Professionalism and Self-Regulatory Standards: Responsiveness of Medical Licensure and Certification

A Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at George Mason University

by

Julia Cerenzia
Master of Science
Johns Hopkins University, 1995
Bachelor of Arts
Montana State University, 1991

Chairwoman: Siona Robin Listokin-Smith, Assistant Professor
Department of Public Policy

Spring Semester 2014
George Mason University
Fairfax, VA
This work is licensed under a creative commons attribution-noderivs 3.0 unported license.
DEDICATION

To my loving husband, Jim, and our wonderful kids, Gus, Simona, Raffaella, and Claudia.
ACKNOWLEDGEMENTS

I owe a special debt of thanks to Professor Siona Listokin for agreeing to chair my dissertation when it was teetering on the brink, and for her astute guidance toward a rigorous and valid study. My thanks to Professor Lee Fritschler, whose comments are always both thoughtful and supportive. It was a pleasure to have him on my committee. I am also grateful for the help and guidance of Professor P.J. Maddox, who joined the committee from the Department of Health Administration and Policy and offered valuable insights from the world of healthcare. I cannot say enough about the crucial support and assistance of those unsung heroes, Beth Eck and Shannon Williams. They quietly keep everything gliding along and have been a tremendous resource as I have navigated this degree.

I am forever grateful to my loving husband, Jim Cerenzia, for his patience and his willingness to endure many evenings of single-parenthood. Thanks, too, to each of my wonderful kids, Gus, Simona, Raffaella, and Claudia. They were incredibly patient with my never-ending studying, always willing to stop and fuel my coffee addiction, and frequently entertained by my sleep-deprived delirium. A special thanks to Raffa for her editorial advice. Undoubtedly, more action and dialogue would improve this manuscript.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Tables</td>
<td>ix</td>
</tr>
<tr>
<td>List of Figures</td>
<td>x</td>
</tr>
<tr>
<td>List of Abbreviations</td>
<td>xi</td>
</tr>
<tr>
<td>Abstract</td>
<td>xii</td>
</tr>
<tr>
<td>1. Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Significance of the Problem</td>
<td>2</td>
</tr>
<tr>
<td>Problem Statement</td>
<td>5</td>
</tr>
<tr>
<td>Research Question and Hypotheses</td>
<td>6</td>
</tr>
<tr>
<td>2. Literature Review</td>
<td>8</td>
</tr>
<tr>
<td>Theoretical foundations</td>
<td>8</td>
</tr>
<tr>
<td>Relevant economic theories</td>
<td>8</td>
</tr>
<tr>
<td>The theory of professionalism</td>
<td>11</td>
</tr>
<tr>
<td>Assessments of tort as regulation of medical practice</td>
<td>16</td>
</tr>
<tr>
<td>3. Historical Background</td>
<td>20</td>
</tr>
<tr>
<td>Establishing the profession and its credentials</td>
<td>20</td>
</tr>
<tr>
<td>Development of state medical licensing</td>
<td>20</td>
</tr>
<tr>
<td>Development of medical specialty certification</td>
<td>22</td>
</tr>
<tr>
<td>The complex reality of medical professional credentials</td>
<td>25</td>
</tr>
<tr>
<td>The era of accountability</td>
<td>26</td>
</tr>
<tr>
<td>The changing environment</td>
<td>27</td>
</tr>
<tr>
<td>The modern accountability movement and the intractable problem of measurement</td>
<td>30</td>
</tr>
<tr>
<td>Tort liability and malpractice crises</td>
<td>32</td>
</tr>
<tr>
<td>History and implications</td>
<td>32</td>
</tr>
<tr>
<td>The three malpractice “crises”</td>
<td>34</td>
</tr>
<tr>
<td>The role of licensure and certification in reducing medical tort claims</td>
<td>40</td>
</tr>
<tr>
<td>Strengthening Quality Standards</td>
<td>42</td>
</tr>
</tbody>
</table>
Continuing medical education requirements (CME) for renewal of medical license .......................................................................................................................... 120
Movement toward Maintenance of Licensure (MOL) ........................................ 121
Analysis of Evidence of Early Adoption of Reforms ........................................... 122
Analysis of CME requirement reforms ................................................................ 123
Analysis of steps toward Maintenance of Licensure ............................................. 125
Evidence-based image of state medical boards in crisis states ......................... 128
Tort is perceived as a signal of an important quality failure…but it is the quality issue, not tort itself, that must be addressed ...................................................... 130
State medical boards have expressed and demonstrated a commitment to responding to the failure of quality and, by extension, to the rise in tort............ 133
Strengthening of licensing standards has not been pursued as a primary or immediate response by medical boards in crisis states .............................................. 136
Contextual factors shape the evidence-based image of licensing boards.......... 151
The effect of “institutional contingencies” .............................................................. 151
Meeting the evolving social contract - progressing from training credential to competency credential ................................................................................................. 164
Practical constraints – managing the professional workforce ................................ 168
Conclusion: The evidence-based image of state medical boards and the analytic frame of professionalism theory .................................................................................. 169
The hypothesized responsiveness is not confirmed by the evidence................. 169
The evidence-based image of state medical boards accords with the analytic frame of the theory of professionalism .............................................................. 170
7. Discussion ........................................................................................................... 174
Cross-Case Conclusions ...................................................................................... 174
Limitations ............................................................................................................. 182
Policy implications ................................................................................................. 185
Future research ...................................................................................................... 187
Appendix A: Identifying crisis specialties ............................................................ 190
Description of Evidence Used ............................................................................. 190
Specialty risk ratings ............................................................................................ 191
Malpractice insurance premiums (i) relative to other specialties; and (ii) relative to physician income ......................................................................................... 192
Relative frequency of malpractice claims across specialties ............................. 197
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1. Specialty Boards and Year of ABMS Approval</td>
<td>44</td>
</tr>
<tr>
<td>Table 2. State Medical Boards Making CME Reforms</td>
<td>123</td>
</tr>
<tr>
<td>Table 3. State Steps Toward MOL</td>
<td>126</td>
</tr>
<tr>
<td>Table 4. CMS Specialty Risk Ratings, 2004 &amp; 2012</td>
<td>201</td>
</tr>
<tr>
<td>Table 5. Malpractice Claims and Malpractice Salience by Specialty</td>
<td>207</td>
</tr>
<tr>
<td>Table 6. Evidence and Interpretation</td>
<td>223</td>
</tr>
<tr>
<td>Table 7. Geographic Areas with High MP GPCI, 2005</td>
<td>228</td>
</tr>
<tr>
<td>Table 8. Geographic Areas with High MP GPCI, 2012</td>
<td>229</td>
</tr>
<tr>
<td>Table 9. States With Large Nominal Spike in MP GPCI</td>
<td>231</td>
</tr>
<tr>
<td>Table 10. States With Large Percentage Spike in MP GPCI</td>
<td>232</td>
</tr>
<tr>
<td>Table 11. Scoring Table for Crisis States</td>
<td>240</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Number of Board with Time-Limited Certification. Data</td>
<td>51</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Case Study Design</td>
<td>65</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Timeline of Mandatory Re-Certification Implementation</td>
<td>76</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Timeline of Mandatory MOC Implementation</td>
<td>78</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Length of Eligibility Period and Transition Date</td>
<td>80</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Matrix of State Medical Boards Making CME Reforms</td>
<td>124</td>
</tr>
<tr>
<td>Figure 7</td>
<td>Matrix of States Boards Taking Action Toward MOL</td>
<td>127</td>
</tr>
<tr>
<td>Figure 8</td>
<td>Specialty Risk (Impact)</td>
<td>203</td>
</tr>
<tr>
<td>Figure 9</td>
<td>Mean Annual MPLI Premiums by Specialty, 1985-2000</td>
<td>209</td>
</tr>
<tr>
<td>Figure 10</td>
<td>Average Premium as a Percent of Average Net Income</td>
<td>209</td>
</tr>
<tr>
<td>Figure 11</td>
<td>Frequency of MP GPCI Values, 2005</td>
<td>227</td>
</tr>
<tr>
<td>Figure 12</td>
<td>Frequency of MP GPCI Values, 2012</td>
<td>227</td>
</tr>
<tr>
<td>Figure 13</td>
<td>Trough to Peak Increase in Paid Claims Over $500,000</td>
<td>235</td>
</tr>
<tr>
<td>Figure 14</td>
<td>Trough to Peak Increase In Paid Claims Over $1 Million</td>
<td>237</td>
</tr>
</tbody>
</table>
LIST OF ABBREVIATIONS

American Association for Thoracic Surgery ................................................................. AATS
American Association of Neurological Surgeons ......................................................... AANS
American Board of Internal Medicine ........................................................................ ABIM
American Board of Medical Specialties ..................................................................... ABMS
American Board of Neurological Surgery ................................................................ ABNS
American Board of Obstetrics & Gynecology ............................................................ ABOG
American Board of Thoracic Surgery ....................................................................... ABTS
American Congress of Obstetricians & Gynecologists ................................................. ACOG
American Council for Graduate Medical Education .................................................. ACGME
American Medical Association .................................................................................. AMA
Centers for Medicare & Medicaid Services .................................................................. CMS
Committee on Certification, Subcertification and Recertification .......................... COCERT
Continuing Medical Education .................................................................................. CME
Continuous Quality Improvement ............................................................................ CQI
Council of State Neurosurgical Societies ................................................................ CSNS
Federation of State Medical Boards ........................................................................ FSMB
Institute of Medicine ................................................................................................. IOM
Maintenance of Certification ..................................................................................... MOC
Maintenance of Licensure .......................................................................................... MOL
Malpractice Geographic Practice Cost Index ............................................................. MP GPCI
Medical Liability Monitor ......................................................................................... MLM
Medical Professional Liability Insurance ................................................................. MPLI
National Practitioner Data Bank ................................................................................ NPDB
Physician Fee Schedule ............................................................................................ PFS
Society of Thoracic Surgeons ...................................................................................... STS
Western Thoracic Surgical Association ....................................................................... WTSA
ABSTRACT

PROFESSIONALISM AND SELF-REGULATORY STANDARDS: RESPONSIVENESS OF MEDICAL LICENSURE AND CERTIFICATION

Julia Cerenzia, Ph.D.

George Mason University, 2014

Dissertation Director: Dr. Siona Robin Listokin-Smith

The medical profession in the United States has traditionally been the quintessential example of a self-regulated profession, invested with deep public trust and granted the privilege of self-regulation through credentialing. However, in the latter half of the twentieth century an erosion of public confidence led to a rise in malpractice claims and three consecutive malpractice crises. Medical malpractice has become a highly salient public policy issue, punctuated by fierce battles for tort reform at the state level.

The issue has sparked a large body of research regarding the response of the medical community to tort pressure, but such research has largely focused upon practice changes made by individual physicians. Theory suggests, however, that responsiveness should take place at the level of the medical profession, with the profession strengthening its standards for medical licensure and specialty board certification. This dissertation
addresses a gap in the research by studying the regulatory responsiveness of the medical profession and its self-regulatory institutions.

Using a qualitative case study design, this dissertation examines each of the medical professional credentials – licensure and specialty certification. An evidence-based image of each credentialing institution is synthesized through triangulation of quantitative and qualitative evidence and analyzed using the analytic frame provided by the theory of professionalism. The dissertation finds that neither state medical (licensing) boards nor medical specialty boards significantly strengthened their respective credential in response to a “crisis” of tort regulation. The case studies did show that the credentialing institutions were cognizant of external regulatory pressures and acted to improve quality, but did not do so primarily by strengthening the credentialing standards. The analytic frame of professionalism facilitated a refinement of the evidence-based image by suggesting “contingencies” – including the state and its policies, and the organization of the profession – that acted to shape and moderate the responsiveness of the profession.
1. INTRODUCTION

It is difficult to overstate the importance of the professions in the American economy and society. The work of the professions – which include medicine, law, the academy, and the clergy – impacts greatly upon such fundamental values as health, justice, knowledge, and salvation. The combination of specialized knowledge and social authority possessed by the professions is reflected in the privilege of self-regulation granted to them by society. While professional self-regulation pre-dates the more modern proliferation of industry self-regulation, we understand far less about the self-regulation of professions. Industry self-regulation is relatively straightforward. Standards are set and enforced under the watchful eye of government, and “pseudoaccountability” or laxness can reasonably be detected. By contrast, the output of the professional’s work, the self-regulatory standards set by the profession, and the effectiveness of professional self-regulation are inherently difficult to judge – for consumers, society, and even for would-be government regulators. A large – and inconclusive – body of literature seeks to understand the nature of professionalism and to judge whether professional self-regulation is an effective and acceptable mechanism for producing and enforcing standards. This dissertation contributes to the literature by considering the medical profession in the United States and its sensitivity to societal demands for improved quality standards.
Significance of the Problem

The medical profession in the United States has been recognized as the quintessential example of a self-regulated profession, invested with deep public trust and granted broad regulatory autonomy to assure medical quality through credentialing. The professional status of physicians\(^1\) began to emerge at the turn of the last century, and from it “grew a virtually mythic image of the medical profession as an altruistic enterprise, committed by moral purpose and technical competence to patient welfare. Over the course of several generations the profession acquired a deep reservoir of public trust and confidence” (Bean, 2009).

Traditionally, the American patient felt secure that his physician was competent and had done all that could be done, even in the face of adverse health outcomes. Since the middle of the twentieth century, however, the American medical profession has lost the unwavering confidence of the American people as the public has become cognizant of frequent medical errors. One result of the erosion of confidence has been a rise in the malpractice claims made against physicians. Once, sheltered from such claims by their respected professional status, physicians rarely faced a malpractice claim. Today, most physicians face at least one malpractice claim during their career and concern regarding periodic malpractice crises has gained broad public salience.

For physicians, the rise in medical malpractice claims has brought with it a much-lamented economic burden of insuring and defending against claims, which has spiked

---

\(^1\) Throughout this document, the term physician refers to licensed Medical Doctors (MDs), including both physicians and surgeons. It does not include Osteopathic Doctors (DOs).
\(^2\) This theoretical discussion describes quite accurately the difficulties faced by physicians prior to the establishment of licensure.
\(^3\) The combined theoretical argument is often referred to as the “theory of quacks and lemons”. 
into three malpractice crises since 1970. The rise in tort has fostered a deep and pervasive fear of meritless claims among physicians and has fueled heated public policy battles over whether to limit physician liability through tort reform.

To date, research regarding the effect of tort on physician quality has examined the responsiveness of individual physicians, particularly the use of “defensive medicine”. This study proposes that the appropriate level of analysis is not the individual physician, but the profession as a whole. More than just a business cost for medical practice, tort is an external regulatory incursion into the autonomy of the profession. This study therefore examines the responsiveness of the profession and its credentialing institutions to the recent regulatory pressure from tort, a topic that has been largely neglected in the existing literature.

The theory of professionalism offers a framework with which to examine the impact of tort liability upon the medical profession. The services of a physician, or any professional, are “credence goods”. Because of the complex nature of medicine, the consumer does not have the capacity to judge the quality of a physician, creating an “information asymmetry”. For professions, this problem is solved through credentialing. The profession is granted the privilege of self-regulation and is responsible for assuring that its members meet an acceptable minimum level of quality. The profession ensures and signals that quality by issuing professional credentials.

If the professional credential fails to provide an adequate quality assurance to consumers, other forms of regulation are likely to emerge. These include not only government regulation, but also regulation through tort. The rise in malpractice claims,
then, should be seen as the emergence of an alternative mechanism for regulating physician quality. Theory suggests that the emergence or threat of external regulation (including tort regulation) will stimulate the profession to reinforce the self-regulatory regime so as to protect its autonomy.

The theory of professionalism also identifies several “contingencies” – including the state and the organization of the profession itself – that will support or impede the workings of professionalism in any given time or place. In this way, the theory offers a nuanced analytic frame with which to analyze professions despite their varied characteristics across time and place.

This study contributes to our understanding of medical professional self-regulation and its responsiveness to external tort regulation. Using a qualitative case study design, each of the medical professional credentials – licensure and specialty certification – were examined. An “image” of each credentialing institution and its responsiveness was synthesized through the triangulation of quantitative and qualitative evidence. Drawing upon Ragin’s model of social research, the evidence-based image of these institutions was then further considered against the analytic frame of professionalism. In this way, the study provided a refined understanding of whether and why self-regulated professions exhibit responsiveness to societal demands for higher quality.

This research found that neither medical licensure nor medical specialty certification was significantly strengthened in response to a “crisis” from tort regulation. The case studies did show that the credentialing institutions were cognizant of external
regulatory pressures and acted to improve quality in other ways. The analytic frame of professionalism facilitated a refinement of the evidence-based image by suggesting “contingencies” – including the state and its policies, and the organization of the profession – that acted to shape and moderate the responsiveness of the profession.

The research offers strong public policy implications as it can inform the state-and federal-level debates regarding medical malpractice tort reform, as well as the debates regarding the need for external regulation and oversight of medical quality.

**Problem Statement**

Medical credentialing no longer serves as a sufficient assurance of acceptable minimum quality, leading patients to question physician quality before the courts and seek regulation of the medical profession through tort. The growth in malpractice claims has led to recurring malpractice crises that have become an important public policy issue. To preserve its autonomous control over the occupation and fend off external regulation through tort, theory suggests that the medical profession will strengthen its credentials to provide a trusted and credible signal of physician quality. Yet its response will be moderated by the contingencies of the state and its own composition. This dissertation will help fill a gap in the literature by examining responsiveness to tort regulation at the level of the professional credentialing institutions.

The research comprises a two-case qualitative study. It examines each of the two credentialing institutions of the American medical profession – medical licensure and medical specialty certification – for responsiveness to tort regulation. Because malpractice crises have disproportionately affected physicians in certain geographical
areas ("crisis states") and in certain specialties ("crisis specialties"), the phenomenon of tort regulation creates an opportunity for comparative analysis. Individual state licensing boards and individual specialty certification boards, embedded within their respective institutional cases, are grouped into “crisis” and “non-crisis” groups. These groups serve as the primary units of analysis. The study uses triangulation of multiple sources of evidence to examine whether those licensing and certification bodies whose members have experienced greater pressure from tort regulation have shown sensitivity to this pressure by more quickly taking steps to strengthen their standards of physician quality.

The evidence-based image of the medical profession that emerges from the case study will be informed by the analytic frame offered by the theory of professionalism. This analytic frame will provide insights as to the responsiveness of the profession and the factors that have shaped this responsiveness.

**Research Question and Hypotheses**

This dissertation will address the following research question: Are professional self-regulatory institutions sensitive to external regulatory pressures in setting their quality standards?

More specifically, this research will address the medical profession and its sensitivity to tort regulation, addressing the following research questions:

1) Have state medical boards that experience severe pressure from tort regulation taken steps to improve their licensing standards, as suggested by the theory of professionalism, and as compared with those state boards experiencing less tort regulation?
2) Have medical specialty boards whose specialty is experiencing severe pressure from tort regulation taken steps to improve their certification standards, as suggested by the theory of professionalism, and as compared with other specialty boards whose specialties are experiencing less tort regulation?

3) How has the medical profession raised its certification and licensing standards, in the context of growing external public pressure?

The study hypothesizes broadly that professional self-regulatory institutions will be more likely to raise standards when experiencing greater external regulatory pressures.

The following specific hypotheses will be tested:

1) State medical licensing bodies whose states experience a malpractice crisis will act more quickly to strengthen their credential than those in “non-crisis” states.

2) Medical specialty certification bodies whose members experience a malpractice crisis will act more quickly to strengthen their credential than specialties whose members do not experience a malpractice crisis.

3) Specialty and state medical boards will express concern about public pressures for quality and leadership will strive to address those concerns.
2. LITERATURE REVIEW

This section will review the literature to provide historical background, key theories, and current empirical research to inform this study on medical professional self-regulation and its responsiveness to tort regulation.

Theoretical foundations

Relevant economic theories

In the language of economics, physician services are “credence goods”—a good or service, the quality of which cannot be adequately judged by a consumer (Darby & Karni, 1973; Nelson, 1970). The physician knows his or her level of quality (as do other trained physicians), but the consumer does not, creating an “information asymmetry”.

Medical knowledge is so complex and specialized that the consumer cannot know whether proper care is being given, whether better quality care is possible, or whether a different provider of the care would provide a better outcome. Medical care is an extreme form of credence good in two ways. First, a poor medical outcome cannot be recouped—one cannot refund or fully recompense the loss of life, limb, or health (Arrow, 1963). Furthermore, medical care is so esoteric that the consumer may not be able to judge its quality even after experiencing it. A bad outcome is possible despite good care; a satisfactory outcome may result despite poor care; and a patient may not even be able to judge where their outcome lies upon the range of possible outcomes.
In his seminal article on “The Market for ‘Lemons’,” economist George Akerlof (1970) considered the degenerative market effects of such an information asymmetry regarding quality. Where buyers cannot judge the quality of a product as well as the seller can, unscrupulous sellers can pass off “lemons” as quality goods. Consumers will lower their purchase price for the good to factor in the chance of getting a lemon, pushing the price below the true value of a high-quality item and causing high-quality producers to exit the market. Prices, average quality, and market size all diminish as dishonest sellers drive out legitimate business and ultimately the market collapses.\(^2\) Leland (Leland, 1979) formalized Akerlof’s theory and applied it to the case of physicians,\(^3\) showing that it behooves the legitimate physicians to establish “minimum quality constraints” through licensure in order to eliminate the “quacks” and preserve the profession’s sound reputation (and its market).

The information asymmetry can be solved for a profession through credentialing. The profession sets and enforces a minimum quality standard and issues a license that attests that the holder meets that standard. The credential is a “private ordering” (Coase, 1988; Djankov, Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2003), a means of regulating quality without the participation of government or other external parties.

Other regulatory options exist, of course. The four main categories of regulation recognized by economists are private orderings, private litigation in independent courts

---

\(^2\) This theoretical discussion describes quite accurately the difficulties faced by physicians prior to the establishment of licensure.

\(^3\) The combined theoretical argument is often referred to as the “theory of quacks and lemons”.

9
(tort regulation\textsuperscript{4}), regulation by government or another third party, and government ownership (Djankov et al., 2003).

If “private orderings” such as professional self-regulation fail to address market failures sufficiently, other institutions such as tort law or government regulation will arise to address the market failure (Djankov et al., 2003). In practical application to the market for medical treatment, the licensure and certification of physicians is undertaken by the medical profession to assure that each physician meets a minimum standard of quality. If this minimum standard is acceptable and credible to patients, then patients are likely to conclude that an adverse health outcome is just a fact of life and is not likely the fault of the physician giving care. However, if patients do not accept that a physician \textit{by reason of his being licensed (and perhaps certified)} possesses the minimum acceptable level of competence, then the patient may suspect physician negligence in the case of an adverse health outcome and the patient may choose to “test” the quality of the physician’s care through malpractice litigation.

Economic theory suggests, then, that rising malpractice claims reflect a shift by consumers from one regulatory mechanism (professional credentials) to another regulatory mechanism (tort law). The profession has failed to provide a credible signal of acceptable minimum quality through credentialing, leading consumers to question physician quality and turn more willingly to tort claims as a means to judge and ensure that quality. As one physician lamented, “This country produced generations of

\footnote{See Hylton (1991) for the economic theory of tort law.}
physicians whose competence and judgment were automatically assumed”, but in an era of malpractice crises, this is no longer the case (Bean, 2009).

Theory further suggests that the resulting pressure from tort may lead the medical profession to strengthen the quality standards of its credential; but research is needed to examine the degree to which professions exhibit this responsiveness to tort law in practice.

**The theory of professionalism**

Sociology, too, has taken up the study of professions and the credentials that they use to assure quality. Both streams of theory begin with the problem of information asymmetry and agree on the essential need for exclusivity (monopoly) and self-regulation to support a viable market for the professional services. The sociological treatment, however, offers a richer analysis of the professions and an alternative explanation of professional behavior, asserting that the profession is motivated not simply by economic objectives (the need to avoid a degenerative market for lemons) but by altruism and an ethic of craftsmanship. This conception of the medical profession is ingrained in American culture and it flavors any policy discussion regarding medicine.

The dominant sociological theory regarding professionalism is that developed by Eliot Freidson (1988, 2001, 2007). Like Max Weber and Adam Smith, Freidson bridges economics and sociology, and asserts that professionalism is fundamentally a way of controlling economic activity. Most economic theory considers the organization and control of work using one of two models – Adam Smith’s free market model in which work is controlled by the preferences of consumers; or Max Weber’s model of rational-
legal bureaucracy in which work is controlled by a detailed set of rules enforced by managers or bureaucrats. Freidson asserts that a third, distinct model (or “logic”, as he terms it) exists, in which work is controlled not by the market and not by organizational structures, but by the occupation itself through “professionalism”.

The sociological perspective acknowledges the highly technical knowledge required of a professional, but goes further to specify that this knowledge is also highly discretionary (Freidson 2001; Surdyk 2003) (Freidson, 2001; Morreim, 1991). An element of judgment is essential to accomplish the work of the profession – artful and flexible thinking is necessary in order to address the variation found in each individual case. This makes it all the more difficult for those outside the profession to judge the quality of a professional, reinforcing the need for self-regulation.

Through its control over training and credentialing, the profession both defines and enforces the minimum quality (knowledge and skills) of the professionals and the services they provide. This control is sanctioned by the state, with “the obligation to employ only those qualified by the occupation is made mandatory by law” (Freidson, 2001).

Granting of regulatory autonomy is in part a practicality – only a member of the profession, not an outside regulator, possesses the ability to judge an individual’s grasp of the profession’s specialized knowledge and discretionary reasoning. However, according to sociology the granting of regulatory autonomy also reflects a significant degree of trust. The theory of professionalism asserts that the profession is driven to maintain its quality not by market concerns but by a professional ethic of quality and service (Cruess
& Cruess 2000, 2004, 2005; Dingwall & Fenn 1987; Freidson 2001; Ayres & Braithwaite 1995; Gunningham & Rees 1997; Frankel 1989). Society must find the professional ethic credible in order to enter into the social contract that forms the foundation of professionalism (Evetts, 2006; Mehlman, 2013; Reinhardt, 2013; Timmermans & Oh, 2010).

The ideology of professionalism: commitment to quality

The professional ideology is fundamental to the distinct “logic” of professionalism and its ability to assure quality. As compared to the ideologies of consumerism and managerialism, the ideal-typical profession is characterized by “an ideology that asserts greater commitment to doing good work than to economic gain and to the quality rather than the economic efficiency of work” (Freidson, 2001). This commitment to doing good work has an element of altruism and an element of self-realization.

In most conceptions of professionalism, the profession forms a social contract with society (Cruess & Cruess, 2004; DeAngelis, 2013, p. 64; Mehlman, 2013). The members of the profession fulfill their part in the social contract by altruistically using their specialized knowledge in the service of others. The individual professional is also personally motivated and committed to doing good work by a desire for self-realization, which is distinct from the notion of what motivates the worker in the free market or the rational-legal organization. Work is a means of self-fulfillment and service to a transcendent value. This conception of the professional ideology was not a novel contribution by the theory of professionalism; it is deeply rooted in Marx’s “species-
being” and C. Wright Mills’ “ethic of craftsmanship” and lies at the heart of the classical concept of professions (Marx, 1993; Mills, 2002; Sennett, 2008). In order to serve this ideology of quality, the profession requires a “shelter” against market forces and bureaucratic control.

The professional market shelter

Professional licensure creates a monopoly position for the profession, which is sanctioned by the state and “sustained by force of law or strong custom” (Cohen, 1973; Freidson, 2001). Only members of the profession are legally allowed to perform the work of that occupation. As a result, the ideal-typical profession enjoys a “sheltered position” (Freidson, 2001). The profession is allowed to insulate itself from market forces and corporate control with “anti-competitive” behaviors; and the state must also refrain from imposing its own managerial regulation on the profession, allowing it to pursue quality rather than the goals of the government. Freidson’s theory asserts that the logic of professionalism, free to operate within the market shelter, will deliver high quality services better than either the logic of the marketplace or the logic of the rational-legal bureaucracy could.

The professional credential

As in economic theory, the professional credential plays a critical dual role in the theory of professionalism: operationalizing the market shelter and assuring that the

---

5 In 1920, British intellectual R.H. Tawney wrote that professionals measure their success by “the service which they perform, not the gains which they amass” and further “the meaning of their profession, both for themselves and for the public, is not that they make money but that they make health, or safety, or knowledge, or good government or good law.” (Crook, 2008)
promised level of quality is delivered by the members of the profession. It embodies both sides of the profession’s social contract. It can only play this role, however, if it is credible and if the level of quality that it assures meets the minimum needs of society.

The professional credential creates exclusivity based on competence (Jeremiah A. Barondess, 2003; Cruess & Cruess, 2004; Mechanic, 2008). In order to function effectively, the credential must reflect a level of quality that is sufficient to meet the needs of society and the market. The consumer must trust that the minimum level of quality will be enforced for each member of the profession – granting membership to any number of “incompetents and quacks” seriously undercuts the credibility of the credential, rendering it useless as a market signal. If the professional credential is to establish exclusivity based upon competence, then the exclusivity must be firmly and consistently enforced.

**The medical credential and the American malpractice crises**

The legitimate credibility, sufficient stringency, and absolute consistency of the professional credential are central to the issue of the American medical profession and its response to recent malpractice crises.

The credibility of the credential as a market signal is essential. If consumers of medical care trust the veracity of the credential, they will have faith in the ability of credentialed professionals, and they will be far less likely to presume that poor physician quality is a factor when they suffer an adverse health outcome. It is the presumption of physician negligence (rightly or wrongly) that drives individual patients to make a tort claim and drives the market collectively to turn to tort regulation.
The setting of sufficient minimum standards is also crucial for the functioning of the credential and its role in addressing the rise in malpractice. If the credential held by a physician assures some level of quality, but this level of quality is below the minimum that the consumer would find acceptable, then the credential has little value to the consumer. If consumers demand at a minimum a competent physician, then signaling that a physician will not be grossly incompetent is not sufficient to sustain a functioning market. The patient suffering an adverse health outcome could reasonably suspect that it is due to the unacceptably low quality of the practitioner. The patient may then turn to the courts to determine whether the physician’s performance was acceptable, essentially substituting tort regulation for the traditional professional self-regulation.

These attributes of the professional credential hold great significance for the American medical profession, the external regulatory pressure it feels from tort, and the periodic malpractice crises it has experienced.

Assessments of tort as regulation of medical practice

Tort liability is a form of regulation, as explained in the *Positive Economic Theory Of Tort Law* (Hylton, 1991; Landes & Posner, 1987). Tort law is generally understood as a mechanism for compensating victims as well as for deterring negligent or wrongful behavior.6 Danzon (1985, p. 222) notes that “in theory, tort liability is uniquely designed to provide an ongoing system of quality control, without direct regulation, because each patient is the enforcer in his own case. He has the right to initiate an investigation and to seek redress, through a legal suit, in the event of breach of due care.”

---

6 Tort also serves a regulatory role by establishing legal standards through common law.
Tort law is thus an important complement to professional credentialing – licensure offers prospective regulation of quality, while malpractice litigation offers retrospective regulation (see Bobinski, 1993). As the accountability movement began to take hold in 1970, Carlson (1970) pointed out that malpractice litigation was the only existing outcome measure for quality of care.

Defenders of malpractice tort assert the importance of its deterrent effect, however weak (Bobinski, 1993; Bovbjerg, 1986; Mehlman, 2013; Michaud & Hutton, 1980, p. 733; Van Tassel, 2013). However, few would deny that the current tort system for medical malpractice is a poor performer in terms of both compensation and deterrence.

As a compensatory mechanism, the tort system is criticized for its inefficiency.7 A large amount of money flows into the malpractice system in premiums and compensatory payments; but the system produces vastly inadequate compensation to most patients who suffer due to medical negligence. Many victims never file a claim; a great deal of money “leaks” from the system through the cost of pursuing and defending against unsuccessful claims; and when compensation is awarded to a plaintiff, a good portion of it is applied to legal fees and other administrative costs (Mello, Chandra, Gawande, & Studdert, 2010; Studdert et al., 2006). The value proposition is unconvincing to many.

Of relevance to this study is the criticism that tort fails to deter poor quality. As one research team has delicately concluded, the statistical relationship between actual malpractice and claims “may or may not be strong” (Adams & Zuckerman, 1984, p. 480).

---

7 These arguments generally draw upon the normative, rather than the positive, stream of the economic theory of tort law (Hylton, 1991).
Some claims are made when no act of negligence has occurred – as reflected in the fact that only about 30 percent of claims end in a payment to the plaintiff; and at the same time, only 4 to 5 percent of patients injured through physician negligence make a malpractice claim (Abbott, Weber, & Kelley, 2005; Bovbjerg, 1986; Patricia M. Danzon, 1985; Luce, 2008; Mello, 2006b). The system’s documented flaws have led many to question its effectiveness in deterring substandard medical practices (Abbott et al., 2005; Luce, 2008; Mello, 2006b). Medical malpractice does not appear to fulfill its role as a deterrent because “being negligent hardly guarantees a claim” (Luce, 2008, p. 1048) and because the fear of litigation causes physicians to under-report adverse events and hide mistakes rather than learning from them (Abbott et al., 2005). Furthermore, the use of MPLI buffers physicians from the monetary risk (although not the psychological or reputational risk) of malpractice claims, thereby mitigating the deterrent effect for negligence (Adams & Zuckerman, 1984; Bovbjerg, 1986).

Much of the literature regarding tort’s effectiveness as a regulatory mechanism for medical quality has looked for responsiveness by the individual physician, spawning a large body of research regarding the practice of “defensive medicine”, reduced physician supply, and reduced access to care (D. M. Studdert 2005; Mello 2005; Mello et al. 2005;)

---

8 Defensive medicine is the over-utilization of diagnostics or treatments that offer little clinical benefit and do not improve the quality of care but are perceived to protect the physician from a malpractice claim. Some defensive steps, however, do provide quality improvements (e.g., learning and applying emerging standards of care and best practices; improving communication skills) or offer clinical benefits to patients (e.g., running additional diagnostics). These individual steps lie outside the scope of this study, except as they reflect the actions of the larger profession or specialty.

9 Fears of reduced physician supply are based largely on anecdotal (survey) evidence that malpractice concerns are leading or will lead physicians to retire early, change the geographical location of their practice, or restrict their practice to procedures, practice areas, and/or patient groups that carry a lower risk of malpractice claims.
CBO 2004; David M. Studdert, Mello, and Brennan 2004; Thomas, Ziller, and Thayer 2010; Sloan and Shadle 2009). These physician-level studies have shown tort to have little positive impact upon the quality of practice by individual physicians, leading many to conclude that tort liability offers little value for the regulation of medical quality (and fueling calls for medical tort reform to limit liability). However, the conclusion that tort regulation has no impact may be premature.

Economic theories provide ample rationale as to why the individual physician is not an appropriate level of analysis when looking at regulation of professional quality and professional responsiveness to tort. Because the individual physician cannot adequately signal his or her competence above the minimum level required for credentialing, his or her reputation rests upon the reputation of the profession as a whole. If consumers do not find the professional credential to be a credible assurance of an acceptable minimum quality, then all physicians are suspect as potential negligents. They are therefore at risk of a malpractice claim (with or without merit) whenever a patient’s outcome is poor. The fundamental problem is that the quality attested by their credential is insufficient to dissuade patients from questioning their quality before the courts. It is at the level of the profession, then, that the quality standards must be adjusted to effectively assure consumers that the physician’s quality is minimally acceptable and forestall external regulation, including tort.
3. HISTORICAL BACKGROUND

Establishing the profession and its credentials
In many ways the trajectory of medicine in the United States from the late 1800s to the 1950s has been seen as a textbook case of professionalization (Tomes, 1985). Foremost among the forces that converged to consolidate the professional status of medicine was the establishment of enforceable and credible competence-based licensure, which could ensure and signal the quality of the members of the profession.

Development of state medical licensing
Prior to the establishment of medical licensure in the U.S., the market for medical care paralleled all too closely the “market for lemons” later described by economists (Akerlof, 1970; Leland, 1979). Better-trained physician were unable to make a viable living and medicine followed other occupations in seeking licensing to protect against the ruinous competition of “scab workmen and fly-by-night, cut rate shops” who were trained in “quicky” schools (L. M. Friedman, 1965).

The quality of medical education, described as “simply horrible” in 1878 (Stevens, 1968) began to improve in the last decades of the nineteenth century (Shryock, 1967; Starr, 1982). Effective state licensure laws began to appear, creating a sheltered position for duly trained physicians, and the state sanction of this monopoly was affirmed
in the 1888 U.S. Supreme Court ruling in *Dent v. West Virginia* (1889). By 1901 every state had a “medical practice act” that created the state licensing board, described the bounds of its regulatory authority, and set licensing requirements. The initial medical licensing acts required only a diploma and exempted many established practitioners, thus weakening potential opposition. Within a few decades, however, licensing boards significantly ratcheted up requirements, refusing to accept diplomas from disreputable schools, extending the required length of training, and often also requiring a licensing examination.

The efforts of the licensing boards to raise quality gave teeth to the seminal 1910 Flexner Report, which clearly made the “linkage between a quality educational experience and competent physician, and the delivery of benefit to patients and the public”, and which is generally credited with eliminating the medical diploma mills (Becker, 2009). By the 1920s, the number of licensed physicians was reduced and the minimum level of quality had been raised. American physicians had cemented their professional status and domain.

The formation of the Federation of State Medical Boards (FSMB) through the merger of two predecessor organizations in 1912 provided a limited amount of coordination among state licensing boards. Throughout the first half of the 20th century, the FSMB comprised simply an annual meeting of state medical board officers and publication of the monthly *Federation Bulletin* (FSMB, 2012f). It was not until the 1950s

10 In a unanimous decision, the court ruled that of those who consult a doctor, “comparatively few can judge of the qualifications of learning and skill which he possesses”; the consumer must rely on the license for assurance of competence and “reasonable considerations, therefore, might prompt a state to exclude people without licenses from practicing medicine” (Starr, 1982).
that the FSMB stepped to the fore as a regulatory actor in its own right. In 1952 the
FSMB undertook a study of state medical practice acts and, finding little in the way of
uniformity, published the first edition of its model policy, *The Essentials of a Modern
FSMB was fully incorporation in the 1960s and has fostered greater coordination and
standardization of medical licensure, though state licensing boards have ceded no
authority to the supra-state level (FSMB, 2012c; Johnson & Chaudhry, 2012).

In addition to the fundamental credential of licensure, the medical profession
created an additional credential during the formative period of the early twentieth century
– specialty board certification.

**Development of medical specialty certification**

Specialization among physicians has always been a natural outcome of
advancements in scientific knowledge and instrumentation (Friedmann, 2003). However
the early paths to medical specialty were numerous and unformalized – physicians
learned their specialties from peers or mentors, in practice as they developed an interest
in a particular area, or in some cases through internships (Starr, 1982). Very few
undertook post graduate studies. This lack of formalized training led to a great diversity
of quality and competence and professional concern over the lack of standards.

The medical profession had to tread carefully, however, in the recognition of
specialization. Specialist physicians sought to assert dominance not only over
nonphysician competitors, but also over general practitioners of medicine. General
practitioners, for their part, strongly resisted any attempt to grant exclusive hospital
privileges to specialists or to limit in any way their own access to specialist training and freedom to work in these areas. As a result, the system that emerged was overtly non-exclusive. Specialty board certification was intended to be an indication of exceptional knowledge and expertise in a specific specialty. It granted certified doctors – called “diplomates” – no exclusive right to practice as specialists, and was explicitly not required to obtain hospital privileges.

From the 1910s through the 1930s the profession began to exert some regulatory control over specialty training and to establish mechanisms for examining and certifying specialist knowledge. The effort was led by a handful of leaders representing the key medical organizations of the day, including the AMA’s Committee on Medical Education and Hospitals (AMA/CME), the National Board of Medical Examiners (NBME, whose members were the state licensing boards), and a number of medical societies and colleges (ABMS, 2013c).

While licensing of physicians had always been located at the state level, the National Board of Medical Examiners concluded in 1932 that “the prospect of a board for each specialty in each state was unfathomable”, thus “all efforts were directed toward the formation of national specialty boards, which would set the standards for practice in each specialty” (Becker, 2009). Specialty certification thus contributed significantly to standardizing medical practices across the country (Michaud & Hutton, 1980).

Specialty societies and colleges began to establish specialty certification boards, beginning with the founding of the American Board of Ophthalmology in 1917, the American Board of Otolaryngology in 1924, the American Board of Obstetrics and
Gynecology in 1930, and the American Board of Dermatology in 1932. Each certifying board was created to be independent from the corresponding membership society, in order that certification be credible in the eyes of the public (DeAngelis, 2013).

In 1933 the four existing specialty boards – together with the AMA, the American Hospital Association, and the NBME – established the Advisory Board for Medical Specialties (ABMS), organized as a loose federation and designed to support communication among the boards.

