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Comments/Feedback

The ABNM welcomes comments from diplomates and residents regarding issues raised in this issue. Please email your comments to ABNM: certification processes.

In Memoriam

In Memoriam: Frank Howard Deland, MD, 1921-2015
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In Memoriam: Robert E. O’Mara, MD, 1933-2015
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2015 has been an important year for ABNM and for the nuclear medicine community, as we reflected upon a proposal for nuclear medicine to become a discipline of radiology, which would have led to the dissolution of the board. Broad stakeholder feedback was obtained through three major surveys, and the majority opinion is in favor of the continuation of ABNM as an independent ABMS member board. We thank you for your participation in this process. Although it may feel as if this conversation has rocked our foundations, these events serve to draw the nuclear medicine community into focus regarding important issues facing diplomats and the specialty.

At a time when scientific advances in molecular medicine herald a new era for imaging and theranostics, nuclear medicine specialists should be well positioned to provide physician expertise for our growing field. In order to fill these shoes we are challenged to embrace hybrid imaging – SPECT, PET, MR and whilst recent training programs dedicate attention to CT experience there are many who are adapting in mid or late career to significant changes in clinical practice. This is the nature of medicine, and exemplifies why we must all be lifelong learners.

Resting within a comfort zone of familiarity threatens our ability to remain fully engaged in nuclear medicine of today.

The Board has received a clear message from the nuclear medicine community that we are valued as an institution and that our continued existence is a necessity for nuclear medicine to be an independent specialty. So we turn to the future with renewed energy. But as we look forward, it will not be business as usual. The Board recognizes the need to evolve, as practice evolves, to support our diplomates in the changing landscape of the specialty.

These are challenging times for many areas of specialist medicine, with shifting policies for resource utilization, economics of healthcare and heightened competition within the job market. Physicians are increasingly busy with volume and complexity of clinical work, and are required to meet local institutional, state medical board, radiation licensing authority and Board credentialing requirements. Maintenance of specialty certification is a complex mix of SAM, CME, performance improvement projects and high stakes examination – a common theme for ABMS member boards. There is recognition, however, that the MOC process should be less burdensome and so the ABNM is committed to significant changes in how we approach MOC. The challenge for the Board is to develop a new MOC process that is more clinically relevant, easily accessible and acceptable to our diplomates. Please read more in the article from Dr Daniel Pryma in this addition of the newsletter.

The future is bright for nuclear medicine, and continued growth in molecular medicine is anticipated. However trainees and programs have decreased in number and there is a need for us as a community to discuss how we go about attracting medical students to our field. This is a critical issue for our specialty. The ABNM looks forward to contributing to an outreach plan in collaboration with NM stakeholder organizations. Please read more in the article by Dr George Segall, Executive Director.

Ongoing discussions within the NM community are planned over the next few months and will be coordinated by the SNMMI. The Board encourages ABNM diplomates to stay involved in these conversations about the important issues that influence the future vitality of our specialty and we thank you for your support.
Looking To The Future: The ABNM In The Next 10 Years

The ABNM and the ABR have decided not to move forward with the proposals in the joint statement sent to stakeholders in July 2015 [click here], which was to replace Nuclear Medicine and Nuclear Radiology training programs with a single training pathway leading to a new ABR certificate in NM, with ultimate dissolution of the ABNM. The reason for the decision was explained in a letter sent to stakeholders in November 2015 [click here].

The specialty of Nuclear Medicine has seen tremendous growth in the past two decades. Hybrid imaging has become widespread since the introduction of SPECT/CT in 1999, PET/CT in 2001, and PET/MR in 2011. There have been many new radiopharmaceuticals approved for diagnosis and therapy, including the first beta amyloid imaging agent in 2012, and Radium-223 dichloride for treatment of prostate cancer skeletal metastases in 2013. Nuclear Medicine is poised on an historic expansion of the specialty into molecular imaging using non-radioactive tracers, including targeted biomarkers, nanoparticles, microbubbles, and optical imaging.

