



Academics' Session — The evaluation of postgraduate students in pediatric dentistry

Moderator:

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The Ohio State University

The Academics' Session, "The Evaluation of Postgraduate Students in Pediatric Dentistry," was held as part of the American Academy of Pediatric Dentistry Annual Session on May 28, 1995, in San Francisco.

Evaluation of postgraduate students, faculty, and programs are each important in maintaining and improving the quality of pediatric dental education. The Academics' Session consisted of a series of talks on these topics presented by speakers from different academic programs. A summary of each presentation follows.

1. Evaluation methods of pediatric dentistry residents, faculty and programs: our current status (J. Tim Wright)

2. A computer-based evaluation of pediatric dental residents' clinical performance (Martha Ann Keels, Guy de Lisle Dear)

3. Identifying and quantifying graduate students' experiences during advanced education programs (N. Sue Seale)

4. The medical model for evaluating residents (Linda P. Nelson)

5. A national in-service training examination in pediatric dentistry: a challenge to academicians (Robert E. Primosch)

6. A model for resident evaluation (Preston G. Shelton)

Evaluation methods of pediatric dentistry residents, faculty and programs: our current status

J. Tim Wright, DDS, MS

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The goal of all pediatric dentistry programs is to educate individuals who are competent to manage the oral health care of the pediatric population. As a means of fulfilling this responsibility, programs and program directors must have strong evaluation standards that ensure graduates are competent.¹ While each program develops its own criteria for resident evaluation, the Commission on Dental Accreditation of the American Dental Association has specific standards for specialty education programs in pediatric dentistry.²

Program directors should be intimately familiar with accreditation guidelines so they can be used to optimize each student's performance and the educational qual-

ity of the specialty program. For example, the accreditation guidelines state that there must be documentation of ongoing evaluation and advancement of students. Furthermore, student evaluations must assess the individual's knowledge, skills, and professional growth periodically. Students must be provided with an assessment of their performance at least semiannually, and records must be maintained of the evaluation. The guidelines also suggest that a variety of evaluation methods be used to evaluate student performance.²

While the accreditation guidelines state that programs must evaluate the degree to which their goals are being met through assessment of outcomes, each program is expected to define its own goals and objectives. Each program must also design and implement its own outcome measures to determine the program's effectiveness. The accreditation guidelines for faculty evaluation are similarly vague, stating only that faculty performance must be assessed. The methods and criteria for evaluating students, faculty, and programs are only broadly defined by the accreditation guidelines, leaving many of the specifics up to the programs. Therefore, the purpose of this study was to examine the methods currently used for evaluating pediatric dentistry graduate students. We also examined the evaluation process of pediatric dentistry training programs and faculty by the graduate students.

Methods

A one-page survey was sent to the program directors of all 56 North American ADA-accredited graduate pediatric dentistry programs with a self-addressed return envelope. The surveys were reported anonymously. The survey consisted of two parts with a total of 12 questions. The questions were designed to establish the type of program, frequency of evaluation, and method of evaluation. Student performance criteria were documented in a checklist providing 16 potential indicators. An open response area was provided for written responses of criteria not included in the list. Questions were also aimed at student evaluation of the program and how useful program directors felt this information was in terms of improving the program. Program directors were asked to voluntarily provide examples of their student, faculty, or program evaluation forms.

Results

Forty-four of the 56 programs surveyed responded, yielding a response rate of 78%. The distribution of respondents was similar to the distribution of ADA-accredited programs with 10 hospital-based programs (23%), 12 university-based (27%), and 22 combined university and hospital (50%). Analysis showed there were no major response differences between the different types of programs in any of the areas evaluated. The frequency of student program evaluations and areas of student performance measured were similar for all three program types. Therefore, the data were combined and represent all of the programs that responded to the questionnaire.

