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Professionalism, Governance, and Self-regulation of Medicine
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A revolution in medicine is occurring and is directly related to several major factors, including substantial changes in the health care system, largely due to the Affordable Care Act; remarkable scientific advances and an accelerated pace of discovery in biomedical science; increasing recognition of the need to practice restraint with respect to both diagnostic testing and therapeutic interventions; the promise of personalized medicine; more physicians being employed by large medical organizations; the increasing trend of consolidation and corporatization of health care delivery; and heightened public demands and expectations for transparency and accountability in health care. At the same time, fundamental aspects affecting physician education and certification have come under intense scrutiny, with expansion of the number of medical schools, critical examination of government funding for residency training, and recent contentious debates regarding maintenance of board certification.3

Considering these fundamental, dynamic, and rapid changes, there also could be challenges to and changes in the well-established governance structure and self-regulating functions involving the medical profession. Accordingly, this is an appropriate time to reexamine the various governing and professional bodies that influence the education, licensing, certification and recertification, and employment of physicians and, perhaps more importantly, to highlight the critically important and distinctive characteristic of medicine—professionalism.

How a profession self-governs has long been debated by scholars. What is its responsibility to its members and the public? Should medicine be held to a different standard than other professions? With the increasing proportion of physicians employed by health care systems, what is the role of employers in governing and overseeing professionalism among physician-employees? If medicine does not self-govern effectively and responsibly, who should provide oversight? The banking and accounting industries are now subject to more federal oversight, at least in part because of their failure to effectively self-regulate.

This issue of JAMA includes a series of Viewpoints by scholars and academic leaders about the responsibility and accountability of medicine to self-govern, self-regulate, and ensure the highest degree of professionalism. To reflect additional perspectives, 2 Viewpoints are written by authors from the United Kingdom and from Canada, and 3 Viewpoints are written by authors from disciplines other than medicine. Among the major issues addressed are the key roles and responsibilities of modern governing and accrediting bodies and of professional organizations and societies in ensuring effective governance and professionalism in medicine, as well as what these entities are doing and should do differently to enhance self-governance, safeguard self-regulation, and foster professionalism among physicians.

Governance Structure and Organizations
Despite the numerous entities that “govern” the lives of physicians, few have formal federal recognition and legal jurisdiction. The Liaison Committee on Medical Education (LCME) and the American Osteopathic Association (AOA) are recognized by the US Department of Education as accrediting bodies for medical education programs leading to an MD or DO degree, respectively. The state medical boards, which govern physician licensure, and the Drug Enforcement Administration, which authorizes physicians and other health professionals to prescribe controlled substances, both have legal standing. Virtually none of the other myriad professional medical organizations in the United States have legal standing or authority (Table).

While these entities are involved with the overall general governance of medicine and physicians, numerous other organizations are involved with professionalism in medicine. For instance, the American Medical Association (AMA) was founded in 1847 as a volunteer organization of physicians in the United States and perhaps was best known for supporting the Flexner report in 1910, which led to radical changes in medical education. In 1847, the AMA produced its first Code of Medical Ethics,20 which has been updated periodically and is considered one of the most influential documents governing physician conduct. Later in the 19th and 20th centuries, numerous other professional organizations were established (Table), including the Association of American Medical Colleges (founded in 1876), the American Association of Colleges of Osteopathic Medicine (1898), and the Federation of State Medical Boards (FSMB) (1912). Subsequently, other venerable professional medical associations, societies, and organizations were founded, among them the American College of Physicians (1915), the American College of Surgeons (1913), and the American Academy of Pediatrics (1930). Other organizations, such as The Joint Commission (founded in 1951) and the American Hospital Association (1898), also have important roles in the professional lives of physicians.

