

## A national in-service training examination for advanced education students in pediatric dentistry (PEDSITE)

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In the early 1980s, the Pedodontic Section of the American Association of Dental Schools developed a prototype test item bank for the purpose of evaluating 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 which could be randomly selected 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 computerized item bank 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 students' progress, two other dental specialty organizations were successful in achieving that goal. The American Association of Oral and Maxillofacial Surgery (AAOMS) has been conducting the "OMSITE" for over 18 years. Currently, all 110 postdoctoral programs participate with the intention to help identify curriculum deficiencies in their programs. Approximately 800 OMFS students take a 250 multiple choice item exam, divided into five topic categories, every April at 90 test sites. The registration fee is \$135.00 per student. The in-service 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 is comprised of 425 multiple choice questions based on the current dental literature. It

is given annually to 385 students in 49 out of the 52 accredited programs. Two committees are assigned with the task of developing the annual exam. One committee serves for test construction and meets for three days every year and the other committee serves to validate the exam which takes an additional day of activity. The AAP has been conducting this exam for the last nine years and uses the support services of the Professional Testing Service in Orlando, Florida. The registration fee is \$60.00 per student. The AAP underwrites approximately 40% (\$16,000) 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 assessment as required by current accreditation standards
3. To emphasize relevance and importance of curricula as established by the accreditation standards
4. To assist postdoctoral student preparation for board certification.

Believing that it is time for the American Academy of Pediatric Dentistry (AAPD) to support the development of this testing activity, the concept was brought before the AAPD Education Committee for further exploration.

### AAPD Education Subcommittee

A subcommittee of the AAPD Education Committee was appointed and charged with the duty to "investigate the feasibility of a national standardized written examination for students in pediatric dentistry postdoctoral training programs". The members of the

subcommittee included Drs. Murray Dock, Robert Henry and Suzi Seale. The progress to date has included acceptance of an action plan, a statement of purpose and objectives, and development and analysis of a survey of program directors.

The approved action plan is as follows:

1. Establish and agree to a prioritized plan to accomplish our charge
2. Identify purpose and objectives for the exam
3. Develop a needs assessment and willingness to participate survey of all program directors
4. Identify, study, and critique existing test models developed by other dental specialty organizations
5. Analyze survey results and report the findings to Education Committee
6. Seek approval by AAPD Board of Trustees in May for the establishment of an ad-hoc committee to develop an initial proposal if initial survey responses are encouraging
7. Identify existing exams or item test banks suitable for establishing a foundation for test generation (e.g., Iowa's PEDCATS, Texas Specialty Board Exam, etc.)
8. Obtain fee estimates from various professional testing services
9. Present preliminary proposal to AAPD Board of Trustees containing cost impact, etc.

### Survey

As part of the survey package sent to all program directors in preparation for the national program director's meeting, a survey was mailed to all 54 advanced education programs (Fig 1).

### Survey results

A total of 50 of the 54 programs (93% response rate) completed the survey. Dr. Murray Dock was generous to volunteer his time to tabulate the results of the survey.

### Fig 1. National in-service training examination survey

The American Academy of Pediatric Dentistry has charged its Education Committee "to investigate the feasibility of a national standardized written examination for students in pediatric dentistry postdoctoral training programs". In order to accomplish that task the Committee agreed that it was necessary to develop a needs assessment and willingness to participate survey of all program directors.

The purpose of the national in-service training examination is 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 the accreditation standards, and
4. To assist postdoctoral student preparation for board certification.

Please take a few minutes of your time to complete the survey.

Thank you.

R. Primosch, M. Dock, R. Henry, S. Seale

Director's name: \_\_\_\_\_

Program's name: \_\_\_\_\_

How many residents per year do you currently have in your program?

\_\_\_\_\_

What is the length (in months) of your program? \_\_\_\_\_ mos.

Do you currently evaluate your students by a comprehensive written examination? Yes No

If yes, is the examination part of your outcome assessment plan?  
Yes No

Do you support the concept of a national standardized examination as stated in the above objectives? Yes No

If no, why not? \_\_\_\_\_

If such an examination was developed and available to your students:

Do you think that the exam should be taken on a \_\_\_\_\_ basis by your students? voluntary mandatory

Do you think the exam should be taken by your students at the \_\_\_\_\_ of the program? (check all that apply):

beginning middle end other: \_\_\_\_\_

How long do you think the exam should be?

2 hr 4 hr 6 hr 8 hr

Do you believe that the expense of exam development and administration should be shared with the Academy by the:

program student both

What do you think is an acceptable fee per student to charge? \$ \_\_\_\_\_

Do you have multiple choice test items which you would be willing to share with a test construction committee? Yes No

Would you be interested in serving on a test construction committee for the purpose of this exam development and evaluation?  
Yes No

Do you currently evaluate your students by a comprehensive written examination?

Yes (19) 40% No (30) ? (1)

If yes, is the examination part of your outcome assessment plan?

Yes (17) 89% No (2)

Do you support the concept of a national standardized examination as stated in the above objectives?

Yes (41) 85% No (7) ? (2)

If no, why not?

- not needed, program accomplishes above objectives without it
- difficult to design exam that is fair due to program diversity
- should use the Board certification exam to accomplish objectives

Do you think that the exam should be taken on a \_\_\_\_\_ basis by your students?

mandatory (34) 76% voluntary (11) ? (2)

Do you think the exam should be taken by your students at the \_\_\_\_\_ of the program?

beginning	1	beginning and end	21
middle	2	beginning and middle	1
end	16	middle and end	2
	19		24

no (negative) response 7

How long do you think the exam should be?

2 hours 13  
4 hours 22  
6 hours 4  
8 hours 4

no (negative) response 5

Do you believe that the expense of exam development and administration should be shared with the Academy by the:

program 21  
student 2  
both 16  
no response 11

What do you think is an acceptable fee per student to charge?

\$10-30 6  
\$50-75 7  
\$90-150 14  
no response 23

Do you have multiple choice test items which you would be willing to share with a test construction committee?

Yes 31  
No 15  
no response 4

Would you be interested in serving on a test construction committee for the purpose of this exam development and evaluation?

Yes 28  
No 17  
no response 5

## Conclusions

The data are self-explanatory and can be summarized as follows:

1. 93% of all programs responded.
2. 60% of the programs do not administer a comprehensive written examination to their students; those programs that do, incorporate the results as part of their outcomes assessment plan.
3. 85% of the programs support the concept of a national standardized exam; those programs not in favor cited redundancy with the Board certification examination or a reluctance due to program diversity.
4. If an exam were developed, most respondents felt that it should be mandatory for students in their programs, approximately 2-4 hours in length, and cost-shared.
5. Approximately half of the programs would administer the test twice during the student's training period (use the exam as part of outcomes assessment). While the other half of the programs would administer the exam once (use the exam for student evaluation).
6. The majority of respondents (50-60%) expressed willingness to provide material for the exam and/or to participate in its development.

Overall, the response was positive. Based upon this conclusion, I recommend that we proceed to item #6 on the Action Plan.

Dr. Primosch is program director, Department of Pediatric Dentistry, University of Florida, Gainesville.