From The Editor

The ABR Is Listening

2016;9[3]:54-55

by Lane F. Donnelly, MD

We are pleased to present to you the latest edition of *The BEAM*. As always, our goal is to keep the ABR's candidates and diplomates informed about changes in the landscape of professional certification.

As ABR leadership, we are constantly trying to improve our processes to protect the public and meet the needs of our diplomates. In considering potential changes, ABR leadership highly relies on feedback from diplomates regarding our processes. Response to this feedback has been demonstrated in a number of recent changes to certification practices, several of which are described in this edition of *The BEAM*.

In 2015, we announced that the ABR had reviewed and revised its policy establishing how ABR diplomates may comply with requirements for Maintenance of Certification (MOC) Part 4: Practice Quality Improvement (PQI) [1]. In addition to meeting requirements by performing a PQI project, diplomates may also meet requirements by demonstrating meaningful participation in any one of many defined PQI activities. These changes were made in recognition of the numerous ways in which radiology professionals contribute to improving patient care and were shaped by diplomates' feedback about the confusion and frustrations related to some aspects of the previously defined MOC Part 4 process.

In a recent ABR announcement, which is also described in this edition of *The BEAM* [2], ABR leadership introduced a major revision to MOC Part 3 – Assessment of Knowledge, Judgment, and Skills. The 10-year proctored examination is being replaced with a pilot of an online longitudinal assessment process [2]. The new process is designed to have minimal impact on the diplomate's workday and does not require time away or travel expenses. Previous feedback from diplomates, stating that these were major sources of dissatisfaction with the previous MOC Part 3 process, was highly considered when ABR leadership investigated new options.

Also included in this edition of *The BEAM* is a description of changes made to processes and content related to Noninterpretive Skills (NIS) material on the Core, Certifying, and MOC Examinations [3]. The ABR has created a single NIS process for all exams, reduced the size of the single *NIS Syllabus,* removed nonclinically relevant materials from the exam domain, and reduced the amount of NIS material on any examination to approximately 10 percent. The ABR

greatly relied on diplomates' feedback and dissatisfaction with the previous process when creating the new process.

The ABR leadership is listening and does value and take into consideration the feedback of its candidates and diplomates when considering changes to certification processes. This is demonstrated in the three examples described above, as well as many others. We appreciate your willingness to provide that feedback and help us continuously improve.

I hope you find this edition of *The BEAM* informative and helpful.

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2. Guiberteau MJ. ABR improvement of MOC Part 3: Assessment of knowledge, judgment, and skills. The BEAM 2016;9[3]:56-58.

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From the President

Online Longitudinal Assessment Update:
Work Begins on MOC Part 3 Revision

2016;9[3]:56-58

by Milton J. Guiberteau, MD

ABR "Online Longitudinal Assessment," or "OLA," is now the official moniker adopted by the Board for the new, more continuous process to be vetted as a replacement for the ABR's current secure, proctored MOC Part 3 examination, taken every 10 years. As announced to all of our diplomates on May 18, 2016, the ABR is developing a pilot to establish OLA's alignment with the American Board of Medical Specialties (ABMS) 2015 MOC Standard for assessment of radiology professionals' knowledge, skill, and judgement. The pilot is also designed to refine the technical aspects of online delivery and obtain necessary feedback from MOC participants to ensure a process that meets their expectations. Work on this innovative and resource-intensive project has now begun in earnest so we can meet our previously stated goals of initiating the diplomate pilot in the latter part of 2018, with subsequent launch of a final version for diagnostic radiology by mid-2019.

The primary goals of OLA for our diplomates include the following:

- To move to a more contemporary model of professional development by incorporating strides made in adult education, which demonstrate that assessment of knowledge is most conducive to learning when feedback is immediate and specific. OLA also aligns with the Institute of Medicine's goal of improved translation of knowledge into clinical practice.
- To transform MOC from a list of seemingly unrelated requirements to a coherent, integrated program in which Part 3 (Assessment of Knowledge) can be used to guide Part 2 (CME and Self-Assessment). Knowledge gained through CME, in turn, may translate into meaningful practice improvement (Part 4).
- To further develop MOC as a framework for a diplomate's continuous, career-long professional development through a meaningful ongoing program, rather than the current once-a-decade challenge by a "binge-and-purge" examination.
- To bring the experience to the diplomate, rather than the diplomate to the experience, OLA will produce less anxiety and disruption by requiring no time away from work and family and sparing diplomates the expense and inconvenience of travel.

- To change diplomate perception of the Part 3 assessment from a "tax" required to maintain certification to an "investment" in themselves, and thus, in the care they provide to their patients.

Diplomate response to these goals and to the rough outline of the new process has been overwhelmingly positive. And, to honor the Board's commitment to keep diplomates informed periodically of progress toward defining the OLA format, I would like to present a few recent Board decisions with the understanding that this is, and will continue to be, a work in progress. Thus, some details may change before—and very likely after—the pilot is completed.

To participate in OLA, diplomates enrolled in MOC will submit profiles of the clinical practice areas that most closely fit what they do every day. This will ensure that the questions they receive are pertinent to their practices. Diagnostic radiologists with ABR subspecialty certificates need not create practice profiles; instead, they will automatically receive questions related to their subspecialty(ies). These questions will be double-purposed to count toward both DR and subspecialty certifications.

The ABR will send emails to the diplomates containing Internet links to the question(s), or questions may be accessed online as needed. The ABR will administer two questions each week, for a total of 104 annually. Of these, only 52 must be answered each year, which allows diplomates to decline some items that may not fit well with their practice profile. Once posted, a question will be available for four weeks before it expires. Questions may be answered individually or in small batches as they accumulate.

