

Physician Licensure and Telemedicine: Some Competitive Issues Raised by the Prospect of Practising Globally While Regulating Locally

Daniel J. Gilman

Follow this and additional works at: <http://digitalcommons.law.umaryland.edu/jhclp>

 Part of the [Health Law Commons](#)

Recommended Citation

Daniel J. Gilman, *Physician Licensure and Telemedicine: Some Competitive Issues Raised by the Prospect of Practising Globally While Regulating Locally*, 14 J. Health Care L. & Pol'y 87 (2011).

Available at: <http://digitalcommons.law.umaryland.edu/jhclp/vol14/iss1/4>

This Conference is brought to you for free and open access by DigitalCommons@UM Carey Law. It has been accepted for inclusion in Journal of Health Care Law and Policy by an authorized administrator of DigitalCommons@UM Carey Law. For more information, please contact smccarty@law.umaryland.edu.

PHYSICIAN LICENSURE AND TELEMEDICINE: SOME COMPETITIVE ISSUES RAISED BY THE PROSPECT OF PRACTICING GLOBALLY WHILE REGULATING LOCALLY

DANIEL J. GILMAN, PH.D., J.D.*

I. INTRODUCTION

The framing issue for the roundtable and these accompanying papers – legal impediments to telemedicine – is, at its core, an issue for competition policy, and this paper seeks to shed some light on what that entails.¹ Physician licensure, like professional licensure generally, is a barrier to entry. Restricting entry is what licensure is for.² Not all barriers to entry are

Copyright © Daniel J. Gilman 2011.

* Daniel J. Gilman is an Attorney-Advisor in the Office of Policy Planning at the Federal Trade Commission. This essay is based on remarks offered at the Legal Obstacles to Telemedicine Roundtable at the University of Maryland School of Law, April 16, 2010. The views expressed herein, like those at the roundtable, are those of the author alone, and do not necessarily reflect the views of the Federal Trade Commission, any of its individual Commissioners, or the Office of Policy Planning at the FTC. The author thanks roundtable participants for their discussion of these issues and James Cooper, Suzanne Drennon Munck, and Gustav Chiarello for their comments on an early draft of this paper. Any faults that remain are the responsibility of the author alone.

1. General questions about the implications of licensing for telemedicine, as seen from a competition standpoint, are not new. *See, e.g.*, FED. TRADE COMM'N & DEP'T OF JUSTICE, IMPROVING HEALTH CARE: A DOSE OF COMPETITION, exec. summary at 14, 22–23, ch. 2 at 25, 30–33 (2004) [hereinafter A DOSE OF COMPETITION], *available at* <http://www.ftc.gov/reports/healthcare/040723healthcarerept.pdf> (examining the relationship among physician licensure, consumer benefits, and marketplace competition). These remarks are intended to revisit and update that discussion, in part because the competition perspective has been lacking in so many recent discussions of telemedicine and HIT policy.

2. Licensure is a process that guards entry into an occupation, and requires the license seeker to obtain the permission of a government agency before providing professional services in that agency's jurisdiction. Typically, the state licensing authority requires the license-seeker to demonstrate a minimum degree of competence in turn. FED. TRADE COMM'N, JOINT FTC/DEPARTMENT OF JUSTICE HEARING ON HEALTH CARE AND COMPETITION LAW AND POLICY

substantial or durable, much less undue or unlawful, and it does not follow from the very nature of physician licensure that licensure is anticompetitive, fails to provide consumer benefits, or is not, on balance, cost-justified.³ On the other hand, any particular licensing scheme may evidence one or all of those failings.⁴ It is not impertinent to ask when that is, or might be, the case. To do so is to look at physician licensure from the perspective of competition law and policy. It is the purpose of this paper to do just that.

In particular, this discussion will focus on the costs that state-based physician licensure may impose on a particular area of innovation in health care delivery – that is, the development and adoption of telemedicine.⁵ In doing so, this brief paper will not attempt a comprehensive account of all the costs and benefits of state-based licensure. Neither will this paper attempt to argue that the conduct of one or more state boards of medicine violates the antitrust laws. Rather, this paper will identify certain competitive problems posed by the current system of state-based physician licensing, especially as these problems may be costly for the development of telemedicine technology and the practice of telemedicine.⁶ Note at the outset that the framing issue of the roundtable – legal impediments to telemedicine – dovetails with a sort of competitive inquiry: certain impediments to competition (barriers to entry in particular) are identified; if the impediments are not trivial, we move to the question whether they are justified by countervailing consumer protection benefits or other pro-consumer efficiencies. An adequate exploration of these questions may, in turn, require detailed fact-specific inquiries and systematic empirical analyses – evidence-based medical policy to frame evidence-based medicine – some of which are available and some of which are not.

33–34 (2003), available at <http://www.ftc.gov/ogc/healthcarehearings/030610ftctrans.pdf> (statement of Dr. Morris Kleiner). See also A DOSE OF COMPETITION, *supra* note 1, ch. 2, at 25 (“Through licensure requirements, states may restrict market entry by physicians and allied health professionals (AHPs), and further limit the scope of authorized practice.”).

3. “Licensing may improve the average quality of service offered by practitioners when the entry of less competent practitioners is prevented or when less competent practitioners are forced to increase their investments in human capital.” Adriana D. Kugler & Robert M. Sauer, *Doctors Without Borders? Relicensing Requirements and Negative Selection in the Market for Physicians*, 23 J. LAB. ECON. 437, 438 (2005). See also Keith B. Leffler, *Physician Licensure: Competition and Monopoly in American Medicine*, 21 J.L. & ECON. 165, 185–86 (1978) (examining approaches to physician licensure and finding “no clear answer” to question of who benefits from the medical profession’s licensing requirements).

4. See, e.g., Charles H. Baron, *Licensure of Health Care Professionals: The Consumer’s Case for Abolition*, 9 AM. J.L. & MED. 335, 341–42 (1983) (detailing how licensure has failed to produce lasting net benefits in quality and has led to increased health care costs).

5. See *infra* Part III.

6. See *infra* Part III.

The heart of the policy problem is this: telemedicine⁷ promises in various ways to reduce the costs and extend the reach of many health care services,⁸ but the advantages of remote and networked expertise may be poorly accommodated by licensing schemes that were developed to regulate local medical practices – practices historically dominated by face-to-face encounters between a physician and her patient.⁹ Telemedicine has the potential to improve access to health care and lower its costs via the use of increasingly efficient and rich tools for gathering, processing, and disseminating health information.¹⁰ At the most basic level, medical problems and the expertise pertinent to their solutions need not always be in the same room at the same time, and the fragmentation of health care can be reduced, rather than exacerbated, by remote communications.¹¹ However, state-based licensing restrictions may erect barriers to the electronic flow of expertise and information to and from qualified practitioners across state lines,¹² and not just to unqualified health care providers. As observed in a 2004 joint Federal Trade Commission (FTC)/Department of Justice (DOJ) report, “[t]he practice of telemedicine has . . . crystallized tensions between

7. See *infra* Part II.A for a general discussion of what telemedicine entails. For now, telemedicine services are treatment-related health care services, enabled by telecommunications or IT technology, where providers and/or consumers are separated geographically or temporally. Matthew S. Yeo, *Distance Health Services Under the General Agreement on Trade in Services*, 35 J. HEALTH L. 83, 85 (2002), available at [http://www.healthlawyers.org/Publications/Journal/Documents/Vol35Issue1/JHL_vol.35_no.1_Yeo\(Distance_Health\).pdf](http://www.healthlawyers.org/Publications/Journal/Documents/Vol35Issue1/JHL_vol.35_no.1_Yeo(Distance_Health).pdf).

8. Ann K. Schooley, Note, *Allowing FDA Regulation of Communications Software Used in Telemedicine: A Potentially Fatal Misdiagnosis?*, 50 FED. COMM. L.J. 731, 732–33 (1998).

9. See generally U.S. DEP’T OF COMMERCE & U.S. DEP’T OF HEALTH & HUMAN SERVS., TELEMEDICINE REPORT TO CONGRESS (1997) [hereinafter TELEMEDICINE REPORT TO CONGRESS], available at <http://www.ntia.doc.gov/reports/telemed/index.htm> (describing different licensing standards and procedures that cater to local needs, and the complicated relationship that might arise if telemedicine were subject to a federal licensing scheme).

10. See, e.g., A DOSE OF COMPETITION, *supra* note 1, ch. 2, at 31 (describing the potential benefits of telemedicine); Daniel J. Gilman & James C. Cooper, *There is a Time to Keep Silent and a Time to Speak, the Hard Part is Knowing Which is Which: Striking the Balance Between Privacy Protection and the Flow of Health Care Information*, 16 MICH. TELECOMM. TECH. L. REV. 279, 286–95 (2010) (discussing generally the development and benefits of Health Information Technology (HIT)).

11. See Ranney Wiesemann, Note, *On-Line or On-Call? Legal and Ethical Challenges Emerging in Cybermedicine*, 43 ST. LOUIS U. L.J. 1119, 1124–26 (1999) (discussing telemedicine’s effect on the traditional face-to-face provision of medical services and noting in particular telemedicine’s potential to broadly cohere the practice of medicine).

12. See Gilman & Cooper, *supra* note 10, at 343–44 (stating that variable state laws regarding the privacy of patient information likely hinder the exchange of such information across state lines and lead to increased costs associated with the use of telemedicine); P. Greg Gulick, *E-Health and the Future of Medicine: The Economic, Legal, Regulatory, Cultural, and Organizational Obstacles Facing Telemedicine and Cybermedicine Programs*, 12 ALB. L.J. SCI. & TECH. 351, 365–67 (2002) (detailing different state laws relating specifically to the use of telecommunications in physician-to-patient and physician-to-physician consultations).

the states' role in ensuring patients have access to quality care and the anticompetitive effects of protecting in-state physicians from out-of-state competition."¹³ The American Medical Association appears to agree.¹⁴

This paper revisits the competition perspective on licensing and telemedicine in view of contemporary developments in health information technology (HIT) and health policy.¹⁵ To that end, Part II provides brief background introductions to: (a) telemedicine, (b) licensure, and (c) the importance of consumer interests in competition law and policy.¹⁶ Part III applies the competition perspective to licensure and telemedicine, and surveys some of the available research on the costs and benefits of licensing.¹⁷ Part III also argues that regulatory costs are substantial and, in particular, that regulatory barriers to entry across state lines are under-rationalized at best.¹⁸ Finally, Part IV briefly discusses possible policy reforms.¹⁹ One policy proposal discussed at the roundtable – federal licensing and the preemption of state licensing requirements for physicians – is both attractive and problematic. In brief, federal physician licensing is attractive because the costs of variable entry requirements across the states are substantial, unjustified, and, given the substantive harmonization of basic qualifications, unlikely to offer much in the way of countervailing consumer protection benefits.²⁰ It is problematic chiefly for institutional reasons, rather than those related to state interests or prerogatives. There are, of course, federal regulations pertaining to physician qualifications and conduct,²¹ and there is considerable federal expertise in health care

13. A DOSE OF COMPETITION, *supra* note 1, ch. 2, at 32.

14. A recent AMA update notes that, “[t]elemedicine in particular has crystallized the tension between the states’ role in protecting patients from incompetent physicians and protecting in-state physicians from out-of-state competition” *Physician Licensure: An Update of Trends*, AM. MED. ASS’N, <http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/young-physicians-section/advocacy-resources/physician-licensure-an-update-trends.shtml> (last visited Dec. 29, 2010).