The medical profession continued to harbor internal concerns about specialization – concerns that it would fragment the profession; frustrations regarding how to examine or judge ability in specialties; specialists’ fervent desire to have their exceptional expertise affirmed (and remunerated); and general practitioners’ adamant opposition to being excluded from any area of practice (Aring CD, 1976; Donini-Lenhoff & Hedrick, 2000; GREGG, 1949; McLean, 2004; Starr, 1982; Wolf, 1976, 1983). These concerns were kept below a boiling point by adhering to the voluntary nature of specialty certification and the non-exclusivity of practice areas.

The specialty movement has continued to expand and gain strength throughout the twentieth century. By mid-century, eighteen specialty boards had been established and it was difficult to deny the ascendency of specialists within the profession and within the marketplace for medical care. While specialty board certification has never supplanted or joined medical licensure as a requirement for the practice of medicine, and while the ABMS and each of its member boards takes great pains to maintain that it is voluntary, non-exclusive, and certifies exceptional expertise, specialty certification has
taken on an important role as a medical credential and a market signal. As it has sought to strengthen the institution of specialty certification, the ABMS has urged that “we must keep in mind that in addition to serving physicians, the American Board of Medical Specialties serves the public” (K. B. Weiss, Bryant, Morgan, & O’Kane, 2010).

**The complex reality of medical professional credentials**

In its first half-century, professional credentialing of medicine evolved from the simple issuance of a license. It grew organically into a more complex organism with multiple working parts: licensure of basic medical skills and knowledge establishes the impermeable boundary of the profession; certification of specialized skills and knowledge offers market signaling of quality and competence; and a number of actors in the marketplace – hospitals and other healthcare institutions, public and private payers, and malpractice insurers among them – giving legal and market value to those credentials.

The evolution from simple licensure was perhaps most clearly acknowledged in a 1976 FSMB editorial noting federal concerns that the medical boards licensed “too broadly”. While the license to practice “medicine and surgery” was reasonable when it was created, as a physician could reasonably expect to care for all the health needs of his or her patient, given the subsequent advances in medical science, the physician could no longer function in this way. Perhaps, the editorial conceded, more limited licensure should be considered. However, limited licensure would require the medical community to clearly delineate the scope of each practice area under the law – a process described as “arbitrary and distasteful to most physicians.” He continued,
“Is there a need for limited licensure to protect the public? In reality there is already an established process designed to solve the problem created by the physician who does not recognize his or her limitations. This is the delineation of privileges which is now part of hospital practice. Each hospital staff must now review annually the credentials of all physicians on staff and practice privileges are defined by the ability of the individual and the needs of the community. …[T]he process itself is recognized and it works.” (J. Morton, 1976a)

The era of accountability
The middle of the twentieth century marked a high point, when the profession “had gained such strength that it almost completely realized ideal-typical professionalism” (Freidson, 2001). Many challenges were waiting in the wings, however, and the profession’s changing fortunes have spawned a library of books and articles examining its fall from the pinnacle of professionalism. ¹¹ The profession’s market shelter has weakened, as have its economic and cultural status, and medicine has felt embattled on multiple fronts for a number of decades (Light & Levine, 1988).¹² It is difficult to tease out the various social, economic, and technological forces that have acted upon medicine since the mid-1900s – the rush of scientific and technological advances; the Olympian expectations and bitter disappointment of patients; the erosion of cultural authority and prestige; the tectonic shifts in the financing of medical care; the resulting

¹¹ Light and Levine nicely summarize and critique the three main streams – deprofessionalization, proletarianization, and corporatization (Light & Levine, 1988). See also Stevens (2002)
¹² See Dr. James R. Bean’s 2009 President’s Address to the American Association of Neurological Surgeons for a poignant iteration (Bean, 2009).
infringements of clinical autonomy by both government and private sector payers; the imposition of new goals such as efficiency and rationalization of care; and the critique of medical quality by those outside the medical profession (Morreim, 1991).

Most of these forces and their effects lie outside the scope of this study, and will only be addressed as they impact upon the topic at hand: the medical profession’s credentials, their role in assuring and signaling quality, and their responsiveness to one specific “assault” on the profession that has varied across space and specialty, tort regulation and the “malpractice crises.”

**The changing environment**

Of the many factors that have converged to create a very different environment for the medical profession after the golden era, three warrant mention here as they impact upon the rise of malpractice claims. These are the biomedical revolution, the emergence of health services research, and the medical profession’s loss of social authority.

The significant biomedical advances since mid-century have increased the likelihood of malpractice claims in two ways (Brook, Brutoco, & Williams, 1976). First, new treatments have the potential not only for better outcomes, but also for significant “iatrogenic” harm (illness or injury caused by medical examination or treatment). Secondly, the biomedical revolution created public expectations for cures that were often undeliverable. With a rise in iatrogenic injury and with outcomes that fail to meet expectations (reasonable or not), a rise in malpractice claims is to be expected.

Health services research pioneered by John Wennberg and his colleagues at Dartmouth Medical School beginning in the 1970s identified significant geographic
variation in the medical care received by patients. While public respect for the medical profession remained high, awareness of these disparities made it easier for an individual patient to question whether his particular doctor and the care that he received may have been sub-standard. Lacking the traditional, unquestioning confidence in their doctor’s ability, yet faced with the traditional inability to judge the quality of the physician’s care, the patient who suffers an adverse outcome becomes more likely to challenge the quality and seek redress through tort.

Concern over the quality of care peaked again at the turn of the millennium, sparked by two Institute of Medicine (IOM) reports – To Err Is Human (IOM, 1999), which identified the prevalence of errors in medical care; and Crossing the Quality Chasm (IOM, 2001), which asserted the need for a significant systems-based overhaul of healthcare delivery. Such concerns were not necessarily new. A 1969 federal study “determined very early that …the problems existed within the current health care system, and significant changes in our system of delivering care were required” (Galiher, Needleman, & Rolfe, 1971). The systems focus had a new salience, however, which has persisted (Stelfox, Palmisani, Scurlock, Orav, & Bates, 2006). It has sparked a “quality movement” focused on process improvements such as clinical practice guidelines, which have implications for malpractice litigation as they may be used to (re)define a legal standard of care (Hyams, Shapiro, & Brennan, 1996; Kinney & Wilder, 1988). The issue

\[13\] Much of Wennberg’s research and related research by others can be accessed at the Dartmouth Atlas of Health Care, [http://www.dartmouthatlas.org/](http://www.dartmouthatlas.org/). A key example of Wennberg’s early work is “Small Area Variations in Health Care Delivery: A Population-Based Health Information System Can Guide Planning and Regulatory Decision-Making” (Wennberg & Gittelsohn, 1973). Kinney and Wilder (Kinney & Wilder, 1988), Mehlman (Mehlman, 2013), and Van Tassel (Van Tassel, 2013) each offer a good bibliography of papers that discuss findings of geographic variation and assess the implications.
of physician competence is not central to the IOM reports or the quality movement, but it is recognized as one component of quality care and improvements in physician regulation are recommended.

The environment faced by the medical profession has also been affected by the erosion of the social authority enjoyed by the profession. In an era of anti-establishment sentiment, “professionalism” took on an air of paternalism and was sometimes seen as a cloak behind which the medical profession and the self-interested physician, could pursue their own interests (Bobinski, 1993; Christensen & Wertheimer, 1976; Haug & Sussman, 1969). This perception was reinforced by widely publicized stories of greed, abuse of power, and unethical behavior by some physicians. The public and some within the medical profession began to question medicine’s “collegial” approach to policing its membership (Derbyshire, 1974). Scandals often not only threw a spotlight on the unethical or incompetent behavior of the individual physician, but also illuminated the “wall of silence” behind which these physicians had been shielded and allowed to continue practicing. There has been what Galbraith and Clyman (2005) have called “a steady drip of ethical, professional and communication issues.” The percent of the public holding the medical profession in high esteem dropped from 73 percent in the 1970s to 37 percent in the early 1990s (Crawshaw, 1991). As consumers lost trust in the ethics of the individual doctor and trust in the profession to police its own ranks, they became more willing to take legal action themselves against those they perceived to have breached the standards of ethical and competent care.
The modern accountability movement and the intractable problem of measurement

The wider dissatisfaction with the processes, organizations, and ballooning costs of the healthcare delivery system also influenced the public and government demands for physician performance. As trust in professional altruism eroded (see Mehlman, 2013), it was replaced with calls for professional accountability for the quality and value of the service they provide. There was an inclination to apply the emerging mechanisms for performance measurement to physicians; yet these collided with the conventional expectations of “professionalism” and have been vigorously opposed by the medical community (Kinney & Wilder, 1988; Van Tassel, 2013).

There was a desire to incorporate the quality of the physician into new process and outcomes measures; yet this was frustrated by the difficulty of defining professional quality in quantifiable and measurable terms (CMSS, 2007; DeAngelis, 2013).

Some have questioned whether professional credentials have lost their relevance (Carlson, 1970; M. Friedman, 2002). Yet the search for quality has returned often to the traditional mechanisms of professional credentialing, only slightly reimagined – to (Maintenance of) Certification, to public reporting, to specialty boards and societies embracing accountability (DeAngelis, 2013).

The intractable problem for healthcare and healthcare reform has been, and continues to be, how to measure “quality” of care (Bovbjerg, 1986; Carlson, 1970; CMSS, 2007; IOM, 2013; Loeb, 2004; S. H. Miller, 2009). In brief, metrics used for performance measurement can generally be categorized as input measures, process measures, or output measures. The choice of measures has significant implications for
professional autonomy and the traditional professional dominance of physicians. The traditional measures of quality for healthcare have been inputs rather than outcome measures (Carlson, 1970). Physician credentials – education, training, licensure, and certification – are input measures of quality, as is following professionally-accepted standards of care. While systems errors have often taken center stage in recent policy discussions, the public has continued to assign a great deal of importance to the demonstrated competence of the physician (an input) when assessing the quality of healthcare (Gary L Freed, Dunham, Clark, & Davis, 2010; Stowell-Ritter, 2007). Indeed, those attempting to measure the quality of healthcare systems have also reiterated the central role of physicians in the quality of care (Brennan TA et al., 2004; Gary L Freed & Uren, 2006).

Looking to physician credentials as a measure of quality also places the profession in control of defining what constitutes “quality” care. The medical profession has worked in recent decades to address the public’s evolving need for quality assurance through the training and credentialing of physicians. The profession’s efforts to measure “quality” and ensure quality throughout the career of a physician have been fragmented, but in recent years have converged around central notions of continuous learning, assessment of practice as well as knowledge, and coordination among quality assessment efforts to keep a manageable burden for physicians and their self-regulatory institutions (ACCME, 2011, 2012; FSMB, 2013a; Havens & Mallin, 2011).
Tort liability and malpractice crises

History and implications

Despite the wicked nature of measuring physician quality and assuring physician accountability in a rapidly changing healthcare system, the importance of the effort is undeniable. One clear sign of the demand for accountability has been the rise in medical malpractice claims. As Bovbjerg (1986, p. 325) asserted, “perhaps the most fundamental, but also the most intangible, benefit of our fault-based liability system is the sense of…accountability that it provides.” The rise in malpractice claims has affected some segments of the professional disproportionately; however, the whole of the profession has become sensitized to the threat of malpractice suit (Mechanic, 1976; Nash, Tennant, & Walton, 2004).

The Second Restatement of Torts defines negligence as “conduct which falls below the standard established by law for the protection of others against unreasonable risk of harm” (Kinney & Wilder, 1988). The medico-legal environment and the “standard of care” that must be met by a physician have evolved in important ways over the twentieth century, setting the stage for an increase in medical tort claims in the post-war period.

The standard of care that must be met by a physician was traditionally defined in relation to the care that could reasonably be expected from “physicians and surgeons of ordinary ability and skill, practicing in the same locality” (McCoid, 1958; Mehlman, 2013, emphasis added). The recognition that physicians would not necessarily be exposed to advances in medicine outside their local area made sense in 1900, but the “locality rule” had two unintended consequences over time. First, it prevented successful tort
claims due to the difficulty of finding members of the local medical community who would testify for plaintiffs as local expert witnesses (McCoid, 1958). Second, it “permitted geographic pockets of inferior health service to flourish unchallenged” by failing to hold physicians to an ever-improving national standard (Waltz, 1968).\footnote{This result was later evidenced by the dramatic findings of health services researchers.}

By the 1960s the locality rule had been rejected in many states (Kinney & Wilder, 1988; McCoid, 1958; Mehlman, 2013; Michaud & Hutton, 1980; Waltz, 1968).\footnote{However, vestiges of the locality rule persist in some states, as reflected in research showing that in 2007 only 30 states had clearly adopted a “national standard” for general practitioners and 35 for specialists (Lewis, Gohagan, & Merenstein, 2007).} By opening the way for plaintiffs to seek expert medical witnesses from outside the practice community of the defendant physician, this legal change served to weaken the “wall of silence” behind which physicians tended to protect their colleagues. The weakening of the geographic locality rule has also made national standards of care and specialty-specific standards of care the main point of reference in malpractice cases (Bobinski, 1993; Kinney & Wilder, 1988; Luce, 2008; Michaud & Hutton, 1980).

In the 1960s and 1970, the judiciary also lowered barriers to tort litigation in general and for medical malpractice in particular (Studdert, Mello, & Brennan, 2004). The combined effect opened the door for more malpractice claims, and more successful malpractice claims, against physicians through the last decades of the twentieth century (Patricia Munch Danzon, United States, Institute for Civil Justice (U.S.), & Rand Corporation, 1982).
The three malpractice “crises”\footnote{The word “crisis” is controversial, as it may overstate the urgency and severity of spikes in MPLI premiums (Mello, 2006b), however, it is widely used in the academic literature as well as political discussions and so will be used here to discuss the peaks of the medical malpractice insurance cycle.} 

At the macro level, the malpractice crises in recent decades are the product of large social, legal, and scientific changes. They are also the product of actuarial and business forces operating at the micro level. Medical professional liability insurance (MPLI) premiums are based upon projections regarding claims losses and the insurers’ financial resources to cover those losses. Malpractice insurance premiums are calculated locally – at the state or metropolitan area level. The risk ratings that drive premiums are a function of (i) the medical riskiness of the type of care being given (how likely is a poor outcome and how severe might a poor outcome be, largely a function of surgical or obstetric activity) and (ii) the legal riskiness of the geographic area (has the population proven to be relatively more or less litigious than that of other areas).\footnote{Mello (2006b) and Brook et al (1976) offer good summaries of MPLI pricing.} Both the number of malpractice claims (the “frequency”) and the size of the awards (the “severity”) impact upon the insurer’s evaluation of risk. Premiums are traditionally “community rated” rather than “experience rated”. That is, they do \textit{not} reflect an individual physician’s claims history but rather the claims history of all similar physicians in the geographic area.\footnote{Strict community rating is being reduced to some degree as malpractice insurers begin offering a greater number of discounts for physicians who obtain certification, participate in risk reduction training, and/or maintain a clean claims history (see Weinstein, 2006b).}

It has been argued by some that the competence of the physician does not have a significant impact upon the risk of malpractice claims (Studdert et al., 2006). This argument is generally founded on the assertion that claims of malpractice have much to
do with the outcome of care but little to do with the quality of care given – that claims are
as likely as not to be meritless or frivolous (Brook et al., 1976). The fact that MPLI
premiums are community rated may reinforce this notion by suggesting that a physician’s
individual competence is not a significant factor in the risk of claims or that past claims
do not reflect past negligence. The validity of this argument has been rebutted by a
number of studies, most notably a 2006 study by the Harvard School of Public Health
researchers, which found the claim of frivolous suits to be “overblown” (Studdert et al.,
2006). The argument is also rebutted by the case of anesthesiology. This specialty
lowered its insurance “risk rating” from one of the highest to a mid-range rating in the
1980s by assiduously developing and adopting the use of patient safety best practices
(ABBOTT ET AL., 2005; MEHLMAN, 2013). Better training of physicians and better quality
care reduced malpractice claims and anesthesiologists’ MPLI premiums.

In addition to the risk ratings and the expected claims losses they reflect, insurers
must consider the financial resources they will have to cover expected losses. In addition
to premium collection, the insurer looks to investment returns to play a significant part of
revenues. Thus, in addition to the frequency and severity of malpractice claims,
malpractice crises can also be generated by the “insurance cycle” (Mello, 2006b). The
financial security of insurers fluctuates over time due to imprudent underwriting, periods
of competitive premium reduction, unforeseen claims expenses, and/or lower than
expected investment returns. When insurers’ actuaries realize that losses may be greater
or financial resources less than expected due to one or more of these factors, insurers
raise premiums and/or exit more risky lines of business. While the relative importance of
these factors varies from one cycle to another, claims experience and claims expectations remain a fundamental factor affecting the cycle and the cost and availability of coverage.

The existence of a malpractice crisis is commonly defined by either (i) a rapid rise in MPLI premiums or (ii) MPLI premiums that are consistently higher for one segment of the physician population than for others.\textsuperscript{19} Three separate crises have been identified: one in the early 1970s; one in the early 1980s; and one in the early 2000s. The crises have been far from universal in their impact, having been characterized by large variations in degree across geography and specialty (Adams & Zuckerman, 1984). While the rate increases in a handful of states may spark claims of a crisis, the majority of states may not see significant rate increases at all. And while one specialty faces a crisis, the other physicians in the same state or metropolitan area may not. It is this variation in impact that creates the opportunity for the comparative analysis in this study.

From 1935 to 1955, appellate courts decided in only 605 cases that cited malpractice by medical practitioners (McCoid, 1958). But scientific, social, and medicolegal changes converged in the post-war period to make malpractice claims a more common occurrence. By the early 2000s, one in six physicians faced a malpractice claim each year, obstetricians face a claim on average every 2.5 years, and it was predicted that every physician would incur a claim at least once in his or her career (Abbott et al., 2005).

\textsuperscript{19} These crises are distinct in important ways from the crisis of too much negligence identified by the IOM (1999). Neither the number of claims made against physicians, nor the number of successful claims (reflecting the occurrence of negligence), is generally used to identify a “malpractice crisis”. The AMA has primarily determined a crisis on the basis of physician intent to restrict or leave practice due to malpractice issues.
The first malpractice crisis occurred in the 1970s, when both the frequency and the severity of claims grew (Abbott et al., 2005; Brook et al., 1976; P. Danzon, 1984; Mello, 2006b). A study of self-employed physicians (who made up 70 percent of all physicians at the time) compared the annual number of claims per one hundred physicians in the period 1976 to 1981 against the annual claims throughout the career of the surveyed physicians prior to 1976 (Adams & Zuckerman, 1984). The authors found that claims increased across all physicians but that premiums increased only for a subset of specialties such as obstetrics-gynecology and radiology.

In the early 1970s, most malpractice insurance was provided by multi-line insurers for whom medical malpractice was not a primary market. As medical malpractice claims ate into their profitability, many of these insurers exited the market. This exacerbated the problem for physicians, who faced a “crisis of availability” as the capacity of the market shrank and many physicians were unable to find coverage.

In response to the crisis of availability many physician-owned insurers were founded by state medical societies, specialty societies, or large group practices. In addition, MPLI policies shifted from being primarily “occurrence” coverage – which

---

20 The Adams and Zuckerman (1984) study found that for all physicians, the average number of claims grew 116 percent, from 3.1 prior to 1976 to 6.7 during the latter period. Obstetricians, who already had faced the highest annual number of claims, also saw the largest increase: 216 percent, from an average of 4.9 claims per year to 15.5 per year. Geographically, claims increased by 187 percent in the North Central region, 144 percent in the Northeast, 132 percent in the South, and 47 percent in the West. However, while the average annual number of claims increased far faster in the South than in the West, malpractice claims were still more prevalent in the West – 6.6 claims per year in the West versus 5.1 in the South (Adams & Zuckerman, 1984).

Adams and Zuckerman’s (1984) analysis of MPLI premiums in 1976 versus 1981 showed that for the majority of physicians there was little increase. Instead there were very specific increases for some physicians in some specialties. For example, the percent of radiologists paying more than $4,000 per year rose from 24.7 percent to 43.7 percent, and the percent of obstetrician-gynecologists paying over $20,000 per year in MPLI premiums rose from 3.8 percent to 16.1 percent.
covers in perpetuity any incidents of malpractice that occurred during the coverage period – to primarily “claims-made” policies – in which future liability for any acts of malpractice ends when the policy ends.\textsuperscript{21}

The second malpractice crisis, in the 1980s, was a crisis of affordability, again driven by an increase in both frequency and severity of claims (Mello, 2006b). After several years of stable or even declining trends in malpractice claims, the frequency of claims began to rise again in 1978. The leading issuer of MPLI reported that annual claims per 100 physicians rose from 10.5 in 1980 to 16.3 in 1985 (Patricia M. Danzon, 1986). Severity also increased, with the value of paid claims increasing 95 percent from 1979 to 1983 and jury awards rising 134 percent from 1980 to 1984 (Patricia M. Danzon, 1986). The increase in losses may initially have been offset by strong investment returns (GAO, 1987), but by 1983 malpractice premiums spiked in almost every state.

The third malpractice crisis began to emerge in the last few years of the 1990s and was widely noted in the early 2000s. The frequency of claims did not increase significantly in the years prior to or during the crisis period (Mello, 2006b). While there were no spikes in the highest claims paid, the average severity did increase across all claims in the 1990s and early 2000s (Mello, 2006b) and total losses from paid claims rose (GAO, 2003b). Evidence suggests that this latest crisis of MPLI premium costs was also driven by a decrease in insurers’ investment returns and imprudent lowering of premiums

\textsuperscript{21} Because claims-made policies have a low risk of claims at first and that risk grows as the coverage time accumulates, the premiums for such policies rise in each of the first five years of coverage before hitting a stable “mature” premium, it is not unreasonable to consider that the shift to this type of policy in the late 1970s may have contributed somewhat to the premium increases of the 1980s (see Patricia M. Danzon, 1986).
during the 1990s as insurers competed for market share in several states (GAO, 2003a, 2003b; Mello, 2006b).

Malpractice insurance is only one of the practice costs for physicians. One study of federal and AMA data from the 1980s suggests that MPLI has historically comprised between 3.5 percent and 5.5 percent of total practice costs, or between 8 and 12 percent if physician income is excluded from practice costs (Zuckerman, Welch, & Pope, 1990). MPLI premiums are on average less significant than other cost categories including “medical supplies” and office rent (Zuckerman et al., 1990). The significance of malpractice as a cost center varies by specialty, of course. One study using the same 1980s federal data found that the malpractice cost of internists fell below the national average of 5.5 percent, while that of obstetrics and gynecology (the highest of all specialties) exceeded 10 percent of practice costs (Dayhoff, Cromwell, & Rosenbach, 1993). Even at this highest cost share, MPLI should not be a sufficient cost to render practice financially untenable. Furthermore, a study by Rodwin et al (2006) has shown that other practice costs rose more significantly between 1970 and 2000. Yet, as the authors of that study point out, “Medical malpractice is among the most emotional health policy issues. Calls for protection from liability unite physicians as few other proposals do” (Rodwin et al., 2006). Unlike other practice costs, malpractice costs and malpractice crises have had a complex and significant impact upon physicians – affecting their job satisfaction, their practice, their sense of professional status and autonomy, and their

---

policy objectives. The reason lies in the fact that tort is not just a cost of doing business. It is a form of external regulation that calls into question the quality of the physician and the larger profession, imposes unwanted external oversight, and erodes the fundamental privilege of professional autonomy.

The role of licensure and certification in reducing medical tort claims

In response to the periodic malpractice crises and the general increase in malpractice claims, the medical profession has undertaken an aggressive and highly visible campaign seeking legal protections through tort reform. This behavior accords with economic theories of monopoly – monopolies are expected to undertake “rent-seeking” activities, exercising political and market power to protect their monopoly position (Krueger, 1974).

The economic theories regarding “private orderings” and the theory of professionalism suggest a different response to the rise of malpractice – strengthening the credentialing standards to improve quality. Since the purpose of the professional license is to assure a minimum standard of competence, strengthening this minimum standard

---

23 The questioning of the physician’s competence or professionalism has been shown to carry a significant psychological impact, as shown in a recent review of the literature (Nash, Tennant, & Walton, 2004).
24 Mello (2006a) offers a concise review of the various tort reforms enacted and also reviews studies of their effectiveness in addressing malpractice crises. Luce (Luce, 2008, p. 1049) notes pointedly that “‘tort reform’ usually stands for discouraging plaintiffs and their attorneys from filing claims.”
25 In addition to raising quality, a strong credential can theoretically reduce claims by signaling a higher standard of quality to the marketplace. The market signal should raise consumer confidence regarding the competence of physicians, thereby discouraging meritless claims. Patients should feel more confident even in the face of adverse health outcomes that their physician performed competently and applied the best standards of care. While it may be counterintuitive, the fact that 40 percent of malpractice claims are meritless (Studdert et al., 2006) suggests that the main drivers of malpractice claims are (i) adverse health outcomes and (ii) patient perception of physician negligence (insufficient competence). If the role of licensure and certification is to offer a credible assurance of physician competence, then strengthening this assurance and its credibility among consumers should reduce the likelihood of perception of physician negligence or incompetence (Mechanic, 2008).
could reasonably be expected to raise overall competence and contribute directly to a lower incidence of malpractice. By corollary, lowering the incidence of malpractice lowers the actuarial risk of claims and, thereby, lowers the cost of MPLI premiums. Similarly, since negligence is measured against a “standard of care” that is defined by the practices of a physician of the “same school” as the defendant, reducing variations in care and improving adherence to best clinical practices among physicians in a specialty could reasonably be expected to improve the quality of care and the defensibility of physician practices against malpractice claims.

Negligence on the part of providers, including physicians, is a known part of the malpractice crisis equation (Abbott et al., 2005; Bovbjerg, 1986; Patricia M. Danzon, 1985; Greenberg, Haviland, Ashwood, & Main, 2010; Mehlman, 2013). As Danzon (1985) has observed, “the incidence of medical negligence is too common to be ignored… evidence from 1974 suggests that almost 1 percent of hospital admissions result in a mishap due to negligence, and that only 1 in 25 of these injured patients was compensated through the tort system.” Or, put another way, “the reason for malpractice claims is malpractice” (Bovbjerg, 1986, p. 331).

The professional credentialing institutions have to some degree acknowledged a role for licensure and certification in addressing the issue of malpractice by raising quality (Pearlman, 2006). A study of 2000 to 2010 data on internists supported this relationship, finding that “higher rates of completing [Maintenance of Certification] in a state are associated with lowering the frequency of malpractice claims” (Park, Lipner, & Arnold, 2012).
The remainder of this chapter will detail the recent history of reforms to medical licensure and specialty certification since the middle of the twentieth century as they pertain to quality improvement and, thus, could help to reduce tort claims.

**Strengthening Quality Standards**

The reform of medical licensure and certification since the middle of the 20th century has been fragmented and halting. Prior to the 1970s “neither licensing boards nor specialty boards paid attention to the current competence of medical practitioners” (J. Morton, 1978, p. 175). Gradually a movement for continued competency has emerged and incremental steps have been taken toward mandatory maintenance of competency through licensing and certification reforms. Because of its voluntary nature, these reforms were adopted more quickly for specialty certification than for medical licensure.

**Specialty board certification since the mid-twentieth century**

Specialty board certification continued to expand and evolved as advances in medical science and technology have led physicians to limit their scope of practice (J.A. Barondess, 2000). Twenty-four specialty boards are now recognized and an estimated 80 to 90 percent of licensed doctors hold board certification (Becker, 2009; Boukus, Cassil, & O’Malley, 2009). In 1970 the Advisory Board became the American Board of Medical Specialties (ABMS), a fully incorporated organization with permanent staff and a new mandate to work for the uniformity of examination policies, procedures, and standards (ABMS, 2013c).
**The de facto credentialing role of specialty board certification**

Medical specialty boards, from their inception, have had at their core not only a pragmatic objective of differentiating those physicians who possess a level of exceptional expertise in a specific area of medicine, but also a stated “commitment to maintaining the social contract through standards of excellence” (DeAngelis, 2013). Over time, the value of the specialty board certification has grown significantly, in parallel with the growing complexity of medicine, certifying knowledge and skills that are particularly relevant to clinical practice. It has had the additional benefit of establishing national, as opposed to state or local, standard of care (McGrath, 1992; Michaud & Hutton, 1980). While some state courts have retained an element of the “locality rule”, certification has played a significant role in promoting geographic standardization of quality (Ginsberg, 2013; Michaud & Hutton, 1980).

The correlation of board certification to quality continues to be a subject of debate. Much of the challenge lies in the fact that defining and measuring quality is an elusive goal. A fairly sizable body of literature has shown a correlation between specialty certification and quality of care, often using compliance with standards of care and/or patient outcomes as proxies for physician quality; but other studies have concluded that there is no correlation (ABMS, 2013e; Chen, Rathore, Wang, Radford, & Krumholz, 2006; Duffy et al., 2008; FSMB, 2012g; Grosch, 2006; Hess, Weng, Holmboe, & Lipner, 2012; Holmboe et al., 2008; Norcini, Kimball, & Lipner, 2000; Ramsey et al., 1989; Sharp, Bashook, Lipsky, Horowitz, & Miller, 2002; Shea, Norcini, & Kimball, 1993; Turchin, Shubina, Chodos, Einbinder, & Pendergrass, 2008).
Table 1. Specialty Boards and Year of ABMS Approval

<table>
<thead>
<tr>
<th>Specialty Boards and Year of ABMS Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1917 Ophthalmology</td>
</tr>
<tr>
<td>1924 Otolaryngology</td>
</tr>
<tr>
<td>1930 Gynecology</td>
</tr>
<tr>
<td>1932 Dermatology</td>
</tr>
<tr>
<td>1935 Orthopaedic Surgery</td>
</tr>
<tr>
<td>1935 Pediatrics</td>
</tr>
<tr>
<td>1935 Neurology</td>
</tr>
<tr>
<td>1935 Radiology</td>
</tr>
<tr>
<td>1936 Urology</td>
</tr>
<tr>
<td>1936 Internal Medicine</td>
</tr>
<tr>
<td>1937 Pathology</td>
</tr>
<tr>
<td>1937 Surgery</td>
</tr>
<tr>
<td>1940 Neurological Surgery</td>
</tr>
<tr>
<td>1940 Anesthesiology</td>
</tr>
<tr>
<td>1941 Plastic Surgery</td>
</tr>
<tr>
<td>1941 Rehabilitation</td>
</tr>
<tr>
<td>1941 Colon &amp; Rectal</td>
</tr>
<tr>
<td>1949 Surgery</td>
</tr>
<tr>
<td>1949 Preventive Medicine</td>
</tr>
<tr>
<td>1949 Preventive Medicine</td>
</tr>
<tr>
<td>1969 Family Medicine</td>
</tr>
<tr>
<td>1969 Allergy &amp;</td>
</tr>
<tr>
<td>1971 Immunology</td>
</tr>
<tr>
<td>1971 Nuclear Medicine</td>
</tr>
<tr>
<td>1971 Thoracic Surgery</td>
</tr>
<tr>
<td>1971 Emergency Medicine</td>
</tr>
<tr>
<td>1991 Medical Genetics</td>
</tr>
</tbody>
</table>

While it has remained officially voluntary and non-exclusive, specialty board certification has taken on an important *de facto* role in assuring and signaling quality.\(^\text{26}\)

By 1978, medical regulators noted:

“No state requires specialty board certification. However, certain state and federal agencies recognize the importance of special knowledge and ability. For instance, the authority to treat injured employees under the

\(^{26}\) Interestingly, malpractice concerns are among the reasons for preserving the voluntary nature of specialty certification. In many states, licensure violations in which a practitioner is found to practice outside the area for which s/he is licensed create a legal presumption of negligence. (Carlson, 1970)
workman’s compensation programs in many states is restricted, and the restrictions are usually based on specialty board certification. Also, certain government fee schedules recognize specialization by authorizing higher payment to specialists than to non-specialists for covered services. By 1970 then…most individuals sought and achieved certification by a medical specialty board” (J. Morton, 1978).

Despite the fact that board certification is not required to practice medicine, and despite the disputed evidence supporting certification’s impact on the quality of clinical practice, board certification most certainly has important consequences for physicians’ ability to practice (Chen et al., 2006; Jeffe & Andriole, 2011; Xierali et al., 2011). Certification has become increasingly important for physicians since the 1980s as its use by health institutions as a quality signal has become increasingly pronounced (Chen et al., 2006). In 2000, Barondess (2000) spoke of “the emerging need for board certification in attaining hospital appointments and other administrative necessities”. This trend was confirmed by a 2013 study (G.L. Freed, Dunham, & Gebremariam, 2013) showing that the portion of hospitals requiring board certification for privileging of pediatricians grew from 67 percent in 2005 to 80 percent in 2010; for specialist pediatricians the requirement grew from 71 percent to 86 percent. For specialties that engage in more high-risk and surgical procedures, researchers surmise that board certification plays an even bigger role, noting that “hospitals have often used board certification as an absolute requirement for surgeons joining a hospital staff” (Cassel & Holmboe, 2006). The AMA’s Committee on Medical Education concluded in 2013 that “few practices will hire physicians who are
not board certified” (AMA CME, 2013a). A 2006 study found that 41 percent of health plans required board certification. Since 2012, Medicare and Medicaid offer a 0.5 percent incentive payment to physicians who participate in MOC (CMS, 2012). In addition, surveys have shown that the public places significant value on the certification and maintenance of certification by their physicians (ABMS, 2013d; AMA CME, 2013a; Brennan TA et al., 2004).  

Hospitals play a central role in determining and codifying the role of certification in medical quality. While certification may verify a physician’s specialist knowledge, the hospital gives that certification meaning through the process of hospital privileging. The presumption is that each hospital will define the individual physician’s scope of practice more broadly or narrowly depending upon the needs of the community and that for any practice privilege granted the hospital will assure the physician’s competence through credentialing. While certification attests to the physician’s ability to competently practice a specific medical specialty, it is left to hospitals to ensure that the physician remains within the boundaries of that specialty area.

The boundaries of the specialty are left permeable by the profession’s adherence to the principle of non-exclusionary certification. While the profession has defended the non-exclusivity of practice, it has simultaneously had to defend the exceptionalism of board certification – all physicians may practice a specialty, but not all may claim the gold standard of being board certified in the specialty. This exceptionalism has been threatened by the long-standing use of the term “board eligibility” rather than board eligibility.

---

27 Freed et al (Gary L Freed, Dunham, & Lamarand, 2009) found, however, that pediatricians did not think that their patients valued certification or used certification status to select a physician.
certification to establish physician competence. The term was originally intended to signify that a physician had completed the required residency training (making them eligible to become board certified) but had not yet achieved initial certification. The term has long been abused, used indefinitely by physicians who never obtain their initial certification and used interchangeably with board certification by institutions (e.g., using the phrase “board eligible or board certified” as a requirement for granting hospital privileges). A study published in 2006 found that 30 percent of hospitals did not require that “board eligible” physicians ever become certified (Gary L. Freed et al., 2006).

As early as 1976 ABMS determined that use of the phrase should be dropped by the specialty boards because “they feel that it is no longer an appropriate term and that it is being misused by many individuals” (J. Morton, 1976b). The position was reiterated until recently on most member boards’ websites with a statement that the specific board “does not use, define or recognize the term ‘Board Eligible.’” As of January 2012, the ABMS and its member boards adopted an official policy to end the use of the term “board eligible”. The impact upon hospitals and other health care organizations that had used the term remains to be seen.

Despite its growing importance, specialty boards have opposed any move to transform board certification into a mandatory medical credential and have even hesitated to accept the de facto importance of certification in the marketplace. But leaders within the medical profession have recognized both the growing need for a quality assurance beyond licensing, and the appropriate choice of the specialty boards to fill this role. Noting that they are a “valuable public resource,” Dr. David L. Nahrwold in 2007 urged
the ABMS and its Member Boards to step up to the plate, to officially “assume the task of certifying to the government as well as the public that its doctors are competent and that they are accountable for their work” (Nahrwold, 2007). If they fail to take on this responsibility, he warned, another (governmental) organization will do so, the ABMS and its Member Boards will become obsolete, and the medical profession will have ceded its autonomy to outside regulation (Becker, 2009; Nahrwold, 2007). It is this belief that has driven the “competency movement” and the recent evolution of board certification.

**Recertification and Maintenance of Certification**

As early as 1936, leaders of the specialty boards may have raised the need for periodic recertification. In a 1940 report, the Commission on Graduate Medicine stated,

> “Many persons argue that certification of a specialist indicates that he is up-to-date and competent at the time of examination but that this does not prove that he continues indefinitely thereafter to be competent and aware of all new knowledge in his field. This is obviously true, and as the certifying Boards become established and as they complete the examination of the large group of physicians already practicing the specialties, they may find it desirable to issue certificates that are valid for a stated period only.” (ABMS, 2013b)

There was no movement in this direction, however, until the late 1960s when “it became evident that the public was demanding assurance of the continuing competence of physicians” (ABMS, 2013b). The initial response relied upon voluntary self-

---

28 According to the ABMS (ABMS, 2013b), “at the Annual Meeting of the Advisory Board, reference was made to a planned meeting of Board Secretaries. Though there are no formal reports of that meeting, one item on the agenda was ‘Reregistration at Stipulated Intervals’.”
assessment tools. The deliberations of the American Board of Internal Medicine (ABIM) were illustrative. When, in 1969, the ABIM adopted a resolution in favor of periodic recertification, “[a]mong the first recommendations were that recertification should be voluntary, educational, and that no one should lose his primary certification as a result of the process.” The American College of Physicians, a professional society for internal medicine specialists, and the American College of Surgeons had already begun offering voluntary, no risk self-assessment examinations in 1967 (Kay, 1974).

In 1969, the American Board of Internal Medicine adopted voluntary recertification and the American Board of Family Practice was founded with the first policy of mandatory recertification. In 1976, the American Board of Surgery and the American Board of Thoracic Surgery issued their first time-limited certifications.

In 1972 the ABMS established its Committee on Certification, Subcertification and Recertification (COCERT) and soon thereafter all 22 member boards agreed in principle to voluntary periodic recertification. It had become clear to the boards that recertification would be one of their most pressing issues in the coming years (Merrill, 2011). In 1975, ABMS issues its Guidelines on Recertification for Specialty Boards, which recommended a recertification period of 6 to 10 years (whether voluntary or mandatory) and the use of continued education, periodic evaluation, practice audits, and/or other emerging “measurements which are directed toward evaluating the candidate’s ability” (ABMS, 1978; J. H. Morton, 1975). While authority over the boards was not easily established (J. H. Morton, 1978), each board did eventually adopt an ABMS-approved recertification plan. Mandatory recertification could not be imposed
upon those who had already been certified, so that each board “grandfathered” those diplomats who held lifetime certification (J. H. Morton, 1975; J. Morton, 1978).

When, in 1976, a Department of Health, Education and Welfare committee proposed “national (non-federal) certification” (Derbyshire, 1976) the ABMS responded by pointing to these nascent steps toward periodic recertification, asserting that the organization’s “mission is the protection of the public’s interest through the establishment and maintenance of standards of training and qualification of physicians rendering specialist care” (ABMS, 1976, p. 376). The organization noted, however, that “limitations in existing evaluation methodologies make assurance of overall competence impossible.” This unwillingness to overstate the link between certification and competence has continued to shape the medical profession’s approach to self-regulation with a strength that has waned only recently and only somewhat.

It became clear, over time, that periodic recertification had become an essential demonstration to the public and the market of the profession’s commitment to quality (DeAngelis, 2013). As the American Board of Neurological Surgery stated upon reluctantly adopting recertification, “enormous pressure had been building through the American Board of Medical Specialties, American Hospital Association, and even public belief that an initial certification process for medical specialists is not adequate to assure that a practicing physician stays current in his or her field’ (Batjer, 2005).

However, implementation of recertification by boards varied widely and much of the growth in mandatory recertification waited until the 1990s. As the turn of the millennium drew near, the movement for mandatory recertification was rather overtaken
by the more ambitious competency movement (Becker, 2009). The ABMS followed the lead of the American Council for Graduate Medical Education (ACGME), which was seeking to reform graduate medical education from a “time-in-service” model to a competency-based model. A 1998 whitepaper urged that the ABMS member boards must accept responsibility for assuring physician competence. This proposition was radical and contentious, as reflected in the response of one board’s executive director:

Figure 1. Number of Board with Time-Limited Certification. Data Source: American Board of Medical Specialties.
“The notion of the Member Boards even trying to assure the public of physician competence seemed fraught with the peril of legal entanglements. Conventional wisdom was that the Member Boards and their examinations could ensure the public that the individual diplomate had shown a certain standard of knowledge and understanding in the chosen field, but nothing more.” (Becker, 2009)

By 2000, both the ACGME and the ABMS had adopted six “core competencies”:

1) Medical knowledge
2) Patient care
3) Interpersonal and communication skills
4) Professionalism
5) Practice-based learning and improvement
6) Systems-based practice

Mastery of these core competencies was to be the objective of graduate medical education for residents and fellows. Furthermore, the core competencies were to guide the development by each specialty board of a Maintenance of Certification (MOC) program. In 2004, while individual specialty societies were seeking ways for practicing physicians to evaluate themselves against the core competencies voluntarily and confidentially (Harrison, 2004), the ABMS was moving forward more aggressively, establishing four mandatory components (based on the six core competencies) to be evaluated in all MOC programs:

1) Professional standing
2) Lifelong learning and participation in a program of periodic self-assessment
3) Cognitive expertise

4) Evaluation and improvement of performance in practice

By 2009 all Member Boards had established approved MOC programs. The larger medical community continues to debate the fundamental necessity of recertification and MOC. Among the leaders of the medical profession, however, “experts for and against MOC agree that the concept of recertification is sound – what they disagree about is the process” (Drazen & Weinstein, 2010).