When opened, individual questions must be answered within a limited period of time (approximately one minute), depending on the complexity of the question. After answering a question, diplomates will know immediately whether or not they are correct, and focused educational material related to the question's content will be presented to fill a gap in —or otherwise enhance—the diplomate's knowledge of the topic. As a self-assessment tool, if a question is answered incorrectly, a similar question related to the subject matter may appear at a later time to assess learning. Thus, while OLA will have a summative purpose of assessing diplomate knowledge base, it also will have a formative component that supports knowledge improvement.

The exact scoring model has not yet been determined and will be finalized after the pilot is complete. However, the criterion-based nature of the assessment will be preserved as it is now, so there will be no curve or fixed percentage of those who pass the assessment. Thus, it is possible for all participants to pass. Because adequate sampling statistics are required to accurately assess performance, a summative decision will not be made until a diplomate has attempted 200 questions, which will require between two and five years. After that time, summative decisions will be made in a continuous fashion following each additional question attempt. The ABR will use the most recent summative decision to evaluate the MOC Part 3 requirement during annual review of MOC compliance on March 2 each year.

Until OLA is piloted and launched, if you need to PASS AN MOC EXAMINATION by MARCH 2, 2017 (as indicated on the Part 3 tab in myABR), you are still required to take and pass the MOC exam in 2016. For all other diplomates, your prior examination will continue to count toward

satisfying the MOC Part 3 requirement until the launch of OLA in your discipline. Please remember that MOC participants must continue to meet the requirements of Parts 1, 2 and 4.

Once OLA is launched, the traditional MOC exam will continue to be offered for:

- those not meeting the requirement in 2017,
- those who fail to pass the traditional exam,
- those who don't participate in OLA, and
- those with inadequate performance on OLA.

At this point, I am obligated to repeat that this is a work in progress and can be changed at any time during the development process. The ABR staff and Board members are working diligently to meet the deadlines we have set, but we could use your help. Converting our current examination question banks to the new format and creating new material, while continuing to create and maintain our current initial certification and MOC exams, will be a very arduous process. If you would like to help, please submit a volunteer application, which can be found on our website, theabr.org/abr-volunteering.

Like my fellow Board members and ABR staff, I am convinced that this change in our Part 3 assessment model will succeed in making MOC a more productive and satisfactory structure for professional development. OLA will not only serve to assure the confidence of our patients, the public, and other healthcare stakeholders of our ongoing commitment to them, but will also instill a sense of accomplishment and satisfaction in our diplomates through their participation in ABR MOC.

CALL FOR APPLICATIONS -

ABR Examination Committee Volunteers

2016;9[3]:59

The American Board of Radiology (ABR) is issuing a *Call for Applications* for volunteers to serve on its Initial Certification and Maintenance of Certification (MOC) examination committees.

As reported in Dr. Guiberteau's article above, the ABR is currently developing a pilot that may potentially replace its MOC Part 3 requirement to pass a traditional proctored examination every 10 years. The pilot Part 3 assessment tool, known as ABR Online Longitudinal Assessment (OLA), will incorporate modern and more relevant adult learning concepts to provide psychometrically valid sampling of diplomate knowledge.

Additional volunteers are needed to launch this important new program and continue work on the existing exams. Committee members must have practiced in the field for at least one year, be certified by the ABR (or ABMP for medical physics), and meet requirements of the MOC program. They serve a three-year term, renewable once. The total time commitment is approximately 50 to 70 hours per year.

More information on volunteering for the ABR can be found at www.theabr.org/abr-volunteering. To apply, please complete and submit the ABR volunteer application form at https://form.jotform.com/61745152459157.

Focus on Maintenance of Certification

Reminder: Simplified Attestation

2016;9[3]:60-61

by Vincent P. Mathews, MD, ABR Board of Governors

On January 1, 2016, the ABR implemented a process of Simplified Attestation for diplomates enrolled in Maintenance of Certification (MOC). Consequently, diplomates are no longer required to upload specific information regarding their MOC participation. They are required only to attest that they have met the requirements for Part 1 (Licensure), Part 2 (CME), and Part 4 (PQI) of MOC. The ABR will already know each diplomate's status for Part 3, the MOC examination.

The specific requirements of each part are clearly stated during the attestation process. If the ABR has information from other sources, such as the CME Gateway, this will be reflected automatically in the diplomate's status. The group practice administrator can still attest on behalf of diplomates using MOC Team Tracker. Ultimately, however, the diplomate is responsible for the accuracy of the attestation. In the event of an audit, the diplomate will need to produce specific information regarding licensure, CME, and PQI. Simplified attestation FAQs are available on the ABR website via this link.

The diagram on the next page illustrates the Simplified Attestation process, which each diplomate enrolled in MOC needs to complete by March 1 every year. Please note that a diplomate who does not attest to meeting requirements in one or more of the four MOC parts at an annual look-back is reported to the American Board of Medical Specialties (ABMS) and on the ABR website as "Certified, Not Meeting the Requirements of MOC."

(See diagram on next page.)

Simplified Attestation

On January 4, 2016, the ABR implemented **Simplified Attestation**.

Who must attest?

All diplomates participating in Maintenance of Certification (MOC). Diplomates in their first 3 years of certification are required to attest to Part 1 (Professional Standing) only.

How do I attest?

Part 1 - Professional Standing: Select the "I Attest" button if you maintain an active, unrestricted license to practice medicine in at least one jurisdiction in the U.S., a U.S. territory, or Canada.

