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TELEMEDICINE'S IMPERILLED FUTURE? FUNDING, REIMBURSEMENT, LICENSING AND PRIVACY HURDLES FACE A DEVELOPING TECHNOLOGY

A physician located thousands of miles away may examine a patient in a remote location, "listen to his heart and lungs . . . examine a lesion on his skin magnified to almost any size, study his X rays, read his EKG, endoscopically examine the mucosa in his bowel, diagnose his condition, and prescribe his treatment."¹ The convergence of health care and telecommunications offers a tremendous opportunity to expand the availability and affordability of health care services, including access to specialists.² This convergence, labeled telemedicine by health care practitioners, is defined as "the use of telecommunications for medical diagnosis and patient care."³ The practice of telemedicine is increasing dramatically in the United States. Unfortunately, that growth has highlighted a host of problems that could eventually stall development of this medical and technological breakthrough.

Simple conversations between physicians and hospitals or physicians and patients over the telephone were the initial step in the evolution of telemedicine.⁴ Today, the telemedicine field has evolved from the use of telephones and facsimile machines to telemetry readings such as electroencephalograms and electrocardiograms.⁵ Telemedicine also can allow for long distance consultation, diagnosis, and treatment, as well as the transfer of clinical, administrative, and educational information. This information can be transmitted via audio, visual, and data communications between health care facilities and physicians separated by substantial geo-

1. Joseph P. McMenamen, *Telemedicine: Preparing for the Future*, CCM, THE AM. LAW. CORP. COUNS. MAG., June 1997 at 55.

2. Federal Communications Commission's Telecommunication and Health Care Advisory Committee, Findings and Recommendations, Submitted Oct. 15, 1996 [hereinafter *Findings and Recommendations*].

3. Stacey Swatek Huie, Note, *Facilitating Telemedicine: Reconciling National Access With State Licensing Laws*, 18 HASTINGS COMM. & ENT. L.J. 377, 379 (1996).

4. Leslie G. Berkowitz, *Is There a Doctor in the House? The Rise of Telemedicine*, COLO. LAW. June 24, 1996, at 19.

5. *Id.* As a result of advancements in technology, more sophisticated images are now being transmitted. *Id.*

graphic distances.⁶

Telemedicine is a segment of the health care industry that is expected to expand tremendously in the next decade.⁷ One reason for the anticipated growth is that telemedicine addresses many of the problems facing patients in rural areas. Rural Americans must often travel inordinate distances to receive medical treatment.⁸ When these patients arrive at rural health care facilities, often they are faced with inferior equipment, scarce resources, and inadequate access to specialists.⁹ Telemedicine addresses these issues by offering patients the opportunity to "see" a specialist or a well-equipped physician outside their primary care physician's office. The knowledge, experience, and state-of-the-art equipment that can be made available to rural patients is invaluable. With full implementation of telemedicine, no longer will patients have to travel to gain these benefits. Instead, specialists can participate in a diagnosis or procedure without the patient leaving the rural hospital.¹⁰

In spite of its many benefits, the telemedicine system is not without its problems.¹¹ Issues of physician licensing, privacy of patient records, reimbursement for physicians, and funding plague telemedicine's universal acceptance.¹² Policy papers, released jointly by the United States House of Representatives Medical Technology Caucus and the National Information Infrastructure Testbed, articulated fears that if legal obstacles to telemedicine are not addressed, it will be difficult to implement the new technology.¹³

Legislatures must act to encourage and protect telemedicine by removing all the barriers to continued development. Telemedicine is already credited with saving money and lives.¹⁴ The Advisory Committee on Telecommunications and Health Care ("Advisory Committee")¹⁵ of the

6. Robin E. Margolis, *Law and Policy Barriers Hamper Growth of Telemedicine*, HEALTHSPAN, Nov. 1994 at 14.

7. See Lane F. Cooper, *Telemedicine Market in Embryonic Stage*, WASH. TECH., Oct. 24, 1996, at 38.

8. *Findings and Recommendations*, *supra* note 2.

9. *Id.*

10. See Susan Lundine, *Florida Hospital Picks Sprint for Telemedicine*, ORLANDO BUS. JOUR., Oct. 18, 1996.

11. See Margolis, *supra* note 6, at 15. See also, Lynn F. Shotwell, Remarks at the D.C. Bar Association's Summer Series Luncheon Program (June 20, 1996).