The continued growth of Nuclear Medicine requires physicians of the future to have more training in functional and anatomic imaging. Fortunately, there are three well-defined pathways leading to dual certification by the ABNM and the ABR, including one year of Nuclear Medicine training after Diagnostic Radiology residency, 16 months of Nuclear Medicine training during four years of Diagnostic Radiology residency, and the new 5-year training programs combining 3 years of Diagnostic Radiology training with 2 years of Nuclear Medicine training.

The future of the specialty is bright, but the ABNM recognizes the challenges that lie ahead. The most critical issue is a lack of understanding or interest in Nuclear Medicine training among medical students and residents, which has resulted in a decrease in the number of Nuclear Medicine training programs and residents from 56 programs with 156 residents in 2009-2010 to 43 programs and 84 residents in 2015-2016. The ABNM will be working with the SNMMI and other stakeholders on an outreach plan to reverse this trend. The plan could include development of a series of high quality PowerPoint presentations introducing Nuclear Medicine and Molecular Imaging to medical students. The plan could also include a web portal where medical student can go to learn about training programs, job market, and earnings. Most of all, we need to be proactive and recruit.

Future employment opportunities are likely to be plentiful for physicians who are dual certified by the ABNM and the ABR. We need to work, however, to support physicians certified only by the ABNM, especially recent graduates. The ABNM recognizes the qualifications of ABNM diplomats to perform and interpret CT optimized for diagnosis when performed on a hybrid PET/CT or SPECT/CT camera, for diplomats who trained in an ACGME accredited NM program after July 2011, and for diplomats trained prior to this date who have had residency or post graduate training fulfilling the recommendations of the SNMMI for hybrid imaging and who have been recertified by the ABNM. The ABNM can publish this policy to help current diplomats, and can work with other groups to help diplomats who need to meet the ACR requirements for on the job training in CT. The ABNM can work with the Nuclear Medicine Program Directors to help current Nuclear Medicine residents and recent graduates get additional residency training in Diagnostic Radiology. According to the 2015 report of the National Resident Matching Program, 55 out of 166 programs offering PGY-2 positions in Diagnostic Radiology were unfilled, and only 862 positions were filled out of 999 offered. These data suggests opportunities for the 60-80 physicians annually certified by the ABNM who want additional training in Diagnostic Radiology.

The ABNM is also working to make Maintenance of Certification more valuable, less expensive, and easier. These goals are especially important for physicians who are certified by more than one ABMS member board. The ABNM currently accepts all MOC activities meeting the Part 2 and Part 4 requirements of other ABMS member boards. The ABNM is also likely to expand the list of quality improvement activities that meet Part 4 requirements to include activities physicians already do. The ABNM is also considering replacing the MOC exam, which diplomates take every 10 years, with a user-friendly process that encourages learning and self-assessment. A pilot program is likely to be launched in 2017. Finally, if more diplomates participated in MOC, the ABNM could lower annual dues, which are currently $400 per year.

The ABNM is prepared to meet the challenges and opportunities of the future to ensure the continued growth of Nuclear Medicine, meet the needs of diplomates, and serve the public by setting high standards for training, initial certification, and continuing competence of physicians.

Please send your comments, suggestions, and ideas to abnm@abnm.org.
Question Writing Enhances Learning

Testing is often considered to be useful only for knowledge evaluation; however, testing is also a valuable mnemonic enhancer (https://abnm_wordpress_uploads.s3.amazonaws.com/wordpress/wp-content/uploads/2015-2_SNMMI_Newsline_1.pdf). It is one form of what the cognitive psychologist call retrieval practice. Retrieval practice has been shown to be considerably more important than rereading or restudy for acquisition of durable knowledge.