Part 2 - Lifelong Learning and Self-Assessment: Select the "I Attest" button if you have earned 75 Category I CME credits over the prior three years, at least 25 of which are self-assessment CME (SA-CME).*

Part 4 - Practice Quality Improvement (PQI): Select the "I Attest" button if you have participated/completed at least one PQI project or activity in the prior three years. *See www.theabr.org/moc-part4-activities.

Why do I have to attest?

The attestations you complete in myABR are used to determine status of your MOC participation and the public-reporting status of your certification(s). The annual look-back will update your public-reporting status based on your attestations in myABR.

Diplomates who have completed attestations and are meeting MOC requirements at the annual look-back are reported to the ABMS and on the ABR public website as "Certified, Meeting MOC Requirements." See www.theabr.org/moc-gen-landing.

When Must I Attest?

To meet the deadline for the annual look-back, all attestations should be completed on or before March 1 each year.

Notes:

*See www.theabr.org/moc-part4-activities.

Focus on Residents

Strategy for Success: Diagnostic Radiology Certifying Exam

2016;9[3]:62-64

by Donald J. Flemming, MD, ABR Trustee

You have completed five years of residency training, and most candidates in the current work environment will also complete at least one year of fellowship training. Now you are faced with taking the ABR Certifying Exam just three months after moving and starting a new job. Seems like a daunting task! This article will provide a roadmap for preparing for the Certifying Exam and will also address common questions and concerns about it.

The Certifying Exam currently consists of five components. Two parts, Essentials and Noninterpretive Skills (NIS), are compulsory. Candidates choose the other three components based on their practice patterns and expertise. Preparation for the exam should be organized as follows.

General Preparation

Studying for this exam should be similar to preparing for any exam you have taken on the long road to becoming a board-certified radiologist. A common concern for many candidates is that radiology is too broad a discipline, and it is difficult to understand how to focus your efforts in a limited amount of time. Here are some general tips to address this concern:

- Avoid cramming

  Goal achievement literature has shown that it is important to commit time on a calendar to review and prepare. It is best if you set aside a specific and consistent time of the day and map out all study sessions at the start. Make sure your significant other and clinical partners are aware of your schedule and that the schedule is realistic and includes downtime for you and others in your life. Some people may feel they need time off from work to prepare for this exam. It is probably not necessary for most candidates, but this is an individual choice.

- Use clinical time wisely

  One of the most powerful ways to prepare for this exam is to **work clinically**. Take simple notes on the cases you see each day. Pay particular attention to your errors and weaknesses and make sure you spend some time each week correcting your deficiencies. Compare your notes and experience with what is expected in ABR clinical study guides to identify gaps that can be rectified with after-hours studying.

- Download study guides

  Study guides for all exam modules are available at www.theabr.org. These guides should be downloaded early in the study process. An immediate cursory review is recommended, so you can understand the scope of preparation required. This cursory review should be followed by detailed and organized preparation. Read a few sections of the NIS or Essentials study guide every week. Test yourself every once and a while by writing down everything you can recall about a given section in the study guide WITHOUT looking at it. Do this immediately after studying a section and again five to seven days later. Keep track of what you have retained and what you cannot remember.

- Take notes

  Keep track of your learning by taking notes. You should jot down concepts that you know as well as those you have trouble understanding or remembering. Physically writing in a journal rather than typing into an electronic note has been shown to improve retention.

- "Train like you fight"

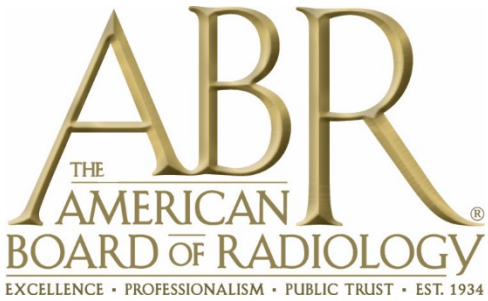
  It is helpful to prepare for a multiple-choice examination by answering multiple-choice questions. These can come from item banks in commercial online products or from CME activities such as ACR Case-in-Point, ACR Continuous Professional Improvement (CPI) modules, and self-assessment modules from journal articles (e.g., *Radiographics*, *AJR*, or *JACR*).

- Take time to reflect

  One of the challenges of modern life is actively pausing to reflect. Sit down at least once a week to reflect on your day, week, and month. It may be harder to do this than you think. It is best to avoid distractions, so turn off your cell phone and find a quiet place to consider what you have done well and not so well in the recent past. Celebrate your strengths but also accept your deficiencies. Write these in your journal and review your previous notes so you can assess your progress.

Summary

An organized approach to preparation for the Certification Exam is highly recommended. The tips provided should help you optimize your chance for success. After you are board certified, these same techniques may help you gain mastery of radiology if they are incorporated into daily practice in a rigorous fashion. Continuous learning and reflective practice are the cornerstones for becoming the best physicians we can be.



Focus on Quality and Safety

Noninterpretive Skills: Changing the Approach for the ABR Examinations in Diagnostic Radiology

2016;9[3]:65-66

by Lane F. Donnelly, MD, ABR Trustee for Quality and Safety

In a previous article in *The BEAM* [1], we outlined concerns raised by ABR candidates and diplomates about test items on Quality and Safety (Q&S) on the Core Examination and about Noninterpretive Skills (NIS) on the Certifying and Maintenance of Certification (MOC) examinations. Concerns included that Q&S and NIS questions and material were not relevant to the clinical radiology practice of many diplomates, and that this material was over-represented on the examinations. Consequently, an NIS Workgroup was formed to review and revise the approach to exam content on the topics of Q&S and NIS. Based on the recommendations of the workgroup, the changes described below have been made.

