Finding Historical Context in Medical Regulation: A Bibliographical Guide

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More than eight hundred individuals serve today as members of a state medical board in this country. These medical regulators constitute a diverse group of physicians, allied health practitioners and members of the public. Most of these regulators are returning veterans to the operations of their respective boards, though every year new members join their ranks.

Executive directors and senior staff for these boards provide education and training to facilitate a smooth transition for new members into the world of medical regulation. This internal training invariably focuses on the specifics of service on that state's medical board; for instance, the relevant state laws governing the practice of medicine, the board's disciplinary processes, or procedural guidelines for conducting board meetings.

While this training works admirably to set forth the operational specifics of medical regulation within the state, one element likely remains absent — the broader history and context for medical regulation itself. What is often missing is the wider lens through which board members today can see beyond operations specific to their state to gain a broader vision of medical regulation as an evolving, collective endeavor — the proverbial desire to see the forest through the trees. This essay is intended to serve as a resource for medical regulators seeking to comprehend the forest.

Medical Licensure and Regulation

No single definitive work exists on the evolution of our state-based system of medical regulation in the United States. Two short works from half a century ago were long the starting points for the field: Robert Derbyshire, *Medical Licensure and Discipline in the United States* (Johns Hopkins University Press, 1969) and Richard Harrison Shryock, *Medical Licensing in America, 1650–1965* (Johns Hopkins Press, 1967). However, these works are now less relevant as they pre-date major philosophical changes toward improved regulatory transparency and accountability, e.g., shift toward greater public member composition on boards. Derbyshire's book remains unique in its blend of historical research and first-hand observations based upon his years of experience on the New Mexico Medical Board and later the governing board of the Federation of State Medical Boards (FSMB). Shryock's book reflects a more conventional narrative by a preeminent scholar who published widely in the history of medicine field.

A more recent contribution offers a stronger starting point — *Medical Licensing and Discipline in America* (Lexington Books, 2012). The text of this book, which I co-authored with FSMB President and CEO Humayun J. Chaudhry, DO, MACP, builds considerably upon the Derbyshire and Shryock works by incorporating more recent scholarship and giving added emphasis to post-1960's developments. Though

DERBYSHIRE'S BOOK (*MEDICAL LICENSURE AND DISCIPLINE IN THE UNITED STATES*, JOHNS HOPKINS UNIVERSITY PRESS, 1969) REMAINS UNIQUE IN ITS BLEND OF HISTORICAL RESEARCH AND FIRST-HAND OBSERVATIONS BASED UPON HIS YEARS OF EXPERIENCE ON THE NEW MEXICO MEDICAL BOARD.

written as a history of the FSMB, our work goes beyond what would otherwise be the narrow confines of an organizational history to place FSMB within the broader context of the evolving regulatory system. For example, the book traces medical boards' shift toward discipline from its fitful start in the 1960s through its critical period in the 1970s–80s and into its current environment with board actions posted online as part of physician profiles.

The single best work for understanding the origins and legal basis for medical regulation derives from James Mohr's *Licensed to Practice: The Supreme Court Defines the American Medical Profession* (Johns Hopkins, 2013). Using the seminal Supreme Court case, *Dent v. West Virginia (1889)* as his focus, Mohr's analysis underscores two key elements: (1) The shift within medicine from unregulated vocation to a legally recognized profession; and (2) the Court's

deference to the medical profession's desire for some form of regulation. Mohr characterized the Court as acquiescing in a "policy wager"— supporting the profession's demands for a science-based approach to physician education *now* with the expectation this would translate into therapeutic benefit to patients sometime *in the future* as medical science evolved.

Shorter historical treatments of 19th century medical regulation and the wave of licensing laws enacted in the post-Civil War era can be found in Samuel L. Baker, "Physician Licensure Laws in the United States, 1865–1915," *Journal of the History of Medicine* (April 1984) and Ronald Hamowy, "The Early Development of Medical Licensing Laws in the United States, 1875–1900," *The Journal of Libertarian Studies* (1979). Both are excellent works drawing upon the original 19th century medical practice laws in the various states.