Today, these and other governing bodies and professional associations represent an extensive collection of medical organizations in the United States. Although these organizations continue to exist and proliferate, and many provide
<table>
<thead>
<tr>
<th>Organization</th>
<th>Year Founded</th>
<th>Professional Role</th>
<th>Organization Makeup</th>
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<tr>
<td>Accreditation Council for Continuing Medical Education (ACCMCE)</td>
<td>1981</td>
<td>Accredits institutions that provide CME</td>
<td>The ACCME’s 7 member organizations are AAMC, ABMS, AHA, AMA, Association for Medical Education, American Medical Association, and the FSMB.4</td>
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<td>Accreditation Council for Graduate Medical Education (ACGME)</td>
<td>1981</td>
<td>Evaluates and accredits residency programs</td>
<td>The ACGME’s 7 member organizations are AAMC, ABMS, AHA, AMA, National Board of Medical Examiners, Association of Osteopathic Specialty Societies, and AAOCA.8</td>
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<td>American Association of Colleges of Osteopathic Medicine (AACOM)</td>
<td>1952</td>
<td>Manages the Main Residency Match and the Post-Licensure Assessment System</td>
<td>The AACOM “provides leadership for the osteopathic medical education community...and serves as the unified voice for the nation’s colleges of osteopathic medicine.”17</td>
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<td>American Board of Medical Specialties (ABMS)</td>
<td>1912</td>
<td>Cosponsor (with NBME) of the USMLE and the NBPAS</td>
<td>The ABMS works in collaboration with 24 specialty Member Boards to maintain the standards for physician certification.14</td>
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<td>American Hospital Association (AHA)</td>
<td>1898</td>
<td>Represents and serves all types of hospitals, health care networks, and their patients and communities</td>
<td>Nearly 5,000 hospitals, health care systems, networks, other providers of care and 43,000 individual members come together to form the AHA.10</td>
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<td>American Medical Association (AMA)</td>
<td>1912</td>
<td>Administers board certification examinations for medical specialties and the ABMS Program for Maintenance of Certification</td>
<td>The AMA’s primary policy-making body is its House of Delegates composed of &gt;500 voting members from all US states and DC, Guam, Puerto Rico, and the US Virgin Islands; 117 national medical specialty societies; 15 professional interest medical associations, sections, and other groups; and 5 federal services.</td>
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<tr>
<td>American Osteopathic Association (AOA)</td>
<td>1897</td>
<td>The AOA’s Commission on Osteopathic College Accreditation is recognized by the US Department of Education for accreditation of osteopathic medical programs leading to the DO degree</td>
<td>“In addition to serving as the primary certifying body for DOs, the AOA is the accrediting agency for all osteopathic medical schools and has federal authority to accredit hospitals and other health care facilities.”6</td>
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<td>Association of American Medical Colleges (AAMC)</td>
<td>1876</td>
<td>Cosponsors LCME (with the AAMC)</td>
<td>The AAMC “is a not-for-profit association representing all 141 accredited US and 17 accredited Canadian medical schools; nearly 400 major teaching hospitals and health systems, including 51 Department of Veterans Affairs medical centers; and 90 academic and scientific societies.”10</td>
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<tr>
<td>Drug Enforcement Administration (DEA)</td>
<td>1973</td>
<td>Registers practitioners, pharmacies, hospitals/clinics, and teaching institutions to prescribe or dispense controlled substances</td>
<td>The DEA enforces US laws and regulations regarding controlled substances, classified into schedules I-V depending on acceptable medical use and potential for abuse or dependency.</td>
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<td>Educational Commission for Foreign Medical Graduates (ECFMG)</td>
<td>1956</td>
<td>Certifies international medical graduates</td>
<td>ECFMG certification is “the standard for evaluating the qualifications of international medical graduates before they enter US graduate medical education...and is a requirement for IMGs to take USMLE Step 3 and to be eligible to obtain an unrestricted US state license to practice medicine.”11</td>
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<td>Federation of State Medical Boards (FSMB)</td>
<td>1912</td>
<td>Cosponsor (with NBME) of the USMLE and the Post-Licensure Assessment System</td>
<td>The FSMB “is a national nonprofit representing the 70 medical and osteopathic boards of the United States and its territories.”12</td>
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<td>The Joint Commission</td>
<td>1951</td>
<td>“Accredits and certifies more than 20,500 health care organizations and programs in the United States”12</td>
<td>“The Joint Commission’s various accreditation/certification programs are recognized and relied upon by many states as part of their quality oversight activities.”13 Recognition and reliance may include use of accreditation for licensing, certification or contracting purposes by various state agencies.14</td>
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<td>Liaison Committee on Medical Education (LCME)</td>
<td>1942</td>
<td>Accredits allopathic medical education programs leading to the MD degree in the United States and Canada</td>
<td>The LCME is cosponsored by the AAMC and AMA Council on Medical Education. The AAMC and AMA each appoint 6 professional members and 1 student member. The LCME appoints 2 public members and a member is appointed to represent the Committee on Accreditation of Canadian Medical Schools.15</td>
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<td>National Board of Medical Examiners (NBME)</td>
<td>1915</td>
<td>Develops and manages the USMLE Cosponsor (with FSBM) of the USMLE and the Post-Licensure Assessment System</td>
<td>The NBME’s mission is “to protect the health of the public through state of the art assessment of health professionals.”16</td>
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<td>National Board of Osteopathic Medical Examiners (NBOME)</td>
<td>1934</td>
<td>Administers COMLEX, which “provides the pathway to licensure for osteopathic physicians in the United States, and is a graduation requirement for earning a DO degree from colleges of osteopathic medicine”17</td>
<td>The NBOME is an “independent, nongovernmental, not-for-profit organization whose mission is to protect the public by providing the means to assess competencies for osteopathic medicine and related health care professions.”18</td>
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<td>National Board of Physicians and Surgeons (NBPS)</td>
<td>2015</td>
<td>Offers continuing board certification based on completion of ACCME-accredited CME hours as an alternative to ABMS maintenance of certification</td>
<td>The NBPS is a “grassroots initiative” and is “committed to providing certification that ensures physician compliance with national standards and promotes lifelong learning.”19</td>
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<td>National Resident Matching Program (NRMP)</td>
<td>1952</td>
<td>Manages the Main Residency Match and the Post-Licensure Assessment System</td>
<td>The NRMP’s mission is “To match healthcare professionals to graduate medical education and advanced training programs through a process that is fair, efficient, transparent, and reliable (and to) provide meaningful and accessible match data and analysis to stakeholders.”20</td>
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critically important oversight functions, relatively little substantial change has occurred in the organizational structure of self-governance for more than 5 decades, with a few exceptions. As an example of a recent change, organized by the FSMB in 2013, a team of state medical board representatives and experts from the Council of State Governments (CSG) developed and drafted a framework for an Interstate Medical Licensure Compact—a new licensing option under which qualified physicians seeking to practice in multiple states would be eligible for expedited licensure in all states participating in the compact.