15. See *infra* Part II.A (providing an overview of HIT and a discussion of recent developments in that field). See also, e.g., A DOSE OF COMPETITION, *supra* note 1, exec. summary, at 14, 22–23, ch. 2, at 25, 30–33 (discussing, among other things, competitive concerns about state licensing of physicians).

16. See *infra* Part II.

17. See *infra* Part III.

18. See *infra* Part III.

19. See *infra* Part IV.

20. See Thomas R. McLean, *The Future of Telemedicine and Its Faustian Reliance on Regulatory Trade Barriers for Protection*, 16 HEALTH MATRIX 443, 462–63 (2006) (discussing the high costs associated with state-based physician licensure and the protection from professional competition that results from those high costs); Alison M. Sulentic, *Crossing Borders: The Licensure of Interstate Telemedicine Practitioners*, 25 J. LEGIS. 1, 7–8 (1999) (detailing the common requirements shared by most state-based physician licensing schemes).

21. See generally, 42 C.F.R. § 485 (2009) (providing several regulations relating to the qualifications and conduct of medical personnel in facilities receiving Medicare reimbursements).

matters.²² There is not, however, a federal agency with the authority, expertise, and experience to perform the various licensing functions undertaken by the states, and it would be difficult to create one. It may be unnecessary as well, as some form of mutual recognition or reciprocity could reduce the costs of interstate commerce in health care services, while leaving in place state-based mechanisms for physician oversight and discipline.

Two brief caveats are offered at the outset. The first ought to be nearly generic in health policy discussions, although it often enough is overlooked: consumer interests and expectations in this space are very likely to be heterogeneous. Both licensing and telemedicine may provide costs and benefits that vary across health care consumers.²³

Second, in discussing the costs of licensure, this paper does not entail or intend a criticism of basic licensing standards. That is, this paper is not concerned with the general question whether the typical or average costs of licensure tend to be justified by consumer benefits or with the relative virtues of licensure and other means of regulating physician entry (including, in the limit, deregulation). Early works by, for example, Milton Friedman and Simon Kuznets,²⁴ George Stigler,²⁵ Kenneth Arrow,²⁶ and Keith Leffler²⁷ provide important foundations for the ongoing study of professional licensing generally and physician licensing in particular. They do not, however, enable us to optimize existing entry requirements for physicians or to sort between the relative advantages and disadvantages of existing and proposed entry requirements. Abandoning licensure entirely does not appear to be a live policy option. The policy questions at hand concern not just the relative stringency of one set of entry requirements or another, but the costs and benefits of *variation* in licensing requirements

22. See, e.g., 42 C.F.R. § 24.4 (2009) (explaining that members of the Senior Biomedical Research Service Policy Board must “have a doctoral-level degree in biomedicine” and “be outstanding in the field of biomedical research or clinical research evaluation”).

23. For example, there is some evidence that licensure offers more benefits to those consumers who place more emphasis on the quality of their health care; there also is some evidence that relatively stringent state licensing requirements tend to raise prices and reduce access to care. A DOSE OF COMPETITION, *supra* note 1, ch. 2, at 27.

24. MILTON FRIEDMAN & SIMON KUZNETS, *INCOME FROM INDEPENDENT PROFESSIONAL PRACTICE* (1954).

25. See, e.g., George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3, 13–17 (1971) (describing licensing and its effects on the assertion of collective political power of an occupation).

26. Kenneth J. Arrow, *Uncertainty and the Welfare Economics of Medical Care*, 53 AM. ECON. REV. 941, 966–67 (1963).

27. See Leffler, *supra* note 3, at 185–86 (examining public interest perspectives of physician licensure, and costs associated with the practice).

and, in particular, in new regulatory restrictions on interstate telemedicine practice via state licensing laws.

II. BACKGROUND: TELEMEDICINE, LICENSURE, AND COMPETITION

A. Telemedicine and HIT

In this discussion, “telemedicine” will be roughly co-extensive with the application of HIT to patient health. “Telemedicine” itself is not well defined, and that may be all for the best at its present stage of development.²⁸ Informally, telemedicine is “the use of telecommunications technology for medical, diagnostic, monitoring, and therapeutic purposes when distance and/or time separates the participants.”²⁹ On this general view of medicine-at-a-distance, the conflation of telemedicine and HIT should be easy enough to excuse. To deliver health services to remote patients, a health care provider may use considerably more than occasional telephone calls or broadband-enabled discussions between physicians and patients.³⁰ A provider might make good use of, for example, real-time access to a patient’s electronic health record (EHR), drug prescription information within the EHR, general electronic prescribing information, practice guidelines, etc.³¹ In some contexts, it might be medically important that test data or images be accessible or transmissible from the patient’s home, from prior providers, or from primary or basic care givers to other members of a health care team.³² Patients could use personal health records, as well as the ability to examine portions of their EHRs, to schedule consultations, etc. Specialist consultation, in real-time or otherwise, might be made available to remote primary care physicians or other advanced health professionals (AHPs).³³ The range of HIT tools applicable to

28. There is, at least, no general definition of the term under federal law, even though various federal statutes and regulations provide for the implementation of telemedicine. *See, e.g.*, 7 C.F.R. § 1703.101 (2010) (providing financial assistance to rural areas in order to facilitate implementation of, and access to, telemedicine).

29. *Telemedicine Activities at the Department of Health and Human Services: Hearing Before the Subcomm. on Health of the H. Comm. on Veterans Affairs*, 109th Cong. (2005) (statement of Carolyn M. Clancy, Director, Agency for Healthcare Research and Quality), available at <http://www.ahrq.gov/news/test51805.htm>.

30. *See generally* TELEMEDICINE REPORT TO CONGRESS, *supra* note 9, (noting that current telemedical practices now utilize traditional audio and advanced imaging capabilities).

31. Gilman & Cooper, *supra* note 10, at 288 & n.31.

32. Marcus V. M. Figueredo & João S. Dias, *Mobile Telemedicine System for Home Care and Patient Monitoring*, 2 ENG’G IN MED. & BIOLOGY SOC’Y 3387, 3387 (2004), available at <http://www.di.ubi.pt/~paraujo/Telemedicina/MobileTelemedicineSystemforHomeCareandPatientMonitoring.pdf> (detailing the increasing number of individuals who would benefit from the expanded home health care services provided by the use of telemedicine).

33. For example, at a 2008 FTC workshop regarding Innovations in Health Care Delivery, Dr. Douglas Wood described initiatives at the Mayo Clinic to extend virtual consults to the United

telemedicine is thus broad and open. From both policy and technical standpoints, their fates are very much intertwined.

Incentives for providers to adopt such tools are considerable. For example, the American Recovery and Reinvestment Act of 2009 (Recovery Act or ARRA)³⁴ contemplates tens of billions of dollars in payments to health care professionals and hospitals to implement, improve, and maintain HIT under the Medicare and Medicaid programs.³⁵ Most incentives are structured to encourage relatively early adoption of interoperable HIT, including EHRs, and, correspondingly, to discourage failures to adopt.³⁶

B. Licensure in Brief

Occupational regulation – restrictions on the provision of professional services – takes various forms, with state law based licensure being the most common.³⁷ “In a licensing system, boards sanctioned by the state

Arab Emirates, cardiac expertise, information, and treatment throughout its hospital system in Minnesota, and specialist consultation to remote family physicians in rural Minnesota. FED. TRADE COMM’N, INNOVATIONS IN HEALTH CARE DELIVERY 170–73 (2008) [hereinafter FTC INNOVATIONS TRANSCRIPT], *available at* <http://www.ftc.gov/bc/healthcare/hcd/docs/hcdwkspttranscript.pdf> (statement of Dr. Douglas Wood, Professor of Med., Mayo Clinic).

34. The American Recovery and Reinvestment Act of 2009 is the short title of H.R.1, “[m]aking supplemental appropriations for job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization, for fiscal year ending September 30, 2009, and for other purposes.” American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115, 115 (2009). Pertinent funding may be provided under the “HITECH ACT” portions of the ARRA or otherwise (e.g., broadband facilities funding elsewhere in the Act that may be devoted to the delivery of rural health care). §§ 13001–13424, 6000, 123 Stat. at 226–79, 512–16 (to be codified in scattered sections of 42 U.S.C.).

35. For these provisions in Division B, Title IV of the Recovery Act, CBO estimates *net* outlays at \$20.819 billion. Letter from Douglas W. Elmendorf, Dir., Cong. Budget Office, to Hon. Charles E. Grassley, Ranking Member, U.S. Senate Comm. on Finance, tbl.2 (Mar. 2, 2009), *available at* http://www.cbo.gov/ftpdocs/100xx/doc10008/03-02-Macro_Effects_of_ARRA.pdf. The Department of Health and Human Services (HHS) has estimated spending “\$44.7 billion in incentives through Medicare and Medicaid to encourage physicians and hospitals to adopt certified electronic health record (EHR) technology.” *Fiscal Year 2010 Budget in Brief, American Recovery and Reinvestment Act*, U.S. DEP’T OF HEALTH & HUMAN SERVS., <http://www.hhs.gov/asrt/ob/docbudget/2010budgetinbriefc.html> (last visited Nov. 22, 2010).

36. Incentives are in several regards time-sensitive. First, direct financial incentive payments are not available past a certain threshold: “No incentive payments may be made under this subsection with respect to a year after 2016,” and “[i]f the first payment year for an eligible professional is after 2014 then the applicable amount . . . for such professional for such year and any subsequent year shall be \$0.” § 4101(a), 123 Stat. at 467–68. Furthermore, the statute provides for certain reductions in scheduled fee payment amounts, for services provided under Medicare, for an eligible provider who is “not a meaningful EHR user” in 2015 and subsequent years. § 4101(b), 123 Stat. at 472.

37. CAROLYN COX & SUSAN FOSTER, FED. TRADE COMM’N, BUREAU OF ECON., THE COSTS AND BENEFITS OF OCCUPATIONAL REGULATION 3 (1990), *available at* <http://www.ftc.gov/be/consumerbehavior/docs/reports/CoxFoster90.pdf>.

typically set entry requirements, enact rules governing conduct, and discipline individuals for rule violations.”³⁸ Such state boards are populated mainly by representatives of the regulated professions themselves, although many require the participation of some lay members as well.³⁹ A 1990 report issued by the FTC’s Bureau of Economics observed that more than 800 occupations were subject to licensing in at least one of the fifty states, with a core group of roughly sixty professions – including physicians and other health professionals, attorneys, architects, engineers, and real estate brokers – licensed by most states.⁴⁰

Each of the fifty states, the District of Columbia, and the U.S. territories regulates the practice of medicine via licensure, which is administered by their respective boards of medicine.⁴¹ Generally, the practice of medicine without such licensure is prohibited and subject to criminal sanction by statute.⁴² Particular licensing requirements vary considerably across the states,⁴³ but core entry requirements are substantially uniform, with state boards and other professional associations doing considerable work to harmonize the basic prerequisites to the practice of medicine.⁴⁴ For example, different states require the payment of different licensure fees (to different entities, of course)⁴⁵ and entry requirements vary in permitting different amounts of time for passing mandatory entry exams or in the number of times a candidate may retake an exam to achieve a

38. *Id.*

39. A DOSE OF COMPETITION, *supra* note 1, ch. 2, at 25. *See, e.g.*, COLO. REV. STAT. § 12-36-103 (2010) (providing that the Colorado medical board contain eleven physician members, one physician assistant member, and four at-large public members).

40. COX & FOSTER, *supra* note 37, at 3.

41. *Physician Licensure: An Update of Trends*, *supra* note 14.