Question writing is often considered to be a task needed for making an exam. However, the question writing experience also had educational value for the writers. A major responsibility for the Board members is writing questions for the in-training, the certification, and the maintenance of certification exams. It becomes quickly apparent to new Board members that question writing is also valuable for learning. The question writer needs to recall an important aspect of nuclear medicine, transform it into a question, and then check references to make sure the question is scientifically valid. Exam questions written by one member are reviewed by other members. Going over the questions as a group not only improves the questions, but the sharing of information also is another educational exercise. In cognitive psychology terminology, question writing enhances learning through a process called reflection. Reflection involves retrieval of information from memory, followed by elaboration. Elaboration of a concept can be expressing it in your own terms, explaining it to someone else, thinking about it in a new context, or writing a question using the concept. Elaboration connects the recalled concept to other information so that it becomes more durable.

Question writing can be used for resident teaching. It is a good way to structure a journal club. Each participant writes a question before the journal club. The reflection involved in writing the question enhances learning about the topic of the question. Each participant becomes the expert for that piece of information, as opposed to a single person being the journal club leader. A journal club can start by reviewing the participants’ questions as a group. Participants other than the writer each answer the question; like testing, answering the question is retrieval practice for every one in the group. Seeing how others interpret or misinterpret a question shows how the question might be confusing and helps teach the writer to write better questions. A Journal club based on participant question writing provides two good forms of learning enhancement, reflection writing a question and retrieval practice answering other participant’s questions.

A revolution is taking place in education. Kahn Academy has had a great success. Massive open online courses (MOOCs) are not replacing college, but certainly are finding their place in the educational landscape. Gamification has had some exciting successes (www.fold.it), and there is interest in gamification in education. Crowdsourcing is popular for avoiding speed traps, but crowdsourcing has also been effectively applied to education.

A medical student education electronic resource (osmosis.org) has been quite successful. It has many educational tools including question banks that cover the major medical school courses. In addition to other tools, it facilitates question writing and test making, particularly single question or few questions tests. It provides push notifications to students for question repetition on their mobile devices. Students can write question related to the course material, and their classmates can use those questions for studying. Peer-to-peer teaching, which is recognized as a powerful teaching method, is combined with crowdsourcing of question writing and answering.

Crowdsourcing of question writing has the advantage of relevance for the participants. The topics that need reinforcement are identified by peers. Peers also identify the scope and content of the material that needs to be studied. Each time a question is answered, the question is rated. Peers grading of the value of the questions gives feedback to the question writers and identifies good questions for others.

As the ABNM and the American Board of Medical Specialties think about the future of MOC assessment, we need to be aware of the revolution in education and consider how methods that have proved to be useful in other applications can best be applied to MOC and MOC assessment. We welcome suggestions and the help of Diplomates.
ABNM and MOC Assessment

Daniel A. Pryma, M.D. – MOC Committee Chair

One of the most stress-provoking aspects of Maintenance of Certification (MOC) is the assessment examination taken every 10 years. While pass rates are generally quite high (as one would expect since the test takers have all been previously board certified), the exam poses two challenges: 1) the stakes are high with serious implications for a non-passing result; 2) while the exam assesses current knowledge it provides only limited feedback on performance (and limited feedback once every 10 years does little to foster productive lifelong learning). Thus, we have a great interest in ways to enhance the MOC assessment process to continue to accomplish the goal of ensuring that practitioners maintain currency in the field but in the context of an ongoing and instructive process.

The ABNM is a member board of the American Board of Medical Specialties (ABMS). Following the lead of the American Board of Anesthesiology (ABA), the ABMS will be developing tools for MOC assessment that can be used by member boards (http://abnm_wordpress_uploads.s3.amazonaws.com/wordpress/wp-content/uploads/2015-2_ABMS.pdf). In 2014, the ABA developed a CME project, the MOCA Minute™, where a pilot group of ABA diplomates received one question each week. The diplomate had one minute to answer the question. Immediately after answering the question, the diplomates would be given the correct answer, the key point, and a brief explanation. The MOCA Minute™ was well received by the pilot group. In 2016, the MOCA Minute™ will be expanded to all ABA diplomates, and participation in this (one minute per week) process will replace the every-10-year ABA MOC examination.

