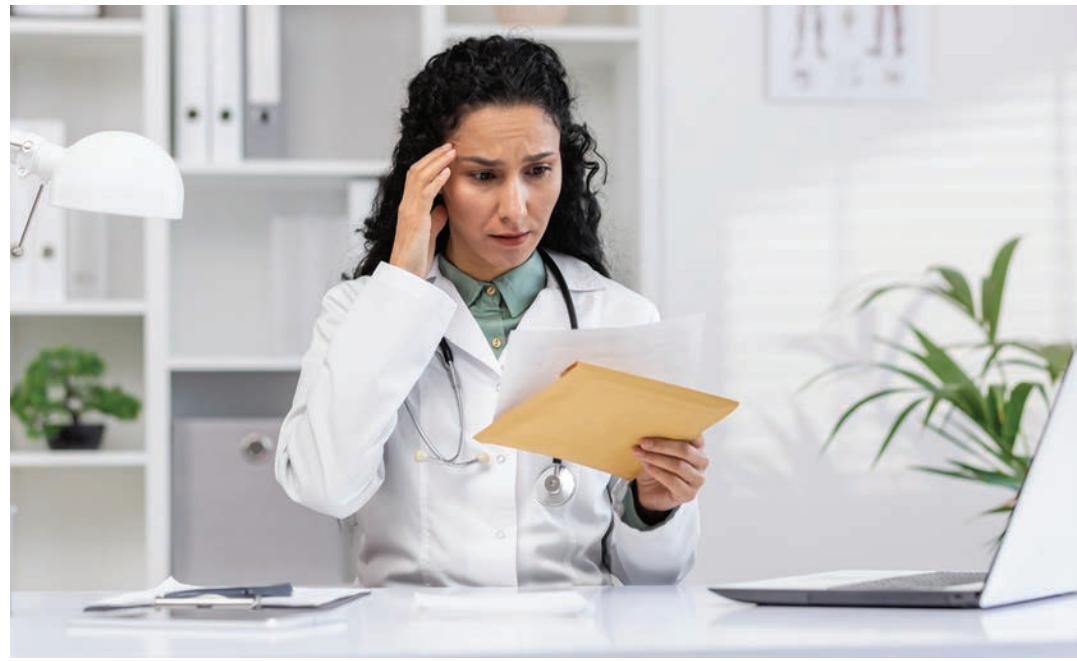
Residency In-Training Examinations

BY JARROD SHAPIRO, DPM

We need more details.

Practice Perfect is a continuing every-issue column in which Dr. Shapiro offers his unique personal perspective on the ins and outs of running a podiatric practice.



The American Board of Foot and Ankle Surgery (ABFAS) recently released the results of this year's residency in-training examinations (ITEs) for the first two resident years (PGY-1 and PGY-2). The PGY-3 residents must wait until November to receive their results. Residents will also take the American Board of Podiatric Medicine's (ABPM) In-Training examination in February. Now you might be a little ambivalent about these examinations given the multilayered reality of these tests. From the perspective of a residency program director, we need more from our examination bodies.

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On the surface, the ITEs are a standardized method to examine our residents as they proceed through their training. They take a didactic examination (both the ABFAS and ABPM) and a computer-based patient simulation (CBPS) through the ABFAS. In a very real sense, these exams are extensions of a board examination series that students take while in school through the National Board of Podiatric Medical Examiners (NBPME) and function as intermediaries along the process toward final board certification. As anyone who has been through the residency training process knows, it is not easy to create objective assessment methods.

A lot of residency evaluations are based more on subjective observation and impressions by attendings than anything concrete and objective. Because of this issue, I'm highly supportive of the existence of the ITEs, and my program willingly participates and pays the expense yearly.

However, my problem is with how the test results are reported. Figure 1 shows the information enclosed in a report. Now, there's no issue with the categories or the comparison between the individual's score and others in the PGY-1 and -2 years. It is good that they break the sections down into parts (as opposed to a simplified report that just lists, for example, didactic and patient work-up sections).

The complaint is what the report does not say. Within each examination category, it is impossible to

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know what the content of the actual question was. For example, looking at the "Diagnostic Studies/Medical Imaging" section, it is impossible to know if questions examined resident knowledge on MRI, radiography, scintigraphy, CT, or other modalities. Was ultrasound included? Similarly, "Surgical Principles" is such a broad category that one could never evaluate a resident's specific level of knowledge. Residents and program faculty are left with a vague gestalt. The CBPS section is no different. The "Physical Examination" category tells us nothing. Physical examination of what? What was the pathology?

The ABFAS publishes a guide to help residency directors, and in that guide, they include information to try to help. Figure 2 shows an excerpt from a table included in the 2018 guide. Since the table is too large to include here, I pulled the imaging section for our readers' consideration.

