

Examiner

NBME to Transition Subject Examinations to Web-Based Format

The NBME began offering web-based tests (WBT) in July 2007. The first program, Customized Assessment Services, permits faculty to create examinations tailored to local curricula using an NBME pool of basic science items. These customized exams are then delivered to students under proctored conditions at the medical school via computer. The NBME continued to expand its WBT services with the introduction of new examinations to assess the musculoskeletal, adult ambulatory, adult/pediatric ambulatory and medicine subinternship experiences. Additional WBTs designed to assess performance in other subinternships are currently under development. Since 2007, a total of 67 US and eight international schools have successfully administered one or more NBME web-based tests.

In March 2009, the Comprehensive Basic Science Examination was offered as both paper and web-based versions. Starting with the next academic year (2010-11), all basic science subject exams will be available in either web or paper format; the clinical science subject tests will be available in both formats the following year (2011-12). After each transition phase is complete, new forms will be implemented only as web-based tests. Paper subject examinations will continue to be available, but by 2015 it is likely that the NBME paper subject examination era will have ended.

There are distinct advantages to using the web-based testing instead of the paper subject examinations:

- Web-based tests can be ordered within six calendar days of the test date rather than the 22 days' notice required for paper exams.
- Score reports are routinely available 48 hours after the test is administered, making it unnecessary to pay an additional fee to expedite the results.

- Concerns around receipt, storage and return of paper test materials are eliminated.
- Security is enhanced by a feature that "locks down" the browser and prevents access to any other applications by examinees during the test session. Also, items are presented to examinees in random order, discouraging copying behavior.

To keep pace with the increased activity of WBT, the NBME has made a number of enhancements to the technical infrastructure that supports the delivery of these examinations. The NBME developed a workstation certification utility to allow medical school technical support staff to track and confirm that the computers used by examinees can successfully deliver the examinations. NBME support systems provide the flexibility to deliver examinations in both wired and wireless environments, in multiple locations simultaneously, and via examinee personal Mac /PC laptops or institution-owned computers. Those responsible for test administration gain access to a website that provides a variety of resources to manage all phases of test delivery.

A series of webcasts designed to orient faculty at interested schools to NBME web-based testing activities is planned for 2010.

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New Assessments Targeted to the Subinternship Experience

Many medical schools require that students complete a fourth-year subinternship (acting internship) as a graduation requirement. Based on the need for an examination to measure the effectiveness of the experience, the NBME has been working with clerkship and residency program directors to develop a series of examinations targeted to the subinternship experience.

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Web Publication of the *NBME Examiner*

Starting in 2010, this twice-yearly newsletter of the NBME, the *NBME Examiner*, will be an online publication only. The *NBME Examiner* will be published in web pages and PDF at www.nbme.org. Readers will receive email notification when new issues are available. The NBME will no longer use postal mail to distribute print versions of the *NBME Examiner*. Inquiries about the *Examiner* may be sent to examiner@nbme.org.

(New Assessments Targeted to the Subinternship Experience, continued from page 1)

Medicine Subinternship Examination

The initial development of the series focused on the internal medicine subinternship. The first step included meetings with clerkship and residency program directors to gain consensus about expectations for acting interns in internal medicine, including defining clinical tasks and responsibilities likely to be required across schools and programs; the information obtained was used to develop draft specifications for building the new examination. Using the draft blueprint, two 75-item test forms were constructed using recently retired items from the USMLE® Step 2 CK examination for review and approval by a task force of clerkship and residency program directors. The task force was also charged with development of new items and formats specifically targeted to the acting intern experience. New item development primarily focused on sequential item sets that unfold and challenge examinees to manage patients over time. Future examinations are expected to include items with associated multimedia and new formats that require examinees to complete hospital admission and discharge orders.

Over the past six months, the two 75-item forms of the web-based examination have been pilot tested at 15 medical schools. The pilot phase was scheduled in October with examinations becoming available as a service starting in November 2009. Schools currently participating in the pilot testing receive percent-correct scores; performance norms for



Left to right: Drs. Liscum and Apantaku; Jen Scotese (staff); Drs. Warnecki, Lind and Buckman

fourth-year students will be provided when we have completed the pilot phase.

Surgery Subinternship Examination

Work is well underway on the surgery subinternship examination and the pilot testing phase is expected to begin in the second quarter of 2010. Development of the surgery subinternship examination followed the same process as that for the medicine subinternship examination. The pictures below show task force members working in pairs to develop new innovative item formats for use on the examination.

Pediatric Subinternship Examination

Work on the pediatric subinternship examination is scheduled to begin in the fourth quarter of 2009 with the pilot testing phase beginning in 2011.