Several Viewpoints in this issue of JAMA address critical aspects of governance and self-regulation. Chaudhry and colleagues emphasize that the primary responsibility of state medical boards is to protect the public and ensure that only qualified physicians practice medicine, and they highlight at least 6 key attributes that enable state boards to perform these essential functions, including physician engagement, public participation, communication, transparency, innovation, and collaboration. Concern that state medical boards need to be more proactive in safeguarding the public remains an issue.

Madara and Burkhart point out that even though most physician professional organizations, such as the AMA, and medical societies have no binding authority that governs professional conduct, such entities have historically been highly influential in shaping the policies and conventions that define medical practice. The authors contend that promoting professionalism is central to the mission of most medical societies, that the ability to imbue professionalism is a central metric of success, and that professionalism in medicine is characterized by the extent to which members of the profession are motivated by intrinsic values that uniquely define the profession.

Chassin and Baker indicate that accrediting and certifying organizations, such as The Joint Commission, can and should play a major role in ensuring that society will continue to entrust self-governance to the medical profession by directly promoting and supporting consistent excellence in the performance of physicians and health care organizations. They emphasize that leaders of organizations must embrace, support, and champion quality and safety with zero tolerance.

Three other Viewpoints in this issue address governance and self-regulation in medicine from several valuable perspectives: from the United Kingdom, Canada, and the US public. In a discussion of governance and professionalism in the United Kingdom, Marcovitch describes the centralized responsibility of the General Medical Council (GMC), which was established in 1858 and is legislatively overseen, with equal representation from the profession and the public. The “powerful” GMC serves as the regulatory body for 250,000 physicians in the United Kingdom, establishes the standards for medical education and training, approves all National Health Service training positions, and “sets the standards by which physicians are expected to perform, both in terms of clinical knowledge and skills and in all aspects of their life that demand qualities such as honesty, integrity, and respect for personal boundaries.” This Viewpoint suggests the possibility of a different path forward in the United States, with fewer organizations and greater centralization of important governance activities.

Naylor and colleagues highlight many of the similarities between Canada and the United States with respect to self-regulation of the approximately 80,000 physicians in Canada. However, the authors also describe a system that has moved to “proactive identification and remediation of deficiencies in clinical competence to prevent patient harm” and the development of random assessment of physicians through field visits to a physician’s office by an assessor who reviews charts and discusses patient management issues.

Levy suggests that among the US public, confidence in the honesty and ethical standards of physicians has remained high for decades and that physicians remain among the most trusted professionals in the United States. However, he cautions that ongoing major changes in the health care system may transform expectations of physicians’ qualifications, affect how the public views organized medicine in general, and increase attention on the current debate over the medical profession’s systems of self-governance.

In an Editorial on the self-governance of medicine, Cohen asserts that perhaps the most important level of “governance” of the medical profession involves the voluntary, personal commitment by individual physicians to self-regulate by adhering to the tenets of professionalism. He also emphasizes that “No matter how effective professional organizations are in the pursuit of self-regulation, sustaining public trust in the profession is ultimately the responsibility of individual physicians being faithful to their obligation as professionals and being earnest in upholding the interest of their patients and the public.”