Practicing physicians have not, by and large, jumped willingly on board with MOC. As of May 2013 it was variously reported that 375,000 to more than 450,000 physicians (approximately half of board certified physicians) were actively participating in MOC across all specialties and that this number was growing by roughly 50,000 per year (ABMS, 2013h; Iglehart & Baron, 2012; T. Sullivan, 2013a). Those physicians who hold lifetime certification rarely choose to participate in MOC. Data on participation by these “grandfathered” diplomates is not made available by the specialty boards, however anecdotal reports in peer reviewed journals indicate that of such diplomates only one percent to twelve percent in a given specialty choose to voluntarily participate in MOC (Iglehart & Baron, 2012; Levinson, King, Goldman, Goroll, & Kessler, 2010; Van Etta, 2009).29

---

29 Buscemi et al (2012) found that voluntary recertification was rare even among leaders in the recertification movement. Twenty years after the American Board of Internal Medicine adopted its time-limited certification, 20 percent of those on the ABIM Board, 9 percent of the editorial board of the *Annals of Internal Medicine*, 8 percent of the American College of Physicians (ACP) Board of Regents, and 4 percent of the ACP Governors have recertified.
Those with time-limited certification share many of these concerns, but do not have the freedom to opt out of MOC. In one survey, only 41 percent of board certified internists whose certification was expiring felt that the MOC requirements had value (Iglehart & Baron, 2012; T. Sullivan, 2013a); in an earlier survey of board certified internists whose certification was about to expire, only 38 percent felt that the recertification activities were appropriate to improve their practice and only 53 percent had completed their MOC requirements (Goldman, Goroll, & Kessler, 2010). A portion of those holding time-limited certification fail to meet the MOC requirements and allow their certification to lapse. To date, only the American Board of Internal Medicine has released data regarding this retention rate. Of those receiving time-limited certification between 1990 and 2001, 92 percent enrolled in MOC and 84 percent of those who enrolled (77 percent of the entire cohort) completed the MOC program (ABIM, 2013). A 2008 study of pediatricians found that 12 to 14 percent, depending on subspecialty, chose not to enroll in MOC (Gary L. Freed, Dunham, & Althouse, 2008).

Some physician feel that recall of facts is overemphasized, or that the breadth of recertification exams and MOC programs is a poor fit for the narrow practice areas of many modern physicians, or that MOC neither gauges nor promotes the critical thinking skills (physicians’ discretionary use of specialized knowledge) that are so crucial to good practice, or that the process costs too much in physician time and effort and produces too little in improved quality (Drazen & Weinstein, 2010; Gary L. Freed et al., 2008; Paul M. Kempen, 2012a; Levinson et al., 2010). When The New England Journal of Medicine sketched a fictitious physician holding a lifetime certificate and asked readers to ‘vote’ on
whether they would advise him to participate in MOC, 64 percent of North American respondents, and 77 percent of grandfathered diplomates, recommended against participation (Kritek & Drazen, 2010; Levinson et al., 2010).

**Medical licensure since the mid-twentieth century**

The system of physician licensure was created more than a century ago “not primarily on the basis of public protection but in the name of professional reform.” (Stevens, 1968) To maintain the legitimacy of the professional license and the justification of professional self-regulation a greater social value has been attributed to the medical license over time. Contemporary policy discussions regarding physician credentialing have rested firmly and exclusively on the question of public protection, as affirmed by the FSMB:

“The Federation of State Medical Boards recognizes, as protectors of the public health and safety, state medical boards are accountable for the quality of health care provided by physicians within their jurisdictions as well as for ensuring that physician licensees are competent to practice medicine” (FSMB, 1999).

Licensure, as the mandatory credential for entry into the medical profession, is the primary quality assurance mechanism of the profession. As a result, in the post-war period the state medical boards have been subjected to demands for greater accountability and to periodic threats of federal regulation. The weakness and inconsistency in licensure at midcentury was recognized by the FSMB, which noted in 1978, “Twenty-five years ago…the state licensing examination was a joke in certain states. Through the years a
number of states did not fail a single candidate who took the examination” (J. Morton, 1978).

While having no binding authority over state licensing bodies, the FSMB provided leadership in promoting standardization and strengthening of licensure. The boards’ responses have been halting and varied. Initial improvements were achieved during the 1960s and 1970s with the adoption of a standardized national licensing exam by almost all states – first the National Board of Medical Examiners’ Federation Licensing Exam (FLEX) and later the FSMB’s 3-part National Boards, which evolved into the 4-part U.S. Medical Licensing Exam (USMLE) used currently.

Many licensing boards have added public members to increase transparency. The Federation of State Medical Boards has worked with some degree of success to improve consistency in licensing requirements across states, seeking to address some of the quality variation so clearly evidenced by health services research. The FSMB’s *Essentials of a State Medical and Osteopathic Practice Act*, first published in 1956 and revised every 1 to 4 years since, sets forth current best practices regarding the various elements of a state medical practice act. The companion document, *Elements of a State Medical and Osteopathic Board*, first published in 1989, provided more detailed guidance for statutes to establish an effective board. In its 1998 *Blueprint for Uniform and Effective Regulation of the Medical Profession* (FSMB, 1998) the Federation, expressing a “profound sense of urgency”, issued a call to action for state licensing boards to adopt key standards and procedures so as to ensure the continued relevancy of the state-based licensing system (and forestall imposition of national licensure).
In response to growing public concern that the medical community was failing to police itself for incompetent and unethical physicians, several states passed “impaired physician laws” to deal with drug and alcohol addiction among doctors and other states have adopted mandatory reporting rules, requiring physicians, as well as hospitals and other health care organizations, to report cases of incompetence or impairment (Brook et al., 1976; Derbyshire, 1983). Only gradually has there been a shift toward ensuring the licensed physician’s continued competence over time.

**Assuring continued competency: Renewal, Re-licensure, Maintenance of Licensure**

“Prior to 1971 a physician who obtained a license to practice in any state could be sure that it was his for life, provided he did not run afoul of the authorities for violation of state laws, which was unlikely. During his entire professional career no one challenged his competence to continue his practice, no matter how antiquated his methods became. He was not required to present to any authority evidence that he had kept abreast of the awesome number of advances in medicine. His only embarrassment might have occurred had he overheard a pathologist of my acquaintance who said of a surgeon, ‘He was a good doctor when he completed his residency twenty-five years ago.’” (Derbyshire, 1975)

In 1967 the National Advisory Commission on Health Manpower recommended that state medical societies and medical boards explore the possibility of periodic

---

30 The vast majority of disciplinary actions by boards are for “physician impairment” (generally drug or alcohol abuse), ethical violations, or criminal behavior (Bobinski, 1993; Paul M. Kempen, 2012b). The state boards have largely avoided sanctioning physicians on the basis of competency.
relicensure to address the “growing problem of professional obsolescence” (Derbyshire, 2003; Kay, 1974).

The initial response was to encourage voluntary continuing education for licensed physicians, building upon a foundation that had recently been laid by the AMA. In 1955, the AMA’s Council on Medical Education found that most physicians were not participating in further education and found, further, that such education “lacked direction and was suffering from a lack of clearly defined objectives” (AMA, 2010a). An accreditation system was established for CME providers by 1967. In 1968 the AMA initiated the Physicians’ Recognition Award (“AMA PRA”) which recognized physicians who voluntarily obtained continuing education from accredited programs (Davis & Willis, 2004; Storey, 1978).

In 1969 Kansas became the first state to pass a law requiring continuing education for license reregistration, but the law included a proviso requiring unanimous approval of the state medical board prior to implementation – approval that was withheld. Thus, in 1971 New Mexico became the first state to adopt and implement CME requirements for continued licensure. The state medical society supported the policy, finding that CME was “a sound and mild approach to the problem of lifelong licensure” (Derbyshire, 1975, p. 303).\(^\text{31}\) One of the leading architects of this effort, Dr. Robert C. Derbyshire, asserted strongly that continuing education is an imperfect but best-available response undertaken not simply to forestall government regulation, but because “periodic review of some type is essential to safeguard the public” (Derbyshire, 1976, 2003, p. 22). “The proponents of

\(^\text{31}\) ...As opposed to the notion of periodic re-examination, which they felt to be “drastic and impractical” (Derbyshire, 2003).
relicensure do not claim that [continuing education] is the final answer to the assurance of continuing competence,” he argued, “It is merely a step along the way” (Derbyshire, 1976).

Pressure for more aggressive regulation by licensing boards continued to grow, as did the threat of outside regulation. Unsuccessful federal legislation in 1974 would have established federal licensure, with relicensure required every 6 years (Derbyshire, 1975); and in 1976, a Department of Health Education and Welfare committee proposed “national (non-federal) certification” (Derbyshire, 1976). Yet in 1976, FSMB officials continued to maintain that “few board members feel that recertification, even if implemented, would have the intended effect of enhancing the quality of care rendered by participating practitioners” (Dornette, 1976, p. 366). Continuing education continued to be the only remedy with support within the profession through the end of the millennium (FSMB, 1999).

Momentum for change began to emerge in 2000, when the FSMB identified ensuring the ongoing competence of physicians as a priority. A Special Committee was formed to consider the possibility of a Maintenance of Licensure regime and in 2004 the FSMB adopted the following seminal policy statement: “State medical boards have a responsibility to the public to ensure the ongoing competence of physicians seeking relicensure” (FSMB, 2013a).

The FSMB Committee recognized that physician licensing boards were behind the curve in addressing ongoing competence. Other healthcare regulatory bodies had adopted means of addressing continuing competency – specialty boards were well on the
way to full implementation of Maintenance of Certification, hospitals were anticipating new credentialing rules from the Joint Commission (then the JCAHO) that would address ongoing physician competence, and the Council of Medical Specialty Societies and the American Council for Continuing Medical Education were examining the CME system to strengthen its meaningfulness to physician competence in practice.

The Committee on MOL recognized that it was possible, appropriate, and necessary to piggy-back on these existing efforts, so as to ensure competency while minimizing the burden for physicians and licensing boards. Nonetheless, the 2008 draft report – including a proposed MOL framework to integrate with other initiatives – was met with concern regarding the impact it might have on state medical boards and adoption was delayed for more study (FSMB, 2008b).

FSMB leadership recognized the necessity of assuring continuous competence, as reflected in such statements as the following:

“The public perceives a medical license to be an indicator of a physician’s competence. The process currently used by state medical boards to renew medical licenses does not effectively meet that expectation. Such processes are largely administrative functions that assume licensees are competent unless a reported event or other development indicates otherwise. This practice may no longer be valid in light of changing societal expectations” (FSMB, 2008a; see also PR Newswire, 2008).

But many of the Federation’s stakeholders continued to balk. The MOL Framework was not adopted by the FSMB House of Delegates until 2010 (FSMB, 2010). Although “pilot implementation” had been the next intended step, it was a series of pilot
studies that were initiated in 2012. Medical licensing boards in nine states – Colorado, Delaware, Iowa, Massachusetts, Mississippi, Ohio, Oregon, Virginia, Wisconsin – and the District of Columbia initially signaled an interest in participating (H. J. Chaudhry, Rhyne, Waters, Cain, & Talmage, 2012; Paul M. Kempen, 2012b). By early 2013, the medical boards of the District of Columbia, Wisconsin, and Ohio had withdrawn, leaving seven participating state medical boards (AMA CME, 2013b). The withdrawal of the Ohio State Medical Board in October 2012 after strident and vocal opposition by the Ohio State Medical Association and eleven other medical professional organizations in the state was a particularly important victory for opponents of the MOL effort (Iskowitz, 2013; Paul Martin Kempen, 2012).

Through the pilots, it was intended that “MOL principles and concepts will be rigorously analyzed and tested in real-world conditions” (FSMB, 2012e). A menu of pilot studies was developed, focusing on specific elements of implementation; for example, processes for evaluating a state board’s readiness, integration of legacy systems, and mechanisms for physicians to document compliance (H. J. Chaudhry et al., 2012). Each participating board was expected to choose one or more of the pilot studies to conduct. The first phase was to be completed by 2013 and followed by “additional projects and more specific recommendations from FSMB for individual boards” (FSMB, 2012e).

In October 2012, the first pilot study – the State Readiness Inventory survey – was initiated. It was “designed to facilitate discussion of implementation of MOL and to

---

32 Osteopathic licensing boards in California and Oklahoma also signaled that they would participate; California proceeded while Oklahoma dropped out. These boards lie outside the scope of this study.

33 In California and Oklahoma the pilot will be led by the osteopathic licensing boards (Hurwitz, 2012)
identify issues state boards need to consider and possibly resolve to ensure successful implementation of MOL” (AMA CME, 2013a). According to the Virginia Board of Medicine documents, seven states took part in this pilot study (VBM, 2013). Four additional pilot studies were planned for 2013, including:

1) a *Physician Acceptability Survey*, to gather input from licensees;

2) a *State Board License Renewal Process Integration Pilot*, to identify means of integrating MOL into existing state board systems;

3) the *Describing the Attributes of Physician Practices in Support of MOL Pilot*, which will develop models of current physician practices and then identify relevant educational and practice improvement activities for MOL; and

4) the *Reporting Maintenance of Certification Data to State Medical Boards Pilot*, which will ask state medical boards to consider whether MOC data are adequate to allow the board to rule on the licensee’s compliance with MOL requirements (MBC, 2013).

State boards have also reported undertaking a communications pilot study to “prepare a comprehensive strategy to communicate the value and importance of MOL” (IBM, 2012a).

The FSMB has consistently dedicated itself to implementing MOL in a way that is “evolutionary, not revolutionary” (H. Chaudhry et al., 2010). The evolutionary approach continues, as does the sometimes impassioned debate. With little real leverage held by the FSMB each state medical board may determine whether to embrace MOL;
and although the FSMB has developed a “framework”, the state boards are free to decide what form MOL should take.

The autonomy of the state medical licensing boards, and their central role in implementing the medical profession’s social contract by setting quality standards for the profession, creates an opportunity for this study which asks whether those facing the pressure of tort regulation will act more quickly to strengthen their credential and fed off this external regulatory incursion. The next chapter sets forth the case study methodology and the sources of evidence used to examine the medical profession’s self-regulatory institutions of licensure and certification.
4. METHODOLOGY

**Case study research design**

This research considers two cases, one for each of the medical profession’s credentialed institutions – medical licensure and medical specialty certification. This replication provides more robust insights into the larger phenomenon of medical professional credentialing (Yin, 2009). Within each case, a comparative analysis of two embedded cases was conducted. Those two embedded cases are (i) the credentialing boards whose member physicians are under great pressure from tort regulation (referred to as “crisis” boards) and the credentialing boards whose members are experiencing relatively less pressure from tort regulation (“non-crisis”). The multiple-case, embedded design of the study can therefore be sketched as in Figure 2. The embedded groups of credentialing boards are the primary units of analysis.

Prior to analysis, it was necessary to sort the licensing and specialty boards into the appropriate embedded group – crisis or non-crisis – because there is no group of crisis specialties or crisis states that has been widely accepted or consistently used in other research. This process is detailed in Appendix A: Identification of crisis specialties and Appendix B: Identification of “Crisis States.”

A qualitative analysis was conducted using triangulation of evidence from multiple sources. Such triangulation of evidence is a key strength of the case study methodology, providing better construct validity (Yin, 2009), and can be synthesized into
a richer *image* (Ragin, 1994) of the professional institutions of interest. For each case, evidence was gathered and analyzed to determine whether those boards experiencing a malpractice crisis have acted more quickly to improve their quality standards.

### CASE STUDY DESIGN

<table>
<thead>
<tr>
<th>Medical Licensure Case</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensure Boards in States</td>
<td>State Licensure Boards in States</td>
</tr>
<tr>
<td>Experiencing a &quot;Malpractice Crisis&quot;</td>
<td>NOT Experiencing a &quot;Malpractice Crisis&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medical Specialty Certification Case</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialty Boards Whose Members Are Experiencing a &quot;Malpractice Crisis&quot;</td>
<td>Specialty Boards Whose Members Are NOT Experiencing a &quot;Malpractice Crisis&quot;</td>
</tr>
</tbody>
</table>

Figure 2. Case Study Design
Analysis of the specialty boards used pattern matching and qualitative analysis to assess whether crisis specialties responded by raising their credentialing standards. Significant quality enhancing reforms have been taken in recent years. Were those facing a malpractice crisis to have implemented these reforms at an earlier date than other boards, matching the predicted pattern, this would provide evidence of their responsiveness to tort regulation. Other qualitative evidence was sought to further support the predicted responsiveness; evidence such as discussion within a specialty or public statements by a specialty that demonstrate the motivating effect of tort in sparking the reforms.

Quantitative and qualitative evidence were used to assess whether medical licensing boards in states experiencing a “crisis” from tort pressure respond by raising their credentialing standards. If quality enhancing licensing reforms were far more prevalent in crisis states, this would suggest responsiveness to tort regulation. Further qualitative evidence such as board statements or discussions linking licensing reforms and tort reduction would have further support a conclusion that licensing boards have strengthened credentials to reduce tort regulation.

For each case, qualitative, contextual evidence was gathered to build an evidence-based image of the credentialing institutions and the factors that shaped their responsiveness. The study used abductive reasoning to bridge theory and evidence – as described in Ragin’s (1994) model of social research – and to refine our understanding of medical professional self-regulation. In Constructing Social Research, Charles C. Ragin models the process of social research as a “dialogue between ideas and evidence” that
produces improved representations of reality (Ragin, 1994, p. 55). In his model, the researcher conducts an iterative process of retroduction\textsuperscript{34} between analytic frames, deduced from theory, and images of the research subject, created inductively from evidence.

The analytic frame for this study is derived from the theory of professionalism, which describes the craftsmanship and altruism that support a profession’s dedication to quality, the credential that regulates this quality, and the contingencies that can support or impede the realization of professionalism in reality. The evidence-based image of the medical profession’s self-regulatory institutions will be synthesized from multiple sources of evidence using the methodology outlined in this chapter and will be informed by the analytic frame of professionalism.

**Choice of subject matter and contribution to the literature**

The purpose of this study is to test and refine the theoretical proposition that a self-regulated profession will adopt and enforce more stringent quality standards in response to regulatory pressure from tort. The comparative qualitative approach is chosen in an effort to identify patterns of behavior among the professional self-regulatory bodies; patterns that can be considered against the analytic frame of professional self-regulation.

The medical profession in the United States was selected as the subject of the study because, as the quintessential example of a self-regulated profession, invested with

\textsuperscript{34} Abduction, retroduction, and inference by hypothesis and are generally used interchangeably to identify a third form of inference, distinct from deduction and induction. The terms were coined by logician C.S. Peirce, (Peirce, 1878).
a great deal of public trust and regulatory autonomy, the American medical profession offers a “critical case” (Yin, 2009) for testing the theory of professional self-regulation.

The choice of licensing and specialty certification boards is central to the contribution made by this study. As the “problem” of medical malpractice has gained salience in medical, public, and public policy circles, there has been no surfeit of research regarding its impact on physicians and the response of the medical community. However, the bulk of this research has taken the individual physician (or perhaps a group of physicians practicing together) as the unit of analysis, asking whether tort is playing its purported regulatory role of deterring negligence by driving physicians to improve the quality of their practice, or whether tort is simply a costly and ineffective compensation mechanism (and ought, therefore, to be legally circumscribed). As discussed in Chapter 2, quality must be assured at the level of the profession because it cannot be adequately judged by consumers at the level of the individual physician. Therefore, if we seek to understand whether tort is serving its theoretical regulatory role of deterring poor quality (negligence), and if we seek to understand whether the medical community is responsive to this regulatory pressure, we must look for a response at the level of the professional self-regulatory institutions. This level of analysis is essentially absent in the existing literature regarding the medical community’s response to the malpractice crises. This study, therefore, will consider evidence of sensitivity by the medical profession by studying the efforts (or lack thereof) of state medical and specialty certification boards to raise the minimum level of professional quality.
Sources of evidence

This study required multiple sources of evidence to identify the “crisis” and “non-crisis” entities, to evaluate the relative responsiveness of these two groups, and to identify and understand the contextual factors (the contingencies) that shaped responsiveness.

Evidence used to identify crisis specialties includes:

1) specialty risk ratings;
2) relative average malpractice insurance premiums for low-, medium-, and high-risk specialties;
3) insurance premium rates relative to average income;
4) relative frequency of claims; and
5) the salience of specialty-specific concerns regarding malpractice, as expressed by coverage in the literature.

Evidence used to evaluate responsiveness by medical specialty boards includes:

1) early adoption of recertification requirements;
2) early adoption of mandatory Maintenance of Certification; and
3) rapid implementation of “board eligibility” restrictions.

The evidence used to identify crisis states includes:

1) designation as a crisis state by the AMA;
2) high malpractice premiums or a rapid rise in malpractice premiums relative to other states; and
3) high or increasing claims frequency or severity.

Evidence used to evaluate responsiveness by state licensing boards includes:
1) state licensing board reforms of the continuing medical education (CME) requirements for renewal of licensure; and

2) state licensing board study of maintenance of licensure, independently or through participation in FSMB pilot studies.

Evidence used to identify and understand the contextual factors shaping responsiveness by state medical boards and specialty boards includes:

1) board documents discussing regulatory pressure from tort and possible responses;

2) board documents detailing regulatory policy decisions;

3) documentation from other medical professional institutions (ABMS, FSMB, medical societies, etc.) discussing regulatory pressure from tort and possible responses;

4) articles from the medical literature discussing regulatory pressure from tort and possible responses;

5) documentation of state government actions or policies impacting upon board responses;

6) publicly available data regarding board regulatory actions;

7) documents from relevant non-governmental organizations; and

8) public media reporting on malpractice crises, tort trends, and board activity/inactivity.

Chapter 4 presents the analysis of responsiveness by specialty certification boards, while Chapter 5 presents the analysis of responsiveness by the state medical boards.
5. CASE ONE: SPECIALTY CERTIFICATION BOARDS

Three crisis specialties were identified through an analysis that is detailed in Appendix A. Evidence used to select the crisis specialties included specialty risk ratings that were relatively high or that rose during the study period; relatively high or rapidly rising costs for medical professional liability insurance (MPLI); frequency of malpractice claims relative to other specialties; and the salience of specialty-specific concerns regarding malpractice, as expressed by coverage in the medical literature. The resulting crisis specialties included obstetrics-gynecology, neurosurgery, and thoracic surgery.

This chapter will present the analysis of the crisis specialties’ responsiveness relative to that of the non-crisis specialties. This will be followed by an examination of qualitative evidence to synthesize a rich image of the crisis specialty boards and their response to tort regulation. Contextual factors – the contingencies of professionalism – and their impact upon the specialty board response will then be explored, and conclusions will be drawn.

In examining specialty boards’ responsiveness, the period of study begins in 1969, when specialties first began reforming their certification requirements. The study period continues to the present, and looks ahead to published dates when specialties have indicated that additional reforms will be implemented.
Evidence used to examine quality improvement by medical specialty boards includes:

1) relatively early implementation of recertification requirements;
2) relatively early implementation of mandatory Maintenance of Certification; and
3) relatively early implementation of “board eligibility” restrictions.

Description of Evidence Used to Gauge Early Adoption of Reforms

As discussed in Chapter 2, the institution of medical specialty certification has undergone a period of transformation since the middle of the 20th century. While the ABMS shepherded its member boards toward recertification and MOC, individual boards were afforded a significant degree of latitude in terms of how quickly they adopted and implemented these reforms. This presents the opportunity for comparative analysis in this study.

Implementation of mandatory re-certification and Maintenance of Certification (MOC) by specialty boards

Implementation of recertification and then of MOC by all 24 boards stretched over a period of 33 years. Plotting the implementation of these reforms by each specialty along a timeline, and considering the relative speed of implementation by specialties experiencing low-, medium-, and high-impact from tort provides evidence of their relative responsiveness to the pressures of tort regulation.

**Strength:** Given the freedom to choose the speed of reform, those specialties that feel a great deal of pressure from tort and perceive an opportunity to lessen that regulatory pressure by raising standards should adopt and implement the reforms more quickly.
Weakness: Institutional or resource constraints could prevent a specialty from implementing reforms as quickly as it would like. More fundamentally, specialty boards may not have perceived the reduction of tort pressure as a benefit to be gained by implementing re-certification or MOC.

Setting early “transition dates” for board eligible physicians
The term “board eligible” has long been used in a way that many boards and the ABMS felt was inappropriate. It has been used indefinitely by physicians who never obtain their initial certification. It has also been used interchangeably with “board certified” (e.g., using the phrase “board eligible or board certified”) by institutions that never require the physician to obtain certification. The ABMS officially disavowed the term as early as 1976 (J. Morton, 1976b), but a formal policy to end its use was only adopted in 2012. The ABMS policy requires each member board to (i) establish a limit on the time that may elapse between completion of residency training and obtaining board certification (the “Board Eligibility Period”); (ii) establish requirements for re-entry into the certification process by those who miss that deadline; and (iii) set a transition date by which all currently eligible physicians must obtain certification or undertake re-entry requirements (ABMS, 2011, 2012). However, each specialty has been given the latitude to establish the details of each of these components. With the exception of one board, all boards have adopted a Board Eligibility Period of either 5 or 7 years. The transition dates adopted by boards range from 1996 to 2022 (ABMS, 2013f).\(^{35}\) The speed with which

\[^{35}\] The American Board of Colon and Rectal Surgery (ABCRS) transition date is December 31, 2023, but candidates for ABCRS certification must first obtain American Board of Surgery certification, which has a transition date of July 1, 2022.
individual boards fully implement the new restrictions on board eligibility provides evidence of their efforts to ensure physician quality. It also provides evidence of efforts to strengthen the credibility of their credential, by ensuring that a more clear distinction is drawn between those who are and are not participating in the rigorous quality improvement processes of initial certification and MOC.

**Strength:** Because implementation of the new policy requires few resources or institutional changes by the board, the speed of adoption signals more clearly a commitment to ensuring the strength and credibility of a board’s certificate.

**Weakness:** The importance of board certification is greater for some specialties than for others. For surgeons, obtaining hospital privileges is paramount and many have likely been privileged as “board eligible”. Removing this designation poses a challenge for these surgeons and for the hospitals at which they hold privileges. Speed of adoption by surgical specialties and obstetrics might therefore be constrained by exogenous factors, such as the need for hospitals, insurers, and other users of the credential to make institutional and policy changes.

**Analysis of Evidence of Early Adoption of Reforms**

Because all specialties have adopted similar reforms but have been allowed to set their own time line for implementing these reforms, it is hypothesized that those specialties experiencing greater regulatory pressure from tort may act more quickly to raise physician quality. The study examines evidence that these professional regulatory
bodies have some sensitivity to the increase in tort regulation, as revealed by a relatively quick implementation of reforms intended to raise physician quality.

**Analysis of mandatory re-certification for board certified physicians**

Figure 3 shows the year when each specialty implemented mandatory re-certification, with the crisis specialties shaded. As of the respective date, all new certificates were time limited, requiring recertification after a period of 7-10 years. Under the expected pattern of responsiveness, crisis specialties would act more quickly than other specialties to implement time-limited certification and raise physician quality.

As shown in Figure A, the implementation of re-certification does not match this pattern.

Implementation of mandatory recertification by all specialties took place over a 36 year period, from 1970 to 2006. In 1973, when the ABMS issued its *Guidelines on Recertification*, which indicated that each board should implement recertification (either mandatory or voluntary), only the newly established American Board of Family Practice required periodic recertification. By the time Nahrwold began pressing his ABMS colleagues to assure continuous competency, all but six specialties had implemented mandatory recertification.

Rather than being grouped as early adopters, the three crisis specialties had implementation dates that span 25 years. The American Board of Thoracic Surgery (ABTS) was one of the earliest adopters of mandatory recertification (1976),

---

36 Psychiatry and Radiology each offer two “primary certificates” and adopted separate recertification plans for each.

37 Holders of previously issued lifetime certificates were “grandfathered.”
implementing this reform at the same time as general surgery and following only the American Board of Family Practice. The American Board of Obstetrics and Gynecology (ABOG) was moderately prompt in implementing mandatory recertification (1986) with
only five boards implementing the reform before it, one other implementing the same year, and 16 boards implementing (18) plans after it. The American Board of Neurological Surgery (ABNS), however, was one of the last to implement the reform. In fact, the ABNS has noted that “Neurosurgery was slow to join the movement and had the somewhat ignominious distinction of being the last Board to adopt a plan” (Piepgras, 2003) and the fifth from last to implement it in 1999. Possible reasons for the widely different pace of reforms will be discussed below.

**Analysis of mandatory Maintenance of Certification for board certified physicians**

Figure 4 shows the year when each specialty implemented mandatory participation in MOC, replacing periodic re-certification with a requirement for continuous participation in MOC activities. The crisis specialties are shown in the shaded area. All specialties made this transition over a 10-year period from 2001 to 2010, with about half (12 boards) implementing MOC in 2006 or earlier and half (11 boards) in 2007 or later.

The expectation that crisis specialties would act more quickly than other specialties to implement Maintenance of Certification and raise physician quality was not met. The American Board of Neurological Surgery began developing its MOC program immediately after implementing recertification in 1999, and implemented MOC in 2006. Both the American Board of Obstetrics and Gynecology and the American Board of Thoracic Surgery implemented their MOC programs in 2008. This made them some of
### Timeline of Mandatory Maintenance of Certification (MOC) Implementation

<table>
<thead>
<tr>
<th>Specialty</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurosurgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ob-Gyn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thoracic Surg.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Allergy &amp; Immun.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Colon &amp; Rectal Surg.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermatology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Emergency Med.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Family Practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>General Surgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Nuclear Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophthalmology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Otolaryngology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pathology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Pediatrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Preventive Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Psychiatry &amp; Neurology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Radiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Urology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Figure 4. Timeline of Mandatory MOC Implementation.**
Data Source: American Board of Medical Specialties (ABMS, 2013a).
the last to implement the reform, with only two other specialty boards implementing MOC after them. Possible reasons for the widely different pace of reforms will be addressed in the discussed section of this chapter.

**Analysis of “board eligibility” reforms**

An analysis of the transition dates and board eligibility periods adopted by specialties offered little differentiation among specialties and no pattern of early adoption by crisis specialties.

Figure 5 shows the transition date each specialty has adopted for board eligible specialists. Those physicians who were currently eligible for board certification – having completed the required residency training, but not yet obtained initial certification – as of January 1, 2012, when this rule was adopted, will have until the specified transition date to obtain their initial certification.

The figure also indicates the board eligibility period each specialty has adopted. This is the length of time following completion of the required residency training during which a physician is eligible to achieve initial certification. If the physician fails to meet the eligibility deadline (including those who miss their transition date deadline) he or she must restart the certification process according to the requirements specified by the certifying board.

Three specialties had restricted the use of the term board eligible prior to the 2012 ABMS rule. The large majority of specialty boards (15) set transition dates of 2017, 2018, or 2019; and only two boards set dates beyond that. It was expected that crisis
### Length of Eligibility Period and Transition Date

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurosurgery</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Ob-Gyn</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Thoracic Surg.</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Aller. &amp; Immun.</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Col &amp; Rect Surg.</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dermatology</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Emergency Med.</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Family Practice</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>General Surgery</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Internal Med</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Nuclear Med</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Ortho Surgery</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pathology</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Pediatrics</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Phys Med Rehab</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Preventive Med</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Psychiatry &amp; Neurology</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Radiology</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Urology</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 5. Length of Eligibility Period and Transition Date.**

Data Source: American Board of Medical Specialties (ABMS, 2013f).
specialties would act more quickly than others to eliminate the inappropriate use of the term board eligible, which dilutes the credibility and value of their board certification as a signal of quality. This pattern did not emerge. Rather, the crisis specialties set transition dates on par with most other specialties. Obstetrics-gynecology adopted a transition date of 2017, while both neurosurgery and thoracic surgery set a 2018 transition date.

All specialties have adopted board eligibility periods of 5 years or 7 years. Neurosurgery is among those with a 5 year eligibility period, while obstetrics-gynecology and thoracic surgery are among those allowing 7 year eligibility.

**Evidence-based image of medical specialty boards**

Informed by the analytic frame of economic and professionalism theories, it was hypothesized that the recent reform of certification practices by specialty boards would provide evidence that these professional credentialing bodies are responsive to pressures from tort regulation. In each of the three crisis specialties – neurosurgery, obstetrics-gynecology, and thoracic surgery – the specialist physicians have experienced strong pressure from malpractice claims and from the costs of insuring against those claims, relative to physicians in other specialties. These pressures from tort have eroded the profession’s self-regulatory autonomy and the market shelter described by the theory of professionalism. Malpractice crises have exposed physicians to external market and regulatory forces; they have restricted the physician’s ability to practice by making some (high risk) areas of practice untenable, in reality or perception; they have restricted the physician’s freedom of judgment (Freidson’s “discretionary specialization”) by creating a
real or perceived need for “defensive medicine”; and they have eroded the assurance of a “good living” (relative to other medical specialties or earlier time periods).

Tort is a form of external regulation. Theory suggests that the profession will recognize it as such and will respond by raising the level of quality assured by its professional credential, thereby reaffirming its social contract, eliminating society’s need for tort regulation, and reducing the pressure from tort. This responsiveness should be particularly clear in specialties that perceive the pressure from tort to have reached “crisis” proportions.

Applied to the reality of the medical specialty, the theoretical reasoning could be stated as:

1) tort is a regulatory response to insufficient quality; and therefore
2) raising quality standards through credentials will reduce/eliminate tort regulation.

Upon examination, this line of reasoning fails to hold on one or both points. The dominant perspective in each specialty appears to be that:

1) tort is not a regulatory response to a failure of quality; and/or
2) raising professional quality standards will not stave off tort regulation.

Quite simply, a perceived connection between strengthening of board certification and reduction of malpractice crises is notable in its absence. The question is, why does the reality depart from the theoretical expectation and how can evidence and theory be brought closer together to provide a better understanding of professional self-regulation.

Using Ragin’s (1994) model of social research, an evidence-based image of the crisis specialties can be built from the evidence examined above and from broader
contextual evidence. This image shows the disjuncture between the professional reasoning and that predicted by the theoretical frame, offers some understanding of that disjuncture, and allows the drawing of conclusions regarding the responsiveness of the medical profession to the pressure of external regulation from tort.

**Tort is not always seen as a form of external regulation driven by insufficient quality**

Throughout the medical profession, there are leaders who have asserted a strong link between malpractice claims and the need for quality improvement by physicians (Clark, Belfort, Byrum, Meyers, & Perlin, 2008; Greenberg et al., 2010; Meyer, Lewin, & Eisenberg, 2001; Weinstein, 2006a). This has been elegantly expressed by the simple assertion that “malpractice loss is best avoided by reduction in adverse outcomes” (Clark et al., 2008). There are also certain specialty organizations that appear to have promoted this perspective, notably thoracic surgery and several other surgical specialties.\(^\text{38}\)

However, the perception of tort as a problem of insufficient physician quality is overwhelmed by the “providers’ general perception,” as noted by Mello and Hemenway (2004), “that, because there are so many [meritless] claims, it is near random and largely out of their control whether any given patient will file a claim against them.” This perception is reflected strongly in physician statements like “the liability threat will always be there, no matter how outstanding the care you provide” (Susman, 2002), and “our liability system is so broken, there is little or no correlation between getting sued and negligence” (Cole, 2003). The prevalence of this perception is even more clear when

\(^{38}\) Physician support for systems-based quality improvements is distinct from support for strengthening physician quality to reduce malpractice claims. The systems-based approach lies mostly outside the scope of this research, but is discussed briefly as it relates to this study.
one notes that much of the medical journal literature urging improved quality to reduce
tort is written by non-physicians (prominent authors include Mello, Studdert, and
Bovbjerg). The perception among physician may be perpetuated not only by “the poor fit
between those who are negligently injured and those who sue” (Mello & Hemenway,
2004), but also by the predominant framing of the issue by many specialties.  
Understanding this framing, then, helps to create the evidence-based image of the
medical specialties and their lack of response focused on certification and physician
quality.

Each of the specialties experiencing crisis-level pressures from tort has framed the
issue differently. Alone among the crisis specialties in this study, thoracic surgery
appears to have framed the problem of tort primarily as a problem of quality, from which
the main impact is patient harm and for which the primary solution is physician-led error
reduction. Obstetrics-gynecology appears to frame tort as primarily a problem of practice
viability, from which the main impact is inability to practice obstetrics for the physician
and reduced access to care for patients, and for which the primary solution is a change in
public policy. Neurosurgery appears to frame pressure from tort as primarily a
socioeconomic issue. The main impact is reduced economic well-being among
physicians, and public policy is presented as the primary solution.

39 This perception is also supported by a broader physician perception that medical errors are not a major
problem. Interestingly, survey research in 2002 (after the IOM reports regarding error and iatrogenic
injury) found that 29 percent of physicians felt that the “cost of malpractice insurance and lawsuits” was
among the most serious problems in healthcare, but only 5 percent identified medical errors as a serious
problem (Blendon et al., 2002).
**Thoracic surgery**

Among the crisis specialties, only thoracic surgery seems to have framed the problem of tort to be a matter of deficient quality to be rectified using performance measurement and quality improvement techniques adapted from other leading industries. Based on the literature, the predominant approach taken by this specialty to address the problem is to (i) understand the medical, patient, and legal perspectives of malpractice and (ii) apply Continuous Quality Improvement (CQI) or other process analysis methodologies to identifying implementable improvements.

The building of a balanced understanding of medical and non-medical perspectives is far more evident than in the writings of most other specialties. The specialty’s journal articles on the subject consistently begin by explaining the workings of the malpractice system and identifying its failures for both physicians (cost, frequency of meritless cases) and patients (failure to compensate most victims, inability to pursue claims that will generate low lawyers’ fees) (Kapp, 2009; Luce, 2008; McLean, 2004; Wells, 1999). At the 2010 Annual Meeting of the American Association of Thoracic Surgeons (AATS), the session on malpractice consisted of one presentation arguing that the problem was “bad lawyers” (DeAndra, 2010) and one arguing that the problem was “bad doctors” (Green, 2010).

While the need for public policy action is noted by thoracic surgery in the literature, the public policy response is not central to the recommended responses (Lang, 2001; McLean, 2004; Wells, 1999). Rather, the journal articles and annual meeting presentations urge the use of CQI, drawn from the manufacturing industry, or surgical
checklists based upon those used successfully by airline pilots (Wadhera et al., 2010; Wells, 1999). The response to claims frequency and severity is presented as fundamentally one of reducing error (Green, 2010; Lang, 2001; McLean, 2004).

Articles returned in a PubMed search using MeSH Terms “thoracic surgery”, “malpractice”, and “United States” are most often reviews of malpractice claims and generally contain phrases such as “making painful inquiries,” “taking responsibility,” and “learning from experience” in the titles. Only one article is focused on tort reform – a 1991 article discussing the role of the Society of Thoracic Surgeons (STS) in launching the AMA-Specialty Society Medical Liability Project (Todd, 1991). Of seven publicly available Presidential Addresses delivered to the AATS or the Western Thoracic Surgical Association (WTSA), only one – that of, Dr. Fred Crawford, Jr. in 2003 – mentions malpractice, and this is a mention in passing that it may deter resident selection of the specialty (Crawford Jr, 2003).

McLean (2004) offers a good example of the tone and approach of thoracic surgery’s approach in his article entitled “Why do physicians who treat lung cancer get sued?” The stated objective of the study, written at the height of the latest malpractice crisis, was to examine claims data “to develop litigation avoidance strategies.” McLean nods to the need for public policy action, but states that this “macro” solution is slow and outside the reach of the physician. The recommended actions for avoidance of claims comprised the *avoidance of errors* that lead to suits – implementing tracking systems, decision aids, and other known safety procedures, and adopting Continuous Quality Improvement. McLean also examines the trends in claim payments. Noting an apparently
large increase in average payments from a 12-year-old study to his recent study, McLean then examines differences in the data and finds that the increase was “not substantial, let alone significant.” He does note, however, “a trend for settlements to increase faster than inflation…This is an important observation because it may reflect the dissatisfaction of plaintiffs, and the public in general, with the number of medical errors” (McLean, 2004, p. 1678).

**Obstetrics-gynecology**

In obstetrics-gynecology the crux of the malpractice problem appears to be framed by specialty organizations as an urgent problem of practice restriction and patient access to care. In May 2002, shortly after the AMA announced its list of crisis states, the American College of Obstetricians and Gynecologists (ACOG) issued its own “Red Alert”, listing nine states where malpractice insurance was unavailable or unaffordable for obstetrician-gynecologists, causing many to restrict their practice or leave the state (Susman, 2002). In 2003, four additional states were added to the “Red Alert” and the ACOG launched its public awareness campaign, “Who will deliver my baby?” (Cole, 2003). By 2004, the list included 22 states and the District of Columbia (“ACOG Red Alert list adds 3 states,” 2004).