42. *See, e.g.*, FLA. STAT. ANN. § 458.327(1)(a) (West 2001) (stating that the “practice of medicine or an attempt to practice medicine without a license to practice in Florida” constitutes a felony of the third degree).

43. *Physician Licensure: An Update of Trends*, *supra* note 14.

44. FED. OF MED. REGULATORY AUTHS. OF CAN., FED. OF STATE MED. BDS. & MILBANK MEM’L FUND, MEDICAL REGULATORY AUTHORITIES AND THE QUALITY OF MEDICAL SERVICES IN CANADA AND THE UNITED STATES 7, 11–12 (2008) [hereinafter MEDICAL REGULATORY AUTHORITIES], available at <http://www.milbank.org/reports/0806MedServicesCanada/0806MedServicesCanada.pdf> (discussing historical and current regulation of the U.S. and Canadian of the medical professions, and noting common educational and examination requirements as well as the potential to create an even more uniform system of regulation).

45. *See generally Physician Licensure: An Update of Trends*, *supra* note 15 (discussing briefly the issue of fees in physician licensure). *Compare, e.g., License Application Forms Physician*, N.Y. STATE EDUC. DEP’T OFFICE OF THE PROFESSIONS, <http://www.op.nysed.gov/prof/med/medforms/htm> (last visited Jan. 3, 2011) (stating that fees are submitted to the New York State Department of Education), with *Licensing Program*, MED. BD. OF CAL., http://www.medbd.ca.gov/applicant/application_international.pdf (last visited Jan. 3, 2011) (explaining that checks are to be made payable to the Medical Board of California and include a mandatory payment to the Physician Corps Loan Repayment Program).

passing score.⁴⁶ The underlying entry exam is the same, however: all state medical boards recognize and require passage of the same sequence of tests – the United States Medical Licensing Examination (USMLE) that is jointly administered by the Federation of State Medical Boards and the National Board of Medical Examiners.⁴⁷ In addition, required medical training tends to reflect an increasingly common model of medical education in the century since the Flexner Report,⁴⁸ and undergraduate medical education in both the United States and Canada is subject to joint accreditation.⁴⁹

Telemedicine is associated with a particular area of variation in licensing requirements across the states. With the development of telemedicine practices, a number of states have adopted special licensing-based restrictions on the practice of telemedicine.⁵⁰ Although state laws generally do not permit the practice of medicine without a license issued by the state in which the health care service is delivered,⁵¹ the relatively new body of telemedicine regulations varies considerably with regard to the question of which types of medical consultation count as the practice of medicine.⁵²

46. AM. MED. ASS'N, STATE MEDICAL LICENSURE REQUIREMENTS AND STATISTICS, 2010 § 1 (2010) (table 1 shows time for passage clustering at seven years, ten years, and no time limits across the states).

47. See generally FED'N OF STATE MED. BDS., STATE OF THE STATES: PHYSICIAN REGULATION 2009 3, 10–11 (2009) (explaining that the Federation of State Medical Boards (“FSMB”) administers the USMLE required by state boards and noting initiatives to streamline and harmonize licensing and make licensure more portable); U.S. MED. LICENSING EXAMINATION (USMLE), 2011 BULLETIN OF INFORMATION 1 (2011), available at http://www.usmle.org/General_Information/bulletin/2011/2011BOI.pdf (detailing the purposes of the USMLE and indicating that it provides state licensing boards with a common method of applicant evaluation). Commonly, a state statutory provision requires passage of an examination approved by the state board, and regulations promulgated by the board stipulate that the USMLE is the approved exam. See, e.g., FLA. STAT. ANN. § 456.017(1)(c) (West 2001) (Florida board to approve national exam by rule); FLA. ADMIN. CODE ANN. r.64B8-5.001 (2008), available at <https://www.flrules.org/gateway/ruleNo.asp?id=64B8-5.001> (Board of Medicine “approves and designates” the USMLE).

48. MEDICAL REGULATORY AUTHORITIES, *supra* note 44, at 3. For a copy of the Flexner Report and its findings, see ABRAHAM FLEXNER, MEDICAL EDUCATION IN THE UNITED STATES AND CANADA, A REPORT TO THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING (1910), available at http://www.carnegiefoundation.org/sites/default/files/elibrary/Carnegie_Flexner_Report.pdf.

49. MEDICAL REGULATORY AUTHORITIES, *supra* note 44, at 3.

50. See generally TELEMEDICINE REPORT TO CONGRESS, *supra* note 9, at ch. III (noting that state licensing laws are viewed as an obstacle to widespread use of telemedicine). See also *Physician Licensure: An Update of Trends*, *supra* note 14 (providing a non-exhaustive survey of state provisions regarding telemedicine and licensure).

51. See *Physician Licensure: An Update of Trends*, *supra* note 14 (stating that state laws generally require that a physician hold a license in the state where the patient is being treated).

52. Compare GA. CODE ANN. § 43-34-31 (2008) (requiring Georgia licensure if care is delivered within Georgia, although permitting certain limited exceptions), and KAN. ADMIN. REGS. § 100-26-1 (2010), available at <http://www.ksbha.org/regulations/article26.html> (citing

Licensure may be an efficient response to several potential types of market failure. First, when there are information asymmetries between professionals and consumers and quality information is costly, professionals may be insulated against the competitive disadvantages of offering lower quality services, and at the same time unable to capture the gains associated with higher quality services.⁵³ Licensing provides one possible regulatory response, at least to the extent that it offers consumers some assurance of minimum quality. Second, licensure may address some quality and consumption problems in markets where externalities are striking – where providers or consumers are not likely to take into account the effects of services on third-parties.⁵⁴ Minimum standards of care may ameliorate, for example, the public health consequences of substandard care or under-treatment.⁵⁵ Third, licensure may help to address problems associated with professionals who play the dual roles of diagnostician and treatment provider.⁵⁶ In such cases – and especially when there are third-party payers, when pricing is based on the quantity of services purchased, and when the service offered is highly technical – there may be a bias toward overconsumption: providers may tend to offer more services than necessary to consumers, who often are poorly equipped to evaluate the marginal value of additional services and, in any case, may be insulated from some of the costs of overconsumption.⁵⁷

KAN. STAT. ANN. § 65-2802(a) (2010)) (generally providing that a physician who diagnoses or prescribes medication for any condition in any manner is considered engaged in the practice of medicine in Kansas), with HAW. REV. STAT. ANN. § 453-1.3(f) (LexisNexis Supp. 2009) (providing generally for the practice of telemedicine and requiring that any physician who has established a patient-physician relationship with a patient in Hawaii obtain a license to practice medicine in Hawaii).

53. COX & FOSTER, *supra* note 37, at 5–6.

54. *Id.* at 9–10.

55. *See Id.* at 10 (discussing generally how poor quality services can result in the absence of professional licensing); The Center for Telemedicine Law, *Telemedicine and Interstate Licensure: Findings and Recommendations of the CTL Licensure Task Force*, 73 N.D. LAW REV. 109, 113–14 (1997) (describing the disparities in quality of health care that were mitigated by the advent of physician licensing).

56. *See* COX & FOSTER, *supra* note 37 at 11–12 (describing the general problems facing physicians who both diagnose and treat, and arguing that those problems are greater when there are third-party payers).

57. *Id.* at 12–13. Some of these difficulties are captured by the notion of “credence” goods or services, “those which, although worthwhile, cannot be evaluated in normal use.” *See* Michael R. Darby & Edi Karni, *Free Competition and the Optimal Amount of Fraud*, 16 J.L. & ECON. 67, 68–69 (1973) (using surgery to remove an appendix as an example of a medical service that contains “credence qualities” because it requires the person having his appendix removed to know whether it is diseased before the surgery takes place). As James Cooper has pointed out, there is an overconsumption equilibrium for credence goods when consumers cannot purchase diagnosis and treatment from separate parties. James C. Cooper, *Public Versus Private Restraints on the Online Distribution of Contact Lenses: A Distinction with a Difference*, 3 J.L. ECON. & POL’Y 331, 343–44 (2007).

Licensure is not always, however, an efficient response to these types of market failure. Moreover, licensure may be associated with certain competitive problems. Most generally, licensure may be used by incumbent professionals to insulate themselves from competition. As George Stigler noted in 1971, licensure “is an effective barrier to entry because occupational practice without the license is a criminal offense.”⁵⁸ By restricting the entry of competing professionals, licensure can restrict supply, which can increase the income of incumbents (at consumer expense) or decrease the pressure on incumbents to improve non-price aspects of their services, such as quality or convenience.⁵⁹ On this model, licensure is not an efficient response to market failure, but an example of legislative or regulatory “capture” by concentrated professional interests.⁶⁰

Part III of this paper examines some of the empirical evidence that is available on the effects of physician licensure in particular.⁶¹ Here, it is noted that physician licensure may offer pro-consumer benefits, anti-consumer harms, or some mixture of the two.⁶² Health care markets – and physician services markets in particular – have some of the hallmarks of areas in which occupational licensure may be an efficient response to market failure.⁶³ At the same time, different licensing provisions may be more or less efficient responses to market failure.⁶⁴ Moreover, concentrated physician interests may be well suited to the anti-consumer capture model of occupational licensing.

58. Stigler, *supra* note 25, at 13.

59. *Id.* at 13–14 (discussing the income variable in professional licensing); COX & FOSTER, *supra* note 37 at 18–20 (arguing that income is a significant factor in professionals’ desire for regulation via licensing); Morris M. Kleiner, *Occupational Licensing*, 14 J. ECON. PERSP. 189, 192 (2000) (“The most generally held view on the economics of occupational licensing is that it restricts the supply of labor to the occupation and thereby drives up the price of labor as well as of services rendered.”). See generally FRIEDMAN & KUZNETS, *supra* note 24 (reporting on an early study of income effects of restrictions on professional entry in five professions, including medicine).

60. See Kleiner, *supra* note 59, at 192 (suggesting that members of professions use state legislatures or local governments to control entry via licensing); Stigler, *supra* note 25, at 13–18 (providing a detailed analysis of the manner in which members of an occupation can use political processes to improve their positions).

61. See *infra* Part III.

62. See discussion *infra* Part III.A.

63. See Deborah Haas-Wilson, *Arrow and the Information Market Failure in Health Care: The Changing Content and Sources of Health Care Information*, 26 J. HEALTH POL. POL’Y & L. 1031, 1032–33 (2001) (discussing information asymmetries between doctors and patients).

64. See Gregory Dolin, Note, *Licensing Health Care Professionals: Has the United States Outlived the Need for Medical Licensure?*, 2 GEO. J. L. & PUB. POL’Y 315, 320–27 (2004) (providing a detailed discussion of the benefits and disadvantages of physician licensing).

C. Consumer Interests and the Competition Perspective

Concerns about legal impediments to telemedicine go to the nexus of competition and consumer protection policy. Even the briefest introduction to antitrust law and economics principles would, of course, go well beyond the scope of this paper. For present purposes, it is useful to revisit the central role of consumer interests in competition law and policy, especially as many discussions of telemedicine policy focus chiefly on institutional planning or competing regulatory interests.