The majority of graduate pediatric dentistry programs (98%) responding to the survey evaluate students every 6 months or less as required by accreditation guidelines. All programs responding assessed students' diagnostic and patient management skills, and nearly all reported evaluating clinical competence (Table). The students' restoration quality and communication skills were also evaluated by most programs. Income generated and clinical productivity were the least common measures of student performance. Dress and grooming and leadership skills were assessed by approximately half of the programs. Examples of

TABLE. FREQUENCY OF USE OF MEASURES OF STUDENT PERFORMANCE			
Most Frequent		Least Frequent	
Diagnostic skills	100%	Income generated	14%
Patient management	100%	Clinical productivity	43%
Clinical competence	98%	Dress & grooming	48%
Restoration quality	95%	Leadership skills	48%
Communication skills	89%	Teamwork	64%
Reliability	86%	Writing skills	66%
Punctuality	73%	Class contribution	70%

evaluation forms provided by various program directors ranged from brief one-page assessments to multiple computer printouts.

The majority of respondents (89%) indicated having their programs evaluated by students, with most having annual reviews. Student program evaluations including faculty assessments were reportedly not performed by 11% (N = 5) of the specialty programs. Program evaluations by students after graduation were performed by 28% (N = 11) of the respondents. The programmatic areas most commonly evaluated by students included faculty, curriculum content, and individual courses (Fig 1). A majority of programs use both direct student interview and questionnaire to assess their program (Fig 2). As a result of student evaluations, most programs reported initiating changes either frequently (23%) or sometimes (56%), while 15% rarely and 3% never made changes. Program evaluations were shared with faculty always or frequently in 83% of the programs while 6% rarely or never shared the results.

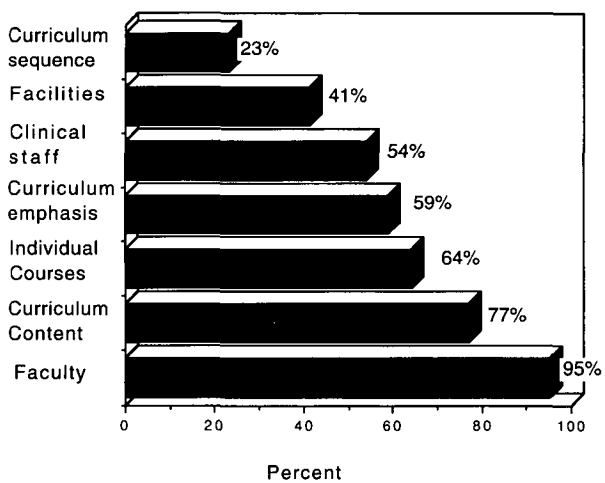


Fig 1. Frequency with which programmatic areas are evaluated by students.

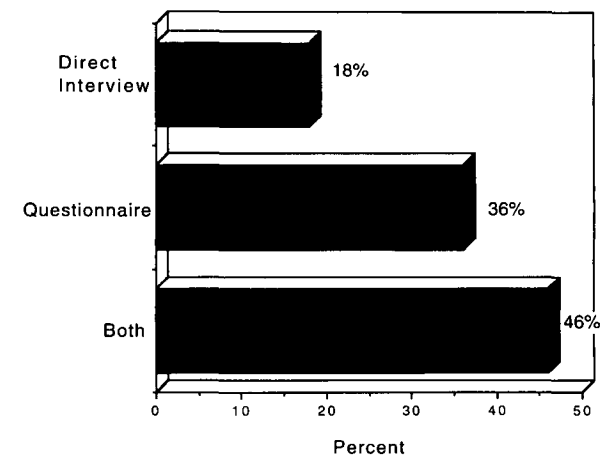


Fig 2. The percentage of programs using different program evaluation methods by students.

