3 Va. J.L. & Tech. 4 (Spring 1998) <http://vjolt.student.virginia.edu>
1522-1687 / © 1998 Virginia Journal of Law and Technology Association

VIRGINIA JOURNAL of LAW and TECHNOLOGY

UNIVERSITY OF VIRGINIA	SPRING 1998	3 VA. J.L. & TECH. 4

Telemedicine: A State-Based Answer To Health Care In America

by Brian Darer[*]

I. Introduction

1. 1996 will be remembered as the year the world officially entered cyberspace. Businesses and households across the world became connected by computers through the Internet. While the world scrambled to update its modems and people quickly sought to learn the difference between pentiums, RAM and megabytes, the medical, and consequently the legal, community cautiously took its first step toward nationalizing what had previously been a state-based system of health care.

2. Previously, practitioners met only at medical conventions and local social events. However, thanks to the advent of something known as "telemedicine," physicians across the country are becoming linked. Although this process raises new legal issues, they can be solved by rethinking old solutions. This Note proposes that while telemedicine[1] raises issues that seem to fall outside of current legal doctrine, a change in the way we view medicine can successfully apply established legal doctrine cutting edge medicine so that telemedicine can be implemented at the lowest possible cost without destroying legal precedent. In the following section, I explain what telemedicine is and how it works. Part I.B. explains the benefits of telemedicine. Part II of this Note explains some potential problems of telemedicine: licensing and standards of care. In Part III, I explain the proposed national solutions to these two problems and offer a state-based solution. In this section, I argue that a simple change in the way we view procedures for providing telemedicine might mold the telemedicine system into our current state-based legal system.

A. What is Telemedicine?

3. Imagine the following scenario: In rural Georgia an elderly woman is hit by a car while returning from the grocery store. The ambulance takes her to the nearest hospital, but the only radiologist is unavailable. The local practitioner takes the x-rays himself and sends them via modem to the radiologist who examines the x-rays and makes a diagnosis, never having seen the patient in person.
4. Telemedicine broadly "refers to the provision of health care consultation and education using telecommunication networks to communicate information."[2] It is also defined as "… 'medical practice across distance via telecommunications and interactive video technology'… for the purposes of education, transfer of medical data or images, consultation, diagnosis, and/or treatment."[3]
5. Generally, a telemedicine network links facilities - doctors' offices, nursing homes, prisons - to a regional medical center through computers, cameras and video monitors.[4] The network consists of a "care portal," a computer-equipped area providing patient access; a "docking station," the area where the medical expert receives and sends information; and a "bridge" that utilizes special software to link the locations.[5] Since 1990, the number of telemedicine networks in the United States has increased dramatically,[6] and as the number of these networks grows, experts predict, "… a day when a specialist could treat a patient hundreds of miles away."[7]
6. Take for example one of the leading telemedicine networks in the country, the one started at the Medical College of Georgia (MCG). In November 1991, MCG linked with a small community hospital 130 miles southwest of Augusta, Georgia.[8] By September 1994, there were sixty telemedicine facilities in Georgia.[9] MCG's system is based on the transmission of two-way video and audio and the use of zoom cameras and electronic stethoscopes.[10] The system permits a local, referring physician to get an on-line, real-time consultation with a specialist miles away while both doctors examine the patient, who is seated in the rural physician's office.[11]
7. Jay Sanders, the director of the telemedicine network based at MCG, estimates that approximately 85 percent of rural patients who previously would have been transferred to a secondary or tertiary care center are now kept in their community, thereby maintaining local revenue and making the

patient more comfortable.[12] Recent estimates suggest that domestic health care systems will spend $15 billion on new information technologies over the next five years, with telemedicine programs at the top of the list.[13] By the summer of 1996, at least 42 states had one or more telemedicine projects in operation and/or development.[14] A nationwide survey by Abt Associates released in early 1996 revealed that 29 percent of the nation's rural hospitals already practice telemedicine or have planned to have programs up and running by the end of 1997.[15]

