

Maintenance of Certification in dermatology: What we know, what we don't

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3. Achievement of a 70% or higher on the online Case-based Post Test
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After completing this learning activity, participants should be able to delineate the historical underpinnings that led to Maintenance of Certification and critically appraise future trends in Maintenance of Certification.

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Participation in Maintenance of Certification is a reality for the majority of board-certified physicians in the United States. It consists of 4 parts that focus the attention of participants on knowledge assessment, practice performance, communication skills, and patient safety. This continuing medical education article reviews the development and possible future of the program, data regarding Maintenance of Certification, what is currently not known about Maintenance of Certification, and how to navigate the requirements for dermatologists. (J Am Acad Dermatol 2013;69:1.e1-11.)

Key words: American Board of Dermatology; American Board of Medical Specialties; dermatology; Maintenance of Certification; Maintenance of Licensure.

Maintenance of Certification (MOC) is a multifaceted program established and overseen by the American Board of Medical Specialties (ABMS) focusing on physicians' knowledge assessment, practice performance, communication skills, and patient safety knowledge. MOC provides a transparent mechanism for the acquisition of continuing medical education (CME) credits and meeting the needs of medical licensure. While data exist to support the utility of MOC, these are not conclusive, nor are they dermatology-specific. The time and expense involved in completion of the program are considerable, but are decreasing.

THE AMERICAN BOARD OF MEDICAL SPECIALTIES AND THE AMERICAN BOARD OF DERMATOLOGY

Key points

- **The American Board of Medical Specialties is the umbrella organization for specialty boards and developed the structure for Maintenance of Certification.**
- **The American Board of Dermatology serves the public and the profession through initial certification and Maintenance of Certification.**

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Dr Stratman is the principal author of the patient safety module currently used in Maintenance of Certification, participates in program development for the Skin Disease Education Foundation Maintenance of Certification self-assessment program, and

CAPSULE SUMMARY

- The majority of dermatologists in the United States participate in Maintenance of Certification.
- Maintenance of Certification requirements for dermatologists and future trends are discussed.
- State medical licensure boards and third-party payers are increasingly interested in participation in Maintenance of Certification.
- If you currently are entered or plan to participate in Maintenance of Certification, visit the American Board of Dermatology website (www.abderm.org) and view your profile.

The ABMS is comprised of 24 member boards. Among those boards is the American Board of Dermatology (ABD), an independent non-profit organization that certifies dermatologists in the United States under the auspices of the ABMS. ABMS member boards are responsible for the certification of 85% of licensed US physicians in more than 150 general specialties and subspecialties.¹ Table I shows the ABMS and ABD licensing history since inception. Together with its member boards, the ABMS establishes common standards to achieve and maintain board certification.

Accountable both to the public and the medical profession, the ABD identifies board-certified physicians and physicians participating in MOC for patients and the public while supporting dermatologists' efforts to update their knowledge and improve their practice.² This accountability to assess dermatologist competence and serve the public is not new, having roots in the initial *Booklet of Information of the Board*, published in 1932, and in each subsequent revision of the Booklet: "The American Board of Dermatology [was] formed for the primary purpose of protecting the public interest."³ This focus differentiates the ABD from the American Academy of Dermatology (AAD),

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Abbreviations used:

AAD:	American Academy of Dermatology
ABD:	American Board of Dermatology
ABMS:	American Board of Medical Specialties
ACGME:	Accreditation Council for Graduate Medical Education
CME:	continuing medical education
CMS:	Centers for Medicare and Medicaid Services
FSMB:	Federation of State Medical Boards
IOM:	Institute of Medicine
MOC:	Maintenance of Certification
MOL:	Maintenance of Licensure
PQRS:	Physician Quality Reporting System
SMB:	state medical board

which has as one of its primary missions the education of board-certified dermatologists as well as from the Accreditation Council for Graduate Medical Education (ACGME), which has primary oversight of residency training programs.