Future Directions

Residency program directors have expressed the need to assess baseline competency of incoming residents and have requested to use these new assessments for this purpose. A pilot test with a limited number of residency programs is scheduled to begin in June of 2010. Performance norms based on incoming residents (residency performance index) would be provided for participating schools and residency programs.

For additional information, please contact: abutler@nbme.org



Drs. James Hebert (Task Force Chair) and Rebecca Minter

INSIDE THE NBME >>

Foundations of Medicine

Over the course of the past five years, the NBME has received requests from a number of international universities and licensing authorities for valid and reliable assessments for undergraduate medical students, recent medical school graduates, and established doctors. The overall international medical curriculum is significantly different from the US curriculum, and there is a great deal of variation in curriculum content among international universities. Regulations in the European Union (EU), for example, call for free interchange of students and mobility of graduates, but there are no available benchmarks to inform judgments regarding the achievement of individual students or the performance of curriculum components.

The NBME, in collaboration with the Foundation for Advancement of International Medical Education and Research (FAIMER), began working with six universities in northern Italy in 2006 to develop a standardized test of knowledge for students seeking transfer experiences within the EU and in the US. The program has expanded to include universities in Portugal, Belgium, Germany, Poland, Spain and the United States, totaling 23 schools. This examination program has become known as International Foundations of Medicine (IFOM). The 2010 IFOM exam is a 200-item MCQ test that covers the clinical disciplines of Medicine, Surgery, Pediatrics, Obstetrics and Gynecology, and Psychiatry. Test questions are supplemented by internationally developed content in appropriate areas by faculty at the participating universities. English, Italian, and Portuguese versions have been prepared.

Students who complete the examination receive a performance profile and the possibility of a certificate of excellence. In 2008 an international panel of medical school faculty met in Parma, Italy to set a standard for the examination. This panel also agreed upon a standard of excellence. Students find the performance profile useful to gauge their areas of

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INSIDE THE NBME >>

Introducing the Newly Enhanced SPEX Exam

The Special Purpose Exam, or SPEX, is one program offered through the Post Licensure Assessment System (PLAS), a collaborative initiative of the NBME and the Federation of State Medical Boards (FSMB). Created in 1988, the SPEX is designed to assess the ability to apply, at a minimally acceptable level, the general medical knowledge considered essential for continued, unsupervised practice by physicians who hold or have held a valid, unrestricted license.

SPEX is a one-day multiple choice examination requisite for the general, undifferentiated practice of medicine and is intended to be used for endorsement of licensure. Because it is a "special purpose" examination, medical licensing authorities may use the SPEX as needed to

evaluate knowledge of physicians, including reinstatement of a license, or reactivation of a license after a period of inactivity (due to illness, disciplinary action, etc.). Since its inception, over 50 licensing jurisdictions have sponsored candidates for SPEX. In addition, more than half of the examinees have elected to take the examination without direct state sponsorship as part of the self-nomination application program. Physicians may elect to take the SPEX exam for reasons that include self-assessment or as a tool to demonstrate current cognitive competence for various initiatives. Since 1995, when it became the first NBME exam to be administered on a computer, more than 6,500 exams have been administered at the US and Canada-based Prometric testing centers.

In 2010, a new version of the SPEX exam will be implemented. In response to some concerns about the currency and relevance of the exam, the PLAS Program Committee, a committee of physician experts responsible for the

design and format of the SPEX, reviewed the blueprint of the SPEX exam and made modifications to ensure the appropriateness of the exam for practicing physicians. These changes will include more focus on patient care items and tasks that physicians do in practice and less focus on mechanisms of disease items. The exam will use content from USMLE item pools, which are high-quality, good-performing items used to assess minimal knowledge for the unsupervised and unrestricted practice of medicine. Thus, the content of the new SPEX will be relevant to current standards of practice and a state-of-the-art test of knowledge and judgment for physicians needing to demonstrate cognitive competence for the practice of medicine. One of the goals of the new SPEX will be to attempt to provide feedback that might be informative about topics for further study to enhance physicians' continuous professional development.

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IN MEMORIAM >>

Charles William Daeschner, Jr., MD



The NBME shares its sorrow with the family of Charles William Daeschner Jr., MD, who died in his home in Galveston, Texas on September 5, 2009.