Though few in number, there have been several excellent state-specific studies exploring the implementation of medical licensure laws. Clinton Sandvick and Kenneth H. Schnepp explored Illinois' experience with their respective works, "Enforcing Medical Licensing in Illinois: 1877–1890," *Yale Journal of Biology and Medicine* (June 2009) and "Medical Licensure in Illinois: An Historical Review," *Federation Bulletin* (March 1977). Illinois proved critical as that state served as the exemplar of a fully empowered medical board. Lynn Miller and Richard Weiss' "Medical Education Reform Efforts and Failures of U.S. Medical Schools, 1870–1930," *Journal of the History of Medicine and Allied Sciences* (July 2008) applied quantitative analysis to make a compelling argument that Illinois' list of "approved" medical schools was the most significant driver in fostering late 19th and early 20th century improvements in medical education.

Other interesting case studies explore the advent of licensing laws in Connecticut and Massachusetts. See Toby Appel, "The Thomsonian Movement, the Regular Profession and the State in Antebellum Connecticut: A Case Study of the Repeal of Early Medical Licensing Laws," *Journal of the History of Medicine and Allied Sciences* (April 2010) and Samuel L. Baker, "A Strange Case: The Physician Licensure Campaign in Massachusetts in 1880," *Journal of the History of Medicine* (1985).

Medical regulation and the role of state medical boards have been addressed within the pages of broader narratives covering the socio-political and economic development of medicine in America. Paul Starr's *The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry* (Basic Books, 1982) addresses the consolidation of professional authority spanning the late 19th and early 20th centuries. This Pulitzer Prize-winning work remains one of the most commonly cited sources on the evolution of medical regulation. Though licensure is not the primary focus of *Social Transformation,* regulators interested in the broader history of the medicine in the United States would be well-advised to consult Starr's text.

Some of the best work comes from Carl Ameringer, whose two narratives *The Heath Care Revolution* (University of California Press, 2008) and *U.S. Health Policy and Health Care Delivery* (Cambridge Univ. Press, 2018) detail much of the critical "shift" in medicine from a "professional to a market regime" stemming from fundamental philosophical changes in groups such as the Federal Trade Commission and seminal U.S. Supreme Court decisions (e.g., *Goldfarb v. Virginia State Bar,* 1975 and *Arizona v. Maricopa County Medical,* 1979).

Public Members and State Medical Board Composition

Ruth Horowitz, a sociology professor at New York University, contributed a volume that should be on the bookshelf of every state medical board's offices — *In the Public Interest: Medical Licensing and the Disciplinary Process* (Rutgers University Press, 2013). Having served previously as a public member on two different medical boards, Horowitz combines these experiences with her professional training as a sociologist to deliver an insightful first-hand analysis of medical board dynamics, including their deliberative processes. Her recommendations for strengthening boards' effectiveness include prioritizing strong communication skills as a vitally important trait for prospective board members,

ensuring robust training for all new board members but especially public members, and remaining mindful of the language of board discourse — specifically, keeping this discourse grounded in the legal/administrative (rather than medical) domain as a mechanism to ensure engagement of the full membership of a medical board.

The role of public members on state medical boards has been a frequent topic in Federation publications. Notable contributions come from Stephen Heretick, "The Role of Public Members on State Medical Boards," *Journal of Medical Regulation* (2010) and Linda Wasmer Andrews, "Public Members: The Voice of the Public," *Journal of Medical Licensure and Discipline* (2002).

Though now somewhat dated, Elizabeth Graddy and Michael Nichol provided quantitative analyses of board performance focusing on the impact of public members in "Structural Reforms and Licensing Board Performance," *American Politics Quarterly* (July 1990) and "Public Members on Occupational Licensing Boards: Effects on Legislative Regulatory Reforms," *Southern Economic Journal* (January 1989). See also Andreas Broscheid and Paul Teske on "Public Members on Medical Licensing Boards and the Choice of Entry Barriers" in *Public Choice* (March 2003). On a related note, a February 2019 article in *Academic Medicine* reported survey findings on utilization of public members on the governing boards of various organizations within the house of medicine. See Johnson, Arnhart, Chaudhry, et al. for "The Role and Value for Public Members in Health Care Regulatory Governance."

