



MARYLAND HEALTH CARE COMMISSION
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November 7, 2018

The Honorable Shane Pendergrass
Chair
House Health and Government Operations
Room 241 House Office Building
Annapolis, MD 21401

RE: Findings and Recommendations of Physician Maintenance of Certification Work Group

Dear Chair Pendergrass:

In March, you requested that the Maryland Health Care Commission (MHCC) study physician maintenance of certification requirements “with the goal of recommending legislation for consideration during the 2019 session”. MHCC convened a work group of key stakeholders and conducted a study on this issue. The four meetings were well-attended and the discussion vigorous. The members of the work group were not able to reach consensus on a legislative approach to this issue. The work group was able to clarify factual issues related to this topic and identify non-legislative approaches that could remedy the current impasse.

Work group and study process

MHCC convened a work group with sixteen members, including all organizations and individuals named in the Chair’s charge letter to MHCC.ⁱ The work group met five times between June 2018 and October 2018. Before and between meetings, MHCC staff conducted research and prepared materials to inform the work group and answer questions raised during work group meetings. A list of work group members and all meeting materials (including agendas, minutes, research summaries, and presentations) are available on the work group’s webpage on the MHCC website:

http://mhcc.maryland.gov/mhcc/pages/home/workgroups/workgroups_maintenance_cert.aspx

Background on board certification and recertification

Board certification is a non-governmental credential for physicians that indicates a level of expertise in a specialty. Initial board certification requires completion of medical school and a residency and/or fellowship; licensure to practice medicine in a State; and passing a rigorous exam.ⁱⁱ

Board certification is provided by non-governmental boards of physicians who practice in the same specialty. These specialty boards are structured as non-profit entities that provide certification throughout the United States of America. Specialty boards often belong to larger non-profit organizations. The two largest organizations of specialty boards are the American Board of Medical Specialties (ABMS) (880,000 board certified physicians) and the American Osteopathic Association (AOA) (30,000 board certified physicians).ⁱⁱⁱ

Historically, board certification was a life-long credential. However, beginning in the 1970s and accelerating in the 1990s, certifying boards began to require periodic renewals, which required exams, continuing medical education classes, and other requirements.^{iv} These requirements are referred to as “maintenance of certification,” “continuous certification,” or similar terms. The terms “recertification” and “board recertification” are used to refer to this concept in this letter. Doctors who had obtained board certification before recertification requirements were created were often exempt from the recertification requirements (“grandfathered”). Physicians who are subject to recertification requirements and do not comply with these requirements will lose their board certification status.

Recertification programs were developed in an attempt to ensure that physicians engaged in lifelong learning and assessment activities for the purpose of staying current on knowledge and skills in the rapidly changing medical field and improving health care quality and patient safety.^v As will be discussed later in this document, there was no consensus in the work group about the effectiveness of these programs for achieving this purpose. Certifying boards also use the recertification process as a way to promote professional skills (like communication and teamwork) and ethics in the medical profession.^{vi}

Board certification is technically voluntary for physicians. However, hospitals, health systems, and other entities may choose to require board certification as a condition of the physician’s employment or privileges. Similarly, insurers may require board certification as a condition of payment or participation in an insurer’s network. Consumers/patients may prefer to see board certified physicians. Thus, obtaining and maintaining board certification can be important to a physician’s career and/or business.

Board certification and state licensure

The State of Maryland prohibits physicians from practicing medicine unless they are licensed in the State.^{vii} The State of Maryland does not require board certification for licensure in the State.^{viii} State licenses to practice medicine must be renewed every two years.^{ix} Renewal requires that the physician complete fifty hours of continuing medical education (CME), a criminal history records check, payment of a fee, and other requirements set by the Maryland Board of Physicians.^x

Current specialty board certification, which generally requires participation in the board’s recertification program, is required for an initial expedited licensure under section three of the Interstate Compact on Medical Licensure for physicians who choose to be licensed under the Compact.^{xi} However, physicians are not required to maintain their specialty board certification to renew their licenses under the Compact.^{xii}

Discussion of concerns with physician recertification programs

A number of physicians have raised concerns about board recertification programs and requirements (the work group did not hear complaints about initial board certification). These concerns about recertification fall into the following categories.

