Analyses

Patient Safety Functions of State Medical Boards in the United States

Christopher G. Roy*

Pulmonary Disease and Critical Care Medicine, Maine Medical Center, Portland, ME, USA

The state medical board system in the United States plays a crucial role in promoting patient safety and is a primary vessel through which policymakers are able to regulate healthcare. The system’s origins, and how it has evolved in tandem with the practice of medicine generally, have heavily shaped its current structure and scope of activities. In particular, the ethos of a largely self-regulated profession has corresponded to a heavy physician influence. In light of this influence, maintaining legitimacy continues to require careful efforts by the state boards to avoid any perceived professional protectionism.

INTRODUCTION

The methods by which societies regulate who can practice medicine have enormous ramifications for patient safety. The state-based medical licensure system has long represented the most visible manifestation of governmental supervision of individual physician practice in the United States. Its history, structure, and evolution are key to appreciating how patient safety is impacted by this model of oversight. Policymakers, patient safety professionals, and frontline healthcare providers should all have a strong interest in understanding these elements in order to ensure the best possible outcomes for patients.

ORIGINS

Since the founding of the republic, medical licensing has been delegated to the states. The ratification of the Tenth Amendment in 1791, which enshrined the concept of federalism in the Constitution, reserved for the states those powers not explicitly assigned to the federal government. This is the same authority by which states regulate other occupations such as lawyers, barbers, and architects. As long as state regulation is applied in a consistent and equitable fashion [1], the Constitution gives broad latitude to states in terms of what types of rules and requirements are put in place. Although state lawmakers may legislate elements of who can practice medicine and the standards they must follow, the state boards are generally empowered by policymakers to actually interpret and enforce these rules.

However, the states largely opted to not robustly exercise this power until well into the 19th century. The few laws that were on the books mandated membership with or examination by local medical societies, but penalties were lenient and enforcement lax. Many of these early
statutes were acknowledged to be failures and repealed [2].

Several factors led states to finally take more responsibility for licensing. Just as medical boards today describe their primary goal as “to protect the public [3],” patient safety was at least cited as a significant motivator for their establishment. In North Carolina, before the first medical board in the United States would be established there in 1859, the state medical society decried how poorly equipped the public was to find competent providers without some element of regulation. The magnitude of this danger posed by “blundering pretenders” was likened to “a man taking his watch to the blacksmith’s shop… whose mistakes may never be repaired [4].” When the Supreme Court upheld the power of state medical boards to restrict who could practice medicine with its 1888 Dent v. West Virginia decision, it gave a clear nod to this patient safety imperative, noting how “comparatively few can judge the knowledge and skill” of practitioners [1].

Even though they should presumably share great concern for patient safety, it might at first seem surprising that the groundswell for government regulation of medicine originated with doctors themselves. Indeed, it was their lobbying that proved pivotal in convincing the North Carolina legislature to establish a board of medicine [5]. Physician interest was not solely guided by patient safety, though: a strong guild mentality and self-perceived economic interests were significant factors. “The evil of over-crowding” caused much handwringing amongst physicians by the middle of the 19th century, and was cited in multiple quarters as a rationale for more regulation of who could practice [6]. The threat this state of affairs posed to income was of particular concern. This was illustrated in the proceedings of the American Medical Association’s 1847 meeting, where competition from unqualified providers was blamed for how “the merest pittance in the way of remuneration is scantily doled out even to the most industrious in our ranks [7]…” Exerting control over the supply of physician labor, through both improved educational standards and a licensing framework to enforce them, were seen as key to preventing erosion of professional fees [8].

Outside of pure economic motives, the desire physicians held for imprimatur from the state was another likely reason for their support of licensing boards [9]. A deep insecurity amongst physicians was palpable in the years before boards were empowered, and licensing was one way to augment their prestige and authority. It was noted with great chagrin in the introduction to the 1849 Proceedings to the State Medical Convention of North Carolina, “that under the combined operations of corrupt influences our honorable profession has been injured in its standing—our titles are assumed and our privileges claimed by charlatans of every cast [10].” This concern might seem extreme and almost selfish. However, legitimacy would be cited many years later by Paul Starr as one of the pillars of professional sovereignty in The Social Transformation of American Medicine. Doctors, he wrote, “claim authority, not as individuals, but as members of a community that has objectively validated their competence [11].” The medical licensure system became a major, official source of that validation.