ACOG press statements referred to the crisis as an “access to health care crisis” (“ACOG Red Alert list adds 3 states,” 2004). Indeed, the reduced availability of obstetrical care as a result of malpractice costs had long been a focus of concern within the broader healthcare community. In 1989, an IOM study concluded that obstetricians were eliminating or reducing their provision of obstetrical care (IOM, 1989).
Titles returned in a PubMed search using the MeSH Terms\(^{40}\) “malpractice,” “obstetrics,” and “united states” often referred to the impact upon and the responsive behaviors of obstetrician-gynecologists – e.g., practice restrictions, use of defensive medicine such as cesarean deliveries, abandoning obstetrical care, retirement, and geographic relocation. As recent research has observed, “the adverse impact of the liability system on obstetrical caregivers is a persistent concern in their professional discourse” (Sakala, Yang, & Corry, 2013b). The PubMed search also returned many titles discussing tort reform and alternatives to the current tort system, reinforcing a perception that public policy offers the primary solution to the problem.

Obstetrics-gynecology has certainly expressed its commitment to improving infant and maternal outcomes and some leaders in the specialty have argued that this may offer the best approach to reducing tort (Pearlman, 2006; Sakala, Yang, & Corry, 2013a; Weinstein, 2006a). However, the problem of malpractice claims is not predominantly framed as a problem of quality in the literature. One good illustration is found in the work of the multidisciplinary *Transforming Maternity Care* partnership. This project was launched in 2007 and in 2009 produced a series of reports by five groups of maternity care stakeholders (Jolivet, Corry, & Sakala, 2010). The report of the “Maternity Care Clinicians & Health Professions Educators” group included three recommendations: educating all healthcare providers on teamwork and communication; shielding healthcare faculty and students from liability; and (the number one recommendation) limiting

---

\(^{40}\) PubMed.org is the online catalogue of the National Library of Medicine (NLM). “MeSH” terms are the NLM “Medical Subject Headings”, a “controlled vocabulary of biomedical terms that is used to describe the subject of each journal article” (NCBI, 2013)
liability and facilitating alternative dispute resolution through legislative changes in all states (Colonge et al., 2010). Liability reforms are predominant in the recommendation, systems errors are addressed, and individual physician quality of care is absent.

Neurosurgery

The specialty organizations representing neurosurgery appear to frame the malpractice problem primarily as a socioeconomic challenge facing the specialty. Particularly since the late 1990s, the neurosurgical literature has included frequent discussions of the economic pressures from falling compensation and rising tort-related costs (Bean, 2003; Florin, 1998; Jimenez, 1996; Roski, 1998; Tolchin, 1998). The expressed concern over tort costs is particularly acute as it pertains to young neurosurgeons who must repay educational debt (Lekovic, 2004). The framing of malpractice as a socioeconomic issue is further evidenced by its designation as such in the annual meeting agendas of the American Association of Neurological Surgeons (AANS) and by its treatment in the Bulletin of the AANS (AANS, 1998, 2000, 2005b, 2007; Bean, 2003).

The importance of the socioeconomic impact of tort, and of socioeconomic issues in general for neurosurgeons, is evidenced by the work of the Council of State Neurological Societies (CSNS). Created in the late 1970, the CSNS emerged directly from the socioeconomic work of the AANS and the Congress of Neurological Surgeons to become “the socioeconomic arm” of these organizations (AANS, 2000; CSNS, 2013b). It’s primary functions continue to be providing education, advocacy, and a national forum “for discussion, consideration, and proposals of action regarding socioeconomic issues
concerning neurological surgery,” in particular issues surrounding reimbursement and malpractice (CSNS, 2013a).

The framing of liability as a socioeconomic issue and the degree of concern among neurosurgeons stands in juxtaposition with the fact that neurosurgeons are among the highest earning specialties. A recent physician salary survey reporting the national average salaries for 51 specialties and sub-specialties indicated that neurosurgeons’ salaries are second only to those of orthopedic surgeons specializing in the spine (“Physician Salary Survey, 2011-2012,” 2012). But, a 2002 survey by the Council of State Neurological Societies found that neurosurgeons faced liability premiums “equivalent to one quarter to one half of personal earnings” (Bean, 2003). This exceeds even the figure for obstetrician-gynecologists, whose liability premiums were found in this study to be equivalent to 14 to 22 percent of earnings during the 1985 to 2000 period. In both of these high-risk specialties, the literature reflects a psychological impact similar to “sticker shock” and a sense of crisis.

Like obstetrics-gynecology, while the literature reflects a desire by the neurosurgical specialty to improve its quality of care, the specialty does not appear to identify reduction of malpractice claims as a driver of these efforts. Nor does the specialty appear to expect quality improvement efforts to resolve the problem of malpractice claims and costs. This is reflected in AANS past-president Dr. Stewart Dunsker’s forceful statement that “this is not about malpractice, it is about medical liability insurance” (Dunsker, 2004). Neurosurgery proposes primarily a public policy

---

41 Neurosurgeons reported 2011 median starting salary was $395,000 per year and national average for a neurosurgeon practicing six years was $589,500 per year (“Physician Salary Survey, 2011-2012,” 2012).
solution in the form of tort reform, as evidenced by writings in the AANS Bulletin and AANS Annual Reports (AANS, 2001, 2005a, 2006); article titles retrieved in a PubMed search using MeSH Terms “malpractice,” “neurological surgery,” and “United States”; and articles returned in a search in the Journal of Neurological Surgery using the search term “malpractice”. The AANS has worked actively for tort reform (AANS, 2013). In 2003 the AANS and Congress of Neurological Surgeons (CNS) launched Neurosurgeons to Protect Health Care Access to provide a war chest for lobbying and public education efforts regarding liability reform (AANS, 2004; Seaver, 2003). In 2005 the AANS formed a new Political Action Committee to pursue liability reform at the national level (Kushner, 1995; Ratcheson, 2005).

The perceptions held by individual physicians vary widely, demanding a nuanced image of what “the profession” thinks. Yet evidence suggests strongly that tort is not perceived as a societal demand for quality improvements, even within two of the crisis specialties. The second half of the equation supposed by theory – that raising the standards for certification is an appropriate response to tort pressure – similarly appears to find little support within the specialty boards.

Raising professional certification standards is not the primary solution to tort regulation

None of the crisis specialties in this study appears to have identified the strengthening of certification standards as a primary means to address increasing tort claims. Because evidence suggests that they do not perceive physician quality to be at the root of the malpractice problem, it is unsurprising that obstetrics-gynecology and neurosurgery (like many specialties) do not propose raising quality standards through
certification as a primary response to malpractice. Yet it appears that thoracic surgery also has not identified strengthening of board certification as the primary tool for reducing malpractice claims, even though this specialty has consistently framed tort as an issue of quality and has consistently identified quality improvements (error reduction) as the primary solution.

Reforms of board certification have been adopted by all ABMS member boards. As the preceding analysis has shown, however, the crisis specialties as a group have not adopted these reforms more quickly than non-crisis specialties. They also have given no real indication in the available literature that the malpractice crises or liability issues in general were a primary driver of the reforms.

Rather than the hypothesized series of events – rising tort pressure leading specialties to raise the standards of their self-regulatory certification – evidence suggests that the crisis specialties (i) have undertaken reforms of certification in response to non-tort pressures and (ii) have responded to tort pressures in ways that do not involve certification standards.

*Non-tort drivers of certification reforms: professional ethic and avoidance of government regulation*

The reform of specialty certification from lifetime to time-limited to Maintenance of Certification has been undertaken by all specialties. Each crisis specialty appears to have framed these reforms differently and, while the rationale of each supports the broader theory of professionalism, only in the literature of obstetrics-gynecology does the rationale include the hypothesized response to tort regulation.
In obstetrics-gynecology the public rationale for reforms has primarily focused upon professional ethics and the need to prevent regulation by government or payers, but has also occasionally included the potential reduction of malpractice claims.

As the sixth specialty to implement time-limited certification (in 1986), this specialty was a fairly early adopter. The literature does not provide any evidence of opposition or strident debate on this reform. But twenty years later implementation of MOC appears to have faced some opposition, causing leaders in the specialty to offer a mix of justifications that included government regulatory pressures, professional ethics, and the malpractice problem.

Just after the launch of the ABOG’s Maintenance of Certification program, one obstetrics-gynecology editorial noted the grass roots opposition within the specialty, observing that “Despite unprecedented efforts by ABOG and ACOG leadership to explain the rationale and describe the new [MOC] process, this change has generated considerable concern and confusion since its implementation in 2008” (Rubin, 2008). In its fall 2004 newsletter, the ABOG cited three reasons for adopting MOC that reflect professional ethics and defense of self-regulation as dominant justifications: “The public wants to know that ‘their doctor is currently competent and well-informed – like an airline pilot’”; “If doctors don’t do this someone else will”; and “This is the ‘correct thing to do’ and medicine should take the lead” (Steinbrook, 2005). Interestingly, the external regulation that MOC is purported to fend off includes expanded regulation from state licensing boards. MOC, it is argued, “reduces the likelihood that state licensing boards
will issue onerous requirements focused on lifelong learning and practice assessment. Physicians [in that case] would confront a complex patchwork of local regulations that might be more burdensome than MOC” (Barbieri, 2008; Rubin, 2008). It is an MOC skeptic within obstetrics-gynecology who has noted its potential for improving public trust in physician quality by signaling (not raising) quality, stating: “we’ve seen a gradual but clear decline in the trust that the average patient places in her physician. So I think that patients are likely to applaud the intent of MOC, which is to ensure the quality of the physician community” (Barbieri, 2008).

Perhaps ironically, the grass roots opposition to MOC within obstetrics-gynecology may stem in part from the specialty’s longer history and success with recertification. From 1986 through 2000, the ABOG issued time-limited certification valid for 10 years. Beginning in 2001, the certification period was shortened to 6 years, making periodic examination more frequent. The specialty implemented its Annual Board Certification (ABC) program in 1998 to augment the periodic written and oral exams. The CME-based ABC program was highly regarded among ABOG diplomates as useful and reasonably burdensome (Rubin, 2008). With annual participation and post-assessments required, the ABC program already met the MOC objectives of continuous learning and assessment. As a result, many argued that MOC would increase the burden for physicians while adding little value (Barbieri, 2008; Steinbrook, 2005).

On the whole, like many of the late adopters of MOC, the primary reason driving obstetrics-gynecology to ultimately implement MOC appears to have been the inevitability of the reform. The ABMS had achieved consensus from all of its member
boards and all had concluded that such a move was necessary in light of pressures from external sources – including the federal government, the American Hospital Association and the Joint Commission charged with hospital accreditation, and state legislatures (Hale & Gant, 2004; Rubin, 2008; Steinbrook, 2005). As the executive directors of ABOG and ACOG wrote in a jointly authored editorial, “Although no one wants to be continually examined after the rigors of medical school and residency, this decision no longer resides within any specialty of medicine. It has become a public issue related to patient safety and appropriate medical care” (Hale & Gant, 2004).

**Neurosurgery**

To an even greater extent, neurosurgery appears not to have embraced certification reform but rather to have capitulated to it. The American Board of Neurological Surgeons (ABNS) rejected early calls from the ABMS to adopt recertification “for intrinsic reasons apart from threat of legislative or licensing requirements” and challenged the validity of knowledge-based examinations to measure the ongoing competence of physicians (Tolchin, 1998). Acknowledging the deterioration of a surgeon’s knowledge base over a seven year period, the specialty countered that “the experience, judgment, and technical ability acquired during these times is known to improve substantially” and while “society equates credentials with competency” the specialty maintained that “neurosurgery has not yet equated such credentials as certification with quality; its intent has only been to confirm completion of training, evaluation and critique of experience, and documentation of ability to pass written and oral exams” (Tolchin, 1998). Eventually, however, faced with “mounting requests by
diplomates resulting from economic credentialing and managed care as well as statutory and state licensing requirements” the ABNS concluded that “such certification is required for economic stability and the privilege of practicing neurosurgery” (Tolchin, 1998).

The American Association of Neurological Surgeons (AANS) announced the implementation of recertification in 1998 apologetically, with a simple introductory statement that the ABNS “is the last board of the American Board of Medical Specialties to submit a plan for re-certification” and an assurance that “the desire of the ABNS is to produce a meaningful exam that will be a fair test of the neurosurgeon’s practice. It will not be an examination of minutia, basic science, or arcane material…Neurosurgeons will be allowed to take the re-certification exam multiple times, if necessary” (Dunsker, 1998).

In 2003, the ABNS began preparing its diplomates for the next reform, Maintenance of Certification. In its Bulletin, the board noted that “the MOC movement has gained momentum” driven by “the need to satisfy the public, payers, other health care organizations, governmental agencies, and the profession itself”; but the board also noted the “troublesome” nature of the competency movement, explaining that the ABMS boards “and their legal counsels are reluctant, indeed unwilling, to accept the responsibility that the certification process verifies ‘competence’ in all aspects of practice at all times” (Piepgras, Dacey, Sonntag, & Day, 2003). The ABNS noted that “many diplomates will regard MOC with trepidation or even outright hostility, which is understandable” (Piepgras et al., 2003). “MOC will necessarily conform to the model
adopted by the ABMS” but “the ABNS will proceed slowly in developing these programs” (Piepgras et al., 2003).

**Thoracic surgery**

In thoracic surgery, reform of certification did not wait until external forces made it unavoidable. Mandatory recertification was adopted by the specialty in 1976 – before malpractice crises became a cyclical norm or hospital accreditation required frequent review of physician credentials. Evidence suggests that the driving rationale for periodic reassessment was to assure the continuing competence of thoracic surgeons. This was made clear in the 1975 Society of Thoracic Surgeons (STS) Presidential Address of Dr. Herbert Sloan, who deplored the low attendance of diplomates at the (educationally oriented) annual STS meetings and the low participation rate in the voluntary annual self-assessment test offered by the Society, admonishing that “continuing education and self-assessment do not seem to loom very large in the lives of these [non-participating] thoracic surgeons” and “one can only conclude that there is relatively widespread indifference to combatting obsolescence” (Sloan, 1975). Sloan noted that some state thoracic surgery societies objected to periodic recertification (Sloan, 1975). Yet the thoracic surgery literature does not provide any evidence of strong objections or a highly contentious debate within the specialty. While state societies may have expressed some objection in the early 1970s (Sloan, 1975), a 1980 survey of Society of Thoracic Surgeons members found that “most believed that a thoracic surgeon’s competence should be reviewed periodically. Most were not fearful of a review of their performance” (Merrill, 2011).
Thoracic surgery also established a limited period of “board eligibility” at a very early date. In 1974, the American Board of Thoracic Surgery (ABTS) set a time limit, requiring physicians to apply for board certification within 5 years of completing their residency training and allowing only three attempts to pass the certification exam (Sloan, 1975). A physician who missed either deadline was required to undertake an additional year of training in an approved program to become eligible again to take the exam (ABTS, 2013a). There is no indication in the literature that this limitation met with serious opposition. In light of the long-standing limit on board eligibility for thoracic surgeons, the ABTS’s 2017 “transition date” is a transition only from one set of “re-entry” requirements to a revised re-entry process that is aligned with the ABMS guidance, but is not necessarily more stringent (ABTS, 2013a).

Thoracic surgery was not among the first specialties to implement MOC, but did take initial steps to move to MOC from an early date. In 1999 the ABTS approved the ABMS/ACGME six competencies, approved a resolution acknowledging that “recertification/competency is a continuous process”, and passed a resolution stating that the ABTS “assumes responsibility for the assessment of competency for thoracic surgeons” (Baumgartner, 2013). The ABTS stated its intention to implement MOC by 2006 (Gay, 2005), but did not achieve the goal until 2008. Throughout this period, no objections to MOC are found in the thoracic surgery literature. Typical of the published thoughts of the thoracic surgery community is the comment by Dr. Peter Pairolero in his 2005 STS Presidential Address. Noting the ABMS’s MOC requirements for continuous practice-based learning and assessment, Pairolero asked “Will we accept these new
certifying requirements? I contend that we must accept them, for they will improve the quality of care we provide our patients” (Pairolero, 2005). Thus, he echoed Sloan’s (1975) assertion thirty years earlier that “some such evaluation will be necessary, and we had best prepare for it.” The transition to MOC may have been eased by the fact that both CME requirements and practice review requirements had already been incorporated into the ABTS recertification process in 1981 (Baumgartner, 2013).

Thoracic surgery also took the unusual step in 2006 of determining that no “grandfathering” of lifetime certificate holders would be allowed. In order to maintain a current and valid certificate, all diplomates, including those issued lifetime certification prior to 1976, have been required to participate fully in MOC since its 2008 implementation (Baumgartner, 2013). The stated rationale: “MOC is intended to give the public assurance that certified specialty physicians are maintaining high standards of clinical care throughout their career” (ABTS, 2013b).

Throughout almost 40 years of certification reform, the over-riding rationale of the thoracic surgery specialty appears to be closely aligned with the commitment to quality on the basis of craftsmanship or professional ethics that is suggested by the theory of professionalism.

**Non-certification mechanisms for raising quality and lowering tort: systems improvements and teamwork**

Even where specialties have indicated that quality improvements could help ease tort pressures, raising certification standards has *not* been the mechanism for quality improvement. Instead, the reduction in tort is presented as a (secondary) benefit to be
derived from the larger quality and patient safety movements undertaken in response to public and government demands. These quality efforts are predominantly implemented outside the board certification regime and focus more on systems improvement than on the traditional approach of assuring physician quality.

It is worth noting the ways in which board certification has occasionally been included as one of secondary mechanisms for moving these strategies forward. Patient safety as well as improved teamwork and communication with non-physicians have become important topics for continuing medical education, including CME credits needed to fulfill MOC requirements (Pearlman, 2006). Seven of the specialty boards have adopted patient safety and/or communication skills as required topics for MOC activities – although none of the crisis specialties is among these (ABMS, 2013a).

In each of the crisis specialties, leaders have expressed the need for and commitment to reducing medical errors, to answer society’s demands for safer care and to reduce malpractice claims. At the 2005 annual meeting of the American College of Obstetricians and Gynecologists, Weinstein asserted that the recurring liability crises “can only be solved by placing an increased emphasis on improving patient safety and elimination of all preventable errors” (Weinstein, 2006a). Pearlman (2006) echoed this

--Studies support the use of patient safety efforts to reduce sentinel events and claims and the medical profession has undertaken many initiatives and practice changes to improve the quality of medical care (Grunebaum, Chervenak, & Skupski, 2011; Pettker et al., 2009; Pronovost, Holzmueller, Ennen, & Fox, 2011). Anesthesiology’s effective use of practice guidelines developed by its Patient Safety Foundation; the American College of Surgeon’s National Surgical Quality Improvement Program (ACS NSQIP); and Quality and Safety Manual developed by ACOG are just a few prominent examples of these efforts (Pearlman, 2006). These initiatives often focus on developing and pushing out mechanisms for standardization of care such as checklists, clinical guidelines, clinical pathways, practice protocols; and improving systems of care by strengthening teamwork and communications (Erickson, 2012; Laube, 2006). These efforts lie mostly outside the scope of this study.

100
call, writing “We are at a crossroads in obstetrics and gynecology. Some have invested in tort reform as the strategy to solve our problems, but I do not believe that tort reform alone will change outcomes. It will not change or improve the care we provide to our patients. However, we can control our own destiny by actively pursuing aggressive changes in how we approach safe care.” Obstetrics-gynecology has urged improvements in patient safety and has carried out closed claims reviews and worked with malpractice insurance providers to identify key risk factors; developed protocols and guidelines for reduced adverse outcomes; established event reporting systems; added “safety nurse” positions and “patient safety committees” to collect and track adverse event data; and provided team training and safety training of ancillary obstetrical staff (Grobman, 2006; Jolivet et al., 2010; Pettker et al., 2009; Pronovost, Holzmueller, Ennen, & Fox, 2011; Sakala et al., 2013a). Pursuing this quality movement through the specialty certification process, however, has been limited to periodic suggestions that patient safety be incorporated into recertification activities (Pearlman, 2006). To date, this subject matter has not been adopted as a required topic of CME for ABOG diplomates.

As discussed above, thoracic surgery has looked to improvements in quality and patient safety as a primary means to reduce tort (Lang, 2001; Luce, 2008; McLean, 2004). The importance of board certification for ensuring quality of care is made clear by the board’s requirement that all diplomates, even those initially granted lifetime certification, participate fully in MOC. Yet, no direct link from board certification reforms to reduced malpractice claims is explicitly drawn in the literature.
Neurosurgery has undertaken its own efforts at improved patient safety and outcomes, including the use of surgical checklists and clinical guidelines (Fargen, Mocco, & McConnell, 2012; Lau et al., 2012; Lyons, 2010); but the specialty appears to have been uniquely focused on the collection and analysis of practice data (Asher, McCormick, & Kondziolka, 2013; Asher, McCormick, Selden, Ghogawala, & McGirt, 2013; Asher, McCormick, Selden, et al., 2013; Asher, McGirt, et al., 2013; L. Miller, 2013; Selden et al., 2013). In what the specialty has termed the “science of practice”, the specialty notes an important shift in the way medical knowledge is expanded. “[M]edicine’s previous reliance on a small scientific elite for the generation of most novel health care information is giving way to a requirement that all physicians engage in scientific inquiry and quality improvement through the acquisition and analysis of practice data” (Asher, McCormick, & Kondziolka, 2013). The various institutions of the specialty have collaborated to develop both single-institution databases and the unique National Neurosurgery Quality and Outcomes Database (N²QOD), which gathers patient-centered outcomes data for analysis. Evidence indicates that the nexus of this data analysis efforts and board certification rests on the specialty’s (and the specialty board’s) commitment to minimizing administrative burdens for neurosurgeons (Grady, 2005; Piepgras et al., 2003; Piepgras, 2003). Discussion of N²QOD in the literature consistently highlights the need to collect comprehensive data that can be used for multiple purposes, including physician self-assessment and practice improvement, meeting reporting requirements for government and non-government payers, and fulfilling the requirements

As noted above, leaders in the crisis specialties have acknowledged that improvements in quality of care and reduction in medical errors should help reduce malpractice claims. External forces may also be working to expand the role of certification in patient safety and healthcare quality. In 2009, the ABMS and the National Quality Forum (NQF), a non-governmental stakeholder coalition established ten years earlier to address healthcare standard-setting\(^{43}\), held a joint summit, announcing that they envision the ABMS, its member boards, and the MOC process “playing a bigger role in quality initiatives” (ABMS, 2009). However, at present the quality movement does not look to the malpractice crises as its primary justification and, furthermore, specialty certification is often assigned only a very small and tangential role in the systems-level quality improvement efforts.

**Contextual factors shaping the evidence-based image of specialties**

Certain environmental factors and the profession’s response to them may have helped prevent greater alignment of certification reform with tort reduction. The first of these is certification’s voluntary – not mandatory or universal – nature. The second is the disruption caused by certification’s evolution from a measure of knowledge to a measure of physician competence. The third is the shadow of legal hazard – not from medical liability but from liability for false claims.

\(^{43}\) The NQF organizes its broad stakeholder membership into eight member councils, including the Consumer Council; Health Plan Council; Health Professionals Council; Provider Organizations Council; Public/Community Health Agency Council; Purchasers Council; Quality Measurement, Research, and Improvement Council; and Supplier and Industry Council.
Preserving the distinction between specialty certification and the professional license – preventing mandatory certification

As discussed in the literature review, because it is used so extensively in the credentialing processes of healthcare institutions, and is incentivized by both payers and malpractice insurers, specialty certification has become quasi mandatory in the marketplace (G.L. Freed et al., 2013). However, to avoid the fragmentation of the medical profession the specialty boards and the profession have guarded closely against any codification of specialty certification as a mandatory credential for the practice of medicine. In their official certification documents and public information pieces, each board attests to the non-exclusionary nature of its certificate with statements similar to the following by the American Board of Thoracic Surgery:

“Board certification in a medical specialty is evidence that a physician’s qualifications for specialty practice are recognized by his or her peers. It is not intended to define the requirements for membership on hospital staffs, to gain special recognition or privileges for its Diplomates, to define the scope of specialty practice, or to state whom may or may not engage in the practice of the specialty. Specialty certification of a physician does not relieve a hospital’s governing body from responsibility in determining the hospital privileges of such specialist.” (ABTS, 2013c).

Were specialty certification to become mandatory, firm boundaries would be established for the scope of practice of any given physician. Regulators noted in 1978 that the difficulties of establishing an exact legal statement of the scope of work for each specialty would outweigh any benefits of doing so (J. Morton, 1978). The medical profession has expressed concerns that it would prevent a physician’s practice from
evolving over time; would create legal battles between specialties over scope of practice; would remove an important element of flexibility in managing the physician workforce; and could impact upon the public’s access to care.

Neurosurgery provides a case in point. Competition with other specialties for dominance in some practice areas has consistently been a key issue for the specialty. In the 1980 and 1990s “neurosurgeons specializing in spine fought a fierce battle with their orthopedic colleagues that culminated in spinal neurosurgeons winning the privilege to perform procedures involving spinal instrumentation” (Sonntag, 2007; Spetzler & Kick, 2010). The literature suggests this was not an isolated turf battle. It has been argued more recently that “the real threat of market-share loss to other specialties in neurosurgery looms large” (Alberstone, Benzel, & Garcia, 1998). Competing specialties include otolaryngology, orthopedic surgery, vascular surgery, general surgery, radiology, nonneurosurgical intensivists, and even anesthesiology (Couldwell, Gottfried, Wiess, Popp, & Weiss, 2003; Couldwell, 2006). Control over practice areas is often closely tied to another perennial concern – the neurosurgical workforce. When a glut of neurosurgeons was projected in the 1980s, the specialty literature urged that it must establish its control over practice areas like spinal surgery. When, instead, neurosurgery found that its workforce was “sparsely populated” at the end of the 1990s, physicians expressed fears that this would “limit the specialty in its ability to expand practice into other areas that would be fruitful extensions of neurosurgery’s expertise” (Couldwell et al., 2003; Couldwell, 2006). By ceding new and growing areas of practice, specialty journals warned that neurosurgery would undercut efforts to expand its numbers by
reducing medium- to long-term demand for their services (Couldwell, 2006). This interplay suggests not only a perceived need for self-preservation by the specialty, but also a perceived need for flexible and permeable boundaries on the scope of practice to meet changes in demand for medical care.

The literature suggests that the threat of mandatory certification has most often been perceived in the efforts to reform state licensure. The AMA House of Delegates has consistently passed resolutions opposing any requirement of certification for re-licensure or Maintenance of Licensure and urging close monitoring of licensure reforms to this end (AMA CME, 2012, 2013a; Pittman, 2013).

The ABMS, the Federation of State Licensing Boards, individual state licensing boards, and others involved in the Maintenance of Licensure (MOL) movement have assiduously reaffirmed their opposition to mandatory specialty certification (ABMS, 2013g; FSMB, 2013b). Indeed, a key stated objective in designing MOL has been to assure that fulfilling MOC requirements will simultaneously meet the requirements of MOL, while also providing an avenue for non-specialty certified physicians to fulfill MOL requirements so that MOC is not required. Nonetheless, because MOC has been required or incentivized by healthcare payers and institutions – including those in the public sector – the specter of mandatory certification for licensure is raised with some frequency and is often presented as an inevitability. Indeed, the impending requirement of MOC for licensure is sometimes cited by MOC proponents in encouraging physicians to participate (Batjer, 2005; Berquist, 2008; Bull & Palfrey, 2010; Corboy & Elkind, 2008; Gasco, Barber, McCutcheon, & Black, 2011; Horowitz, 2008; Nahrwold, 2007).
Because the profession is dedicated to maintaining the voluntary nature of certification, it is also unlikely that certification will become universal among physicians. Approximately twenty percent of physicians are not certified by an ABMS member board (AMA CME, 2010; Iglehart & Baron, 2012). Of those who are certified, some are “grandfathered” and most of those do not participate in recertification or MOC activities. As a result, over 300,000 practicing physicians are estimated to lie outside the reach of the educational and practice-improvement activities of the ABMS specialty boards (Iglehart & Baron, 2012). This reduces the potential for certification reforms to effect significant changes in the quality of the profession as a whole. If specialties wish to improve patient safety and reduce errors within their specialty, they must influence practitioners who are non-certified or grandfathered as well as those who are participating in MOC. Therefore, more universal approaches such as working with hospitals and insurers to implement guidelines and protocols appear to offer a more attractive mechanism than board certification for affecting change.

**Meeting the evolving social contract - moving from certification of knowledge to certification of competency**

Board certification’s role in the quality movement has also been shackled by its own growing pains as this institution has grappled with the competency movement. Traditional board certification was a mark of the physician’s specialized training and point-in-time knowledge. Certification of physician competency is a profoundly different objective – one that the boards must attempt to implement while simultaneously discovering how to define and measure that which they are asked to attest. Board certification has had to leap from testing what a physician knows (as demonstrated in a
typical written board exam) and perhaps that a physician knows how to apply clinical judgment along with knowledge (as in many oral certification exams), to testing the physician’s ability to demonstrate knowledge and judgment (perhaps through simulation), and even further to assessing the physician’s actual performance in practice and real-life outcomes (Rhodes & Biester, 2007). While the specialty boards have been asked to certify their diplomates’ “competence” through this full spectrum, valid mechanisms for judging physician competence are nascent at best (Clavien, Nahrwold, Soper, & Bass, 2005; Heffron, Simspson, & Kochar, 2007; Rhodes & Biester, 2007).

Market, public, and government demands pressed specialty boards to move forward with the competency movement. The resulting Maintenance of Certification processes not only were (of necessity) far more “burdensome and intrusive” but also lacked a solid basis of “evidence” regarding their validity and effectiveness (Rhodes & Biester, 2007). The combination has provided a foundation for grass roots resistance to recertification and then MOC.

Physicians have expressed concern regarding the cost of MOC in terms of both time and money, specifically citing the cost of exams and burden of exam preparation as well as the time out of practice needed to complete record reviews and other performance-in-practice assessments (). The MOC process, stated one critic, “promises only to increase costs, reduce physician availability, consume physicians’ time excessively and non-productively, and invite physicians’ early retirement” (Paul M. Kempen, 2012b). The burden of MOC has been presented by many as a “last straw”,

---

44 This hierarchy of metrics is often represented using the framework for the clinical assessment of medical residents developed by George E. Miller and referred to as “Miller’s Pyramid” (G. E. Miller, 1990).
adding to the many layers of oversight and assessment that had become of medical practice in recent years – credentialing and oversight by hospitals and group practices, peer review mechanisms, Medicare and Medicaid requirements and incentives, reviews and risk mitigation training from medical liability insurers, expanding licensure renewal requirements, and additional requirements for state medical society membership (Iglehart & Baron, 2012; Paul M. Kempen, 2012a, 2012a; T. Sullivan, 2013a, 2013b). The IOM’s 1999 report, To Err Is Human, sparked a rush to action, but the quality movement was highly fragmented. Each institution in the large healthcare complex moved independently to assess and improve its own domain and numerous public and private entities – the LeapFrog Group, the National Quality Forum, the Agency for Healthcare Research and Quality, the Joint Commission – generated a flurry of recommended actions (Altman, Clancy, & Blendon, 2004).

Each quality improvement effort has impacted upon physicians and the practice of medicine, adding administrative burdens and constraining clinical freedom. This imposition was perhaps all the more onerous because, according to surveys, few physicians perceived the measures imposed upon them to be effective. A 2002 survey found that a majority of physicians felt that only two proposed solutions would be effective in reducing medical errors: requiring hospitals to develop systems for error prevention (55 percent); and increasing the number of nurses in hospitals (51 percent). Less than half of physicians felt that measures relevant to board certification would be effective, including improving training of health professionals (36 percent) and using
only physicians trained in intensive care medicine in intensive care units (34 percent) (Blendon et al., 2002).

This context may have fostered opposition to MOC. Physicians demanded that in an era of “evidence based medicine”, there should be evidence to support the new practices they were asked to adopt (). Some have argued that physicians who have for generations looked to randomized clinical trials to guide their clinical decisions must now accept a new epistemology to guide their systems of care. For “studying complex, unstable, nonlinear social change” such as the quality movement, the advocates of rapid action assert that methodologies adapted from other disciplines – quality improvement techniques developed in engineering as well as qualitative methods such as ethnography and anthropology – offer more powerful insights than randomized trials. The IOM reports suggest that favoring the status quo is imprudent, they argue, and therefore it is best to test promising changes rapidly, remaining alert for problems and learning from experience in the process, rather than maintaining the status quo and awaiting the results of ill-suited randomized trials (Berwick DM, 2008; Pettker et al., 2009). But for many physicians this line of reasoning is unconvincing and runs counter to the established medical principle of “following the evidence” (Auerbach, Landefeld, & Shojania, 2007). “The ABMS believes that MOC is the path to better care,” argued one skeptic, “To my knowledge, however, there’s no reproducible scientific evidence, based on controlled study, that MOC improves care. Common sense suggests that lifelong learning would improve the care we provide – but that’s all there is to support the idea” (Barbieri, 2008).

 Each of these measures were perceived as effective solutions by over 70 percent of the public in the same survey study (Blendon et al., 2002).
The MOC movement, driven by the ABMS, was met with doubt not only from individual physicians, but also from some specialty boards themselves. The American Board of Neurological Surgery was among the most skeptical of boards regarding the value of recertification. The ABNS introduced its recertification program in 1998 without mentioning any expectations that the quality of its diplomates would benefit (Dunsker, 1998).

Without evidence similar to randomized clinical trials to support the validity and effectiveness of MOC activities, the literature reflects a perception among some in the medical community that MOC poses an additional burden with no proven benefits in terms of reducing errors (Auerbach et al., 2007). To the extent this is true, board certification is poorly placed to be at the forefront of physicians’ error reduction efforts, in response to either the quality movement or the malpractice crisis.

**Practical constraints – avoiding the legal hazard of “false claims”**

The unproven effectiveness and validity of MOC activities also inhibited the specialty boards’ willingness to push certification to the forefront of these efforts. Some boards had grave misgivings about the “competency movement” and resisted the notion that board certification offered any guarantee of competency (ABMS, 2013b). Traditional certification had attested only to the knowledge of a physician and traditional exams had firmly established their psychometric validity over the years. The challenge of defining and measuring “competency” is daunting (Rhodes & Biester, 2007) and natural skepticism has been amplified by practical and legal constraints. The literature reflects significant concern that the boards not overstate their ability to certify the competence, in
part to preserve the credibility that is so essential to their certification; and in part because they were cognizant of the legal hazard of claiming to assure a physician’s competence. The ABNS has put a fine point on it, stating in 2003 that “the designation of ‘competence’ has been troublesome for the ABMS Boards. All boards share the belief that their diplomates possess ‘requisite or adequate ability or qualities’; however, they and their legal counsels are reluctant, indeed unwilling, to accept the responsibility that the certification process verifies ‘competence’ in all aspects of practice at all times” (Piepgras et al., 2003).

Specialty boards appear to have struggled with the legal and reputational hazard associated with changing the meaning of certification – from averring the knowledge held by a physician to certifying his/her competence. Evidence shows that they have also struggled with physician pushback and demands for evidence that MOC activities can improve physician competence. This opposition may be stronger because physicians have faced numerous layers of new oversight and assessment requirements from healthcare institutions and payers – requirements that they often feel provide no benefit in return for the burden of time and cost. Furthermore, were specialty boards to assert that MOC could reduce malpractice claims by raising physician quality, then they would have to address the fact that on average 20 percent of physicians practicing in their specialty do not have certification. The voluntary nature of specialty certification would create a free rider problem – certified physicians lowering the overall malpractice risk rating through their efforts, but non-certified physicians also reaping the benefits. Yet the specialty boards
could not and would not seek to make their certification mandatory because it would fragment the profession and circumscribe the individual physician’s scope of practice.

**Conclusion: The evidence-based image of specialty boards and the analytic frame of professionalism theory**

The evidence-based image of medical specialty boards does not support the hypothesis that those facing severe pressure from tort regulation will respond by raising their self-regulatory standards more quickly. Only one of the three crisis specialties recognized tort as a form of external quality regulation and sought to address it through quality improvement. However, the evidence-based image of specialty boards is not discordant with the analytic frame offered by the theory of professionalism. Indeed, the image reflects both the concern for professional quality and the moderating effects of “contingencies,” as suggested by the theory. All three crisis specialty boards sought to address malpractice risk through expanded education or analysis and all did eventually adopt certification reforms. But all three faced opposition from the larger community of physicians within their specialty, and each expressed concerns regarding the fragmentation of the profession.

**The hypothesis is not confirmed by the evidence**

The variable impact of tort regulation upon the specialties, and their freedom to be more or less responsive in their implementation of certification reforms, created an opportunity to examine the sensitivity of the American medical profession. The evidence indicates that specialties have recognized society’s demand for quality improvements, but that tort regulation has not been a primary signal to specialty boards in this regard. The evidence further indicates that specialty boards have sought to respond to the demand for
improved quality, but have not strengthened their certification credential as the primary mechanism for doing so. Because malpractice claims have been often framed by crisis specialties as random acts with no correlation to physician negligence, and malpractice crises have been primarily framed as societal litigiousness and trial lawyer greed rather than as societal dissatisfaction with the profession’s minimum quality standards, the crisis specialties that have been subjected to greater tort regulatory pressure have not been more responsive than those experiencing less tort pressure. Thus, the hypothesized responsiveness to tort regulation was not found in the evidence-based image of specialty boards.

The evidence-based image of specialty boards accords with the analytic frame of the theory of professionalism

While the hypothesized responsiveness of specialty boards did not emerge from the evidence in this study, significant evidence in the case of specialty boards did reflect other key elements of the theory of professionalism.

The first of these is a fundamental concern for regulating and assuring the quality of the profession. The specialty boards and the ABMS that leads them frequently reiterate the centrality of the professional ethic and reinforce the fundamental importance of altruistic service to patients and the public. There is an expressed commitment to providing quality care and concrete efforts have been undertaken by each of the crisis specialty boards to strengthen quality and uphold the social contract of the profession. In addition to adopting ABMS-led certification reforms, each of the boards also undertook other efforts to improve quality through education and evaluation.
Secondly, where the specialty boards demonstrate reluctance to strengthen their credential – thereby being unresponsive to society’s demands for quality – the reasons are generally found to lie in two internal characteristics of an ideal-typical profession that are addressed in the theory. The first is the way in which specializations establish the boundaries of their jurisdictions within the professional division of labor through negotiation. There is “considerable internal struggle and negotiation over jurisdictions” among specializations and subspecializations, and boundaries naturally shift as a result of the “development of new knowledge, skill, or technology” (Freidson, 2001, pp. 57–58).

This negotiation and flexibility of boundaries over time plays an essential role in allowing the profession to meet the needs of society. For example, when demand for spinal surgery grew rapidly both orthopedic surgeons and neurosurgeons began performing the procedures, thereby meeting demand; and the ability of family practitioners to provide obstetrical care allows excess demand for low-risk obstetrical care to cascade from obstetrician-gynecologists to family doctors and allows this care to be offered in less populated areas. Preservation of this workforce flexibility has been a primary reason for the specialty boards’ refusal to accept specialty certification as a new minimum standard.

The second characteristic of profession that serves as a contingency to professional responsiveness is the inherent tension between the leadership and the practitioners of the profession. In presenting the theory of professionalism, Freidson (2001, p. 99) discusses the differences in “intellectual perspectives and interests” between practitioners and “faculty”. Charged with codifying, refining, and expanding the
knowledge and skills that define the profession, the “faculty…represents one of the major structural sources for sustaining professionalism” (Freidson, 2001, pp. 96–98). In his description, the professional school is the institution that provides the foundation of the profession (licensing being simply a process of verifying that the proscribed knowledge of this institution has been absorbed by a recruit to the profession) and the faculty is the professional leadership. In the modern reality of American medicine, the leadership of the specialty boards fit within the ideal-typical definition of faculty. They are credentialed members of the profession who devote themselves to the codification and refinement of knowledge and skills – establishing the knowledge and skills needed for specialist physicians; codifying this set of required competencies through their certification exams; and furthering the specialist knowledge and skills by producing clinical guidance and educational materials for the members of the specialty. Like the faculty in Freidson’s theory, the specialty leadership “is insulated from the everyday demands of consumers and the variety of work settings, each of which has its own contingencies bearing on what work must be done and limiting how it can be done” (Freidson, 2001, p. 99). As a result of its protected circumstances, the leadership “advances more stringent and up-to-date standards for practice than most [practitioners] are able or even willing to meet in light of settled habit and the demands of practice” (Freidson, 2001, p. 100). This tension between leadership and practitioners – abundantly apparent in the anti-MOC protestations of physicians – has significantly moderated the responsiveness of the specialty boards.

Thus the explanatory power of the theory of professionalism is sufficiently robust to address the less-than-perfect responsiveness of the specialty boards and their
preference for quality improvement through educational support rather than regulatory reforms.