HOROWITZ (*IN THE PUBLIC INTEREST: MEDICAL LICENSING AND THE DISCIPLINARY PROCESS*, RUTGERS UNIVERSITY PRESS, 2013) COMBINES THESE EXPERIENCES WITH HER PROFESSIONAL TRAINING AS A SOCIOLOGIST TO DELIVER AN INSIGHTFUL FIRST-HAND ANALYSIS OF MEDICAL BOARD DYNAMICS.

Medical Licensing within the History of Medicine

The rise of medical licensing and regulation represent just one aspect within the broader history of medicine in the United States. There are many excellent survey histories of medicine, though several stand out for their interweaving of licensing and medical boards into their broader narrative. Two of the best are William G. Rothstein's *American Physicians in the 19th Century: From Sects to Science* (Johns Hopkins Press, 1972) and Joseph Kett's *The Formation of the American Medical Profession: The Role of Institutions, 1780–1860* (Yale University Press, 1968). Both works address the rise and influence of sectarian medicine. Though not a particular emphasis of either work, both authors discuss 19th century medical licensure. Rothstein addresses medical societies and their relationship to licensure at length. Licensure in the post-Civil War era is presented in the context of the "institutionalization" of medical sects with Kett offering numerous examples of state and territorial efforts seeking to regulate medicine through legislation and medical societies.

Interested readers can also consult John S. Haller, Jr.'s *American Medicine in Transition, 1840–1910* (University of Illinois Press, 1981) and John Duffy's *From Humors to Medical Science: A History of American Medicine* (University of Illinois Press, 1993). However, both texts are limited in their discussion of medical licensure.

Norman Gevitz drafted an excellent overview of the rise of the osteopathic profession in *The DOs: Osteopathic Medicine in America* (Johns Hopkins University Press). Originally published in 1982, a new edition is slated for release in 2019. Interwoven throughout Gevitz' text is the success of osteopathic physicians in gaining recognition from the medical regulatory community and the broader profession.

Medical Licensing Examinations

The starting point on this topic for every medical regulator should be the commentary by Donald E. Melnick, "Licensing Examinations in North America:

Is External Audit Valuable?" *Medical Teacher* (2009). This brief but insightful essay offers a cogent philosophical rationale for why an independent assessment of candidates for licensure remains a critical function of medical regulation and a powerful reminder of the need for individual regulators to remain attuned to this role.

Considerable research into educational and professional testing has developed over the past 60 years. Much of the literature involves technical analyses of the examinations required today for medical licensure: USMLE and COMLEX-USA. This material appears regularly in *Academic Medicine,* the *Journal of the American Osteopathic Association* and, less frequently, the *Journal of the American Medical Association (JAMA).*

There are several articles that should be in the library of every state medical board. Analysis by Brian Clauser and Ron Nungester provide important statistical evidence for medical board policies limiting the number of attempts on the licensing examination. See "Classification Accuracy for Tests that Allow Retakes," *Academic Medicine* (October 2001 supplement). A study by Monica Cuddy, Andrew Gelman, et al. demonstrated a correlation between lower performance on the USMLE with an increased likelihood of subsequent disciplinary actions by state medical boards. See "Exploring the Relationship between USMLE Performance and Disciplinary Action in Practice," *Academic Medicine* (December 2017). Analysis tying performance on a U.S. medical licensing exam with clinical outcomes has been challenging to gather. The best example remains John Norcini, Jack Boulet, et al. in "The Relationship between Licensing Examination Performance and the Outcomes of Care by International Medical Graduates," *Academic Medicine* (August 2014). Interested regulators should consult the work of Canadian researcher Robyn Tamblyn for the potential in this area as her multiple studies demonstrate correlation between performance on the Canadian exam and other important criteria, such as clinical outcomes and patient satisfaction.

A definitive history of medical licensing examinations in the United States remains to be written. There are, however, two organizational histories that focus heavily on licensing examinations. See John Hubbard and Edithe Levit, *The National Board of Medical Examiners: The First Seventy Years* (1985) and Betty Burnett, *In the Public Trust: The National Board of Osteopathic Examiners, 1934–2009* (2010). These works provide an overview of the two professional agencies responsible for multiple examinations recognized for medical licensure in the 20th century: the NBME Parts certifying examination, Federation Licensing Examination (FLEX) and the Comprehensive Osteopathic Medical Licensing Examination or COMLEX-USA (previously the NBOME Parts).