1. **Fairness:** The discrepancy in treatment between physicians subject to recertification and grandfathered physicians is unfair. In addition, requiring high stakes tests every renewal period is unfair for physicians who do not test well (but may be excellent physicians).^{xiii}
2. **Time Burden and Access:** Physicians find compliance with the recertification requirements (including studying for an exam) to be time consuming. Completing recertification tasks takes physicians away from their patients and families, impacting their businesses, hindering patient access, and contributing to physician burnout.

3. **Relevancy:** The exam and other recertification requirements contain material that is not relevant to the physician's practice. This issue is most acute when the physician is practicing a narrowly focused subspecialty and the recertification is for the broader specialty.
4. **Expense:** Satisfying recertification requirements is expensive due to fees, travel, and test prep costs, as well as opportunity costs from time spent on recertification activities. Fees vary by specialty board (a 2017 study of ABMS member boards showed annualized fees ranging from \$150 to \$610 a year, depending on specialty).^{xiv} These fees and other direct expenses may be paid by the physician or by the physician's employer (for example, a health system). The opportunity cost of time spent on recertification activities instead of active practice is the largest component of the total expense, with some researchers suggesting that this lost income is 90 percent of the overall expense associated with physician participation in recertification programs.^{xv} These same researchers estimate that this time is worth more than half a billion dollars on an annual basis for the entire United States.^{xvi}

Some physicians also feel that current recertification programs are ineffective at ensuring patient safety and quality of care.^{xvii} As a result, the burden of the recertification programs, and particularly the periodic exams, are felt by these physicians to be unjustified. The topic of the connection between recertification programs and quality of care was highly debated in the work group. There is conflicting evidence on the connection between recertification requirements and quality of care for patients.^{xviii} In addition, board certification is only one of means of assessing physician capabilities and ensuring continuous learning. Physician capabilities are also assessed by hospitals through real-time case reviews via electronic health records, peer review processes, and hospital re-credentialing processes. Insurers use billing reviews and authorizations on a case-by-case basis. The State of Maryland requires licensing renewal every 2-years (including 50 hours of CME). These are comprehensive reviews and can include information about patient complaints, malpractice suits, feedback from other professionals, and any other aspect of practice. There was debate in the work group about the value of recertification in the context of these other means of evaluation or, alternatively, whether these other means of assessing physician capabilities are adequate substitutions for board recertification program participation.

In addition, some physicians feel frustrated that they are required to maintain their board certification as one of the conditions to maintain hospital privileges or employment. Physicians have similar concerns related to reimbursement or approval of panel participation by insurance carriers that use board certification status for credentialing. Initial board certification is not a concern for most physicians. This concern is reflected in principle 15 of the American Medical Association's Principles on Maintenance of Certification "The MOC program should not be a mandated requirement for licensure, credentialing, privileging, reimbursement, network participation, employment, or insurance panel participation."^{xix}

Some physicians are also concerned that physicians do not have sufficient choices available for board certifying entities, and that the relatively consolidated market for these entities has contributed to higher costs and a lack of responsiveness to physician concerns. This concern is balanced by hospital concerns that any board certification and recertification program should be rigorous enough to meet their credentialing needs, so that any new board certification entities that seek to compete in this market must find a way to gain acceptance by hospitals (see discussion below). Some physicians express their concerns as a desire for more independence and control over their lifelong learning.

As stated above, recertification programs have historically required periodic exams (once every ten years), CME requirements, and other requirements. The exam was the most debated element of recertification programs in the work group. ABMS considers assessment requirements (including exams) to be an essential element of their recertification program, while some physician members of the work group felt that the need for assessment was not sufficiently supported by evidence to justify the burden of these requirements. The work group had more consensus about the value of CME throughout a physician's career, but there was

disagreement within the work group about whether CME alone, without an exam or assessment component, was sufficient to meet the purpose of a recertification program.

Current law is not a barrier to some responses to physician concerns

The work group considered a number of ways that concerned physicians could seek change (or where organizations are already engaged in processes that could lead to change) that do not require statutory changes. These existing pathways for change are discussed below.