Discussion

Pediatric dentistry specialty programs have diverse curricula and vary tremendously in their emphasis. Although one might predict that a university-based program would place a greater emphasis on writing skills compared with a hospital-based program, we found these different programs to have generally similar evaluation criteria. For example, 66% of university programs reported writing skills as a student performance indicator compared with 50% of hospital programs. Despite programmatic differences, this investigation revealed that while a variety of evaluation methods and criteria were used by pediatric dentistry programs, there were certainly universal evaluation domains. Appropriately, the majority of ADA-accredited pediatric dentistry programs assessed the clinical competence of their students with regard to diagnostic and communication skills, patient management, and ability to provide restorative care. There was clearly a consensus of program directors that these are the areas most important for establishing the competence of a pediatric dentist. Measures that were not held as clear indicators of competence for all programs included dress and grooming, leadership skills, and clinical productivity.

The methods and intensity of resident evaluations varied tremendously from one program to the next. Some programs had daily grade sheets and extensive student performance documentation, while other programs had much briefer evaluations. This study did not attempt to determine which methodological approaches were the best measure of true student performance. Determining how best to measure student performance and clinical competence is an area begging continual investigation.

This study established that most pediatric dentistry programs have residents evaluate the faculty and curriculum. However, 11% of the programs report having no program or faculty evaluation by students. Furthermore, a minority of programs are evaluated by resi-

dents after graduation to assess whether the goals and objectives of the program are being accomplished. It could be that having graduates evaluate the program would provide the most insightful and beneficial information for directing positive programmatic change. Postgraduation program evaluations could also serve as an opportunity to question alumni as to their career direction, thus providing an outcomes assessment of the program. This survey also found that approximately half of the programs being evaluated by students did so using a combination of direct interview and questionnaire techniques. Using both methods appears preferable to using either approach alone as both have distinct strengths and weaknesses.

While the ADA Commission on Accreditation has guidelines for resident and faculty evaluation that we must adhere to, the reason for optimizing these procedures is to develop and maintain the best possible educational environment. Based on the findings of this study we suggest the following recommendations to enhance graduate training in pediatric dentistry.

1. Programs should continually strive to improve their student performance assessment methods to further strengthen the educational process.
2. All programs should have students evaluate the faculty and program periodically.
3. Programs should be evaluated by students after graduation as part of outcomes assessment as required by accreditation guidelines and to enhance programs.
4. Programs not having program evaluations (18%) should implement them to provide direction for implementing change and improving education.

1. Short JP: The importance of strong evaluation standards and procedures in training residents. *Acad Med* 68:522-25, 1993.
2. Commission on Dental Accreditation of the American Dental Association: The Standards for Advanced Specialty Education Programs in Pediatric Dentistry, 1988.

Computer-based evaluation of pediatric dental residents' clinical performance

Martha Ann Keels, DDS, PhD
Guy de Lisle Dear, MD, FRCA

Duke University Medical Center

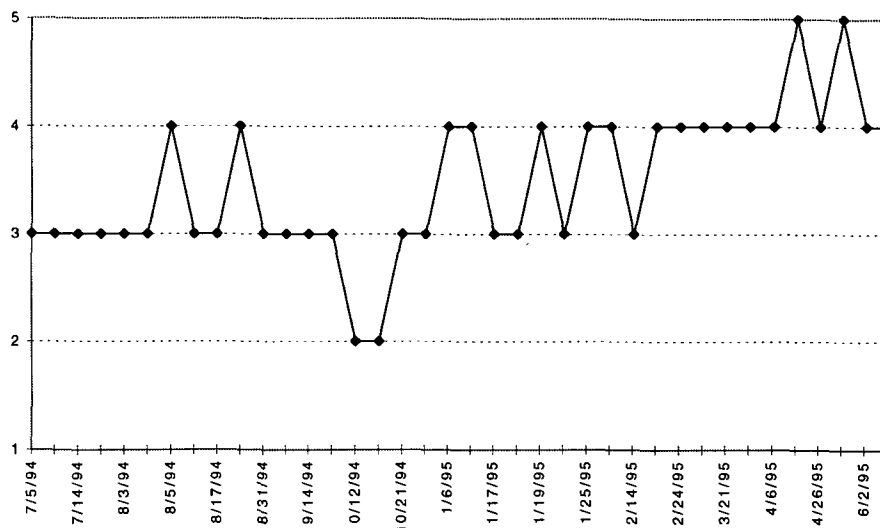
In an effort to evaluate residents' clinical performance fairly and in a timely fashion as well as maintain simplicity for the faculty, a computer program was developed. The program, developed using

Claris™ Filemaker Pro, enables faculty members to send their evaluations via electronic mail to the program director where they are compiled into a database. Results of the evaluations can be exported to Microsoft Excel™ to display graphically a resident's performance over time (Fig 1).

