

PROFESSIONALISM AND ACCOUNTABILITY: THE ROLE OF SPECIALTY BOARD CERTIFICATION

CHRISTINE K. CASSEL, M.D. and (by invitation) ERIC S. HOLMBOE, M.D.

PHILADELPHIA, PA

Brief History of Board Certification in the USA

Board certification began in 1917 with the American Board of Ophthalmology as the first specialty board. The American Board of Internal Medicine (ABIM) was incorporated in 1936; and by 2002, the core group of the 24 member boards of the American Board of Medical Specialties (ABMS) had a firm set of shared guidelines and requirements for board certification (Table 1). The specialty boards were created in the first part of the 20th century as medical science was beginning to advance, and physicians were beginning to gain specialty knowledge. The primary reason for specialty boards was to identify the boundaries and the content areas that defined specific specialties. It was a time, shortly after the Flexner report, when American medicine was beginning to try to distinguish itself from the proprietary physicians trained by apprenticeship, many of whom had little science base and were often considered “snake oil salesmen.”¹

Importantly, in contrast with the Royal Colleges in the United Kingdom and Canada, the specialty boards were established to be independent of the membership societies. The parent bodies that created the ABIM in 1936, the American Medical Association (AMA) and the American College of Physicians (ACP), felt it was important for the certifying boards to be independent of membership societies in order to be able to set high standards that would be credible with the public. Thus, the true constituency of the certification boards is the public. This factor has indeed led board certification to have the potential for leadership in advancing quality of physician practice consistent with growing contemporary pressures for transparency and public accountability.

For the first several decades of the US board certification process,

Correspondence and reprint requests: Christine K. Cassel, MD, President and CEO, American Board of Internal Medicine, 510 Walnut Street, Suite 1700, Philadelphia, PA 19106, T: 215-446-3528, F: 215-446-3473, E-mail: ccassel@abim.org

TABLE 1

Member boards of the American Board of Medical Specialties (ABMS)

● Allergy & Immunology	● Orthopedic Surgery
● Anesthesiology	● Otolaryngology
● Colon/Rectal Surgery	● Pathology
● Dermatology	● Pediatrics
● Emergency Medicine	● Physical Medicine & Rehabilitation
● Family Medicine	● Plastic Surgery
● Internal Medicine	● Preventive Medicine
● Medical Genetics	● Psychiatry & Neurology
● Neurological Surgery	● Radiology
● Nuclear Medicine	● Surgery
● Obstetrics & Gynecology	● Thoracic Surgery
● Ophthalmology	● Urology

it was a truly voluntary system and was considered a mark of excellence and extra professional achievement. Indeed, many early leaders in the field were not board certified and most patients would not have considered inquiring about a physician's certification status. During the latter decades in the 20th century, a number of important changes occurred. One was the growing consumer movement in healthcare and the more widespread recognition that a "board certified physician" was a good thing, even though most members of the public did not really know what that meant. With the growth of hospital-based and more highly technical care, hospitals were looking for credentials for hospital privileges. In the surgical specialties, in particular, board certification began to be considered a highly desired and sometimes required credential. The second major change was the rapid growth of managed care in the health insurance industry in the 1980's. Looking for ways to distinguish themselves, the managed care plans began to prefer board certified physicians for their networks. These two changes caused a large proportion of previously uncertified physicians to seek certification in the late 1980s and early 1990s. The third major change was the beginning of limited duration for board certification and the consequent incentive for recertification. For example, the American Board of Family Medicine (formerly Family Practice) required recertification every seven years from its outset in 1972. The American Board of Surgery changed its standards to require recertification in 1976. Internal Medicine certificates became time-limited in 1990. In 2002, all of the ABMS boards agreed on comparable standards for board certification, including recertification requirements and a new component that requires evaluation of performance in practice.