The ABMS member boards require physicians to complete a prescribed course of training and set of requirements in an accredited residency training program and obtain a passing score on a cognitive examination.⁴ Skills and competencies beyond medical knowledge are necessary for physicians to remain current, close quality gaps if they exist, and enhance patient care. The ABMS adopted 6 competency domains and has challenged the profession to reconsider postresidency assessment strategies beyond the cognitive examination.⁵

Until 2002, each member board of the ABMS had its own standards.⁶ Some had time-limited certification; some required practice assessment as part of certification; others did not. Since 2002, member boards agreed to move towards continuous assessment of physician quality and to adopt comparable standards—most notably that all board certificates are time-limited and that there be additional performance evaluation, through a program called MOC.⁶⁻⁸

The goal of MOC is to improve physician performance and improve patient outcomes.⁷ To successfully participate in MOC, board-certified physicians must meet a series of requirements over a cycle ranging from 6 to 10 years.⁶ For dermatology, the MOC cycle length is currently 10 years. Table II details the 4 components of MOC. While dermatologists must fulfill several new requirements to effectively participate in MOC, part IV (Assessment of Performance in Practice) is a key distinguishing aspect of MOC, emphasizing improvement in practice.^{9,10}

EVOLUTION FROM CERTIFICATION TO MAINTENANCE OF CERTIFICATION

Key points

- **The American Board of Dermatology was 1 of 4 boards founding the American Board of Medical Specialties in 1933**
- **The Institute of Medicine has been influential in the quality movement**
- **Maintenance of Certification for dermatologists began in 2006**

The board certification movement began 100 years ago out of concern for the quality of medical care delivered by doctors and the need to differentiate specialty care, with the first specialty board—ophthalmology—founded in 1917.^{9,10} The American Board of Otolaryngology (1924), the American Board of Obstetrics and Gynecology (1930), and the ABD followed (1932; originally called the American Board of Dermatology and Syphilology, changed to its current name in 1955).³ These 4 boards teamed with representatives from the American Hospital Association, Federation of State Medical Boards, Association of American Medical Colleges, and the National Board of Medical Examiners to form the forerunner of the ABMS in 1933 (originally called the Advisory Board of Medical Specialists, later renamed ABMS in 1970). Initial certification and training requirements were the focus of the ABMS at its onset. Diplomates who passed the certification examination were board-certified for life, provided that they maintained an active and unrestricted state medical license.⁹

In the 1970s, in an attempt to minimize potential diplomate decline in clinical competency over time, the ABMS began time-limiting certification and requiring recertification.⁷ The ABMS recommended physicians be reevaluated every 6 to 10 years, primarily by a written examination.⁹ The American Board of Family Medicine (1970) was the first board to incorporate a recertification requirement, with the American Board of Pathology being the final board (2006).⁶ The ABD began issuing time-limited certificates in 1991, requiring recertification via a “take home” examination every 10 years.

Over time, the ABMS concluded that performance on a single examination did not guarantee physician competency, and in 1998, the ABMS Task Force on Competence proposed a MOC process.^{7,10} Soon thereafter, 2 influential reports were published by the Institute of Medicine (IOM), an independent, nonprofit health arm of the National Academy of Sciences that works outside of government to provide unbiased, authoritative advice to decision-makers and the public.¹¹ The first, “To err is human” (1999), focused on patient safety, highlighting the

Table I. Licensing history

Year	Board	Description
1917	The American Board of Ophthalmology	First specialty board founded
1924	The American Board of Otolaryngology	Second specialty board formed
1930	The American Board of Obstetrics and Gynecology	Third specialty board formed
1932	The American Board of Dermatology and Syphilology	Founded as fourth specialty board
1933	The American Board of Medical Specialists (later changed to ABMS)	Consisting of the 4 specialty boards listed above along with American Hospital Association, Federation of State Medical Boards, Association of American Medical Colleges, and the National Board of Medical Examiners
1955		The American Board of Dermatology and Syphilology changes name to the ABD
1977	The American Board of Family Medicine	First specialty board instituted recertification
1991		ABD institutes recertification—required assessment of knowledge and skills every 10 years
2006		ABD institutes MOC—requires continuous enrollment and completion of 4 components of MOC every 10 years

ABD, American Board of Dermatology; ABMS, American Board of Medical Specialties; MOC, Maintenance of Certification.