The ABMS tools will be similar to the MOCA Minute. The goal of the initial pilot project will be to determine if this type of system can be used not only for CME, but also for ongoing diplomate assessment. If the results of diplomate assessment are shown to be accurate, then a system like this could be used as an alternate to the traditional MOC exam. Compared to the traditional MOC exam, there would be several advantages to this type of MOC assessment. The evaluation would be longitudinal with feedback on performance via a diplomate dashboard. There would be space for repetition to promote learning and retention. Answering a single question would involve much less anxiety than the high-stakes MOC exam and a weekly process would allow for far more questions over the 10-year cycle than are typically seen on an MOC exam, so each individual question would have less at stake. Cramming for an exam, which has been shown to be a poor strategy for long-term retention, would be avoided. Indeed, the primary purpose of MOC is to improve healthcare delivery though encouraging continuous lifelong learning, not cramming for a few weeks every 10 years.

The ABNM plans to take part in the ABMS pilot project. The ABNM hopes to pilot a CME project some time in 2017. A major challenge for the ABNM is developing the large number of questions that will be needed to start this project. One possibility for content development is crownsourcing though the exact method for implementation content development has yet to be determined. However, crowdsourcing question writing and question answering raises some interesting possibilities for the future of MOC, (https://abnm_wordpress_uploads.s3.amazonaws.com/wordpress/wp-content/uploads/2015-2_AED_Report.pdf). If you are interested in helping out with the development of content for the pilot project contact abnm@abnm.org.
SNMMI Newsline:
Nuclear Medicine, Social Media and Two Degrees of Separation
George M. Segall, M.D., Executive Director

Reprinted with permission SNMMI Newsline J Nucl Med 2015 56:19N

The American Board of Nuclear Medicine (ABNM) is one of the smaller boards among the 24 member boards of the American Board of Medical Specialties (ABMS). The ABNM has certified 5,600 physicians since the first certification examination in 1972 and currently has more than 4,700 active diplomates. Approximately 60-80 new diplomates are certified each year, a steady number for the last 4 decades. In comparison, the 3 largest medical boards have each certified more than 100,000 physicians and collectively account for approximately half of the nearly 1 million physicians certified by ABMS member boards.

One of the unique attributes of our small medical and scientific community is the personal connection we have with one another. Six degrees of separation is a theory postulated by Hungarian author Frigyes Karinthy in 1929, asserting that everyone can be connected to any other individual through no more than 5 people. World population was estimated to be 2 billion people in 1927.

How closely are we connected with one another in our medical and scientific community? To help answer that question, I asked 2 colleagues to separately identify 10 individuals who have advanced nuclear medicine. The list included physicians as well as scientists in the United States and abroad. Four individuals were included in both lists, for a total of 16 luminaries. I wrote to each of these 16 individuals and asked him or her to indicate those on the list with whom they had a professional connection, including a minimum of 1 face-to-face conversation or meeting. I received answers from 12 individuals, who indicated they had a direct professional connection (0 degrees of separation) with a remarkable average of 70% of the other individuals on the list (range 33%-100%). Based on this admittedly nonscientific survey, one could reasonably estimate that we are all professionally connected to one another with no more than 2 degrees of separation.

The nuclear medicine community in the United States has 1 leading professional society, SNMMI, in addition to several other professional organizations that significantly contribute to education and research. SNMMI membership in 2015 is more than 18,000, including more than 14,000 technologists, 2,622 physicians, and 885 scientists and pharmacists. A large number of nuclear medicine professionals attend the annual meeting, which provides an opportunity for making new professional connections. Approximately 1,739 physician members (66%) attended at least 1 annual meeting from 2011 to 2015.

Digital social networks are becoming a large part of everyday life as a result of convenience and universal connection to the Internet. The ABNM made its debut on social media in September 2014. You can find us on Facebook at https://www.facebook.com/americanboardofnuclearmedicine, on Twitter @ABNM or https://twitter.com/ABNM, or you can search ABNM on either site. Both sites contain important dates and updates regarding examinations, as well as other useful information. Social media allows the ABNM to share information with diplomates between semianual newsletters and, more important, allows individuals to communicate with one another as well as with the board.