Dr. Daeschner had a long and distinguished history serving the NBME in a number of capacities for many years. He was a member of the NBME Executive Board for 12 years, including service as Vice Chair before being elected to serve as Chair of the NBME from 1983 to 1987. In 1989, the NBME Executive Board approved a resolution in tribute to Dr. Daeschner commending him for his commitment to education and evaluation and expressing its deep appreciation for his dedication and contributions to the NBME. The resolution praised his involvement in NBME activities since 1968, including serving on the Part III Test Committee and several advisory committees, as Flex 1 Committee Chair, and in the NBME Membership in many roles. In 1991, Dr. Daeschner received the NBME's Distinguished Service Award honoring him for his long-term service and valuable contributions. In presenting the award, L. Thompson Bowles, MD, then Chair of the NBME, expressed the NBME's sincere gratitude and appreciation to Dr. Daeschner for his loyalty and extraordinary commitment to the NBME over his 23 years of service.

Throughout his long and demanding professional career, Dr. Daeschner made significant contributions to local and national medical communities and was honored with many awards for his dedication to excellence in patient care and teaching. In addition, he was the author of several hundred scholarly publications and textbooks including *Pediatrics: An Approach to Independent Learning*, one of his many contributions to medical education.

OUT & ABOUT >>

AMEE

The Association for Medical Education in Europe (AMEE) meeting took place from August 29 to September 2, 2009 in Malaga, Spain. Over 2,200 delegates from over 80 countries attended. Her Majesty, Queen Sofia of Spain attended the opening reception. Informative plenary sessions included overviews of international medical education collaboration, global health, and the need for reform in education and health care. Dr. James A. Hallock, former president of the ECFMG, presented the Miriam Friedman Memorial Lecture, "Evolution of Clinical Skills Assessment: Miriam Would Be Proud." This lecture highlighted the collaboration between the NBME and ECFMG and subsequent development of the USMLE Step 2 Clinical Skills examination.

The NBME was well-represented, with staff presenting papers and workshops on topics including psychometrics, test development activities, and Foundations of Medicine.

OUT & ABOUT >>

Faculty Development Workshop

The University of Minho's Medical Education Unit in Braga, Portugal, hosted a faculty development workshop for clinical skills assessment case development September 4 and 5, 2009.



Faculty members of University of Minho work in small groups to develop standardized patient cases.

Clinical Skills Evaluation Collaboration (CSEC) staff members Colette Scott and Gail Furman facilitated the workshop. Twelve faculty members from the school of medicine produced a test blueprint for assessing third year students' clinical skills of history taking, physical examination and communication skills. Five cases were completed and a foundation for future research collaboration was established.



Faculty and SP participants in the University of Minho workshop.

IN MEMORIAM >>

Sheldon Jacobson, MD



The NBME shares its sorrow with the family of Sheldon Jacobson, MD, who died on June 30, 2009. Dr. Jacobson began his service at NBME more than 15 years ago and was chair of the USMLE Step 3 Committee from 2007 until 2009. Dr. Jacobson has served in the NBME Membership as a test committee representative since 2000 and was actively involved in test development at the NBME for many years. He previously served as chair of the USMLE Step 3 Acute Care Committee and was a member of the NBME's Center for Innovation Advisory Committee and Edward J. Stemmler Research Fund Committee.

Dr. Jacobson was chair of emergency medicine at Mount Sinai Medical Center. The following is reproduced from an alumni update at the website of the Albert Einstein College of Medicine: "Originally trained in internal medicine and gastroenterology, [Dr. Jacobson] saw a desperate need for competent emergency care. He started the first paramedic training program (1974) and the first emergency medicine residency (1975) in New York. Dr. Jacobson also established the department of emergency medicine at Einstein/Jacobi Medical Center. His legacy will be the patients whose lives he helped save and whose care he improved, along with the students, residents, and attendings he taught."

NBME Policy Statements Relevant to Health System Reform

At NBME Annual Meetings in 2008 and 2009, the NBME Membership encouraged NBME staff to pursue the development of NBME policy statements relevant to the health system reform debate. The NBME Membership recognizes that our nation should provide affordable access to healthcare services for all Americans; the NBME supports this as the central goal of health system reform.

The NBME is a standard bearer for an important component of patient safety and quality healthcare: health professional assessment. The NBME Membership encouraged us to articulate how health system reform might assure that affordable and accessible healthcare is also of high quality and how the NBME and other organizations with similar purpose might collaborate in achieving this outcome.

As a result of the strong indication of the NBME Members' desire that NBME become more engaged in public discussion of health system policy, we convened several staff and NBME Member working groups during 2008 and early 2009, including the newly appointed Non-Physician Stakeholder Task Force, to identify relevant topics.

Using rankings from NBME Members and suggestions from members of groups that developed a topic list, staff developed a draft outline for a policy document. Responding to recommendations from experts in advocacy, the NBME Chair and President drafted a letter capturing the key themes. The policy document outline and letter were reviewed and endorsed by the NBME's Executive Board in June 2009. In early July, the letter was sent to key congressional staff. While the full policy document is still in development, key issues identified in our letter to policy makers are listed below.