Table II. Components of Maintenance of Certification

Component	Description
1. Licensure and Professional Standing	Requires maintaining an unrestricted state license
2. Lifelong Learning and Self-Assessment	Requires self-assessment, continuing medical education and completing a patient safety self-assessment module
3. Cognitive Expertise	Requires passing a cognitive examination
4. Evaluation of Performance in Practice	Requires completing performance improvement activities, patient and peer communication surveys

epidemic of medical errors and the injuries such errors cause.¹² The public reaction to this report was significant and helps sustain the quality movement today.¹⁰ A follow-up IOM report, “Crossing the quality chasm” (2001), highlighted physician-level gaps in quality and variations in care.¹³ The IOM reports fueled the national health care quality movement, and in part influenced approval of and eventually adoption by all member boards of the ABMS MOC proposal (2002).

As a result, the ABD developed a MOC program for dermatologists. Implementation is occurring over a 10-year window, from 2006 through 2015, with certifying and recertifying dermatologists automatically enrolled in the MOC program. Lifetime certificate holders—those initially certified before 1991—were not required to enter the MOC program. By 2015, with enrollment of dermatologists into MOC and the retirement of lifetime diplomates, nearly all board-certified dermatologists will be entered into the MOC program. In addition, 8% of lifetime diplomates have voluntarily entered MOC. There has been criticism in other fields of the decision not to mandate MOC for

lifetime certificate holders because these older physicians may benefit from the program.¹⁴

RATIONALE AND EVIDENCE SUPPORTING THE NEED FOR MAINTENANCE OF CERTIFICATION

Key point

- **Specialty training and board certification have been associated with quality care**

There is evidence supporting board certification as a physician characteristic that is positively associated with quality care. In specialties outside of dermatology, board certification has been associated with reductions in morbidity and mortality, improved preventive care delivery, better surgical outcomes, and performing guideline-based care, including prescribing appropriate drug therapy.⁷ Specialty training in dermatology is associated with higher quality care of skin disease.¹⁵ Across specialties, being female, having graduated from a US medical school, and being board-certified were the 3 physician characteristics that were significantly

associated with higher overall performance on 124 quality measures in Massachusetts.¹⁶ However, all these quality of care studies compare board-certified physicians to physicians who are not board-certified. There are possible explanations for the association between board certification and higher quality performance. It could be a selection bias where only higher quality physicians choose to sit for the boards, or an effective diagnostic tool where only higher quality physicians pass the boards, or a causal relationship where the board certification process leads physicians to improve themselves. Because the large majority of physicians in practice are now board-certified, these comparisons become less meaningful in light of the IOM reports when looking at the physician quality differential as a whole.

QUALITY IS INFLUENCED BY FACTORS BEYOND MEDICAL KNOWLEDGE

Key point

- **Medical knowledge does not necessarily predict high quality performance in complex medical practice settings**

While knowledge is important, the delivery of medical care is a complex process. Knowledge examinations have been an important part of the certification process, because knowledge is an important foundation for clinical judgment and decision-making in complex situations.^{6,17} However, health services research has shown that knowledge is essential but alone not sufficient.⁶