12. Lynn F. Shotwell, Remarks at the D.C. Bar Association's Summer Series Luncheon Program (June 20, 1996).

13. Margolis, *supra* note 6, at 15.

14. *Id.* at 14.

15. *Id.* The Federal Communications Commission appointed the Advisory Committee

Federal Communications Commission ("FCC") is "united in the belief that telemedicine holds significant promise to improve the availability of needed health services to millions of Americans."¹⁶ Before doctors embrace this emerging, yet viable, technology, the medical profession in conjunction with the courts and legislative bodies should address the funding, reimbursement, physician licensing, and privacy issues.

This Comment evaluates the problems facing the evolution and implementation of telemedicine, including legal and financial issues. Part I outlines the current status of telemedicine, addressing issues such as funding and physician reimbursement. Part II discusses Congressional, State, and Federal Communications Commission policy and public interest statements that have advanced, and will continue to spur, the development of telemedicine. Part III describes the legal issues concerning physician licensing with respect to the practice of telemedicine, and Part IV addresses the problems of physician-patient privacy when information is shared via telecommunications. This Comment concludes that an interim solution is necessary for telemedicine to continue to grow, until federal legislation is developed that acknowledges the key role telemedicine will play in providing adequate health care to rural Americans while addressing the relevant legal issues.

I. CURRENT STATUS OF TELEMEDICINE DEVELOPMENT

Despite strong public interest arguments and bipartisan Congressional support for telemedicine, future development and implementation will have to overcome the obstacles of funding infrastructure development and securing payment for physicians. Governmental expenditures for telemedicine and related technologies exceeded \$100 million in fiscal year 1994-1995.¹⁷ According to a recent study released by Feedback Research Services, the telemedicine segment of the health care infotech market accounted for \$77 million in sales of telepathology and videoconferencing systems, in 1995.¹⁸ Some states have even invested their own resources, "in some cases up to \$50 million, to build the necessary state-of-the-art

to provide advice to the Commission on telemedicine, particularly the rural telemedicine provisions of The Telecommunications Act of 1996. It is made up of individuals with expertise and experience in health care, telecommunications, and telemedicine. *Findings and Recommendations*, *supra* note 2.

16. *Findings and Recommendations*, *supra* note 2.

17. Berkowitz, *supra* note 4.

18. Cooper, *supra* note 7 (suggesting that the development of telemedicine is in its embryonic stages, with tremendous growth predicted for the future).

telecommunication infrastructure.”¹⁹ Alex Linder, author of *Global Telemedicine Report*, believes that taking a broader look at the telemedicine industry would reveal that, throughout the United States, \$750 million is being invested in telemedicine.²⁰ This financial commitment reinforces the fact that, although telemedicine is in its infant stages, it has a strong future.

Aside from financial investments, some of telemedicine’s reported growth can be attributed to technological advancements including the development of the Internet. Telecommunications and computer industry experts believe that the explosive growth of the Internet is just beginning.²¹ Within several years, more than 100 million people will be connected to the Internet,²² providing telemedicine with an enormous opportunity to expand internationally.²³ Telemedicine, in fact, recognizes no boundaries save those erected by financial limitations or by federal, state, or foreign laws. As society moves into the telecommunication era where geographic boundaries are inconsequential, governmental policies that recognize this boundary-less society must be developed.²⁴

In spite of the continued development of the Internet, increased investments, and strong support from both state and federal governments, telemedicine faces two significant financial impediments. Questions surrounding funding for infrastructure development and physician reimbursement must be addressed.

A. *Telemedicine Funding*

A lack of funding for infrastructure development probably will slow telemedicine programs in a number of geographic areas. An advanced communications infrastructure is necessary to transfer patient data to specialists. The funding of the telecommunications infrastructure, and as a result, the funding of telemedicine, was addressed by a panel of experts convened to examine the problems facing telemedicine.²⁵

In several areas of the country . . . rural communities lack rudimentary telecommunications services Where basic tele-

19. Berkowitz, *supra* note 4.

20. Cooper, *supra* note 7.

21. Conrad Burns, *Development of Internet Services Hurt by Export Encryption Policy*, 216 N.Y.L.J. 5 (1996).

22. *Id.* at 7.