Both competition and consumer protection issues are important to physician licensure, telemedicine, and health care more generally.⁶⁵ We want to understand the consumer interests at stake in adequate physician licensing standards, but, equally, we want to understand the consumer interests at stake in efficient licensure. We want to avoid excess, unnecessary costs, and impediments to competition, as they may tend to increase prices and decrease access to health care goods and services.⁶⁶ The advantages to a joint competition/consumer protection perspective are numerous. As John Fingleton, head of the United Kingdom's Office of Fair Trading, has explained, competition analysis (and regulation) benefits from consumer protection's grasp of concrete consumer harms and real consumer behaviors; and consumer protection analysis benefits from competition policy's resistance to the rush to regulate, its ability to identify the costs of intervention, its understanding of the private sector, and its economic rigor.⁶⁷

A competition perspective also implies a key baseline commitment to consumer welfare when scrutinizing either private or public conduct. Consumer welfare is, of course, a foundational concern in consumer protection law. It is equally fundamental to competition analysis.⁶⁸ "In its design and function," the rule of reason approach that dominates antitrust analysis "distinguishes between restraints with anticompetitive effect that

65. See *infra* Part III.A.

66. See generally Thomas Bodenheimer, *High and Rising Health Care Costs Part I: Seeking an Explanation*, 142 ANNALS INTERNAL MED. 847, 849–52 (2005) (discussing generally issues of access, cost, and competition in health care markets).

67. John Fingleton, Chief Exec., U.K. Office of Fair Trading, Remarks at the U.S. Federal Trade Commission (June 27, 2010). Among foreign competition agencies, the U.K. Office of Fair Trading is distinctive in that it has broad jurisdiction over both competition and consumer protection matters in the United Kingdom, much as the FTC does in the United States. Enterprise Act, 2002, c. 40 (U.K.). Fingleton's remarks apply to the institutional advantages offered by an agency – such as the Office of Fair Trading or the FTC – that has jurisdiction over both competition and consumer protection matters. Fingleton, Remarks at U.S. Fed. Trade Comm'n. I suggest here that those advantages can be generalized to the cross-fertilization of competition and consumer protection policy analyses more generally.

68. See, e.g., John Vickers, *Concepts of Competition*, 47 OXFORD ECON. PAPERS 1, 3–4 & n.6 (1995) (discussing the tightly-bound concepts of competition and consumer welfare).

are harmful to the consumer and restraints stimulating competition that are in the consumer's best interest."⁶⁹ Prohibited exclusionary conduct, for example, is conduct that has an anticompetitive effect – one that will “harm the competitive process and thereby consumers.”⁷⁰ The general focus is captured neatly in the title of an article by Robert Lande, *Proving the Obvious: The Antitrust Laws Were Passed to Protect Consumers (Not Just to Increase Efficiency)*.⁷¹

III. LOOKING AT LICENSURE FROM THE COMPETITION PERSPECTIVE

A. Competition and Consumer Interests

There are special consumer protection concerns in the realm of medical practice in particular, and the antitrust laws have long demonstrated some consideration for the norms and goals of the learned professions.⁷² These observations do not, however, lessen the reach or the importance of the antitrust laws to health care or health care professionals. Beginning with the seminal 1943 decision in *American Medical Association v. United States*,⁷³ the Supreme Court has come to recognize the importance of competition, and the application of antitrust principles, to health care.⁷⁴ Not incidentally, the FTC's contemporary health care competition program has roots in its 1970s case against the American Medical Association, concerning restrictions on advertising and pricing.⁷⁵ Since then, the

69. *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 886 (2007) (identifying primacy and nature of rule of reason in holding that vertical restraints on price should be subject to rule of reason analysis, rather than per se condemnation). The alternative, and more limited, per se condemnation of conduct as anticompetitive is not at odds with the core of the rule of reason. Rather, it is applied when courts, based on considerable experience with certain conduct, “can predict with confidence that it would be invalidated in all or almost all instances under the rule of reason.” *Id.* at 886–87.

70. *Rambus Inc. v. Fed. Trade Comm'n*, 522 F.3d 456, 463 (D.C. Cir. 2008). *See, e.g.*, *Fed. Trade Comm'n v. Ind. Fed'n of Dentists*, 476 U.S. 447, 459 (1986) (condemning the FTC's x-ray policy as anticompetitive because it impaired “the ability of the market to advance social welfare . . .”).

71. Robert H. Lande, *Proving the Obvious: The Antitrust Laws Were Passed to Protect Consumers (Not Just to Increase Efficiency)*, 50 HASTINGS L.J. 959 (1999).

72. *See, e.g.*, *Nat'l Soc'y of Prof'l Eng'rs v. United States*, 435 U.S. 679, 696 (1978) (noting that that nature of competition within professional services might be different from the nature of competition within the traditional business arena).

73. 317 U.S. 519 (1943).

74. *Id.* at 528, 536 (holding that a group of physicians and a medical association were not exempted by the Clayton Act and the Norris-LaGuardia Acts from the operations of the Sherman Act, although declining to reach the question whether a physician's practice of his or her profession constitutes trade under the meaning of Section 3 of the Sherman Act).

75. Interview by Patrick Thompson with William E. Kovacic, Chairman, Fed. Trade Comm'n (June 30, 2008), available at <http://ftc.gov/speeches/kovacic/2008kovacicintrvwc.pdf>.

antitrust agencies⁷⁶ have investigated the competitive effects of restrictions on the business practices of health care providers.⁷⁷ The FTC has, for example, targeted attempts by provider-controlled licensing boards to limit competition to the detriment of health care consumers.⁷⁸ Anticompetitive misuse of credentialing and privileging has been the target of both enforcement actions⁷⁹ and private litigation.⁸⁰

Consumers may have both positive interests and serious concerns about the impact of licensing requirements.⁸¹ What might consumers want from physician licensure?⁸² Consumers might want some form of public assurance about minimum standards of quality for medical care they receive. Substandard care may be disastrous, but information is costly, and reliable information about health care quality often is hard to obtain.⁸³ Moreover, information asymmetries between providers and patients can be substantial.⁸⁴

76. In the United States, the antitrust laws are jointly enforced by the FTC and the Antitrust Division of the Department of Justice. FED. TRADE COMM'N, OVERVIEW OF FTC ANTITRUST ACTIONS IN HEALTH CARE SERVICES AND PRODUCTS 1 (2010), available at <http://www.ftc.gov/bc/0310hcupdate.pdf>.

77. See *id.* (describing the FTC's Health Care Division, which is dedicated to addressing health care antitrust matters).

78. See, e.g., *S.C. State Bd. of Dentistry v. Fed. Trade Comm'n*, 455 F.3d 436, 440–43, 447 (4th Cir. 2006) (upholding FTC action against a board of dentistry following the board's promulgation of an emergency regulation that prevented oral hygienists from performing certain services in a school setting unless a dentist first examined the student and prescribed a course of treatment).

79. See, e.g., *In re Med. Staff of Mem'l Med. Ctr.*, 1987 FTC Lexis 9, *6–9 (1987) (addressing a challenge to a hospital's denial of credentials to a nurse-midwife and finding that “[c]onsumers have been limited in their ability to choose among alternative types of health care providers competing on the basis of price and quality.”).

80. See, e.g., *Boczar v. Manatee Hosps. & Health Sys., Inc.*, 993 F.2d 1514, 1519 (11th Cir. 1993) (reversing judgment notwithstanding the verdict because, on de novo review, “there was evidence from which a jury could reasonably infer that the hospital conspired with members of its medical staff and peer review committees . . . to restrain trade in violation of the Sherman Act.”).

81. See, e.g., *COX & FOSTER*, *supra* note 37 at v (suggesting that although occupational licensing might protect public health and safety, it can also result in significant consumer costs).

82. Interestingly, studies have shown that medical professionals tend to be the driving force behind the enactment of licensing regulation, and research also has shown the income-enhancing effects of licensure. See *id.* at 19–20 & nn.55–60 (discussing research that has demonstrated professionals' desire for regulation and its attendant effects on professional incomes).

83. See, e.g., A DOSE OF COMPETITION, *supra* note 1, ch. 1, at 18 (“[I]n health care . . . [quality] information is often difficult to obtain and is not necessarily reliable.”); Paul B. Ginsburg, *Shopping for Price in Medical Care*, 26 HEALTH AFF. w208, w209 (2007) (“[L]imited credible quality data are constraining the degree to which consumers are willing to consider price when choosing providers.”).

84. See SHERMAN FOLLAND ET AL., *THE ECONOMICS OF HEALTH CARE* 343 (4th ed. 2004) (explaining the public interest motive for regulation, which results where patients have limited information relating to quality and cost); *COX & FOSTER*, *supra* note 37, at 4–16 (discussing rationales for licensure including asymmetric information on quality).

Consumers might have concerns about licensure too. For example, consumers might not want misleading or opaque signals about health care quality.⁸⁵ Also, consumers likely do not want their health care to be more costly or more difficult to access than it is already.⁸⁶ These very understandable consumer concerns may be heightened, for example, in certain geographic areas or, looking forward, if one projects overall shortages of primary care or generalist physicians.⁸⁷ Hence, consumers should want to avoid licensing that adds undue costs, needless restrictions on the scope of service, or excessive barriers to entry for health care service providers. If licensing is inefficient in its design or implementation, misdirected in its regulatory focus, or misused for anticompetitive ends, it can do precisely those things.⁸⁸

Consumers may have substantial interests in the further development and deployment of telemedicine as well. Telemedicine may provide better access to health care services and health care information – easier

85. For a general discussion of choice architecture and mapping problems for health care choices, see RICHARD H. THALER & CASS R. SUNSTEIN, *NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS*, 81–100 (2008). Among legislative initiatives to improve quality reporting and make publicly available information clearer to consumers are, for example, Patient Protection and Affordable Care Act (“PPACA”) Sections 3002 and 3003 (to improve the physician quality and feedback reporting systems, respectively) and 3015 (strategic framework for quality and efficiency data collection, with data to be made available to the public on standardized Internet websites). Patient Protection and Affordable Care Act, Pub. L. No. 111-148, §§ 3002, 3003, 3015, 124 Stat. 119, 363–68, 387–89 (2010) (to be codified in scattered sections of 42 U.S.C.).

86. Myriad sources document general consumer concerns about price and value in health care services markets. See generally PIERRE L. YOUNG & LEIGHANNE OLSEN, *INST. OF MED., THE HEALTHCARE IMPERATIVE: LOWERING COSTS AND IMPROVING OUTCOMES* (2010) (discussing in detail the ill-effects of steadily-rising health care costs on both governments and individuals). Legislative response to such public concerns has been substantial too, however one assesses the particulars of the response. For example, throughout the PPACA are provisions aimed at improving price and quality, as well as value transparency in health care. §§ 1001, 1003, 124 Stat. 135–37, 139–40.

87. See, e.g., Jack M. Colwill et al., *Will Generalist Physician Supply Meet Demands of an Increasing and Aging Population?*, 27 *HEALTH AFF.* w232, w237 (2008) (regarding the supply of primary care physicians).