This is because optimizing patient care requires tasks such as communicating knowledge, navigating systems, and follow through to achieve results. Examples of quality clinical performance being impacted by systems include processes for calling patients with their results, automatic reminders to ask psoriasis patients about smoking status, and systems to identify melanoma patients who are due for annual skin examinations. All can greatly impact the care dermatologists deliver beyond the medical knowledge needed to know they should be performed. Therefore, taking and passing an examination may not be sufficiently influential on or predictive of high functioning in practice. In fact, it is currently difficult to assess clinical skills through written examinations, because of the challenges of assessing problem solving or other higher order cognitive skills needed to care for patients.⁶ In addition, knowledge deficits uncovered in examination settings are not necessarily equivalent nor predictive of making clinical mistakes in caring for patients.¹⁸

As a result, MOC programs were designed to provide a more comprehensive approach to the assessment of practicing physicians beyond knowledge assessment. To date, it is uncertain if the current MOC design leads to measured improvements in the highly complex issues of high quality dermatologic care, rather than measuring a willingness to perform certain steps to get through the MOC process.

QUALITY CHANGES OVER TIME

Key point

- **An inverse relationship exists between years of practice and performance of quality measures**

In some specialties, it has been shown that the quality of care physicians provide deteriorates with time.⁷ While not specific to dermatology, studies have found an inverse relationship between years of practice and performance on quality measures.¹⁶ In a systematic review of 62 studies assessing medical knowledge or quality of care outcomes as a function of time since graduating from medical school, 52% of evaluations reported decreasing performance with increasing years in practice for all outcomes studied, and an additional 21% reported decreasing performance for at least some outcomes studied.¹⁹ These studies did not measure quality of care over time for a cohort of physicians, but rather measured quality of care based on time in practice. For some measures, it is possible that newer physicians are more familiar with documentation requirements used to measure quality rather than actually providing higher quality care. Older physicians, solo practice physicians, and foreign medical graduates tend to have lower quality scores in specialties that have been studied, but dermatology was not among them. After controlling for a patient's probability of death, practice environment, physician specialty, board certification, and the volume of patients seen, researchers observed a 0.5% increase in patient mortality for every year since the treating physician graduated from medical school.¹⁹ Data are lacking in dermatology, in part because of limited quality measures developed to date and limited work in the area, but for some specialties, evidence exists that physicians who have been in practice longer are at risk for providing lower quality care.

TRADITIONAL PASSIVE CONTINUING MEDICAL EDUCATION DOES NOT CHANGE BEHAVIOR

Key point

- **Acquisition of passive continuing medical education does not improve physician performance**

Participation in traditional passive continuing medical education (CME), including lectures and the distribution of handouts, reinforces clinical concepts but has not been shown to improve physician performance and knowledge, even under experimental conditions.²⁰⁻²³ Conceptually, with more active CME activities, such as self-assessment and assessing practice performance, MOC may provide a structured assessment process that is more likely to decrease or prevent the decline in skills, knowledge, and performance than more passive CME alone—but this has not been proven.²⁰ For example, learning by reviewing the care plan of ≥ 1 patient was 37% more likely than performing a medical literature review to result in a change in practice.²⁴ Structured feedback, similar to that which occurs in a MOC component 4 practice improvement module, may provide a stronger stimulus for behavioral change.²⁴ Unfortunately, to date, little data exist in dermatology about whether participation in MOC prevents potential decline or improves performance in care, or more importantly, improves patient outcomes.

PHYSICIANS ARE TYPICALLY POOR AT SELF-ASSESSMENT OF SKILLS AND QUALITY PERFORMANCE

Key point

- **Physicians tend not to recognize practice gaps**

Physicians are not typically good at assessing their own skills,²⁰ which might be responsible for and related to the assertion that traditional passive CME does not impact behavior. What physicians think they know and do in practice does not necessarily match what they actually know and do, particularly when self-assessing compliance with quality standards.^{20,25} Objective self-assessments that result from gathering and review of actual practice data will likely better guide physician improvement.