To physicians in the days before robust medical licensing, the idea of their peers serving on the state boards and regulating the profession also probably seemed vastly preferable to the feasible alternatives, which might have involved more direct legislative activity and the judicial system. With physicians serving as such important advocates for the foundation for state regulation of medicine, it is perhaps unsurprising that the physician-staffed board model won out. However, despite any logic to the idea of regulation by experts, the appearance of professional protectionism under this framework has been through the present day the primary threat to both the fulfilment of the boards’ patient safety mission and their legitimacy. These dual interests of patient safety and professional protection that precipitated the birth of state-based medical licensure, and the frequent underlying tension that exists between them, would continue to shape the system to the current day.

**EARLY ACTIVITIES**

In the beginning, the patient safety function of state medical boards was largely focused on excluding practitioners from practice up front: this meant denial of licensure to those physicians without sufficient training credentials or unable to pass a licensing exam, as well as those engaged in outright fraud or thought to be of low character. This was the case with the Illinois Board of Health, which was one of the first bodies in the country to be vested with broad powers necessary to effectively prosecute the law and its rulings [12]. However, outside of pursuing sanctions against those engaged in grossly unprofessional behavior, medical boards like Illinois’ were not at first significantly engaged in taking disciplinary action against qualified, licensed physicians for incompetence [13]. The reasons for this are manifold.

First, there was not sufficient agreement as to what constituted appropriate care [12, 14]. Medical training in the United States was still wildly unstandardized at the time. Furthermore, many state boards were comprised of physicians representing a wide range of “sects,” such as homeopathy and eclectics, in addition to the mainline orthodox practitioners (in some states, each sect had its own board). Although there were areas of commonality, the sects were different in several key areas, especially therapeutics [14]. The gulf between them was wide enough
that the licensing exams conducted by states often had to steer clear of fundamental aspects of patient management [15]. This philosophical diversity would have made it very challenging for a medical board to sanction physicians for deviating from a standard of care that did not exist.

Second, in their early days, it likely would have been very difficult for boards to reconstruct an objective, accurate account of a given patient’s course of treatment as part of any post-hoc investigation. Comprehensive medical record keeping did not come into practice in the United States until well into the 20th century [16], leaving many complaints to the medical boards a matter of the patient’s word versus that of the treating physician. Even as late as the 1950s, many of those records were woefully inadequate, with less than a fifth of physicians keeping what would today be considered complete medical records [17].

Finally, the limited resources commanded by the various boards curtailed their ability to be more proactive about conducting investigations about the provision of care. Today, the disciplinary function of state boards is their most resource-intensive activity [18], and there is little to suggest that it would have been any less costly when the state boards were first finding their footings. As an example, the Illinois Board of Public Health received a deluge of complaints against physicians in its first year, both from patients and other physicians. Many were found to be bogus, some likely being attempts to coopt state power to settle scores or put competitors out of business. Adjudicating such complaints on top of their primary responsibility to enforce training requirements for the thousands of physicians in the state was not a task for which nascent boards were financially equipped [19]. In fact, the Illinois Board of Health had a budget so tight that it relied partially on complementary transportation donated by railroad companies to make ends meet [20]. The state boards would remain strapped for resources through at least the middle of the 20th century [21].

One group of physicians otherwise qualified to practice that was marked early on by boards for disciplinary action and license revocation were physicians of “low character.” Those with substance abuse problems, criminal convictions, and fraudsters fell into this category [22]. This can perhaps be understood as an early proxy method of regulating the quality of physician practice in the name of patient safety, with the added benefit of shielding the prestige of the profession from disrepute. The targeting of convicted felons and the like did not necessitate the medical consensus, recordkeeping, or resources required for a more comprehensive disciplinary regime. Rather, for those with criminal convictions, the heavy lifting of fact-finding was effectively outsourced to courts [23].

