ARTICLE

How Should Board Certification Evolve?

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Family Medicine was a child of the 1960s. Triggered by compelling social need for care outside of large hospitals, Family Medicine emphasized access to personal physicians based in the community. As a protest movement, the ABFP required ongoing recertification for all Diplomates, with both independent examination and chart audit. Fifty years later, society and health care have changed dramatically, and it is time again to consider how Board Certification must respond to those change. We propose three interlocking arguments. First, even before COVID-19, health and health care have been in a time of fundamental transformation. Second, given the role Board Certification plays in supporting improvement of healthcare, Board Certification itself must respond to these changes. Third, to move forward, ABFM and the wider Board community must address a series of wicked problems – i.e., problems which are both complex–with many root causes–and complicated- in which interventions create new problems. The wicked problems confronting board certification include: 1) combining summative and formative assessment, 2) improving quality improvement and 3) reaffirming the social contract and professionalism and its assessment. (J Am Board Fam Med 2020;33:S1–S9.)

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Introduction

On September 16, 1964, what we epitomize as the 1960s began. The Republicans held their national convention in San Francisco, CA, and nominated Barry Goldwater. Berkeley students applied to the administration for a permit to protest on what is now called Spruill Plaza. The Dean of Students forbad them to demonstrate, and the resulting "free speech" protest nationalized. Fueled by the civil rights movement, the Vietnam war, and high-profile assassinations, that era has shaped much of modern society. In health care, along with the passage of Medicare and Medicaid, the beginning of community health centers, the American Board of Family Practice (ABFP, now American Board of Family Medicine [ABFM]), was launched as the 20th specialty board in 1969. Triggered by a compelling social need for personal care outside large hospitals, family medicine emphasized access to personal physicians[1] based in the community. ABFP brought change to board certification, requiring ongoing recertification for all diplomates, with both independent examinations and chart audit, while affirming the emphasis on continuing medical education (CME) of the American Academy of General Practice.

Fifty years later, both society and health care have changed dramatically, and it is time to consider how board certification should evolve. The goal of this special issue is to explore the future of board certification in family medicine and in other specialties. The articles in this special edition were first presented at a symposium marking the 50th anniversary of the ABFM. The first 2 sections briefly describe contemporary changes taking place in American health care and changes in the patients and practices of family physicians, which together frame the need for substantial changes in board certification. To remain relevant and valuable to the profession and to society, board certification must respond to these needs. Using examples from family medicine and other boards, the next 3 sections of this article describe a series of wicked problems facing board certification—problems that are both complex, with many root causes; and complicated, that is, that interventions often create new problems. These wicked

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problems include (1) combining assessment of learning and for learning, (2) improving quality improvement, and (3) reaffirming professionalism and the social contract. The sections frame the problems, describe possible strategies for addressing each of the problems and introduce the articles in this special issue.

Transformation without Improvement

Health care in the United States is changing dramatically. American health care has always been dynamic, with a parade of new drugs and devices. But, changes of an amplitude and speed not seen in 2 generations are occurring: they represent transformation. A major component is the rapid consolidation of hospitals and health systems, driven by health reform, the promise of payment for population health, and market and regulatory forces. In parallel are the rapid advance of technology, integrated electronic health records, and the employment of US physicians. Most US physicians are now employed,[2] as are almost 70% of family physicians.[2]

A second phase of transformation is just starting. Changes in genomics are revolutionizing cancer and autoimmune disease treatment and promise more. Augmented intelligence promises to change health care as much as what has already happened in banking and retail businesses. Attracted by margin, new business models are coming into medicine—CVS and Aetna; Humana and Walmart; Amazon, JP Morgan, and Berkshire Hathaway; and many others. And now the COVID-19 pandemic has greatly accelerated telehealth and will have a major and long-lasting impact on the organization and financing of health care long after the pandemic is over.

These dramatic changes come in the context of worsening outcomes of care compared with similar countries. Americans die earlier and are sicker across all ages and for almost all diseases. These trends started in the 1980s and have persisted across parties and administrations. Figure 1[3] illustrates 1 example. Despite dramatically more investment in health care,[4] the probability of survival for US men to age 50 is the lowest among similar countries, and survival of US women to age 50 is much lower than similar countries. Underscoring the implications of these trends is the recent report that, despite 15 years of "innovation and transformation" and despite health care reform, the life expectancy of Americans has begun to decline[5]—even before COVID-19.