Quality of care varies significantly, even among board certified physicians. Research shows that there is wide variability in quality of care and increasing public expectations for professional accountability.²⁶ Significant unexplained variations in use and appropriateness of care that do not seem to be related to improved outcomes have contributed to concerns over doctor quality.⁹ Strategies to enhance quality include the IOM's classification of 6 central "aims" of quality: patient centeredness, safety, effectiveness, efficiency, timeliness, and equity.¹⁰ These aims serve as categories for clinical quality improvement needs and efforts. Quality of care will be judged by how effectively diseases are managed.¹⁰

Physician clinical performance assessment is defined as the quantitative assessment of performance based on the rates at which physicians adhere to evidence-based processes of care, and in some cases the rate at which patients experience certain outcomes of care. Physician professional organizations (like the American Academy of Dermatology), consumer advocacy groups, Centers for Medicare and Medicaid Services, and the National Quality Forum have all been active in creating and fostering such initiatives.²⁷ Physician clinical performance assessment data aims to capture at least 3 dimensions of quality: outcomes of care, process measures related to delivery of care, and results of patient satisfaction surveys.²⁷

Described in detail below, component 4 of the MOC program requires doctors to assess, reflect upon, and seek to improve the quality of their practice performance.^{9,26} Currently, fewer than 30% of physicians formally examine their own performance data, and, while not known, this is likely even lower for dermatologists.²⁰ For procedural dermatologists, registries may be optimal for identifying improvement needs, yet none exist. For physicians not involved in direct patient care, such as many dermatopathologists, the process of care is mostly peer to peer. Assessment based on peer review focused on diagnostic accuracy, safety, and technical quality may be valuable.²⁶

PATIENTS EXPECT MAINTENANCE OF CERTIFICATION

Key point

- **Maintenance of Certification is highly valued based upon public polling**

Patients expect physicians to engage in frequent review and testing.²⁸ In a Gallup poll of public opinion, MOC was highly valued by the public. The public also believed that physicians should be assessed more often than every 6 to 10 years.¹⁰ For example, the majority of the public, in 1 study, stated they would change physicians if their physician failed to maintain certification.¹⁰ Certification status is judged by consumers to be more indicative of the physician quality of care than ratings from government or others.¹⁶

THE VALUE OF MAINTENANCE OF CERTIFICATION

Key points

- **Maintenance of Certification participation has been associated with improved patient care**
- **Data are needed for dermatology**

The biggest physician concerns related to MOC are the high cost, time with regard to effort, relevance, and fear related to the high stakes nature of the

process.²⁰ For dermatologists, proof does not exist that participation in MOC improves performance and patient outcomes, but MOC participation has been associated with improved care in other specialties.²⁰ Given the massive undertaking of MOC, however, there are surprisingly few studies to support its value. Moreover, as noted above, the current exemption for older dermatologists is problematic. Ideally, there would be measurement of actual quality of care delivered and subsequent requirement of an MOC-like program for those physicians falling below a certain standard. A few specialties have shown a positive relationship between MOC examination scores and quality of care.²⁶ For example, physicians scoring in the top quartile on an MOC examination were more likely to perform quality of care processes for diabetes mellitus and mammography screening compared to physicians in the lowest quartile.¹⁷

Despite this more, better and dermatology-specific data are needed to determine the benefit of MOC. There also exists no data on remediation efforts or ability to improve performance for those physicians who participate in MOC but fail to successfully complete the component requirements. Future research and effort in improving the outcomes of groups most likely to struggle with MOC (for general surgery and internal medicine, this group includes older physicians, international medical graduates, solo practitioners, and practitioners who struggled to pass the initial certifying examination) is needed.²⁹ The ABMS supports research evaluating outcomes of the MOC process.