Maintenance of Certification

The agreement of the 24 specialty boards to a process called "Maintenance of Certification (MOC)" marked a new era in the importance of specialty boards for public accountability and the potential for the boards to strengthen public trust in physicians as leaders with a strong ethical responsibility for maintaining their competence and standards of patient care. About 87% of American physicians are certified.

MOC requires all of the boards to limit the duration of their certificates. Currently, certificates are required to be renewed within 6- to 10-year cycles, depending on the different specialties. All specialties, however, require four components to the MOC process:

1. An active and unrestricted license in the state where the physician is practicing.
2. Self-evaluation of knowledge, to increase and strengthen the standards for continuing medical education, including the ability to demonstrate significant learning.
3. A secure, closed-book examination of knowledge.
4. Assessment of performance in practice.

For most boards, the fourth component, the practice assessment, is a new and challenging aspect of the MOC process, leading to the need for boards to interface with physicians' clinical or claims data at a time when such data sources are becoming more available. The investments in research and development of new products and approaches to new relationships with the medical societies, health plans, hospitals and healthcare organizations, have energized certified physicians in an important way.

The concept of MOC suggests the goal that physicians should be continuously engaged in self-evaluation and improvement of knowledge and practice performance over the course of a career. Boards are developing approaches and products that are more relevant to clinical practice, reduce burdens of redundant data collection and will create incentives for physicians who complete self-evaluation of knowledge and practice performance on a frequent basis, perhaps as frequently as every year; but at this point, that has not been required by most.

For the self-evaluation of knowledge component, some boards have developed their own education materials with exam-like questions that encourage the use of educational resources, provide links to key educational information, and may use video and audio recordings.² This

more active type of CME has been shown to be more effective in promoting improvement.³

The knowledge exam is the component of MOC that is probably the most rigorous, most linked to evidence of better outcomes but the most anxiety-provoking aspect of MOC.⁴⁻⁹ It is not hard to see why a periodic secure examination is a core component of public expectation for board certification.¹⁰ Science is advancing ever more rapidly, and the knowledge base that any physician needs is dramatically increasing. The Institute of Medicine pointed out that some 10,000 clinical trials are published every year, and no physician could be expected to keep up with that volume of knowledge. For this reason, many physicians cite the importance of decision support and information resources available to physicians rather than physician memory. However, state-of-the-art question development on knowledge exams is not so much to test rote memory, but more to evaluate the synthesis of information and clinical judgment. The exams are rigorously developed and tested using strict psychometric standards; and at the ABIM, they are reviewed by a national network of practicing physicians and graded for clinical relevance. Only those questions with significant relevance to practice are used in the MOC examinations.

A comprehensive meta-analysis of the literature on physician capability over the course of a career found a dramatic and significant decline in physician knowledge and compliance with national guidelines for diagnosis and treatment, and in some cases, with actual patient outcomes.¹¹ Data like these further support the need for ongoing stimulus for physician learning and self-evaluation. As performance assessment becomes more rigorous and more widespread, many people argue that knowledge exams are not necessary if performance is being evaluated in practice. Medical knowledge, however, consists of so many complex areas that the ability to evaluate a physician solely based on a limited number of patients cannot possibly truly evaluate the depth of specialty knowledge. In internal medicine, for example, one can fairly reliably gather enough patients with diabetes, asthma or congestive heart failure to test one's performance in these areas. But no internist would have a large enough volume of patients with meningitis or tuberculosis to be able to evaluate performance in those patients; and yet, one would want to expect a board certified internist to be able to consider the possibility of meningitis in a patient with a headache and a fever or of tuberculosis in a patient with a cough and weight loss. Twenty years of research in cognitive psychology has confirmed the importance of

possessing a certain “core” of medical knowledge.¹² First, without this core knowledge one cannot recognize what one does not know and therefore needs to “look up.” Second, as shown in Figure 1, this core knowledge is a critical component of the clinical reasoning process.¹³ Thus, it is diagnostic acumen that is probably best evaluated by the knowledge exam, whereas the treatment and management of common conditions may be evaluated as well or better by practice performance assessment.