THIS BRIEF BUT INSIGHTFUL ESSAY (DONALD E. MELNICK, "LICENSING EXAMINATIONS IN NORTH AMERICA: IS EXTERNAL AUDIT VALUABLE?" *MEDICAL TEACHER*, 2009) OFFERS A COGENT PHILOSOPHICAL RATIONALE FOR WHY AN INDEPENDENT ASSESSMENT OF CANDIDATES FOR LICENSURE REMAINS A CRITICAL FUNCTION OF MEDICAL REGULATION.

Medical Education and Licensure

The origins of modern medical regulation stem in part from the chaotic environment for U.S. medical education in the post-Civil War era. With vast disparities in the quality of medical education, medical licensing laws gained momentum as a means for setting a minimal threshold for physician qualifications. Medical education reform and medical licensing were closely linked during this period.

The best work on the evolution of U.S. medical education over the past two hundred years comes from Kenneth M. Ludmerer. Through two works — *Learning to Heal: The Development of American Medical Education* (Johns Hopkins University Press, 1985) and *Time to Heal: American Medical Education from the Turn of the Century to the Era of Managed Care* (Oxford University Press, 1999) — Ludmerer

delivers a seamless narrative tracing the evolution of U.S. medical education from its haphazard conditions in an unregulated environment in the mid-19th century to the current era of managed care. In *Learning to Heal*, he contends that state medical boards' primary contribution to medical education stemmed from their efforts (in concert with the Association of American Medical Colleges and the American Medical Association) in shutting down substandard proprietary medical schools during the two decades after the Flexner report.

The era of medical educational reform represented by the 1910 Carnegie Foundation report on "Medical Education in the United States and Canada" by Abraham Flexner has been discussed extensively. For regulators, the starting point should be Chapter 11 of Flexner's report that spoke directly to the statutory role of state medical boards as the "instrument" cementing the reforms of progressive medical schools as the basis for minimum qualifications for physician licensure. Excellent subsequent analysis of the report derives from editors, Barbara Barzansky and Norman Gevitz, in *Beyond Flexner: Medical Education in the 20th Century* (New York: Greenwood Press, 1992). *Academic Medicine* marked the centennial of the Flexner report with a special commemorative issue in February 2010 offering an excellent multi-perspective assessment of this key report and the era within which it appeared.

Continuing Competence

Multiple studies have explored the efficacy of physician self-assessment as a means of practice improvement. An excellent starting point is the *Journal of Continuing Education in the Health Professions* (Winter 2008) which explored this subject as the foundation for continuing education. Particularly noteworthy was the article by Kevin Eva and Glenn Regehr, "I'll Never Play Professional Football and Other Fallacies of Self-Assessment." An excellent companion piece comes from David Davis et al. in "Accuracy of Physician Self-Assessment Compared with Observed Measures of Competence," *JAMA* (2006).

Collectively, these works demonstrate the flaws of "unguided" physician self-assessment. However, both these and other studies attest to the usefulness of self-assessment when guided by objective assessment data compared with external standards. See Robert Galbraith et al. in "Making Self-Assessment More Effective," *Journal of Continuing Education in the Health Professions* (Winter 2008) and F. Daniel Duffy et al. in "Self-assessment in Lifelong Learning and Improving Performance in Practice: Physician Know Thyself," *JAMA* (2006).

Important related works by Eva and Niteesh K. Choudhry challenge the conventional wisdom equating experience with greater expertise by showing an inverse relationship between age or years in practice and performance. See "The Aging Physician: Changes in Cognitive Processes and Their Impact on Medical Practice," *Academic Medicine* (2002) and "Systematic Review: The Relationship Between Clinical Experience and Quality of Health Care," *Annals of Internal Medicine* (2005). See also Richard Hawkins et al. "Ensuring Competent Care by Senior Physicians," *Journal of Continuing Education in the Health Professions* (July 2016)