23. *Id.*

24. *Id.*

25. *Findings and Recommendations*, *supra* note 2.

communications services for modern health care are available, the cost is often four to five times the cost in urban areas, which makes these services unaffordable for rural health providers.

While telemedicine holds much promise to improve the quality of health care for rural residents, the Advisory Committee believes that the growth of telemedicine in rural areas will require both an adequate rural infrastructure buildout and a discounted rate.²⁶

Who will pay for developing the rural telecommunications infrastructure? The Advisory Committee believes the Universal Service Fund should reimburse telecommunications providers for both the cost of infrastructure buildout and the lower rate paid by rural health care providers.²⁷ The Fund currently is used to provide basic communications service to areas where the cost of service is greater than the cost that the provider could charge. Those who wish to provide telemedicine services should have access to financing from the Fund. Unless rural communications infrastructures can handle the transfer of data, the inestimable value of telemedicine will not be recognized.

B. Physician Reimbursement

Apart from funding issues surrounding infrastructure development, telemedicine also faces the problem of reimbursing telemedicine physicians for their services. A bill was brought before Congress that addresses the issues of Medicare/Medicaid reimbursement for physicians participating in telemedicine programs.²⁸ Currently, some Medicare and Medicaid rules require that patients and physicians meet face to face, preventing telemedicine physicians from collecting revenues from these programs.²⁹ If growth in telemedicine is to continue, both programs need a coherent plan to address telemedicine claims.³⁰

Along with reformed Medicare and Medicaid coverage, other forms of

26. *Id.* (Stating that rural telemedicine efforts are hindered by the lack of telecommunications infrastructure and the high cost for telecommunications services in those areas. Upgrading the infrastructure and provision of telecommunication services at discounted rates is essential to the expansion of telemedicine.)

27. The Universal Service Fund, currently administered by the FCC, is a fund in which interexchange carriers contribute \$750 million each year to support the provision of telecommunications services to rural areas. Interexchange carriers are telecommunications carriers that provide service across state lines. LEON T. KNAUER ET AL., TELECOMMUNICATIONS ACT HANDBOOK 43, 42-43 (1996).

28. Rural Telemedicine Act of 1995, H.R. 851, 104th Cong. (1995).

29. Margolis, *supra* note 6, at 15.

30. Shotwell, *supra* note 12.

insurance coverage for telemedicine would dramatically increase physician participation.³¹ In some cases, states have addressed this issue through legislation that will mandate reimbursement for telemedicine services.³² For example, Louisiana has enacted a law prohibiting insurers from discriminating against telemedicine providers when making payments.³³ These efforts to guarantee reimbursement will attract physicians in areas where telemedicine is viable.

C. Public Interest Arguments Supporting Telemedicine Development

Three strong public interest arguments favor full nationwide development of telemedicine. First, telemedicine benefits patients. The technology gives patients access to health care providers otherwise unavailable to them because of timing constraints, cost, or geographic limitations. Consider the following hypothetical:

A vacationer is injured in a car accident while driving through a California desert. Over a computerized telecommunications network, a team of physicians including a rural doctor, specialists at the University of Southern California Medical Center, and the patient's personal physician at Johns Hopkins University . . . share her prior medical records and currently generated medical images, and engage in real-time consultation to make a diagnosis and decide on treatment.³⁴

In rural areas, transfer to an urban facility may be physically or financially impossible. Telemedicine makes it possible to bring the urban facility to the rural patient. In situations where time is of the essence, telemedicine alleviates the need to travel from one practitioner to another. In each situation, the patient benefits from having the choice of seeing a specialist via telemedicine.

A second public interest argument is that telemedicine increases public knowledge about medicine. "Virtual hospitals" are beginning to appear on the Internet. These hospitals give physicians and patients easy access to the vast medical resources available on the Internet.³⁵ Rural general

31. See Cooper, *supra* note 7 (addressing the fact that the outlook for telemedicine would dramatically improve if reimbursement policies were established allowing for remote teleconsults instead of standard face-to-face consultations).

