to surveys, including limitations on the nature and quality of the data imposed by the survey design. Residency program directors were asked to describe the teaching of behavior management techniques as defined in the AAPD Reference Manual.¹ The validity of the program directors' responses are dependent on their interpretations of the definitions and the extent to which these definitions correspond with those used by the programs. In addition, a lower percentage of responses was obtained from the directors of hospital programs. The extent to which the teaching of behavior management may differ between hospital and university-based programs may not be reflected in the overall results of this study.

Conclusions

Survey response by directors of advanced education programs in pediatric dentistry indicate that:

Table 9. Informed Consent of Behavior Management Techniques		
Technique	n (%)	
Tell-show-do		
No consent	45 (85)	
Oral consent	6 (11)	
Written consent	2 (4)	
Nonverbal communication		
No consent	46 (87)	
Oral consent	5 (9)	
Written consent	2 (4)	
Voice control		
No consent	30 (56)	
Oral consent	20 (37)	
Written consent	4 (7)	
Positive reinforcement		
No consent	44 (81)	
Oral consent	8 (15)	
Written consent	2 (4)	
Distraction		
No consent	44 (83)	
Oral consent	7 (13)	
Written consent	2 (4)	
Hand-over-mouth exercise		
No consent	0 (0)	
Oral consent	8 (73)	
Written consent	3 (27)	

1.	The majority of postdoctoral pediatric dentistry pro-
	grams teach that communicative and pharmacologic
	behavior management techniques, with the exception
	of HOME, are acceptable.

2. The amount of curricular time devoted to behavior management techniques has not changed greatly over the past 5 years, nor is it likely to change significantly in the near future.

Acknowledgments

The AAPD Foundation funded this study. The authors express their appreciation to Hazel Grant for coordinating this study's survey mailings, coding, and data entry.

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Table	9 continued			
Active immobilization for nonsedated child				
No consent	3 (6)			
Oral consent	23 (48)			
Written consent	22 (46)			
Passive immobilization for 1	nonsedated child			
No consent	1 (2)			
Oral consent	16 (32)			
Written consent	33 (66)			
Active immobilization for se	edated child			
No consent	2 (5)			
Oral consent	11 (26)			
Written consent	29 (69)			
Passive immobilization for s	sedated child			
No consent	0 (0)			
Oral consent	12 (24)			
Written consent	38 (76)			
Conscious sedation				
No consent	0 (0)			
Oral consent	23 (43)			
Written consent	30 (47)			
Nitrous oxide/oxygen inhala	ation sedation			
No consent	0 (0)			
Oral consent	2 (4)			
Written consent	50 (96)			
General anesthesia				
No consent	0 (0)			
Oral consent	0 (0)			
Written consent	52 (100)			

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