Medical Education and Professionalism
Undergraduate through postgraduate medical education represents the common denominator for the acculturization of physicians as professionals. As a vital component of maintaining professionalism and fulfilling the related responsibilities to patients, physicians have an obligation and responsibility for lifelong learning. Several important recent changes related to governance and self-regulation have occurred throughout the spectrum of medical education. For instance, the Accreditation Council for Graduate Medical Education (ACGME), the American Association of Colleges of Osteopathic Medicine (AACOM), and the AOA have agreed to a single accreditation system for graduate medical education programs in the United States, whereby AOA-accredited training programs will transition to ACGME accreditation by 2020. These organizations, along with others, such as the Association of American Medical Colleges (AAMC) and the American Board of Medical Specialties (ABMS), have fostered other important changes, including new requirements for medical school curricula, duty hour reforms for residency programs, and maintenance of certification requirements. However, limited data are available about how these changes have affected patient outcomes, in part because conducting rigorous research examining outcomes related to educational innovation remains a challenge.
Several scholarly Viewpoints in this issue of JAMA discuss self-governance and professionalism across the spectrum of physician education, ranging from undergraduate education to continuing medical education (CME). Kirch and colleagues maintain that developing competence in professionalism is a core expectation for a physician learner, no different from developing competence in medical knowledge. The authors suggest that undergraduate medical education lays the foundation for a lifelong commitment to professionalism among physicians, and that this commitment is critical to both the future of the profession and the health of patients. However, how to teach professionalism and assess success is unclear. Whether all of the 6 core competencies (patient care, medical knowledge, interpersonal and communication skills, professionalism, practice-based learning and improvement, and systems-based practice) that are emphasized in undergraduate and especially graduate medical education should be “weighted” equally is also uncertain.

Emanuel highlights 2 issues, including, first, the potentially negative effects of money on professionalism in health care, suggesting “that the pursuit of monetary gain for the physician is distorting judgments about what is best for the well-being of patients. All other threats to professionalism pale in comparison.” Second, he suggests that the fundamental nature of medicine has changed so substantially that medical students require instruction in numerous management issues, such as leadership and behavioral economics.

Nasca maintains that professionalism and governance of the profession by its institutions should be linked at a fundamental level, and that those institutions that are responsible for providing oversight, such as the ACGME, must provide professional, economic, and public and social accountability. Berwick points out that despite the legacy of the self-regulating physician preparation systems, consideration should be given to reorganizing the oversight of physician education with principles that ought to guide much of health care delivery reform (such as integration, strengthened patient voice, teamwork, and cost reduction), and he proposes that “[T]he unprecedented cooperation that the future of health care needs might become more likely if the standards and oversight of physician education in the United States were brought under the aegis of a single governing body, from undergraduate requirements through CME.”

Board Certification, Lifelong Learning, and Self-regulation
There is perhaps no better example of the issues surrounding the importance of self-regulation and professionalism in medicine than the current controversy surrounding maintenance of board certification. The American Board of Internal Medicine (ABIM) recently suspended the current approach to maintenance of certification. A new organization, the National Board of Physicians and Surgeons, has emerged and offers to provide certification of physicians as specialists. In addition, legal action has challenged the American Board of Medical Specialties (ABMS) and its maintenance of certification program, alleging antitrust law violations and disparagement of physicians who decline to participate in ABMS maintenance of certification. Several Viewpoints in this issue of JAMA directly address the critical need for the profession to resolve these issues responsibly and thereby demonstrate effective self-regulation by finding the appropriate way forward. Nora and colleagues underscore that board certification has been a highly valued element in medicine’s system of collective professional self-regulation. The authors suggest that innovation by ABMS and thoughtful engagement across the profession will contribute to the continued evolution of a rigorous and meaningful process of continuing certification that is valued by physicians, is trusted by the public, and sustains the privilege of professional self-regulation.

Baron emphasizes that the ongoing professional responsibility to protect the public by defining who is qualified to practice medicine remains a core part of medicine’s social contract. He draws attention to the challenges arising with the accelerating pace of change in scientific progress and knowledge. He also discusses the criticisms of the ABIM maintenance of certification activities and describes the important efforts that organization is taking to develop new approaches and processes for recertification to illustrate appropriate professional self-regulation.

Teirstein and Topol express the concerns some physicians have regarding maintenance of certification, including relevance to everyday practice, cost of testing, lack of evidence that these activities improve quality of care, and issues related to the financial and regulatory aspects surrounding maintenance of certification, including potential conflicts of interest. The authors also describe aspects of an alternative pathway for recertification.