32. Shotwell, *supra* note 12 (citing Louisiana law that prohibits payment discrimination).

33. *Id.*

34. Kathleen M. Vyborny, *Legal and Political Issues Facing Telemedicine*, 5 *ANNALS HEALTH L.* 61, 68 (1996).

35. *Id.*

practitioners will be able to monitor changes in the provision of health-care, with patients benefitting from this increased knowledge. General practitioners also will be able to "attend," via telemedicine, specialists' procedures involving their patients. Aside from being able to monitor patients during procedures, general practitioners will be able to provide better follow-up care after completion of the specialists' procedures.³⁶

Third, telemedicine benefits rural health care facilities. "Telemedicine not only distributes needed resources across the country, but may be a lifeline for struggling rural hospitals."³⁷ It can offer rural hospitals access to equipment that they cannot afford. Telemedicine can also provide access to tests that are being performed at larger, more technologically advanced health care facilities. Furthermore, as patients are treated via telemedicine, they will remain in rural hospital beds and be monitored by rural health care providers instead of leaving the rural hospital for urban specialists. This will result in a financial benefit to the rural facilities.

In sum, patients, physicians, and hospitals all benefit from this emerging technology. Congress and federal agencies have recognized these substantial benefits, and have begun to advance programs aimed at developing telemedicine.

D. Congress and Government Agencies Fuel Growth

The rapid growth in telemedicine is due, in part, to federal and state government efforts to increase the provision of universal health care. Congress, government agencies, and individual states all are attempting to facilitate telemedicine development.³⁸ The result has been a surge in telemedicine awareness, as well as an infusion of capital into a technology still in its infancy.

As of November 1994, at least thirty-five states conducted telemedicine projects.³⁹ During fiscal year 1994-1995, at least thirteen federal agencies began telemedicine research.⁴⁰ The Department of Commerce's Telecommunication and Information Infrastructure Assistance Program awarded a grant of \$250,000 to the Nevada Rural Hospital Project Foundation that "allow[s] four rural hospitals to consult with medical special-

36. A general practitioner who is present for a specialist's medical procedure will be better situated to provide specific follow-up care.

37. Huie, *supra* note 3, at 384.

38. *See infra* notes 39-42.

39. Margolis, *supra* note 6.

40. Berkowitz, *supra* note 4.

ists in urban areas for diagnostic and emergency treatment support.”⁴¹ The United States House of Representatives is considering a bill that will facilitate the establishment of telemedicine pilot projects.⁴²

In January of 1996, President Bill Clinton signed into law The Telecommunication Act of 1996.⁴³ This Act contained a provision addressing the cost, to rural health care providers, of telecommunications services necessary for the provision of telemedicine.⁴⁴ In an attempt to implement the wishes of Congress, the FCC convened a panel of professionals in the fields of health care, communications, and law.⁴⁵

On October 15, 1996, the FCC's Advisory Committee on Telecommunications and Health Care released its findings and recommendations.⁴⁶ It concluded that the health care services, which many take for granted, are often inaccessible to rural Americans.⁴⁷ This is due, in part, to the lack of a developed communications infrastructure and the reduced access to sophisticated health care in rural America.⁴⁸ The Committee believes, as noted above, that the advancement of telemedicine is of such importance to the provision of health care in the United States that government should subsidize telecommunications providers as an incentive for them to develop rural telecommunications and therefore aid in the provision of telemedicine.⁴⁹

In 1996, Congress demonstrated its support for telemedicine by removing a financial impediment facing health care providers. The language of the Act reads:

A telecommunications carrier shall, upon receiving a bona fide request, provide telecommunications services which are necessary for the provision of health care services in a State, including instruction relating to such services, to any public or nonprofit

41. *Bryan and UNR Medical School Officials to Hold Press Conference Today to Demonstrate Telemedicine*, Government Press Release, Oct. 15, 1996.

42. Rural Telemedicine Act of 1995, H.R. 851, 104th Cong. (1995). The bill “directs the Secretary of Health and Human Services to establish pilot projects to investigate the effectiveness of the use of rural health care provider telemedicine networks to provide coverage of physician consultive service under part B of the medicare program to individuals residing in rural areas.” *Id.*

43. Communications Act of 1934, *as amended* by The Telecommunications Act of 1996, Pub. L. No. 104-104 (codified at 47 U.S.C. § 151).

44. *Id.*

45. *See Findings and Recommendations*, *supra* note 2.

