

Accuracy of a Testing Result

Part 2

Introduction

As described in Accuracy of a Testing Result: Part 1, some test scores are imperfect indications of knowledge mastery for some candidates. Scores that are high enough or low enough to be outside the margin of error from the cut score respectively indicate that a candidate is competent or not competent without a second thought. There remains some degree of uncertainty linked to scores within the margin of error. The phrase “cut score” is used throughout this document to describe the score required to pass a test.

Questions and Answers

This Part 2 document cautions against misinterpretations that could result from uncertainties as described in the following Questions and Answers:

Q. If error is observed in some scores, should an examination be considered invalid?

A. A perfectly accurate test of each candidate’s knowledge is an unrealistic expectation. A test of knowledge can never produce certainty about every result because the test is a type of indirect measurement. Because perfection is unrealistic, **it is inappropriate to disregard an examination result because evidence of small errors in some scores is observed.** It is theoretically possible for a set of test scores to lack sufficient accuracy for most scores to be useful, but such events have not been observed in NBRC examination results.

Q. Should scores close to the cut score be suspect because of the potential for error?

A. A score equal to, or just more than, the cut score identifies a candidate who *probably* rather than *certainly* has the necessary knowledge mastery because the score falls inside the range in which error can exert some influence. In other words, it remains possible that some of these results were helped by error. **Doubting a pass result because the score obtained by a credential holder was equal to, or close to, the cut score is unacceptable because there is no way to be certain that error helped or hurt a specific result.**

Q. What is the consequence of sharing information about examination content and how does doing so affect error?

A. Candidates control an important source of error that can increase scores other candidates subsequently receive. The more a candidate communicates about content observed on a recently taken examination, the more likely other candidates who follow will wind up with erroneously high scores. Such communication can occur one-to-one or through social media. **Communicating with others about examination content negatively impacts those who rely on the results, including patients.**

The NBRC Board of Trustees endorses the following statements in this regard:

- Educators should emphasize to their graduates that their professional responsibilities include taking NBRC tests in good faith to protect the meaningful use of the results.
- Candidates should take NBRC tests in good faith in fairness to other candidates and to the institutions responsible for making fair decisions based on test results.
- Terms and Conditions statements to which candidates agree before taking a test declare that removing or reproducing any part of the test is prohibited. Violations have resulted in invalidated test results and suspension or revocation of credentials.

Q. If a candidate fails the examination with a score close to passing, should he or she request the score be checked?

A. First, a technical problem is unlikely in a computer-administered system. If such a problem does occur, then a free-retake is a reasonable expectation. **Second**, absent a technical problem, about 90% of the explanation for scores is linked to knowledge mastery, which explains nearly all about candidates' results. Therefore, **a fail result is unlikely to be overturned after a review even when a candidate's score is close to the cut score.**

Summary

Candidates who earn scores high enough or low enough to be outside the margin of error respectively have demonstrated competence or a lack of competence without any doubt. Linked to the group of candidates in the middle are scores that could be meaningfully decreased or increased by measurement error. However, this does not mean that every score in the middle is influenced by error. The NBRC expects candidates who see themselves as professionals to take credentialing tests in good faith.