B. Benefits of Telemedicine

8. Telemedicine is designed "to increase the quality and accessibility of health care in rural areas and to reduce the costs of such care."[16] Telemedicine fulfills the need of providing basic health care to rural areas, areas that often do not have many specialists or hospitals that can handle a variety of medical problems.[17] An effective telemedicine network can generate many benefits. First, and most obvious, is the benefit to the rural patient. The patient can have access to referrals, consultations and support systems through a comprehensive, coordinated health care system, thereby providing better health care.[18] Second, telemedicine networks help keep the rural physician up to date on developing medical issues by making information easily and locally accessible to the rural practitioner.[19] This educative benefit in turn benefits the patient by providing her with more educated physicians who can make better-informed decisions. Furthermore, telemedicine allows rural hospitals to treat more patients locally, keeping the health care revenue in the community.[20] Lastly, telemedicine can decrease duplicate testing when the rural hospital cannot treat the patient and she must be transferred out of the rural area for treatment.[21]
9. Therefore, telemedicine is a valuable tool which can be used to improve health care services in America.[22] As such, the legal community must resolve potential problems to make the implementation of nation-wide telemedicine networks a smooth process.

II. Potential Legal Problems

10. "It's a fascinating and fun field because there are so many new developments every day…. There are impediments to its growth, largely due to the federal and state governments and medical societies trying to sort out telemedicine and regulate it."[23]

A. Licensing

11. Our current medical system is state-based. Physicians must pass tests administered by the state and a pay a fee directly to the state in order to be licensed to practice. [24] Generally, this license authorizes the physician to practice only within the licensing state. A doctor wishing to practice across state lines must be licensed in the second state before she can practice medicine in that state.[25]

12. Telemedicine presents a unique difficulty to this state licensing system. Since the telemedicine network generally links the rural community to the nearest major hospital, the telemedicine network will often cross state lines. For example, as telemedicine networks grow, a rural West Virginia community might be linked to a hospital in Virginia. A patient located in West Virginia would then be "seeing" a doctor licensed to practice in Virginia. Given the current individual state licensure system, it has been suggested that "a physician utilizing telemedicine to provide consultative services to a patient would have to be licensed in every state that the patient resided."[26] Because of the often difficult and time-consuming nature of taking additional tests, filing papers and paying fees, it seems unlikely that many physicians would choose to practice telemedicine and would thus significantly limit the benefits telemedicine has to offer.[27]

B. Standards of Care

13. A second legal problem facing the implementation of telemedicine networks involves the varying standards applied in medical malpractice lawsuits. Although many states have strayed from a pure state-based standard of care in medical malpractice cases, many states maintain remnants of the pure state-based system.
14. Virginia, for example, has held that "the standard of care by which the acts or omissions are to be judged shall be that degree of skill and diligence practiced by a reasonably prudent practitioner in the field of practice or specialty in this Commonwealth... An expert witness who is familiar with the statewide standard of care shall not have his testimony excluded on the ground that he does not practice in this Commonwealth."[28] Referring to Virginia's refusal to adopt a nationwide standard of care,[29] the Henning court held that an expert witness familiar with the state's standard of care was permitted to testify.[30] In rejecting a national standard of care, Virginia has gone a step further in applying a local standard of care. If any party to a lawsuit can prove by a preponderance of the evidence that the health care services and facilities in the locality in which the alleged malpractice has occurred is more appropriate than a statewide standard of care, then the court will apply a local standard rather than a statewide standard of care.[31]
15. Other states hold on to the state-based standards in a different way. Montana, while rejecting a pure national standard, holds a non-board certified general practitioner to the standard of a "reasonably competent general practitioner acting in the same or similar community in the United States in the same or similar circumstances."[32] Use of the phrase "similar circumstances" permits the court to consider various local factors affecting the standard of care.[33]
16. Finally, some states reject the state-based model and adopt a pure national standard. Under this view, the standard to be applied is that of a reasonably competent physician or specialist acting in the same or similar situation nationwide.[34] Courts in this category realize that improved technology gives physicians broader access to medical knowledge and interstate patients.[35] Thus, since providing health care is the same regardless of the state, there ought to be a national standard of care applied in medical malpractice lawsuits.
17. Because telemedicine is a valuable innovation in health care, the legal issues facing the future of telemedicine must be resolved. Failure to solve these problems can result in a significant step backwards in improving health care in America. Only by tackling the issues before they arise can

successful and effective telemedicine be implemented.