**Licensure and Discipline in the Modern Age of Medicine**

As state medical boards propagated across the country and honed their procedures for identifying what constituted an acceptable medical education, the process of licensing graduates became a more routine, manageable process. This development was made easier for the boards with the shuttering of so many proprietary diploma-mill medical schools, which were no longer financially viable in the face of a more stringent licensing framework. The epicenter of medical education had also moved to the university setting, where more rigorous admission requirements and standardized, science-based curricula became the norm. Organizations like the American Medical Association and the American Association of Medical Colleges also became effective leaders in the standardization and certification of medical curricula and identifying subpar institutions, the determinations of which state boards eventually were able to rely upon [24].

The process for licensing physicians became even more standardized after licensing examinations, a function previously performed by the individual state boards, was bolstered by the creation of National Board of Medical Examiners (NBME) starting in 1915 [25]. Long-distance communication became more advanced and photography more commonplace, which made it easier to root out imposters and those who escaped scrutiny by moving their practice to other locales [26]. As verification of credentials and administering their respective licensing exams had previously been primary activities of the state boards, the confluence of these developments removed a considerable burden.

This shift, along with changes impacting the health care system in the United States following the Second World War, allowed the boards to focus more on taking disciplinary measures against licensees for the first time. There was a much stronger consensus on what constituted appropriate medical care, which provided a basis for disciplinary action due to incompetence. Medical record keeping was also becoming more robust, partially due to requirements imposed on providers by third party payers [27], which provided a basis for more comprehensive fact-finding by boards. Additionally, the state boards had by then adopted more effective administrative management techniques and allowed them to more effectively monitor licensees and their activities, and were more financially resourced to conduct investigations. The Federation of State Medical Boards (FSMB) had also developed a more centralized structure that allowed it to serve as a recordkeeping clearinghouse for the various state boards, to preempt physicians facing discipline who might be tempted to simply move to another state [28].
Perhaps most importantly, there was significant public pressure to assert board authority and reign in dangerous doctors in the name of patient safety. From 1960-1968, only seven physicians nationwide were disciplined for gross malpractice, underscoring the inadequacy of efforts hitherto [29]. Many leaders in the profession identified this as a threat to the profession and a welcome sign to more aggressive government intervention if the status quo was permitted to continue [29].

Physicians who had previously enjoyed a sort of expected immunity from discipline once licensed thus found themselves exposed to this accountability for the first time. Whereas the role of state boards always involved some element of balance between patient safety and professional protection, the increased emphasis on discipline represented a clear swing of the pendulum towards the former. In many states where boards were not seen as aggressive enough in pursuing disciplinary actions during this period, many were stripped of their autonomy by state policymakers and brought under the control of agencies [30].

But even in this new era of discipline, it is possible to appreciate in the actions by state boards a residual tendency to balance the public safety priority with concern for physician welfare [31]. For instance, as the methods for disciplining providers impaired by substance abuse were reformed starting in the 1960s, state legislatures and boards began to approach the problem as one of an illness to be treated [32]. For many states the system that grew out of this trend meant that practitioners with substance use disorders were reported by colleagues or self-referred to Impaired Physician Programs (IPPs) run by local and state medical societies. These IPPs often had cooperative arrangements with their respective state boards. Those referred physicians who were compliant and successfully treated for dependence would never have their names actually referred to state medical boards. Only if they continued to engage in substance-use activities that put patients at risk would they actually be referred for discipline [33]. This left open the potential for rehabilitation and return to practice, and not automatic cause for permanent revocation of licensure. Such an approach destigmatized the issue sufficiently that those affected by it felt more comfortable coming forward and seeking help or referring colleagues. This model was found to be generally successful [34,35], and widely adopted by other state boards.