We can applaud the ABFAS for attempting to break down the sections a bit more to provide information to residency personnel. However, it still doesn't help. The problem is there are two forms of examinations, summative and formative, and the ITEs currently only provide summative information. The residents receive a "grade" (mostly a comparison against the mean).

The problem is there are two forms of examinations, summative and formative, and the ITEs currently only provide summative information.

Residency programs, though, need formative information. The real point of these examinations is to give our residents and programs feedback on how they are doing, and to empower us to make recommendations to study specific topics more (for the residents) and to show residencies where their overall deficiencies are. If all of the residents at a particular program score below the average on their imaging section, then that residency might want to adjust their imaging rotation or add imaging activities to their academics.

In the past, the ABPM released the actual examination after residents completed the ITE. It's not known if they are still doing this, but the directors loved knowing the content. We could incorporate the test into our academics, reviewing specific questions during our academics. It also allowed us to direct residents to specific areas of study. In the long-term, it may not be a sustainable action for the boards because there is a finite number of questions and writing questions takes a lot of work. But there is a solution.

FIGURE 1A

Foot Surgery Didactic In-Training Examination			
Subject Area	**Your Score**	**PGY 1 Mean**	**PGY 2 Mean**
Diagnostic Studies/Medical Imaging	480	397	433
Surgical Principles	410	394	437
Surgical Procedures/Techniques	340	386	426
Procedural Perioperative Management	330	404	441
Complications	490	398	436
General Medicine	410	399	424
Total	**400**	**389**	**425**
RRA Surgery Didactic In-Training Examination			
Subject Area	**Your Score**	**PGY 1 Mean**	**PGY 2 Mean**
Diagnostic Studies/Medical Imaging	540	423	442
Surgical Principles	550	369	391
Surgical Procedures/Techniques	460	327	357
Procedural Perioperative Management	650	357	394
Complications	580	345	376
Total	**550**	**351**	**381**
Foot Surgery CBPS In-Training Examination			
Case Management Area	**Your Score**	**PGY 1 Mean**	**PGY 2 Mean**
Physical Examination	620	447	483
Diagnostic Procedures/Labs/Imaging	590	448	475
Diagnosis	480	440	486
Treatment (application of surgical principles and medical management to determine treatment of patient	420	435	480
Total	**500**	**432**	**469**

FIGURE 1B

RRA Surgery CBPS In-Training Examination			
Case Management Area	**Your Score**	**PGY 1 Mean**	**PGY 2 Mean**
Physical Examination	320	362	410
Diagnostic Procedures/Labs/Imaging	550	386	423
Diagnosis	480	368	416
Treatment (application of surgical principles and medical management to determine treatment of patient	330	362	406
Total	**360**	**359**	**403**

Figures 1A and 1B: Score report from the ABFAS In-Training Examination. Year and name removed for anonymity.

Tagging!

A reasonable compromise solution is to tag each of the questions on the examinations with information about the content. This simply requires the boards to become a bit more granular with what they are already doing. The podiatry schools

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are already doing this, so we know that it's possible. As someone who writes examination questions at the WesternU College of Podiatric Medicine, it is laborious but far from impossible.

Let's take an example based on the "Diagnostic studies/medical imaging" section from Figure 2. You need to write a question in which you're testing a resident's ability to diagnose osteoarthritis from a foot radiograph. The question requires them to understand that the radiographic signs of osteoarthritis are the following: asymmetrical joint space narrowing, eburnation, osteophytes, periarticular cysts, and intra-articular osseous bodies. The resident attempts to answer the question on the exam, and they get it wrong.

If this question were tagged, that tagging might look something like:

Foot Surgery > *Didactic* > *Diagnostic Studies* > *Radiography* > *Pathology* > *Osteoarthritis*

Each "> " indicates movement down the topic toward more specific information. There are any number of formats to this, and what has been suggested here is only one. As an examiner writes their questions, they would tag those questions down to the most specific topics. These tags could then be listed in a large table or spreadsheet as a reference for directors and residents.

In this specific example, the resident answered incorrectly. The ABFAS could then report "Incorrect" and the tagging tree listed above. They would not have to divulge any other information about the question, thereby maintaining their test bank integrity. This would allow a residency director to know that their resident is lacking knowledge about the radiography of osteoarthritis.

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Table 1. In-training Examination Didactic Subject Areas

Diagnostic studies/ medical imaging	Exam Weight = 10%
Definition: Interpretation of specific studies of diseases, disorders, and conditions of the lower extremity. RRA subject areas may be tested.	**Sample Topics:** • Diagnosis or differential based on laboratory studies, imaging, or other diagnostic studies. • Diagnosis based on a specific imaging study.

Figure 2: Didactic imaging section from the ABFAS Guide for Residency Directors.

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