Excerpt from NBME Letter to Key Congressional Staff

"The NBME has promoted high quality in the health professions workforce for 95 years. We

seek to protect the health of the public through state of the art assessment of health professionals. We recognize that high quality clinicians are only one ingredient in an effective and efficient healthcare system, and that a dysfunctional system can undermine the protections intended by our work in defining standards and assessing individual practitioners. Therefore, the NBME supports efforts to reform the US healthcare system.

"Specifically, we advocate for a healthcare system

- that is financed in a manner that provides essential healthcare services to all Americans at an affordable price;
- in which the right number of the right kinds of clinicians are available in the right places to provide access to essential healthcare services to all Americans;
- that uses evidence to optimize a balance of cost and quality and to reduce preventable adverse events, including errors, to a minimum;
- in which qualified providers deliver patient-centered care.

"We support these goals of healthcare reform and commit the NBME to promoting these goals, particularly where our assessment instruments can emphasize their importance.

"Health system reform also offers the opportunity to improve many elements that contribute to overall system quality and efficiency. The NBME urges policy makers to consider the following recommendations for change that NBME believes will improve our system, patient safety and the health of the public:

- Encourage or require a national system for defining a taxonomy of competence, articulating minimum standards for competence, and developing common tools for assessing competence and measuring performance for all healthcare professionals.
- Require that licensed clinicians demonstrate sufficient proficiency in all relevant domains, including domains important to effective care that are now underemphasized, such as prevention, communication, patient-centeredness, and evidence-based practice.

- Require that all healthcare professionals demonstrate continuing proficiency through a robust system of competence assessment and measurement of practice effectiveness as a condition of continuing licensure.
- Require that healthcare information systems arising from health system reform support both patient care and clinician assessment needs, since effective clinician assessment translates into improved patient care.
- Encourage or require collaboration among organizations responsible for monitoring the quality of healthcare professionals, both within each profession and across professional and geographic boundaries.
- Support the creation of a longitudinal research effort to identify the characteristics of our educational and regulatory systems that contribute to a more effective healthcare system, allowing continuing improvement based on evidence."

The more comprehensive document is under review by the Executive Board and the Membership; when it is complete and endorsed by the Membership, it will provide guidance as the NBME seeks partner organizations to advocate for change in the American healthcare system.

INSIDE THE NBME >>

Nominations for Volunteers to Serve on Test Committees

Nominations for membership on test material development committees for the United States Medical Licensing Examination® are welcome from medical licensing boards, medical schools, professional societies, and individuals; self-nominations are also welcome. Nominations for membership should include a brief summary of the qualifications of the nominee. Nominations should be sent to:

Gerard F. Dillon, PhD
Vice President, USMLE
National Board of Medical Examiners
3750 Market Street
Philadelphia, PA 19104

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strength and weakness by task. The certificates also become a useful part of the students' portfolios to further demonstrate their level of knowledge. Medical schools and licensing authorities are finding many uses and benefits for the program and the deliverables. In addition to the student benefits, Dr. Nuno Sousa from the Escola de Ciencias da Saude in Minho, Portugal identified the institutional benefits: "The accreditation of quality of programs offered to students is essential by an external evaluation. Student mobility, especially within the network of universities participating in the FOM, is increased. The internal process of assessment is improved with the detailed

feedback provided by the NBME whereby we can gauge our areas of weakness and strength. A win-win situation for the students and the medical school is the result."

Enthusiasm continues to build at the participating universities and is supported by the increasing number of examinees. In 2007, the exam was administered to 643, 1605 in 2008, and will exceed 2500 examinees in 2009. The program is already gaining interest from potential 2010 participants wishing to join the network and preparations are well underway. The exam will be offered predominately in paper and pencil format in 2010 with some pilot work to begin delivery in web format. Please visit www.nbme.org for further information.

(Introducing the Newly Enhanced SPEX Exam, continued from page 3)

In the future, maintenance of competence/licensure programs will likely require quality improvement-focused assessment methods that simultaneously assure the public that physicians remain competent to practice medicine and also identify appropriate continuous professional development opportunities for physicians. As these initiatives develop, the new SPEX exam will continue to evolve as a resource for physicians, state licensing authorities, and other entities responsible for the ongoing competence of the medical profession. A future goal in the evolution of the SPEX will be to become more customized to practice patterns so that physicians can assess themselves based on their actual practice.

Please visit www.nbme.org for further information on SPEX and other PLAS programs.



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