Our professional connections are the bedrock of the nuclear medicine community. The personal and digital network that we have created is a tangible asset that helps us advance professionally and scientifically. Many challenges and opportunities lie ahead. We will meet them together.
ABMS is initiating a pilot project to test assessment models for the recertification examination similar to the American Board of Anesthesiology® (ABA) MOCA Minute™.

This pilot is the result of a workshop attended by representatives from 13 of the 24 Member Boards held this past July in Raleigh, North Carolina. The workshop, which was sponsored by ABMS and ABA, focused on the possibility of adapting the MOCA Minute approach for other Member Boards’ diplomates. ABMS is in the process of identifying Boards interested in joining the pilot.

The MOCA Minute is a longitudinal assessment tool that ABA began piloting in 2014. It will replace the ABA’s current Maintenance of Certification in Anesthesiology (MOCA) Examination. Beginning January 4, 2016, ABA diplomates will no longer be required to take the 10-year exam and will instead participate in an expanded MOCA Minute pilot, in which they will answer 30 questions per calendar quarter; 120 per year.

“The educational literature supports the concept of more frequent, lower stakes assessments that contribute to an overall summative decision,” stated Mira Irons, MD, ABMS Senior Vice President for Academic Affairs. “Through this pilot, ABMS will invest in innovative models that deliver intensive, longitudinal, practice-relevant assessments that serve to both rigorously assess diplomates’ knowledge, judgment, and skills and assist them in keeping up to date and improving practice in a manner consistent with new principles and forms of assessment and adult learning,” she noted. “A secondary, but equally important, goal is to evaluate the effectiveness of the assessment and learning models and how they contribute to the value of Maintenance of Certification.” These innovations are encouraged by the updated Standards for the ABMS Program for Maintenance of Certification (ABMS MOC®) approved by the ABMS Board of Directors in January, 2014.

“This approach requires a somewhat different way of thinking because it focuses on assessment for learning instead of assessment of learning,” noted David B. Swanson, PhD, ABMS’ Vice President of Academic Programs and Services. “The traditional MOC Part III exam assesses whether or not learning has occurred at a point in time – an assessment of learning. In contrast, this approach focuses on assessment for learning, that is, assisting diplomates in keeping up to date on an ongoing basis,” he explained, adding, “The use of frequent longitudinal assessments with retesting of key content also promotes retention of information.”

The assessment models to be tested in this pilot will have common characteristics. They will include:

- Longitudinal assessment with spaced repetition to promote learning and retention.
- Use of more focused, diagnostic assessments to identify knowledge gaps and assist diplomates in keeping up to date.
- Immediate feedback on performance through confirmation of correct/incorrect answers and explanation of correct responses.

“Within this general framework, there is substantial room for Board-specific differences in program emphasis and assessment formats,” Dr. Swanson said. While the ABA’s MOCA Minute uses question-based assessments, other options include article-based assessments and problem/topic-based assessments that group items around a theme, such as management of asthma in children, or a combination of the two. “Member Boards will need to decide which approaches are most appropriate for them,” he added. In addition to item formats, other considerations that need to be addressed are item-writing needs and potential sources of test material. During the pilot, however, Member Boards will be required to maintain their MOC Part III exams.

As part of the pilot, ABMS will conduct research and evaluation to test psychometric validity of the questions and assessment methods, the ability of the construct to inform summative decisions, and the associations of different delivery methods with processes and outcomes of care, among other measures.
The is the second in a series of short reviews for ABNM diplomats to help keep us updated on published findings regarding the value of the Maintenance of Certification Process (MOC) in our careers. These articles are often published in non-imaging related publications and may not be seen by members of our specialty. The American Board of Medical Specialties has an on-line evidence library where articles are listed with short summaries of their findings. It is constantly updated and can serve as a resource for ideas and provide background for the MOC as an important aspect of our professional careers, quality patient care, and re-imbursement. Below is a summary of an article from the ABMS on-line evidence library published by our Internal Medicine colleagues regarding quality of care assessment.