LIMITATIONS TO MAINTENANCE OF CERTIFICATION

Key point

- **More guidelines of care are necessary for dermatologic diseases**

Although studies across specialties studied thus far are consistent in their findings, the MOC literature is limited, with few studies specific or even inclusive of dermatology or dermatologists. In addition, there are currently significant limits in the breadth and depth of available evidence-based guidelines and relevant performance measures for dermatologists to choose or to use as examples to inform ongoing quality improvement.²⁶ Many dermatologists still do not have electronic medical records or participate in disease registries. They may therefore have difficulty assessing quality measures because of their inability to readily collect data about their practice. The current list of dermatology-specific performance in practice assessment modules is small (Table III). There are few continuing professional development

Table III. American Academy of Dermatology's performance in practice modules

Current	Proposed
Melanoma	Venous ulcers
Atopic dermatitis	Phototherapy for rejuvenation
Acne	
Biopsy	

opportunities found in dermatology CME venues that teach the concepts of process improvement—education that is critical to advance the quality movement.

EMERGING TRENDS

Institutional Maintenance of Certification and the Multispecialty Maintenance of Certification Portfolio Approval Program

Key point

- **The American Board of Dermatology participates in a program to allow institutions to create and provide part 4 activities**

The ABD has aligned with several other ABMS boards to offer institutions and organizations with robust quality infrastructures opportunity to offer MOC credit for locally approved quality improvement activities. Participants in this Multispecialty MOC Portfolio Approval Program (Portfolio Program) are organizations that develop, sponsor, and oversee multiple quality improvement efforts across >1 ABMS specialty. Currently approved organizations and institutions are shown in Table IV. This pathway is intended to reduce the application burden and costs for organizations seeking MOC credit for their quality improvement efforts and to align physician-led quality improvement efforts with organizational goals. As a Portfolio Sponsor, an organization must meet requirements outlined in Table V.³⁰

Organizations must submit a 4-part application for approval substantiating their commitment to quality improvement and their ability to meet the program standards and guidelines. The value of such a program is that local quality improvement projects that are aligned with institutional needs, mandates, or quality focus areas can be completed for MOC credit, rather than having individuals forced to choose less locally relevant quality projects from external vendors.

PHYSICIAN QUALITY REPORTING SYSTEM BONUS TO PHYSICIANS PARTICIPATING IN MAINTENANCE OF CERTIFICATION

Key point

- **At present, more frequent participation in Maintenance of Certification in conjunction**

Table IV. Organizations approved as portfolio sponsors

Advocate Physician Partners
American Board of Medical Specialties Research and Education Foundation
Better Health Greater Cleveland
Dana-Farber Cancer Institute
HIVQUAL-US
Marshfield Clinic
Mayo Clinic
Medical Society of Virginia Foundation
Medical University of South Carolina
Nationwide Children's Hospital
Partners Healthcare
Permanente Federation
Sentara Healthcare
Seattle Children's Hospital
University of Colorado School of Medicine
University of Michigan
University of Wisconsin
Virginia Mason Medical Center

Table V. Requirements of portfolio sponsors

Develop, sponsor, and oversee multiple quality improvement efforts that meet the standards and guidelines of the Portfolio Program
Have in place, or be able to establish, an infrastructure for governing, evaluating, and managing quality improvement efforts for the organization, network, or area
Have or establish an internal group or entity that evaluates quality improvement efforts for the organization and approves those that meet the standards and guidelines of the Portfolio Program
Agree to resolve any disputes internally
Agree to submit periodic progress reports for quality improvement efforts approved for MOC part 4 credit through the Portfolio Program

MOC, Maintenance of Certification.

with the Physician Quality Reporting System qualifies diplomates for enhanced reimbursement from The Centers for Medicare and Medicaid Services

Since 2011, The Centers for Medicare and Medicaid Services (CMS) has added a 0.5% Physician Quality Reporting System (PQRS) MOC Program Incentive for physicians participating more frequently/more substantially in MOC. To earn the MOC PQRS incentive, diplomates must: (1) submit data under the PQRS based on a 12-month reporting period; (2) participate "more frequently" in MOC; and (3) successfully complete an MOC part 4 practice assessment for the

reporting year. Practice assessments must include a patient experience of care survey and an improvement cycle (plan—do—study—act).