III. Offered Solutions

A. Licensing

i. National View

18. One proposed solution to the licensing problem is to implement a national licensing scheme in addition to the current state-based model.[36] Such a system would require a national commission or licensing board that would issue national licenses after physicians pass a uniform national exam.[37] The exam could take any format but proponents of a national licensing scheme urge a conglomeration of various state exams with an additional emphasis on telemedicine technology.[38] This method would ensure that physicians practicing telemedicine are experts in both the national medical issues as well as the computer technology.
19. A national licensing scheme would upset the current state-based model. Moreover, national licensing produces a tension between federal regulatory power and state autonomy.[39] Proponents of the national licensing scheme therefore urge the adoption of a dual licensing system.[40] Such a system would maintain state control over intrastate medicine but provide a national solution to the problem of interstate medicine. Physicians wishing to practice telemedicine would be required to hold two licenses, one state license and one national telemedicine license. Advocates of this system wish to impose two requirements for obtaining a dual license. First, the practitioner must be state licensed before she can apply for a national telemedicine license thereby preventing an end-run around state regulations.[41] Second, the national license would only be valid to practice telemedicine; state licenses would still be required for face-to-face treatment within the state.[42] This plan provides that states would maintain control over doctor-patient interactions occurring within their borders (as the current system provides) and, at the same time, offers a national solution to the interstate licensing problem.

ii. State View

20. The current licensing system is purely state based and, some would say, "if it ain't broke, don't fix it." Therefore, prior to implementing the recommendations urging a national, or dual, licensing system, one must ask if telemedicine can be regulated within our current system, or whether change is necessary. Since any change is costly, the cost of implementing change must be balanced against the cost of maintaining the status quo. Only if change is found to be the cheaper alternative should the status quo be rejected, and a national licensing system be implemented.
21. Under our current licensing system, a physician can examine, diagnose and treat a patient who resides in a state other than the one in which the physician is licensed, so long as the patient travels to the doctor. In this scenario, a patient who travels to see the doctor is being treated in the physician's licensing state, not the patient's home state. Consequently, there is no concern that the

physician is practicing medicine in a state in which she is not licensed.

22. Telemedicine can be similarly viewed as a method of travel, allowing telemedicine to fit into the current licensing scheme. Telemedicine allows both the physician and the patient to remain in their home states during a consultation. An interstate licensing problem arises only if one views telemedicine as transporting the physician to the patient. Under this view, the doctor would be practicing without a license in the patient's home state. There is no reason, however, to view telemedicine exclusively in this way. If a physician can be transported to a state in which she is unlicensed, then "perhaps the most logical way to deal with state licensure requirements is to determine that the patient is, in fact, being 'electronically transported' to the physician rather than the physician being transported to the patient."[43] This interpretation avoids a licensing problem and allows telemedicine to be implemented within the current legal framework.
23. An additional difficulty with a dual licensing, national system is the cost imposed on physicians wishing to practice telemedicine. The American Medical Association (AMA) rejected a proposal, similar to the dual licensing solution, which would have called on states to "consider establishing a special license to practice telemedicine across state lines that would be made available to out-of-state-licensed physicians with full and unrestricted medical licenses issued in the U.S."[44] Prospective physicians already pay a high cost to become licensed under the current system. Initially, there is a monetary cost due to the payment of examination and licensing fees. Additionally, physicians must "pay" for lost time in studying, and then taking, the licensing test. A dual licensing system doubles these costs. Physicians must pay not only for the state licensing test and the license itself, but also for the national telemedicine test and license. Furthermore, a dual licensing system imposes additional expenses on the physician in the form of lost time studying for and taking the second examination. These additional costs imposed on doctors discourage practitioners from practicing telemedicine.[45] Since telemedicine is a good thing,[46] we would not want to implement a system that slows down this progress. Thus, we should reject the proposed dual licensing solution and attempt to interpret telemedicine within state boundaries.
24. Our medical licensing system is state based so that individual states can determine the amount of protection to provide for patients residing within their respective boundaries.[47] Consequently, some states might resist the interpretation of telemedicine as transporting the patient to the physician on grounds that such a view fails to afford their residents sufficient protection. Therefore, a state based system may not gain national support among all states, and telemedicine growth may be slowed as a result. If this is true, the most desirable scheme is a national licensing system that imposes no additional costs on the physician above those currently imposed.
25. Such a system can be created without imposing the additional costs of the dual licensing proposal offered by some. Since telemedicine will have a major impact on health care in America generally, Congress can gain control of medical licensing under its Commerce Clause power.[48] Accepting medical licensing as a legitimate exercise of federal power, Congress can eliminate individual state licensing entirely and impose one uniform national examination and license for all physicians. By implementing such a system, the additional costs to telemedicine practitioners will be eliminated and the imposition of the initial cost to all physicians will shift from state to federal government. This proposal has the benefit of solving the potential interstate licensing problem of telemedicine without raising costs on physicians wishing to practice in this way.
26. Unfortunately, although this solution remedies the cost difficulties with a dual licensing system

but it fails to solve the problem of state autonomy.[49] Therefore, it may be best to implement the proposed dual licensing solution but make the national telemedicine license free to doctors. This solution imposes no additional monetary costs on physicians wishing to obtain a license to practice telemedicine. However, there is an additional non-economic cost in lost time studying for and taking the additional examination.