Evaluation of Performance in Practice

The evaluation of practice performance component for ABIM consists of either ABIM-developed tools -the ABIM PIMSM Practice Improvement Modules (PIMs) - or other data gathered around the physician’s practice from other sources. The PIM is an internet-based tool, using nationally accepted guidelines for specific conditions or patient groups, allowing a physician to review chart data, both manually or electronically, survey their patients, and examine the office systems. Physicians send these data to ABIM over a secure link to be analyzed and then returned to the physician as a summary performance report. To get credit for that component, a physician must spell out goals for improvement; and at a later time (perhaps

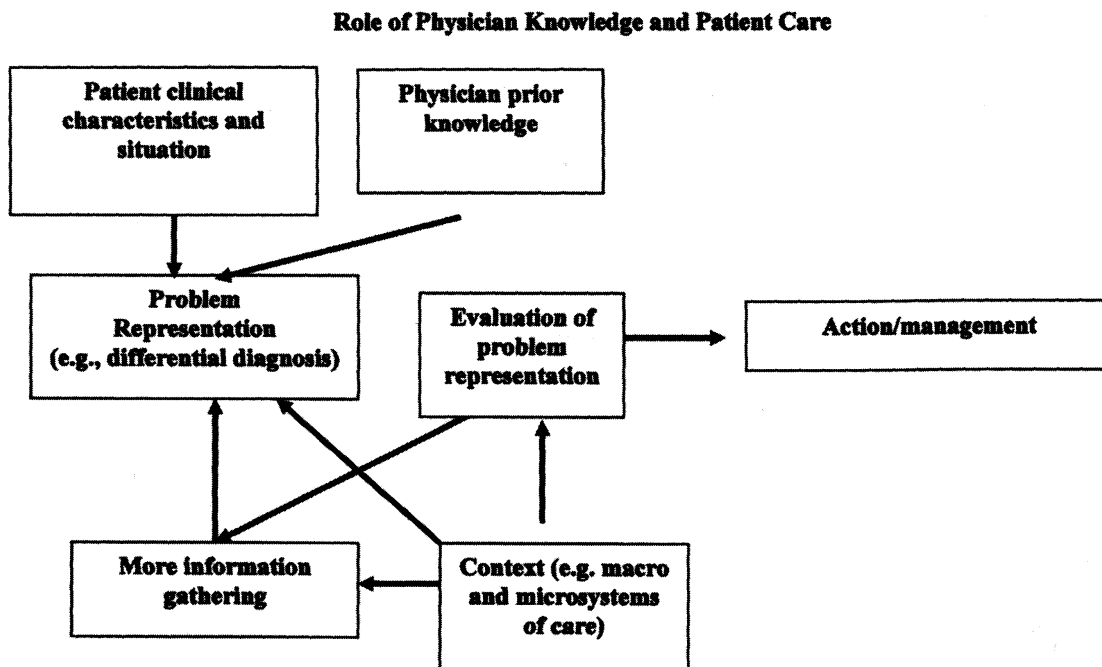


FIG. 1. Role of Physician Knowledge and Patient Care Adapted from Gruppen and Frohna. International Handbook on Medical Education and Research. Kluwer. 2002. (Reference 8)

six months to a year), reevaluate a comparable group of patients and resubmit the data. Early research work by the ABIM found the vast majority of physicians rated the condition-specific PIMs to be a valuable experience. In a pilot study of the diabetes PIM, the participating physicians discovered deficiencies in care processes among their diabetic patients that surprised them. As a result, all but one physician made a change in their practice habits.¹⁴ Physicians can also use modules that specifically ask patients and/or peers to evaluate the physician and that have been shown to discriminate between levels of physician performance.¹⁵ PIMs are being used and tested in more than 50 residency programs, involving over 700 residents across the USA.¹⁶