The ABD defines "more frequently" based on the category of diplomate. Diplomates will fall into 2 categories depending on whether the diplomate is currently required to participate in MOC. Diplomates who are grandfathered—and therefore not required to participate in MOC—would qualify by registering for and participating in an MOC program and completing a part 4 practice assessment with patient experience of care survey in the reporting year. For these diplomates, participation in MOC will satisfy the "more frequently" requirement because, by definition, any participation would be "more frequent" than required for certification. Similarly, diplomates with time-limited certificates who will be expected in the future but are not currently required to participate in MOC would qualify through participation in MOC earlier than required by the Board.

For diplomates currently required to be enrolled in MOC, eligible dermatologists will be required to participate "more frequently" in both parts 2 and 4. For part 2 requirements, some additional activity or frequency would be expected, so requiring additional hours of CME would satisfy this requirement.

With respect to part 4 activities, there is both a current year requirement and a "more frequent" requirement. Diplomates will need to complete a practice assessment module (including a patient experience of care survey) in the reporting year and the total number of assessment modules completed in a 10-year MOC cycle needs to be at least 1 more than currently required. For the patient survey element of practice assessment, surveys administered at the institutional or departmental level are acceptable if previously approved by the ABD; however, these data must be available to CMS for validation purposes upon request. The requirements as promulgated by CMS may change year-to-year.

THE RELATIONSHIP BETWEEN MAINTENANCE OF CERTIFICATION AND MAINTENANCE OF LICENSURE

Key points

- **Participation in Maintenance of Certification will satisfy requirements for Maintenance of Licensure**
- **Several state medical boards have begun Maintenance of Licensure implementation**

Assessing the quality of physician care and the requirement to participate in MOC programs likely represent only part of the changing landscape.⁹ For example, an IOM report suggests that future clinical

performance assessments will involve aggregating patient encounters over time and emphasizing shared accountability across a patient's entire care team.³¹ In addition, an emerging trend in health care is the movement by the 70-member Federation of State Medical Boards (FSMB) towards "Maintenance of Licensure" (MOL). While MOC programs and board certification can be viewed as being voluntary, because a clinician may practice medicine without being board-certified, maintaining licensure is a requirement.

As a group, State Medical Boards (SMBs) "ensure that the public is protected from the unprofessional, improper, unlawful, unethical, and/or incompetent practice of medicine."³² SMBs interpret this responsibility differently; for example, not all of the 70 SMBs require CME as part of licensure.³³ In addition, the amount of CME required varies, as do mandates for specific content. FSMB governs the individual SMBs, and as a result is the sponsor of MOL. The FSMB goal is to protect the public by licensing physicians who can show that they provide good care.³⁴ In 2010, the FSMB recommended that all state licensing boards adopt requirements similar to those required for MOC, including participating in CME, a proctored examination, and performance improvement (Table VI).³⁵ It also recommended that these elements occur in a 5-year cycle, and that all 70 state licensing medical and osteopathic boards adopt MOL within 10 years. Although implementation is voluntary, some states have already begun (Table VII).³⁶

Recognizing that CME activities unrelated to a physician's practice do not support the vision for MOC, the ABMS has implemented a policy so that only CME related to the physician's practice can be used to meet requirements for MOC. In an attempt to align with MOC requirements, the FSMB has endorsed a similar principle for MOL.

The 3 components of MOL incorporate the core competencies for physicians adopted by the Accreditation Council for Graduate Medical Education and the ABMS in 1999.³⁷ Although states do not currently mandate a "high-stakes," secure examination for MOL, the FSMB has begun to identify various educational and practice improvement activities across all specialties and areas of practice that could satisfy a state's MOL requirements. These are reflective self-assessment, assessment of knowledge and skills, and performance in practice (Table VI).