The Evolution of Family Medicine

The development of family medicine also underscores the need for significant changes in board certification. Patients and practices in family medicine have changed dramatically in 2 generations. Table 1 depicts the changes in causes of death from the 1950s until recently[6,8,9]: they represent the conditions that "personal doctors in the community" must address in daily practice. The relative burden of infection and accidents has stayed the same, and there has been a dramatic increase in the incidence of cancer, diabetes, and other chronic diseases.

Table 1. Causes of Death in 1952 and 2017*

1952		2017	
Cause of death	Death Rate per 100,000	Cause of death	Death Rate per 100,000†
Diseases of the heart	250.8	Cancer	157.1
Vascular lesions affecting CNS	98.0	Heart disease	156.5
Malignant neoplasms	79.6	Accidents (except motor vehicle)	56.3
Influenza and pneumonia	31.3	Motor vehicle accidents	15
All accidents (except motor vehicle)	30.4	Chronic lower respiratory diseases	45
Motor vehicle accidents	27.7	Stroke	43
Immaturity	22.1	Alzheimer's disease	37.3
Nephritis and nephrosis	17.1	Diabetes	24.5
Tuberculosis	15.3	Pneumonia and influenza	17.5
Diseases of arteries	13.8	Chronic kidney disease	17.0
		Suicide	17.2

CNS, central nervous system.
*See references 6 and 7.
†State center for health statistics.

Table 2. Community Practices*

Practice	1953 (%)	2004 (%)
Solo practice	75	18.1
Family practice group		43
Multispecialty group		22
Own practice		21
Owned by medical group		26
Owned by hospital or health system		32
Obstetrics	65	20

*See references 8 and 12.

Decline in motor vehicle mortality has been counterbalanced by increased opioid deaths and suicide. Visits for preventive care have continued at approximately the same rate. The task of family medicine has thus increasingly become managing 1 and often multiple chronic diseases, along with behavioral health, with important implications for our model of care.[10,11]

Changes in the organization of the practices of family physicians parallel changes in patients' conditions. As Table 2 depicts,[8,12] the basic organization of practices has changed dramatically from the 1950s—moving from solo to employed group practices, with a reduction of direct weekend access and reduced scope of practice. The total number of hours worked is similar when 1 includes charting and other administration, and our group practices include many more staff and professionals. A major driver of these changes was the extension of insurance from surgical procedures to ambulatory care in the 1960s. In aggregate, the changes have increased the ratio of physicians to staff from 1:1 to 1:4 to 5. This dramatically increased overhead created the business case for direct primary care.[13]

The dramatic decline of small independent practices has major implications for family medicine.[13] Small independent practices gave birth to the specialty, affirming the commitment to substantial CME, clinical flexibility, a broad scope of care, residency training in the community, and celebration of service to communities—many of the features that have been so valuable in the response of family physicians to the COVID-19 pandemic.

As a part of the Family Medicine for America's Health initiative, Phillips et al[14] underscored the risks of the current trajectories of family medicine. If not addressed, they portend a dystopic future:

> "The role of the US family physician is to provide episodic outpatient care in 15-minute blocks with coincidental continuity and a reducing scope of care. The family physicians surrender care coordination of care to care management functions divorced from practices and works in small ill-defined teams whose members have little training and few in depth relationships with the physicians and with patients. The family physician serves as the agent of a larger system whose role is to feed patients to subspecialty services and hospital beds. The family physician is not r esponsible for patient panel management, community health or collaboration with public health."

On the other hand, by taking advantage of technology and other advances, Philips et al paint a different and more positive vision for the future of family medicine based on greater use of technology and other advances:

> "Family physicians are personal doctors for people of all ages and health conditions. They are a reliable first contact for health concerns and directly address most health care needs. Through enduring partnerships, family physicians help patients prevent, understand, and manage illness, navigate the health system, and set health goals. Family physicians and their staff adapt their care to the unique needs of their patients and communities. They use data to monitor and manage their patient population and use best science to prioritize services most likely to benefit health. They are ideal leaders of health care systems and partners for public health."[14]

Family medicine is thus at a tipping point, paralleling the larger health system. Taken all together, these changes represent the new 1960s—compelling social need, poor population health outcomes, and the opportunities of new technology—and require fundamental changes in board certification, both within family medicine and across the profession. The American Board of Medical Specialties (ABMS) has begun to recognize this in commissioning and then responding to the ABMS Vision Commission report.[15] Many partners will be needed to meet the greater social need, but board certification can help.