46. *Id.*

47. *Id.*

48. *Id.* at 1-2.

49. *Id.*

health care provider that serves persons who reside in rural areas in that State at rates that are reasonably comparable to rates charged for similar services in urban areas in that State. A telecommunications carrier providing service under this paragraph shall be entitled to have an amount equal to the difference, if any, between the rates for services provided to health care providers for rural areas in a State and the rates for similar services provided to other customers in comparable rural areas in that State treated as a service obligation as a part of its obligation to participate in the mechanism to preserve and advance universal service.⁵⁰

The clear intent of Congress is to offset the actual cost of telemedicine to rural health care providers. Through the use of the Universal Service Fund, telecommunications providers are able to offer services to rural health care providers below the actual cost of the service.⁵¹ The combined actions of the FCC and Congress send a strong policy message: the federal government wants to facilitate the continued growth of telemedicine.

II. PHYSICIAN LICENSING

Despite the government's interest in promoting telemedicine, legal barriers such as state licensing laws for physicians inhibit telemedicine's growth. These licensing laws and various state-to-state waivers raise difficult questions for physicians wishing to participate in the practice of telemedicine.⁵² Some would argue that, based on current state physician licensing laws, physicians practicing telemedicine would have to be licensed in the states where their patients reside.⁵³ Since telemedicine is so new, no case law exists that would allow a lawyer to say, with any certainty, how a federal or state court would address a case involving telemedicine and physician licensing.⁵⁴

50. 47 U.S.C. § 254(h)(1)(A).

51. See *Findings and Recommendations*, *supra* note 2.

52. See Berkowitz, *supra* note 4.

53. Barry B. Cepelewicz, *Telemedicine: A Virtual Reality, But Many Issues Need Resolving*, 13 MED. MALPRACTICE L. & STRATEGY 1 (1996).

54. See generally, *id.* (This issue arises when physicians practice telemedicine across state lines. Because no court has yet decided where physicians "practice" medicine when they "see" a patient using telemedicine, physicians must be careful. Are physicians practicing medicine where the patient is located, or where they themselves are located? Until a court decides that question, to avoid malpractice claims, doctors may have to assume they are practicing in both states.)

Problems arise when physicians “cross” state lines to “practice” medicine. For example:

[a] radiologist in Chicago is asked to interpret an MRI image transmitted from a small, rural Indiana hospital. A dermatologist in New York City who specializes in rare skin conditions is asked to review images of a patient’s skin condition from an outpatient clinic in California Are these physicians lawfully practicing medicine [if the physicians are not licensed in the distant state]?⁵⁵

The answer to this question is found in the language of each state statute regulating the practice of medicine. Unfortunately for the development of telemedicine, and for those physicians who choose to practice telemedicine, the answer varies from state to state, as does the penalty imposed for practicing without a license.

Aside from the criminal ramifications of practicing telemedicine within a state’s borders without a license, doctors also face potential malpractice or other law suits. For example, if “a doctor in New York diagnoses a patient in rural Oklahoma through the use of interactive television and real-time videoconferencing and a misdiagnosis occurs, does the misdiagnosis occur in New York or Oklahoma, and which law applies?”⁵⁶ Again, one must look to the statutory language of each state. In most cases, it is arguable that the patient could avail herself of the laws of the state in which she resides.

The uncertainty surrounding physician licensing and choice of law presents a novel question for the courts.⁵⁷ There is no precedent addressing the licensing and choice of law issues incidental to physicians practicing telemedicine across state lines. Until such precedent is established, physicians will have to rely on the uncertainty of their own statutory interpretation of each state’s laws to understand the legal framework surrounding their medical practice.⁵⁸

Currently, a physician must weigh the costs of obtaining a state license, including filing fees and waiting several months, against the benefit of providing telemedicine service.⁵⁹ Unfortunately for some rural patients, the costs and time factor involved may prohibit many physicians from

55. *Advanced Health Information Systems, Telemedicine and the Law*, HEALTH INFORMATION SYSTEMS AND TELEMEDICINE NEWSLETTER (Arent, Fox, Kintner, Plotkin & Kahn, Washington, D.C.) Sept. 1996 [hereinafter *Arent Fox*].