Some physicians receive practice-related data either from their health system, such as those belonging to the Veterans Administration, or from a large multi-specialty integrated group practice, such as the Kaiser Permanente or Mayo Clinic groups. However, over 50% of practices in the US consisting of five or fewer physicians may receive very little useful clinical data and have no way of identifying their patient denominator base to do a reliable evaluation of practice performance. For those physicians, the PIM is an extremely useful and new tool. Some physicians do receive useful clinical data from insurance companies which collect some data based on individual payment claims submitted by the physician for each patient visit and treatment. Increasingly, the desire is that more direct clinical data (such as laboratory values and clinical exams) are collected by these physicians for the purposes of public accountability and, increasingly, pay for performance. But in the current world, this is not possible for most physicians to do, except through something like the ABIM's PIM. ABIM will, however, give credit to physicians who have robust enough data from some other source so that they are not then required to engage in redundant measurement in order to maintain their certification. This reduction of redundancy and reducing the burden of measurement is a major commitment of the ABIM Board of Directors, and the flexibility around meeting the performance assessment component of MOC is evidence of that effort. Some health plans, however, are seeing that the PIMs may be useful to them in pay-for-performance models and are exploring ideas of using these clinical measures for pay for performance. While ABIM would also give credit for MOC, it is important to understand that the certifying boards are not in any way involved in determining the amount or issuing payment for services.

Certification Boards and Physicians

These are a lot of changes and new requirements at a time when American physicians are feeling increasingly beleaguered by the growing bureaucratic requirements of the fragmented healthcare system and, in the case of primary care and generalist physicians, reduced payment for their services. How are they responding to these new rules for board certification? When the new requirements were initially announced, there was understandable opposition from physicians who see this as added, and perhaps unnecessary, requirements. Over time, however, it appears that acceptance is growing as many of the boards - and ABIM, in particular - have made a concerted effort to reach out and communicate to physicians, to conduct research to improve the products and to demonstrate the relevance to practice.

For one thing, board certification is no longer as discretionary as it once was. As consumers and payers become increasingly interested in evidence of physician competence and quality of care, board certification, especially in its new manifestations, has growing relevance to that world. Thus, many physicians really feel that board certification is not optional. For many in the surgical specialties, hospital privileges depend on certification standards; and increasingly, hospitals are looking to board certification even in non-surgical areas.¹⁷ Widely accepted quality measures for health plans in the US include a percentage of doctors with board certification as one of their quality measures.¹⁸ Thus, board certification exams come with higher stakes; and physicians are more motivated to maintain their certification. Since internal medicine certificates became time-limited in 1990, the first wave expired in 2000. Thus, in the last five years of experience, data show that 88% of specialists and 80% of general internists are enrolling for recertification. The findings of a recent survey conducted jointly by the ACP and ABIM examined physician attitudes about certification.¹⁹ It showed a number of interesting things; the most common reasons physicians gave for enrolling in certification were professional image and quality of care rather than employment requirements or payment, suggesting that professional motivation still is the primary driver. Secondly, it also showed that physicians were much more likely to be critical of the process -complaining that it was too time consuming and not relevant to their practice - before they had gone through the process. More physicians agreed that the process was relevant to their practice after they had completed MOC. The major complaint was still, however, the amount of time that it takes, an issue that leads the boards to look increasingly toward ways to streamline data collection

and strengthen the ability to recognize activities that physicians are doing with their societies or their group practices.

Conclusion

In summary, a combination of knowledge and practice is required to maintain board certification in the United States. The boards are independent entities of peer review, without legal or regulatory status but with significant impact in the marketplace. Given the legitimate public interest in rigorous physician qualifications, it will be ideal if the profession itself can provide trusted and meaningful oversight.