The program was originally developed to evaluate residents in the anesthesia training program at Duke University Medical Center. However, it has been adapted to evaluate residents in other specialty training programs. The program described here helps assess pediatric dental residents' performance through pop-up lists in the following categories for each patient encounter: 1) knowledge and judgment skills, 2) clinical

skills, and 3) character skills (Fig 2). Responses in each category range from "unsatisfactory" to "excellent", and include an option for "not applicable". Computer terminals are available at all clinic sites and in each faculty member's office for easy access.

This program also serves other needs such as facilitating data compilation for graduate program accreditation. The program enables the faculty to readily document excellence in clinical practice. Information is provided to the program director to identify areas of clinical weakness that need attention. It also provides a mechanism whereby a faculty member's ability to critique residents can be evaluated by examining that faculty member's scoring trends. The goal of this computer-based resident evaluation system is to facilitate faculty performance assessment, enhance feedback with the residents, and focus teaching efforts appropriately.



Confidential Dental Resident Evaluation Form

Date: Fri, Apr 28, 1995 Attending: KEELS, Martha Ann Discussed with Resident: Yes

Resident: XXXXXX Op. category: Hospital Res Year: 3

Knowledge Base
 General Dental Knowledge: Satisfactory
 Appropriate for Level: Satisfactory

Judgement
 Appropriate for Level: Excellent
 Appropriate Plan: Excellent
 Patient / Parent Preparation: Excellent
 Patient Management: Excellent

Clinical Skills
 Examination: Excellent Periodontic: N/A Pain Management: Excellent
 Prevention: N/A Prosthodontic: N/A Behavior Management: Excellent
 Restorative: Excellent Orthodontic: N/A
 Endodontic: N/A Surgical: Satisfactory

Character Skills
 Appropriate reactions to stress situations: N/A
 Reliable, conscientious & responsible: Satisfactory
 Learns from experience: Satisfactory

Ranking: 4 (1 to 5) 1=Bad 5=Best Attitude: Receptive Critical Incident: No Star Performance: No

Topics taught: Management of Malignant Hyperthermia

Comments: Great day, no problems: was very considerate with all patients and parents.

Fig 1 (above). Score plotted against assessment dates for a resident whose performance was improving.

Fig 2 (left). The entry screen for the program.

Identifying and quantifying graduate students' experiences during advanced education programs

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The organization responsible for accrediting advanced education programs in pediatric dentistry, the Commission on Dental Accreditation of the American Dental Association, requires that programs be able to verify the clinical activities of students. However, the standards concerning this matter are loosely written and subject to interpretation. There is only one place in the standards where reference is specific to documentation of clinical experiences. Section 5.0 Curriculum and Program Duration states: "...Docu-

mentation of all program activities must be maintained by the program director and available for review."¹ Another reference to clinical material is made in 5.2.5 Clinical Core: "...the clinical material must be of sufficient quantity and variety to provide the broad range of learning experiences essential to the pediatric dentist's education and training."² Just how detailed the documentation of a student's clinical experiences must be to satisfy accreditation standards during site visits appears ambiguous. Therefore, it would be valuable to determine how program directors interpret these standards. The purpose of this project was to gather information concerning if and how program directors formally collect information about their students' clinical experiences and what they do with that information.