Specialty boards are reevaluating recertification requirements and processes

The specialty boards that provide board certification are non-governmental organizations of physicians. Physicians with concerns about recertification can (and have) raised their concerns directly with these board certifying organizations. Both the ABMS and AOA have begun to respond to physician concerns. In early 2018, ABMS established a commission (the Vision for the Future Commission) which is studying the issue of recertification and will make recommendations to ABMS in 2019.^{xx} The “Vision” commission has collected testimony from a broad set of sources, including state medical societies in eight states, practicing physicians, health systems, and credentialing staff.^{xxi} The commission also conducted two surveys and received responses from more than 36,000 individuals (34,600 physicians), as well as a national survey of approximately 1800 consumers.^{xxii}

Concurrent with the work of the “Vision” commission, some ABMS member boards are making changes to recertification requirements. For example, the American Board of Internal Medicine now offers “knowledge check-ins”, more frequent and shorter assessments of physician knowledge as an alternative to the long-form exam.^{xxiii} These shorter assessments can be completed at home^{xxiv}, eliminating travel time and expenses. ABMS remains committed to including some form of assessment of physician knowledge as a component of its board recertification programs.

AOA member boards are making similar changes to their recertification programs. AOA continuous certification programs include requirements for both cognitive and practice assessment.^{xxv} In July 2018, the American Osteopathic Board of Radiology became the first board to eliminate the high stakes exam component of their ten year recertification process, moving to a new assessment format.^{xxvi} This board also cut the required number of CME hours from 120 hours every 3 years to 60 hours every 3 years (note that this requirement is less, on an annual basis, than Maryland’s state licensure requirements).^{xxvii}

It is too early to determine if recent or future changes to recertification programs will be sufficient to address the concerns identified by this work group.

A new board certifying entity is competing with ABMS and AOA

As an alternative to working for change within the existing specialty boards, some physicians created an alternative board certifying entity for recertification (but not initial board certification). The National Board of Physicians and Surgeons (NBPAS) (<https://nbpas.org>) is a non-profit that was created in 2014 to provide an option for physicians looking for a less burdensome option for board recertification. In order to qualify for board certification from NBPAS, a physician must have received initial board certification from an ABMS or AOA member specialty board and a valid license to practice in a state. In addition, the physician may not have had their clinical privileges revoked in that specialty. For some specialties, active hospital or outpatient privileges in that specialty are also required.^{xxviii}

A physician who joins NBPAS is required to complete 50 hours of continuing medical education every two years in the physician's specialty (note that Maryland requires 50 hours of CME for state licensure renewal, but does not specify that those hours be in the physician's specialty).^{xxxix} Applicants must also pay a small fee (under \$200) for renewal of the NBPAS board certification every two years.^{xxx} There is no assessment component for NBPAS recertification. Thus this approach reduces, but does not eliminate, requirements for recertification activities by physicians. As of mid-2018, approximately 7,000 physicians have board certification through NBPAS.

Hospitals are able to change their credentialing requirements

Hospitals may change their medical staff bylaws to meet the needs of their physicians, patients, and community, subject to federal and state law and regulatory requirements. These bylaws set the rules for membership to the hospital's medical staff through employment or privileges, including rules related to physician credentialing. All changes to the medical staff bylaws must be voted on by the hospital's organized medical staff and approved by the hospital's governing body.^{xxxi} Hospitals believe that their ability to independently set evaluation criteria for providers is important to their role in maintaining quality of care within their facilities and serving the needs of their communities.

To the extent that a hospital requires continued maintenance of board certification as part of its credentialing requirements for medical staff, physicians must maintain this certification to maintain their employment or privilege status with the hospital. Because medical staff are self-governing, physicians have the option to propose changes to hospital policies, following the process outlined in each hospital's medical staff by-laws and subject to approval by the hospital board.^{xxxii}

As of 2018, 104 hospitals in the United States had changed their bylaws to accept NBPAS as a board certifying entity. In Maryland, in September 2015, Frederick Memorial voted to accept a NBPAS as a valid option for recertification (in addition to boards that had been previously recognized by the hospital).^{xxxiii} Between 2015 and 2017, six physicians at Frederick Memorial had switched to NBPAS for board recertification (less than one percent of the medical staff).^{xxxiv} Sibley, a Hopkin's affiliated hospital in Washington, D.C., also accepts NBPAS certification.