This study of the medical specialty boards offers one case in considering the responsiveness of the self-regulated medical profession to external regulation from tort. The evidence-based image of the medical profession will be further developed by examining the case of medical licensing boards in the subsequent chapter. Using Ragin’s model of social research, Chapter 8 will address the interaction of the evidence-based image of the medical profession with the analytic framework of the theory of professionalism.
6. CASE TWO: STATE MEDICAL BOARDS

Seven crisis states were identified through an analysis that is detailed in Appendix B. Evidence used to select the crisis specialties included designation as a crisis state by the American Medical Association, which waged a significant public awareness campaign and significantly raised the salience of a malpractice crisis among the profession and the public. Other evidence used to identify crisis states included high or rapidly rising malpractice premiums relative to other states and high or rapidly rising claims frequency or severity. The seven states identified as experiencing a malpractice crisis in the early 2000s were Florida, Illinois, New Jersey, New York, Pennsylvania, Texas, and West Virginia.

This chapter will present the analysis of the responsiveness of state medical boards in crisis states relative to that of medical boards in non-crisis states. The evidence of responsiveness will be considered, followed by an examination of qualitative evidence to synthesize a rich image of the crisis state medical boards and their response to tort regulation. Contextual factors – the contingencies of professionalism – and their impact upon the state medical boards’ response will then be explored, and conclusions will be drawn.

For the consideration of state medical boards the study period is 2000 to 2011. The beginning of the latest malpractice crisis can be placed in the late 1990s, when
claims and premiums began an upward trend in some states, but this trend was not generally recognized until 2002, when the AMA noted the trend and declared that a new crisis was under way. The crisis is generally considered to have run from 2002-2005. Carrying the analysis through 2011 allows time for state medical boards to have taken action.

Evidence used to examine responsiveness by state medical boards includes:

1) state medical board reforms of the continuing medical education (CME) requirements for renewal of licensure; and
2) state medical board movement toward maintenance of licensure, independently or through participation in FSMB pilot studies.

Description of Evidence Used to Gauge Early Adoption of Reforms

In the study of licensing board responsiveness, one general concern centers on the fact that in reality the profession does not have complete control over the licensing boards. In states where the licensing board licenses not only medical doctors, but also doctors of osteopathy and/or other health professions the membership of the board often contains representatives of each of the regulated groups. Furthermore, most medical licensing boards have added non-physician “public members” in recent years. Most importantly, the licensing board of each state derives its regulatory authority from a medical practice act and is therefore dependent upon the state legislature for authority to undertake reforms to licensure rules and practices. The board is also often organizationally housed within the state bureaucracy. Thus public institutions have some control over the authority, scope, and resources of the professional body.

However, the structure and oversight of medical licensing boards does not significantly prevent the profession from exercising control over its licensing standards.
Firstly, in all cases, the public members and representatives of non-physician health professions comprise a minority of licensing board members. Even more importantly, the medical community continues to possess a great deal of cultural authority and political influence in health-related policy matters. While physician-led efforts to limit tort liability have sometimes faced effective opposition from consumer-rights and victim’s rights advocates, it is unlikely that physicians seeking to raise quality standards would meet with non-physician opposition in a state legislature.

**Continuing medical education requirements (CME) for renewal of medical license**

All medical licensing boards require renewal of licenses every one to three years. In recent years many have adopted or strengthened CME requirements. The reforms that will be analyzed for this study include (i) adopting CME requirements or increasing the number of credits required, (ii) requirements that some CME credits address patient safety (also referred to as “risk management” or “reducing medical error”), (iii) requirements that a minimum number of CME credits be relevant to the declared specialty of the physician or “practice relevant”, and (iv) requirements that a minimum number of CME credits have a post assessment or be interactive.

The information was obtained from the AMA’s annual publication *State Medical Licensure Requirements and Statistics*. Using online sources and the resources from National Medical Library provided access to data for the following years: 2003, 2005, 2006, 2008, 2010, and 2013.

**Strength:** CME is the most well-established mechanism for preventing “educational obsolescence” or “dyscompetence”, the failure to “maintain
acceptable standards of one or more area of professional physician practice” (FSMB, 2012b, p. 27, emphasis added). Requiring or increasing requirements for CME is evidence of an effort to improve physician quality, particularly among older physicians. Requirements that physicians receive training in patient safety are specifically directed at reducing medical error and malpractice. The requirement of post-assessment and for CME topics that are relevant to the physician’s practice are intended to increases the likelihood that education will be translated into practice improvements and reducing dyscompetency.

**Weakness:** The value of CME has been questioned in recent decades, as research has shown that the knowledge is often not translated into practice. This could weaken the usefulness of increasing CME credits as evidence of quality improvement efforts. However, in response to these concerns, good deal of research has also been conducted recently to discover ways to strengthen the value of CME (Davis & Willis, 2004; Davis, 2009; Lowe et al., 2009) and many state medical boards (and specialty certification boards) continue to value it as a quality improvement mechanism.

**Movement toward Maintenance of Licensure (MOL)**

The concept of periodic re-licensure has been discussed for more than a half century, but its progress toward implementation or even adoption in principle has been negligible until the past decade. As the FSMB initiated a serious examination of “continued competence” and “maintenance of licensure” after 2000, several state medical boards undertook studies or established committees to consider the issue. When the
FSMB later proposed to undertake pilot studies, several states volunteered to participate.
Each of these initiatives provides evidence of a board’s efforts to improve physician
quality by taking steps toward assuring continuous, life-long physician quality. Evidence
of these activities was drawn from a variety of sources including public documents of the
Federation of State Medical Boards, public documents and websites of the individual
state medical boards, and peer reviewed journal articles.

**Strength**: The movement toward lifelong physician competency through
*continuous* assessment and improvement has become the hallmark of physician
quality improvement. This approach has already been embraced by the other core
institutions of medical professionalism (ACGME and the specialty boards) and
incorporated into the graduate education and specialty certification of physicians.
Undertaking *voluntary*, albeit exploratory, steps toward MOL offers strong
evidence of efforts to improve physician quality standards through licensure.

**Weakness**: These steps are only exploratory in nature – even the FSMB pilots are
*pilot studies*, not pilot *implementation*. Furthermore, it cannot be assumed that
state medical boards will adopt a favorable position toward MOL after taking
exploratory steps.

**Analysis of Evidence of Early Adoption of Reforms**
Because state medical boards are autonomous from one another, they have the
freedom to choose and implement reforms to their licensing practices and standards as
they see fit and state law allows. The Federation of State Medical Boards has no authority
to compel reforms by its member boards; however, it has sought to influence the state
boards by developing best practices and tools to facilitate their adoption by the states. As in the preceding case of specialty boards, this freedom to act independently creates an opportunity for comparative analysis.

**Analysis of CME requirement reforms**
State licensure requirements were analyzed for reforms implemented from 2003 through 2011. Table 2, shows the states that have implemented relevant licensing board reforms.

<table>
<thead>
<tr>
<th>States Making Licensing CME Reforms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Reforms</strong></td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>
To compare the level of quality improvement activity against that of non-crisis states, a two-by-two matrix was generated (Figure 6).

<table>
<thead>
<tr>
<th>CRISIS</th>
<th>No Licensing Board Action on CME</th>
<th>Licensing Board CME Reforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO Crisis</td>
<td>Alabama</td>
<td>Alaska</td>
</tr>
<tr>
<td></td>
<td>Arizona</td>
<td>Connecticut</td>
</tr>
<tr>
<td></td>
<td>Arkansas</td>
<td>D.C.</td>
</tr>
<tr>
<td></td>
<td>California</td>
<td>Idaho</td>
</tr>
<tr>
<td></td>
<td>Colorado</td>
<td>Nebraska</td>
</tr>
<tr>
<td></td>
<td>Delaware</td>
<td>North Carolina</td>
</tr>
<tr>
<td></td>
<td>Georgia</td>
<td>Oregon</td>
</tr>
<tr>
<td></td>
<td>Hawaii</td>
<td>South Carolina</td>
</tr>
<tr>
<td></td>
<td>Indiana</td>
<td>Tennessee</td>
</tr>
<tr>
<td></td>
<td>Iowa</td>
<td>Wyoming</td>
</tr>
<tr>
<td></td>
<td>Kansas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kentucky</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Louisiana</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maryland</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Massachusetts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Michigan</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6. Matrix of State Medical Boards Making CME Reforms
Using the distribution of states within the matrix, the prevalence\textsuperscript{46} of board action was calculated for the crisis states and for the non-crisis states. The calculations were as follows:

Prevalence of board action among crisis states = $\frac{4}{7} = 0.571$

Prevalence of board action among non-crisis states = $\frac{10}{44} = 0.227$

Among states identified in this study as experiencing significant pressure from tort regulation (crisis states), 57.1 percent have undertaken steps to strengthen their CME requirements. This compares to 22.7 percent of all other states (non-crisis). The difference between the crisis and non-crisis groups was not statistically significant.\textsuperscript{47} Thus, it does not appear that crisis and non-crisis states behave differently in regard to adopting CME-related reforms.

**Analysis of steps toward Maintenance of Licensure**

Based upon FSMB documents, publicly available documents from individual state medical boards, academic literature, and open source publications, five states were identified that had established committees, undertaken studies, or conducted official discussions regarding maintenance of licensure or continuing competency issues including MOL. In addition, seven states have participated in FSMB MOL Pilot

\textsuperscript{46} The prevalence is the number of cases with a certain characteristic within a population at a given point in time.

\textsuperscript{47} The t-statistic value of 0.13 did not exceed the critical value for the one-tail 95\% confidence level (1.943) or even for the one-tail 50\% confidence level (0.718).
Table 3. State Steps Toward MOL

<table>
<thead>
<tr>
<th>States with Study / Committee / Statement by Medical Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
</tr>
<tr>
<td>California Medical Board has established a Committee on ongoing competency (H. J. Chaudhry et al., 2012)</td>
</tr>
<tr>
<td>Minnesota</td>
</tr>
<tr>
<td>Minnesota Board of Medical Practice Task Force on MOC/MOL met from Aug. 2006 to Oct. 2008; Found low voluntary participation in MOC and greater need for maintenance of competency; Actively participating in FSMB discussions to develop MOL; Working with University system to provide improved CME (H. J. Chaudhry et al., 2012; Van Etta, 2009)</td>
</tr>
<tr>
<td>Nevada</td>
</tr>
<tr>
<td>Committee formed by NV State Board of Medical Examiners to study assurance of ongoing competency. (FSMB, 2004)</td>
</tr>
<tr>
<td>New York</td>
</tr>
<tr>
<td>NY State Board of Medicine has proposed MOL requirements and held discussions with the state medical society (NCMB, 2010; NYSSPath, 2010)</td>
</tr>
<tr>
<td>Pennsylvania</td>
</tr>
<tr>
<td>Pennsylvania State Board of Medicine has established a Committee on Medical Education/Maintenance of Licensure that continues to meet as of October 2013 (H. J. Chaudhry et al., 2012; PSBM, 2013)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>States with FSMB Pilot Study Participation by Medical Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
</tr>
<tr>
<td>At least one Pilot Study (Physician Acceptability Survey) has been completed and results published (Wojak, 2012, 2013a, 2013b)</td>
</tr>
<tr>
<td>Delaware</td>
</tr>
<tr>
<td>Delaware Board of Medical Practice is publicly silent but is still listed as participating in 2013 AMA report to the House of Delegates (AMA CME, 2013b)</td>
</tr>
<tr>
<td>Iowa</td>
</tr>
<tr>
<td>Two Pilot Studies have been completed: 2012 Communication Plan; and 2013 Physician Survey. Two more (unspecified) Pilots planned (IBM, 2012a, 2012b)</td>
</tr>
<tr>
<td>Massachusetts</td>
</tr>
<tr>
<td>MA Medical Board still listed as participating in MOL Pilot Studies in 2013 AMA report to the House of Delegates (AMA CME, 2013b)</td>
</tr>
<tr>
<td>Mississippi</td>
</tr>
<tr>
<td>MS Board of Medical Licensure still listed as participating in 2013 AMA report to the House of Delegates (AMA CME, 2013b)</td>
</tr>
<tr>
<td>Oregon</td>
</tr>
<tr>
<td>Participation in Pilot Studies is included in the 2012 Strategic Plan of Oregon Medical Board, but with no details (OMB, 2012)</td>
</tr>
<tr>
<td>Virginia</td>
</tr>
<tr>
<td>State Readiness Inventory pilot survey was completed at some point prior to April 2013; Physician Survey conducted in May 2013 (by Med. Soc’y of VA); License Renewal Integration pilot and Communications Plan pilot to be undertaken (MSV, 2013; VBM, 2013)</td>
</tr>
</tbody>
</table>
Table 3 provides information on each of the 12 states that were found to have taken steps toward maintenance of licensure during the study period.

<table>
<thead>
<tr>
<th>CRISIS States</th>
<th>NO State Board Action on MOL</th>
<th>State Board Action Toward MOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td></td>
<td>New York Pennsylvania</td>
</tr>
<tr>
<td>Illinois</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Texas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Virginia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alabama</td>
<td>Montana</td>
<td>California</td>
</tr>
<tr>
<td>Alaska</td>
<td>Nebraska</td>
<td>Colorado</td>
</tr>
<tr>
<td>Arizona</td>
<td>New Hampshire</td>
<td>Delaware</td>
</tr>
<tr>
<td>Arkansas</td>
<td>New Mexico</td>
<td>Iowa</td>
</tr>
<tr>
<td>Connecticut</td>
<td>North Carolina</td>
<td>Massachusetts</td>
</tr>
<tr>
<td>D.C.</td>
<td>North Dakota</td>
<td>Minnesota</td>
</tr>
<tr>
<td>Georgia</td>
<td>Ohio</td>
<td>Mississippi</td>
</tr>
<tr>
<td>Hawaii</td>
<td>Oklahoma</td>
<td>Nevada</td>
</tr>
<tr>
<td>Idaho</td>
<td>Rhode Island</td>
<td>Oregon</td>
</tr>
<tr>
<td>Indiana</td>
<td>South Carolina</td>
<td>Virginia</td>
</tr>
<tr>
<td>Kansas</td>
<td>South Dakota</td>
<td></td>
</tr>
<tr>
<td>Kentucky</td>
<td>Tennessee</td>
<td></td>
</tr>
<tr>
<td>Louisiana</td>
<td>Utah</td>
<td></td>
</tr>
<tr>
<td>Maine</td>
<td>Vermont</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>Washington</td>
<td></td>
</tr>
<tr>
<td>Michigan</td>
<td>Wisconsin</td>
<td></td>
</tr>
<tr>
<td>Missouri</td>
<td>Wyoming</td>
<td></td>
</tr>
</tbody>
</table>

Figure 7. Matrix of States Boards Taking Action Toward MOL

48 The Ohio Medical Board was also to participate in the Pilot Studies, but ended its participation in October 2012 due to vocal opposition by the state medical society and several state specialty societies (OOA, 2013). It is unlikely that it completed the first pilot, a State Readiness Survey, prior to withdrawing as only seven states were reported to have conducted this pilot (VBM, 2013).
A two by two matrix (Figure 7) was used to analyze whether licensing boards in crisis states have acted to strengthen quality through MOL more than those in non-crisis states.

Using the distribution of states within the matrix, the prevalence of board action can be calculated for the crisis states and for the non-crisis states. The calculations were as follows:

\begin{align*}
\text{Prevalence of board action among crisis states} &= \frac{2}{7} = 0.286 \\
\text{Prevalence of board action among non-crisis states} &= \frac{10}{44} = 0.227
\end{align*}

Among the states identified in this study as experiencing significant pressure from tort regulation (crisis states), 28.6 percent have undertaken steps to contribute to the development and implementation of MOL. This compares to a 22.7 percent rate of responsiveness among all other (non-crisis) states. The difference between the crisis and non-crisis groups was not statistically significant.\(^{49}\) Thus, it does not appear that crisis and non-crisis states have behaved differently in regard to taking steps toward Maintenance of Licensure.

**Evidence-based image of state medical boards in crisis states**

Informed by the analytic frame of economic and professionalism theories, it was hypothesized that the recent reforms to strengthen the licensing practices of state medical boards would provide evidence that these professional credentialing bodies are

\(^{49}\) The t-statistic value of 0.008 did not exceed the critical value for the one-tail 95% confidence level (1.943) or even for the one-tail 50% confidence level (0.718).
responsive to pressures from tort regulation. In each of the seven crisis states physicians have experienced strong pressure from malpractice claims and from the costs of insuring against those claims, relative to physicians in other states. These pressures from tort have eroded the profession’s self-regulatory autonomy and the market shelter described by the theory of professionalism. Malpractice crises have exposed physicians to external market and regulatory forces; they have restricted the physician’s ability to practice by making some (high risk) areas of practice untenable, in reality or perception; they have restricted the physician’s freedom in clinical judgment by creating a real or perceived need for “defensive medicine”; and they have eroded the assurance of a “good living” (relative to physicians in other geographic areas or earlier time periods).

Tort is a form of external regulation. Theory suggests that the profession will recognize it as such and will respond by raising the level of quality assured by its professional license, thereby reaffirming its social contract, eliminating society’s need to turn to tort regulation, and reducing the pressure from tort. This responsiveness should be particularly clear in states where that pressure from tort is perceived to have reached “crisis” proportions.

Applied to the reality of the medical specialty, the theoretical reasoning could be stated as:

3) tort is a regulatory response to low quality; and therefore  
4) raising quality standards through licensing will ease tort regulation.

Quantitative evidence fails to provide statistically significant results that would allow us to either accept or reject the null hypothesis. We cannot conclude on the basis of quantitative analysis that those states experiencing a malpractice crisis were motivated to
respond with a strengthening of licensing standards. However, qualitative evidence drawn from the statements of individual medical boards and the Federation of State Medical Boards suggests that these boards do perceive a failure of quality and view the rise of tort as one signal of that failure. Furthermore, the medical boards have sought ways in which to raise quality, redress this failure, and stave off external regulation from both government and tort. Pursuit of this objective, however, has been filtered through a number of “contingencies” – “forces that support or impede…professionalism” – as suggested by Freidson (2001, p. 128). Thus, while the theoretical reasoning may hold, the practical outcome may not fully reflect that reasoning.

Using Ragin’s (1994) model of social research, an evidence-based image of the crisis specialties can be built from the evidence examined above and from broader contextual evidence. This image shows the ways in which practical constraints may impede and obscure theoretical principles, allows the drawing of conclusions regarding the responsiveness of the medical profession to the pressure of external regulation from tort, and offers some policy implications.

**Tort is perceived as a signal of an important quality failure...but it is the quality issue, not tort itself, that must be addressed**

When considered by medical boards, malpractice is fundamentally about quality of care and the failure to meet society’s demand for quality of care. The Texas State Medical Board reflected this perception when it stated frankly that in 2003 it “found itself in the center of the storm of competing interests surrounding medical malpractice and tort reform”, with a major newspaper running “a series of stories depicting the harsh truth that bad doctors were not being adequately disciplined by the board” (Texas Medical
Board, 2004, emphasis added). In 2003, the Medical Board of California undertook a study of malpractice settlements. Their findings, which “did not come as a surprise to the board’s investigation staff” indicated that “[t]here is a correlation between poor medical practice, or at least poor judgment and negligent or careless behavior, and malpractice payments”; or in other words, the “common denominator” of physicians making malpractice payments was that “they were all bad at practicing medicine” (Cordray, 2006).

Others in the regulatory community have gone further by asserting that rising malpractice claims signal a failure of medical boards to assure sufficient quality. When the first crisis emerged in the 1970s, the medical boards’ role in addressing malpractice quickly became a leading topic in the FSMB’s proceedings and its journal (Casterline, 1976; Dornette, 1976). Almost thirty years later, with the third crisis under way, an article in the FSMB’s journal concluded that the “current crisis in the availability and cost of medical malpractice insurance in many states is an indicator something is not right in the balance” between public expectations and professional standards (Deckers, Eberle, & Strongwater, 2004).

Even when the sense of crisis had temporarily waned, the FSMB’s Special Committee on the Evaluation of Quality of Care and Maintenance of Competence concluded: “As evidenced by the rising number of medical malpractice claims, negative media reports, legislative initiative, and criticisms of the overall health regulatory system, there appears to be a public perception that state medical boards could do a better job in handling quality of care cases and assuring ongoing medical competence” (Martin et al.,
1998). This statement reveals a perception of the rise in malpractice claims as one symptom of an important problem, but not itself the central problem.

While the incidence of malpractice claims is deemed important by boards as an indicator for quality of care and board performance, neither the existence of a malpractice crisis nor the financial and practice difficulties it creates for physicians are publicly assigned any particular importance by the boards.

Rarely have boards in the crisis states concerned themselves publicly with the external causes or effects of a malpractice crisis – flaws in the tort law system, disruptive effects of insurance cycles, physician income, or even physician practice viability. The one exception is the New Jersey Board of Medical Examiners, which officially expressed board support for pending legislation to cap non-economic damages in 2005. The board minutes report that the board “voted to support this bill and suggested that the cap on non-economic damages be extended to all physicians and not just those in emergent care context. The Board believed that this was a step in the right direction in achieving global tort reform” (NJ BME, 2005).

The rationale for boards’ aloofness in regard to the malpractice crises and the practical difficulties they may cause practitioners is perhaps explained by the comments of one speaker at the 1991 FSMB Annual Meeting, who reiterated the fundamentally altruistic nature of professionalism. Highlighting the tension between medical practice, which is “concerned with internal goods – the satisfaction that comes with restoring a person to health, or with alleviating human suffering”, and the institutions of medicine (i.e. hospitals, clinics), which “are concerned with so-called external goods like money,
power, status, and prestige” (Tong, 1991), she urged the boards to remember their role: “to keep doctors focused on the practice of medicine” lest their licensees “forget with makes a doctor good as opposed to what it is that makes a doctor successful (i.e. rich and famous)” (Tong, 1991, emphasis in original).

The mandate and self-professed purpose of medical boards is to assure quality, thereby enforcing the social contract between society and the profession. Many facets of a malpractice crisis that have been of central concern for practitioners, specialty boards, policy makers, and the public lie outside the interests of the medical boards.

**State medical boards have expressed and demonstrated a commitment to responding to the failure of quality and, by extension, to the rise in tort**

Issues of quality raised by malpractice claims are, however, relevant. In fact, the failure of quality has raised existential concerns for the medical boards. Assuring a minimum quality of physician care is fundamental to the medical boards – it has been and remains the *raison d’etre* for the institution. The commitment to the boards to this mandate is often reaffirmed. The FSMB’s Special Committee on Evaluation of Quality of Care and Maintenance of Competence concluded in 2000 that “state medical boards are ultimately accountable for the quality of care rendered within their jurisdictions and for the competence of those providing such care” (Martin et al., 1998, p. 43). The sentiment was codified in the watershed 2004 policy statement adopted by the FSMB House of Delegates: “State medical boards have a responsibility to the public to ensure the ongoing competence of physicians seeking relicensure” (FSMB, 2013a).

As quality of care has become a key issue for healthcare providers, policy makers, and the public, many healthcare stakeholders have proposed or developed their own
nascent mechanisms for ensuring competence (Brinkley, 1985; Finocchio & Dower, 2003; Porter et al., 1995). The proliferation of accountability efforts came to pose an existential question for the boards – did the medical boards have any relevance in the late 20th century environment of quality assurance and physician accountability?

Presentations delivered at the annual meetings of the Federation of State Medical Boards and articles published in the FSMB’s journal in the 1990s reflect the search for continued relevance as the broader accountability movement took hold. In 1991, the newly installed president of the FSMB Barbara Schneidman summarized the current state of affairs by stating, “We have continuing deficiencies in the licensure and discipline of doctors in our country – and even more important, we have come to an era of increasing public awareness of those deficiencies and a consequent loss of confidence in our profession” (Schneidman, 1991).

Schneidman (1991) issued a familiar warning, one that has been echoed in the halls of medical self-regulation from the 1970s (Derbyshire, 1972) until the present (H. J. Chaudhry et al., 2013) – the medical profession must regulate itself well or someone else will. A 1993 presentation asserted that as insurers, hospitals, HMOs, and other organizations scrambled to find their place within a developing “quality assurance marketplace…state medical boards are largely out of the loop. They are not in the action…Their experience is seen as peripheral…[others] view boards as having little capacity or even inclination to get involved with complex issues concerning the quality of medical care” (Yessian, 1994). In 1994, Senator John D. Rockefeller, IV, admonished that there was a “real and perceived problem that physicians cannot keep their own house
in order” and that if national licensure was to be avoided, “boards must demonstrate that they can ‘get tough’, that self-regulation can work” (Rockefeller, 1994). And in 1996, the lead article in the FSMB’s journal asked bluntly “Do Boards of Medicine Really Matter?” (Andrew & Sauer, 1996).

In response to this soul searching, the boards and the FSMB have re-examined the strategies that could be employed to achieve their mission of quality assurance. Within the public statements and publicly available documents of the state medical boards and the FSMB is found a commitment to improving the quality of physicians and the care they give (see e.g., FL BOM, 2011b). The boards have expressed an intent and a desire to respond to malpractice claims insofar as the rise in tort is one symptom of low quality or one signal of society’s dissatisfaction with quality.

In states that experienced a third, highly salient malpractice crisis in the early 2000s, medical boards would be expected to feel a particular urgency in strengthening their public assurance of quality. The hypothesized response, based on Freidson’s theory of professionalism, is an increase in the quality standards established and maintained through licensure activities. Quantitative analysis in this study found a low rate of reform activity and no statistically significant difference in the activities of boards in crisis and non-crisis states. Qualitative evidence provides additional insight into why the boards in crisis states have failed to take more active steps and what steps they have, in fact, taken to respond to rising malpractice and the quality failure it signifies.
Strengthening of licensing standards has not been pursued as a primary or immediate response by medical boards in crisis states

While the medical community in crisis states faced a renewed sense of urgency in the early 2000s, this was not their first experience with a malpractice crisis. Thus their response must be set in the context of regulatory responses adopted during earlier crisis periods. In the 1970s, facing rising malpractice claims and the first crisis surrounding malpractice insurance, the state boards did, indeed, act to strengthen their licensing standards. Boards moved away from lifetime medical licensure and many adopted CME requirements for continued licensure (Ameringer, 1999; Derbyshire, 1975, 1976; FSMB, 1999; Gunn, 1999). By 2000, all states required license renewal every one to four years and all but 17 had in place a CME requirement for renewal (AMA, 2000). Strengthening CME requirements to provide greater practice improvement or moving to more continuous assessment of competency through MOL offered the next step in the evolution of medical licensure, but each state faced a different baseline situation and a different political, legal, and policy environment. Each board’s response using CME requirements, in particular, must be considered in light of its starting point as the third malpractice crisis began.

CME requirements

In 2000, as states began to take note of the latest malpractice crisis, the crisis states were distributed across the spectrum of CME requirements already in place. At that time, state CME requirements ranged from zero to 50 hours per year, with a mean of 20.4 hours and a median of 20 hours. The distribution of CME requirements was multimodal, with seventeen states requiring no CME, twelve states requiring 20 hours per year, and
eleven states requiring 50 hours per year. Among the crisis states, Illinois began the crisis period with the strongest CME requirements – 50 hours per year – already in place. West Virginia and Texas were above the media with 25 and 24 hours per year, respectively. Florida was at the median, requiring 20 hours per year; while Pennsylvania, New Jersey and New York were among the states with no CME requirement.

Illinois’ failure to enact additional CME requirement could, therefore, reflect the fact that the state had already adopted some of the strongest reforms in this area, at least in regards to the amount required. There is no publicly available evidence that the Medical Licensing Board considered mandating specific topics for CME.

Texas and West Virginia began above the median amount of CME required, but were not in the top tier. Minutes and board reports from the Texas Medical Board do not indicate that the board considered any increase in CME requirements or mandate of specific topics. West Virginia, however, added a 2008 mandate that 30 of the 50 hours of CME required over the two year license period must be “related to the physician’s area or areas of specialty” (WVBOM, 2013). This reform addressed long-standing criticisms that medical continuing education provided a “flimsy” assurance to the public when it could be met with activities that had no relevance to better practice (Storey, 1978).

Florida’s CME requirements were at the median in 2000, but in 2001 the “prevention of medical error” CME requirement was obtained through legislation (Rogers, 2011). The legislation gave the state medical board responsibility for specifying the content of the error prevention CME course and for identifying biennially the “five most misdiagnosed medical conditions”, which were a statutorily required part of that
content (Rosenberg, 2010). The structure of this CME mandate clearly reflects an intent to reduce misdiagnosis and failure to diagnose, leading drivers of malpractice claims.

In New Jersey, New York, and Pennsylvania no CME requirements were in force prior to the malpractice crisis of the early 2000s. As of 2014, New York is one of only five medical boards that continues to require no continuing medical education, and the only large state to do so (AMA, 2014). By contrast, in 2002, New Jersey enacted legislation that required 25 hours per year for the 2003-2005 biennial licensing period, and increased the requirement to 50 hours per year beginning in 2005 (NJ BME, 2013b). The state thus moved from the bottom tier to the top tier of medical boards in terms of CME requirements. Pennsylvania also adopted new CME requirements, which came into force in 2003. Like New Jersey, Pennsylvania jumped from no CME requirement for licensure renewal to 50 hours per year; however, the effective change on physicians was less significant because the same number of CME hours had previously been required as a prerequisite for physicians to participate in the state run excess liability fund (AMA, 2000). The 2002 statute also mandated that CME include 12 hours per biennium on patient safety and risk management topics. The Pennsylvania CME reforms were part of a much larger package of patient safety measures established by the Medical Care Availability and Reduction of Error (MCARE) Act of 2002. The stated objective of this legislation was to “reduce and eliminate medical errors” and “promote patient safety” as well as to ensure that MPLI was “obtainable at an affordable and reasonable cost” so as to “ensure that medical care is available” in the state (MCARE Act, 2002, Penn. P.L. 154.13,40). Thus, patient safety measures, including CME, were included in the
legislation to balance the tort reform measures that reduced the patient’s reduced access to the courts (Matray, 2013).

Thus, quantitative evidence used in this study finds that there was no statistically significant difference in the CME reform efforts of boards in crisis states and those in non-crisis states. Qualitative evidence shows that the boards in crisis states varied significantly in both their initial CME requirements and their use of CME as a quality response in the early 2000s.

**Maintenance of Licensure**

At the onset of the third malpractice crisis maintenance of licensure was a far more novel approach to quality improvement than CME. The periodic renewal of medical licenses was largely an administrative process and did not involve any evaluation of competence (FSMB, 2004). While the notion of continuing competence had been discussed by the medical regulatory community since the 1970s, it wasn’t until 2000 that the FSMB formally began pursuing MOL (FSMB, 2004, 2013a). In subsequent years, a number of state medical boards initiated efforts, independently or by contributing to the work of the FSMB.

As reported earlier in this chapter, none of the boards from crisis states participated in the FSMB’s 2012 pilot studies to test the feasibility of implementing its MOL framework. However, the Florida Board of Medicine was one of 13 boards that convened as a taskforce in 2008 and in 2009 to assist in evaluating the impact of the framework (FSMB, 2009a, 2009b).
Pennsylvania is one of the states identified by FSMB leaders as having formed a committee to examine the issue of MOL. The referenced committee is the Committee on Medical Education/Maintenance of Licensure (H. J. Chaudhry et al., 2012). No substantive information regarding the deliberations or activities of this committee is publicly-available.

Among the crisis states, the medical licensing board\textsuperscript{50} of New York has perhaps taken the most overt step toward introducing MOL policies. In 2010, the board approached the Medical Society of the State of New York (MSSNY) with proposed MOL requirements to be implemented in 2013. Under the proposal, physicians licensed prior to adoption would be grandfathered; board certified physicians could fulfill the MOL requirement by participating in the specialty board’s Maintenance of Certification program; non-board-certified physicians could demonstrate continued competence through possession of verified credentials and privileges at a JCAHO-accredited hospital; and non-board-certified physicians without such hospital privileges could demonstrate continued competence through completion of 50 hours of CME per year (NCMB, 2010). The heaviest additional burden for physicians under the proposed MOL policy would be equivalent to the existing license renewal requirements in many other states – seventeen other states required 50 hours of CME per year, and 27 states accepted MOC activities to fulfill CME requirements (AMA, 2010b). The MSSNY rebuffed the attempt, however, and persuaded the board to abandon its proposal for MOL (NYSSPath, 2010).

\textsuperscript{50} Recall that New York has separate boards for physician licensing and physician discipline.
While the Texas Medical Board has never proposed adoption of continuous assessments that would meet the “demonstration of competence” standards of the FSMB’s 2010 MOL framework, the board did make an early attempt to achieve a “periodic demonstration of proficiency.” In 2002, the journal of the FSMB reported optimistically on a Texas medical board proposal to require retesting licensees on general medical knowledge every 10 years (Andrews, 2003). The anticipated state legislation never materialized, presumably at least partly due to strong opposition by the Texas Medical Association, also reported in the journal (Andrews, 2003).

The medical boards in the remaining four crisis states have either remained publicly silent on MOL or adopted a wait-and-see position. Neither the West Virginia Board of Medicine nor the New Jersey State Board of Medical Examiners has stated a position regarding MOL. The Florida Board of Medicine identified MOL as one of five key issues “on the Board’s radar” in 2011 (Rosenberg, 2010). While no details were offered regarding implementation of MOL, the other items on this list incorporated areas in which the board has been very actively engaged in recent years. The Illinois Medical Disciplinary Board expressed a slightly more negative position in 2009, when it reviewed FSMB materials on MOL “requirements” and wrote a letter to the FSMB recommending “no further action at this time” (IDFPR, 2009).

In sum, the quantitative evidence used in this study finds that there was no statistically significant difference in the prevalence of steps toward MOL among boards in crisis states and those in non-crisis states. Qualitative evidence shows that the crisis state medical boards have largely taken a wait-and-see posture with regard to the
emerging maintenance of licensure regime; that those that have taken overt steps toward maintenance of competence policies, have done so independently of the FSMB; and that these initial steps have been tenuous and unsuccessful at achieving licensing changes.

In evaluating qualitative evidence of the boards’ responsiveness, however, it becomes apparent that state medical boards have evolved over the past century and certifying the competence of physicians has become more complex than simply validating the training credential and examining the knowledge of the would-be physician. To ignore the full complement of activities used by boards to credibly certify the minimum competence of medical professionals is to take the most superficial evaluation of the boards’ responsiveness.

**Alternative responses: discipline, remediation, and education**

In addition to setting licensing standards for physicians, the state medical boards also have a disciplinary role that can be used to maintain quality standards – a role that has grown significantly since the middle of the 20th century. In their role as disciplinary bodies, medical boards are tasked with examining specific complaints of purported negligence, incompetence, sub-standard care, and breach of professional ethics. These individual disciplinary cases comprise the preponderance of each board’s activity, as evidenced by the resources allocated to investigations and the board time allocated to hearing cases (Bovbjerg, Aliaga, & Gittler, 2006). One FSMB leader stated in 1976 that “unquestionably, the healing arts licensing board forms both the first and last defense against the malpractitioner. The board performs the initial screening procedure during evaluation of his credentials and examination for licensure. The same board later may be
called upon to conduct a hearing leading to possible disciplinary action, *i.e.* it becomes the last defense” (Dornette, 1976, p. 364). It is the role as the last defense that has often become the pointy end of the malpractice issue for medical boards – highlighted in public criticism of the boards, it has both driven the boards to action and offered them a means of taking visible action.

The disciplinary role of the boards has garnered particular public attention because of its easily perceived alignment with the role of malpractice litigation. Both are regulatory means to discipline poor performance by physicians and to remove those that pose a danger to the public. As a result, consumer advocates have criticized medical boards for their reactive approach and the low number of disciplinary actions taken, and have noted their failure to act against potential “bad apples” who have made multiple malpractice payments (Levine, Oshel, & Wolfe, 2011; Public Citizen, 2014).

Most public attention has followed the annual publication of a report by the consumer advocacy group Public Citizen, in which states are ranked based on the number of serious disciplinary actions (license revocation, surrender, suspension, and restriction) using FSMB data. Over the period 1998 to 2011, the median rate of discipline by all boards has averaged 3.24 per thousand physicians.\(^{51}\) Public Citizen has estimated that one percent of physicians likely should be “eligible” for licensure action (Public Citizen, 2014). In the early 1980s, Robert Derbyshire, a leader of medical board reform in New Mexico and former president of the FSMB, estimated that 5 percent of physicians in the U.S. were “incompetent [or] unscrupulous” (Derbyshire, 1983). At the time, an estimated

---

\(^{51}\) Data drawn from the fourteen annual *Ranking of State Medical Boards Serious Disciplinary Actions* reports available at http://www.citizen.org/statemedicalboardsdisciplinaryactions.
0.14 percent of physicians were disciplined per year, according to the first FSMB report of such data, up from an estimated 0.06 percent in the early 1960s (Derbyshire, 1983). The rate of 0.324 percent per year since 1998 is, thus, an improvement but an arguably inadequate improvement.

Public Citizen has bolstered the conclusion of inadequacy by casting light on the boards’ failure to act against physicians who repeatedly face other forms of sanction. In a 2011 report, the organization highlighted states in which physicians with multiple paid malpractice claims, as well as reported restrictions on their clinical privileges, had no licensing actions taken against them by their state medical board (Levine et al., 2011). In fourteen states, Public Citizen found physicians who had made at least 10 malpractice payments between 1990 and 2009 and had at least one clinical privilege report filed, but against whom no licensure action had been taken. Four of the seven crisis states were among this group: Illinois (with 10 such physicians), New York (17), Texas (22), and Pennsylvania (23). In an earlier report on Pennsylvania, Public Citizen cited 13 specific cases of physicians with multiple paid claims reported to the NPDB (ranging from 4 claims in one year to 15 claims in 12 years) but no serious licensing action taken against them (Public Citizen, 2004).

In most states malpractice claim payments must be reported to boards by insurers and must be self-reported by physicians applying for licensure renewal, but this

---

52 Data regarding paid claims and clinical privilege restrictions were drawn from the National Practitioner Data Bank (NPDB). Clinical privilege restrictions can be imposed by hospitals, managed care organizations, or other health care entities. Any revocation or limitation of privileges for a period of more than 30 days must be reported to the NPDB, although under-reporting by such entities is a persistent problem (Bovbjerg, Aliaga, & Gittler, 2006).
information is generally neglected by boards as a source of potential disciplinary cases (Bovbjerg et al., 2006). Boards do not routinely open an investigation when a physician pays a single malpractice claim because a “judgment or settlement in a medical malpractice case does not constitute misconduct in and of itself” (T. P. DiNapoli, 2009). Board officials have “noted that malpractice, even with patient injury, is not the same thing as incompetence. Malpractice is a conclusion about physician behavior in a single accident or incident, whereas incompetence is a continuing status of incapacity or inability” (Bovbjerg et al., 2006). The FSMB and its member boards have recognized that a pattern or accumulation of such incidents should prompt licensing action (Cordray, 2006; NY DOH, 2009; Texas Medical Board, 2004). The imperative to address these “bad apples” is reflected in the Texas Medical Board Executive Director’s statement that “malpractice legal actions cannot remove bad doctors. Only regulatory authority can protect the public” (Texas Medical Board, 2004). In fact, the commitment to increasing disciplinary action permeates the medical board literature from the 1970s to the present. Public watchdogs and legislators concur with the regulatory community’s sentiment but have often been unimpressed by the level of board activity in this regard (Bovbjerg et al., 2006).

Since the 1970s, many boards have worked to facilitate the filing of complaints, to increase the number and speed of investigations, and to expand their regulatory authority. Some boards have achieved large increases in their rates of serious disciplinary actions, including Florida which increased by 230 percent from 1998 to 2001 (from 1.32 to 3.04 per thousand physicians). However, for most boards the activities have not
translated into significant increase in this data point. The reason lies in part in the boards’ preference for “remediating” physicians rather than sanctioning them – a preference that has presented a point of friction between the regulators and their outside observers. Public citizen counts only “serious disciplinary actions” in its ranking of state boards, asserting that it would be inappropriate to include less severe actions such as reprimands, fines, or referral to rehabilitation or educational programs. The watchdog asserts that these actions are only a “slap on the wrist” and does not want to reward a board’s “decision to discipline less severely” (Robeznieks, 2013b; S. Wolfe, Williams, & Zaslow, 2012). Medical boards and the FSMB counter that physicians are an important community asset – one that is in short supply and not easily replaced – and should not be cast aside too casually (FL DOH, 2004). As one medical board official explained, “if we can make a physician better – with additional training or drug and alcohol treatment – then taking a license away doesn’t ultimately serve the community” (Robeznieks, 2013b). Indeed, many boards have focused strongly on the identification and rehabilitation of “impaired” physicians as a means to strengthen their regulation. Beginning in 1971, state boards sought authority under “impaired physician” laws to intercede when there is adequate cause to believe that a physician poses a danger to his or her patients. Boards may compel a physician to submit to an examination, may require participation in a rehab program, and may impose temporary or permanent license restrictions including revocation on the basis of impairment before any patient is harmed. In recent years, many boards have also collaborated with medical societies to identify, confront, and rehabilitate impaired physicians through “healthy physician” programs. Similarly, boards have
recently begun to use remediation in cases of sub-standard care and incompetence by compelling physicians to participate in individualized programs of continuing medical education. The expanded use of remediation suggests that medical boards may be increasing their regulatory impact without increasing their rate of serious disciplinary actions. For example, while the Texas Medical Board has fluctuated between 2.5 and 3.5 serious licensure actions per thousand physicians annually since 1998, the number of lesser “prejudicial actions” taken per thousand physicians per year rose steadily from 1.9 in 2000 to 9.0 in 2010 (FSMB, 2014).