27. Another problem with implementing a national licensing system is coordinating Congressional action to the exclusion of state control. A federal telemedicine license might eventually become a reality but, in the meantime, some states have already begun to solve the problem of licensing telemedicine.
28. California, for example, is considering a telemedicine bill called the Telemedicine Development Act.[50] The bill would require telemedicine practitioners to secure both verbal and written "informed consent" from prospective patients prior to any telemedicine consultation.[51] Furthermore, the bill would require that no health plan can exclude telemedicine by requiring face-to-face services only.[52]
29. In Mississippi, by contrast, the attorney general has issued an official opinion that out-of-state telemedicine physicians treating patients in Mississippi are not subject to the state licensing requirements.[53] Although the Mississippi State Board of Medical Licensure believes that out-of-state telemedicine doctors ought to be licensed in Mississippi, the attorney general felt that the state definition of "practicing medicine" does not include an out-of-state physician practicing telemedicine across state lines.[54]
30. Unlike Mississippi, Oklahoma has amended its definition of "practice of medicine" to include "diagnostic or treatment procedures done via electronic communication on a patient inside the state by someone outside the state."[55] This modification requires a practitioner of telemedicine who regularly diagnoses or treats Oklahoma patients to be licensed by the state of Oklahoma.[56]
31. Lastly, Tennessee has expanded its medical licensure law to include the issuance of a "special license" for the purpose of practicing telemedicine across state lines.[57] In order to qualify for this "special license", a physician must first be state licensed.[58]
32. It appears that there is no perfect solution to the problem of licensing interstate telemedicine. When seeking to resolve this issue, however, one must remember that any additional monetary costs imposed on a physician will, in all likelihood, be passed on to the ultimate consumer (the patient).[59] Physicians might increase prices charged for medical procedures, both telemedicine and face-to-face, in order to cover the additional costs imposed by a license to practice telemedicine. Furthermore, insurance companies might increase the premiums they charge for medical malpractice coverage since doctors will have an additional license to potentially mistreat patients.[60] While the impact of telemedicine on insurance rates is still unclear, two theories have evolved. First, some insurance companies believe that since telemedicine encourages physicians to work together, patient treatment is more comprehensive and therefore entails less overall risk of malpractice.[61] The more cynical view suggests that increased technology raises patient expectations and, when not met, results in additional medical malpractice claims.[62] Furthermore, there is the risk that medical data transmitted via modem will have been incorrectly or incompletely transmitted.[63] Again, it is likely that this cost will be passed on to the

patient.[64] Thus, no matter what alternative is ultimately chosen and implemented, the cost will be passed on to the patient. Since the cost of comprehensive health care is already out of the reach of many Americans, one must be careful to choose a solution that imposes minimal costs on physicians wishing to practice telemedicine.

B. Standards of Care

i. National View

33. Advocates of the national licensing scheme also offer a national solution to the medical malpractice problem of applying standards of care. Adopting the analysis of the Robbins court,[65] proponents argue that telemedicine technology is distinctly different from existing medical knowledge and doctors practicing telemedicine ought to be judged in comparison to others utilizing this new technology.[66]
34. Known as a specialist standard, under this view, courts should require plaintiffs to prove that a defendant did not "possess the skill expected of a reasonably competent [telemedicine] practitioner acting in the same or similar circumstances nationwide."[67] Since physicians utilizing telemedicine do not practice within any confined locality but rather on a potentially nationwide scale,[68] a national standard would eliminate the difficulty of determining what local standard should apply.