A Single NIS Process

Historically, separate committees, syllabi, and processes existed for the Q&S exam questions on the Core Exam and NIS questions on the Certifying and MOC exams. Now, there will be a single NIS process to create this type of exam content for all ABR examinations, including the Core, Certifying, and current Maintenance of Certification examinations.

A Shorter NIS Syllabus

Beginning in 2017, there will be a single NIS Syllabus that defines the domain of exam items for all ABR diagnostic radiology examinations. Previously, there were separate Q&S and NIS syllabi.

The NIS Syllabus also has been rewritten, edited, and reduced to half its previous length. The current NIS Syllabus is 100 pages of text, and the version created for the 2017 exams is approximately 50 pages of text.

Another improvement to the syllabus is better version control. Each version of the syllabus has a title page listing the year for which the syllabus is intended to be used and a list of examinations to which the syllabus is applicable. This should help candidates and diplomates ensure that they are using the correct version of the syllabus. The new syllabus also has a table of contents and improved formatting to make reading and navigation easier.

The 2017 NIS Syllabus will be posted on the ABR website later in 2016 so it can be used in studying for 2017 examinations.

More Clinically Relevant Content

In reducing the length of the NIS Syllabus and testing domain, efforts were made to remove or greatly reduce the materials that were most often viewed as irrelevant to the clinical practice of many diplomates. Such feedback was greatly considered when cutting the length of the syllabus in half.

Consistent Percentage of ABR Exams Related to NIS Content

Due to the previous method used to assemble ABR examinations—with a dedicated Q&S or NIS module of 60 units—an inconsistent number of exam items related to Q&S/NIS on different examinations unintentionally occurred. On the 2015 ABR examinations, the percentages of NIS-related questions were as follows: Core (11 percent), Certifying (19 percent), and MOC (25 percent). As a result, the amount of NIS content on the remaining 2016 Certifying and MOC examinations has been reduced.

The ABR also has pledged that future examinations will consistently include approximately 10 percent of questions related to NIS. To make this possible, beginning in 2017 we will incorporate NIS questions into other test modules rather than having a dedicated NIS module.

The Future MOC Online Longitudinal Assessment Model and NIS

Many details related to a future change in the MOC examination from a traditional proctored exam to an online longitudinal assessment, which was recently announced, still need to be determined [2]. One of the things not yet decided is how NIS materials will be tested using this new approach, which is intended to test "walking-around knowledge." The manner in which NIS materials are integrated will be communicated as more details are settled.

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2. Guiberteau MJ. ABR improvement of MOC Part 3: Assessment of knowledge, judgment, and skills. The Beam 2016;9[3]:56-58.

Focus on Interventional Radiology

Upcoming Options for Attaining American Board of Radiology IR/DR Certification

2016;9[3]:67

by Anne C. Roberts, MD, Associate Executive Director for Interventional Radiology

As you may be aware, in 2012 the American Board of Radiology was approved by the American Board of Medical Specialties (ABMS) to begin issuing specialty certification in interventional radiology/diagnostic radiology (IR/DR). Physicians beginning their Vascular and Interventional Radiology (VIR) fellowship in July 2015 will be the first group to be able to earn this new certification.

Below is information about the two options available for earning certification.

Option One:

- Take the DR Certifying Exam in fall 2016 at the ABR Exam Center in either Chicago or Tucson.
    - If passed, the candidate will be issued DR certification.
- Then take the IR/DR Certifying Exam **(oral component only)** in fall 2017 in Tucson.
    - If passed, the candidate will be issued IR/DR certification.
- Candidates will be required to complete one year of post-fellowship training practice experience in IR (minimum 15 hours per week in IR).
- Fees: five DR annual fees, plus current IR/DR application fee

Option Two:

- Wait until fall 2017 and take the IR/DR Certifying Exam (computer-based component ***and*** oral component) in Tucson.
    - If passed, the candidate will be issued IR/DR certification.
- Candidates will be required to complete one year of post-fellowship training practice experience in IR (minimum of 15 hours per week in IR).
- Fees: five DR annual fees, plus current IR/DR application fee

If you have any questions about ABR certification, please visit the interventional radiology FAQs page on our website by clicking here. ABR staff also are available by email at info@theabr.org or by phone at (520) 790-2900.

Focus on Radiation Oncology

CME, SA-CME, and SAMs: Adding Clarity to Current Requirements

2016;9[3]:68-70

by Paul E. Wallner, DO, Associate Executive Director for Radiation Oncology, and David Laszakovits, MBA, Director of Certification Services

Continuing medical education (CME) has been an integral element of physician practice for decades. Many entities, including state medical licensing boards, hospitals, national credentialing organizations, and specialty societies, among others, have required physicians to earn a variety of CME credit hours. Some jurisdictions have gone so far as to specify detailed requirements for topics that must be included in the educational experiences, such as HIV/AIDS, pain management, cultural competency, and palliative care (1). As requirements and educational offerings became more varied and complex across entities and jurisdictions, a centralized governance body for CME activities was a logical step. In 1981, the Accreditation Council for Continuing Medical Education (ACCME) was created to bring order to the postgraduate medical education process (2).

Founding and current sponsoring organizations of the ACCME include the American Medical Association (AMA), the American Board of Medical Specialties (ABMS), the American Hospital Association (AHA), the Association of American Medical Colleges (AAMC), the Association for Hospital Medical Education (AHME), the Council of Medical Specialty Societies (CMSS), and the Federation of State Medical Boards (FSMB). Each of these ACCME founding organizations has a significant stake in postgraduate medical education and recognizes the need for systematic policies and procedures that can be understood and employed nationally. At this time, the ACCME accredits approximately 2,000 organizations to provide a variety of programs, including almost 150,000 individual activities. These activities, employing an increasingly wide variety of media and format, have in common a need for appropriate planning, content value, and documentation (3).