In 2017, Frederick Memorial again changed their medical staff bylaws. Frederick continues to recognize the value of initial board certification, but believes that their peer review process, combined with state licensure requirements, makes recertification unnecessary. Under Frederick's current bylaws, the hospital will only appoint physicians to the medical staff if they are board certified or admissible to a specialty board. New physicians who did not have board certification when they joined the medical staff must obtain initial board certification within five years. Members of the medical staff "do not need to achieve board recertification to be considered eligible to re-apply."^{xxxv}

There is no evidence that a hospital's Joint Commission accreditation status would be affected by a change in recertification process. The Joint Commission accredits hospitals, and some hospitals have raised questions about whether changes to medical staff standards will impact their accreditation. The Joint Commission's standards focus on the independence of the organized medical staff to determine membership criteria within the hospital, as opposed to setting specific credentialing requirements.^{xxxvi} Hospitals may change their medical staff membership criteria without impacting Joint Commission accreditation. For example, Frederick Memorial underwent Joint Commission review in the fall of 2017, and no concerns were raised about their membership criteria.^{xxxvii}

The Maryland Board of Physicians has the authority to recognize alternative board certification entities.

Under current law, the Maryland Board of Physicians (BoP) has the authority to recognize specialty certification boards, in addition to ABMS and AOA, if that specialty board submits an application to the BoP.^{xxxviii} As stated earlier, board certification is not a requirement for licensure in Maryland. However, the Maryland Board of Physicians recognizes board certification entities for other purposes. BoP regulates physician's advertising, including references to board certification status. BoP also requires that physicians have board certification in order to serve as peer reviewers in physician disciplinary actions.^{xxxix} As of August 2018, NBPAS had not applied to the Maryland Board of Physicians for state recognition.

A compilation of provisions of Maryland law that reference to physician board certification is available on the work group web site:

https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/MD_Law_Relevant_to_MOC_Work_Group_7_20_18_update2.pdf

Discussion of legislative approaches to addressing recertification concerns.

Increasingly, physicians are seeking to change state statutes to prohibit the requirement of board recertification by state licensing boards, hospitals, insurers, or other entities.^{xl} As of early 2018, eleven states had passed legislation preventing their state licensure board from requiring board recertification. Five states have passed laws related to board recertification that impact hospitals and/or insurers.

The states that have prohibited the use of board recertification requirements by hospitals or other entities have taken one of the following two approaches:

1. Statutes that amend the title of the state code related to professional regulation of physicians to prohibit differentiation between physicians based on MOC for "reimbursement" or "employment" or privileges. Georgia, Oklahoma, and South Carolina have used this approach.^{xli} These statutes are likely not enforceable against hospitals and insurers because of the inclusion of this language in the state's code titles related to professional regulation (not insurance or hospital regulation) and the use of language such as "nothing in this title shall be construed to....", which limits the impact of the new statutory language.
2. Statutes that amend the titles of the state code related to insurance and hospitals to prevent differentiation between physicians based on board certification status. Texas and Tennessee have taken this approach in bills that went into effect this year.^{xlii} These statutory changes are likely enforceable against hospitals and insurers. Both bills allow hospital medical staffs to vote to allow the hospital to require recertification program participation for medical staff members.

MHCC staff compiled a memo detailing the statutory approaches in all five states mentioned above. This memo is available on the MHCC website at:

https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/Memo_5_%20st_%20leg_w_text.pdf

Three concerns were raised in the work group about statutory approaches that would impact hospitals and/or insurers.

1. *Impact on quality of care:* Some work group members would like to be able to see data on the impact of these statutes on quality of care in other states. However, effective dates for these statutes range from July 1, 2016 to July 1, 2018.^{xliii} Given the recent implementation of these new laws, insufficient data exists at this time to determine if passage of these statutes impact trends in patient safety, hospital quality performance, or physician disciplinary actions.