Assessing Quality of Care Knowledge Matters
Eric S. Holmboe, M.D., Rebecca Lipner, Ph.D., Ann Greiner, MCP

The article begins with the premise that “what is often overlooked in quality improvement, but equally important, is that effective microsystems must have highly competent clinicians, who possess sufficient knowledge and clinical skills to make and execute evidence-based decisions, exercise informed clinical judgment, and deal effectively with uncertainty. Clinical judgment and the ability to deal with uncertainty are especially critical with respect to misuse and overuse of processes of care. …. Physician knowledge and clinical judgment also are central to making correct diagnoses.”

The article goes on to present a discussion of the issues in medical knowledge and quality. How does specialty board examination address these issues? Can we assess clinical reasoning and diagnosis ability in a meaningful way? The authors review and cite multiple literature references that support findings that over time, clinical skills tend to diminish for practitioners, and that engaging in continuous professional development, as aspect of which can be specialty board MOC and re-certification, can help reverse this natural trend. Patient care and outcomes data analyses for specific clinical conditions has also identified that better outcomes are associated with the specialty board certification status of the physician providing the care. In other words, the authors state that “evidence exists that medical knowledge as one of the foundational competencies for clinical practice, matters.” Our patients also care about this documentation of competence. Professional competence, cognitive and diagnostic skills in practitioners; their assessment and maintenance is an area of active investigation is beginning to be explored in evidence based investigations.
SNMMI Newsline: ABNM International In-Training Examination Program

J. Anthony Parker, M.D., Ph.D., Associate Executive Director

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The Nuclear Medicine Residency Review Committee of the Accreditation Council for Graduate Medical Education requires residents to take the American Board of Nuclear Medicine (ABNM) In-Training Examination (ITE). The board has expanded the ITE program, allowing diplomates who will be taking the Maintenance of Certification (MOC) exam in October to practice by taking the ITE exam. The goal is to lessen the anxiety of diplomates about the MOC exam, especially those diplomates who have not recently taken a multiple choice test.

Training programs in other countries have also used the ITE for resident evaluation. Nuclear medicine residents in Australia and New Zealand used the ITE first in 2010. The Academy of Medicine in Singapore used the exam in 2013. With success in these 2 programs, the board reached out to a few other countries, and next year the exam will be used for resident evaluation in Australia and New Zealand, Singapore, Kuwait, and South Africa.

The American Board of Medical Specialties (ABMS), the ABNM parent organization, has incorporated a wholly owned subsidiary, ABMS International™, to provide support and added value to governments and organizations around the world striving to set high standards for assessing and certifying medical specialists. In addition, some of the member boards have reached out to international certifying organizations. The ABNM international ITE program is in line with this broader effort.

The ITE is a 3.5-hour paper-based exam. The 12 members of the ABNM Board of Directors write questions that are used on the certifying exam, the MOC exam, and the ITE. The questions are edited by committee and then placed in 2 pools: 1 for the certifying and MOC exams and 1 for the ITE. Questions on all 3 exams are quite similar, emphasizing current or emerging clinical practice. The ITE also has a few questions that test knowledge needed to learn the principles of nuclear medicine and to become lifelong learners.

The certifying and MOC exams are administered by an international testing agency, Pearson VUE (Bloomington, MD). Residents who are admitted to the certifying exam and diplomates who need to take the MOC exam may sit for the exam throughout the world. This flexibility is useful not only for diplomates currently living in foreign countries but also for diplomates serving in the military who are posted abroad. To minimize costs for the ITE, the board uses a paper-based exam. This limits the availability of the ITE exam for foreign-based diplomates to locations at which the exam is given for residents.