88. The FTC advocacy page contains numerous examples of FTC staff analyses that seek to limit undue regulatory restraints on health care competition. See, e.g., DEP’T OF JUSTICE & FED. TRADE COMM’N, *COMPETITION IN HEALTH CARE AND CERTIFICATED OF NEED 2–3* (2008), available at <http://www.ftc.gov/os/2008/09/V080018illconlaws.pdf> (regarding competitive issues raised by certificate of need regulations); Letter from Fed. Trade Comm’n Staff to Jill Brown, Off. of Legal Servs., Ky. Cabinet for Health and Family Servs. 2 (Jan. 28, 2010), available at <http://www.ftc.gov/os/2010/02/100202kycomment.pdf> (regarding competitive impact of regulatory restrictions on scope of practice within limited service clinics); Letter from Fed. Trade Comm’n Staff to Hon. Timothy Burns, La. House of Representatives 2–3 (May 1, 2009), available at <http://www.ftc.gov/os/2009/05/V090009 louisianadentistry.pdf> (regarding proposed restrictions on mobile dentistry); *Advocacy Filings By Date*, FED. TRADE COMM’N, http://www.ftc.gov/opp/advocacy_date.shtm (last visited Jan. 4, 2011) (listing an index of advocacy filings across industries and markets).

geographic access, more timely access, more choice, and more affordable care, to the extent that telemedicine efficiencies tend to lower provider costs and consumer prices.⁸⁹ Many have argued that telemedicine and the growth of HIT are critical to improving quality and efficiency in health care delivery.⁹⁰ For example, it appears that HIT has the potential to reduce medical errors,⁹¹ duplicative testing and procedures,⁹² and substantial administrative costs now attributed to incomplete, hard-to-find, or faulty paper records.⁹³ That is not to say that the issues involved with the adoption and implementation of telemedicine are trivial or unproblematic.⁹⁴ Potential benefits may sometimes go unrealized, but they are real nonetheless, and have been demonstrated in various contexts.⁹⁵ Undue impediments to consumption of those benefits are unwanted.

Brown Shoe's oft-cited dictum, that the purpose of the antitrust laws is "the protection of competition, not competitors,"⁹⁶ does not, of course, mean that the impact of regulations on providers is irrelevant from a competition perspective.⁹⁷ Trivially, health care providers and professionals may themselves be consumers in one or another health or HIT-related

89. See Schooley, *supra* note 8, at 732–33 (arguing that telemedicine will widely benefit the provision of health care, including access, treatment, and cost).

90. See, e.g., Richard Hillestad et al., *Can Electronic Medical Record Systems Transform Health Care? Potential Health Benefits, Savings, and Costs*, 24 HEALTH AFF. 1103, 1103–05, 1107–08 (2005) (noting that all the benefits of HIT are currently unclear but suggesting that there might be significant—if unpredictable—health care savings involved in its use).

91. See, e.g., INST. OF MED., REPORT BRIEF: PREVENTING MEDICATION ERRORS 1 (2006) (estimating a minimum of 1.5 million preventable medication errors per year in hospitals, nursing homes, and ambulatory care settings in U.S.). The IOM has also identified HIT as a promising means of reducing the frequency of such errors. *Id.* at 3.

92. See *id.* (discussing the importance of eRx (Electronic Prescriptions) and other HIT in reducing medication errors).

93. See *id.* (emphasizing the importance of maintaining accurate patient and prescription information as it travels between the physician's office, the pharmacy, the nursing home, etc.).

94. See generally Gilman & Cooper, *supra* note 10, at 290, 295 (including an overview of the potential costs and benefits associated with HIT adoption, with a focus on regulatory costs and impediments to HIT adoption).

95. See, e.g., *id.* at 292 & nn. 50–54 (discussing the benefits of HIT in health care delivery organizations); see also U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-04-0224, INFORMATION TECHNOLOGY: BENEFITS REALIZED FOR SELECTED HEALTH CARE FUNCTIONS 13 (2003), available at <http://www.gao.gov/new.items/d04224.pdf> (identifying "20 IT initiatives associated with health care organizations that resulted in reported cost savings or other benefits"); David W. Bates et al., *The Impact of Computerized Physician Order Entry on Medication Error Prevention*, 6 J. AM. MED. INFORMATICS ASS'N 313, 314, 320 (1999) (evaluating the impact of electronic physician order entry on medication error rates and exploring possible changes for future implementation of this HIT).

96. *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962).

97. For a general discussion of varying economic interests at stake in licensing, see Sam Peltzman, *Toward a More General Theory of Regulation*, 19 J.L. & ECON. 211, 217–18 (1976) (expressing skepticism about the unique relevance of either efficiency or cartel model of regulation).

market. They also may provide key, expert input regarding the operation and effects of competitive constraints. But more than that, even if we focus especially on the patient – who is the end-consumer of typical telemedicine services – limits on health care providers may directly impact the quality, price, or availability of services.

Revisiting the case study offered at the Roundtable, we might consider, for example, the interests of an academic medical center (AMC) in providing telemedicine services to underserved rural communities throughout the western United States. First, an AMC might seek to provide care to (and seek revenue from) remote patients who would not otherwise have access to specialized care or other resources offered by a tertiary care center. Such patients might be new to the AMC, or might be patients previously referred to an AMC practice for an episode of care – patients who might well benefit from ongoing, integrated, specialized health care that is unavailable where they live.⁹⁸ Second, the AMC might seek to distribute its expertise to remote primary care practices or monitor chronic conditions, providing more regular and thorough oversight of patient conditions than feasible with face-to-face contact.⁹⁹ The AMC might be interested in grant resources too, including those available under the Recovery Act.¹⁰⁰ The AMC also might seek to expand its base of referring health care providers or affiliates, or to develop new training opportunities for its students, residents, fellows, and other AHPs.

What might be some of the center's concerns? All of the regulatory concerns about its own in-state practice may carry over to new settings, as may liability concerns.¹⁰¹ A provider might, for example, be concerned both about additional exposure to potential malpractice claims and about whether, or to what extent, existing malpractice coverage protects against claims relating to novel practice contexts.¹⁰² Second, regulatory burdens may vary considerably across state lines.¹⁰³ That may constrain an AMC's service delivery and professional staffing in ways that differ from one jurisdiction to the next. It also raises an AMC's risk profile in several ways.

98. See *supra* note 33 and accompanying text.

99. See, e.g., FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 203–06 (statement of Thomas Berg, Marshfield Clinic, regarding patient input into electronic diabetes management).

100. See *supra* notes 35–37 and accompanying text.

101. See, e.g., LINDA L. DIMITROPOULOS, PRIVACY AND SECURITY SOLUTIONS FOR INTEROPERABLE HEALTH INFORMATION EXCHANGE: NATIONWIDE SUMMARY 6-11 (2007), available at http://www.rti.org/pubs/nationwide_summary.pdf (discussing provider concerns about liability, risk management, and regulatory obligations); Gilman & Cooper, *supra* note 10, at 333–34 & nn. 286–94 (regarding liability concerns and HIT).

102. A DOSE OF COMPETITION, *supra* note 1, ch. 2, at 32.

103. See, e.g., Linda Dimitropoulos & Stephanie Rizk, *A State-Based Approach to Privacy and Security for Interoperable Health Information Exchange*, 28 HEALTH AFF. 428, 428–29 (2009) (noting issues in accommodating state-level variation in health information privacy regulation).

Additional states means a larger matrix of potential liability. It also implies increased uncertainty about the choice of law in complex interstate matters and, not incidentally, the degree of expertise the AMC might have – either in-house or otherwise – about its possible exposure to public disciplinary action, private suit, or both. And, depending on the nature of any given connection, there may be uncertainty about the actual – and jurisdictional – location of any given patient or practitioner.¹⁰⁴ These species of uncertainty are themselves costly. Moreover, when relevant state and federal regulations are not clear, parties may over-comply to avoid liability.¹⁰⁵

Areas of potential regulatory concern are many. For example, health privacy regulation not only has a federal baseline in HIPAA,¹⁰⁶ the ARRA,¹⁰⁷ and the FTC Act,¹⁰⁸ but also has myriad state law components – not generally preempted by federal law – with the particulars varying greatly from state to state.¹⁰⁹ Many states have fragmented sets of privacy laws, including provisions drafted for non-health contexts and prior to the advent of the Internet, that may be applicable to health information or

104. See Schooley, *supra* note 8, at 734 (noting that the practice of telemedicine is not bound by state lines and discussing the jurisdictional issues that result for licensing and malpractice insurance purposes).

105. See STEVEN SHAVELL, FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW 224–29 (2004) (discussing behavior where the duty of care is uncertain and parties misperceive or overestimate the level of care expected of them).

106. Federal health privacy regulation under HIPAA generally refers to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and its implementing regulations. Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, §§ 261–264, 110 Stat. 1936, 2021–34 (1996) (codified at 42 U.S.C. §§ 1320d, 1320d–1320d-8, 1320d-2 (2008)); 45 C.F.R. pts. 160, 162, 164 (2009).

107. American Recovery and Reinvestment Act, Pub. L. No. 111-5, §§ 13001–13424, 123 Stat. 115, 226–79 (discussing HIT generally in Div. A, Tit. XIII, and HIT privacy and data security in Tit. XII, Subtit. D).

108. Federal Trade Commission Act of 1914, Pub. L. No. 63-203, 38 Stat. 717, 717–24 (codified as amended at 15 U.S.C. §§ 41–58 (2006)). See also *In re Eli Lilly & Co.*, File No. 012 3214, Agreement Containing Consent Order (Jan. 18, 2002), <http://www.ftc.gov/os/2002/01/lillyagree.pdf>. (ordering Eli Lilly & Company to establish and maintain a security program to protect the personal information of its customers that purchased pharmaceutical and other health related products and services from the company). See also *In re Eli Lilly & Co.*, Docket No. C-4047, Decision and Order (May 8, 2002), <http://www.ftc.gov/os/2002/05/elilillydo.htm> (settling case alleging disclosure of personal health information inconsistent with stated security policies, in violation of FTC Act).

109. See generally DIMOTROPOULOS, *supra* note 101, at 6-3 (citing variation among state laws relating to privacy of health information as a factor to consider in the creation and implementation of health exchanges). For a general overview of state law provisions, see JOY PRITTS ET AL., INST. FOR HEALTH CARE RES. & POL'Y, GEO. UNIV., THE STATE OF HEALTH PRIVACY: A SURVEY OF STATE HEALTH PRIVACY STATUTES (2d ed. 2003), available at <http://ihcrp.georgetown.edu/privacy/pdfs/statereport1.pdf> and <http://ihcrp.georgetown.edu/privacy/pdfs/statereport2.pdf>.

telecommunications.¹¹⁰ Not incidentally, some states have special privacy and disclosure requirements pertaining to telemedicine.¹¹¹

Non-reciprocal state licensing requirements, as well as variation in licensing requirements across the states, can also raise regulatory costs.¹¹² Many of these costs are associated with questions about the unauthorized practice of medicine.¹¹³ At the most basic level, a given course of treatment, performed by a given practitioner, might be regarded by a state board as lawful practice meeting the gold-standard of care or, in the alternative, the unauthorized practice of medicine. Which view prevails may depend essentially on the question whether state A or B has issued a license to the practitioner,¹¹⁴ it may be wholly independent of the question whether the two states' entry requirements or practice standards are substantially different. Such substantive differences may be viewed as small and shrinking – as noted above, all state medical boards recognize and require passage of the same sequence of USMLE tests¹¹⁵ and medical

110. See DIMOTROPOULOS, *supra* note 101, at 6-3 (discussing the ways in which state privacy laws vary).

111. See CAL. HEALTH & SAFETY CODE § 123149.5 (West 2006) (telemedicine data included in a patient's medical record); COLO. REV. STAT. ANN. § 25-1-801(d)(4) (West 2008) (telemedicine data included in a patient's medical record); OKLA. STAT. ANN. tit. 36, § 6804(A)(4) (West 2009) (requiring providers to give telemedicine patients “[a] statement that patient access to all medical information transmitted during a telemedicine interaction is guaranteed, and that copies of this information are available at stated costs, which shall not exceed the direct cost of providing the copies . . .”).

112. See TELEMEDICINE REPORT TO CONGRESS, *supra* note 9 (“[S]tate licensure laws are perceived as a barrier to the expansion of this type of health care practice in many parts of the country.”).