State medical boards have also been criticized for their failure to take action proactively against problem physicians. Boards have traditionally been entirely reactive, acting only upon the lodging of a formal complaint. Most explicitly continue to operate in this way; however, some boards, including two in crisis states, have recently taken steps to be more proactive. The Florida Board of Medicine has developed an extensive program of outreach and education aimed at reducing wrong site/side/procedure/patient surgery – one of the most common medical errors leading to malpractice claims and/or licensing actions. The board has developed operating room procedures for avoiding this type of error, provided operating room posters to remind physicians of the proper procedures, conducted workshops for physicians, and addressed the topic frequently in its outreach and communications to the Florida medical community (FL BOM, 2009, 2010, 2011a, 2012; Governor’s Task Force, 2002; Rosenberg, 2010). The board’s Communication, Education, and Information Committee is working to develop similar education and outreach efforts regarding pain management, another leading topic of
complaints, that can be similarly targeted to physicians involved in pain management (Rosenberg, 2010).  

The New York Board of Professional Medical Conduct (NYBPMC) is also explicitly striving to discipline physicians more proactively. It is among the very few boards that have worked to improve the use of malpractice claims to identify physicians for licensure action. This effort has been undertaken only recently, beginning in 2007 (NY DOH, 2008, 2009).

It should also be noted that the New Jersey Board of Medical Examiners works in coordination with a Medical Practitioner Review Panel, which proactively reviews all malpractice judgments and settlements, as well as adverse privileging actions. All such actions must be reported to the Panel, which considers the possible need for a licensing action. The Panel was created by legislative action in 1989, predating the third malpractice crisis. Although the state was among those criticized by Public Citizen for taking no serious action against most physicians with clinical privilege restrictions, New Jersey was criticized for only one undisciplined physician with multiple malpractice claims (Levine et al., 2011; NJ BME, 2013a).

Qualitative evidence suggests, then, that the medical boards in crisis states, feeling a commitment to respond by raising quality, have channeled their efforts and resources into improved discipline rather than licensure reform, and have emphasized

53 Because diagnostic error is applicable to all physicians, the Florida Board of Medicine has addressed this cause of malpractice claims and licensure actions in a less targeted way through mandatory CME for all physicians.
54 Other states outside the crisis group, notably Massachusetts and California, have also made efforts to utilize malpractice claims for targeted investigation of physicians, and it is anticipated that improvements in IT systems will facilitate the use of malpractice and other data to identify problem physicians by more boards (Bovbjerg et al., 2006).
rehabilitative discipline rather than expelling poorly performing physicians. In this regard they have not differed from medical boards in non-crisis states. Qualitative analysis also suggests that these decisions may be a function of the environment in which the state medical boards operate.

Three prominent explanations for these board tendencies are discernible from the professional literature and from open source media coverage of the boards. First, increasing disciplinary activity was more directly responsive to the public cry for board action. The public salience of malpractice created a perception that there were “bad apples” within the medical profession. Headlines often presented not only the most shocking cases of malpractice, but also the most shocking cases of repeated malpractice by a physician (e.g., Eisler & Hansen, 2013). The public called for medical boards to remove dangerous physicians and the boards have long seen this is a legitimate role for them to play (Cain, 2003). As the Executive Director of the Texas Medical Board stated, “Malpractice legal actions cannot remove bad doctors. Only regulatory authority can protect the public” (Texas Medical Board, 2004). Interest in strengthening this area of activity was also reinforced by the well-publicized work of Public Citizen (Robeznieks, 2013b).

A second explanation for the boards’ focus on disciplinary action rather than licensure reform is the relatively straight-forward nature of increased discipline. It has not been easy for state medical boards to increase their disciplinary activities and establish effective disciplinary mechanisms – the boards have expended a great deal of effort to obtain the necessary authority, resources, and external support. However, the disciplinary
role and processes are easy to see and to measure. Conversely, the concept of maintenance of licensure or other mechanisms for assuring the continued competence of physicians has continued to face forceful opposition from those who contest the validity of competency measures and the effectiveness of proposed activities to build competence in practice. This opposition has been reflected in the anti-MOC and -MOL advocacy efforts and resolutions of state societies, the watchful skepticism of the AMA House of Delegates, and the FSMB’s felt need to compile a compendium of research supporting MOL’s validity (AMA, 2009; FSMB, 2012g; NYSSPath, 2010; OAFP, 2012; PAMED, 2013b; TMA, 2013).

A third explanation for the boards’ preference to expand discipline rather than reforming licensure is the conviction among practicing physicians that MOL in any form will pose an onerous burden upon them. Similar objections were raised when specialty societies began replacing lifetime certification with ongoing Maintenance of Certification programs; however, the voluntary nature of certification made these objections far less vehement. Physicians may choose not to obtain board certification or not to maintain it through participation in MOC. Approximately 20 percent of the physician population holds no specialty certification, and a significant portion of board certified specialists have chosen not to voluntarily recertify or participate in MOC. In the case of licensure, it is not possible to opt out. Thus, concern regarding an excessive burden of compliance has been even more staunch and vocal. Opponents perceive MOL as a threat to their medical license and their livelihood. Opposition to the burden of MOL is most vividly on display in the cautions expressed by the AMA House of Delegates (AMA, 2009); by several state
medical societies including the crisis states of Florida (FAFP, 2013), New York (AAPS, 2013b), Pennsylvania (PAMED, 2013a, 2013b), and Texas (HCMS, 2013).

At the root of all these explanations lie the “institutional contingencies” and constraints faced by state medical boards.

**Contextual factors shape the evidence-based image of licensing boards**

**The effect of “institutional contingencies”**

While this study has sought to identify evidence of responsiveness to malpractice crises by state medical boards – specifically through CME requirements or movement toward MOL – it is vital to recognize that the responsiveness of state medical boards is circumscribed by several important “contingencies”, to apply Freidson’s terminology. State medical boards do not enjoy the complete autonomy of the ideal-typical professional self-regulatory body and in responding to the malpractice crisis (and the larger issue of quality failure) they must contend with legislative bodies, state government agencies, the judiciary, the public, healthcare institutions, organized medicine, and the larger community of physicians (Casterline, 1976, p. 400; Derbyshire, 1983). Qualitative evidence brings to light the various ways in which these institutions have acted to promote or impede medical board responsiveness.

**State legislatures**

“The prime contingency of professionalism is the state and its policies” (Freidson, 2001, p. 128). State medical boards are fundamentally dependent upon the state legislature to grant them authority – or expanded authority – through a medical practice act (FSMB, 2012a). As a political body, the state legislature is subject to multiple
competing lobbying efforts that can block or at least delay legislative efforts. While the medical profession has strong social and political prestige, and its advocacy efforts tend to be very well funded, it has often been pitted against the powerful and well-funded advocacy efforts of trial lawyers and occasionally stymied by public sympathy for the stories told by patient advocacy groups. Legislative action to enhance (or defend) the regulatory power of state medical boards has varied significantly across states and over time.

The New Jersey State Board of Medical Examiners has benefited from relatively early and significant legislative reforms to strengthen its regulatory activities. In 1983, mandatory reporting of privilege restrictions by healthcare institutions was legislated, as well as immunity and confidentiality provisions for physicians who reported colleagues. The Professional Medical Conduct Reform Act of 1989 granted the board additional authority to strengthen remediation efforts (NJ BME, 2013a). The act established the position of Medical Director to review all complaints, which strengthened the position of medicine vis-à-vis civil servants and lawyers within the disciplinary process (NJ BME, 2013a; W. I. Weiss, 1994). Most germane to the malpractice problem (though preceding the third crisis), the act had a strong emphasis on identifying problem physicians. It established the Medical Practitioner Review Panel, which receives notice of all malpractice judgments and settlements as well as any disciplinary actions taken by hospitals or HMOs (NJ BME, 2013a). In turn, the board was required to contribute to open communications by notifying all licensed health facilities of actions it takes against physicians (NJ BME, 2013a). In 2002, when CME requirements were added for license...
renewal, New Jersey also strengthened the physician re-education program and implemented online physician profiles (NJ BME, 2013a).

Most medical boards have been granted additional authority over the past half-century, increasing the specified causes for action against practitioners and allowing boards to act more intrusively to rehabilitate impaired physicians (Derbyshire, 1983). Legislatures have not always relinquished more general control to the boards, however. For example, the Florida Board of Medicine sought unsuccessfully to obtain full control over CME, shifting authority for setting mandated topics from the legislature to the sole purview of board rulemaking (FL BOM, 2009). At times, the expanded authority or mandate has been problematic for boards. In 2005, the Illinois legislature passed Public Act 94-677, which made significant reforms to increase the oversight and discipline of physicians, including giving the board authority to look for and act upon longer-term patterns of practice or behavior that suggest a problem, and doubling the number of full-time investigators for the board (from one per 500,000 physicians to one per 250,000 physicians). Unfortunately, the new mandates were unfunded, putting additional strain on the board and undermining effective implementation.

Medical board reliance upon the state legislature for funding has often proven problematic. In order to expand its activities to strengthen quality in the past half century, each board has had to grapple with constraints in budgets and staffing. Boards may be funded by the state legislature, or by licensure fees and fines collected, or a combination of the two sources. Even those funded by the fines and fees they collect may be required to contribute some portion of those revenues to the state’s general coffers or may be
subject to periodic sweeps by the state government. As a result, lack of adequate funding is a commonly cited reason for weak boards and inadequate regulation (Derbyshire, 1983; Public Citizen, 2014). Interestingly, the criticism of Public Citizen has occasionally proven to be beneficial to boards because the watchdog consistently stresses the importance of adequate funding and staffing. Public Citizen has occasionally provided important testimony to state legislatures urging improved funding (S. M. Wolfe, 2010).

For the Illinois Medical Licensing Board and Medical Disciplinary Board, meager funding has been a perennial problem and has been identified as a key contributor to the functional weakness of the boards. In 2013, with investigative staff having been substantially reassigned to other units within the Illinois Department of Financial and Professional Regulation (IDFPR), the medical boards with support from the Illinois State Medical Society sought legislation to restore $9.6 million of funding previously swept from the Medical Disciplinary Fund into the state’s General Fund (ISMS, 2013). In 2012 and again in 2013 the board sought an increase in medical licensure fees, which had been fixed at $100 per three-year licensure period since 1987 (IDFPR, 2012; ISMS, 2013). While serious disciplinary actions in Illinois have been notably higher since 2004, the Illinois disciplinary board was criticized in 2014 for the type of actions that have dominated its work during this period. Since 2004, about half of disciplinary actions were “reciprocal actions”, taken in response to disciplinary actions against a doctor by the medical board of another state (King, 2014). FSMB initiated its Disciplinary Alert Service for its member boards in 2004, making reciprocal actions even less resource intensive than they had been traditionally (FSMB, 2007). In 2012, more than 100
reciprocal actions were taken, while fewer than 30 disciplinary actions were taken in the more resource intensive medical error cases that originated in Illinois (King, 2014).

Conversely, for the Texas Medical Board, a $200,000 grant from the Texas Governor’s Office in 2002 followed by a 60 percent increase in annual funding beginning in 2003 fueled an expansion of investigative staffing (Schneider, 2005; Texas Medical Board, 2002). Together with major process reforms, the increased resources allowed the board to triple its annual disciplinary actions from 2001 to 2003 (Schneider, 2005). In 2005, additional funding was secured with an increase in licensure fees (Texas Medical Board, 2006). This more recent funding has been of less benefit, however. Seventy percent of the licensure revenues go to the general fund and the 2007 switch from annual to biennial licensure effectively cuts the revenue in half (Hope, 2003; Texas Medical Board, 2006; TMB, 2008). While lesser prejudicial actions continued to grow steadily, serious disciplinary actions in Texas declined after 2005 (FSMB, 2014; Public Citizen, 2014).

Legislation to increase funding – either through budgetary allocation or by allowing an increase in licensure fees – has played a critical role in allowing other boards to strengthen their regulatory activities. The New York State Board for Professional Medical Conduct was allowed a fee increase in 1995 that doubled the resources available to expand and professionalize its disciplinary efforts (NY DOH, 1996). Unlike the Texas Medical Board, the disciplinary board in New York receives 100 percent of the funds from licensing fees (Dube, 2009).
State Agencies

The influence of the state reaches beyond legislative control. Each medical board is, to a greater or lesser degree, integrated with the state agencies. The operation of each state medical board is shaped by its functional interaction with the state government, with most making use of state government staffing for not only clerical, but also investigative activities. The boards are often impeded by government-wide staffing and hiring constraints (Texas Medical Board, 2006; W. I. Weiss, 1994). The subject boards vary in the degree to which they rely upon a state agency for investigative resources. In each state, responsibility for disciplinary rulings is shared between panels of physicians and administrative law judges, with the variety of arrangements reflecting the myriad legal and administrative differences among state government structures.

Because they are public entities, state agencies have tended to support stronger regulation by their medical boards. Concerns regarding malpractice are more often patient-centric concerns that malpractice occurs too frequently and are less often focused on the financial concerns of practicing physicians arising from MPLI costs. However, medical boards do sometimes perceive that state agencies have constrained their ability to regulate doctors – by imposing due process procedures that seem excessive, by vesting too much discretionary power in administrative law judges or non-physician investigative staff, or by under-funding or under-staffing the board. As a result, boards have often sought greater functional autonomy from state government agencies.

In New York, the history of the State Board for Professional Medical Conduct has been one of establishing greater independence from the state apparatus. In 1976, the
disciplinary board was carved from the State Board for Medicine, which handles licensing, and transferred from the Department of Education to the Department of Health. Historically, the medical board operated only in an advisory capacity and all disciplinary decisions by the board continued to go to the state Board of Regents for final decision until 1991, when the board gained full authority over physician discipline (Dube, 2009; NY DOH, 1995). Since that time, the board has involved physicians significantly in every step of the disciplinary process. Physicians participate in the investigation process. Board certified physicians provide expert review in all cases involving clinical practice, and since 2008 board physicians review licensee’s medical records in cases involving impairment (NY DOH, 2009). The results of the investigation are presented to an Investigation Committee, comprised of two physician members and one public member. If a case subsequently goes to a hearing, it is heard not by an Administrative Law Judge (ALJ) alone, as is the case in many states, but rather to another similarly-constructed panel assisted by an ALJ (NY DOH, 1998).

The Florida Board of Medicine fought for many years to assert a similar primacy of physicians over ALJs in the disciplinary process. From the late 1980s, the board experienced a similar multistage shift from one department of the state government to another, through multiple efforts to improve the process efficiency (FL DOH, 2004). In the resulting process, cases referred to a formal hearing are heard by an ALJ alone and the ALJ’s recommended order is then forwarded to the Board for final consideration (FL BOM, 2014; FL DOH, 2004). However, due to statutory provisions, the board did not have the authority to reach a different conclusion than that of the ALJ. Most importantly,
the board could not overrule an ALJ’s finding regarding standards of care, effectively removing from the medical profession the ability to define such standards (Chisenhall, 2011; Shoop, 2007). The medical board physicians were outraged when an ALJ recommended order prevented them from disciplining a physician whom they felt had failed to meet the standard of care, causing the death of a patient (Governor’s Task Force, 2002; Shoop, 2007). The board lobbied actively to win 2003 legislation to (partially) rectify this situation so as to hold members of their profession to a higher standard (CGO, 2007; Chisenhall, 2011; FL DOH, 2004; Shoop, 2007).

While it is generally argued in the literature that independence from the state government promotes more disciplinary action, the influence of the state can also push medical boards toward stronger regulation (S. Wolfe et al., 2012). In the mid-1980s, the Governor of New York proposed requiring periodic re-examination for medical license renewal (R. Sullivan, 1986a, 1986b). The proposal was studied and supported by the Board of Regents – which at that time held authority over both licensure and discipline of physicians – but was never implemented (Lambert, 1988). In 2005, the New York comptroller pressed the disciplinary board to begin proactively identifying cases of potential misconduct using malpractice claims data (T. P. DiNapoli, 2009; T. DiNapoli, 2007). Implementation of the comptroller’s recommendations began quickly and was further reinforced by provisions of the Patient Safety Act of 2008 (T. P. DiNapoli, 2009; NY DOH, 2009).

In Pennsylvania, a unique relationship appears to exist between the State Board of Medicine and the state government, including both the legislature and the executive
branch. The state has long been at the center of the malpractice crisis, with widely publicized concerns about an exodus of physicians and doctors protesting in the streets and on the state capitol steps (A.M. Best, 2002; Bunch, 2002). The state has also often been in the spotlight for its prominent role in the healthcare quality movement. Yet the medical board has remained extremely silent; absent in the public media and the healthcare literature. In a state that has wholeheartedly adopted the systems approach to healthcare improvement, the medical board and its role in regulating physician quality has slipped into a quiet eddy.

Pennsylvania has been an innovator since the 1970s, leading the charge to adopt “first generation” responses to the first malpractice crisis – passing its first tort reforms (many of which subsequently fell to court challenges) and instituting the nation’s first “patient compensation fund” in the Health Care Services Malpractice Act (Kersh, 2005; Matray, 2013). In 1999, the publication of To Err Is Human fundamentally altered the debate in Pennsylvania and in 2002 it adopted some of the first and most extensive “second generation” policy responses to malpractice in the Medical Care Availability and Reduction of Error (MCARE) Act (Kinney, 1995; Matray, 2013). Patient safety and a systems approach to ensuring it took center stage. The Patient Safety Authority (the “Authority”) was established to receive extensive mandatory reporting of medical errors (“serious events”) and near misses (“incidents”) from healthcare institutions, analyze the data, and make practice improvement recommendations to physicians, hospitals, and other healthcare facilities (Rabinowitz, 2007). Serious events are reported simultaneously to the Department of Health (DOH), which houses the medical board, and all information
is available to the DOH for purposes of licensure action (MCARE Act, 2002; QuPS.org, 2014). Individuals involved in the patient safety activities are not required to testify regarding knowledge gained during these activities (Salvatore, 2004).

While the MCARE act allows the medical board four years to act against a physician on the basis of criminal sentencing, licensure actions taken by another state, or paid malpractice claims, all of which must be reported to the board, it does not require the board to act on these reports (Salvatore, 2004).

The number of actions taken by the medical board – both serious actions and lesser actions – did spike in 2004, when the PSA began operating, before settling back to rates just above the norm for earlier years (Public Citizen, 2014). However, whether information submitted to the Authority contributed to this trend is unknown because, as one assessment has concluded, “it is unclear how the DOH obtains information…and it is unclear how the DOH interacts with the Authority in matters of licensure sanction” (QuPS.org, 2014). The state medical board has continued to rank poorly in terms of disciplinary actions taken per thousand physicians, and was among eight worst-performing states in terms of taking action against physicians with privilege reports in the NPDB (Levine et al., 2011; Public Citizen, 2014).

The Pennsylvania State Board of Medicine has maintained a very low profile publicly, and has rarely been mentioned in healthcare policy discussions (Fallk, 2009; Salvatore, 2004; Smullins, Evans, & Nash, 2005). There is no evidence to suggest that

55 When NPDB data used by Public Citizen to criticize the medical board in 2003 was found to be flawed, it was the Pennsylvania Medical Society that championed the board publicly (Jordan, 2003).
the medical board has sought to play a more central role in addressing the malpractice crisis or the larger issue of healthcare quality. In fact, in a 2008 medical board newsletter, then Chairman Dr. Ollice Bates published a telling statement on the “Board of Medicine’s Purpose.” In it, Dr. Bates states pointedly that “it is imperative to understand that we are complaint-driven…We do not police our board-regulated practitioners,” and further that educating practitioners is emphasized “as opposed to sanctioning them”, reporting that the board is “diligently working toward methods of retraining” physicians (Bates, 2008).

**Societies and the Physician Community**

In addition to the contingency of state government, the state medical board must also contend with the profession itself and the way the profession is organized and represented within the state. In most cases, the state medical society plays a significant role in shaping this relationship; but state specialty societies, county medical societies, independent groups of activist physicians, and the broader community of physicians can also affect the relationship. The interaction between the medical board and these other actors within the profession can have significant implications for board responsiveness.

Of primary significance for this study is the fact that in each crisis state, the state medical society has framed the malpractice crisis as a problem emanating from the judicial system, rather than from physician quality (FMA, 2014; Robeznieks, 2013a; Stark, Uhlman, & Loyd, 2003; Washburn, 2002). In Pennsylvania, the medical society took a quiet approach to blaming the judicial system, while a more vocal group of physicians independently raised the bar by organizing doctor protests and strikes (Stark et
The Texas Medical Association – deemed “America’s Best Medical Society” and lauded for its leading role in obtaining the country’s most sweeping tort reform legislation – epitomizes the way in which medical societies have behaved like trade associations in recent decades (Guglielmo, 2001; Nixon, 2013; TMA, 2012). As a result, state medical societies have pushed back against stronger regulation of their members.

It is not clear that physicians in crisis states have responded to their medical boards differently than those in other states. Each group of states offers examples of forceful opposition to MOL or other expansion of medical board regulation. The Ohio State Medical Association has been no less aggressive than the Texas Medical Association. At the same time, in two crisis states (Florida and Pennsylvania), the medical societies have accepted some form of additional regulatory oversight of physicians in return for tort reforms (Governor’s Task Force, 2002; Kersh, 2005).

In four crisis states – Florida, New York, Pennsylvania, Texas – the medical society has adopted a resolution opposing Maintenance of Licensure (AAPS, 2013a; FMS, 2013; HCMS, 2013; PAMED, 2013b). The Medical Society of New Jersey has adopted a resolution opposing Maintenance of Certification, but has remained silent on Maintenance of Licensure (MSNJ, 2013). The West Virginia State Medical Association has remained silent on both. In Illinois, the State Medical Society has remained silent on the topic of MOL, but the Chicago Medical Society – representing the county hardest hit by malpractice insurance costs – brought a 2013 resolution before the state society (Sidney, 2013). The debate by members of the state society as it considered the resolution was reflective of the broader discussion within the medical profession – some
emphasized the contribution to practice improvements and the public’s need for a credible credential of competence, while others argued that the MOC and MOL processes are burdensome and ineffective in improving quality (Sidney, 2013).

Beyond the topic of MOL, the medical community and its organizations have impacted in important ways upon the boards’ regulatory efforts, and their efforts to strengthen regulation. Medical societies periodically pursue legislation that would weaken a board’s regulatory strength, block board efforts to obtain expanded authority from the legislature, or head off such efforts by making their opposition known to the board.

Three years after New Jersey passed its Professional Medical Conduct Reform Act, the board faced an aggressive effort by the Medical Society of New Jersey to raise the standard of evidence needed for licensure action (Swankin & Cohen, 1992). The medical director at the time writes of the challenge of managing “relations with the organized medical community” (W. I. Weiss, 1994, p. 22).

In New York, the periodic re-examination (“recredentialing”) of physicians proposed by the Governor and supported by a government study committee was immediately met with a Medical Society of the State of New York policy statement in strong opposition (MSSNY, 1988). Implementation legislation failed in 1992 (Gabel, 1992). In 2002, 2003, and 2004 physician groups pursued legislation to strengthen due process with such measures as allowing physicians to request an additional public hearing and requiring that successive panels review all facts de novo (NY DOH, 2004; Schlafly, 2002; Wollner, 2004). The legislation passed in 2004 but was vetoed by the governor,
who argued that it would impede the ability of the board to act to protect the public (NY DOH, 2004).

A similar effort was undertaken by physicians in Texas. With increased funding, the Texas Medical Board had effectively begun to address a significant backlog of complaints and over half of its investigations in 2004 were for alleged standard of care violations. In 2005, the Texas Medical Association complained that the board investigations were “heavy handed” and pressed for additional “due process rights” in standard of care complaints to be adopted as part of the board’s sunset review (Schneider, 2005). The additional provisions were not adopted. In 2002, the Texas Medical Board became the first to endorse the concept of periodic retesting for relicensure, but was thwarted by opposition from the Texas Medical Association (Andrews, 2003; FSMB, 2008b; Texas Medical Board, 2002). On several occasions, the Texas Medical Board has emphasized that the objectives of a regulatory body and those of a trade association do not always align.

Meeting the evolving social contract - progressing from training credential to competency credential

The terms of the social contract between the medical profession and the public it serves have changed significantly since the mid-twentieth century. This change has been driven fundamentally by the explosive growth of professional knowledge. Medicine can today deliver vastly more in terms of longevity and quality of life than it could when medicine attained professional status, or even during the profession’s “golden age”. As a result, the public has naturally developed greater expectations. Medicine also carries a much greater potential for harm than it did a half-century ago and the public has
rationally come to demand greater caution and accountability from physicians in return for the trust of the patient. To meet this changing need, the credential of the medical profession has been pressed to evolve in a fundamental way from the “training credential” discussed in the theory of professionalism to a “living” credential – a continuous credentialing process that can reflect the continuous, sometimes exponential, growth and evolution of medical knowledge.

The first steps in this direction were taken by many states in response to the first two malpractice crises. One-time credentialing based on medical training – e.g. completing medical education at accredited medical schools and residency programs – moved toward continuous credentialing with the addition of continuing medical education requirements. However, by the start of the 21st century, states could not simply fall back on CME. While it had been the most accepted approach for three decades and placed a relatively low burden on the boards and their licensees, skepticism about the merit and validity of CME had taken hold (AMA, 2010a; Davis DA, Thomson M, Oxman AD, & Haynes R, 1995; Davis & Willis, 2004; Derbyshire, 1976; Finestone, 1988; FSMB, 1999; Storey, 1978). CME had become insufficient to the task in the eyes of many, but its successor was not evident. As in the case of specialty certification, the lack of established tools for assessing and assuring competency impeded the responsiveness of state medical boards as the third malpractice crisis emerged.

Responsiveness was also impeded by growing friction within the profession. As the regulatory leadership sought more rigorous means to offer the public an assurance of
competency, some segments of the wider physician community opined that society’s
demands – and the proposed efforts to meet them – were a bridge too far.

Those physicians (and physicians’ organizations) that argue against MOC,
generally tag on an opposition to MOL. MOC is perceived to be the immediate battle,
MOL is the next one looming. Like MOC, MOL is seen as a “last straw” that, when
added to the multiple layers of peer review and oversight, will break the back of the
practicing physician. The threat is even more dire in this case. If a physician concludes
that the burden of maintaining specialty certification outweigh the benefits, he or she can
opt not to remain board certified. There is no opting out of licensure. Yet, despite the
often-expressed trepidation and indignation, there is a growing sense of inevitability
among medical boards and practitioners that the medical credential must eventually move
in this direction. The social contract demands it.

The friction between those leading the competency movement and the rank-and-
file of the medical community has had a strong impact upon the pace of responsiveness.
Leadership has proceeded cautiously, cognizant that it must meet a great burden of proof.
The FSMB has worked actively to curate valid research that attests to the practice
improvements to be achieved through MOL activities, has conducted voluntary pilot
studies with little fanfare, and has committed itself to an “evolutionary not revolutionary”
approach. The most responsive state medical boards have had to retreat from early
reforms. Skeptical boards and progressive boards alike have come around to a wait-and-
see attitude, supporting the concept of continued competency in principle but looking to
the FSMB to develop mechanisms, build a case for MOL, and provide guidance and leadership.

Meanwhile, the precise nature of public demands for accountability continues to emerge. While concern regarding “bad doctors” has focused some attention on the responsibilities of the medical boards, the broader public concerns regarding iatrogenic injury reflect a changing public understanding of medical care and have, in some ways, deflected the demand for medical board action. The public has come to view medical care differently since the golden era of medicine. The expectation has shifted from obtaining the personal care of a physician to obtaining healthcare delivery from a large and complex system of institutions. This new environment has implications not only for the practice of medicine but also for its regulation. Public concerns regarding iatrogenic injury, poor health outcomes, and even medical error are no longer directed exclusively at individual physicians and the bodies that regulate them. The post-To Err Is Human focus on systems errors has provided a respite from the focus on physician competence and performance.\footnote{Pennsylvania offers the clearest example of this shift in responsibility, for outcomes and for regulation.} The medical profession has traditionally dominated the healthcare division of labor almost completely and has defended this position of dominance fiercely. However, in the modern era of accountability the profession has begun to welcoming the sharing of accountability, even if that presumes an erosion of the physician’s dominance. The influence of the systems approach to reducing medical error is apparent not only in Pennsylvania’s approach to addressing the malpractice crisis; but also in the adoption of systems-based efforts by medical boards themselves, including specific patient safety and
risk reduction CME requirements, and in boards’ outreach activities such as the “wrong site” programs of the Florida Board of Medicine.

While the systems approach may have eclipsed medical board regulation in many policy discussions, the need for licensure that credibly certifies physician competence has not disappeared. The need to align and balance both approaches toward better outcomes is becoming a more common theme in the literature (H. J. Chaudhry et al., 2013; Linsk, 1990), thus it is unlikely that pressure for the implementation of MOL will wane in the coming years as systems improvements are achieved. As they move forward, however, the medical boards will also need to address a more traditional issue of balance – that of balancing physician quality with the supply of physicians.

**Practical constraints – managing the professional workforce**

Permeating reform discussions amongst the medical boards and the FSMB is the “workforce” issue. The medical profession has always had to address the issue of how many physicians should be trained and licensed. A glut of physicians would undermine the ability of members of the profession to earn a “good” living; while physician shortages prevent the profession from meeting the needs of society and pose problems of overwork for physicians. Workforce concerns have also arisen since the 1970s in regard to physician discipline and are often cited in explaining the medical boards’ preference for remediation of errant physicians whenever possible. As the profession has begun considering Maintenance of Licensure, the practical constraint of maintaining adequate workforce has again been often raised. There is an explicit concern that if medical licensure becomes too difficult – or too burdensome – to maintain over time, then current
physicians will exit the profession and potential recruits will be dissuaded from entering. The conundrum of raising the standards for physician competency yet not reducing the number of physicians has posed yet another challenge for the development of MOL, slowing the responsiveness of the medical profession.

**Conclusion: The evidence-based image of state medical boards and the analytic frame of professionalism theory**

The evidence-based image of medical specialty boards does not support the hypothesis that those facing severe pressure from tort regulation will respond by raising their self-regulatory standards. However, the image that emerged is not discordant with the analytic frame offered by the theory of professionalism. In fact, the evidence did reflect key aspects of the theory of professionalism including (i) a significant concern for assuring quality and for perpetuating professional control over regulation of physicians, (ii) a commitment to balancing physician quality with maintaining an adequate physician workforce, (iii) efforts to improve the integrity of professional quality standards, and (iv) the moderating effect of the “contingencies” on professionalism, as suggested by theory. The theory of professionalism thus offered a valuable analytic frame.

**The hypothesized responsiveness is not confirmed by the evidence**

The variable impact of tort regulation across states in the early 2000s, and the freedom of each medical board to respond at the individual state level, created an opportunity to examine the sensitivity and responsiveness of medical boards. In general, state medical boards have not responded to malpractice crises by strengthening their licensing standards since 2000, either by increasing their requirements for continuing medical education or by moving to implement a Maintenance of Licensure regime.
Among the seven crisis states only New York and Pennsylvania took steps to consider Maintenance of Licensure and only four – Florida, New Jersey, Pennsylvania, and West Virginia – implemented reforms of Continuing Medical Education requirements. In neither case was there a statistically significant difference between the reform behaviors of crisis and non-crisis state boards.

The evidence-based image of state medical boards accords with the analytic frame of the theory of professionalism

The evidence suggests that medical boards have taken relatively little interest in malpractice crises, per se, but have perceived the growing societal demand for quality improvement and the importance of meeting that demand. The FSMB and medical boards frequently reiterate the fundamental mandate to protect the public against inferior medical care and this commitment was explicitly stated in the 2004 FSMB policy statement that “state medical boards have a responsibility to the public to ensure the ongoing competence of physicians seeking relicensure” (FSMB, 2013a). Five of the seven crisis state medical boards have publicly reiterated this commitment to assuring quality and furthermore have often expressed their resolve to retain or reestablish the profession’s dominant role in this regulatory endeavor (Bates, 2008; Governor’s Task Force, 2002; NY DOH, 1998; Texas Medical Board, 2002; W. I. Weiss, 1994). The Pennsylvania and Texas boards have also explicitly stated that their role is to regulate physicians, not advocate for their interests, thus asserting the boards’ determination to regulate without succumbing to capture (Bates, 2008; Texas Medical Board, 2004)
Five of the seven crisis state boards undertook significant efforts to address the societal demand for higher quality, strengthening their regulation of physicians through increased re-licensure requirements (primarily prior to 2000), through increased disciplinary actions, through innovative outreach and education efforts, and through efforts to detect and remediate impaired physicians. A sixth board, that of Illinois, was constrained by perennial underfunding yet made efforts to expand its disciplinary activity by significantly increasing its “reciprocal actions” against physicians that had been investigated and sanctioned by other states. Only the West Virginia medical board did not take publicly reported steps to increase regulation during the study period.

Although only New York, Texas, and New Jersey have taken concrete steps to regulate proactively for physician incompetence, three other states also secured legislative authority to monitor malpractice awards and/or incident reports from healthcare institutions during this period.

While many crisis state medical boards acted to strengthen their disciplinary activities, the evidence gathered in this study reflected the theoretical proposition that the self-regulated profession must and will balance enforcing quality standards against the need to maintain an adequate supply of physicians. Each of the seven crisis state medical boards developed programs for remediation of physicians through treatment for impaired physicians and re-education of other sanctioned physicians. The medical boards in Pennsylvania, New York, New Jersey, Florida, and Texas were particularly dedicated to this effort and commented publicly on their successes.
In addition to the various efforts at increased discipline, New York and Texas also attempted, without success, to adopt some form of maintenance of licensure.

The evidence analyzed in this study also reflected the theoretical proposition that professional responsiveness will be moderated by contingencies, including that of government and the organization of the profession itself. State governments – both legislatures and state agencies – have in three of the seven crisis states acted to restrict or impede state medical board efforts to strengthen the regulation of physicians. The most commonly cited impediment to stronger regulation by all state medical boards (crisis and non-crisis) has been insufficient funding or staffing resources for the boards. In the case of Illinois this contingency has been significant. In Texas, too, state funding has played a role – first boosting the regulatory capacity of the medical board, then later allowing funding to dwindle, curtailing the board’s activities. In addition, three crisis state boards – Florida, New York, Illinois, and Pennsylvania have at times faced limitations on their regulatory power due to their structural integration with their state governments.

The evidence also identifies ways in which the structure of the profession itself has acted as a contingency, moderating the board’s regulatory responsiveness. Publicly available information shows that the larger community of practicing physicians has forcefully opposed stronger regulations by the boards in four of the crisis states – New York, Texas, New Jersey, and Florida.

The evidence gathered in this study suggests, then, that where the specialty boards have failed to strengthen their credential, the reasons are generally found to lie within the “contingencies” suggested by the theory of professionalism. Both government and the
organization of the profession have at times significantly impeded the ability of medical boards to regulate physicians more actively.

As in the case of specialty boards, the theory of professionalism offers a useful, if not complete, understanding of the state medical boards’ less-than-perfect responsiveness to tort regulation.
7. DISCUSSION

Cross-Case Conclusions
The medical profession in the United States has often been recognized as the quintessential example of a self-regulated profession, invested with deep public trust and granted the privilege of self-regulation. The profession has established and controlled two credentialing institutions – mandatory medical licensure and voluntary specialty certification. At its zenith, the professional credential was accepted as a strong assurance of quality and the profession held the trust of patients and society.

Changes in medical science, healthcare delivery, and American society led to an erosion of public confidence in the medical profession and the quality of medical care in the latter half of the twentieth century, however. As a result, malpractice claims, which had once been a rarity, grew into malpractice crises in the 1970s, in the 1980s, and for some areas again in the early 2000s. Tort became a dread risk for physicians, a salient public policy issue, and a threat to medicine’s autonomous self-regulation. Theory suggests that a self-regulated profession will respond to pressure from external regulation, including tort regulation, by strengthening its own credentials. While research has examined the response to tort at the level of the individual physician, little research has been done to ascertain whether the medical profession has responded to tort regulation as predicted in theory.
This dissertation comprised a two-case qualitative case study of the American medical profession that considered the profession’s responsiveness to pressure from tort regulation. Each case considered one of the credentialing institutions of the medical profession – licensing by state medical boards and certification by medical specialty boards. In each case, some credentialing bodies experienced a relatively higher degree of pressure from tort regulation than others.

The case studies examined here have produced an evidence-based image of the medical specialty boards and the state medical boards. Together, the credentials of these two institutions provide the assurance of quality that is demanded by the public and required by the social contract. As society’s trust in the quality of physicians began to waver in the second half of the twentieth century, the theory of professionalism suggests that an ideal-typical profession would respond by raising its credentialing standards. Thus, this study hypothesized that the state and specialty boards experiencing tort regulatory pressure would raise the requirements needed for an individual to obtain medical credentials.

The evidence has not shown the expected responsiveness in either case. Physicians practicing obstetrics-gynecology, neurosurgery, and thoracic surgery experienced a rising number of malpractice claims and correspondingly high and rising costs to insure against such claims. The viability of practicing medicine in these specialties was questioned and alarms were sounded that the public might lose access to care. Yet these specialties did not move more quickly than others to reform their specialty credential. Similarly, in the crisis states, the public and the medical profession were often
assailed with vociferous fears that medical practice was not viable, that doctors would soon flee the state, and that access to care was in jeopardy. Yet the medical boards in those states did little to strengthen their requirements for license renewal and less to adopt Maintenance of Licensure.

Considering a richer universe of qualitative evidence, however, revealed that both the state medical boards and the specialty boards were very aware of society’s demands for higher quality and the need to meet those demands. The signaling effect of tort regulation was diluted by the fact that the malpractice crises were driven not only by medical quality, but also by insurance cycles and changes in the medico-legal environment. Tort was, nonetheless, among the signals of society’s quality demands that were noted by leaders in the medical profession. Further, the state medical boards and specialty boards did demonstrate responsiveness to the demand for quality, but did not turn to changes in the credentials as the primary mechanism. Rather, the state medical boards looked to removing dangerous outliers in the physician population, and both the state and specialty boards often explored ways to reduce medical error through the systems-based approaches that had newly come to the fore in policy circles.

The evidence-based image of the medical profession’s credentialing institutions that emerged from the study did not match the *idealypical* profession of theory. However, these institutions did exhibit the key traits of professionalism – dedication to quality, altruistic service to the public, and awareness of the social contract that the profession must fulfill if it is to retain the privilege of self-regulation. The analytic frame offered by the theory of professionalism serves to bridge the remaining gap between the
ideal-typical and the reality because it acknowledges the existence of important “contingencies” that shape the degree to which professionalism can be achieved in the real world.

The primary contingency is the state and its policies, and it is apparent from the evidence-based image of the American medical profession that this contingency has strongly influenced the profession and its response to tort regulation. The impact of the state has been most clearly seen in regard to the state medical boards. Both state legislatures and state agencies have often constrained the efforts of the medical board. A lack of adequate funding and a lack of adequate staffing generally top the list of reasons for weak or ineffective boards. Additional frequent constraints include a lack of independence from the state government, and statutes that set the evidentiary bar too high for disciplining physicians. Boards at times have found their disciplinary efforts frustrated by legal standards of proof that prevent them from upholding a high professional standard of competence. In other cases, state disciplinary processes place significant adjudicatory powers in the hands of administrative law judges, weakening the power of the medical board itself to determine physician competence.

The state has also had a broad impact upon the way in which medicine is practiced in the United States and upon the transformation of the healthcare environment. As the low quality of health outcomes and the high incidence of medical errors have come to light, the high public salience of these issues has attracted great interest from the federal government. The very real threat of government licensure has been raised periodically by both Congress and federal agencies. Government healthcare payers
responded with attempts to incentivize quality improvement and regulation, with private
payers often following suit. By encouraging and supporting multiple accountability and
oversight innovations, the state has contributed significantly to the perception among
practicing physicians that they are already over-regulated and their clinical freedom is
under siege.

The “institutional sphere”\footnote{See Freidson (Freidson, 2001, pp. 159–161).} in which medicine is practiced has changed
significantly, and while this larger context lies outside the scope of this study, it is
important to note that the instability of the healthcare system and the resulting insecurity
of physicians has impacted upon the actions that medicine’s institutions were able to take
in response to the rise in malpractice claims. In this environment, MOC and MOL
activities have been opposed by many in the medical community who felt that the time
and cost required was too great a burden and that too many burdens had already been
born in the name of “accountability” and “quality improvement”. The activities of the
state, then, may have amplified the effects of the second contingency discussed in the
theory of professionalism – the profession and the way in which it is organized and
represented.