The ABNM has been pleased with the response to this program and hopes to expand the use of the ITE to other international nuclear medicine training programs.
Cognitive psychology has shown that retrieval practice is much better than traditional studying for long-term retention of learning. Testing has traditionally been thought of as a method of evaluation, but testing can also be used in a learning strategy as a form of retrieval practice (1). Testing is only one form of retrieval practice; retrieval practice is commonly used during nuclear medicine resident teaching. Teaching at the workstation often involves a staff member or another resident asking a question. The process of answering the question is retrieval practice. Furthermore, going over cases, both for resident teaching and during our daily practice of nuclear medicine, is an example of retrieval practice. We evaluate the history and the imaging and then search our knowledge base to come up with a diagnosis or a differential diagnosis. If we are unsure we may seek information from a colleague or ask Dr. Google. The bottom line is that retrieval practice is an exceptionally important part of our learning, both during training and during practice.

Continuing medical education (CME) and maintenance of certification (MOC) are often thought of as being separate from practice, in large part because of the bureaucratic overlay of CME and MOC. But the continuing learning process has always been a part of medicine; ongoing learning throughout one’s career has traditionally been captured by the word “practice” in medical practice.

The American Board of Nuclear Medicine (ABNM) seeks to provide more value to the MOC process, making it more directly beneficial to practice. The challenge for the ABNM is to make the MOC process credible to our patients and those who contend they represent our patients. Credibility provides value to ABNM certification both with respect to our patients and our colleagues. Credibility in the current environment means that there must be an evaluation. The challenge for the ABNM is to emphasize learning and de-emphasize bureaucracy while providing credible diplomate evaluation.

Cognitive psychology has shown that learning from testing is enhanced by feedback (1). Although testing has a positive effect without feedback, one negative effect is that a person becomes more convinced of a wrong answer after committing to that answer on a test. Overcoming this negative effect is one of the benefits of feedback (1). Cognitive psychology has also shown that mass learning (e.g., “cramming” for a test) provides fluency and short-term recall but is poor at enhancing long-term retention (1). Part 3 of MOC, the MOC exam, suffers as a learning tool both because there is no feedback and because diplomates tend to prepare for the exam with mass learning.

One benefit of ABNM membership in the American Board of Medical Specialties (ABMS) is that we can learn from the best practices of other medical boards. The American Board of Anesthesiology (ABA) has been a best practice leader and has been developing innovative simulations for anesthesia emergencies. They have also been leaders in trying to integrate principles from cognitive psychology into their MOC Anesthesiology (MOCA) program. They have piloted the “MOCA minute,” a combination of MOC Parts 2 and 3. Once each week, diplomates who had recently taken the MOC exam were provided with a single new question. The diplomates had 1 minute to answer a question similar to one that more than half the diplomates had answered incorrectly on the exam. The diplomat was then provided feedback about the correct answer and the principles needed to answer the question correctly. If the diplomat missed the question, then another similar question was presented after an interval. The MOCA minute provides spaced learning and feedback. Going forward, the ABA plans to use this type of approach as an alternative to the traditional MOC exam.

As a small board with limited resources, development of a program like the MOCA minute would usually not be possible for the ABNM. An advantage of being part of the ABMS is that we can share resources with other boards. The ABMS is in the process of developing MOCA minute-like resources for member boards. The ABNM will take part in this process. We believe that this process may increase the value of MOC for our diplomates while decreasing the bureaucratic burden of assuring our patients that the process is credible.

Like the ABA, the ABNM will likely run a CME pilot. One issue for us will be the rapid development of content for this effort. Anyone who shares our excitement about the potential for this project and is interested in helping with the content development effort is encouraged to contact me at Tony_Parker@BIDMC.Harvard.edu or the ABNM at ABNM@ABNM.org.

REFERENCE
2015 ABNM In-Training Examination (ITE)

Number of Candidates Who Took Exam 130

<table>
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<th>Category</th>
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<tr>
<td>Residents-Canadian</td>
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<tr>
<td>Non-Trainees</td>
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Number of Nuclear Medicine Training Programs Participating in ITE Examination

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<td>Canadian Programs</td>
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Dates For The Next ABNM In-Training Examination (ITE)

Week of January 11-16, 2016
Robert E. O’Mara, MD, 1933–2015

Robert E. O’Mara, MD, former chair of radiology and chief of nuclear medicine at the University of Rochester Medical Center (URMC), died on April 26 at his home in Tucson, AZ.