2. *Hospital Accreditation:* Some group members raised a concern that such statutes could raise difficulty for hospitals in the state seeking accreditation from the Joint Commission. All Maryland acute care hospitals are accredited with the Joint Commission. The Joint Commission's Certification Manual requires that hospitals have a self-governing medical staff to determine medical staff membership requirements, with the approval of the hospital's executive board, rather than specifying specific credentialing requirements for medical staff.^{xliv} An interview between MHCC and Joint Commission staff clarified that accredited hospitals must comply with all applicable state and federal law and that compliance with applicable law is a valid explanation for any concern that might be raised by a Joint Commission review. Thus, hospital accreditation would not be impacted by a change in state law.
3. *Medicare:* Some concerns were raised about Medicare conditions of participation. Compliance with these conditions is crucial to receiving Medicare reimbursement. Based on preliminary research, it does not appear that a statute similar to those passed in other states would impact hospital's compliance with these rules.^{xlv} The implications of a state statute on Medicare payment for hospitals likely merits additional research.

Hospitals and insurers believe, on principle, that their independence in setting criteria for employment, privileges, and other credentialing-related decisions is crucial to their ability to meet the unique needs of their community, including patients, physicians, and other stakeholders. Hospitals and insurers feel that a statutory approach to this topic would limit their ability to adjust to meet changes in the community and in the practice of health care. The physician members of the work group expressed a preference to determining their own requirements for ongoing training and assessment. They expressed the commitment of physicians to quality patient care. These two positions are not reconcilable at this time, as achieving one group's goal requires limiting the other group.^{xlvi}

Additional finding: most health insurers in Maryland do not require board recertification

It appears that most insurers in Maryland are not currently requiring board recertification. The exception is the one insurer (Kaiser) that employs all of its own physicians. Similar to hospitals, insurers on the workgroup want to maintain their ability to make choices about their credentialing requirements. The work group did not survey all insurers in Maryland on this topic, but did hear from many insurers, including work group members.

Insurers in Maryland generally delegate credentialing to hospitals for practicing Maryland physicians who are affiliated with a hospital.^{xlvii} To the extent that the hospital or health system requires board recertification for employment or privileges, that requirement would be carried through to the insurer with respect to physicians affiliated with that hospital. Similarly, changes to medical staff bylaws at the hospital to remove recertification requirements or allow for alternative certifying boards, as described above, would also pass through to the insurer. For independent physicians, the insurers that provided information to the work group did not require board recertification, and at least one major insurer in the state did not require initial board certification.

As a result of this finding, the work group spent relatively little time discussing insurance-related topics. The work group also did not discuss malpractice insurance, another topic raised in legislation in some other states.

Conclusion

MHCC supports steps that reduce physician burden and improve physician retention while maintaining quality of care. With respect to physician board certification requirements, key stakeholders in the work group were unable to reach compromise on a legislative approach. Physicians have non-legislative means to change recertification through modernizing requirements within traditional board certifying organizations, encouraging acceptance of alternative board certification organizations with reduced recertification requirements by hospitals and other health facilities, and through changes to hospital medical staff by-laws that

could provide physicians with greater flexibility in recertification or relief from recertification requirements altogether.

Maryland should continue to monitor implementation in the states that have adopted legislative changes, including any legal issues that arose during implementation and data on quality of care, (recognizing that it will likely be several years before meaningful data is available for evaluation). Maryland should also monitor ongoing changes in recertification requirements at ABMS and AOA.

The Maryland Health Care Commission carefully reviewed the findings and conclusions in this letter at its October 16, 2018 meeting. The Commission agreed that the lack of consensus meant that work group could not recommend compromise legislation at this time.

MHCC thanks all members of the work group for their active engagement on this topic. Additional resources from the work group, including meeting minutes, presentations, research reports, and a summary of state statutory provisions that reference board certification, are available at http://mhcc.maryland.gov/mhcc/pages/home/workgroups/workgroups_maintenance_cert.aspx.

MHCC welcomes feedback and questions on this topic. Please contact Megan Renfrew, Chief of Government Affairs and Special Projects, at Megan.Renfrew@maryland.gov or (443)-615-1338 or contact me directly at 410-764-3566.