As required by the ACCME through the late 1990s and early 2000s, CME program providers focused on “up-front” documentation of program planning, topics, speakers, and avoidance and/or disclosure of potential conflicts of interest. Strict guidelines and restrictions were established for for-profit entities supporting programming and presenters. The primary metric for attendees was “seat time,” i.e., time spent in the program, although this specific element was difficult to establish credibly. During this same period, the ABMS moved to ensure that its Maintenance of Certification (MOC) requirements were consistent across its 24 member boards, and to meet demands for greater physician accountability from government, payers,

and the public. These initiatives necessitated a shift in the focus of the newly designated lifelong learning offerings from "seat time" to measurement of the actual knowledge gained from a program. The need for this assessment of knowledge was emphasized by the FSMB, which recognized its responsibility to the public to ensure "ongoing competence of physicians seeking licensure" (4, 5).

At this time, all ABMS member boards have specific requirements for CME, and CME with assessment credits, embedded into their MOC Part 2 "Lifelong Learning and Self-assessment" elements. For historical reasons related to practices of certain stakeholder specialty societies, the ABR has continued to allow specific programming to be designated by the provider as either self-assessment CME (SA-CME) or self-assessment modules (SAMs). Current American Board of Radiology (ABR) Part 2 requirements include a minimum of 75 AMA *Category 1* CME credits every three years, of which at least 25 credits must be SA-CME (6, 7, 8). SAM program offerings must be prequalified by the ABR, but once any entity has provided 10 qualified SAM programs, it can apply for "deemed status," by which prequalification of offerings is no longer necessary. Organizations such as the American Society for Radiation Oncology (ASTRO), the Radiological Society of North America (RSNA), and the American College of Radiation Oncology (ACRO) have attained this deemed status recognition.

Despite widely publicized descriptions of the variety of acceptable programming, confusion remains as to the differing designations employed by various content providers. In addition to ABR-prequalified SAMs, the ABR will count all AMA *Category 1* CME activities in "enduring materials" (including web-based and print) and "journal-based CME" formats toward the SA-CME requirement (9).

The ABR defines "self-assessment CME activities" as interactive learning opportunities that use self-assessment tools to help learners reflect on their practice and identify their individual needs. There are three types of SA-CME activities:

- SAMs (Self-Assessment Modules) created by societies and other organizations and prequalified by the ABR
- AMA *Category 1* CME offerings, especially materials online and in written form with embedded questions
- Podium presentations with a post-session assessment instrument. Some organizations call these "SA-CME," and others call them "SAMs." Both terms are equivalent, with the number of credits determined by the ACCME or an ACCME-accredited *Category 1* CME provider

Products without self-assessment instruments are eligible for only CME credit. Organizations offering credit for CME or SA-CME activities must be accredited by the ACCME to do so.

According to AMA policy for CME, "Self-Assessment CME activities include the following features:

- They provide an assessment of the learner that measures achievement of the educational purpose and/or objective(s) of the activity with an established minimum performance level; examples include, but are not limited to, patient-management case studies, a post-test, and/or the application of new concepts in response to simulated problems.

- They communicate to the participants the minimum performance level that must be demonstrated in the assessment in order to successfully complete the activity for *AMA PRA Category 1 Credit*™.
- They provide a reference to appropriate bibliographic sources to allow for further study" (9).

The ABR works closely with a wide variety of entities to ensure that its candidates and diplomates have access to a diverse group of programming and media offerings to meet current standards and interests for their MOC Part 2 needs. Program planning advice to these educational content providers is routinely offered, and the ABR will continue to monitor changes in the CME, SA-CME, and SAM marketplace to adopt to evolving opportunities.

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Focus on Medical Physics

The Self Directed Educational Project

2016;9[3]:71-74

by Geoffrey Ibbott, PhD, ABR Board of Governors, and ABR Trustees Jerry Allison, PhD; Michael Herman, PhD; and J. Anthony Seibert, PhD

Medical physicists often face the challenge of learning a new skill for clinical practice, teaching, or administration. The self-directed educational project (SDEP) is a tool developed by the American Board of Radiology to make that task more organized and productive. SDEPs are opportunities available only to ABR-certified medical physicists and are approved by the American Board of Medical Specialties (ABMS) for Maintenance of Certification (MOC) credit. An SDEP helps the physicist organize the assimilation of new knowledge so the process is more efficient, thorough, and useful. SDEPs are not required but may be counted for either Continuing Education (CE) or Self-Assessment-CE (SA-CE) credit. A maximum of one SDEP may be recorded yearly. Fifteen CE credits are given for each completed SDEP.

SDEPs can be used to improve one's knowledge in a wide variety of areas. Some examples of SDEPs include the following:

- Quality improvement
- Research projects that have a self-educational component
- Publication of original research that has a self-educational component
- New lecture development
- Regulatory issue review
- Educational topics
- Technology updates
- New protocol implementation

These are just a few examples; almost any topic relevant to education in an individual's area of practice is acceptable. To be efficient, an SDEP must be formulated before an individual begins the project.

How is an SDEP structured?