O’Mara was born in Flushing, NY, and in 1955 graduated from the University of Rochester, where he was part of the school’s undefeated 1952 football team. He received his medical degree from the Albany (NY) College of Medicine in 1959 and served as a captain in the U.S. Air Force from 1960 to 1963. He completed residencies in surgery at Rochester General Hospital and in radiology at St. Vincent’s Hospital (New York, NY), followed by a fellowship in nuclear medicine at the State University of New York Upstate Medical Center (Syracuse).

He served on the faculty at Upstate Medical Center and published several early papers in partnership with John G. McAfee, MD. He also served on the faculty at the University of Arizona College of Medicine (Tucson) before returning to URMC in 1975. At URMC he served as director of nuclear medicine through 1988 and as chair of the department of radiology from 1987 to 1991.

Dr. O’Mara published more than 50 peer-reviewed scientific papers across a broad spectrum of radionuclide imaging and therapy. His earliest such paper, on hepatic “scintiscanning,” was published in 1967. He led a number of studies on bone scanning and, later in his career, focused more closely on nuclear medicine applications in thyroid cancer. He retired in 1999 and moved to Tucson, where he practiced part-time at the University of Arizona until 2006.

“Dr. O’Mara was an excellent physician, teacher, and scholar,” said David Waldman, MD, PhD, chair of Imaging Sciences at URMC, in a published university tribute. “He made a tremendous impact on so many people’s lives.” A celebration of Dr. O’Mara’s life was held on May 4 in Tucson. He is survived by Brenda O’Mara, his wife of 51 years, 3 children, and 2 grandchildren.
Frank Howard DeLand, MD, 1921–2015

Frank Howard DeLand, MD, who devoted his professional life to the practice of nuclear medicine and for almost a decade served as the editor of The Journal of Nuclear Medicine, died on February 27. He was born in 1921 in Jackson, MI. His education in engineering at the University of Michigan (Ann Arbor) was interrupted by service in World War II, where he was a captain in the U.S. Army Air Corps, flying reconnaissance in the Pacific theatre. He became a member of the China Burma India Hump Pilots Association and earned numerous recognitions for meritorious service.

After the war, he completed his bachelor’s degree at the University of Michigan and in 1952 received his medical degree from the University of Louisville (KY). After an internship at Philadelphia (PA) General Hospital, he served as a fellow in pathology at the Mayo Clinic (Rochester, MN), where he also earned a master’s degree in pathology. Dr. DeLand’s earliest appointments were at The Ohio State University (Columbus; 1956 and 1957) and at Florida Southern College (Lakeland; 1960–1967). After training in nuclear medicine at Johns Hopkins University (Baltimore, MD), he became a professor of radiology at the University of Florida School of Medicine (Gainesville; 1970–1974), followed by professorships at the University of Kentucky School of Medicine (1974–1985) and from 1985 until his retirement at the State University of New York (SUNY) School of Medicine (Syracuse). At SUNY he served as a professor of radiology and pathology and as associate dean of the SUNY Health Science Center.

Dr. DeLand lectured both nationally and internationally on a broad range of topics representing the multiple foci of nuclear medicine in its formative years. He served as the editor of The Journal of Nuclear Medicine from 1975–1984 and as president of the Southeast Chapter of the Society of Nuclear Medicine (SNM) in 1981 and 1982. He contributed as a member on numerous committees of the SNM and on the SNM Board of Trustees. He was a member of the American Board of Nuclear Medicine. He authored many books and more than 175 peer-reviewed articles and contributed to the development of the first automated blood culture system.

Dr. DeLand is survived by Mary Maitland Schwab DeLand, his wife of almost 66 years, 4 children, and 6 grandchildren.