Sincerely,



Ben Steffen,
Executive Director
Maryland Health Care Commission

cc: Robert Moffit, PhD., Chairman MHCC
Andrew Pollack, MD, Vice Chairman MHCC
Robert Neall, Secretary, Maryland Department of Health
The Honorable Christopher West, House of Delegates
Physician Maintenance of Certification Work Group Members

ⁱ The Honorable Shane Pendergrass to Ben Steffen, March 13, 2018, available at: https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/Physicians_Specialty_Certifications_Study_HB%20857_Request_HGO.pdf

ⁱⁱ American Board of Medical Specialties, “ABMS Board Certification Report, 2016-2017”, https://www.abms.org/media/139572/abms_board_certification_report_2016-17.pdf, page 14; American Osteopathic Association Board Certification, “About AOA Certification”, <https://certification.osteopathic.org/about/>, accessed 8/23/2018.

ⁱⁱⁱ American Board of Medical Specialties, ABMS Board Certification Report 2016-2017, https://www.abms.org/media/139572/abms_board_certification_report_2016-17.pdf, accessed 8/17/2018; Wieting JM, Weaver JL, Kramer JA, Morales-Egizi L. Appendix 2: American Osteopathic Association Specialty Board Certification. J Am Osteopath Assoc 2017; 117(4):268–271. doi: 10.7556/jaoa.2017.045. For context, there were approximately 969,000 actively practicing physicians in the United States as of March 2018. <https://www.kff.org/other/state-indicator/total-active-physicians>