113. See, e.g., GA. CODE ANN. § 43-34-31 (2008) (requiring Georgia licensure if care is delivered within Georgia, including where care is delivered electronically or via telecommunications, although permitting certain limited exceptions); KAN. ADMIN. REGS. § 100-26-1 (2010), available at <http://www.ksbha.org/regulations/article26.html> (regulating the practice of medicine, including telemedicine services, and requiring Kansas licensure, although permitting certain exceptions for communications “incidental” to services lawfully provided elsewhere that are transmitted to certain persons in Kansas).

114. See GA. CODE ANN. §§ 43-34-31, 43-34-31.1 (2008) (providing practice of medicine and licensure requirements pertaining to location of patient); see also Christopher Guttman-McCabe, Comment, *Telemedicine's Imperiled Future? Funding, Reimbursement, Licensing and Privacy Hurdles Face a Developing Technology*, 14 J. CONTEMP. HEALTH L. & POL'Y 161, 169-71 (1997) (discussing generally the uncertainty surrounding physicians' authorization to practice inter-state via telemedicine).

115. See, e.g., FED'N OF STATE MED. BDS., *supra* note 47, at 9-11, 25-26 (stating that the FSMB administers USMLE required by state boards and noting initiatives to streamline and harmonize licensing and make licensure more portable); U.S. MED. LICENSING EXAMINATION (USMLE), 2010 BULLETIN OF INFORMATION 1 (2009), available at http://www.usmle.org/General_Information/bulletin/2010/2010bulletin.pdf (providing details about the USMLE).

training and preparatory training itself has tended to reflect an increasingly common model of medical education.¹¹⁶

There are further potential complications. For example, input into a case by a remote practitioner might be regarded as mere consultation under one state system, but the practice of medicine under another.¹¹⁷ Certain conduct by other AHPs – such as psychologists, psychiatric social workers, or advanced practice nurses – might be regarded as within the scope of their respective licensures in some states but not others.¹¹⁸ As noted above, these regulatory concerns impose direct compliance costs, can limit entry or the scope of practice, and may in many cases prompt concerns about potential civil liability for health care providers – both individual practitioners and the provider institutions that employ them, or with which they are affiliated.¹¹⁹

B. The Costs and Benefits of State Licensure

Consistent with their policy missions, the antitrust agencies (FTC and DOJ jointly) held twenty-seven days of hearings on competitive issues in health care in 2003.¹²⁰ On the basis of those hearings, an FTC sponsored workshop, and independent research,¹²¹ the agencies issued the 2004 Report, *Improving Health Care: A Dose of Competition (A Dose of Competition)*.¹²² The Report examined the role of competition in addressing the challenges facing U.S. health care,¹²³ and broadly concluded that, just

116. See MEDICAL REGULATORY AUTHORITIES, *supra* note 44 (noting the similarities between the regulation of and educational requirements for the medical profession in the U.S. and Canada).

117. See *supra* note 52 (comparing medical profession regulations in Kansas and Hawaii).

118. See, e.g., Brian Dulisse & Jerry Cromwell, *No Harm Found When Nurse Anesthetists Work Without Supervision by Physicians*, 29 HEALTH AFF. 1469, 1469–70 (2010) (describing states where nurse anesthetists may provide anesthesiology services without physician supervision versus those where they may not).

119. Analogous concerns about scope of practice limitations have been raised regarding limits on the scope of practice permissible in certain clinic settings. For example, certain states have contemplated restrictions on the scope of practice permissible for advance practice nurses in limited service clinics, which typically employ telemedicine for consultation, supervision, and quality control by remote physicians. See, e.g., Letter from Fed. Trade Comm'n to Jill Brown, *supra* note 88, at 1–2 (addressing regulations placing restrictions on scope of practice within limited service clinics).

120. Press Release, U.S. Dep't of Justice, DOJ/FTC Hearings to Focus on Health Care and Competition Law and Policy (Feb. 27, 2003), *available at* http://www.justice.gov/atr/public/press_releases/2003/200808.htm.

121. For an example of independent research that the FTC and DOJ considered, see COX & FOSTER, *supra* note 37.

122. A DOSE OF COMPETITION, *supra* note 1, exec. summary, at 1.

123. The 2004 Report addressed two basic questions: “First, what is the current role of competition in health care, and how can it be enhanced to increase consumer welfare? Second, how has, and how should, antitrust enforcement work to protect existing and potential competition in health care?” *Id.* at exec. summary, at 1–2.

as in other areas of the economy, “[v]igorous competition, both price and non-price, can have important benefits in health care as well.”¹²⁴ At the same time, the Report noted that certain barriers to competition had limited consumers’ ability to enjoy the fruits of competition in health care.¹²⁵ Among the barriers noted were, (1) information problems, (2) third-party payment, to the extent that it distorts competitive incentives, (3) agency problems, and (4) some of the extensive regulation of health care.¹²⁶

Among other regulatory costs, the Report examined those associated with licensure and certification, as well as special state restrictions on telemedicine.¹²⁷ As noted above, licensure’s impact on competition stems from the fact that, through licensure, state boards can restrict market entry by physicians and AHPs, and can limit the scope of practice of those professionals once licensed.¹²⁸ Studies have shown that state-based licensure can harm consumer welfare by limiting provider mobility, in addition to imposing other barriers to entry.¹²⁹

Boards tend to be dominated by particular industry representatives – incumbent providers of health care services in their markets.¹³⁰ This permits expert input into minimum standards, but also raises a core concern: “[b]ecause most board members are industry participants with economic interests at stake, the potential exists for the board to make decisions that are contrary to consumers’ interests.”¹³¹ Such providers may be unduly biased against competition from out-of-state practitioners, new modes of practice, or allied professions.¹³² And while providing expert opinion in certain regards, that expertise might be over-narrow. For example, providers might fail adequately to represent other disciplinary approaches to important health policy issues. Providers’ expertise may also fail to represent adequately the broad spectrum of citizen interests. It has been argued that competition would be better served if the membership of licensing boards were broader.¹³³

124. *Id.* at exec. summary, at 4.

125. *Id.* at exec. summary, at 4–7.

126. *Id.*

127. *Id.* at ch. 2, at 25–28, 30–33.

128. *Id.* at ch. 2, at 25–26.

129. *Id.* at ch. 2, at 28 & n.202.

130. *Id.* at ch. 2, at 25–26.

131. *Id.* at ch. 2, at 29.

132. *Id.* at 29 & n.210.

133. *Id.* at ch. 2, at 30. Discussing analogous problems for the allied health professions, the Institute of Medicine (IOM), for example, has recommended that “states strengthen the accountability and broaden the public basis of their regulatory mechanisms.” COMM. TO STUDY THE ROLE OF ALLIED HEALTH PERS., INST. OF MED., ALLIED HEALTH SERVICES: AVOIDING CRISES 256 (1989), available at <http://books.nap.edu/books/0309038960/html/RI.html#pagetop>. The IOM has also recommended increased board representation from without the regulated

More recent hearings and workshops have continued the inquiry. For example, in 2008, the FTC hosted a public workshop called Innovations in Health Care Delivery (Innovations Workshop), which focused substantially on HIT-related issues.¹³⁴ Several panelists identified state licensure requirements as among the regulatory barriers that may slow HIT implementation and the practice of telemedicine,¹³⁵ consistent with earlier reports from other government agencies.¹³⁶

The empirical record on the costs and benefits of physician licensure is limited and could be – should be – further developed. As noted in the introduction to this paper, early research on the costs and benefits of licensure and cartel effects in physician licensing, etc.,¹³⁷ provide important foundations for the ongoing study of professional licensing generally and physician licensing in particular. It does not, however, resolve present policy questions about the relative advantages among existing licensing systems, about how best to harmonize or streamline licensure, or about how best to lower barriers to interstate practice of medicine and telemedicine. In addition, it does not resolve the costs and benefits of *variation* in licensing requirements or, in particular, to new regulatory restrictions on interstate telemedicine practice *via* state licensing laws.

In broad terms, we want not just evidence regarding the general effects of licensing, but about the marginal effects of changes in licensing standards. Pertinent effects include not only effects on physician entry, but also effects on how physicians practice – selection into different specialty practices, selection into different regulatory jurisdictions, time spent with patients, etc., and not just on practicing physicians but on the end-consumers of their services – effects on patient access, frequency of

profession, including diverse members of the public and those who can bring to bear a variety of areas of expertise, such as health administration, economics, consumer affairs, education, and health services research. *Id.* at 250. The FTC/DOJ Report suggested that the IOM's recommendations could, if followed, help to ameliorate some of the competitive concerns associated with licensure. A DOSE OF COMPETITION, *supra* note 1, at ch. 2, at 30.

134. See *Innovations in Health Care Delivery*, FED. TRADE COMM'N, <http://www.ftc.gov/bc/healthcare/hcd/index.shtm> (last visited Jan. 5, 2011) (providing links to the April 24, 2008 Innovations Workshop agenda, a complete transcript of the Workshop, supporting materials, and public comments).

135. See, e.g., FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 176 (statement of Douglas L. Wood, Professor of Med., Mayo Clinic) (discussing the Mayo Clinic's concerns about telemedicine practice across state lines); *id.* at 268–69 (statement of Robert M. Kolodner, Nat'l Coordinator, U.S. Dep't of Health & Human Servs.) (identifying licensure and cross-state licensure as policy problems to be solved to enable interoperable HIT and telemedicine).

136. See, e.g., OFFICE FOR THE ADVANCEMENT OF TELEHEALTH, U.S. DEP'T OF HEALTH & HUMAN SERVS., 2001 TELEMEDICINE REPORT TO CONGRESS 21, 24 (2001) [hereinafter 2001 TELEMEDICINE REPORT TO CONGRESS] (noting that state-based telemedicine licensure laws make it difficult for the practice of telemedicine to grow across state lines).

137. See *supra* text accompanying notes 24–27.

treatment, choice of substitute providers from among AHPs and others, etc.¹³⁸ There is evidence that licensing generally increases costs for consumers.¹³⁹ There also is evidence that state-based licensure can serve as a barrier to provider mobility, to the detriment of consumer welfare.¹⁴⁰ Evidence of licensure's impact on the quality of care is mixed, and less well developed.¹⁴¹ There is some evidence regarding the effects of medical licensing board characteristics on rates of physician discipline.¹⁴² Lacking, however, appear to be serious, well-controlled longitudinal studies of the marginal benefits, in terms of quality of care, of varying entry standards. The states may offer a sort of "laboratory" for testing different regulatory responses to complex problems but testing the consumer benefits of, for example, longer residency requirements, appears not to have been done.¹⁴³

138. See generally Paul B. Ginsburg & Ernest Moy, *Physician Licensure and the Quality of Care: The Role of New Information Technologies*, 15 REGULATION 32 (1992) (discussing the effects of licensure on the quality of physician services, and state board mechanisms to respond to decreased quality of services).

139. See Kugler & Sauer, *supra* note 3, at 463 (reporting income effects from physician re-licensing in Israel); Leffler, *supra* note 3, at 185–86 (finding cartel rents, but small ones in equilibrium periods). Studies have found positive effects in other licensed health professions. See, e.g., COX & FOSTER, *supra* note 37, at 31 (providing a table indicating the effects of certain restrictions on dentistry, optometry, and pharmacy prices); Morris M. Kleiner & Robert T. Kudrle, *Does Regulation Affect Economic Outcomes? The Case of Dentistry*, 43 J.L. & ECON. 547, 575–76 (2000) (finding that tougher dental regulation resulted in increased dental prices and higher hourly earnings for dentists, but had no apparent effect on malpractice premiums or on the number of patient complaints).