The overriding philosophy of the timeline for MOL implementation can best be summarized as "evolutionary, not revolutionary."³⁸ The FSMB's MOL Implementation Group recommended a gradual implementation process, with state boards spending at least a year educating their physicians

Table VI. Maintenance of Licensure

Reflective self-assessment	Self-assessment, practice assessment, and participating in continuing medical education
Assessment of knowledge and skills	Secure examination as applied to own practice
Performance in practice	Using data to assess practice performance and associated improvement program

Table VII. State boards that are early adopters of Maintenance of Licensure

Osteopathic Medical Board of California
Colorado Medical Board
Delaware Board of Medical Practice
Iowa Board of Medicine
Massachusetts Board of Registration in Medicine
Mississippi State Board of Medical Licensure
Oklahoma State Board of Osteopathic Examiners
Oregon Medical Board
Virginia Board of Medicine
Wisconsin Medical Examining Board

and public about their MOL plans before implementation.³⁹ Also recommended was that the 3 components be implemented sequentially, rather than all at once, allowing 2 to 3 years for each component to be fully realized. Finally, the group recommended that while activities in the first component, such as CME, are required annually, other activities in the second and third components be reported no more often than every 5 to 6 years. Therefore, if all of these recommendations are followed, the earliest that state boards could begin to implement the first part of an MOL program would be 2014.

Successful participation in MOC should satisfy the requirements for MOL.⁴⁰ FSMB's MOL Implementation Group recommended that physicians actively engaged in MOC be recognized as having substantially fulfilled the requirements of all 3 components of any state's MOL. Therefore, in some years, an actively licensed physician need only attest to his/her ongoing participation in MOC to satisfy MOL. A large number of physicians (>230,000) are not board-certified in the United States, and physicians who are lifetime certificate holders are not required to participate in MOC. The FSMB and its affiliates are attempting to identify and develop tools to enable these physicians to meet MOL requirements.⁴¹

Table VIII. Attributes of continuing medical education and continuous professional development

Continuing medical education	Continuous professional development
Episodic	Lifelong
Time-specific	Continuous
Group learning	Individualized learning
Teacher driven	Learner driven
Covers clinical domains only	Covers the full spectrum of the profession
Physician as practitioner	Physician as health care team member
Lecture-based	Varied formats and media
Formal settings	Varied venues including on the job

CONTINUOUS PROFESSIONAL DEVELOPMENT

Key point

- **There will be an emphasis on continuous learning paradigms in the future**

Continuous professional development (CPD) has been referred to as CME version 2.0 (Table VIII).⁴² CME has classically been episodic and formal, provided during a specific time, often in a group setting with a lecture format, and largely driven by the teacher focusing on the physician as a practitioner. This model is changing. CPD is meant to be a lifelong, continuous, learner-driven process focusing on the physician as a member of the health care team with individual learning occurring in a variety of settings with a variety of educational formats. CPD and assessment are part of the future paradigm of CME, MOC, and MOL. Moving forward, physicians have more choices for CME opportunities, and accredited organizations that provide CME are responsible, under current CME standards, for creating activities that actually make a difference in practice. The goal to improve health care quality will more likely be realized when physicians select CME activities to specifically help their practices. To accomplish this, CME content must be related to scope of practice, addressing actual care gaps, with tools and strategies to apply the information based on the best unbiased evidence.

CONCLUSION

MOC is and will be a reality for the majority of dermatologists, despite the necessary—but currently missing—dermatology-specific data confirming its benefit. Studies are needed to evaluate the influence of MOC on the quality of care provided to

dermatology patients in order to justify the viability of MOC in its current form. The ABMS constantly reviews and discusses MOC requirements with the 24 member boards, including the ABD. There is much to recommend MOC as an impactful and thought-provoking paradigm for physicians to maintain and improve the quality of care delivered to patients. In response to thoughtful dialog, the MOC process should evolve as data accrue to inform us regarding the value, or lack thereof, in MOC components.

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Answers to CME examination

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