Disciplinary Function of State Medical Boards

The single most resource-intensive activity of state medical boards involves their disciplinary function—from triaging incoming complaints to the formal adjudication of alleged unprofessional conduct. It is difficult to comprehend that discipline was not always a major function of medical regulation. The best introduction to the subject of state medical boards and their disciplinary role comes from Carl Ameringer in *State Medical Boards and the Politics of Public Protection* (Johns Hopkins University Press, 1999). Ameringer, former faculty member at Virginia Commonwealth University, weaves the forces of consumerism and corporate medicine into his analysis of state medical boards and their uneven transition into the disciplinary role statutorily authorized to them. His narrative picks up the story of state medical boards' disciplinary efforts described by Derbyshire and updates their efforts through the 1980s and 1990s.

A key document in the transition of state medical boards toward a more robust disciplinary role can be

found in the American Medical Association's "Report of the Medical Disciplinary Committee to the Board of Trustees" as part of the proceedings for the 1961 AMA House of Delegates. This report and Lall Montgomery's article "Panel on Problems of Discipline: Unprofessional Conduct," in the *Federation Bulletin* (September 1960) offer contextual insight into the transition beginning in the medical regulatory arena toward a stronger disciplinary focus in the early 1960s.

Scholarly work in this realm accelerated beginning in the 1980s. Important contributions came from Richard Kusserow, "An Overview of State Medical Discipline," *Journal of the American Medical Association* (February 13, 1987); Andrew Dolan and Nicole Urban, "Determinants of the Effectiveness of Medical Disciplinary Boards: 1960–1970," *Law and Human Behavior* (1983); Elizabeth Graddy and Michael B. Nichol, "Structural Reforms and Licensing Board Performance," *American Politics Quarterly* (July 1990); Darren Grant and Kelly Alfred, "Sanctions and Recidivism: An Evaluation of Physician Discipline by State Medical Boards," *Journal of Health Politics, Policy and Law* (October 2007); Marc Law and Zeynep Hansen, "Medical Licensing Board Characteristics and Physician Discipline," *Journal of Health Politics, Policy and Law* (2010) and Nadia Sawicki, "Character, Competence, and the Principles of Medical Discipline," *Journal of Health Care Law and Policy* (2010).

Invariably assessments of state boards' performance in disciplining physicians centers upon data — in particular, the number of actions/sanctions taken by a state medical board. The Federation of State Medical Boards has published national data on state board disciplinary actions since 1981. The *Federation Bulletin* published annual aggregate disciplinary data from 1981 to 1989. In more recent years, the Federation has published this data in its *U.S. Medical Regulatory Trends and Actions* report.

Some of the best work exploring possible indicators for subsequent likely discipline by a state medical board comes from Maxine Papadakis in a pair of articles from 2004–2005. Papadakis' retrospective study showed a strong correlation between unprofessional/unethical behaviors in medical school and later disciplinary action by medical boards. See "Disciplinary Action by Medical Boards and prior Behavior in Medical School," *New England Journal of Medicine* (December 22, 2005) and "Unprofessional Behavior in Medical School is Associated with Subsequent Disciplinary Action by a State Medical Board," *Academic Medicine* (March 2004).

Summary

This essay is intended to provide medical regulators with a convenient guide to important scholarship relevant to specific aspects of medical regulation. The literature described here — though extensive — is not meant to be exhaustive as additional resources undoubtedly exist that warrant inclusion in the library of state medical boards. In particular, board staff should consider resources specific to their state or region to supplement the national materials suggested here.

A Condensed Reading Guide

Classics in the Field

- Carl Ameringer, *State Medical Boards and the Politics of Public Protection*
- Robert Derbyshire, *Medical Licensure and Discipline in the United States*
- Richard Harrison Shryock, *Medical Licensing in America*

Newer Contributions

- Ruth Horowitz, *In the Public Interest*
- David Johnson, Humayun Chaudhry, *Medical Licensing and Discipline in America*
- James Mohr, *Licensed to Practice*

Regulation in Professional and Educational Contexts

- Norman Gevitz, *The DOs: Osteopathic Medicine in America*
- Kenneth Ludmerer, *Learning to Heal*
- Paul Starr, *The Social Transformation of American Medicine*

About the Author

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