A four-question survey was developed and sent to 51 U.S. pediatric dentistry advanced education program directors requesting information about documentation of students' clinical experiences during training. Thirty-eight individuals responded for a return rate of 75%. Programs types included 14 hospital-based, 19 school-based, and four combination hospital/school-based programs.

The first question asked whether programs formally collected types of experiences and quantified them. Thirty respondents reported having formal mechanisms to collect types of experiences and 29 quantified them. Of the eight who responded negatively, five provided explanations. One collected data but did not use it, preferring to track the student's experiences in orthodontics and general anesthesia "through personal conversations." Three reported they did not have readily accessible means to collect or retrieve such information, and one responded that there was ongoing evaluation by faculty without specific categorization. Those who answered yes to this question were asked to review a list of types of experiences and check all that they documented. Eighty-three percent reported they document operative procedures, 77% record full-mouth dental rehabilitations under general anesthesia, 67% track sedation experiences, and 50% track guidance of occlusion procedures. Other types of experiences being tracked were surgical procedures (43%), medical diagnoses (23%), craniofacial anomalies (17%), syndromes (17%), and documentation by doctor (3%). They were then asked to identify from a list all individuals responsible for collecting this information. The two most often identified were graduate students (43%) and faculty (40%) followed by secretaries (20%). Other methods/individuals identified were computer systems, itemized fee forms, receptionists, clinic administrators, and clinic coordinators. Seventy-seven percent use a computer program to collect information, while 40% have hand-entered check sheets. Three percent collect it through billing. Several individuals sent the forms they use. These range from computer printouts of numbers of procedures to patient encounter forms used for billing.

The second question asked how often the information is reported. More than half collect it monthly (57%), followed in frequency by quarterly (27%), yearly (10%), and irregularly (6%).

The third question asked respondents to check all that applied from a list concerning use of the information. It is used to compare experiences for equity among students by 80% of the programs. Sixty percent maintain it in students' files for accreditation purposes and half use it for budget analysis. Other uses included providing it to students for use in future credentialing endeavors (40%); documenting fulfillment of program requirements (33%); and for satisfying curiosity or for clinic grades (7%).

The final question examined whether programs had set numerical requirements that the students must or

should meet by the time they complete the program. Six respondents said they do have requirements and 23 said they do not. General anesthesia and sedation were the two procedures specifically mentioned. Three individuals cited their general anesthesia requirements: a minimum of 30 cases, a range of 25–40, and 20 cases. One individual responded that they require one documented case each year, which complies with the American Board of Pediatric Dentistry criteria. When asked how they arrived at the requirements, responses were varied and included: faculty consensus; subjective based on the overall performance in the program and the clinical progress and competency of the individual; "trial and error — over the years we have evaluated requirements and found what works best for our program". One individual wrote that he was unalterably opposed to setting quantity requirements and another expressed concern that he would hate to see us go in the direction of another specialty where the numbers are the "be all and end all".

Despite the ambiguous nature of the accreditation standards for curriculum and clinical core, nearly two-thirds of the programs reported that their purpose for maintaining information about type and quantity of students' experiences was for accreditation. However, one-fourth of the programs do not have formal mechanisms for collecting or quantifying the information. Recently added accreditation requirements for documentation of outcomes assessment and evidence of "value added" following completion of graduate programs may give additional impetus to the collection and quantification of clinical experiences of graduate students during their training. Additionally, as program directors respond to increasing demands for accountability for program costs and containment of those costs, tracking student productivity by means of clinical experiences may have new importance.

In summary, the majority of programs have some formal mechanism of identifying and quantifying their students' experiences during their training. Of the programs that collect this information, four of five collect it quarterly or more often. Few have numerical requirements for their students and those that do have arrived at these numbers subjectively.

1. Commission on Dental Accreditation of the American Dental Association: The Standards for Advanced Specialty Education Programs in Pediatric Dentistry, Section 5.0 Curriculum and Program Duration, Chicago, Illinois, 1988.
2. Commission on Dental Accreditation of the American Dental Association: The Standards for Advanced Specialty Education Programs in Pediatric Dentistry, Section 5.2.5 Clinical Core, Chicago, Illinois, 1988.

