

FAQs Regarding the Comprehensive Psychometric Review of COMLEX-USA Level 2-Cognitive Evaluation (CE)

These questions and responses were derived from the inquiries the NBOME has received as of September 2, 2014.

1) Why was COMLEX-USA Level 2-Cognitive Evaluation (CE) under review?

COMLEX-USA Level 2-CE scores released on August 14, 2014 for the new testing cycle that commenced in June 2014 generated concerns from deans, candidates, student organizations and other stakeholders. As a result, the scores underwent a comprehensive psychometric review. A further update has been released. The primary purpose of this examination is the pass/fail determination for licensure so that NBOME can meet its trusted mission of protecting the public. For this primary purpose, the NBOME remains confident that the pass/fail determinations are accurate, reliable and fair.

However, the NBOME also acknowledges secondary uses of COMLEX-USA scores, most notably in residency program applications. The NBOME is intent on assuring the score scaling is as consistent and applicable as the pass/fail determination has proven to be.

On August 21, 2014, the NBOME announced that a comprehensive psychometric review of the 2014-2015 COMLEX-USA Level 2-CE testing cycle was underway and notified candidates, deans, program directors and key stakeholder groups including the American Osteopathic Association (AOA), American Association of Colleges of Osteopathic Medicine (AACOM), Association of Osteopathic Directors and Medical Educators (AODME), Osteopathic Program Directors Association (OPDA), the Council of Osteopathic Student Government Presidents (COSGP), the Student Osteopathic Medical Association (SOMA) and others. Additionally, the NBOME provided further information to the public through various mediums on September 2, 2014.

2) What was involved in the comprehensive psychometric review?

The comprehensive psychometric review included revalidation of scoring on the ability metric and pass/fail decisions:

- a) Individual student performance verification,
- b) Psychometric calculations confirmation,
- c) Internal psychometric review of current processes including formulas for score determination, and
- d) External review by two different, independent psychometric experts.

The NBOME believes this plan, reviewed and endorsed by independent, external psychometric experts, to be effective, responsive and fair. It preserves the integrity and the primary purpose of the assessment – protecting the public – and provides for year-to-year comparability of three-digit standard scores, and meets a standard of fairness to the candidates for secondary uses of examination scores.

3) Why did the COMLEX-USA Level 2-CE scores change following the comprehensive psychometric review?

The NBOME will continue to set the standard score required to pass at 400 in keeping with past practices. The NBOME is confident that this pass/fail standard is accurate and fair and provides a sound base for comparability from year-to-year for that purpose.

The NBOME was concerned that the three-digit standard scores for the first cohort of candidates released on August 14, 2014 might look different compared with previous years at a similar percentile. The NBOME felt it important to undergo the comprehensive psychometric review in order to sustain the integrity of the examination for its primary purpose, and at the same time, be appropriate for secondary purposes.

The closer the initial score was to 400, the less the impact; the further away from 400 (in either direction), the greater the impact. However, it is important to note that the updated three-digit score will more accurately reflect the percentile rank of the candidate as compared to other candidates in this and the previous year. Additionally, a score of 400 (the minimum passing score) will not change.

The updated standard scores will allow an improved comparability of the three-digit scores between candidates taking the examination in recent test cycles while upholding the primary purpose of the examination: a pass/fail determination for licensure. However, the underlying ability metric of the scores was not changed in the updated scores released on September 2, 2014. The NBOME is intent on ensuring the score scaling is as consistent and applicable as the pass/fail determination.

4) Did the average candidate performance change?

The NBOME has seen improved candidate performance and the pass rate to date is trending higher than in the previous year. Therefore, the overall average for this cohort may go up. However, a final average will be known only when the entire cohort completes the testing cycle (i.e., through May 2015).

5) As more candidates test, how will that impact the overall situation/score?

An individual's COMLEX-USA Level 2-CE three-digit score and the pass/fail (cut score) are not impacted as more candidates test.

6) Did standard deviation change for COMLEX-USA Level 2-CE after the psychometric review for the June/July 2014 examination scoring?

In order to provide a norm-based mean of 500, and a criterion-based pass score of 400, the previous scaling resulted in a decreased standard deviation reported on the

initial score release. Consequently, the three-digit standard score looked different as compared to those from previous years at similar percentile ranks.

In an effort to provide meaningful score reporting, the NBOME is reporting an approximate mean and standard deviation of the current distribution of scores. The updated reports will allow for better candidate score comparability across test cycles.

7) Is this COMLEX-USA Level 2-CE three-digit score of 400 the same as a 400 from the previous test cycle? What is the cut score?

The COMLEX-USA Level 2-CE three-digit standard score of 400 always reflects the minimum passing score established by the NBOME through rigorous and defensible standard setting processes. The cut score is the same as the minimum passing score and is used to classify test takers above or below 400 on the basis of their performance. The NBOME is confident that the pass/fail determinations are accurate, reliable and fair.