56. Berkowitz, *supra* note 4, at 20.

57. See Cepelewicz, *supra* note 53, at 1.

58. See Margolis, *supra* note 6, at 15.

59. *Arent Fox*, *supra* note 55, at 2.

participating in telemedicine. Further, the uncertainty involved in the interaction of differing state-to-state licensing laws and the practice of telemedicine may chill physicians willingness to practice telemedicine across state lines.⁶⁰ This is not an issue when the physicians operate within a state's borders.⁶¹

A. *The Dilemma of Differing State-to-State Regulations*

"Medical licensing statutes are necessary to protect the health, safety, and welfare of [the citizens] of each state and thus are supported by the police power of each state."⁶² Because medical licensure is controlled by each state, the result may be fifty different sets of regulations.⁶³ To protect the welfare of its citizens, each state regulates the provision of health care differently, creating a potential for innumerable malpractice suits as telemedicine spreads throughout the country.⁶⁴

As discussed above, physicians must look to the statutory language to determine if they are, in fact, "practicing medicine." Many state medical practice acts define the practice of medicine quite broadly. They allow only licensed physicians or other licensed health care providers, within the bounds of their license, to practice medicine within the state.⁶⁵ To enforce licensing regulations, states may apply criminal sanctions against unlicensed practitioners or revoke the license of any physician who aids an unlicensed practitioner in the practice of medicine.⁶⁶

A typical statutory definition of the practice of medicine can be found in North Carolina General Statute, section 90-18, which states: "[a]ny person shall be regarded as practicing medicine . . . who shall diagnose or attempt to diagnose, treat or attempt to treat, . . . operate . . . prescribe . . . administer to, or profess to treat any human ailment" ⁶⁷ The practice of medicine as defined by this statute encompasses almost any possible action a physician may take. In this context, one may strongly argue that any type of telemedicine would be considered "the practice of

60. See Cooper, *supra* note 7.

61. *Id.*

62. BARRY R. FURROW ET AL., HEALTH LAW, CASES MATERIALS AND PROBLEMS at 40-41 (2d ed. 1991).

63. *Id.* at 55.

64. *Id.*

65. *Id.* at 57.

66. *Id.* See e.g., ME. REV. STAT. ANN. TIT. 32, § 3270-A (West 1988). See also, N.Y. EDUC. LAW § 6512 (McKinney 1985).

67. Arent Fox, *supra* note 55 (citing N.C. Gen. Stat., § 90-18) (1993)).

medicine.” Another example of a state statute that could impact telemedicine can be found in New York:

[In] making the unauthorized practice of medicine a crime, section 6512 of the New York Education Law provides: 1. Anyone not authorized to practice . . . who practices or offers to practice or holds himself out as being able to practice in any profession in which a license is a prerequisite to the practice of acts . . . shall be guilty of a class E felony.⁶⁸

Unfortunately for physicians and patients seeking the benefits of telemedicine, uncertainty may be the norm. Physicians cannot be assured that if they understand the old language of state licensing statutes before they begin practicing telemedicine, they will now be safe. In part, this is because states are adapting their statutes to address telemedicine.⁶⁹ Speaking at the District of Columbia Bar Association’s Summer Series Luncheon on the topic of “Telemedicine in Cyberspace,” Dr. Leroy Buckler stated that the interstate nature of telemedicine gives states compelling reasons to enact special laws to regulate the practice of medicine across state lines.⁷⁰ Several states are considering requiring out-of-state physicians to be licensed in-state if they plan on practicing telemedicine within the state’s borders.⁷¹ Kansas, for example, is requiring out-of-state physicians to be licensed in Kansas if they provide primary diagnosis and treatment to residents in Kansas via telemedicine.⁷² The Kansas regulation “requir[es] any physician who treats, prescribes, practices or diagnoses a condition, illness, ailment, etc. of an individual who is located in Kansas to obtain a Kansas medical license.”⁷³ The regulation, although commonly referred to as the “telemedicine regulation,” fails to expressly address telemedicine.⁷⁴ In May of 1995, Maine introduced a similar bill.⁷⁵ In Texas, the legislature amended the Texas Medical Practice Act as follows:

a person physically located in another jurisdiction is engaged in the practice of medicine in Texas if he or she, through the use of

68. *Id.* (citing N.Y. EDUC. LAW § 6512) (McKinney 1985)).