The medical model for evaluating residents

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Children's Hospital, Boston

Information contained in this presentation is adapted for pediatric dentistry from a conference sponsored by the American Board of Medical Specialties in 1984. The proceedings were published in How to Evaluate Residents, Lloyd J, Langsley DG, Eds. Chicago: American Board of Medical Specialties, 1986.

Measuring resident performance entails quantifying what has been observed without interpretation, while evaluation involves interpreting performance. Evaluation determines whether what has been observed is acceptable, or better or worse than desired.

The first step in designing an evaluation is to determine why it is being done. This involves examining the measurement process in order to ask if it is appropriate within the particular context. That is, are the evaluations being compiled for a file for accreditation, for promotion, or for hospital privileges? Are evaluations being gathered to identify areas of teaching weakness within the department or for cost effectiveness of the program? In order to have a meaningful evaluation procedure the measurement process must fit with the objectives or purposes of the evaluation.

It is also important to determine what is being evaluated. Is it the potential for performance after the completion of the program or the quality of performance during the program? Hopefully, both are accomplished. Is the measurement process comprehensive? Is it an appropriate set of standards for someone at a particular point in training? For example, the evaluation standards for a first-year pediatric dental resident should be different from someone who is completing the program.

It is also important to evaluate based on a clearly defined curriculum. The curriculum must be defined as standards of care that can be evaluated at benchmarks along the road to program completion. Graduating pediatric dental residents are excellent resources for eliciting acceptable knowledge and skill levels at various benchmarks of a program. For example, at the end of the first year of the program, a resident should independently be able to diagnose and treat an immature permanent incisor with a root fracture.

Some common problems with performance assessment have been identified.¹

1. The halo effect and other observer bias. A resident may develop a reputation early in training and find that all subsequent ratings are influenced by that reputation.

2. Skew. Rating scales are notoriously underused. No one likes to use the "failing" rating so we cluster toward the upper end of the scale. Generally ambivalence equals the average point on the scale.
3. Lack of direct observation. Videotaping is an alternative to direct observation. It is time consuming and expensive, but it provides a direct view of basic skills that may be taken for granted, such as behavior management. Videotaping also provides a mechanism for self-study.
4. Lack of appropriate criteria. If a program has inappropriate criteria, how can satisfactory performance be evaluated?
5. Lack of reliability. A greater number of evaluators and evaluations yields increased reliability of data. Multiple observations over time help mute interexaminer variability and reinforce that the data are real rather than idiosyncratic reports. Interexaminer reliability should be addressed.
6. Distracting personal stress. At the end of the first year and beginning of the second year, there seems to be a period of clinical depression among house officers.

After an evaluation is obtained, something must be done with it. The feedback model assumes that evaluations will identify deficiencies, that they will be dealt with in a remedial manner, and that subsequent evaluation can show whether adequate improvement has occurred. In such a model participants are allies not enemies, and a lack of satisfactory performance is easier to accept. Important ingredients for this model include agreed-upon objectives, which should come directly from the curriculum, baseline measurements of knowledge and skill that the person comes into the program possessing, a record of experiences, periodic assessment of performance during each phase of the program, cognitive exams of knowledge and judgment, ratings of personal qualities, and interactive conferences between the program director and the resident. In this feedback model, the program director wants to increase the resident's skills to further the resident's career and to ensure that patients receive the best possible care. A coach/player relationship is the goal of this interaction. If both parties have the same goals, then both parties have a vested interest in the final outcome and player performance is likely to improve. An evaluation meeting should begin with agreement on appropriate goals, for example: "It's the sixth month of the residency, the time when interns should take responsibility and begin making decisions independently. It is not expected that you be familiar with the majority of clinical problems you are encountering, but by now you should be gaining a sense that you are actually the one caring for your patients. Do you agree? Does this sound like an appropriate objective for this interval of your training?"