Huckman and Raman, reflecting on quality improvement in other businesses, contend that even though current approaches to maintenance of certification are necessary, those approaches are unlikely sufficient to maximize quality in the health care system. They suggest that health care must extend beyond the episodic certification of individuals and place greater emphasis on the continuous improvement (not just certification) of processes (not just individuals).

Resolving the complicated issues surrounding maintenance of certification is critically important for medicine. In a profession in which the science changes frequently and the actions of physicians influence the health and well-being of patients, understanding the best way to ensure a competent, highly trained, ethical workforce has no greater educational priority. In some ways, some of the actions of the ABMS and, in particular, the ABIM in response to the concerns that have been raised about maintenance of certification epitomize professionalism. For instance, ABMS and its member boards recently developed new standards for maintenance of certification. In addition, ABIM acknowledged that its maintenance of certification program was flawed, apologized to those who were affected, and now is encouraging input from multiple stakeholders about the maintenance of certification process and making concerted efforts for meaningful improvement.

As part of professionalism in medicine, CME should be an important component of lifelong learning for physicians. However, according to Nissen, the current CME system has limited effectiveness in improving physician performance, is poorly.
regulated, lacks a well-developed, scientifically based methodology for educating physicians, has problematic financing with concerns about conflict of interest, and has an ineffective oversight entity. He suggests that the CME system requires major reform and proposes a number of specific recommendations to help ensure that CME can enable physicians to fulfill their obligation for meaningful ongoing learning and lifelong education. Reforming CME is likely an important component in improving maintenance of certification.

Professionalism and Physician Employment
As more physicians have become employed by large health care organizations, concerns about maintaining professionalism are likely to become increasingly important. In an elegant Viewpoint describing the transformation of medicine over the past century, Fuchs and Cullen suggest that the change of US physicians from self-employment to salaried employment, and from solo or small group practice to “team care,” raises considerable concerns about the future of the medical profession. The authors also acknowledge that even though physicians might become less independent, their professional role could increase as their entrepreneurial role decreases.

Crosson suggests that lessons from physician group self-regulation in such organizations as the Permanente Medical Groups and the Mayo Clinic indicate 4 key elements for successful self-regulation in the employment setting: clinical governance, management capabilities, clinical performance information transparency, and appropriateness of financial incentives. From the perspective of a leader of a major academic health care system, Lee describes the importance of redesigning quality and cost metrics to integrate professionalism into the governance of health care. She suggests the possibility of a centralized governing authority that would be focused not only on economic incentives at the system level, but also on the professionalism of physicians and other health care practitioners and their relationships with patients, thereby helping ensure that value transformation in health care productively blends both economic and societal values.

Margolis focuses on how leaders of health-related businesses should weigh the demand for efficiency and profit alongside the care of patients and the professional development of physicians. The author also highlights the importance of expanding fiduciary duty to encompass what leaders owe not only the corporation and shareholders but also the health of patients served and the medical professionals who provide care.

In an Editorial on medical professionalism, DeAngelis emphasizes that “[W]hat physicians do must be centered on directly or indirectly caring for patients. As business has become very much intertwined with the patient-physician relationship, sometimes it may be difficult for physicians to remember to whom they have primary allegiance. When that happens, professionalism is at great risk.” In addition, although she describes the difficulty some may have in precisely defining medical professionalism, she issues the cogent reminder that “the medical profession must be conceived as a vocation or calling dedicated to caring for and protecting patients.”

Conclusions
Medicine is a privileged profession. Caring for patients and helping them stay well and become well is a most noble calling. However, much is at stake in the evolving health care system and the current debates about educational reform, training issues, maintaining skills, and the cost of health care. As increased transparency reveals many aspects of medicine that have formerly been hidden from patients (such as conflicts of interest and costs of care), as more physicians are employed, as the economic stakes for patients and their families are greater, and as the belief that medicine should be more personalized becomes integrated into practice, it is incumbent on the leaders of medicine to reexamine the organizational, governance, and self-regulatory structure of the profession. As suggested in a number of the Viewpoints, perhaps fewer organizations are needed, members of the public and practicing physicians should be more involved in the governance structure of these organizations, performance as a member of a health care team should be taught and assessed, and methods and metrics for evaluating lifelong learning and clinical competency should be refined. These important challenges must be addressed to ensure the optimal governance structure and self-regulating function of medicine and, above all, to safeguard medicine as a profession and utmost professionalism as the distinguishing characteristic of physicians.

REFERENCES