REFERENCES

1. Starr P. *The social transformation of American medicine*. Basic Books, Inc., Publishers: New York, 1949.
2. Davis DA, Taylor-Vaisey A. Translating guidelines into practice. A systematic review of theoretic concepts, practical experience and research evidence in the adoption of clinical practice guidelines. *CMAJ* 1997. 157(4):408–16.
3. Mazmanian PE and Davis DA. Continuing medical education and the physician as a learner. *Guide to the evidence*. *JAMA*. 2002; 288: 1057–60.
4. Holmboe ES, Lipner RS, and Greiner AG. Assessing Quality of Care: Knowledge Still Matters. *JAMA*. (In press).
5. Norcini JJ, Lipner RS, and Kimball HR. Certifying examination performance and patient outcomes following acute myocardial infarction. *Medical Education*. 2002;36:853–859.
6. Norcini JJ, Lipner RS, and Kimball HR. Certification and Specialization: Do They Matter in the Outcome of Acute Myocardial Infarction? *Acad Med*. 2000;75:1193–98.
7. Pham HH. Delivery of Preventive Services to Older Adults by Primary Care Physicians. *JAMA*. 2005;294(4):473–481.
8. Prystowsky JB, Bordage G, and Feinglass JM. Patient outcomes for segmental colon resection according to surgeon's training certification and experiences. *Surgery*. 2002;132(4):663–672.
9. Haas JS, Orav EJ, and Goldman L. The Relationship Between Physicians' Qualifications and Experience and the Adequacy of Prenatal Care and Low Birth Weight. *Am J of Pub Health*. 1995;85:1087–1091.
10. The Gallup Organization for the American Board of Internal Medicine. *Awareness of and Attitudes Toward Board-Certification of Physicians*. August 2003. Accessed at www.abim.org/resources/press/Gallup_Report.pdf.
11. Choudry N, Fletcher R, and Soumerai S. Systematic review: The relationship between clinical experience and quality of health care. *Ann Intern Med*. 2005;142:260–273.
12. Brennan T, Horwitz R, Duffy D, et al. The role of physician specialty board certification status in the quality movement. *JAMA*, 2004;292:1038–1043.
13. Gruppen LD and Frohna AZ. Clinical Reasoning in *International Handbook of Research in Medical Education*. Pgs. 205–230. Norman GR, van der Vleuten CPM, Newble DI, eds. Kluwer Academic. Dordrecht, Netherlands. 2002.
14. Holmboe ES, Meehan TP, Lynn L, Doyle P, Sherwin T, and Duffy FD. Promoting

- self-assessment and quality improvement by physicians: The ABIM Diabetes Practice Improvement Module. Submitted for publication.
15. Ramsey PG, Wenrich MD, Carline JD, Inui TS, Larson EB, LoGerfo JP. Use of peer ratings to evaluate physician performance. *JAMA*. 1993;269:1655–60.
 16. Hood S, personal communication
 17. Freed G, Uren R, Hudson E, et al. Research Advisory Committee of the American Board of Pediatrics. Policies and practices related to the role of board certification/recertification of pediatricians in hospital privileging. *JAMA*. 2006;295:joc60001–8.
 18. National Committee for Quality Assurance. The Health Plan Employer Data Information Set (HEDIS). Accessed at <http://www.ncqa.org/programs/HEDIS/index.htm>.
 19. Lipner R, Bylsma W, et al. Who is maintaining certification in internal medicine—and why? A national survey 10 years after initial certification. *Ann Intern Med*. 2006;144:29–36.

DISCUSSION

Billings, Baton Rouge: Chris, I enjoyed that. About 15 years ago as a lifelong certificate holder I approached the board to see what my liability was for recertification, and I was told that if I attempted the exam and was unsuccessful, that not only would I no longer be certified, but I would have to retake the exam, and if I became successful, I would have to then again have to recertify.