ii. State View

35. The difficulty of applying standards of care can also be solved without resorting to an implementation of a national standard of care. Before implementing widespread change that might disrupt both the current practice of medicine and the effectiveness of courts in resolving medical malpractice suits, one ought to attempt to solve new problems within our current system. While the practice of telemedicine presents new challenges to courts hearing medical malpractice suits, courts need not change the system to face them. Instead, a change in how the problem is interpreted can adapt the challenge to the system rather than adapting the system to face the challenge.
36. In any medical malpractice suit, including those involving telemedicine, the plaintiff must prove two things. First, she must establish a duty of care owed to her by the physician utilizing telemedicine.[69] Second, the plaintiff must establish that the physician breached the relevant standard of care. The relevant standard of care is generally that which is expected of a local practitioner (although the definition of "local practitioner" might vary from state to state).[70] In proving the latter requirement of a malpractice case, a plaintiff compares the work done by the defendant to the work one could expect to be done by a physician acting under similar circumstances. Thus, in assessing the relevant standard of care for malpractice suits involving telemedicine, one must determine if the nature of the treatment affects the quality of care more than geographical considerations such that "similar circumstances" ought to include the practice of telemedicine. If the answer to this question is "yes," then a national standard of care ought to be

adopted in lieu of the state-based standard of care.

37. In answering this question, one must remember what exactly telemedicine entails. Lawsuits arising out of the practice of telemedicine will focus on essentially the same concerns that current medical malpractice suits do: a breach of a duty of care by the physician resulting in injury (or exacerbation of an existing injury) to the patient. The means by which the breach occurs will likely be different, i.e. a faulty computer transmission rather than misreading a diagnostic chart, but the basic issue will be the same.[71] For example, telemedicine will not send heart specialists to examine brain tumors. Telemedicine connects, possibly across state lines, a patient, often located in a rural community, with a specialist.[72] It does not do provide new or additional methods of treatment, it simply facilitates new ones. Telemedicine can help in the diagnosis of a rare disease in a patient located hundreds of miles away from a specialist trained to diagnose and treat it. Physicians practicing on a telemedicine network practice the same type of medicine they would in face-to-face situations. The only difference is the transmission of communication and examination, not the communication and examination itself. Therefore, the telemedicine practitioner should not be held to a higher standard of care than she would if practicing face-to-face. Adopting a higher standard of care might deter the development of telemedicine. Since telemedicine is a beneficial technology, we would not want to adopt any change that might slow its development. Holding physicians to a different standard of care when practicing telemedicine might impede its growth. Losing a malpractice lawsuit is obviously costly to the physician.[73] The different standard of care might be more difficult to meet. The more difficult it is to meet the standard of care, the more likely the plaintiff will win.
38. Since the nature of telemedicine does not have a relevant impact on the quality of health care provided, one must ask if the current state based system will allow for an acceptable standard of care in a malpractice lawsuit involving telemedicine. Take, for example, the Virginia statute.[74] The Virginia statute holds a defendant physician to the standard of a reasonably competent physician in the field of the defendant in the Commonwealth. Therefore, a telemedicine practitioner would be held to the standard of a similar physician (telemedicine or not) in the state of Virginia. This standard would seem to require a minimum level of competence for the defendant whether or not she is a Virginia doctor. Maintaining this standard allows Virginia to establish the minimum level of competence for all physicians treating Virginia residents. This would affect an out-of-state physician in one of two ways. If the doctor's home state has a standard of care higher than or equal to the Virginia standard, then telemedicine has no impact on the quality of health care provided. If the physician's home state has a standard of care lower than Virginia, then the state based system imposes an additional burden on the doctor and could slow the growth of telemedicine. However, since the impediment to telemedicine only applies to those states that have a standard of care lower than Virginia's, maintaining the state based system imposes less of an impediment than a national standard of care because the new and different national standard would affect all states.
39. Allowing each state to maintain its own standard of care will contribute to the growth of telemedicine. States like Virginia, which hold on to a state standard of care, will impose a minimum level of care on out-of-state practitioners that imposes less of a burden on telemedicine than the national standard. States like Montana may effectively designate a telemedicine standard without upsetting state autonomy.[75] These states apply a specialist standard of care, i.e. a

standard for physicians, regardless of geography, who practice a particular type of medicine. Montana acheives this end through its use of the phrase "same or similar community in the United States in the same or similar circumstances."[76] This is essentially the proposed national standard without the federalism concern.

40. Thus, when applying a state standard of care model, we are faced with two possibilities. First, states that impose a purely local standard of care will be able to maintain state control with less cost than a national standard. Second, states that impose a specialist standard of care will effectively impose a national telemedicine standard without upsetting state autonomy. At worst, the state based system seems to be a better alternative than imposing a national standard of care for lawsuits involving the practice of telemedicine.