Refer to: http://www.nbome.org/standardsetting_passfail.asp?m=boa

8) What about the Electronic Residency Application Service (ERAS) transmission of my scores to residency program directors?

The NBOME immediately contacted ERAS. All COMLEX-USA Level 2-CE ERAS reports to residency program directors from August 14, 2014 have been retracted and new reports are being transmitted beginning September 2, 2014, therefore having minimal impact, if any, on the 2014-2015 residency application cycle.

9) What is standard setting? What is recalibration? Why are these necessary?

Although the terms *recalibration* and *standard setting* are commonly misused as if interchangeable, the concepts are different. In the standard setting process, a new passing standard is defined. Recalibration is the establishment of an ability scale based on current data. For more information, please refer to: http://www.nbome.org/standardsetting_app.asp?m=boa

In keeping with best practices in assessment, the NBOME reviews the standards for minimum competency required to pass COMLEX-USA examinations every four to five years. This process is typically referred to as "standard setting," and is needed to reflect changes in the practice of osteopathic medicine, changes in curriculum, changes in the ability of test takers and changes in the content of the examinations.

The periodic review and resetting of the pass/fail standards for COMLEX-USA examinations are consistent with the NBOME's mission of protecting the public by assessing competencies for osteopathic medicine and related health care professionals. It is critical to the validity and defensibility for the primary purpose of COMLEX-USA: osteopathic physician licensure.

As communicated to various stakeholder groups including colleges of osteopathic medicine (COMs), COM deans, state licensing boards, and the Federation of State Medical Boards (FSMB), and as outlined on the NBOME website, the passing standard for COMLEX-USA Level 2-CE was due for reevaluation. This occurred in the spring of 2014 for application in June 2014.

10) Why did/does COMLEX-USA Level 2-CE standard setting implementation occur in June, “mid-cycle”?

The COMLEX-USA Level 2-CE testing cycle has always been aligned with the academic year, which for most COMs ends in May. This means a new academic cycle typically commences in June. This has been the preference of COMs due to aggregate scoring reports that best allow deans to use COMLEX-USA data to provide direct evidence of student learning for the purpose of accreditation as well as for other curricular quality improvement.

11) How should I compare my COMLEX-USA scores from Levels 1, 2-CE, COMSAE, and COMAT?

The purpose and content of each examination is different (See the Bulletin of Information (BOI) <https://www.nbome.org/docs/comlexBOI.pdf>). While there is consistently a strong, positive correlation between performance on COMLEX-USA Level 1 and Level 2-CE examinations (i.e., high performers tend to remain high performers, and vice versa), scores achieved on different examinations are not directly comparable (i.e., apples-to-apples) since they are designed for different purposes as defined below:

- a) COMLEX-USA Level 1: Candidates are expected to demonstrate application of foundational and basic biomedical and osteopathic science **knowledge** relevant to clinical presentations as defined by the Level 1 blueprint. Level 1 emphasizes the scientific concepts and principles necessary for understanding the mechanisms of health, clinical problems and disease processes.
- b) COMLEX-USA Level 2-CE: Candidates are expected to demonstrate **application** of knowledge of clinical concepts and principles involved in all steps of clinical problem solving for osteopathic medical practice as defined by the Level 2-CE blueprint. Level 2-CE emphasizes the biomedical and osteopathic concepts and principles necessary for making appropriate clinical diagnoses through patient history and physical examination findings.
- c) COMLEX-USA Level 3: COMLEX-USA Level 3 is constructed according to the COMLEX-USA examination blueprint. Candidates are expected to demonstrate knowledge of clinical concepts and principles necessary for solving medical problems as independently practicing osteopathic generalist physicians. Level 3 emphasizes the medical concepts and principles required to make appropriate patient **management** decisions.

- d) COMAT: The NBOME's COMAT Series currently includes seven core clinical disciplines. Each subject examination is designed for standardized assessment in core osteopathic medical disciplines, such as end-of-course or clinical rotation student assessment. They assess an osteopathic student's achievement level on those subjects, with an emphasis on clinical application.
- e) COMSAE: COMSAE is a formative self-assessment examination for osteopathic students and residents to gauge the base of their knowledge and ability as they prepare to take a COMLEX-USA cognitive examination. COMSAE can be purchased individually by candidates. Studies have repeatedly shown a positive correlation between COMSAE and COMLEX-USA performance.

12) I have paid or I am thinking about paying \$50 for score verification. Is this an option worth doing?

Score verification was part of the comprehensive psychometric review for COMLEX-USA Level 2-CE scores released on August 14, 2014. Since all scores have undergone score verification, candidates do not need to request it. For those COMLEX-USA Level 2-CE candidates who have already requested a rescore of their August 14, 2014 report, the NBOME has refunded the \$50 fee. After September 2, 2014, if a candidate still wants a subsequent score verification, he/she should contact the NBOME (<http://www.nbome.org/comlex-pe.asp>) and be prepared to incur the \$50 fee.