140. See A DOSE OF COMPETITION, *supra* note 1, ch. 2, at 28 & n. 202 (citing studies on the effect of licensing requirements on health care provider mobility between states).

141. A DOSE OF COMPETITION, *supra* note 1, ch. 2, at 27; L. Gregory Pawlson & Margaret E. O'Kane, *Professionalism, Regulation, and the Market: Impact on Accountability for Quality of Care*, 21 HEALTH AFF. 200, 204 (2002) ("Traditional regulation has been erratic in its scope and has created limited evidence to suggest its effectiveness in fostering quality."). See also Kugler & Sauer, *supra* note 3, at 463 (stating that stricter licensure requirements lead to a lower average quality of service); Chris Paul, *Physician Licensure Legislation and the Quality of Medical Care*, 12 ATL. ECON. J. 18, 24–26 (1984) (finding some evidence that the overall impact of physician licensure on the quality of care is neutral).

142. Marc T. Law & Zeynep K. Hansen, *Medical Licensing Board Characteristics and Physician Discipline: An Empirical Analysis*, 35 J. HEALTH POL. POL'Y & L. 63, 90 (2010) (reporting greater resources and board independence associated with greater frequency of disciplinary action).

143. One study of an allied health care profession—dentistry—found that more stringent entry requirements were associated with lower rates of dental neglect, but also noted that neither the full benefits nor costs of those licensing requirements were observed, and hence did not reach conclusions about their net impact on consumer welfare. ARLENE HOLEN, PUB. RESEARCH INST., CTR. FOR NAVAL ANALYSES, *THE ECONOMICS OF DENTAL LICENSURE* vii, 23, 26 (1978), available at <http://www.cna.org/documents/0203440000.PDF>. The implications of that study for evaluating differences in current entry standards for physicians is simply unclear. Interestingly, there is at least some evidence that patient care by second year medical residents is not superior to that provided by first year medical residents. Lisa L. Willett et al., *Differences in Preventive Health Quality by Residency Year: Is Seniority Better?*, 20 J. GEN. INTERNAL MED. 825, 829 (2005)

Moreover, differences in substantive entry requirements do not appear to be rationalized by, for example, varying state assessments of the trade-off between the benefits of enhanced safety assurances and the costs of additional restrictions on physician entry.¹⁴⁴ Requiring three years of post-graduate residence training as opposed to two, for instance, could be an effort to guarantee a higher minimum standard of physician care, despite potential costs such as reduced access, increased prices, or negative selection.¹⁴⁵ States could have different aggregate preferences regarding such trade-offs and different entry requirements could reflect such preferences. That case for variation seems not to have been made, however, and there does not appear to be an empirical basis on which to make it. Numerous studies of training programs seem too particular to serve this end;¹⁴⁶ some point to other problems.¹⁴⁷ Converging entry standards make the argument independently dubious; and special restrictions on telemedicine practice seem entirely distinct from such concerns, as do, for example, varying licensing fees.

To some extent, difficulties in evaluating the total and relative costs and benefits of state licensing systems are bound up with one of the main justifications for licensure in the first place: thick, rigorous, and non-controversial quality metrics are hard to obtain in many areas of health care.¹⁴⁸ Perhaps therefore it's not surprising that the relative excellence or

144. See, e.g., Troyen A. Brennan et al., *The Role of Physician Specialty Board Certification Status in the Quality Movement*, 292 JAMA 1038, 1040–41 (2004) (discussing three bodies of evidence for medical certification as a measure of physician quality: the validity of the testing process, the relationship between examination scores and physician competence, and the relationship between certification and clinical outcomes).

145. See *supra* notes 138–140 and accompanying text.

146. See, e.g., Charles H. Griffith, III et al., *Internal Medicine Residency Training and Outcomes*, 12 J. GEN. INTERNAL MED. 390, 390 (1997) (noting that the objective of the study was to discuss the impact of internal medicine residents' clinical education on patient outcomes; the study did not discuss the costs of additional years of residency training); Jeanette Mladenovic et al., *Variation in Internal Medicine Residency Clinic Practices: Assessing Practice Environments and Quality of Care*, 23 J. GEN. INTERNAL MED. 914, 914–15 (2008) (noting that the objectives of the study were to describe the patient population cared for by trainees, assess the quality of preventative care given to the patient population, describe the existing practice-based systems in internal medicine residency clinics, and examine the relationships between practice-based systems and the features of a program).

147. See, e.g., Willett et al., *supra* note 143, at 827–28 (finding that extended postgraduate and resident requirements do not always produce improved quality of care).

148. See *supra* notes 84–86, and accompanying text (regarding the transparency of health care quality information). Without disputing progress in the interim, we note that the problem was put starkly in a 1998 article in the *Milbank Quarterly*: “there is little systematic evidence about quality of care in the United States. We have no mandatory national system and few local systems to track the quality of care delivered to the American people.” Mark A. Schuster et al., *How Good is the Quality of Health Care in the United States?*, 76 MILBANK Q. 517, 517 (1998). The *Dartmouth Atlas*, which has done much to assess health care performance and spending, reported a need for better evidence and better quality measures in 2009. ELLIOTT FISHER ET AL., DARTMOUTH

efficiency of different state regulations is not well understood.¹⁴⁹ Further complications should be noted. For example, increased terms of mandatory residence for medical graduates – which may not be associated with improved quality of care in any case¹⁵⁰ – may suppress the supply of primary care givers in several ways. It may reduce the overall supply of practitioners if new physicians opt for alternative and less costly regulatory settings, or it may bias new practitioners toward specialty practice, suppressing the relative number of primary care physicians.¹⁵¹ Restrictions on physician entry also may have mixed effects to the extent that marginal patients opt for alternative care givers, such as AHPs, or opt out of treatment altogether.¹⁵² That, in turn, raises questions about the twin effects of limits on physician entry and limits on the scope of practice of alternative professionals.¹⁵³

Yet another complication is presented by the fact that the costs of state-by-state variation in regulation may be especially high in network

ATLAS, DARTMOUTH INST. FOR HEALTH POL'Y & CLINICAL PRAC., HEALTH CARE SPENDING, QUALITY, AND OUTCOMES: MORE ISN'T ALWAYS BETTER 4-5 (2009), available at http://www.dartmouthatlas.org/downloads/reports/Spending_Brief_022709.pdf.

149. “The main difficulty in measuring quality effects is in obtaining accurate measures of practitioner quality.” Kugler & Sauer, *supra* note 3, at 438.

150. See Willett et al., *supra* note 143, at 828 (failing to find qualitative benefits to second-year resident treatment relative to treatment provided by first-year residents).

151. Cf. FISHER ET AL., *supra* note 148, at 2 (describing the “paradox of plenty” where increased specialist supply is not associated with improved access).

152. See *id.* at 2 (discussing research that has indicated that patients in geographic regions with fewer medical resources and lower Medicaid spending see physicians less frequently and receive fewer diagnostic tests). See generally Keith J. Mueller et al., *Health Status and Access to Care Among Rural Minorities*, 10 J. HEALTH CARE FOR POOR & UNDERSERVED 230, 231 (1999) (explaining that rural minority patients have limited access to physicians due to socioeconomic hardship and a “dearth of health care providers”).

153. General questions about the scope of practice restrictions on alternative professionals and access to basic health care have been raised by FTC staff regarding the regulation of limited service clinics. See, e.g., Letter from Fed. Trade Comm’n to Jill Brown, *supra* note 88, at 1–2 (suggesting that proposed regulations on the scope of practice within limited service clinics are not needed because studies indicate that the quality of care in such clinics is just as good as in other clinic settings). However, substitution does not necessarily lower quality care; there is evidence suggesting that the quality of alternative professional care, within the scope of practice, is not lower. See Dulisse & Cromwell, *supra* note 118, at 1472–74 (finding no evidence of additional harm in states where nurse anesthetists may provide anesthesiology services without physician supervision versus those where they may not); Ateev Mehrotra et al., *Comparing Costs and Quality of Care at Retail Clinics With That of Other Medical Settings for 3 Common Illnesses*, 151 ANNALS INTERNAL MED. 321, 325–26 & tbl.3(2009) (analyzing fourteen quality metrics for commonly treated ailments otitis media [ear infection], streptococcal pharyngitis [strep throat], and urinary tract infections, and finding little evidence to support concern about greater rates of misdiagnosis at retail clinics).

industries.¹⁵⁴ There may be significant positive externalities to consumption in certain industries (goods or services); in particular, “[t]here are many products for which the utility that a user derives from consumption of the good increases with the number of other agents consuming the good.”¹⁵⁵ Hence, for example, the benefit a consumer may derive from the purchase of a telephone depends on the number of others using the same telephone network, among other things.¹⁵⁶ HIT and telemedicine exhibit many characteristics of network industries.¹⁵⁷ Further, there is empirical evidence that HIT is subject to network effects.¹⁵⁸ Specifically, Miller and Tucker have observed local network effects in HIT adoption, finding a robust and positive relationship between the installed base of hospital HIT in a given local health service area and the likelihood of adoption by additional hospitals.¹⁵⁹ That is, the more hospital HIT there is in a service area, the more likely it is that neighboring hospitals will adopt HIT.¹⁶⁰ These network effects, however, are contingent on the extent of privacy regulation in a given state; in fact, they are observed to disappear entirely in states that apply certain consent requirements to hospitals.¹⁶¹ In addition, because they tend to suppress the local network benefits associated with hospital EHR adoption, these state laws are associated with lower rates – up to 25 percent

154. See, e.g., FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 231 (statement of Amalia Miller, Professor, Dep’t of Econ., Univ. of Va.) (estimating the network effect in states without strong privacy laws to be about 6%).

155. Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424, 424 (1985).

156. *Id.*

157. As described below, one panelist at the FTC Workshop described research suggesting that there were significant network benefits in eMR adoption by hospitals, at least in states where those effects were not suppressed by countervailing state regulation. FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 231 (statement of Amalia Miller, Professor, Dep’t of Econ., Univ. of Va.) (finding evidence of network effects in hospitals responsive to other hospitals and estimating the network effect in states without strong state privacy laws, in addition to federal laws, to be about 6%).

158. *Id.* at 230–31.

159. *Id.* at 231.

160. *Id.* This effect is observed across states that have not adopted certain privacy regulations, pertaining to hospital sharing of health information, above the federal floor established by HIPAA, the federal privacy rule, and other federal laws. See *supra* text accompanying note 162. However, this positive network effect essentially disappears in states that have adopted hospital health privacy laws above the federal floor. FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 231 (statement of Amalia Miller, Professor, Dep’t of Econ., Univ. of Va.)

161. FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 231 (statement of Amalia Miller, Professor, Dep’t of Econ., Univ. of Va.) Most of the data came prior to HHS’s adoption of the Privacy Rule, so absent state law, there were no privacy laws applied to hospitals. See *id.* at 230 (noting that the data used to study the network effects of HIT adoption were collected in 2002, 1999, and 1996); see also Standards for Privacy of Individually Identifiable Health Information, 65 Fed. Reg. 82,462, 82,462–463 (Dec. 28, 2000) (codified at 45 C.F.R. pts. 160, 164) (providing final rule that outlines standards to protect individuals’ identifiable health information).

lower – of HIT adoption.¹⁶² The data also suggest that hospitals adopting systems in states with more stringent privacy protections are more likely to adopt proprietary, closed systems than open or interoperable ones.¹⁶³

We do not have a comparable empirical analysis of licensure's impact on network effects in HIT. Numerous stakeholders have identified state licensure requirements as a regulatory barrier that may slow HIT implementation.¹⁶⁴ As noted above, licensure restrictions restrict the scope of telemedicine practices or other HIT-aided collaboration across state lines.¹⁶⁵ Hence, any given provider – as an HIT consumer – might anticipate fewer benefits to HIT adoption and interoperability than the provider would in the absence of such restrictions. Correspondingly, positive consumption externalities for consumers in other states may be reduced even if a provider implements interoperable HIT. Hence, there are ample reasons to be concerned about licensure's impact on network effects (and benefits) in telemedicine, although there is no adequate measure of the actual impact.