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- ^{iv} American Board of Medical Specialties “Table 2D: ABMS Member Board Requirements for Continuing Certification (MOC)”, ABMS Board Certification Report, 2016-2017, https://www.abms.org/media/139572/abms_board_certification_report_2016-17.pdf, page 25; Scheinthal S, Wieting JM, Elko E, Bowling J, Gonzalez F, Librizzi R, Murcek B, Simms B. Evolution of AOA Specialty Board Certification. *J Am Osteopath Assoc* 2015; 115(4):265–267. doi: 10.7556/jaoa.2015.051.
- ^v See, Madewell, John E., et al., *American Journal of Roentgenology*. 2005; 184: 3-10. 10.2214/ajr.184.1.01840003. David B. Troxel (2002) Maintenance of Certification. *Archives of Pathology & Laboratory Medicine*: August 2002, Vol. 126, No. 8, pp. 901-901. Brandi White, *Fam Pract Manag*. 2005 Jan; 12(1):42-48. Rhodes, Robert S., *The American Surgeon*, Volume 73, Number 2, February 2007, pp. 143-147(5). The famous Institute of Medicine study “To Err is Human” notes the ability of ABMS to reach large numbers of physicians on patient safety topics. Institute of Medicine. 2000. *To Err Is Human: Building a Safer Health System*. Page 143, Washington, DC: The National Academies Press. <https://doi.org/10.17226/9728>.
- ^{vi} American Board of Medical Specialties, “ABMS Board Certification Report, 2016-2017”, https://www.abms.org/media/139572/abms_board_certification_report_2016-17.pdf, page 13; page 25-27
- ^{vii} Title 14, MD Health Occ Code (2018). The State of Maryland prohibits physicians from practicing medicine unless they are licensed in the state. MD Health Occ Code § 14-301 (2018). There is a limited, education-related, exception to this rule in MD Health Occ Code § 14-301 (2018) and additional limited exceptions in title 14 of the Maryland Health Occupations Code (2018).
- ^{viii} MD Health Occ Code § 14-307 (2018). Physicians that fail the state licensing exam three or more times may use board certification to qualify for a license in Maryland, but board certification is not required. MD Health Occ Code § 14-307(g) (2018).
- ^{ix} COMAR 10.32.01.08
- ^x COMAR 10.32.01.08; COMAR 10.32.01.10; Maryland Board of Physicians, “Application for Reinstatement of Medical License”, <https://www.mbp.state.md.us/forms/phyreint.pdf>
- ^{xi} Section 3(a)(1)(II) of the Interstate Compact on Medical Licensure, MD Health Occ Code § 14–3A–01 (2018).
- ^{xii} Section 3(a)(2) of the Interstate Compact on Medical Licensure, MD Health Occ Code § 14–3A–01 (2018).
- ^{xiii} As an example, the American Board of Internal Medicine, a member board of ABMS, reports an average pass rate for first time MOC exam test takers of 85 percent, and 96 percent pass within three years, for the period between 2008 and 2013. The pass rate varies by year and subspecialty. American Board of Internal Medicine, “First-Time Taker Pass Rates - Maintenance of Certification”, <https://www.abim.org/~media/ABIM%20Public/Files/pdf/statistics-data/maintenance-of-certification-pass-rates.pdf>, Accessed August 30, 2018
- ^{xiv} Drolet BC, Tandon VJ. Fees for Certification and Finances of Medical Specialty Boards. *JAMA*. 2017; 318(5): 477–479. doi:10.1001/jama.2017.7464
- ^{xv} Sandhu AT, Dudley RA, Kazi DS. Ann, A Cost Analysis of the American Board of Internal Medicine's Maintenance-of-Certification Program. *Intern Med*. 2015 Sep 15; 163(6):401-8. doi: 10.7326/M15-1011.
- ^{xvi} \$5.1 billion over ten years. Sandhu AT, Dudley RA, Kazi DS. Ann, A Cost Analysis of the American Board of Internal Medicine's Maintenance-of-Certification Program. *Intern Med*. 2015 Sep 15; 163(6):401-8. doi: 10.7326/M15-1011.
- ^{xvii} National Board of Physicians and Surgeons, “Journal Club recertification Literature Review”, https://nbpas.org/wp-content/uploads/2018/06/recertification-Journal-Club_2018-05-30.pdf, accessed 8/23/2018
- ^{xviii} American Board of Medical Specialties, “The ABMS Program for Maintenance of Certification (ABMS recertification®) is Liked to Better Patient Care”, http://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/Studies_on_Impact_of_MOC_on_Patient_Care_and_Safety.pdf; National Board of Physicians and Surgeons, “Journal Club recertification Literature Review”, https://nbpas.org/wp-content/uploads/2018/06/recertification-Journal-Club_2018-05-30.pdf, accessed 8/23/2018
- ^{xix} American Medical Association, “Issue brief: Maintenance of Certification laws and legislation”, 2018. Available on the work group web page: https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/AMA_St_Chart_MOC_laws_legislation.pdf
- ^{xx} Vision Initiative for the Future, “Detailed Timeline”, <https://visioninitiative.org/about/detailed-timeline/>, accessed 9/4/2018.
- ^{xxi} Continuing Board Certification: Vision for the Future Commission,” Summary of Testimony”, July 2018; https://visioninitiative.org/wp-content/uploads/2018/07/Vision_for_the_Future_Public_Testimony.pdf, accessed 9/4/2018.
- ^{xxii} Vision for the Future Commission, “Stakeholder Beliefs about the Future of Continuing Certification: Survey Findings”, July 2018, https://visioninitiative.org/wp-content/uploads/2018/07/Vision_for_the_Future_Stakeholder_Survey_Summary.pdf, accessed 9/4/2018.