When there are mutually agreed upon goals, criteria can be set and negotiated. This is the point when specific direct observation material from the evaluation folder can be introduced without incurring defensiveness, anger, or humiliation, and without jeopardizing the relationship. When the evaluation is negative it is better not to use global phrases or summary statements. It is less insulting and safer to be specific and describe by example as in, "Your Class II amalgams are fracturing at the isthmus in primary molars by the six month recall visit" or "You seem to be weak in cephalometric analysis. If this comment is not like others you've received, do you have any thoughts on what might be happening?". Obviously, in both cases there should be documentation on file. If the program director backs up this negative feedback with positive ideas for remediation, then the resident can work toward a solution. If the resident fails to see the problem or discredits the evidence, the program director could respond, "If this is not typical, then help me to understand why we have this perception?". By asking this question, the program director is asking if this is truly a skill problem or a problem with the evaluation.

When residents are asked what they think needs to be done to remediate a problem, the most common response is extra reading, even when the problem has little to do with knowledge base and more to do with skill. Remediation by tutoring and close supervision of clinical skills by the program director with direct observation can work well to remediate skill deficiencies. The conversation and the remediation plan should be documented.

Sometimes stress can be an obstacle to performance and may be unrelated to the knowledge base or manual skill. In order to relieve stress and unblock proper performance, all that may be necessary is a decompression of the resident's schedule or a switch in rotations to one that is less stressful for a period of time. A referral to a therapist or psychiatrist may be indicated if personal problems are a factor in performance.

Positive feedback is as important as negative feedback. The coach/player model is still the best relationship. Feedback should be specific and focus on performance, not the player. Nouns are better than adjectives, verbs better than adverbs. Just as anger and defensiveness are signs of a poor negative feedback session, so too are embarrassment and awkwardness signs of poor positive feedback. Describe the performance relative to the goals rather than how marvelous the resident is, for example: "Your diagnosis of the root fracture was particularly impressive because you arrived at it independently despite the incorrect assessment of others. That is impressive, especially at this point in your training."

A resident who consistently cannot assemble a workable knowledge base or is physically unable to perform essential manual tasks should be terminated. The decision to terminate should be a departmental activity with proper documentation and legal advice. A list of problems that include what the resident is unable to do must be compiled. Documentation of discussions with the resident and the problems must exist, including documentation that the resident understood the significance of the problem and that there was a clear plan of action for remediation. The resident should be given ample opportunity and resources to work on the problems. Attempts to correct these problems should be documented. It is important to ask if the problems are significant enough to warrant termination, and if you are prepared for possible legal action.

In conclusion, an organized approach to evaluation can only strengthen the program for the resident, the faculty, and the program director. Clear expectations based upon the curriculum must be spelled out from the beginning and must be agreed upon by everyone involved with the evaluation process. Good feedback can improve the quality of students and, therefore, the program.

1. Davis J: The evaluation process. In: How to Evaluate Residents, Lloyd J, Langsley D, Eds. Chicago: American Board of Medical Specialties, 1986, pp 75-98.

A national in-service training examination in pediatric dentistry (PEDSITE): a challenge to academicians

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University of Florida, College of Dentistry

In the early 1980s, the Pedodontic Section of the American Association of Dental Schools developed a prototype test item bank to evaluate the progress of postdoctoral pediatric dental students through their

educational experience. The purpose of the test item bank was to have a repository of questions that could be selected randomly to create an annual examination. The test bank was coordinated under the direction of Dr. Stephen Goepferd at the University of Iowa and was known as PEDCATS. Test questions were voluntarily submitted by dental educators throughout the United States and entered into this database for storage and retrieval. Program directors requesting examinations received a randomized selection of questions from the test bank. Unfortunately, only three postgraduate programs subscribed to the service and the project was discontinued due to underutilization. The test item bank was archived at the University of Iowa and is still available for use today.