69. *See* Leroy Buckler, M.D., Remarks at the D.C. Bar’s Summer Series Luncheon Program (June 20, 1996).

70. *Id.*

71. *Arent Fox, supra* note 55 (states include Kansas, Maine, Oregon, and Colorado).

72. *See* Margolis, *supra* note 6.

73. K.A.R. § 100-26-1 (1994).

74. *Arent Fox, supra* note 55, at 5.

75. *Id.* (citing 1995 Me. Acts S.P. 534, to amend § 2, ME. REV. STAT. ANN. TIT. 32 § 2571-A (West 1988) & § 4, ME. REV. STAT. ANN. TIT. 32 § 3270-E) (West 1988).

any medium (including an electronic medium), performs an act or is part of a patient-care service initiated in Texas that would affect the diagnosis or treatment of the patient.⁷⁶

In most cases, "physicians who practice medicine across state lines without physically being located in the state where the patient encounter occurs, are either required to have a full and unrestricted license in that state or they are unregulated."⁷⁷ If the physician lacks a license, and a law suit is filed, the physician and his or her attorney face uncertainty in the outcome because in most cases, state laws do not address telemedicine. A situation such as this may also lead to conflict of law questions. Such questions will arise as interstate telemedicine actions conflict with state statutes, court decisions, and regulations that specify different duties of care for physicians.⁷⁸

The effect of licensing regulations that vary from state to state may be that they prevent physicians from contributing their services to rural areas, in part, because both physicians and malpractice insurers will fear the legal uncertainty. Unfortunately, each of these varying state medical regulations, while promulgated to protect the health, safety and welfare of the citizens of a state, may in fact have the opposite effect. Citizens may be denied access to physicians who would otherwise diagnose and/or treat them via telemedicine due to language contained in a statute, a statute that may be outdated.⁷⁹

Whereas the practice of telemedicine is relatively new, the statutory provisions addressing physician licensing have been around for decades. Many state statutes:

were originally passed to protect patients by preventing or discouraging "quack" physicians, and those who were not adequately qualified, from practicing medicine. When enacted, the legislators surely did not contemplate the practice of telemedicine between states, across continents, or even across oceans. Nonetheless, these laws may be construed to prevent out-of-state physicians from practicing via telemedicine without first obtaining a license in that state.⁸⁰

The antiquity of some of the licensing statutes, combined with states' efforts to understand and control telemedicine and physicians through new

76. Don James, *Physicians, Scope of Licensure Laws*, 49 SMU L. REV. 1089, 1095 (1994).

77. Buckler, *supra* note 69.

78. Margolis, *supra* note 6, at 15.

79. Arent Fox, *supra* note 55.

80. *Id.*

licensing legislation, may have an adverse impact on both the development of telemedicine and on the health of each state's citizens. A solution may be a form of reciprocity or waiver of licensing laws from state to state when a physician practices telemedicine.

B. Consultations and Waivers - Working Around State Licensing Laws

States, seeking a way around subjecting out-of-state physicians to in-state licensing laws, have addressed the problem of licensure in telemedicine with a variety of approaches. One choice is to address the practice of telemedicine as if it were merely a physician consultation occurring within a state border. Another possible choice is to "abbreviate" the licensing process for physicians practicing telemedicine. Further, some states have chosen to grant waivers of their licensing rules for the practice of telemedicine. By adapting their regulations to address the emergence of telemedicine, states indicate their recognition of the benefits of telemedicine.⁸¹

One approach, the consultation exception, permits out-of-state telemedicine physicians to consult with a locally licensed physician regarding an in-state patient.⁸² In these "consultation" cases, the local physician is always present. A state may justify allowing the out-of-state licensed physician to "practice medicine" within its state for several reasons. First, a state may view an out-of-state physician as having been invited into the state by an in-state licensed physician. Otherwise, to require an invited physician to be licensed would inhibit in-state physicians from seeking second opinions or expert medical advice. Second, states may claim that as long as an in-state physician is present, the duty of care owed to the patient will be protected by the physician licensed within the state.