Although eventually enough evidence accrued to support the continuation of these “Sick Doctor” reforms on the basis of their benefits to patient safety, such moves did arguably represent real risk-taking by state boards. To disavow the kind of zero-tolerance regime that some would institute certainly could have looked to the public at first glance like callous self-protection, and it is not out of the question that there was. The state boards and the profession of medicine itself could easily suffer a loss of legitimacy if such a policy change was found to result in patient harm [36]. This illuminates a critical challenge these bodies face; for reforms that are unproven in their ability to positively impact patient safety, any perception of professional protectionism as a primary motivator must be assiduously avoided, even if there are in fact concurrent benefits to physicians. Given the dual set of interests that state boards have historically tried to abide, this is a constant struggle.

Another important lesson illustrated by this experience with impaired physician discipline is the effect of the diffused, state-based system on the process of policy-making. The autonomy of states to experiment with reforms without achieving buy-in from the whole country, allows any new policy found to be salutary to thus be considered by other states with at least some amount of evidence behind it. This should be understood as a major advantage conferred by federalism.

A NEW AGE OF PATIENT SAFETY

The early 1990s in the United States saw a new clarion call for patient safety, best embodied by the Institute of Medicine’s To Err is Human. Among its wide-ranging recommendations, this report by the Institute of Medicine suggested several reforms of the medical board system. It specifically acknowledged the important role of the licensure system in defining standards, but lamented that under the current regime it was providing a false sense of security to the public by allowing inadequacies to persist [37].

In particular, the report was critical of the relative permanency of licensure once obtained, and how the erosion of knowledge and skills as physicians age could jeopardize patients. It called for “periodic assessment” of licensees after initial licensure in order to verify maintained competence, specifying that this should entail examination [38]. The report also cited inconsistent reporting practices across the states and a wide range in the frequency of disciplinary action [39].

THE RE-EXAMINATION CHALLENGE

The re-examination recommendation from To Err is Human is perhaps one of its most salient recommendations, and one which the healthcare system in the United States continues to grapple. Whatever the merits of the recommendation, the report did not acknowledge the complexity that building a system for periodic reassessment would entail. The first major roadblock to such reform is deciding exactly what material examinees should be tested on. In this case, the ideal content for an exam
should be pertinent to scope of practice for physicians at least several years out of training. Unfortunately, the main examination tools currently in use by state medical boards are not designed to achieve this goal. Rather, the three-step United States Medical Licensing Exam that medical students and residents take is the same content for all, regardless of the field in which they plan to practice. This design is derived from a time when the practice of medicine was less specialized [40]. However, imposing any sort of re-examination regime years into practice would be of questionable value unless dedicated exams for each specialty were used. Of course, developing individual re-licensure examinations effective at determining competence for the myriad of specialties in medicine would represent an enormous increase in the scope of responsibility for the NBME and the FSMB.

In its recommendation for a competency reassessment regimen, To Err is Human referenced the role of specialty board certification in assessing professional skills, but may have underappreciated the role it could play in achieving the report’s goals of longitudinal evaluation of competency.

In contrast to licensure, specialty board certification has long been optional for the practice of medicine in the United States. It was originally intended to be a badge of honor, signifying high achievement and degree of competence in one’s field. Beginning with the American Board of Ophthalmology in 1917, these were independent examining bodies often spun off by professional societies. Their independent nature was considered important, so as to insulate the boards from attempts by the rank-and-file to dilute standards [41,42]. Another important distinction between board certification and licensing examination is the former is highly specialty-specific.

Even before To Err is Human was released, some specialty boards had recognized the value of periodic re-examination and required it for recertification [43,44], creating at least some element of longitudinal, post-licensure quality control on physician practice, at least as it relates to an elective credential: in the current regulatory environment board examinations do not comprehensively preclude uncertified physicians from practice, with more than 25% of actively licensed physicians lacking board certification [45].

There are some indicators relating to the value of board certification. For example, the incidence of medical board disciplinary actions is more than double for those physicians who either failed or did not take their board exams in the past 10 years, compared to examinees who did pass in the same time frame [46]. In a nod to its value, more health systems are beginning to require board certification for employed providers [47]. These features suggest that specialty boards may be among the best-suited entities for developing examinations specific to their fields and identifying high-risk practitioners, as opposed to developing such examinations de novo. There may also be significant value to developing validated alternative pathways for physicians challenged by traditional exam formats to prove their continued clinical competence.