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- ^{xxiii} “Knowledge Check-in: ABIM MOC changes mean more choices”, blog, NEJM Plus, <https://knowledgeplus.nejm.org/blog/knowledge-check-in-abim-moc-changes-mean-more-choices/>, accessed 9/4/2018.
- ^{xxiv} Ibid.
- ^{xxv} AOA, “Osteopathic Continuous Certification”, <https://certification.osteopathic.org/osteopathic-continuous-certification/>, accessed 9/4/2018.
- ^{xxvi} AOA, “AOBR Pilots New OCC Examination Format”, Wednesday, July 11, 2018, <https://certification.osteopathic.org/news/aobr-pilots-new-occ-examination-format/>, accessed 9/4/2018
- ^{xxvii} Ibid.
- ^{xxviii} NBPAS, “FAQs”, <https://nbpas.org/faqs/>, accessed 9/4/2018.
- ^{xxix} NBPAS, Criteria, <https://nbpas.org/criteria/>, accessed 9.24.2018
- ^{xxx} Ibid. For comparison, recertification fees for recertification member boards average \$262 per year. Drolet BC, Tandon VJ. Fees for Certification and Finances of Medical Specialty Boards. JAMA. 2017; 318(5):477–479. doi:10.1001/jama.2017.7464
- ^{xxxi} The Joint Commission, “Medical Staff”, Comprehensive Accreditation Manual for Hospitals, January 2018.
- ^{xxxii} The Joint Commission, “Medical Staff”, Comprehensive Accreditation Manual for Hospitals, January 2018.
- ^{xxxiii} Meeting Summary, Physician Maintenance of Certification Work Group, Meeting of June 19, page 2, https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/FINAL_MOC_Meeting_Summary_June_19_2018.pdf, accessed 9/4/2018.
- ^{xxxiv} Meeting Summary, Physician Maintenance of Certification Work Group, Meeting of June 19, page 2, https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/FINAL_MOC_Meeting_Summary_June_19_2018.pdf, accessed 9/4/2018.
- ^{xxxv} Frederick Memorial Hospital Bylaws. An excerpt of the bylaws is available on the workgroup webpage.
- ^{xxxvi} The Joint Commission, “Medical Staff”, Comprehensive Accreditation Manual for Hospitals, January 2018. Note that the rule described above applies to hospitals. The Joint Commission does require active ABMS or AOA board certification for ambulatory sleep centers. Joint Commission, “New Requirement for Sleep Centers”, June 2017.
- ^{xxxvii} Meeting Summary, Physician Maintenance of Certification Work Group, Meeting of June 19, page 2, https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/FINAL_MOC_Meeting_Summary_June_19_2018.pdf, accessed 9/4/2018.
- ^{xxxviii} MD Health Occ Code §§ 14-101, 14–401.1.
- ^{xxxix} MD Health Occ Code §§ 14-101, 14–401.1, 14-411.1(b), 14–503 (2018). A compilation of references to board certification in Maryland law is available on the work group web site: https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/MD_Law_Relevant_to_MOC_Work_Group_7_20_18_update2.pdf
- ^{xl} American Medical Association, “Issue brief: Maintenance of Certification laws and legislation”, 2018. Available on the work group web page: https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/AMA_St_Chart_MOC_laws_legislation.pdf
- ^{xli} GA Code § 43-34-46 (2017); Okla. Stat. Ann. tit. 59, §492(G); S.C. Code Ann. § 40-47-38 (Supp 2018)
- ^{xlii} T.C.A. §§ 33-2-422, 56-7-1006, 63-6-246, 63-9-123, 68-2-422. Tex. Ins. Code § 1461.001 et seq. Tex. Occ. Code §§ 151.002(a), 151.0515155.003, 156.001(f).
- ^{xliii} Memo Re: Out-of-State Legislation on MOC affecting hospitals and/or insurers, Regulations, and Related Topics, July 24, 2018, https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/Memo_5_%20st_%20leg_w_text.pdf
- ^{xliv} The Joint Commission, “Medical Staff”, Comprehensive Accreditation Manual for Hospitals, January 2018.
- ^{xlv} 42 CFR 482.12(a)(7).
- ^{xlvi} Note that Texas’s statute addressed this concern by setting a baseline rule that hospitals could not consider board recertification, but allowing hospital medical staff and hospital boards to overrule that rule through their medical staff bylaws. Memo Re: Out-of-State Legislation on MOC affecting hospitals and/or insurers, Regulations, and Related Topics, July 24, 2018, https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/Memo_5_%20st_%20leg_w_text.pdf
- ^{xlvii} According to MHCC staff analysis of data from the Maryland Board of Physicians 2016 Licensure Renewal Files, 61% of actively practicing physicians in Maryland are affiliated with a hospital or health system. Presentation, Physician Maintenance of Certification Work Group July 24, 2018, https://mhcc.maryland.gov/mhcc/pages/home/workgroups/documents/moc/7_24_2018_MOC_Wrkgrp_Prst_v2.pdf