The elements of an SDEP are as follows:

- Significance: a statement of the educational need
- Approach: a list of activities designated to address the need
- Evaluation of achievement, with an initial prospective statement and a summary statement at the time of completion
- Impact on practice/outcome statement, with an initial prospective statement and a summary statement at the time of completion

To begin an SDEP, one needs to consider what knowledge is needed and why one needs it. The "why" is important because by considering "why," one may modify the structure of the necessary information.

Significance: We are installing our first PET-CT scanner, and I need to improve my knowledge of PET shielding and the testing of PET shielding so I can efficiently and effectively design and test the shielding.

Once an individual decides on the required elements of the SDEP, he or she should make a list of the resources proposed for use. These can include:

- AAPM reports
- Virtual library presentations
- Journal articles
- Discussion with other physicists
- Online materials

Individuals may worry excessively about details because they fear that an ABR audit will be hypercritical. That is not the case as the ABR assumes that someone conducting an SDEP does so in good faith.

Approach: Initially, I will use the following resources. Others will be added as necessary.

- *AAPM Report 108*
- *PET/CT Facility Design – ACMP 2010*
- *AAPM 2007 Summer School Resources*
- *Discussions with XX, YY, and ZZ*
- *Internet search for PET/CT shielding resources*
- *AAPM Virtual Library Resources*

Following the design of the educational project, an individual works with the resources to acquire the appropriate knowledge and then puts it into practice. When the individual is satisfied that he or she has completed the project, there are two final steps. The first is an evaluation of the achievement, which has two distinct parts. Part 1 is a prospective written as part of the initiation of the SDEP, and Part 2 is a retrospective evaluation of the project as it was done.

Evaluation of the project

Prospective – I will evaluate the project by determining that the radiation exposures in the facility meet both my expectations and regulatory requirements.

Retrospective – I designed the facility using the techniques I learned from my resources. I paid particular attention to areas that would be exposed from multiple parts of the facility. After the shielding was in place, I measured the exposure rates in all the appropriate areas and determined that they were below my design values and the regulatory limits.

The last element in the SDEP is the impact on practice/outcome, which also has prospective and retrospective parts. This section is the most confusing to many individuals who are contemplating an SDEP. The key concept is to consider how the project is important to the medical physics practice where it is conducted. Many times, this is very simple. For example, if a shielding design is not done correctly, the practice has a major problem. Other impacts are a bit more subtle. If the goal of an SDEP is to improve an individual's teaching skills, it may be more difficult to determine the benefit. Again, the ABR will not evaluate the details and will accept that the SDEP was done with honest intentions.

Impact on Practice

Prospective – I expect that this project will allow me to design the shielding more effectively, which will save time. Well-designed shielding can also save money, especially for PET scanners, and will make testing more efficient.

Retrospective – I learned a number of important points from the educational materials that made the design easier and improved the overall shielding. The testing went quickly. The good design and testing kept the project on schedule and probably saved money.

SDEPs and MOC Part4

An important component of the ABR MOC process is Practice Quality Improvement (PQI). In 2015, the ABR made a major change to Part 4–PQI by adding the category of Participatory Quality Improvement Activities to satisfy Part 4 requirements. It is important for physicists to be aware that SDEPs relating to quality and safety can be counted as Part 4 projects and thus

meet the physicist's requirement for a triennial PQI project. Thus, an SDEP related to quality and safety can be counted as contributing to both Part 2 and Part 4.

Final Thoughts

The ABR medical physics trustees believe that SDEPs are underused in the medical physics community. SDEPs can make the incorporation of new knowledge into a medical physicist's practice more efficient, serve as a source of self-directed educational credits, and, if quality and safety related, they can meet a medical physicist's MOC Part 4–PQI requirements.

In Memoriam: Robert Owen Gorson, PhD

2016;9[3]:75

Robert Owen Gorson, PhD, passed away peacefully on May 9, 2016, at age 92 in Philadelphia, where he was born. Dr. Gorson was a longtime ABR volunteer and a leader in medical physics. He was one of the first physicists certified by the ABR and is believed to have been the second longest surviving medical physics diplomate. A World War II Navy veteran, he was an instructor of radiological physics, Graduate School of Medicine, at the University of Pennsylvania, Philadelphia, and director of the Medical Physics Division, Department of Radiology, Thomas Jefferson University, also in Philadelphia. He retired as professor emeritus of radiology (medical physics) and professor emeritus of radiation oncology and nuclear medicine in 1989. A former president of the American Association of Physicists in Medicine, he earned several achievement awards and served on other national and international committees.

Spotlight on MOC Advisory Committee Members

2016;9[3]:76-78

In this issue of *The BEAM,* our spotlight article features volunteers who have devoted their time to serve as members of the ABR Diagnostic Radiology Maintenance of Certification (MOC) Advisory Committee. The first (Dr. Scott Truhlar) is a current member, and the other three (Drs. Thomas Anderson, Christine Lamoureux, and Mark Mullins) are members who have recently ended their terms. All have given us their reflections on ABR MOC and the role of the Advisory Committee. We thank them for their valuable feedback and volunteer service.

Scott M. Truhlar, MD, is in his 13th year of practicing general and musculoskeletal radiology in an eight-physician private practice group in Iowa City. He serves his hospital physician community as president of the medical staff, Iowa physicians as a director of the Iowa Medical Society and Iowa Healthcare Collaborative, and the radiology profession as chair of the American College of Radiology (ACR) Council Nominating Committee.