The FSMB did eventually move towards implementing re-examination regime with a major announcement in 2010, heralding a new framework for “Maintenance of Licensure” (MOL) as a set of recommendations to the various state boards to bolster the re-licensure process [48]. It advised new re-licensure requirements that promote self-reflection on performance (including augmented CME), various means of knowledge/skill verification, and developing improved feedback mechanisms for physicians (such as patient surveys and 360-degree evaluations). Importantly, as a recognition of the growing importance of specialty board certification, the FSMB made clear that complying with the Maintenance of Certification pathway for a licensee’s field should be considered by the state boards as compliance with the elements of MOL [48].

This move by the FSMB to encourage acceptance of specialty board certification as compliance under the burgeoning MOL regime represents a crucial watershed in the evolution of the state medical board system and its patient safety role. Along with the enhanced disciplinary activity in recent decades, it will close the door on the era where state medical boards served solely as one-time gatekeepers to medical practice.

A LAST LINE OF DEFENSE

The modern patient safety regulatory landscape is in large part predicated on the assumption that excluding incompetent or impaired physicians from practice protects the public from harm. As has been the case since the beginning of state medical boards, to some extent this reasoning is axiomatic. But there is evidence that suggests a small fraction of physicians is responsible for a disproportionately large share of preventable adverse events. Malpractice data, although not a perfect way to gauge provider propensity for such events, supports this [49].

In the complex constellation of payers, regulators, health systems, and individual providers that attempt to favorably impact patient safety outcomes, where does the state medical board system fit in? Is it still relevant after so many years?

The value of the licensure system is evident if one understands that patient safety regulations are a patchwork that leverages multiple approaches. For example, the federal government is able to indirectly impose requirements on healthcare organizations by setting rules for those that wish to receive payments from Medicare and Medicaid.
These regulations are enforced through the accreditation process performed by the Joint Commission. One of these Joint Commission mandates aimed at enhancing patient safety is the requirement for health systems to conduct routine Ongoing Professional Practice Evaluations (OPPEs). These evaluations use elements such as patient complaints, chart review, and peer interviews to determine suitability for renewal of privileges [50].

Although OPPE and similar requirements play an important role in institutional patient safety promotion, they are separate from licensure and are not sufficient by themselves. Like any other institution-specific patient safety mechanisms, they are largely toothless beyond the walls of a hospital or clinic unless high-risk physicians are reported to the National Practitioner Data Bank (NPDB). The NPDB, a database established by the Department of Health and Human Services, is accessible by eligible entities such as hospitals, state medical boards, and others as a resource in their decisions related to hiring, credentialing, and licensing [51].

Even though such reporting is required by law, historically many hospitals do not follow through [52,53]. Even the federal government that created these rules has demonstrated significant failures in reporting the high-risk physicians it employs through the Veterans Administration and other agencies [54,55]. This leaves high-risk physicians the options of moving their practices to other institutions, and OPPE also does not apply to independent practices. There are many possible reasons healthcare organizations may not be vigorous with OPPE, or about reporting to the NPDB. For example, because peer evaluation work often relies on the specialized knowledge of departmental colleagues, judgment on competency and decisions on remediation may be influenced by critical staffing needs and personal connections. At one VA hospital, for example, an incompetent surgeon was retained despite significant performance concerns because their spouse (also a surgeon employed by the hospital) was in a highly sought-after subspecialty [56]. Some hospital administrators have cited fear of litigation from reported physicians as a motivating factor [57]. Finally, specialists who perform procedures generating high revenues for hospitals may be given favorable treatment by administrators [57].

The inadequacy of institution-specific mechanisms for patient safety is amply illustrated by the high-profile case of Dr. Christopher Duntsch. The Texas spinal surgeon was able to continue practicing after killing and maiming several patients at various hospitals. Even if it should have happened sooner, it was the state medical board that acted against him first by suspending his license [57]. The Texas Medical Board served as a crucial kill switch, and demonstrated the powerful, more definitive reach of state regulatory authority versus institution-specific surveil-

lance and disciplinary mechanisms.