Cassel, Philadelphia: I am really glad you asked that question. That is not true and is a common misconception among “grandfathers.” The lifetime certificate will appear on the website as a lifetime certificate, and you never lose that. If you recertify, then you get an additional piece of information on the website that says recertified, such and such a date. We are actually moving with some of the public members of our board to talk about displaying, at the physician’s request, individual data about which quality or area the physician worked in for example. But it is very important that the lifetime certificate holders realize that they don’t lose that lifetime certificate, which may carry meaning over time. I think one thing that is happening with the health plans is that they recognize that it is a different kind of certificate. So for health plan recognition, you do have to enroll in maintenance of certification in order to get credit from them.

Billings, Baton Rouge: The other problem that I think a number of us face is that I have a certificate in internal medicine, hematology and medical oncology, and I am not sure I have the muster to recertify for all three every 10 years.

Cassel, Philadelphia: You are actually not required to do all three and that is why I showed you those data. A number of people voluntarily do recertify in the underlying certificate, but ABIM does not require that you recertify in the underlying internal medicine certificate in order to recertify in your subspecialty. Those exams actually include a fair amount of specialty-relevant internal medicine in them, and so at this point, at least, that is not a requirement.

Billings, Baton Rouge: Thank you.

Cassel, Philadelphia: So you should try it. It doesn’t hurt.

Billings, Baton Rouge: I’m afraid to.

Ludmerer, St. Louis: Thank you, Chris, for that excellent presentation and very important work that you have been doing and are continuing to do. It struck me that there could be a way out of the big dilemma that faces medicine, and it has to do with properly training physicians and making sure that they continue to practice well, which is what you are doing now. The quality practice of medicine has always been a thinking practice. You evaluate patients carefully, and then you do things because they are

indicated from the patient's circumstances rather than because they are there to do, and it is extraordinary reviewing physician practice over time how seldom we have accomplished that goal. We get things because they are there, not because they are needed, and we see what the data show, and the only difference in this regard between medical practice today and 1937 is that we have a larger menu of things to choose from, and the things that we choose from cost more. I have always viewed this as a failure of medical education. Bob Brooks' work, which you very nicely cited today, confirms this. I would be interested in your view of what we can do in medical education to promote internists, or physicians in any field who truly perform in a cost-effective fashion, getting things because they are needed without any harm to the patient. If you do less, you are doing more. Reducing costs, bringing uninsured people into it and what might be possible for boards to do in measuring this aspect of physician performance, as I was very struck by your comments that the board is moving to evaluate not just knowledge, but performance. Is there any technical possibility of measuring this aspect of performance? Certainly, if we can measure it will be an incentive to people to practice more thoughtfully.

Cassel, Philadelphia: Well Ken, I have an answer that I hope will please you as an educator, which is that we have some preliminary data in a collaboration that we have with Elliott Fisher at Dartmouth, that now has actually been funded by NIH for a major national study, suggesting that the people who perform at a higher level on our exams have better resource use and better outcomes. Because of the kind of data that we are collecting, we will, of course, be able to monitor that over time. As you know, Elliott has these maps of geographic variation that are down to the Medicare neighborhoods now and the individual physician, and so he is able to match that up with our data on physician performance on the exams. So when you think about it, people who know more are much more likely to order the right test first, get to the diagnosis first. Now they still are influenced by their regional pressures and payment policy and things like that, but there seems to be a remarkably rigorous consistency with knowledge and efficiency of care. So hopefully that study will be published some time within this year. They are doing a whole range of studies with some of the research staff at the Board. So stay tuned.

The other thing related to the question that someone asked earlier about the caring function that Abraham mentioned, and Abraham is a member of our Board, is that we use the CAHPS studies, which is the nationally recognized Consumer Assessment Health Plan Survey Assessment, as part of all of our practice assessment; and now all of the ABMS boards are using that tool. It is a pretty sophisticated tool of the patient's perception of the quality of their care, not just was the waiting room nice and did you get seen promptly, but did your questions get answered and did you feel respected, etc. So I think we are going to have some pretty robust and consistent data across all of the boards very soon. Thank you.