“Prior to medical school, my training was in social and public policy, economics, and the history of medicine,” Dr. Truhlar said. “For that reason, I can’t help but conceptualize board certification within the big picture, long-range perspective of the function of any professional certification in America. That perspective acknowledges that the healthy function of our society relies on an interlocking, interdependent network of private actions, civil institutions, and governmental bodies. My vision of the ABR is of a professional self-regulatory organization operating in the space between the public and government. If the ABR fails to fulfill its role as a trustworthy arbiter of professional quality, it would create a public policy vacuum that would inevitably be filled by a formal governmental regulatory body. Because I do not think that is an optimal endpoint, I want the ABR to succeed in its mission as the mechanism for members of our profession to publicly validate the best version of ourselves. Hopefully, it serves society and our diplomates by channeling participants into productive pursuits that enhance our capabilities.

“Dr. Guiberteau, current president of the ABR Board of Governors, asked if I would join the Advisory Committee in the summer of 2015 after I expressed dissatisfaction with the MOC process at the annual ACR meeting. I took him up on the offer because experience has taught me that if you want to be an agent of change, it is more effective to be part of a process than external to it. The Advisory Committee functions not as an echo chamber for the Board’s policies, but to provide frequent ‘real-world’ user feedback on the board certification process. The recent changes to the MOC Practice Quality (PQI) process represent a true step-change in the usefulness of that requirement and a major improvement in the Continuous Certification process.

"As an individual in private practice, I sincerely believe that I am keeping my knowledge base and skills up-to-date, but would appreciate a mechanism to validate myself against an objective standard. The current 10-year cycle for repeat testing provides me that opportunity, but is far too infrequent to generate the actionable information I need. The online, continuous process the ABR will be piloting provides me with an ongoing opportunity to review my strengths and weaknesses and receive immediate feedback about where I should focus my CME. I believe this will make my study efforts more efficient and be substantially beneficial to my practice."

Thomas M. Anderson, MD, FACR, is an ABR-certified diagnostic radiologist at Mercy Hospital in Chicago, who also holds subspecialty certification in neuroradiology and pediatric radiology.

"I joined the ABR's MOC Advisory Committee in the hope that a voice of balance representing the practicing radiologist might be heard," Dr. Anderson said. "I suspect I was already one of the most insistent, even abrasive, critics of matters ABR. I was eased into MOC from my participation in CAQ [subspecialty certification] in the late 1990s. In a small group with a small hospital practice, we had one fellowship-trained neuroradiologist and no one in pediatrics. I showed the most interest in both, and it seemed worthwhile to demonstrate to the medical staff and the hospital administration that we were still learning and providing care beyond the general radiologist level.

"Originally a 10-year MOC cycle, every ABR change has worked to the advantage of the practicing radiologist. The state license cycle was always two or three years, so the CME requirement trimmed back from 10-year blocks to a rolling three years fits the existing CME requirements of most state licenses. The PQI changes that give credit for existing, ongoing quality activities in regular radiology practice make much more sense than specific projects designed only for MOC. Finally, the new online MOC examination model opens the way to timelier and more educationally sound practice related to updates in knowledge.

"Ongoing proof of competence is required of professionals who serve the public. If we must have MOC, we are well advised to have the ABR listening to our concerns and managing a process that is the least intrusive possible to the activities of our busy practices of radiology."

Christine A. Lamoureux, MD, completed an internship, radiology residency, and musculoskeletal imaging fellowship at the University of Colorado Health Sciences Center in Denver. She worked in private practice in Boulder, Colorado, for seven years and has been a teleradiologist for the past six years. She currently serves as clinical chief of musculoskeletal imaging for Virtual Radiologic.

"I used to think obtaining initial board certification was enough, and I was honestly not pleased when I found I fell into the first year of required MOC (2002). I decided to embrace the idea, however, and got involved by taking the first pilot MOC exam offered at the RSNA [Radiological Society of America] annual meeting in 2010. Following the exam, there was a request for feedback, which I gave, and one thing led to another. I was asked to join the ABR MOC Advisory Committee shortly thereafter as a new MOC participant to give my perspective on the evolving process.

"Through this experience and my personal experience with the MOC process (even undergoing a random MOC audit at one point), I realized that although sometimes inconvenient, it felt good to keep up with CME and practice improvement projects in the spirit of lifelong learning.

Being on the MOC Advisory Committee allowed me to share my ideas in a way that I could find in no other comparable forum elsewhere, and I gained a greater insight into what governing bodies and relationships contribute to the dynamics of the MOC process.

"In my six years on the Advisory Committee, I have seen significant shifts in how this process is carried out—it is ever evolving to be more relevant to the real-world practice of radiology. For example, I think the plan to change the 10-year ABR exam into an Internet-based process is a great idea from the perspective of saving lost work and family time, as well as the cost of travel to exam centers. Radiologists will still study and reflect on where they need to apply themselves for continued learning in their individual areas of specialty, which brings us logically to the whole point—better patient care."

Mark E. Mullins, MD, PhD, earned an MD/PhD degree from Harvard Medical School. He followed this up with an internship in internal medicine at the Mount Auburn Hospital (a Harvard teaching hospital) and then a diagnostic radiology residency and a neuroradiology fellowship at Massachusetts General Hospital (MGH). Following fellowship, Dr. Mullins joined the radiology faculty at MGH. In 2005, he became a faculty member at Emory University in Atlanta, where he is vice chair for education in the Department of Radiology and Imaging Sciences and director of radiology medical student education.

"It was an honor to be asked to join the ABR's MOC Advisory Committee in 2010," Dr. Mullins said. "When I started, I was not sure how we would participate and how our input would be sought out and received. It was very heartening to find that our opinions mattered, and over time it was quite gratifying to see that our concerns and recommendations seemed to make a difference. I also had the privilege of serving as one of the connections between the AUR [Association of University Radiologists] and ABR.