Combining Summative and Formative Assessment

A first step is to recognize that our approach to assessing clinical knowledge should change. Historically, board certification began in ophthalmology with an examination.[16] The purpose was to protect the public

from practitioners without the knowledge necessary for up-to-date and safe practice. In modern parlance, this is termed summative assessment or assessment of learning. It is critical that the examination is independently conducted—physicians should not just declare themselves experts—with standards set by peer physicians. The importance of independent assessment has been supported by substantial research over the last generation, which underscores that physicians, like other experts, do not self-assess their knowledge accurately.[17–23]

A major dilemma, however, has been how to respond to the explosion of clinical knowledge in modern medicine—clinical care evolves dramatically over a typical diplomate's 30- to 40-year career. A first approach was to increase the amount of CME. In 1947, the American Academy of General Practice committed to an ambitious requirement of 50 CME hours a year, and in 1969, the ABFP included that requirement and mandated independent examination every 7 years. Since 1969, all other boards have committed to the principle of recertification, with the American Board of Medical Specialties committing to maintenance of certification in 2000. In parallel, there has been tremendous growth and development of the CME industry. The traditional distinction has been that assessment is the role of the boards and that education is the role of the specialty societies and other CME providers.

New pedagogy and new technology have blurred this distinction. From the 1980s onward, educators have been increasingly aware that assessments powerfully drive learning. Applied to board certification, the question has become whether and how board assessment should support keeping up to date—assessment for learning, in contrast to assessment of learning. Over the last generation, moreover, web-based technology has greatly improved the convenience of learning. Building on these 2 trends and responding to diplomates' concerns, the American Board of Anesthesiology (ABA) began a longitudinal assessment of knowledge, providing questions online over time—continuous assessment helping to drive continuous learning. Overwhelmingly popular with ABA diplomates, longitudinal assessment has spread to many boards, including family medicine with its family Medicine Certification Longitudinal Assessment (FMCLA).[24]

Where are we now? Summative assessment, or assessment of learning, over physicians' careers remains our responsibility to the public, but formative assessment, or assessment for learning, helps keep people up to date and is popular for diplomates. What is the right relationship between assessment of learning and assessment for learning? This is part of the wicked problem: can boards do both at 1 time—and, more broadly, what is the right relationship between boards and the CME community?

In this context, McMahon,[25] the president of the Accreditation Council for Continuing Medical Education, argues that the critical function of the boards is primarily summative assessment, underscoring the Vision report's[15] relative silence on this issue. He emphasizes that such assessment is critical for the public but should also include effective interfaces with CME providers. Cole and his colleagues[26] present the rationale and early outcomes of the ABA's innovations. They give the rationale for emphasizing assessment for learning and describe how they are addressing the needs of the public and incorporating adaptive learning. A key assumption of their approach is the need to change the relationship between boards and diplomates from judge and jury to supporter of lifelong learning by working closely with specialty societies and other CME providers who provide formal education.

Knight[27], senior vice president of Education for the American Academy of Family Physicians, emphasizes the intrinsic motivation of physician learners, and proposes a portfolio-based approach driven by the individual physicians that would support continuing professional development along many dimensions. Important to his vision is the conceptual integration of the "parts" of board certification. Examinations and quality improvement work lead to an awareness of gaps of knowledge needing CME, and the physician takes responsibility for tracking this over time. Given that most CME[28] remains passive, the challenge for CME will be to change modalities to increase engagement and improve effectiveness in changing clinical outcomes. Quan[29] addresses another approach to assessment for learning—journal article-based activities. Pioneered by the American Board of Obstetrics and Gynecology over 20 years ago,[30] journal article activities identify the most important new articles published and deliver them to diplomates, who choose the ones they are interested in and answer questions based on the article.

As they are very successful in Obstetrics and Gynecology, journal article activities are spreading rapidly across certifying boards. Quan reviews what boards are currently doing and lays out principles for how ABFM will develop its journal article activity.

Improving Quality Improvement

A second wicked problem is improving quality improvement. "To Err Is Human and Crossing the Quality Chasm"[31,32] changed the course of American health care and policy. Although systematic measurement of health care was piloted in the 1950s and extended later by Donabedian, Hulka et al, and Newton and Bradley[33–35] there has been only intermittent recognition of widespread problems of quality of care. Previously the province largely of academic researchers, quality of care became mainstream with the then Institute of Medicine (IOM) reports. For the first time, there was wide recognition that health care itself was a major cause of death. Importantly, the IOM reports asserted that this was not the result of ignorant or uncaring doctors or other health professionals, but rather a lack of attention to systems of care. The IOM reports were a major driver of ABMS maintenance of certification and its requirement of improving performance, the American Council of Graduate Medication Education Next Accreditation System, and broader health reform; its influence has spread widely across hospitals, specialties, and professions. The result has been the emergence of a vast quality industry in hospitals, health systems, and payors; an explosion of quality measures; and an intrusion of quality improvement requirements into the daily life of all physicians. It is no accident that the rebellion against maintenance of certification began with frustration with quality improvement activities.