The larger community of physicians and the organizations that give them voice
have strongly curtailed the responsiveness of both the state medical boards and the
specialty boards. While the American Medical Association (AMA) has remained
cautiously watchful of MOC programs and MOL proposals, state and county medical
associations have often clearly stated their opposition to MOC and/or MOL in official
resolutions and policy statements, and have occasionally worked actively to prevent MOL or even the integration of MOC into existing requirements for licensure. The Association of American Physicians and Surgeons, a competitor to the AMA, has sued both the Texas Medical Board and the American Board of Medical Specialties (ABMS) for their regulatory activities. Practicing physicians have also “voted with their feet”, choosing not to re-certify or participate in MOC. It is noteworthy that medical specialties have also pushed back against efforts to incorporate MOC into MOL, working to ensure that such proposals will not overtly or inadvertently make specialty certification a requirement for the practice of medicine.

This competency movement has amplified the normal friction that exists between the leadership of a profession and its practitioners. The theory of professionalism speaks of the “faculty”, those among the profession who devote themselves to work that “encourages the systematic refinement, growth, and legitimation of their discipline”, who carry out their charge “without having to gain a living by dealing with the practical, everyday problems posed by consumers or employers” (Freidson, 2001, p. 98). The leaders of the Federation of State Medical Boards (FSMB) and the ABMS can rightly be included in this notion of faculty. Their organizations are not mere trade associations, advocating for the interests of their members. Rather, these organizations, like the institutions that train recruits for the profession, are fundamental to the codification and operationalization of the social contract between the profession and society. Thus, when the theory of professionalism discusses the development of “special intellectual

---

58 Most noticeably in the case of Ohio, where a coalition of state, county, and specialty societies brought a halt to the medical board’s planned participation in FSMB pilot studies of MOL.
perspectives and interests [among faculty] that are different from those of the practitioners it trains” and notes the inherent “tension and conflict” between those who cultivate the professional knowledge and those who put that knowledge into practice, the relationship between the thought leaders in the continuous competency movement and the practicing physician is cast in a clear light (Freidson, 2001, pp. 99–100). The tension has often run high, with practitioners impugning the legitimacy of leaders who do not have to deal with the constraints and demands of practice. Perhaps it has never been more accurate to note that the profession’s leadership “advances more stringent and up-to-date standards for practice than most [practitioners] are able or even willing to meet” (Freidson, 2001, p. 100).

One stream of opposition by practicing physicians has been the unproven nature of the proposed regulatory measures. Behind this objection lies the seemingly-intractable problem of how to measure physician competency. There is an interesting gap in professional knowledge – the knowledge of how to assess the quality of its own members. This knowledge is fundamental to the concept of professional self-regulation, which assumes that (only) the profession can make such an assessment. What happens when even the profession cannot accurately judge the quality of its members? Accepting the notion that medical care is a credence good, the means of measuring physician competence will have to be developed by members of the profession. A good many faculty, in the broader sense used herein, are now engaged in developing this area of professional knowledge. This work is taking place in the FSMB, the ABMS, and the profession’s training institutions. It is also taking place in non-medical university
departments, government agencies, and healthcare institutions not controlled by the profession. The involvement of institutions that are not under the control of the profession does not necessarily remove the medical credential outside the control of the professional. As Freidson explains, even when policy decisions regarding a profession are taken by governments, they are generally shaped by members of the profession working with or for the government. The theory of professionalism presumes that the profession will establish a way of judging the fitness of prospective members. Freidson stated that when work “is especially complex, specialized, and discretionary, a considerable amount of time and money may be expended before [the consumer] can reach a secure judgment about the way in which it has been performed” (Freidson, 2001, p. 81). It is fair to assume that for the profession, too, the creation or evolution of a credential will take effort. Society’s demand for this knowledge has emerged more quickly than the knowledge could be developed.

In myriad ways, the contingencies on professionalism have moderated the responsiveness of the medical profession’s credentialing institutions, reducing the degree to which these bodies approximate the ideal-type described in theory. The evidence-based image of the American medical profession that emerges is not the image of an ideal-typical profession, cognizant of and dynamically responsive to any threat of external regulation (tort or otherwise). The more nuanced image that emerges from qualitative evidence informed by the analytic frame of professionalism does, however, comport with the theory of professionalism, which accounts exceptionally well for various
contingencies, their moderating effect on professionalism, and the “empirical variation” that will exist in the real world.

The theory of professionalism is intended to provide “a stable point against which empirical variation and process can be systematically compared and analyzed” (Freidson, 2001, p. 5). In this study the theory of professionalism has provided an analytic frame that has informed the synthesis of a nuanced evidence-based image of the medical profession. It has facilitated a dialog between ideas and evidence, as described by Ragin’s model of social research, producing a clearer and more informed representation of reality that can help shape policy decisions.

**Limitations**

Two factors have created notable limitations on this study – a paucity of data and the complexity of the healthcare environment. Data is not widely available regarding the activities of the institutions of medical self-regulation. While state medical boards are part of their respective state governments much information regarding their deliberations is protected. Information regarding specific complaints is protected, of course, to preserve the privacy rights of the physician(s) and others involved. In all states, medical boards are allowed to close portions of their meetings to protect the privacy of those physicians who come before the board for licensure or disciplinary decisions. In many cases, the broader proceedings of the medical board, including policy discussions, may also be protected due to their sensitive nature. In some cases, almost no information about the work or deliberations of a medical board is published publicly. Due to the variable and often
limited availability of information, a more detailed image can be synthesized for some medical boards while others remain highly opaque.

The relative openness of the FSMB has made it possible to some degree to overcome the paucity of information regarding individual state boards. The FSMB has developed publicly available policy guidance on best practices for medical boards, as well as white papers on key issues facing state boards. All quarterly newsletters and annual reports since 2010 are available, as are summary reports from symposia that the Federation has convened. The FSMB has also made every issue of its journal publicly available online.\(^\text{59}\) The journal contains editorials from FSMB leadership and articles authored primarily by officials from the state medical boards. Its content provides a rich source of insight regarding the evolution of important issues and policies and occasionally details the reform processes undertaken by individual state boards.

As private member-based organizations, the medical specialty boards are not legally required to make their documents or data publicly available and are highly opaque. The ABMS, too, makes little information publicly available. There does exist, however, a large amount of non-primary source documentation that sheds light on these organizations. Each specialty has at least one dedicated journal in which key issues and positions are discussed. Officials from specialty societies and specialty boards submit frequent editorials, presidential addresses, and articles on policy matters to specialty-specific and other journals. In addition, because the FSMB is a member of the ABMS, the FSMB journal has published reports of some ABMS meetings. Thus, the availability of

\(^{59}\) Currently titled *The Journal of Medical Regulation*, the journal has been previously titled the *Federation Bulletin*, and later the *Journal of Medical Licensure and Discipline*. 

183
non-primary source information partially addresses the scarcity of primary-source information, but the need for inference and the remaining gaps in information limit the richness of the evidence-based image and create the potential for inaccuracies.

The complexity of medical regulation and the revolutionary changes to the healthcare environment also posed a challenge for the study, particularly in regard to internal validity. The environment in which medicine is practiced has since the 1960s been characterized by constant and significant change. As a result, the number of confounding factors for this study is significant. Changes in oversight and accountability, practice structure, remuneration and incentives all have an impact upon the willingness and ability of the medical profession and its members to respond to tort regulation as a call for higher quality. Furthermore, while the variable impact of the malpractice crises on different states and specialties creates an opportunity to consider the profession’s responsiveness to tort regulation, unobserved differences across states and specialties present significant confounding factors. The legal, economic, and regulatory environment differs greatly from state to state. Similarly, the practice characteristics of various specialties differ greatly, confounding the association between tort pressure and reform of specialty credentials. In sum, the many differences across states and specialties and the many changes in the health care environment produce a number of “comingled rivals”\(^{60}\) for explaining the variable speed of reforms.

The complexity of medical professional liability and the malpractice crises has also posed a difficulty for internal validity. Malpractice crises are driven by more than

---

\(^{60}\) See Yin (2009, p. 135).
just incidents of malpractice. To the degree that a malpractice crisis is a function of insurance cycles, they are a poor proxy for societal demands for higher quality. The fact that the medical profession in general – and particularly those physicians in the crisis specialties and crisis states – tended to frame the crises as a function of malpractice claims allowed the researcher to accept the crises as a reasonable – though certainly imperfect – proxy of society’s concerns.

Qualitative analysis and triangulation of evidence from multiple sources have been used in this study to address the confounding forces and to offer a nuanced analysis of responsiveness within this complex context.

This study of the American medical profession offers results that can be generalized to the theory of professionalism; however, the contribution of the study in terms of strengthening the theory are limited somewhat by the fact that theory itself has been primarily informed by studies of the American medical profession. Case studies of other professions in other environments will pose a more challenging test of the theory. Nonetheless, the evidence and the theory have benefited one another mutually and the study has produced insights that can inform related policy matters in the United States.

**Policy implications**
This study offers modest but valuable insights with several policy implications. The efficacy and responsiveness of medical professional self-regulation holds great importance for the policy issues of public safety and healthcare quality. The medical profession has been entrusted to assure the quality of medical doctors, but little previous research has been conducted to evaluate the profession’s responsiveness when society
finds its quality assurance unsatisfactory. In providing a qualitative image of medical regulatory institutions, this study identifies a number of ways in which public policy can impact upon both responsiveness and quality assurance. The dissertation showed that while state medical boards are adamant about their public safety mandate, their ability to meet that mandate is greatly impacted by state policy makers. Through amendments to state medical practice acts, legislatures can grant medical boards the authority needed to strengthen medical regulation or they can undermine the medical board’s ability to hold physicians to a high professional standard. Both possibilities are illuminated by the history of the Florida board.

In addition, state governments’ allocation of resources, including funding and qualified staff, have a fundamental impact upon medical regulation. The findings of the study reinforce the concerns raised by the consumer advocacy group Public Citizen regarding chronic underfunding and its dilatory effect on regulatory activity. The study should serve as a caution to state governments that insufficient or insecure resource allocation, as well as statutory restrictions on a medical board’s authority to increase its own fee revenues, can have serious implications for the quality of medical care received by the state’s citizenry.

This study also showed that state medical boards balance their public safety mandate against the need to maintain an adequate physician workforce, as reflected by the boards’ strong preference for remediating rather than removing problem physicians. While this is a legitimate balancing of objectives, addressed by the theory of professionalism, it suggests that third party oversight by government or non-
governmental watchdogs may have an important role to play in assuring that the balance meets society’s needs. New York offers a model in which statutory authority and adequate funding drove an effective program of monitoring for probationary violations and recidivism among physicians referred for remediation.

More generally, the government’s ability to catalyze regulatory improvements was evidenced in the effects of the 2005 Comptroller’s report in New York and the 2002 Governor’s Task Force report in Florida.

This research also found that there is some capture of the medical regulatory bodies, particularly specialty boards, but that public policy can help reduce this capture. As member-based organizations, issuing voluntary credentials, the specialty boards must preserve the support of the physicians they certify, placing downward pressure on quality standards; yet the boards’ standards for certification are vitally important for the quality of medical care in the United States. The case of neurosurgery, in particular, suggests that policy makers can incentivize higher standards by these institutions by building the value of certification for practicing physicians.

**Future research**

This study suggests the need for further research regarding medical self-regulation in the U.S., particularly in the case of the state medical boards. Each state medical board has developed and operated within a unique legal, institutional, and political environment. These circumstances offer fertile ground for increasing our understanding of medical professional self-regulation through the conduct of extensive case studies.
Single-state case studies would benefit from supplementing the extant data with evidence collected through surveys, interviews, and ethnographic observation. This use of additional mixed methodologies could provide a greater depth of insight and produce rich and valuable conclusions. State case studies could also apply a variety of analytical frames drawn from political, public policy, and organizational theories, as well as from medical sociology. When combined with the evidence produced by expanded data collection methods, a highly refined representation of these bodies could emerge.

If such single-state case studies could be replicated in numerous states, inductive analysis could distill additional important conclusions regarding the larger institution of medical professional self-regulation.

Additional research is also warranted to better understand and evaluate the theory of professional self-regulation. Conducting similar qualitative explorations of other professions such as academia or law could provide new insights into the mechanisms of professional self-regulation that have developed, their effectiveness, and the effects of various contingencies across professions. Such study would also serve to test, interpret, and refine the theory of professionalism.

Further research into the nature and operation of medical self-regulatory bodies could inform not only federal and state policy-makers, but also policy-makers within the medical profession itself. The insights gained could suggest reforms that would advance the cause of effective self-regulation, strengthening the social contract between the
medical profession and society and the benefits of the social contract for both parties. It is hoped that the present study will serve as the first step in this direction.
APPENDIX A: IDENTIFYING CRISIS SPECIALTIES

The first credentialing institution to be examined in this study is that of medical specialty certification.

Evidence of tort pressure used for the selection of crisis specialties was drawn from the years 1985 to 2008. Specialty-specific data were not publicly available for years prior to 1985. By 2008, the most recent malpractice crisis had ended and pressure from tort regulation had subsided. Only 23 of the 24 ABMS member boards will be considered in this study, as the American Board of Medical Genetics did not begin certifying physicians until 2009.

Evidence of relative pressure from tort upon specialties was sought from:

1) specialty risk ratings;
2) malpractice insurance premiums relative to other specialties and relative to average physician income;
3) relative frequency of claims; and
4) the salience of specialty-specific concerns regarding malpractice, as expressed by coverage in the medical literature.

In this chapter, each source of evidence will be described and analyzed to arrive at a list of crisis specialties for the purposes of this study.

Description of Evidence Used

The frequency and severity of claims against physicians and the cost to physicians of insuring against malpractice claims are the most common indicators of the pressures placed upon physicians by tort regulation, and have been used by other researchers to
establish the “malpractice climate” (Patricia M. Danzon, Pauly, & Kington, 1990). The first three sources of evidence provide this information. For this study, the perception of “crisis” or a feeling of concern regarding tort pressures is also relevant because the perception of a problem can lead a specialty to respond. The fourth source of evidence addresses the perception of tort pressure.

**Specialty risk ratings**

By definition, a “high risk” specialty will be subject to a greater frequency and/or severity of malpractice claims, will therefore pay higher MPLI premiums, and will generally be more significantly impacted by a malpractice crisis. Malpractice insurance actuaries calculate a risk class or factor for each specialty, but these ratings are proprietary and are not available to researchers. The Centers for Medicare and Medicaid Services (CMS), however, has undertaken an extensive process to replicate insurers’ risk assessment. In the process of developing the Medicare Physician Fee Schedule, which includes reimbursement for physician malpractice insurance costs, CMS used a rigorous methodology to establish “risk classes” for medical specialties (“69 FR 66236,” 2004; AMA, 2004). These risk classes were explicitly developed to approximate the proprietary risk classes developed by malpractice insurers and used in insurance rate setting. Like insurers, CMS assigned each specialty a surgical risk class and a non-surgical risk class. CMS risk classes were published in 2004 and updated “risk factors” were published online in 2012. Because CMS calculated its risk classes for initial use in 2000, and

---

61 Indeed, to ensure their accuracy, CMS mapped its risk classes against those used by St. Paul Companies, which had long been a prominent malpractice insurer but had recently exited the medical malpractice market.
because CMS calculates its geographic premium indices on the basis of premium data from four years previous, it can be expected that the risk classes and risk updates correspond to the premiums that were paid by physicians in approximately 2000 and 2008, respectively.

For this study, the specialties governed by 23 ABMS member boards were crosswalked to the specialties identified by CMS. The risk classes/factors were than used to categorize each ABMS specialty as low-, medium-, or high-risk.

**Strength:** Rigorously developed specialty risk classes offer a valid mechanism for identifying specialties as “low risk”, “moderate risk”, and “high risk”. This risk taxonomy serves as a proxy for an “impact” taxonomy – low risk specialties are less impacted by a malpractice crisis than high risk specialties.

**Weakness:** While low risk specialties are less affected by malpractice crises than high-risk specialties, the impact of a “crisis” will not be distributed in a smooth gradient across risk classes. Because of this, the risk rating may be a less-than-perfect proxy for the impact of a crisis.

**Malpractice insurance premiums (i) relative to other specialties; and (ii) relative to physician income**

Premium data for malpractice insurance (“medical professional liability insurance” or “MPLI”) offers evidence of the relatively higher impact of tort upon some specialties. Because malpractice premiums are “community rated” rather than “experience rated”, the link between the quality standards of the specialty and the premium levels is particularly cogent.

---

62 See the discussion of CMS’s Geographic Practice Cost Indices (GPCI) in Chapter 6.
The corresponding income data provides further evidence of the unequal distribution of malpractice impact. If a high-risk specialty pays higher MPLI premiums but also produces a significantly higher income, then the high-risk specialty may not feel any appreciably greater degree of pressure from tort regulation.

Due to limited data availability, the premium and income evidence were examined using three representative specialties: internal medicine represents a low-risk specialty; general surgery is a representative middle-risk specialty; and obstetrics-gynecology serves as the representative high-risk specialty. These specialties are widely used as representatives of the risk categories in the literature. Furthermore, the risk category of each is supported by the previously discussed risk factors assigned to each by the Centers for Medicare and Medicaid Services (CMS).

For the period 1985 to 2000, the study uses data collected by the AMA’s Socioeconomic Monitoring Survey and published in the Statistical Abstract of the United States, 2000 and 2004-2005 editions (US Census Bureau, 2001, 2005). The AMA survey was conducted annually through 1998. No data were collected for 1999. AMA data for 2000 is drawn from its 2001 Patient Care Physician Survey. Data from the Statistical Abstracts includes the mean annual liability premium and the mean net income for the three representative specialties of obstetrics-gynecology, surgery, and internal medicine. Constant rates of change were projected between 1998 and 2000 to address the 1999 gap in the data.
Data for 1985 to 2000 was plotted to establish the relative costs of malpractice insurance for the three representative specialties and to examine the magnitude of these costs relative to each specialty’s average income.

Unfortunately, the AMA did not collect socioeconomic data over the full period of this study. For the period 2001 to 2008, this study makes use of premium data collected from insurers and published by the Medical Liability Monitor for the period 2000-2008 (MLM, 2012). Comprehensive rate data is largely unavailable as there is little public disclosure of proprietary risk ratings and premium information by insurers (GAO, 2003a). The Medical Liability Monitor (MLM) conducts an annual rate survey and publishes the base rates of each major insurer by location for obstetrics-gynecology, surgery, and internal medicine (MLM, 2012). For example, for each insurer selling MPLI in the state of Colorado or in the Miami metropolitan area, the base rate for each of the three specialties is listed. This rate would be the advertised annual premium for a policy that covers a maximum of $1 million per claim and a maximum of $3 million per year, generally referred to as “$1million/$3million” coverage.

The MLM survey does not offer aggregate data and does not provide the market share information that would allow weighted aggregation of this data to produce an average premium for each specialty in each geographic market. To derive useful evidence from this data, localized ratios were generated to compare the premium costs and the premiums relative to income for the three representative specialties. For each geographic

---

63 Premiums are for standard coverage and are adjusted for mandatory contributions to Patient Compensation Funds in states that have established them. The claims-made base rate may differ from the rate actually paid by a physician, as it does not reflect any discounts or additional charges assessed for an individual practitioner.
area, all premium rates offered for each specialty were averaged to produce an average premium available on the market. This is not an average premium paid by physicians in the locality, but does offer some indication of the local market price. Many other researchers have also used the MLM data (e.g., P.M. Danzon, Epstein, & Johnson, 2004; Kilgore, Morrisey, & Nelson, 2006; U.S. General Accounting Office, 2003). In fact, it has been recognized that the MLM survey has been “the source of nearly all data in scholarly articles and reports by government agencies” for this period (Rodwin et al., 2006).

Income data for the 2001-2008 period is drawn from the Occupational Employment Statistics Survey of the U.S. Department of Labor’s Bureau of Labor Statistics (BLS). This data is available for specific medical specialties at the county and metropolitan area level, making it possible to match it geographically to the MLM data, however there are many gaps in the data.

For the post-2000 period, ratios were used to compare the average premiums available to the specialties in each state or metropolitan market. Corresponding income ratios were also generated. County level BLS data was used to produce average incomes for the specialties for the metropolitan, county, and multi-county areas used in the MLM data. Informed by the relative premiums and incomes found in the 1985-2000 data, pairwise comparisons were made for obstetricians versus internists and for obstetricians versus surgeons.

**Strength:** Because malpractice crises are generally defined by high MPLI costs, the variation in premium costs between specialties – particularly relative to
physician income – offers strong evidence of the variation in impact upon
different specialties. The AMA survey data for 1985-2000 is particularly useful as
income and premium data is collected from a single sample of physicians. The
MLM data, while inappropriate for statistical analysis, offer highly detailed
evidence of uneven impact of tort upon different specialties.

Weakness: No single source of data is available for the entire period of study, thus
the 1985-2000 evidence cannot be compared directly to the evidence for the post-
2000 period. The MLM data, while widely used by researchers, suffers from two
important flaws. First, the rates listed are the *advertised* base premiums of each
insurer, not the actual rates paid by physicians. Liability insurers increasingly use
discounts to compete for business and to encourage risk-reduction practices by
covered physicians, such that physicians often pay a lower premium for standard
coverage. Furthermore, physicians often purchase additional coverage above the
standard $1million/$3million policy, such that physicians’ total cost of coverage
would be higher. Unfortunately, there is no source of data regarding the premiums
actually paid by physicians since 2000. The second weakness of the *MLM* data is
that, while all major insurers in each state are included, the market share of each
is not disclosed. A weighted average premium would give a more accurate picture
of the insurance costs borne by physicians. Nonetheless, with the use of localized
ratios, the data still serves to indicate the price levels available in the local
markets for MPLI and sufficiently indicates the *relative* pressures faced by
physicians for this study.
Relative frequency of malpractice claims across specialties

Specialty-specific claims data is not publicly available from the National Practitioner Data Bank (NPDB), the central repository of claims data. Most analysis of claims frequency in the literature uses proprietary “closed claims data” from a single insurer, and specialty specific results are rarely published. One widely-cited study published in the New England Journal of Medicine, however, offered a rare piece of evidence that could be used to inform this research. The authors studied closed claims data for 1991 through 2005 from a large, nationwide provider of MPLI and analyzed the annual proportion of physicians who faced a claim and the annual proportion who had a paid claim, by specialty (Jena, Seabury, Lakdawalla, & Chandra, 2011). The ordering of specialists according to their likelihood of receiving a claim in any given year provides additional evidence regarding the uneven distribution of malpractice claims across specialties.

**Strengths:** The likelihood of facing a malpractice claim is an important factor in perceiving a malpractice crisis. The study by Jena et al offers a rare and useful piece of evidence for identifying which specialties have been “hardest hit” by tort regulation.

**Weakness:** The study by Jena et al analyzes closed claims data from only one insurer, albeit a large insurer with nationwide coverage. Furthermore, the specialties used in the study by Jena et al do not correspond precisely to the ABMS specialty boards.
**Specialty-specific discussion of malpractice in peer reviewed journals**  
A sense of crisis can be both reflected in and fueled by frequent discussion of a problem. This is particularly true for specialties that are often cited specifically as examples in the malpractice literature. To gauge the level of discussion regarding malpractice for each specialty, a PubMed search was used.64 Multiple searches were conducted on December 5, 2013, each using the MeSH Term "malpractice", the date of "1970 to present", and the MeSH Term for each board specialty. In the absence of a "family medicine" MeSH Term, the MeSH Term "physician, general practice" was used. In the absence of MeSH Terms for "diagnostic radiology" and "radiation oncology", these phrases were used as full text search terms. Two searches were performed to gauge the number of articles relevant to the American Board of Obstetrics and Gynecology. One search used the MeSH Term "obstetrics"; and a separate search used the MeSH Term "gynecology" and excluded the MeSH Term "obstetrics".

**Strength:** PubMed searches are widely used to conduct meta-analyses and offer a useful indicator of the volume of scholarly publications on medical topics.

**Weakness:** The search results are not restricted to articles that identify a problem and, indeed, include many articles that rebut the perception of “crises”.

Nonetheless, the search does indicate the salience of the “malpractice issue” and serves its role satisfactorily for this study.

---

64 PubMed.org is the online catalogue of the National Library of Medicine (NLM). “MeSH” terms are the NLM “Medical Subject Headings”, a “controlled vocabulary of biomedical terms that is used to describe the subject of each journal article” (NCBI, 2013).
Analysis of Evidence

Each piece of evidence described above was analyzed to produce a list of “crisis specialties.” The sequence of analysis was as follows. Specialty risk ratings were first analyzed to arrive at an initial sorting of the specialties into low-, medium-, and high-risk categories. Second, the relative frequency and severity of malpractice claims were analyzed. This evidence helped to move from a taxonomy of risk categories to one of “impact categories.” Because there is a lag between an increase in malpractice claims or payments and an increase in the risk rating assigned to a specialty, those classified as “high risk” may not be in a (real or perceived) state of “crisis” (“high impact”) from tort pressure. Third, the evidence of specialty-specific salience regarding malpractice issues was analyzed. While increases in tort activity might only directly affect specialists in a few geographic areas, discussion of the malpractice issue in the medical literature can give the issue broad salience throughout the specialty, thus creating a larger sense of crisis. Finally, the malpractice premiums faced by specialties – relative to the premiums of other specialties and relative to income – were analyzed to further operationalize the “impact” of tort for physicians in low-, medium-, and high-risk specialties.

Analysis of specialty risk ratings

This first source of evidence – the various “risk categories” of the specialties – was used to sort specialties into three risk categories: low, medium, and high. Because they reflect the relative malpractice risks of specialties at the onset of the malpractice crisis, the 2004 risk categories are the primary risk ratings to be used. The ratings published in 2012 play an important role, however, in verifying the appropriate risk level of each specialty and in identifying any significant change in risk that specialties may
have experienced during the study period. In accordance with private sector insurance risk rating practices, most specialties were assigned a surgical and a non-surgical risk rating by CMS. For this study, each specialty is categorized by its highest risk rating because this would by the risk rating that would likely sensitize the specialty to malpractice concerns, even if these higher rates do not apply to all of its members.

CMS identified 43 distinct specialties. CMS specialties that are certified by multiple ABMS member boards were eliminated and the remaining specialties were crosswalked to ABMS specialties. The 2004 CMS list of specialties did not incorporate any obstetrical practice. However CMS has assigned a risk category for obstetrical procedures is 11.3, which was used for obstetrics-gynecology for this study because 80 percent of obstetrician-gynecologist perform both obstetrics and gynecology (“69 FR 66236,” 2004, p. 66237). Two ABMS specialties – Radiology and Psychiatry and Neurology – each offer two primary certificates. Where the certificates of one board differ in their risk ratings or their responsiveness, they will be discussed separately.

Table 4 lists the specialties with their 2004 and 2012 CMS risk ratings, sorted by their 2004 risk ratings. The 2004 risk ratings were used to establish risk categories for specialties. Because internal medicine, general surgery, and obstetrics-gynecology are generally accepted as representative of low-, medium-, and high-risk specialties,

---

65 CMS clarifies that the vast majority of obstetrics-gynecology services provided to Medicare patients are gynecological, thus the upper risk category assigned to obstetrics-gynecology is a surgical, non-obstetric category of 4 (“69 FR 66236,” 2004, p. 66273).
Table 4. CMS Specialty Risk Ratings, 2004 & 2012

<table>
<thead>
<tr>
<th>Medical Specialty</th>
<th>2004 CMS Surgical Risk Class</th>
<th>2012 CMS Surgical Risk Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy Immunology</td>
<td>1</td>
<td>1.00</td>
</tr>
<tr>
<td>Nuclear Medicine</td>
<td>1</td>
<td>1.64</td>
</tr>
<tr>
<td>Physical Medicine &amp; Rehab.</td>
<td>1</td>
<td>1.17</td>
</tr>
<tr>
<td>Preventive Medicine</td>
<td>1</td>
<td>1.12</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>2</td>
<td>1.74</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>2</td>
<td>1.90</td>
</tr>
<tr>
<td>Pathology</td>
<td>2</td>
<td>1.72</td>
</tr>
<tr>
<td>Pediatric Medicine</td>
<td>2</td>
<td>1.51</td>
</tr>
<tr>
<td>Psychiatry - Psychiatry</td>
<td>2</td>
<td>1.23</td>
</tr>
<tr>
<td>Psychiatry - Neurology</td>
<td>2</td>
<td>10.26</td>
</tr>
<tr>
<td>Radiation Oncology</td>
<td>2</td>
<td>2.28</td>
</tr>
<tr>
<td>Radiology - Diagnostic</td>
<td>2</td>
<td>2.58</td>
</tr>
<tr>
<td>Urology</td>
<td>2</td>
<td>2.69</td>
</tr>
<tr>
<td>Colorectal Surgery</td>
<td>3</td>
<td>3.96</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>3</td>
<td>3.56</td>
</tr>
<tr>
<td>Family Practice</td>
<td>4</td>
<td>3.80</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>5</td>
<td>2.20</td>
</tr>
<tr>
<td>Dermatology</td>
<td>5</td>
<td>3.91</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>5</td>
<td>4.88</td>
</tr>
<tr>
<td>General Surgery</td>
<td>5</td>
<td>5.91</td>
</tr>
<tr>
<td>Plastic &amp; Reconstr. Surgery</td>
<td>5</td>
<td>5.46</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td>6</td>
<td>5.46</td>
</tr>
<tr>
<td>Thoracic Surgery - w/ Cardiac</td>
<td>6</td>
<td>6.93</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>8</td>
<td>9.94</td>
</tr>
<tr>
<td>Obstetrics Gynecology w/ OB</td>
<td>11.3</td>
<td>7.96</td>
</tr>
</tbody>
</table>
respectively, their risk categories were used as a guide to establish the bounds of each category. As a result, risk categories less than 5 were adopted as low risk; risk categories of 5 to less than 7 were adopted as medium risk; and risk categories of 7 and greater were adopted as high risk.

Given this structure, both anesthesiology and neurology would change categories between 2004 and 2012. This was deemed not to invalidate the categories as neurology has experienced a well-documented increase in malpractice risk and anesthesiology has experienced an equally well known reduction in malpractice risk during the period under study.

The resulting assignment of specialties to risk categories is shown in Figure 8. These risk categories can also be perceived as “impact” categories, reflecting the relative impact of tort liability upon each specialty.

This initial ordering of specialties by impact category was further refined using the remaining sources of evidence: malpractice claims data, specialty-specific salience in the literature, and malpractice insurance premium and income data.
### Specialty Risk (Impact) Categories Based on 2004 and 2012 CMS Risk Ratings

<table>
<thead>
<tr>
<th>Low-Risk Specialties (Low Impact)</th>
<th>Medium-Risk Specialties (Medium Impact)</th>
<th>High-Risk Specialties (High Impact)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy &amp; Immunology</td>
<td>Dermatology</td>
<td>Neurological Surgery</td>
</tr>
<tr>
<td>Colon &amp; Rectal Surgery</td>
<td>Emergency Medicine</td>
<td>Obstetrics Gynecology</td>
</tr>
<tr>
<td>Family Practice</td>
<td>General Surgery</td>
<td>(Neurology 2012)</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>Orthopedic Surgery</td>
<td></td>
</tr>
<tr>
<td>Nuclear Medicine</td>
<td>Plastic Surgery</td>
<td></td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>Thoracic Surgery</td>
<td></td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>(Anesthesiology 2004)</td>
<td></td>
</tr>
<tr>
<td>Pathology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pediatrics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Medicine &amp; Rehab.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preventive Medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychiatry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology – Rad. Oncology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiology - Diagnostic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urology</td>
<td>(Anesthesiology - 2012)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Neurology - 2004)</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 8. Specialty Risk (Impact)*
Analysis of the relative frequency and severity of malpractice claims across specialties

Jena et al (Jena, Seabury, Lakdawalla, & Chandra, 2011) have provided a rare analysis of the risk of malpractice claims faced by specific specialties. Their closed-claims research identified ten specialties in which more than 10 percent of physicians faced a claim annually: neurosurgery, thoracic surgery, general surgery, orthopedic surgery, plastic surgery, gastroenterology (a subspecialty comprising only 7 percent of internal medicine diplomates), obstetrics-gynecology, and urology. Among these, neurosurgeons and thoracic surgeons faced by far the highest probability of claims, with 19.1 percent and 18.9 percent of these specialists, respectively, being subject to a claim annually. With the exception of gastroenterology, the specialties with the highest number of claims (listed above) were also in the top tier for paid claims. The top group for paid claims also included non-obstetrical gynecology. In each specialty, fewer than 5 percent of physicians have a paid claim each year. This evidence accords with the impact categories established previously. All of the specialties experiencing a high frequency of claims are in the high- and medium-impact categories.66

Jena et al (Jena et al., 2011) also analyzed the severity of closed claims. They identified the following ten specialties with the highest median claim payments: neurosurgery, neurology, internal medicine, pulmonary medicine, general surgery,

---

66 The high ranking of gastroenterology does not significantly influence the ranking of internal medicine (raising internal medicine to a medium or high impact category) because that subspecialty comprises only 7 percent of all internal medicine diplomates.
pathology, pediatrics, obstetrics-gynecology, thoracic surgery, and cardiology. The findings of Jena et al are reflected in Table 5 (see page 207).

Although fewer than five percent of neurosurgeons and thoracic surgeons pay a malpractice claim in a given year, the fact that almost one in five of these surgeons will have a claim made against them each year is significant for the current study. Research has shown that defending against a malpractice claim, even when successful, is costly for physicians in terms of time and money and has a significant psychological impact (Carrier, Reschovsky, Mello, Mayrell, & Katz, 2010; Nash et al., 2004; Seabury, Chandra, Lakdawalla, & Jena, 2012). This evidence suggests that thoracic surgery is more appropriately placed in the high impact category and perhaps considered a crisis specialty.

The evidence could also suggest that neurology and general surgery be considered high impact specialties. However, neurology has a high claims severity but there are relatively few claims made or paid. General surgery was rejected as a potential crisis specialty as it is widely accepted as a representative medium-risk specialty.

The categorization of specialties was given further consideration against the specialty salience of malpractice issues, to arrive at a set of crisis specialties.

Analysis of specialty-specific discussion of malpractice in peer reviewed journals
The PubMed search, described previously in this chapter, produced the results shown in Table 5. The table is structured upon the impact categories identified above.

---

67 Cardiology has been removed from this current study because it falls under the purview of several ABMS member boards.
Generally, the interest demonstrated in scholarly publications accords with the specialties’ impact categories, with low-impact specialties returning fewer than one hundred articles, medium-impact specialties returning 100 to 200 articles, and high-impact specialties returning in excess of 200 articles.

Pediatrics, pathology, and ophthalmology returned a larger than expected number of articles; and dermatology returned fewer than other medium-risk specialties. The large number of articles mentioning internal medicine could be attributed to the fact that internal medicine is a large specialty and is often used as an example of a less-impacted specialty in the malpractice literature. Psychiatry was a significant outlier for no easily discernible reason. Anesthesiology returned a very large number of articles, but this salience is to be expected given the specialty’s recent successful initiative to reduce malpractice.

General surgery also returned significantly more items than most medium-risk specialties. Again, it was not reassigned to the “high-impact” group because it is widely accepted as a representative medium-risk specialty.

The PubMed searches provide a useful piece of evidence for identifying crisis and non-crisis specialties. In this regard, this particular evidence does suggest that neurology should be considered a low risk specialty and that thoracic surgery could reasonably remain as a crisis specialty.
Table 5. Malpractice Claims and Malpractice Salience by Specialty
* MeSH terms “obstetrics” and “gynecology” were searched separately and returned 545 items and 61 items, respectively.

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Malpractice Claims</th>
<th>No. of PubMed Malpract. Articles, 1970 - Present</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High-Impact Specialties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>C, P, S</td>
<td>204</td>
</tr>
<tr>
<td>Obstetrics Gynecology</td>
<td>C, P, S</td>
<td>545 + 61*</td>
</tr>
<tr>
<td>Thoracic Surgery</td>
<td>C, P, S</td>
<td>177</td>
</tr>
<tr>
<td>(Neurology 2012)</td>
<td>S</td>
<td>44</td>
</tr>
<tr>
<td><strong>Medium-Impact Specialties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermatology</td>
<td></td>
<td>61</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td></td>
<td>186</td>
</tr>
<tr>
<td>General Surgery</td>
<td>C, P, S</td>
<td>538</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td>C, P</td>
<td>116</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>C, P</td>
<td>135</td>
</tr>
<tr>
<td>(Anesthesiology 2004)</td>
<td></td>
<td>458</td>
</tr>
<tr>
<td><strong>Low-Impact Specialties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergy &amp; Immunology</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Colon &amp; Rectal Surgery</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Family Practice</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>S</td>
<td>233</td>
</tr>
<tr>
<td>Nuclear Medicine</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td></td>
<td>117</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>Pathology</td>
<td>S</td>
<td>135</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>S</td>
<td>294</td>
</tr>
<tr>
<td>Physical Med. &amp; Rehab.</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Preventive Medicine</td>
<td></td>
<td>59</td>
</tr>
<tr>
<td>Psychiatry</td>
<td></td>
<td>1165</td>
</tr>
<tr>
<td>Radiology - Oncology</td>
<td></td>
<td>28</td>
</tr>
<tr>
<td>Radiology - Diagnostic</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Urology</td>
<td></td>
<td>56</td>
</tr>
<tr>
<td>(Anesthesiology 2012)</td>
<td></td>
<td>458</td>
</tr>
<tr>
<td>(Neurology 2004)</td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>
Analysis of specialty malpractice insurance premiums, relative to other specialties and relative to physician income

The final piece of evidence speaks to the uneven impact of tort regulation upon different specialties is comparative data regarding malpractice insurance premiums, particularly the premium costs relative to income. Because this data is available only for three representative specialties, it could not be used to select crisis specialties. The data does serve a valuable purpose, however, by providing evidence that higher malpractice risk has a significant impact upon a specialty and its member physicians.

Internal medicine represents a low-risk specialty, general surgery represents a mid-risk specialty, and obstetrics-gynecology represents a high-risk specialty. Because different data sources must be used, separate analyses are conducted for two time periods: 1985 to 2000, and 2001 to 2008.

1985 to 2000

Figure 9 shows the average annual malpractice insurance premiums paid by each reference group and by all physicians. As would be expected, the relative MPLI costs correspond to the previously identified relative risk ratings of the specialties. Obstetrician-gynecologists (high-risk) consistently paid the highest premiums, followed by (mid-risk) general surgeons and then (low-risk) internists.

Throughout the 15 year period, however, general surgeons earned the highest average net income. Thus, the higher MPLI premiums paid by obstetrician-gynecologist have an even greater impact upon the specialty. This is illustrated by Figure 10, which
Figure 9. Mean Annual MPLI Premiums by Specialty, 1985-2000

Figure 10. Average Premium as a Percent of Average Net Income by Specialty, 1985-2000
shows the average annual MPLI premium as a portion of the average annual net income of each of the three specialties. On average, obstetrician-gynecologists paid premiums that were equivalent to more than 15 percent of their average annual incomes, while general surgeons’ were around 10 percent of average annual income and internists’ never reached the equivalent of 10 percent of income, even when they spiked in the late 1990s.

This evidence demonstrates that malpractice insurance premiums posed a more significant financial burden for obstetrician-gynecologists than for the other specialists throughout the 1985 to 2000 period.

**2001 to 2008**

Premium data available for the post-2000 period does not lend itself to the simple, aggregate analysis used for the 1985-2000 period. Without information about the market share of each insurer, data from the Malpractice Liability Monitor Rate Survey cannot be aggregated in a valid way. As detailed previously in this chapter, average premiums offered in the market (not paid) were calculated for each specialty in each geographical market. These average insurance policy prices were then used to generate ratios comparing the premiums offered to obstetrician-gynecologists versus internists and ratios comparing the premiums offered to obstetrician-gynecologists versus general surgeons.

---

68 Note that the net income is net of practice costs, including malpractice insurance.

69 Net incomes of each specialty, including obstetrics-gynecology, did grow over this time period and MPLI premiums were generally equivalent to a declining portion of physician income. This accords with the conclusion by Danzon and her colleagues (1990) that during the period 1976 to 1983 physicians were able to pass on malpractice costs to patients fairly effectively.
The use of ratios normalizes the data for purely geographical variation in premiums and illuminates the difference in premium prices for different specialties.

While there was significant variation across geographical areas, the data showed that obstetrician-gynecologists generally faced local average premiums fifty percent higher than those seen by general surgeons.70 The data also showed that the local average premiums offered to obstetrician-gynecologists were generally more than five times those seen by internists.71

Using available BLS data, ratios were also generated showing the average local income of obstetrician-gynecologists versus internists, and the average local income of obstetrician-gynecologists versus general surgeons.72 In general, obstetrician-gynecologists earned approximately the same average income as general surgeons73 in the same locality and ten percent more than internists74 in the same locality.