IV. Conclusion

41. As computers become a more integral part of our society, technology will have a greater impact on all aspects of our lives. With a growing need to provide quality health care to all Americans, telemedicine is an important aspect of our technological future. Linking rural communities with distant hospitals and specialists will increase the quality of health care provided to citizens living in rural communities. By connecting the patient with a specialist via modem, telemedicine has the benefit of allowing the patient to remain close to home while she receives the quality of care for which she would normally have to travel great distances.
42. However, because telemedicine changes the way health care is delivered to the patient, legal problems may arise. Issues involving state licensing and standards of care in medical malpractice lawsuits need to be resolved. Since telemedicine has the potential to cross state boundaries, many proponents of telemedicine argue that Congress should implement a national licensing system and impose national standards of care to be used in malpractice lawsuits involving telemedicine. Unfortunately, imposing such a nationwide system will upset the current state-based model of medicine.
43. One should only change the status quo if creating a national system imposes less cost than the current state systems. This Note has argued that a national system will not reduce costs and, may actually increase the cost of medical treatment. Our current state-based model does not need to be changed, but instead, the legal community needs to modify its way of viewing the problem.
44. State licensing will not be a problem for interstate physicians if courts view the practice of telemedicine as a form of travel which transports the patient to the physician's home state. Under such an interpretation, the practitioner will be licensed in the state where the medical treatment is provided and no licensure problem will arise.
45. Likewise, our state-based standard of care model can also be maintained. Since telemedicine changes the way in which health care is delivered to the patient, but does not change the type of work done, the standard of care should not change. In other words, a physician who misdiagnoses a heart murmur over the internet ought to be held to the same standard as a physician who misdiagnoses a heart murmur during a face-to-face examination. This way, telemedicine will not upset our current system.
46. Whatever path Congress and the medical and legal communities choose to take, they should carefully study the impact their choice will have on the development of telemedicine. Since

telemedicine is a useful innovation, lawmakers should choose the paths that lead to its quickest and smoothest implementation. In this way, America can reap the benefits of telemedicine, and provide quality health care to all of its citizens.

Footnotes

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[1] A related field, but one not covered in this Note, is Virtual Medicine. Virtual Medicine permits doctors to use total-immersion computer simulation; a "video game" in which physicians "enter" a patient's body and conduct practice examinations and surgery.

[2] THE PROMOTION OF QUALITY TELEMEDICINE, AM. MED. ASS'N JOINT REPORT OF COUNCIL ON MEDICAL EDUCATION AND COUNCIL ON MEDICAL SERVICE, June 1996 [hereinafter JOINT REPORT].

[3] *Id.*

[4] Geoffrey Cowley, *Robodocs and mousecalls*, NEWSWEEK, Feb. 27, 1995, at 66.

[5] Bradley J. Fikes, *Institute Melds Patients, Medicine, Virtual Reality*, SAN DIEGO BUS. J., Feb. 5, 1996, at 3. *See infra* note 11 for a listing of technologies utilized by telemedicine networks. *See generally* Douglas D. Bradham, *et. al.*, *The Information Superhighway and Telemedicine: Applications, Status, and Issues*, 30 WAKE FOREST L. REV. 145 (1995).

[6] JOINT REPORT, *supra* note 3.

[7] Alessandra Bianchi, *Long-distance Medicine*, INC., Aug. 1 1994, at 33.

[8] *Telemedicine: An Information Highway to Save Lives: Hearing Before the Subcomm. on Investigations and Oversight of the House Comm. on Science, Space, and Technology*, 103d Cong. 40 (1994) [hereinafter *An Information Highway*] (statement of Dr. Jay Sanders).

[9] *Id.*

[10] Daniel McCarthy, *The Virtual Health Economy: Telemedicine and the Supply of Primary Care Physicians in Rural America*, 21 AM. J. L. & MED. 111, 114 (1995).

[11] *Id.*

[12] *An Information Highway*, *supra* note 9.

[13] Robert F. Pendrak & Peter Ericson, *Telemedicine and the Law*, HEALTHCARE FIN. MGMT., Dec. 1996, at 46.

[14] JOINT REPORT.

[15] Pendrak & Ericson, *supra* note 14 (citing to Abt Associates, Exploratory Evaluation of Rural Telemedicine, Preliminary Report (1996)).

[16] H.R. 3909, 103d Cong. § 1711 (1994).

[17] *See, e.g., An Information Highway*, *supra* note 9.

[18] *An Information Highway*, *supra* note 9, at 26 (statement of Helen L. Smits).

[19] *Id. See also* Susan Duerksen, *Fantastic Voyages in Future, Computer Images May Guide Surgeons' Hands*, THE SAN DIEGO UNION-TRIB., July 8, 1992, at E1.