It is thus reasonable to ask the following: where are we 20 years later? How much progress have we made? McGlynn[36] lays out what we know of our progress and policy changes. She authored the classic *New England Journal of Medicine*[37] study that measured quality of care across settings and across the country and found performance much below accepted standards. She describes the policy responses, including increased transparency and payment for value. In the end, however, her final conclusion is that it is not clear whether we are any better off, despite a huge increase in activity. Improvement has not been consistent, coherent, or sustained.

So where do we go now? What is the role of certification boards moving forward? The ABFM has been insistent that board certification requires not just knowledge but action. The initial ABFP recertification required chart audits with an Angoff procedure to establish a standard of care; as its formal maintenance of certification program was developed, the progression from chart audits to performance improvement was a logical extension. Moving forward, ABFM's new strategic plan[38] emphasizes refreshing choices for performance improvement, including new opportunities for diplomates not working in traditional continuity of care relationships. More broadly, ABFM is committed to improving quality improvement, broadening dimensions physicians work on, and making the overall system more robust and relevant to daily practice.

The American Board of Pediatrics (ABP) provides another example of a positivist approach of a board working to improve the quality of care. As detailed by Lannon,[39] the ABP built improving quality into the center of its mission: "Advancing child health by certifying pediatricians who meet standards for excellence and are committed to continuous learning and improvement."[40] Over the past 15 years, ABP has engaged many partner organizations in quality improvement networks. These networks have shown dramatic improvement in measured quality, while pushing other boards to set high standards for what is acceptable quality improvement. In addition, impressive is what the ABP has done in engagement of patients and families in quality improvement. Done well, involving patients and family will improve what we do and will bring public support. Finally, illustrating the convening role of boards, ABP has identified clinical areas that need improvement and that convened national partners need to address. Most recently, this has included the quality of care of patients with sickle cell disease. By convening partners, including other boards, Centers for Medicare & Medicaid Services (CMS), National Institutes of Health (NIH), and others, the ABP has led the way for all us.

Another strategy of ABFM has been to rethink the quality measures we use. As documented by an IOM report in 2014,[41] the dramatic proliferation of quality measures has in many cases diffused our focus and distracted our attention. For family medicine, in addition, existing measures focus on disease

and often do not capture the core value of family medicine. ABFM has thus engaged in a substantial effort to develop, test, and spread new measures of quality[42]—a 10,000-mile march to shape the environment in which our diplomates practice.

Another major need in improving quality improvement is the systematic incorporation of the reality of team-based care. Increasingly, we are recognizing that teams—including other professions, staff, and patients—play critical roles in quality, cost, and patient experience. In this context, Lefebvre describes her experience on the ground level, spreading the North Carolina Area Health Education Centers quality improvement program to over 1,400 primary care practices.[43,44] She argues for the critical importance of team-based efforts with the commitment that comes from being close to where the patients are. Team functioning has substantial implications for ABFM and other boards. Our thinking about what constitutes teams in the inpatient and outpatient setting is still at the beginning, but it is clear that smaller units, such as practices or surgical teams, drive many outcomes of care. As health systems consolidate, it will be important to attend to not only the microlevel (individual physicians) and the macrolevel (payers and the megaorganizations) but also the mesolevel (the individual practices and surgical teams that drive many of the outcomes). The challenge for ABFM and the other boards is how to develop certification activities that address the role of an individual diplomate as a part of teams and the overall effectiveness of working teams.

Where does education in quality improvement fit in? Over the last decade, there has been an increasing recognition of the importance of health systems science[45] in undergraduate medical education and the role of systems-based practice in residency training. Working closely with the Accreditation Council for Graduate Medical Education, boards play a critical in framing residency education. In this context, Baxley[46] addresses the interrelated roles of practice and curricula and makes the case for education as a key strategy to improve quality over the long run. A major focus going forward should be the message that the "practice is the curriculum!"[47,48]

Professionalism and the Social Contract

Perhaps the most important wicked problem the boards face, however, is the renewal of professionalism and the social contract. As argued by the Cruesses,[49–51] the ideologies of the 60 seconds were hostile to the "nostalgic professionalism" of the previous era—and interpreted the idea of professionalism itself as a self-serving ideology of the elite. Gradually, however, experience has shown that health care organized only through administrative fiat and financial incentives is limited in effectiveness and responsiveness to patients. Major advances of the past 15 years in professionalism have been the American Board of Internal Medicine Foundation's "professionalism charter"[52] and the introduction of formal curricula on professionalism in medical schools. Despite this progress, however, professionalism faces new challenges in the increasing lack of control of physicians of their immediate work environment with health system consolidation and increasing commoditization of care. The profession is further limited, moreover, by the ongoing debate over definition[53]—as well as lingering self-doubt about its value and importance.