Data could not be aggregated across geographical areas or across years, but were displayed in a series of charts. What these charts lack in concision, they make up for in richness. Taken together, the premium and income ratios provided a clear illustration of the disproportionate impact of malpractice costs – of tort regulation – upon the high-risk

---

70 The premiums for obstetrician-gynecologists ranged from 80 percent to 280 percent of premiums available to general surgeons in the same location. Across geographic locations and years, the average ratio of ob-gyn premiums to general surgery premiums was 1.52; while the median ratio was 1.42.
71 The premiums for obstetrician-gynecologists ranged from 270 percent to 900 percent of premiums available to internal medicine specialists in the same location. Across geographic locations and years, the average ratio of ob-gyn premiums to internal medicine premiums was 5.4 while the median ratio was 5.3.
72 Some gaps exist in the Bureau of Labor Statistics income data.
73 The net annual incomes for obstetrician-gynecologists ranged from 80 percent to 140 percent of the average net income of surgeons in the same location. Across geographic locations and years, the median ratio was 1.0 (parity).
74 The net annual incomes for obstetrician-gynecologists ranged from 60 percent to 180 percent of the average net income of internists in the same location. Across geographic locations, the median ratio was 1.1 in all years.
specialty of obstetrics-gynecology. While the earnings of this specialty are close to parity with those of general surgery and internal medicine, obstetrician-gynecologists pay significantly higher premiums than other specialists in their geographic area to insure against malpractice claims.

This evidence lends strong credence to the idea that the impact of tort is felt more strongly by obstetrics-gynecology. The conclusion cannot, unfortunately, be generalized to all high-risk specialties. Earnings data are not available from the Bureau of Labor Statistics for other high risk specialties such as neurosurgeons or thoracic surgeons. A recent physician salary survey conducted by a physician recruitment agency reports that the average income after six years of practice is $589,500 for a neurosurgeon, $522,875 for a cardiothoracic surgeon; and $279,750 for an obstetrician-gynecologist (“Physician Salary Survey, 2011-2012,” 2012). Though not an authoritative source, salary.com offers an additional publicly available source of information. According to this source, the national median annual income for neurosurgeons is $530,000; the national median annual income for a cardiothoracic surgeon is $415,000; and the national median annual income for an obstetrician-gynecologist is $253,000. Though no MPLI premium data is available for neurosurgeons or cardiothoracic surgeons, given the much larger earnings of the other two high-risk specialties, it cannot be concluded from the data that they experience the same level of pressure from tort as obstetrics-gynecology do.

**Selection of crisis specialties based on the evidence**

The above evidence was analyzed qualitatively to identify a small number of specialties to serve as valid representatives of “crisis specialties.” The behavior of each of
these groups could then be compared against the behavior of all other specialties to assess whether they exhibit a particularly high/low degree of sensitivity to tort regulation. Three specialties were identified as crisis specialties – neurosurgery, obstetrics-gynecology, and thoracic surgery. Two other specialties – general surgery and neurology – were considered but rejected as representative “crisis specialties.” Following is the rationale supporting each of these decisions.

**Rejection of neurology and general surgery**

General surgery was considered as a crisis specialty because it had a relatively high likelihood of experiencing a claim (15 percent of general surgeons face a claim each year) and a relatively high severity of claims (in the top quarter of ranked specialties) (Jena et al., 2011). The specialty also experienced a rise in its risk rating, according to the Centers for Medicare and Medicaid Services, between 2004 and 2012 similar to the increase seen by thoracic surgery (0.91 versus 0.93). The PubMed search returned a very large number of items, approaching the number returned for obstetrics-gynecology and reflecting a very high degree of salience for malpractice issues. However, general surgery’s CMS risk rating remained firmly within the medium-risk category even after its increase (5.91 in 2012) and the specialty is widely accepted as a medium-risk specialty, as evidenced by its use as a representative of this risk class by the Medical Liability Monitor (MLM, 2012). Therefore, it was not deemed to offer a good representation of a crisis specialty.

Neurology was considered as a crisis specialty due to the extremely large increase in its risk rating from 2004 to 2012, from 2 to 10.6. While Jena et al (Jena et al., 2011)
found a high severity of claims, based on the median amount paid, neurologists had only a moderate likelihood of claims according to their research (ranking 13th of 24 specialties). The PubMed search did not suggest a high salience for malpractice issues (44 items returned). The evidence was not deemed sufficiently convincing to identify neurology as a “crisis specialty.”

Selection of neurosurgery

Neurosurgery was selected as a crisis specialty because it is a high-risk specialty, and it has seen an increase in its risk rating from 8 in 2004 to 9.94 in 2012. This was the third largest increase among all specialties and other surgical specialties saw a concurrent increase of only 0.46 to 0.96. Neurosurgery has both an extremely high frequency of claims and a very high severity of claims, based on the study by Jena et al (Jena et al., 2011). The high salience of malpractice issues for this specialty is supported by the large number of PubMed items found.

Selection of obstetrics-gynecology

Obstetrics-gynecology is a high risk specialty and has both a high frequency and a high severity of claims. While the risk rating of 7.96 in 2012 is significantly lower than the 2004 risk rating of 11.3, this can be partly attributed to the basis on which these risk ratings were calculated. The 2004 risk class was assigned by CMS for obstetrical procedures, while the 2012 risk factor was assigned to obstetrician-gynecologist services including obstetrics. The agency assigned a 2004 surgical risk class of 4 to obstetrics-gynecology services other than obstetrics. An accurate 2004 risk rating for the obstetrics-gynecology specialty would need to combine and weight the risk classes of 11.3 and 4.
As a result, any decline in the risk associated with the specialty is likely far less severe that it appears at first glance.

The salience of malpractice issues for the obstetrics-gynecology specialty is strongly supported by the very large volume of literature returned in the PubMed search.\textsuperscript{75} Furthermore, the analysis of malpractice insurance premiums, particularly relative to income, provided strong evidence as to the disproportionate impact that malpractice insurance has upon this specialty, regardless of the cycle of “crises”.

The selection of obstetrics-gynecology as a crisis specialty is firmly supported by a reading of the literature regarding the periodic malpractice crises. This specialty is consistently cited in discussions of the high cost of malpractice insurance; the frequency and severity of claims; the impacts of malpractice crises on clinical practice, including the elimination of high-risk care; and the reduced access to care.

**Selection of thoracic surgery**

Thoracic surgery had a high and rising risk rating – increasing from 6 in 2004 to 6.93 in 2012 – and could arguably have been categorized as high risk in 2012. The study by Jena et al (Jena et al., 2011) identified an extremely high likelihood of claims for thoracic surgeons, with almost 1 in 5 having to defend against a claim each year. The specialty was also among the top three in terms of likelihood of having a paid claim and in the upper half of specialties in terms of severity of claims. The high frequency of claims is also supported by mentions of this specialty in the literature regarding

---

\textsuperscript{75} The author notes, anecdotally, that obstetrics is often cited in the literature, with concerns often expressed regarding “access to care” as physicians restrict their practice, retire or move away from geographic areas experiencing a “malpractice crisis”.

215
malpractice crisis (e.g., Palmisano, 2004; Posner, 1986) The PubMed search returned a large number of items (177), indicating a relatively high salience for malpractice issues for this specialty.

These three specialties – neurosurgery, obstetrics-gynecology, and thoracic surgery – will serve as representative crisis specialties for this study’s evaluation of specialty responsiveness to pressure from tort regulation.
APPENDIX B: IDENTIFYING CRISIS STATES

The second credentialing institution to be examined in this study is that of medical licensure. A comparative analysis of the two embedded cases – state medical boards in crisis states and state medical boards in “non-crisis states” – requires first the identification of states belonging in the “crisis” group.

The study period for analyzing responsiveness by state medical boards in crisis and non-crisis states is 2000 to 2011. However, the identification of crisis states will make use of data from as early as 1991 because there is an inherent lag between the beginning of the malpractice claims trends and the resulting “crisis”. Reaching back to the early 1990s for evidence allows for comparison between pre- and post-“crisis” evidence, and identifies claims trends in the 1990s that would result in increases in MPLI premiums in the 2000s.

Evidence of a real or perceived malpractice crisis in a given state includes:

1) designation as a crisis state by the American Medical Association;
2) high or rapidly rising malpractice premiums relative to other states; and
3) high or rapidly rising claims frequency or severity.

In this chapter, each source of evidence will be fully described. Each source of evidence is then analyzed to arrive at a list of crisis states for the purposes of this study.

Description of Evidence Used

The latest malpractice crisis occurred in the early 2000s and was characterized by widely acknowledged geographic variation. The crisis had broad salience among
physicians, policy makers, and the public. Since much of this salience was driven by the American Medical Association’s aggressive publicity campaign that focused on a list of crisis states, this designation is used as evidence of a state crisis, whether it be real or perceived. Two other sources of evidence seek to identify the existence of crisis conditions, whether defined as an increase in malpractice claims or an increase in the cost of insuring against claims.

**Designation as a crisis state by the AMA**

While only a minority of physicians holds membership in the American Medical Association, the AMA continues to serve as a prominent public voice of the profession (Collier, 2011). The AMA’s choice of crisis states was based primarily upon physician reporting of physicians restricting or eliminating some areas of practice – or their intent to do so – as a result of MPLI costs (Mello et al., 2005; Palmisano, 2005). The AMA also considered “the state’s judicial and legal climate, the affordability and availability of professional liability insurance, the trends in jury awards and settlements” (Palmisano, 2004, 2005). Independent studies have shown that the crisis states do not correlate with the highest MPLI premiums or with declining physician supply (Mello et al., 2005; Mello, Studdert, Schumi, Brennan, & Sage, 2007; Robinson et al., 2005). Nonetheless, when the AMA designated certain states (ultimately numbering 20) as crisis states in the early 2000s that designation was widely reported and repeated in the general press, the trade press, the medical community, and state and national legislative bodies (“AMA Labels Mass. 20th Med-Mal Crisis State,” 2004; Jost, 2003).
Strength: The AMA publicity gave the rise in MPLI costs very broad salience as a physician problem; effectively framed the issue as a “crisis”; and drew a clear line between crisis states and “non-crisis states.”

Weakness: Because the “crisis” was used in many states to pursue tort reforms that would reduce compensation for victims, advocates for consumers and for victims of malpractice in some cases quickly and publicly rebutted the AMA’s arguments. Furthermore, while the AMA remains a potent advocacy organization, fewer than one third of physicians are members and the organization may have less influence over the perceptions of practitioners than it does over the perceptions of policy makers (Parikh, 2009; Pho, 2009).

High or rapidly increasing malpractice insurance premiums, as indicated by the Malpractice Geographic Practice Cost Index (MP GPCI)

The MP GPCI is calculated by the Centers for Medicare and Medicaid Services (CMS) and used to adjust physician reimbursement to account for geographical variations in the cost of malpractice insurance. CMS uses a rigorous methodology to develop malpractice MP GPCIs that reflect actual premiums costs in each state and in many metropolitan areas. This study made use of the MP GPCI for Calendar Year 2000 which is based upon 1994-1995 premium data; the MP GPCI for Calendar Year 2005 which is based upon 2001-2002 premium data; and the MP GPCI for Calendar Year 2012 which is based upon 2006-2007 premium data (“64 FR 59380,” 1999, “69 FR 66236,” 2004, “76 FR 73025,” 2011). These MP GPCIs were chosen because they reflect premium rates

76 See 64 Federal Register 59380 “Medicare Program: Revisions to Payment Policies Under the Physician Fee Schedule for Calendar Year 2000” at p. 59383 for a full description of the methodology used. Premiums are for standard policy and adjusted for mandatory contributions to Patient Compensation Funds in states that have established them.
before, during, and after the malpractice crisis. The use of three data points was important because in some states premiums spiked early, then fell while other states’ premiums were just beginning to spike. For example, premiums in Texas were already falling when those of Rhode Island began to rise.

The 2005 and 2012 MP GPCIs were used to identify states with relatively high rates during the crisis. To examine the spikes that were experienced, MP GPCI changes from 1999 to 2005 and from 1999 to 2012 were calculated for each geographic location. The largest increase of these two was used to assess the “premium spike”, if any, during the study period. This spike was expressed both as a nominal change over the 1999 MP GPCI and as a percent change over the 1999 MP GPCI.

**Strength:** Physicians facing persistently high premiums through the early 2000s might be more likely to perceive a malpractice problem or crisis in their state and would have a motivation to address the problem. Physicians are even more likely to be sensitive to rapid spikes than to more gradual increases or sustained high rates, both because a rapid rise is more alarming and because the more gradually increasing costs can more easily be passed through to consumers (Patricia M. Danzon et al., 1990).

**Weakness:** Some states may have seen the peak of premiums in a year that was not measured, making the comparison of spikes somewhat less than perfect.

**High claims frequency**

Publicly available data from the National Practitioner Data Bank (NPDB) includes the number of malpractice claims paid annually in each state. Data from 1991-
2011 is used for this study. Data as far back as 1991 is examined because an increase in claims frequency is not immediately perceived by physicians and there is a lag between the claims trend and the resulting increase in premiums.

**Strength:** A high frequency of paid claims contributes to a rise in MPLI premiums (the most common definition of a malpractice crisis) and can also contribute to a perceived crisis by raising awareness of malpractice claims. This evidence of a crisis is also particularly useful for this study, as raising physician quality is a rational response to a malpractice crisis driven by claims (rather than by the insurance cycle).

**Weakness:** Data on claims frequency needs to be adjusted for the number of practicing physicians and presented as the number of claims per physician (Mello, 2006c). As noted by other researchers using this data, the “geographic preponderance of claims and payments in six large US states with large patient and physician populations is not surprising, and, in part, simply reflects the large fraction of medical care delivered in these states” (Tehrani et al., 2013). Unfortunately, the necessary data is not available.77 Because claims data is used throughout the literature without this adjustment, this researcher accepted this weakness.

---

77 One study did loosely calculate claims per physician using physicians-per-capita data and found that several (unspecified) states that have the highest total payouts also have the highest total payout per physician (Tehrani et al., 2013).
High claims severity

High severity is defined as a claims payment greater than $1 million. This value is particularly useful point of reference because the typical MPLI policy covers up to $1 million per claim; thus insuring against claims over $1 million requires the purchase of additional coverage. This value is widely used as a designation of “large claims”, including by the National Practitioner Data Bank (NPDB). Publicly available data from the NPDB includes the annual number of paid claims in this category in each state. Data as far back as 1991 is examined because there is a lag between an increase in claims severity and an increase in premiums.

**Strength:** High severity of paid claims contributes to a rise in MPLI premiums (the most common definition of a malpractice crisis) and may further create a felt need among physicians to purchase additional coverage. High severity paid claims can also contribute to a perceived crisis by raising awareness of malpractice claims and sensationalizing malpractice awards. A combination of high frequency and high severity strongly reinforces the perception of “crisis”.

**Weakness:** Large awards are often attributed to “jackpot juries” or other attributes of the judicial system, rather than being attributed to greater severity of negligence or public dissatisfaction with the quality of medical care. As a result, the medical profession may be less likely to perceive licensing reform to be a rational response to an increase in large awards. The profession may be more likely to respond by seeking tort reforms.
Analysis of Evidence

Each piece of evidence described above was analyzed and a scoring process was used to triangulate the evidence from all four sources. Table 6, summarizes how the evidence was analyzed to identify crisis states.

A scoring table was created to determine the crisis states based on these sources of evidence. For each of the four sources of evidence, a state could receive one “point” if the evidence supported its inclusion as a crisis state. Except in the case of AMA designation, each source of evidence offered two possible ways in which a state could be scored as a potential crisis state, as reflected in Table 6.

Table 6. Evidence and Interpretation

<table>
<thead>
<tr>
<th>Evidence of Crisis</th>
<th>What is reflected</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation as a crisis state by AMA (21 states)</td>
<td>PERCEPTION: Shapes political and public framing of the issue</td>
<td>AMA</td>
</tr>
<tr>
<td>Among highest point-in-time MPLI rates as reflected by high MP GPCI values in 2005 and/or 2012 Index</td>
<td>PREMIUM PROBLEM: High premium pressure relative to other states</td>
<td>CMS Malpractice GPCI</td>
</tr>
<tr>
<td>Among largest increases (nominal or percentage) in MPLI rates as reflected by MP GPCI values</td>
<td>PREMIUM PROBLEM: Rapid spike in premiums relative to other states</td>
<td>CMS Malpractice GPCI</td>
</tr>
<tr>
<td>Large spike in high severity claims (over $500K, and/or over $1M)</td>
<td>CLAIMS PROBLEM: Driver of future problems in the cost and/or availability of insurance</td>
<td>NPDB Malpractice Claims Data</td>
</tr>
</tbody>
</table>
Analysis of AMA’s crisis state designations

Beginning in 2002, the AMA expressed concerns about the emergence of a new malpractice crisis (AMA, 2002). By 2005, a crisis had been declared in each of the following twenty-one states: Arkansas, Connecticut, Florida, Georgia, Illinois, Kentucky, Massachusetts, Mississippi, Missouri, Nevada, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Texas\(^{78}\), Washington, West Virginia, and Wyoming.

The AMA claimed that a rise in malpractice claims, and in some cases large jury awards, was driving a significant increase in MPLI costs for physicians, and that physicians were responding out of necessity by restricting their practice, retiring early, or leaving crisis states for other areas (Palmisano, 2005). An aggressive effort to enact tort reforms at the state level was conducted on the basis of the crisis claim (Palmisano, 2004).

The AMA’s assertions and line of argument have been rebutted on several counts. Consumer advocacy groups and academic studies have refuted the contention that either frequency or severity of claims had “exploded” (Gottlieb & Doroshow, 2003; Lincoln, 2013). The AMA’s claims that physician were restricting their practice, retiring early, and leaving crisis states causing a public problem of access to care were largely supported with anecdotal evidence (physicians were often surveyed about their intent to take these steps) but academic studies did not find evidence to support such trends (Mello et al., 2005, 2007). Numerous studies concluded that rising premiums were driven in

\(^{78}\) Texas was declared a crisis state in 2002, but was removed from the list in 2005 at the same time that Rhode Island was added (Albert, 2005).
major part by the insurance cycle, with a rise in claim severity playing a secondary role in some cases, but that the frequency of claims had not increased (P.M. Danzon et al., 2004; Harrington, Danzon, & Epstein, 2008; Mello, 2006c). Insurers had kept premiums artificially low throughout the 1990s as they competed for premiums to invest in a booming stock market. As investment returns dropped, insurers raised premiums significantly to cover their projected loss ratio or exited markets when they determined that sufficient premium increases were not possible. Ironically, these underwriting factors were most clearly detailed by the AMA in an internal report (AMA, 2002).

Despite the fact that the AMA’s rationale for tort reform has been somewhat debunked, it remains that large spikes in MPLI premiums were evident in the early 2000s. Any sense of crisis that these premium hikes may have instilled in the state medical communities were amplified by the alarming national press reports echoing the AMA’s alarm regarding crisis states. The AMA crisis designations may or may not provide evidence as to which states were hardest hit, but more importantly they provide evidence which states were perceived to be hardest hit.

The 21 “AMA crisis states” served as a starting point for identifying crisis states for use in this analysis. In the scoring table, states were scored as potential crisis states – entering “Yes” – if they were at any point identified by the AMA as a “crisis state.”

Analysis of relative MPLI premium costs using the Malpractice GPCI

The Malpractice Geographic Practice Cost Indices (MP GPCIs) from 2000, 2005, and 2012 reflect the malpractice insurance premiums in different geographic areas in 1994-1995, 2000-2001, and 2006-2007, respectively. MP GPCI values were analyzed
comparatively to identify states in which physicians paid relatively high malpractice premiums.

CMS identifies a total of 87 geographic areas in its Geographic Practice Cost Indices and assigns each a Malpractice GPCI value between zero and 3.5. The MP GPCI values will be analyzed to identify those states with very high values and to identify those states that saw a significant increase in their MP GPCI value during the study period.

**States with relatively high MP GPCI**

Like the MPLI premiums from which they are derived, MP GPCI values exhibit a wide degree of variation across geographic areas. They ranged from 0.28 to 3.069 in the 1999 Index; from 0.365 to 2.744 in 2005 Index; and 0.282 to 2.815 in the 2012 Index. The frequency of MP GPCI values is fairly constant over time, however, with the majority of geographic areas having values of 0.5 to less than one and a long tail extending into the upper values (Figure 11 and Figure 12).

In the 2005 Index, twenty-seven geographic areas in 11 states had values of 1.0 or greater, and eleven geographic areas in five states had MP GPCIs of 1.5 or greater. Because the data is not normally distributed, an interquartile range was used to identify outliers. The median value in the 2005 Index was 0.895. The first quartile value is 0.651, and the third quartile value is 1.069, giving an inter quartile range of 0.418. Outliers, defined as those data outside 1.5 IQR of the third quartile (Frigge, Hoaglin, & Iglewicz, 1989), must have a MP GPCI value of 1.696 or greater. Seven geographic areas meet this
Figure 11. Frequency of MP GPCI Values, 2005

Figure 12. Frequency of MP GPCI Values, 2012
criterion – Miami FL; Ft. Lauderdale FL; Chicago IL; East St. Louis IL; New York City Suburbs/Long Island NY; Queens NY; and Detroit, MI. But a state need not be a statistical outlier to be in “crisis”. If physicians are paying 1.5 times a “normal” premium, it can reasonably be expected that they will perceive a financial burden. Thus, in identifying potential crisis states, this study uses 150 percent of the median premium, operationalized as 1.5 times the median MP GPCI of 0.895. Thus all states with a 2005 MP GPCI of more than 1.3425 were scored as potential crisis states on the basis of high premiums. Twelve geographic areas in six states, shown in Table 7, met this criterion:

<table>
<thead>
<tr>
<th>State</th>
<th>CMS Geographic Area</th>
<th>2005 MP GPCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>Miami</td>
<td>2.269</td>
</tr>
<tr>
<td></td>
<td>Ft. Lauderdale</td>
<td>1.703</td>
</tr>
<tr>
<td>Illinois</td>
<td>Chicago</td>
<td>1.867</td>
</tr>
<tr>
<td></td>
<td>East St. Louis</td>
<td>1.75</td>
</tr>
<tr>
<td></td>
<td>Suburban Chicago</td>
<td>1.652</td>
</tr>
<tr>
<td>Michigan</td>
<td>Detroit</td>
<td>2.744</td>
</tr>
<tr>
<td></td>
<td>Rest of Michigan</td>
<td>1.518</td>
</tr>
<tr>
<td>New York</td>
<td>NYC Suburb / Long Island</td>
<td>1.785</td>
</tr>
<tr>
<td></td>
<td>Queens</td>
<td>1.71</td>
</tr>
<tr>
<td></td>
<td>Manhattan</td>
<td>1.504</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Metro Philadelphia</td>
<td>1.386</td>
</tr>
<tr>
<td>West Virginia</td>
<td>Whole state</td>
<td>1.547</td>
</tr>
</tbody>
</table>
In the 2012 Index, thirty-one geographic areas in eighteen states had values of 1.0 or greater, and eight geographic areas in four states had MP GPCIs of 1.5 or greater. The median value was 0.86. The first quartile value was 0.613, and the third quartile value was 1.103, giving an inter quartile range of 0.49. Outliers must have a MP GPCI value of 1.838 or greater. Four geographic areas met this criterion – Miami FL; Ft. Lauderdale FL; Chicago IL; and East St. Louis IL. The threshold for a potential crisis state using 2012 MP GPCI values (150 percent of the median premium) is 1.29. Eleven geographic areas in five states met this criterion (Table 8).

<table>
<thead>
<tr>
<th>State</th>
<th>CMS Geographic Area</th>
<th>2012 MP GPCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>Miami</td>
<td>2.815</td>
</tr>
<tr>
<td></td>
<td>Ft. Lauderdale</td>
<td>1.982</td>
</tr>
<tr>
<td></td>
<td>Rest of Florida</td>
<td>1.553</td>
</tr>
<tr>
<td>Illinois</td>
<td>Chicago</td>
<td>2.077</td>
</tr>
<tr>
<td></td>
<td>East St. Louis</td>
<td>1.934</td>
</tr>
<tr>
<td></td>
<td>Suburban Chicago</td>
<td>1.706</td>
</tr>
<tr>
<td></td>
<td>Rest of Illinois</td>
<td>1.336</td>
</tr>
<tr>
<td>Michigan</td>
<td>Detroit</td>
<td>1.814</td>
</tr>
<tr>
<td>New York</td>
<td>NYC Suburb / Long Island</td>
<td>1.441</td>
</tr>
<tr>
<td></td>
<td>Queens</td>
<td>1.491</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Metro Philadelphia</td>
<td>1.624</td>
</tr>
</tbody>
</table>
Six states contained geographic areas that met the criterion of having MP GPCI values of at least 1.5 times the median in the 2005 Index, the 2012 Index, or both. In the scoring table, these states were scored as potential crisis states – entering “Yes” – on the basis of their relatively high malpractice insurance premiums.

**States with spikes in MP GPCI**

The MP GPCI values change over time for most geographic areas – sometimes significantly, as will be shown in the analysis below. For each of the 87 CMS geographic areas, the difference was calculated between the 1999 and 2005 MP GPCI values and between the 1999 and 2005 MP GPCI values. The largest increase was used to identify the spike in premiums, if any, experienced by the geographic area during the study period. Both a nominal increase and a percentage increase were calculated.

Thirty-one of the geographic areas experienced a decrease in their MP GPCI during the study period. Nineteen geographic areas in 10 states saw an early peak in MP GPCI<sup>79</sup>; while thirty-seven geographic areas in twenty-seven states saw a later peak.<sup>80</sup>

Using the calculated *nominal* change from the 1999 MP GPCI to the peak MP CPCI (in either the 2005 or the 2012 Index), those geographic areas experiencing an increase of 0.25 were deemed to be potential crisis states. Fifteen geographic areas in 11 states (see Table 9), met this criterion.

---

<sup>79</sup> California, Delaware, Georgia, Kentucky, Louisiana, Massachusetts, Nebraska, Tennessee, Texas, and West Virginia saw an early peak in MP GPCI.

Using the calculated *percentage* change from the 1999 MP GPCI to the peak MP CPCI (in either the 2005 or the 2012 Index), those geographic areas experiencing an increase of 25 percent were deemed to be potential crisis states. Seventeen geographic areas in 14 states (see Table 10), met this criterion.

A total of fifteen states met the criterion for a significant increase in their MP GPCI, in either nominal or percentage terms. In the scoring table, each of these states was scored as a potential crisis state on the basis of its rise in relative malpractice insurance premiums.

<table>
<thead>
<tr>
<th>State</th>
<th>Geographic Area</th>
<th>Nominal Increase in MP GPCI Value to Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>Miami</td>
<td>0.465 (2012)</td>
</tr>
<tr>
<td>Illinois</td>
<td>East St. Louis</td>
<td>0.447 (2012)</td>
</tr>
<tr>
<td></td>
<td>Chicago</td>
<td>0.384 (2012)</td>
</tr>
<tr>
<td></td>
<td>Rest of Illinois</td>
<td>0.346 (2012)</td>
</tr>
<tr>
<td></td>
<td>Suburban Chicago</td>
<td>0.341 (2012)</td>
</tr>
<tr>
<td>Montana</td>
<td>All</td>
<td>0.371 (2012)</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Rest of New Jersey</td>
<td>0.250 (2012)</td>
</tr>
<tr>
<td>New Mexico</td>
<td>All</td>
<td>0.281 (2012)</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>All</td>
<td>0.283 (2012)</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Rest of Pennsylvania</td>
<td>0.486 (2012)</td>
</tr>
<tr>
<td></td>
<td>Metro Philadelphia</td>
<td>0.417 (2012)</td>
</tr>
<tr>
<td>Texas</td>
<td>Rest of Texas</td>
<td>0.267 (2005)</td>
</tr>
<tr>
<td>Utah</td>
<td>All</td>
<td>0.508 (2005)</td>
</tr>
<tr>
<td>West Virginia</td>
<td>All</td>
<td>0.441 (2005)</td>
</tr>
<tr>
<td>Wyoming</td>
<td>All</td>
<td>0.528 (2012)</td>
</tr>
</tbody>
</table>
Table 10. States With Large Percentage Spike in MP GPCI

<table>
<thead>
<tr>
<th>State</th>
<th>Geographic Area</th>
<th>Percent Increase in MP GPCI Value to Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>Rest of Illinois</td>
<td>34.6 % (2012)</td>
</tr>
<tr>
<td></td>
<td>East St. Louis</td>
<td>30.0 % (2012)</td>
</tr>
<tr>
<td>Indiana</td>
<td>All</td>
<td>50.2 % (2012)</td>
</tr>
<tr>
<td>Montana</td>
<td>All</td>
<td>37.1 % (2012)</td>
</tr>
<tr>
<td>North Carolina</td>
<td>All</td>
<td>39.8 % (2012)</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Rest of New Jersey</td>
<td>31.4 % (2012)</td>
</tr>
<tr>
<td></td>
<td>Northern New Jersey</td>
<td>31.0 % (2012)</td>
</tr>
<tr>
<td>New Mexico</td>
<td>All</td>
<td>39.2 % (2012)</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>All</td>
<td>62.7 % (2012)</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Rest of Pennsylvania</td>
<td>76.3 % (2012)</td>
</tr>
<tr>
<td></td>
<td>Metro Philadelphia</td>
<td>34.5 % (2012)</td>
</tr>
<tr>
<td>South Carolina</td>
<td>All</td>
<td>85.7 % (2012)</td>
</tr>
<tr>
<td>Texas</td>
<td>Rest of Texas</td>
<td>31.0 % (2005)</td>
</tr>
<tr>
<td>Utah</td>
<td>All</td>
<td>85.5 % (2012)</td>
</tr>
<tr>
<td>Virginia</td>
<td>All</td>
<td>31.2 % (2012)</td>
</tr>
<tr>
<td>West Virginia</td>
<td>All</td>
<td>39.9 % (2005)</td>
</tr>
<tr>
<td>Wyoming</td>
<td>All</td>
<td>74.9 % (2012)</td>
</tr>
</tbody>
</table>

Analysis of NPDB claims frequency data

Publicly available data from the National Practitioner Data Bank includes the number of malpractice claims paid (not made) each year from 1991 to 2012, fully covering the study period. While the large majority of states remained under 750 paid claims per year against MDs, nine states had a consistently higher number of claims: New York, California, Pennsylvania, Florida, Texas, Illinois, Michigan, New Jersey, and
Ohio.\textsuperscript{81} However, over the study period these states generally saw stable or declining claims frequency, rather than an increase in claims.

Illinois and Michigan experienced a steady decline over the study period. New York, California, Texas, and New Jersey saw some moderate fluctuation in the 1990s, followed by a decline in the 2000s. Ohio experienced a short spike in 1999, but then returned to its normal band of fluctuation. Florida and Pennsylvania did experience a steady growth in claims over the 1990s, but this was followed by a fairly rapid decline in the early 2000s.

Additional states with lower claims frequency were examined but also showed no significant spikes. This finding accords with published research concluding that claims frequency was not a factor in the malpractice crisis of the early 2000s (P.M. Danzon et al., 2004; Mello, 2006c). As a result, the analysis of claims frequency was not used in identifying crisis states for this study.

**Analysis of NPDB claims severity data**

Publicly available data from the National Practitioner Data Bank includes the number of paid malpractice claims paid each year in several severity categories (amount of payment). Data was extracted for “large” payments over $500,000 and for “very large” payments over $1 million. Studies have identified claims severity, rather than frequency, to be the more important claims-related driver of the premium increases of the early 2000s (AMA, 2002; P.M. Danzon et al., 2004; Mello, 2006c).

\textsuperscript{81} These are the nine states with the highest number of licensed physicians (Young, Chaudhry, Thomas, & Dugan, 2013)
Spike in “Large” claims over $500,000

This data can provide very useful evidence in identifying crisis states because high severity claims will drive up insurer loss ratios, leading insurers to raise premiums or exit the market. While most states remained well below 100 paid claims over $500,000 per year, the NPDB data identifies nine states that exceeded 100 large paid claims through most of the study period – New York, Pennsylvania, Illinois, California, Florida, Texas, Ohio, New Jersey, and Massachusetts. The first four in this list had in excess of 100 large paid claims in every year of the study period.

For each of the top nine states, a spike was identified by calculating the largest trough-to-peak increase during the study period. The size of each spike was calculated nominally and as a percentage increase. New York had the largest nominal increase in claims (337), a 99 percent increase in its annual figure. Pennsylvania, Florida, and New Jersey had nominal increases that were much smaller, but these increases represented more significant spikes relative to the states’ pre-crisis figures, increasing 128 percent, 103 percent, and 138 percent, respectively.

The preceding analysis was repeated for all states and identified six states with a smaller annual number of claims over $500,000, but with clear upward trends in this number during the study period. Each saw growth beginning in 1991 or 1992; three peaked in 2001, and one peaked in each of the subsequent three years. The fact that the large claims in these states increased in unison may have contributed to a sense of crisis.

82 Other small states (for example, Indiana) experienced wild annual spikes and dips in their claims numbers, but did not have an upward trend. It is worth noting that these periodic or episodic spikes could contribute to a sense of crisis because they could attract press coverage and generate increased public and physician salience in the state.
The trough-to-peak increase was calculated for each of these six states. The percentage increase for each is presented in Figure 13, together with the percentage increases for the nine larger states examined above. The nine states with a significantly larger number of annual claims experienced spikes that were of a smaller percentage magnitude, but were significant because of the nominal magnitude of increase (as shown above). While the smaller states experienced rather small nominal increases in large paid claims, the very large percentage increases could cause insurers to raise premiums or exit the market.

Figure 13. Trough to Peak Increase in Paid Claims Over $500,000
In total, fifteen states exhibited a significant spike in their annual paid claims over $500,000. In the scoring table, each of these states was scored as a potential crisis state on the basis of its rise in large paid claims.

**Spike in “Very large” claims over $1 million**

In addition, an increase in paid claims over $1 million can lead physicians to take out additional coverage, as standard policies cover only $1 million per claim. The felt need for additional coverage further increases the cost of MPLI. Finally, increasing claims severity provides useful evidence because an increase in these very large malpractice awards is often publicized and sometimes sensationalized, thereby fueling the sense of crisis.

The same nine states had the highest number of paid claims in this category, exceeding 20 in at least one year. The size of the spike experienced by each of the 9 states was calculated, nominally and as a percentage increase. This analysis was repeated for all states and identified six states with a smaller annual number of claims over $1 million, but with clear upward trends in this number in the late 1990s and early 2000s. The states include Georgia, Connecticut, South Carolina, Oregon, Arkansas, and Indiana.

The percent increase for each of the resulting 15 states of interest – nine large and six small – is shown in Figure 14. The nine states with a significantly larger number of annual claims experienced spikes that were of a smaller percentage magnitude, but were significant because of the nominal magnitude of increase (as shown above). While the smaller states may only have seen a dozen more claims per year, the very large percentage increases could cause insurers to raise premiums or exit the market and could
create a perception of crisis when publicized. In the scoring table, each of the fifteen states was scored as a potential crisis state on the basis of their rise in “very large” malpractice claims.

![Figure 14. Trough to Peak Increase In Paid Claims Over $1 Million](image)

**Identification of crisis states**

Each state was scored based on the number of evidentiary factors supporting its identification as a crisis state. Four points were possible, one for each source of evidence.
States received one point if they were designated as a crisis state by AMA. These designations were widely publicized and framed the perception of a malpractice crisis. Twenty-one states received this designation in the early 2000s.

States received one point if their Malpractice Geographic Practice Cost Index (MP GPCI) value in either the 2005 Index or the 2012 Index was at least 1.5 times the median MP GPCI. These indices reflect the variation in malpractice insurance premiums across geographic areas and having one of the highest Index values indicates that the state is among the most expensive in the U.S. for MPLI. Six states met this criterion in one or both Indices.

States received one point if their MP GPCI value saw a significant increase either nominally (by 0.25) or proportionally (by 25 percent) to a peak in either the 2005 Index or the 2012 Index. The baseline 1999 Index reflects the premium prices paid by physicians in 1995. Some states saw MPLI rates rise in the later 1990s, while others increased in the early 2000s. A peak in the 2005 or 2012 Index reflects higher premiums paid in 2001 or 2008, respectively. Fifteen states met this criterion either nominally or proportionally, or both.

States received one point if they experienced an increase in high-severity paid claims – either “large” claims over $500,000 or “very large” claims over $1 million, or both – in the late 1990s to early 2000s. An increase in high-severity claims will drive rate increases by insurers, may cause some insurers to exit a geographic market, and creates a perception of crisis. Seventeen states met this criterion.
Table 11 shows the scoring of all states (numbering 31) that met any of the four criteria, sorted from highest to lowest score. To ensure a tight group of states for analysis, only states with a score of 3 or 4 were chosen to serve as crisis states for this study.

This resulted in a group of seven crisis states for use in this study. All seven were among the AMA’s designated crisis states. Only West Virginia had not experienced a spike in high severity claims. New York did not experience a large increase in its MP GPCI value over the study period, but the state consistently had two to three geographic areas among the top ten highest values. Neither Texas nor New Jersey had MP GPCI values during the study period that met the criterion of 1.5 times the median value. However, Texas had four CMS geographic areas that fell just under the mark in 2005 – Galveston, Beaumont, and Brazoria at 1.298 and Houston at 1.297 versus the cutoff of 1.3425. While these high-cost localities saw a decrease in their MP GPCI during the study period, the rest of Texas saw increases.

The crisis states arrived at for this study were: Florida, Illinois, Pennsylvania, New Jersey, New York, Texas, and West Virginia.
### Table 11. Scoring Table for Crisis States

<table>
<thead>
<tr>
<th>State</th>
<th>AMA Crisis Desig.</th>
<th>High 2005</th>
<th>High 2012</th>
<th>MP CPCI</th>
<th>MP GPCI Spike (Nom.)</th>
<th>Spike in Claims &gt;$500k</th>
<th>Spike in Claims &gt;$1mill</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>4</td>
</tr>
<tr>
<td>IL</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>4</td>
</tr>
<tr>
<td>PA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>4</td>
</tr>
<tr>
<td>NJ</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>NY</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>TX</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>WV</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>AR</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>CT</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>GA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>IN</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>MA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>MS</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>NV</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>NC</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>OH</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>OR</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>SC</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>WY</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>AZ</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>CA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>KY</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>MI</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>MO</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>MT</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>NM</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>OK</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>RI</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>UT</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>VA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>WA</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
</tr>
</tbody>
</table>
REFERENCES

64 FR 59380. (1999, November 2).


Dent v. West Virginia (Supreme Court of the United States January 14, 1889).


FSMB. (2008a). *Assuring the Ongoing Competence of Licensed Physicians, 2008* (Board of Directors Report No. 08-3). Federation of State Medical Boards. Retrieved from fsmb.org/m_mol_timeline.html


FSMB. (2012a). *Elements of a State Medical and Osteopathic Board*. Federation of State Medical Boards.

FSMB. (2012b, revised). *Essentials of a State Medical and Osteopathic Practice Act*. Federation of State Medical Boards.


doi:10.1097/01.AOG.0000245092.16780.a6


doi:10.1016/j.ajog.2010.11.009


doi:10.1016/j.jbankfin.2007.09.009


Holmboe, E. S., Wang, Y., Meehan, T. P., Tate, J. P., Ho, S.-Y., Starkey, K. S., & Lipner, R. S. (2008). Association between maintenance of certification examination...
scores and quality of care for medicare beneficiaries. *Archives of Internal Medicine, 168*(13), 1396–1403. doi:10.1001/archinte.168.13.1396


American College of Chest Physicians Evidence-Based Educational Guidelines. 

_Chest, 135_(3 Suppl), 69S–75S. doi:10.1378/chest.08-2522


https://www.health.ny.gov/professionals/patients/patient_safety/laws/program_bill/frequently_asked_questions.htm#three


PR Newswire. (2008, May 5). Federation of State Medical Boards takes interim steps toward Maintenance of Licensure model policy; organization affirms commitment to policy requiring physicians to demonstrate continuing competence. Dallas. Retrieved from Factiva


Washington, DC. Retrieved from
http://www.census.gov/prod/www/statistical_abstract.html#


VBM. (2013, April 5). Virginia Board of Medicine Executive Committee Minutes.

Virginia Board of Medicine. Retrieved from
https://www.dhp.virginia.gov/Medicine/Minutes/2013/Executive_draft_04052013.doc


BIOGRAPHY

Julia Cerenzia (nee Reynolds) graduated from Kremlin-Gildford High School in Gildford, Montana, in 1986. She received her Bachelor of Arts in Political Science from Montana State University in 1991. Ms. Cerenzia then worked for the State of Montana as the Assistant International Affairs Coordinator, the International Marketing Manager for Tourism, and as a contractor based in the United Kingdom. In 1995, she received her Master of Arts in International Affairs and International Economics from the Johns Hopkins University’s Paul H. Nitze School of Advanced International Studies (SAIS), studying in Bologna, Italy, and Washington, D.C. After her graduate studies, Ms. Cerenzia had a ten-year career in the U.S. Department of Commerce, providing subject matter expertise on limited recourse project finance and international investment, and serving as liaison to and Board staff for the Overseas Private Investment Corporation. She is currently the founder and CEO of Open Window Consulting, LLC, providing management consulting, research, and analysis for public and private sector clients.