[20] *An Information Highway*, *supra* note 9, at 26.

[21] *Id.* at 26-27; JOINT REPORT, *supra* note 3.

[22] Evidence of this benefit can be found in the Joint Report in which the AMA expresses support for the expansion of telemedicine based on the expectation that it could improve access to, and quality of health care for, under-served populations. JOINT REPORT, *supra* note 3.

[23] Jon Linkous, president of the American Telemedicine Association, in Leslie Walker, *The Innovations That May Cure What Ails Us; New Medical Devices Give Hope, But Raise Concerns*, THE WASH. POST, Jan. 27, 1997, at F17.

[24] *See, e.g.*, VA. CODE ANN. §§ 54.1-2900 - 54.1-2993 (Michie 1994).

[25] *Id.*

[26] *An Information Highway*, *supra* note 9, at 47 (testimony of Dr. Jay Sanders).

[27] *Id.*

[28] VA. CODE ANN. § 8.01-581.20 (Michie 1992); *see also Henning v. Thomas*, 366 S.E.2d 109 (Va. 1988); *Mariano v. Tanner*, 497 So.2d 1066, 1069 (La. 1986) (holding that plaintiff must prove that defendant deviated from the standard of care exercised in the local community); *Malila v. Meacham*, 211 P.2d 747, 749 (Or. 1949) (holding that standard of care to be applied was that in the same neighborhood and general line of practice as the defendant). Although the Virginia statute provides for a state-based standard of care, it is not clear that the statute would apply to medical malpractice suits arising out of telemedicine. A prerequisite for application of the statute is that "the acts or omissions so complained of are alleged to have occurred in this Commonwealth." VA. CODE ANN. § 8.01-581.20(A) (Michie 1992).

[29] *Bly v. Rhoads*, 222 S.E.2d 783, 789 (Va. 1988).

[30] *Henning*, 366 S.E.2d at 112.

[31] VA. CODE ANN. § 8.01-581.20 (Michie 1992).

[32] *Chapel v. Allison*, 785 P.2d 204, 210 (Mont. 1990).

[33] *Id.*

[34] Note, *Is There a Doctor in the House? Licensing and Malpractice Issues Involved in Telemedicine*, 2 B.U. J. SCI. & TECH. L. 8, 41 (1996) [hereinafter *Is There a Doctor in the House?*].

[35] *See generally Robbins v. Footer*, 553 F.2d 123, 128-29 (D.C. Cir. 1977); *McMillan v. Durant*, 439 S.E.2d 829, 832-33 (S.C. 1993).

[36] JOINT REPORT, *supra* note 3; *see also Is There a Doctor in the House?*, *supra* note 35. It is important to note that although telemedicine is a driving force behind the suggestion of a national licensing system, it is not the only force. As physicians become more and more aware of the common nature of providing health care, many experts argue that we ought to abolish our state-based licensing system.

[37] *Is There a Doctor in the House*, *supra* note 35 at 26-27.

[38] *Id.*

[39] This tension raises issues grounded in the United States Constitution's Commerce Clause. An analysis of this conflict is beyond the scope of this Note but the Supreme Court has addressed these issues in a line of cases beginning with *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824) and concluding with *U.S. v. Lopez*, 115 S. Ct. 1624 (1995).

[40] *Is There a Doctor in the House*, *supra* note 35 at 29.

[41] *Id.* at 31.

[42] *Id.*

[43] *An Information Highway*, *supra* note 9, at 48 (testimony of Dr. Jay H. Sanders).

[44] HEALTH NEWS DAILY, Vol. 8, No. 126, at 1 (June 28, 1996).

[45] *See, e.g.*, JOINT REPORT, *supra* note 3, at 381.

[46] *See supra* notes 17-23 and accompanying text.

[47] *See, e.g.*, Va. Code Ann. § 54.1-2902 (Michie 1997).

[48] For example, see the line of cases beginning with *U.S. v. E.C. Knight Co.*, 156 U.S. 1 (1895) and concluding with *U.S. v. Darby*, 312 U.S. 100 (1941). These cases suggest that Congress has the broad authority of regulating business that has any impact at all on interstate commerce. *But see U.S. v. Lopez*, 115 S.Ct. 1624 (1995); N.Y. v. U.S., 505 U.S. 144 (1992).

