

## **In-training Examination Results**

### **FREQUENTLY ASKED QUESTIONS (FAQ)**

- 1. What is the appropriate use of In-training Examination scores?** The only validated use of In-training Examination scores is to provide one piece of information to EM residents and their faculty to determine the residents' degree of preparedness for taking the ABEM Qualifying Examination.
- 2. Why are my residents allowed to discuss the content of ABEM's In-training Examination but are not allowed to talk about other ABEM examinations they may take?** Given the purpose of the In-training Examination, ABEM policy allows residents to discuss In-training Examination content so long as test questions are not used or shared in any written or other enduring form. After your residents graduate and enter ABEM's initial certification process, the purpose of the examinations shifts from providing information to residents to evaluating residents' knowledge to meet the standards for certification. Consequently, candidates for certification are prohibited from discussing any content from the Qualifying or Oral Certification Examinations. It is a good practice to make sure your residents are aware of this difference to avoid the consequences of violating ABEM's irregularity policies.
- 3. How is the reported In-training Examination score determined?** The total number of items a resident correctly answered is calculated. A statistical process called equating is then used to adjust and scale the scores to ensure that scores reflect the same level of ability across examination administration years.
- 4. How is the percent predicted to pass the ABEM Qualifying Examination calculated?** ABEM has conducted research showing that resident scores on the In-training Examination can be used to predict performance on the Qualifying Examination, which can provide useful information to residents and faculty by indicating whether they are on target to pass the Qualifying Examination the first time they take it. To predict Qualifying Examination scores, residents' In-training Examination scores from recent administrations were matched to their first Qualifying Examination score. The results of this analysis, given on your residents' report and in the *Summary of Residents Taking The 2023 In-Training Examination by EM Residency Training Level*, can be used to talk with residents about the probability they will pass the Qualifying Examination the first time they take it, given their current score. Models are tailored to all levels within program formats PGY 1-3 and PGY 1-4. Because of this, your programs predictions may not be the same as other programs.
- 5. Why are EM residency training levels 3 and 4 no longer combined on the In-training Examination Score Reports?** Historically, the EM resident training levels 3 and 4 were combined for reporting In-training Examination results. Given the growth of the specialty, there is now a sufficient sample size to provide an accurate predictive model for each level within the PGY 1-3 and PGY 1-4 formats.
- 6. Why is some information missing on my resident's score report?** Residents in combined training programs, advance match residents, and residents in international programs represent groups too small and diverse to provide useful

comparison data, such as the percentile ranks and the percent passing the Qualifying Examination. Programs that fall within these categories are provided with the *Summary of PGY 1-3 Residents Taking the 2023 In-training Examination by EM Residency Training Level*. ABEM suggests using your knowledge of the resident's training curriculum to pick an appropriate comparison level for your resident.

- 7. What is the standard error of measurement?** Every examination score is comprised of both real information on the test taker's ability and some error in that examination. Error in examination scores is based on error due to the quality of the examination (e.g., reliability, difficulty) and error due to external factors such as the test taker's preparedness on the examination day, the test taker's health on examination day (e.g., they were sick), or an environmental factor that impacted the test-taker's experience. To assess this error, ABEM uses a statistic called the standard error of measurement (SEM). The SEM is calculated using a reliability statistic (coefficient alpha) and the score variability.

Assuming the residents' observed scores are their "true scores" (the average score they would receive if they took the examination an infinite number of times without additional training or preparation), the resident could be expected to score within  $\pm 1$  SEM about 68% of the time, and within  $\pm 2$  SEMs about 95% of the time. The SEM should not be confused with the confidence intervals used for inferential statistics used in research, although it shares some of the same characteristics.

- 8. How is percentile rank calculated?** The percentile rank is calculated for each score by adding the percent of residents at each EM residency training level who achieve that score or less. A difference in one percentile can mean a difference in several score points for high and low scores achieved by few residents. On the other hand, a difference in several percentiles can mean a difference of only one score point in the middle of the score range where several residents might score.
- 9. Why are there so many messages in the reports about promoting my program?** Over the past few years, ABEM has become aware of several instances in which residency program faculty have used In-training Examination feedback to claim that their program has been "highly ranked" by ABEM. ABEM has never ranked resident training programs and believes that ranking programs is not in the best interest of the specialty.

In addition, programs should be aware that ABEM privacy rules require the resident's written permission before sharing scores outside the program. The scores are held in confidence between the program director and the resident unless the resident grants permission to share his/her score.

- 10. Who do I talk to if I have a question about my reports?** If you have any questions about your reports, please feel free to contact Kevin Joldersma, Ph.D., at the ABEM office by phone at 517.332.4800, extension 338, or by email at [kjoldersma@abem.org](mailto:kjoldersma@abem.org).

**Updated March 2023**