IV. TENTATIVE CONCLUSIONS

The foregoing sections identify questions for further research – to be sure – and perhaps constitute a brief for ongoing antitrust scrutiny of state licensing practices. More than that, there are grounds to be concerned about the competitive costs of state-based licensing, both generally, and in its particular implications for telemedicine. The costs seem to be substantial, if

162. FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 231; Amalia R. Miller & Catherine E. Tucker, *Privacy Protection and Technology Diffusion: The Case of Electronic Medical Records*, 55 MGMT. SCI. 1077, 1077 (2009).

163. FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 232 (statement of Amalia Miller, Professor, Dep't of Econ., Univ. of Va.).

164. Several participants at the FTC's Innovations in Health Care Delivery workshop identified this as an ongoing issue for HIT development and adoption. See FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 176 (statement of Dr. Douglas Wood, Vice Chair, Dep't of Internal Med., Mayo Clinic)(flagging licensing issues as a less talked about concern relating to HIT development); FTC INNOVATIONS TRANSCRIPT, *supra* note 33, at 267 (statement of Dr. Robert M. Kolodner, Nat'l Coordinator for Health Info. Tech., U.S. Dep't of Health & Human Servs.) (noting the need to harmonize standards if the use and implementation of HIT is going to move forward). General concern about the problem is longstanding. See generally TELEMEDICINE REPORT TO CONGRESS, *supra* note 9 (identifying licensing as an impediment to telemedicine in 1997).

165. TELEMEDICINE REPORT TO CONGRESS, *supra* note 9. For a more recent discussion relating to state-based licensure issues and telemedicine, see also Lindsey T. Goehring, *H.R. 2068: Expansion of Quality or Quantity in Telemedicine in the Rural Trenches of America?*, 11 N.C. J.L. & TECH. ON. 99, 107–09 (2009), available at <http://jolt.unc.edu/sites/default/files/Goehring.pdf> (arguing for more inter-state cooperation on the issue of physician licensing for purposes of telemedicine growth).

not fully assessed.¹⁶⁶ As noted above, more than a few states have adopted licensing regulations to restrict interstate telemedicine practice in particular.¹⁶⁷ To the extent that the barriers to entry posed by state licensure require justification – a demonstration of countervailing consumer protection benefits – the justification appears to be lacking. As entry requirements converge, there is reason to suspect that remaining differences are unlikely to be associated with large, demonstrable consumer benefits.¹⁶⁸

Ongoing harmonization efforts may be promising,¹⁶⁹ but harmonization is a costly process,¹⁷⁰ and cannot eliminate the costs of regulatory variation itself. Without some form of reciprocity or mutual recognition, even perfect harmonization of substantive licensing requirements would leave many of the barriers to interstate telemedicine intact. Adjoining states could require not just the same USMLE tests for entry, but could also require the same tests taken on the same terms (the same time period, the same number of possible re-takes, etc.), the same residency periods, the same licensing fees, etc. If, however, states were to leave in place (a) a requirement of local (state) licensure, (b) identification of interstate telemedicine consultation with the practice of medicine at both ends of communication, and (c) limited or null reciprocity with regards to each other's licensing, they would continue to impede telemedicine.

The possibility of wholesale federal preemption of state licensing – discussed at the roundtable and elsewhere¹⁷¹ – seems problematic and may be preliminary at best. In some ways, concerns about state licensing represent both a best case and a worst case for federal preemption of state law. There are reasons to consider preemption. First, the mix of licensing regimes appears to be costly and a non-trivial impediment to major federal

166. See Goehring, *supra* note 165, at 107 (discussing the impracticality of obtaining multiple state medical licenses and the resulting obstacle it creates to the efficient use of telemedicine). Some have argued that the inability of physicians to “see” patients via phone calls or emails has resulted in an incredibly costly and inefficient system of health care delivery. See, e.g., FISHER ET AL., *supra* note 148, at 5 (suggesting that physicians regularly see patients for whom care could be provided via telephone or email in-office because these doctors “need to keep their offices full to pay the rent”).

167. See *supra* notes 114, 118 and accompanying text.

168. See COX & FOSTER, *supra* note 21, at 21–36 (stating that restrictions on education or experience may not result in increases in output quality of services).

169. See *supra* note 116 and accompanying text (regarding uniform administration of USMLE tests and efforts to streamline and harmonize licensing and make licensure more portable).

170. Joel R. Reidenberg, *Resolving Conflicting International Data Privacy Rules in Cyberspace*, 52 STAN. L. REV. 1315, 1319–20, 1362, 1365, 1370–71 (2000) (regarding the difficulties and harms of harmonizing privacy rules across national borders).

171. Live policy discussion of the possibility of preemption has been ongoing for well over a decade, garnering consideration in, for example, the Telemedicine Report to Congress submitted by Commerce and HHS in 1997. See generally TELEMEDICINE REPORT TO CONGRESS, *supra* note 9.

policy initiatives and important private innovations in health care delivery.¹⁷² Also, it is not at all clear that the varied practices of the independent professional boards of medicine – to which so much licensing authority is delegated – serve any particular values of federalism directly.

At the same time, licensing is an area traditionally ceded to the states.¹⁷³ That is likely a political problem more than a constitutional one. Federal authority to regulate health care is not unbounded, but the extension or application of commerce clause authority into diverse areas of health and safety regulation has been frequent and largely sustained, at least since the New Deal.¹⁷⁴ Recognizing potential complications with any putative preemption argument, it should not be supposed that the authority for federal regulation in this area depends critically on the question whether federal requirements are conditioned on federal grants or funding. As noted in the 1997 Telemedicine Report to Congress, there appears to be adequate legal authority for the federal government to establish uniform physician licensing and preempt state licensing regimes.¹⁷⁵

Preemption would, however, pose an institutional problem. In brief, there is no federal regulatory competitor standing ready at hand. There are, of course, federal regulations pertaining to physician qualifications and conduct.¹⁷⁶ And considerable expertise pertinent to standards of care resides at HHS and elsewhere.¹⁷⁷ Still, there is no federal agency with the

172. *Id.* See also 2001 TELEMEDICINE REPORT TO CONGRESS, *supra* note 136 at 21–26 (noting that, since the 1997 report, inter-state licensing requirements have become an even more concrete barrier to the expansion of telemedicine and discussing potential solutions).

173. TELEMEDICINE REPORT TO CONGRESS, *supra* note 9. Each state has a Medical Practice Act that “defines the process and procedures for granting a health professional license, renewing a license, and regulating medical practice within the state.” *Id.*

174. See, e.g., *United States v. Walsh*, 331 U.S. 432, 434 (1947) (explaining that the 1938 Federal Food, Drug, and Cosmetic Act “rests upon the constitutional power resident in Congress to regulate interstate commerce . . . [and] seeks to keep interstate channels free from deleterious, adulterated and misbranded articles of the specified types.”). See also TELEMEDICINE REPORT TO CONGRESS, *supra* note 9 (providing a general discussion of the legal issues with regard to licensure).

175. See TELEMEDICINE REPORT TO CONGRESS, *supra* note 9 (recognizing the states’ “clear authority” to design medical licensing schemes but noting the federal government’s authority to do the same per the Supremacy Clause of the Constitution).

176. See, e.g., 42 U.S.C. §§ 1320a-7b(b) (2006) (prohibiting the solicitation or receipt of patient care related kickbacks); Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, §§ 261–264, 110 Stat. 1936, 2021–34 (1996) (codified in scattered sections of 42 U.S.C) (outlining the privacy standards with which physicians must comply).

177. See generally RANDALL R. BOVBJERG ET AL., STATE DISCIPLINE OF PHYSICIANS: ASSESSING STATE MEDICAL BOARDS THROUGH CASE STUDIES v–xi (2006), available at <http://aspe.hhs.gov/daltcp/reports/2006/stdiscp.htm> (summarizing a report commissioned by HHS to assess physician standards of care as demonstrated through state medical board disciplinary proceedings).

authority, experience, and expertise to perform the various licensing functions undertaken by the states and it would not be trivial to create one.

Mutual recognition – or some form of federally mandated reciprocity – may be the most promising alternative. Either alternative could leave in place state authority to oversee medical practice and to discipline substandard care. These options would require some groundwork, to be sure. Among other things, additional evidence on the costs and benefits of various licensure systems is pertinent not just to the question whether to maintain multiple licensing authorities but to forging some consensus on best and worst standards. Nonetheless, as noted above, substantive entry requirements for physicians have been converging for some time,¹⁷⁸ and many states have undertaken both to harmonize licensure and to make it more portable.¹⁷⁹ Moreover, mutual recognition or reciprocity could leave in place state disciplinary authority, making use of extant institutional resources in the states and, at least arguably, making the best use of the relative advantage of local and state authorities to judge aspects of care that, for economic or social reasons, remain justifiably varied. State regulators could continue to administer disciplinary codes just as state courts continue to adjudicate tort claims in interstate commerce.

Mutual recognition or reciprocity also needs to acknowledge one of the motivating factors for enhanced licensing requirements for telemedicine consultation (however unfortunate the results, and however much regulators have jumped ahead of demonstrated need). That is, the distinction between mere consultation and the practice of medicine *should* be eroded by further development and adoption of HIT and telemedicine, which are, after all, about the integration of care and health care resources. Provisions that would permit certain limited interstate telemedicine consultations – whether under uniform federal law or the laws of several states – may provide very limited and temporary safe harbors for telemedicine practice.¹⁸⁰ Extant models of such provisions do not reach much of what is contemplated by existing technology and federal health policy already, and may have less to do still with future developments.

178. See *supra* notes 115–17 and accompanying text.

179. See *supra* notes 115–17 and accompanying text. Cf., e.g., NURSE LICENSURE COMPACT ADM'RS, NURSE LICENSING COMPACT (NLC): FACT SHEET FOR LICENSEES AND NURSING STUDENTS (2010), available at https://www.ncsbn.org/2010_NLCA_factsheet_students_July_2010.pdf (detailing the NLC, which provides nurses with one multi-state license to allow for inter-state practice).

180. See, e.g., FED'N STATE MED. BDS., A MODEL ACT TO REGULATE THE PRACTICE OF MEDICINE ACROSS STATE LINES (1996), available at http://www.fsmb.org/pdf/1996_grpol_Telemedicine.pdf (providing generic guidelines for states to use when adopting broader licensing schemes that would promote the use of telemedicine).

These are difficult issues but not fundamentally intractable. As the nation forges ahead toward the “meaningful use” of HIT,¹⁸¹ it is incumbent on policy makers to resolve them.

181. *See, e.g.*, Electronic Health Record Incentive Program, 75 Fed. Reg. 44,314, 44,314 (July 28, 2010) (to be codified at 42 C.F.R. pts. 412, 413, 422, and 495) (implementing regulations establishing the definition of “meaningful use of certified electronic health record (EHR) technology” and establishing the way in which health information technology will be used by physicians and hospitals in the coming years).