[49] The problem of state autonomy could be resolved by the courts. If Congress implements a federal licensing scheme against the wishes of the individual states, the states (or particular doctors or licensing boards) could sue alleging that the federal law is an unconstitutional exercise of the federal commerce power. Under this scenario, a court would resolve the issue of state autonomy. However, assuming that states would resist a federal licensing scheme, Congress may wish to seek alternative solutions thereby avoiding the problem of federal versus state power.

[50] Jeane Schulte Scott, *State Responses to Telemedicine Licensing Issues*, HEALTHCARE FIN. MGMT., Dec. 1996, at 46.

[51] *Id.* In the bill, telemedicine is defined as "the practice of health care delivery, diagnosis, consultation, treatment, transfer of medical data, and education, using interactive video and data communications." *Id.*

[52] *Id.*

[53] *Id.*

[54] *Id.*

[55] *Id.*

[56] *Id.* However, a physician practicing telemedicine who consults with an in-state physician on an "irregular basis" would not need an additional Oklahoma license. *Id.*

[57] *Id.*

[58] *Id.* This type of requirement is similar to the dual licensing system proposed by advocates of national licensing.

[59] Additional non-monetary costs of lost time cannot be passed on to the patient and must be internalized by the physician.

[60] The impact telemedicine will have on insurance rates is unresolved. Generally, insurance companies base their rates not on the number of patients treated but rather on the risk of mistreatment. Some critics of telemedicine believe that the very nature of telecommunications makes the practice of telemedicine a riskier form of treatment as compared to face-to-face examinations. *See, e.g.*, Barry B. Cepelewicz, *Telemedicine: A Virtual Reality, But Many Issues Need Resolving*, MEDICAL MALPRACTICE LAW & STRATEGY, July 1996. However, it remains unclear how telemedicine will impact insurance coverage. "A current lack of consensus on [telemedicine's] core issues makes anticipating telemedicine malpractice outcomes problematic for insurance carriers, which may affect rates for liability coverage." Robert F. Pendrak & R. Peter Ericson, *Telemedicine May Spawn Long-Distance Lawsuits*, NATIONAL UNDERWRITER, LIFE & HEALTH/FINANCIAL SERVICES EDITION, November 4, 1996, at 44. Furthermore, insurance rates tend to vary from one jurisdiction to the next. Therefore, it is also unclear how nationalizing health care will impact varying insurance rates.

[61] Pendrak & Ericson, *supra* note 61.

[62] *Id.*

[63] Cepelewicz, *supra* note 61, at 3.

[64] An additional cost that may be imposed by insurance companies is a rise in insurance premiums paid by patients for their health insurance. Although beyond the scope of this note, the argument can be summarized as follows: Telemedicine eliminates face-to-face contact between the patient and the physician. The elimination of this contact, in and of itself, will increase medical malpractice suits because patients will assume that physicians who cannot see and touch them must be committing some type of malpractice. *See, e.g.*, *An Information Highway*, *supra* note 8, at 49 (testimony of Dr. Jay H. Sanders).

[65] *Robbins, supra* note 36, at 127.

[66] *Is There a Doctor in the House?*, *supra* note 35, at 43.

[67] *Id.*

[68] *See, e.g.*, H.R. 3909, 103d Cong., 2d Sess. § 1712(c)(2)(1994) ("State or **States** in which the network intends to establish and develop a project") (emphasis added).

[69] Although this issue is beyond the scope of this note, the establishment of a doctor/patient relationship presents a difficult issue for a prospective plaintiff in the telemedicine context. The plaintiff must prove that a doctor/patient relationship was created even though the doctor and patient never met face-to-face.

[70] See *supra* section II.B.

[71] "It should be remembered that telemedicine is purely a mechanism by which medical services are provided; it is not a new form of diagnosis and treatment." Cepelewicz, *supra* note 61, at 1.

[72] See *supra* sections I.A. and I.B.

[73] This cost comes in two forms. First, the physician might have to pay the amount of judgment if his liability carrier denies coverage or if the amount of the judgment exceeds the amount of his coverage. Second, even if the insurance carrier pays the full amount of the judgment, the premiums the doctor must pay for liability coverage might increase. A third cost to the physician is attorney's fees. The higher the standard of care, the less likely the defendant can win on summary judgment. The longer the case takes, the higher the attorney's fees. While liability carriers have a duty to defend the insured, this duty can be litigated in a declaratory action. If the insured loses, he must pay for his defense in the primary lawsuit.

[74] Va. Code Ann. § 8.01-581.20 (Michie 1992).

[75] *Chapel*, *supra* note 33, at 210.

[76] *Id.*