Although pediatric dentistry was unable to sustain interest in maintaining and utilizing a centralized test item bank for the in-service evaluation of postdoctoral student's progress in their programs, two other dental specialty organizations were successful. The American Association of Oral and Maxillofacial Surgery (AAOMS) has been conducting the OMSITE for over 18 years. Currently, all 110 postdoctoral programs participate of helping identify curriculum deficiencies in their program. Approximately 800 oral and maxillofacial surgery students take a 250-item multiple choice exam covering five topic categories. The exam is given every April at 90 test sites. The registration fee is \$135 per student. The exam is written and approved by an AAOMS committee, which hires ACT at the University of Iowa as its support service for final exam generation, distribution, scoring and analysis. The American Academy of Periodontology (AAP) is the other dental specialty organization successfully engaged in the in-service testing of its postdoctoral students. Their examination has 425 multiple-choice questions based on the current dental literature. It is given annually to 385 students in 49 of the 52 accredited programs. Two Academy committees are assigned to develop the annual exam. One committee serves for test construction and meets for three days every year. The other committee meets for one day and validates the exam. The AAP has been conducting this exam for the last nine years and uses the support services of Pro-

fessional Testing Service in Orlando, Florida. The registration fee is \$60 per student. The AAP underwrites approximately 40% of the expenses incurred in the production and administration of this annual examination.

Our pediatric dental postdoctoral students as well as their educational training programs could benefit substantially from the creation of an in-service examination. The purpose of this national in-service training examination would be to provide an annual, standardized examination of pediatric dental postdoctoral students, which would support accredited programs in achieving the following objectives: 1) to evaluate postdoctoral student academic achievement and progress, 2) to assist in program evaluation and outcome assessments as required by current accreditation standards, 3) to emphasize relevance and importance of curricula as established by accreditation standards, and 4) to assist postdoctoral student preparation for board certification.

Perhaps it is time for the American Academy of Pediatric Dentistry to support the development of this testing activity. Through the efforts of the AAPD, a formalized and standardized approach to evaluating the educational experience and progress of our postdoctoral students could be realized. Successful models exist in two of our dental specialty organizations. All we need to do is to generate the desire to follow their example.

A model for resident evaluation

Preston G. Shelton, DDS, MS
University of Maryland

Ongoing evaluation should be an essential component of the educational process. The forms used in the evaluation of pediatric dental residents at the University of Maryland are described below. Separate forms are used for clinic and seminar.

Clinic. At the end of each semester, all faculty formally evaluate the residents. The first part involves the faculty reviewing 10 categories (listed below) and rating each of them as poor, average, above average, or exceptional. The 10 categories are: 1) ability to follow directions: takes directions readily and without argument; 2) accuracy of work: expresses self accurately; work usually free from errors; 3) dependability: fulfills obligations, completely reliable; 4) industry: makes judicious use of time, habitually completes work, well motivated; 5) cooperation: possesses ability to work harmoniously with others, willing to do their part in any cooperative undertaking; 6) professional bearing:

exhibits professional attitude in relations with patients and house staff, presents professional appearance, is tactful and courteous; 7) correlation of basic science with clinical situations; 8) ability to carry out good clinical practice, exercises sound clinical judgment; 9) acceptance of responsibility for patients welfare; 10) expansion of knowledge during residency.

The second part involves written components made by faculty concerning these areas: 1) knowledge of procedures, 2) manual skills, 3) patient management, and 4) additional observations/comments.

A composite evaluation of all faculty members' ratings and comments is then compiled for each resident. This form provides evaluation feedback to the residents in writing, serving as a guide for the director to review with the residents their clinical progress to date using the input from all clinical faculty.

Seminar. The faculty covering particular subject areas in the seminar series are asked to evaluate the residents using written comments concerning: 1) comprehension/understanding of material covered, 2) ability to evaluate literature articles related to material covered, 3) correlation of material to clinical areas and 4) punctuality and attendance.

Anyone who would like copies of the above forms, should contact Dr. Shelton at 410-706-7970.