The Cruesses' articles provide a framework for discussion. Fundamental to their analysis is the distinction between healer—seen in all societies over time—and the professional.[54] These roles overlap, but it is important to recognize that professionals are a modern creation. Modern societies sanction an implicit "social contract" that gives physicians autonomy and the right to self-regulate in return for commitment to the public, prestige, and affluence. Changing social conditions and the evolution of medicine, however, require constant renegotiation of the social contract. The Cruesses[54] describe the social contract, formulate what communities of practice consist of today, and then discuss how renegotiating the social contract actually takes place in practice.

What are the implications for the boards? The American Board of Urology (ABU)[55] provides an excellent example of a comprehensive approach taken by a community of practice. Uniquely among the boards, the ABU website includes a discussion of ethical challenges faced particularly by urologists.[56] ABU has developed a set of required modules on many aspects of ethics, quality, and patient safety. Because so many of their diplomates practice only in the community, they have developed both a sophisticated peer review system and a clinical audit to assess professionalism. The audit also allows them to identify and intervene with diplomates who are performing procedures for which there is no

evidence of benefit—and then the ABU can act against the physician's certification. Importantly, given public outrage about the cost of care, the ABU is the only board that has directly focused on that aspect of care.

Family medicine remains the heir of general practice and to the traditional understanding professionalism the Cruesses identified. The primary responsibility is to the public; like other boards, ABFM measures professionalism with a full unrestricted license and has embedded a code of ethics in its professionalism guidelines. The ABFM new strategic plan recognizes that, as a "diagnostic test," a full and active license is insensitive and only moderately specific for problems with professionalism. ABFM is committed to exploring additional assessments, such as Drug Enforcement Administration licenses and CMS lists of fraudulent physicians, which might improve the robustness of professionalism assessment. Just as important, however, is that ABFM will explore what might be called positive professionalism, that is, rewarding and recognizing the positive contributions of family physicians to the profession and society. The goal is to try to change the public narrative of doctors as servants of health system margins and to celebrate the positive role that family physicians play in improving health and equity. In this context, Kinney[57] illustrates how the American Board of Physical Medicine and Rehabilitation is defining "positive professionalism," including the basic commitments to keep up to date and to improve quality and mentor others. Similarly, as a part of its response to the COVID-19 crisis, ABFM has begun to recognize and reward what diplomates do to serve their communities.

Phillips's commentary[58] frames the issue more broadly: he argues that our focus should be on improving the conditions of physicians' practice to make it easier for them to be professional. Relative value unit-based productivity incentives and a reduction of scope of practice often impair a real knowledge of patients that is pertinent to their health and well-being. To help shape the environment of practice, ABFM and Phillips have established the Center for Professionalism & Value in Health Care.[59] Given ABFM's traditional focus on improving quality of care, the first priorities have been to develop quality measures that matter and to recognize the social drivers of health and embed them into reimbursement.

Conclusions

In summary, the profession is a time of both peril and opportunity. From consolidation to commodification, and now including COVID-19, we face enormous challenges to our specialty, to our profession, and to society. If board certification is to remain relevant and useful, these changes in health care and the health of our population demand changes in board certification. The most important directions are combining assessment of learning with assessment for learning, improving quality improvement, and reaffirming and revitalizing professionalism.

For ABFM, as detailed in its new 5-year plan,[39] the journey is just beginning.[60] The first steps have involved implementing a longitudinal assessment pilot[24] and broad engagement of its diplomates, the AAFP, state chapters, and the academic organizations in family medicine. Over the next 5 years, ABFM plans to substantially change every part of its portfolio, building on its tradition of innovation. As challenging as the current time is, ABFM believes that we live in a time of promise, with new thinking and new tools that can help our diplomates and improve health and health care. Taken together, the coming changes potentially represent a very different role for the board and a different relationship with its diplomates—1 in which the board joins diplomates in their journey and supports improvement in health and health care. The times call for it.

To see this article online, please go to: http://jabfm.org/content/33/Supplement/S1.full.

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