INTERSTATE COOPERATION

It is likely that the future will see increased attempts by state boards to coordinate activities amongst themselves, orchestrated by bodies like the FSMB. This will consist in large part of information sharing initiatives, as we have seen in years past. For instance, the FSMB continues to hone its Physician Data Center, which compiles disciplinary records from state, federal, and international authorities, as well as licensure and biographical information. Using this information, it has in recent years been publishing a biennial physician census to aid policymakers, state boards, and other regulators in their activities [58]. This sort of coordination plays an important patient safety role by pre-empting physicians barred from practice in certain states relocating in order to evade oversight, a method used by high-risk providers since the earliest days of regulated medical practice. “Reciprocal action,” the practice of a state board taking action against a licensee based on the actions of another board, thus remains an important activity. Even if there is not a deliberate attempt to evade reciprocal action, 21% of physicians in the United States hold licenses in more than one state according to 2017 data from the FSMB, with 1,339 reciprocal actions taken that year. This underscores the importance of such information-sharing [59].

However, there is also an increasing realization that the licensure process in the United States can be a barrier to physicians practicing in some areas that have struggled to attract medical workers. These shortages are expected to worsen over time as an aging population increases demand [60]. Of course, maintenance of standards is key to patient safety, but the often-burdensome process of licensure at some point risks depriving patients of access to care, which itself carries downstream patient safety implications.

In an attempt to strike a balance between these competing interests, the Interstate Medical Licensure Compact was devised. This agreement, initially between 18 states, provides an expedited pathway to licensure for those already licensed and in good standing in another participant state. This project was undertaken with strong backing from the FSMB [61].

FUTURE

In 2017, there were 4,081 physicians subject to board actions in the United States, just over 0.4% of the 970,091 with active medical licenses. Two hundred forty eight of these actions resulted in license revocation and 97 license applications denied. The number of physicians experiencing board actions annually has remained relatively
stable over several years, hovering just over 4,000 per year since 2008. This is despite an increase in the number of licensed physicians, up from 850,085 [62,63].

However, it is ultimately challenging to clearly identify the cause of the trend in the frequency of board actions, as there are multiple concurrent changes in the US healthcare system during the same time period, which may have impacted these figures in various and potentially opposing ways. For instance, even though the number of physicians has increased, the distribution of medical care has changed, such that the state medical boards have responsible for overseeing a smaller percentage of it. Specifically, the number of physician assistants and nurse practitioners have expanded dramatically [64,65]. These providers are often not overseen by the same state medical boards as physicians [66], and are likely to see a selected subset of patients. At the same time, the volume of total medical care in some significant areas has changed. This is significant if you consider a patient encounter in any setting to become potential grounds for a board action. The number of total outpatient visits has actually decreased rather substantially between 2008 to 2016, from 955,969 to 883,725 [67,68]. Meanwhile, the total number of inpatient hospital stays decreased from 37.8 million in 2005 and 35.4 million in 2014 [69]. These variables could obfuscate any attempt to trend the true frequency of board actions, or interpret the significance of any trend.

Whatever shape the coming years take for the state-based medical licensure system in the United States, it will play a key role in shaping patient safety. Its unique structure and history are likely to continue to reflect its historical dual concerns of promoting patient safety and protecting physician professional interests. Perhaps the biggest change is that the professional protection element is becoming progressively weaker and less flagrantly displayed than in the early days of state boards. Many boards now mandate a certain fraction of its membership come from the general public, to represent the public interest and serve as a check on any biases of the physician members [70]. Still, there remains an imperative to not be overly zealous in their regulatory practices, especially in states where physician shortages loom.

How well they strike a balance between these evolving motivators will to some extent determine the legitimacy of their regulatory role, and by extension that of the physicians they oversee. Any perceived failures in this area could invite political consequences and attempts by lawmakers to regulate physician practice more directly. For these reasons, patient safety authorities should pay attention to the impact the state medical board system has on patients and the providers who care for them.

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