"It seems that we are in a constant state of evolution and revolution these days, and the recent changes to the MOC process are no exception. It does appear that these changes have been very diplomate-friendly, and the 'chatter' I have heard has been all positive, some very much so. I'm not sure yet whether or not I am positive on the change to the MOC exam. I think it will depend a lot on how it is operationalized (doesn't it usually?). I guess this is another example of living a 'continuous' life in an 'era of change.'

"I believe strongly in service and advocacy, as well as improvement of systems. Serving on the MOC Advisory Committee seemed like a great opportunity to address all of these, and it has been!"

Continuing improvements in ABR's MOC program have in no small part been due to the contributions of diplomates like these volunteers. We are very appreciative of their honest input and the gift of their time.

ABR Appoints Seven New Members to Its Diagnostic Radiology Maintenance of Certification Advisory Committee

2016;9[3]:79-80

The American Board of Radiology (ABR) is pleased to announce seven new appointments to its Diagnostic Radiology Maintenance of Certification (MOC) Advisory Committee. Formed in 2010, this committee assists the ABR by evaluating its MOC program from the participant's viewpoint, and by offering suggestions for improvement and enhanced user friendliness, while maintaining a program that is navigable for diplomates and ideally integrated into daily workflow. Each of these distinguished individuals began a three-year term on July 1, 2016, with the option for an additional three-year term thereafter.

Christopher M. Fleener, MD, is a diagnostic radiologist who is president of Advanced Medical Imaging Consultants in Fort Collins, Colorado. Dr. Fleener was a fellow at the Washington University School of Medicine in St. Louis, Missouri; subspecialized in body/abdominal imaging at the Mallinckrodt Institute of Radiology also in St. Louis, Missouri; and served his residency at the Maine Medical Center in Portland, Maine. He also received his medical degree in 2000 from the University of Iowa's Roy J. & Lucille A. Carver College of Medicine, and he is listed on the Healthgrades Honor Roll.

Christine M. Glastonbury, MBBS, is a professor of clinical radiology, biomedical imaging, and otolaryngology at the University of California, San Francisco. She obtained an MBBS from the University of Adelaide, South Australia, in 1991 and completed a residency in diagnostic radiology at Royal Adelaide Hospital, also in Adelaide. She finished a fellowship in general radiology at Hammersmith and Charing Cross Hospitals in London, with oncology radiology training at the Royal Marsden Hospital in Surrey, UK. She subsequently completed a two-year fellowship in neuroradiology, followed by a body MR fellowship, at the University of Utah in Salt Lake City. Dr. Glastonbury is the author of numerous publications.

Joshua M. McDonald, MD, specializes in musculoskeletal and abdominal/pelvic diagnostic radiology and has more than 15 years of experience in the field of medicine. He was a fellow at the Indiana University Medical Center in Indianapolis and an intern at Iowa Methodist Medical Center in Des Moines, and he served his residency at the University of Iowa Hospitals and Clinics in Iowa City. Dr. McDonald received his medical degree from the University of Iowa College of Medicine in 2001. He is extensively involved in the American College of Radiology and the Iowa Radiological Society.

Kansas-born **Edsa M. Negussie, MD,** is director of cardiac imaging services at Southfield Radiology Associates, PLLC, in Southfield, Michigan, where she has been the diagnostic

radiology residency program director since July 2009. Dr. Negussie attended medical school at Addis Ababa University Faculty of Medicine in Ethiopia, graduating in 1992. She completed a residency at Providence Hospital in Southfield, Michigan, and a fellowship in body imaging at the University of Michigan, Ann Arbor, in 2002. Dr. Negussie has more than 13 years of experience in her field.

Joshua P. Nickerson, MD, is vice chair of education, Department of Radiology Residency Program director, and division chief of neuroradiology at the University of Vermont College of Medicine in Burlington. He served an internal medicine internship at Loma Linda University Medical Center in Loma Linda, California, and received a medical degree in 2005 from Loma Linda University School of Medicine. In 2010, Dr. Nickerson completed a diagnostic radiology residency at the University of Vermont/Fletcher Allen Healthcare in Burlington and a neuroradiology fellowship at Johns Hopkins Hospital in Baltimore in 2011. He is the recipient of a Radiological Society of North America Roentgen Resident/Fellow Award and has authored numerous publications.

Stephen F. Simoneaux, MD, is pediatric radiology division director and associate professor of radiology and imaging sciences, and pediatrics at Emory University School of Medicine in Atlanta. Additionally, he is chief of radiology at Children's Healthcare of Atlanta. Dr. Simoneaux completed a residency in diagnostic radiology at Jackson Memorial Hospital/University of Miami and a fellowship in pediatric radiology at Emory University in Atlanta. He serves on numerous committees nationally for the Society for Pediatric Radiology and serves as chair of the Society of Chairs of Radiology at Children's Hospitals.

Joshua G. Tice, MD, is a graduate of Pennsylvania State University's College of Medicine in Hershey. Since 2012, he has been a diagnostic radiologist at West Reading Radiology Associates in Reading, Pennsylvania. Dr. Tice served his internship at the National Naval Medical Center in Bethesda, Maryland. He completed his residency and a fellowship in musculoskeletal imaging at Penn State Hershey Medical Center in Hershey. He is a member of numerous professional societies and has a special interest in musculoskeletal and body imaging.

List of Society Attendance

2016;9[3]:81

The ABR sponsors a booth at numerous society meetings throughout the year. Printed materials are available, and ABR representatives are in attendance to answer your questions. To see a list of society meetings at which the ABR plans to have a booth in 2016 and 2017, please click here.