

ABNM: MOC Assessment

J. Anthony Parker, MD, PhD, Associate Executive Director, American Board of Nuclear Medicine

The American Board of Nuclear Medicine (ABNM) will start a pilot program in 2017 testing CertLink™, a new platform under development by the American Board of Medical Specialties (ABMS). This new method for maintenance of certification (MOC) assessment has been made possible by a number of factors that have come together fortuitously. We are all aware of the discontent of physicians with the bureaucracy of the MOC process and particularly with the high-stakes MOC exam. Continuing medical education has broad support, but many participants dislike requirements that are perceived as impeding continuing medical education.

A second factor has been increased interest in testing for learning in the field of cognitive psychology. Testing has been shown to be a much better mnemonic enhancer than rereading or restudy. Rereading and restudy increase short-term familiarity with concepts but not long-term consolidation of memory. The term used for this short-term familiarity is “fluency.” Cramming for an exam tends to improve the results on the exam, providing a perceived sense of learning, but long-term retention is usually poor. By comparison, testing for learning during a longitudinal study program has been shown to be considerably more effective. Testing can also be used for “calibration,” identification of gaps in knowledge and areas for study. After short-term fluency has faded, periodic reinforcement of knowledge has been shown to be another strong method for memory consolidation.

A third factor is the considerable recent development in online education, such as massive open online courses, Kahn Academy, Magoosh, etc. Medical school platforms, such as Osmosis, are now available to aid in learning. These developments have spurred interest in new methods of evaluation while learning.

A fourth factor that has come together at a particularly good time is the development by the American Board of Anesthesiology (ABA) of the MOCA Minute™. The MOCA Minute, piloted in 2015 and implemented at the start of 2016, assesses ABA diplomates during a longitudinal question-based learning experience. It serves as the model for other ABMS boards, several of which are developing similar initiatives.

The ABNM, along with the American Boards of Colon and Rectal Surgery, Dermatology, Medical Genetics and Genomics, Ophthalmology, Otolaryngology, Pathology, and Physical Medicine and Rehabilitation are collaborating with the ABMS on testing the new CertLink platform. Diplomates will receive an e-mail informing them that a question is available. They can click then or later on a link that will take them to a multiple-choice question on the CertLink site, with a limited amount of time to select an

answer. After submitting an answer, they will receive immediate feedback, with explanations about which answer was best and why alternatives were not as good. Key points about each question will be provided, along with a brief explanation and an open-source reference or references.

The goal of this project is to provide testing for learning and to identify gaps in knowledge while at the same time allowing MOC assessment. Each question will provide or help solidify knowledge. Incorrect answers will identify gaps in knowledge, and the explanation will help fill those gaps. If more information is needed, reference(s) will provide a source for further study. After an interval to allow fluency to fade, similar questions (or “clones”) will be interspersed with new questions. A diplomate’s score will depend on the percentage of correctly answered initial questions and clones. A diplomate dashboard will illustrate performance. The Board has been pleased with the performance of the ABNM diplomates on the MOC exam, and we expect that most diplomates will be able to maintain good or excellent scores. For those diplomates, answering an individual question will be low-risk. CertLink will be largely testing for learning, keeping the testing while learning as a concern only for the very few poorly performing diplomates.

Learning styles differ, and CertLink may not be preferred by all diplomates. When we surveyed diplomates in the spring about preferences, no clear preference for random questions or article-based questions was identified. For the pilot, it was not possible to provide an array of options. We have chosen the question with explanation and reference(s) format because it includes testing for identification of knowledge gaps. Rather than have diplomates reread a topic on which they are well versed, testing to identify knowledge gaps allows more efficient study. Although a more continuous process has cognitive advantages, a few diplomates preferred taking the MOC exam each 10 years. That will remain an option.

A 5-year CertLink pilot is planned. During that period adjustments to the program will be made using feedback from diplomates. A key part of MOC is providing credible assessment of diplomate knowledge—credible to the public and to organizations that contend they represent the public. One of the key efforts of the ABMS during the pilot will be developing data that show that this method of testing while learning is credible and that the method of assessment is similar to traditional high-stakes exams. The ABNM strongly believes that online, low-risk, longitudinal assessment while learning has many advantages and that ABNM certification using CertLink will provide a credible indicator of specialty expertise.