A second approach that may be used by states to address the increasing numbers of telemedicine practitioners is to facilitate licensing for out-of-state physicians wishing to practice telemedicine in-state. Model legislation has been introduced by the Federation of State Medical Boards. As outlined by Dr. Leroy Buckler, it calls "for a special purpose license — an abbreviated but effective licensure process for physicians who will not physically be practicing within a state's jurisdiction, but wish to provide services to patients located within that jurisdiction."⁸³ This solution pro-

81. *Id.*

82. Cepelewicz, *supra* note 53.

83. Buckler, *supra* note 69.

vides some protection for the local market for physicians, yet still promotes telemedicine.

A third approach is the introduction of waivers into licensing statutes for physicians who act as consultants to in-state practitioners.⁸⁴ Idaho,⁸⁵ Indiana,⁸⁶ New Hampshire,⁸⁷ North Carolina,⁸⁸ and Pennsylvania⁸⁹ have provided exceptions to the "unauthorized practice of medicine" rules of their states. In Arizona, the licensing requirement for out-of-state physicians is waived if the physician is assisting in an emergency.⁹⁰ However, some of these state statutes place restrictions on telemedicine, requiring that the consultation be initiated by an in-state physician, or limiting the ability of telemedicine physicians to solicit patients within the state. Other states may remove physicians from the exception if they practice telemedicine too often within the state.⁹¹

The need for a license and/or waiver may in fact depend on the service being performed. To illustrate, "an argument may be made that an out-of-state radiologist who receives and interprets either a static or dynamic image and who has no direct contact with the patient is not 'practicing medicine.'"⁹² Alternatively, if an out-of-state telemedicine physician is consulting with, or treating a patient alone, without the aid of an in-state licensed physician, the state medical licensing board may be more likely to raise a licensing question. If the telemedicine physician is practicing in conjunction with a local physician, the state board may look to the local physician to ensure adequate care.⁹³

As highlighted above, the telemedicine licensing picture in many states is, and will continue to be, clouded with uncertainty. Unfortunately, in some of the states where the picture is clear, the clarity works against telemedicine. "In an effort to protect their local specialists, [some states] are working toward closing their consultation exceptions by such measures as outright requiring out-of-state physicians to be licensed in the state."⁹⁴ Another method of protecting in-state physicians from

84. *Arent Fox, supra* note 55.

85. IDAHO CODE § 54-1804(1)(b) (1994).

86. IND. CODE ANN. § 25-22.5-1-2(a)(4) (Michie 1995).

87. N.H. REV. STAT. ANN. § 329:21(II) (1995).

88. N.C. GEN. STAT. § 90-18(11) (1993).

89. PA. STAT. ANN. tit. 63, § 422.16 (West 1996).

90. ARIZ. REV. STAT. ANN. § 32-1421(B) (West 1992 & Supp. 1997).

91. *See* N.H. REV. STAT. ANN. § 329:21(II) (1995).

92. *Arent Fox, supra* note 55.

93. *Id.*

94. *Ceplewicz, supra* note 53. *See e.g.*, CONN. GEN. STAT. ANN. § 20-9 *An Act Con-*

telemedicine competition includes requiring physicians with ongoing relationships with a state to become licensed in that state, thus prohibiting out-of-state telemedicine physicians from establishing a regularly used hospital connection. Further, some states require that consultation requests come from an in-state physician practicing in the same specialty.⁹⁵

Laws that protect in-state physicians may materially impact the provision of quality health care. Denying patients the ability to seek health care providers, including specialists, through legislation will simply return the patients to where they were prior to the development of telemedicine technology. Unfortunately, the current trend in licensing physicians seems to be toward protecting the in-state physicians and not the patients. Until more states adopt telemedicine-friendly legislation, or until federal licensing statutes are promulgated to circumvent this uncertainty in the definition of "practicing medicine" or physician licensure, physicians will have to be acutely aware of the legal world in which they choose to practice, assuming they are allowed to do so. This may mean understanding and complying with the licensing laws of two or more jurisdictions.

III. PRIVACY ISSUES

Licensing issues are not the only legal issues facing telemedicine providers. One of the most important obligations of the physician-patient relationship is the protection of confidences revealed by the patient to the physician.⁹⁶ The information obtained in a consultation with a physician is expected to remain private. Lawyers addressing health care issues repeatedly have had to address both physicians' and patients' fears in maintaining privacy while sharing information.⁹⁷ State courts have imposed liability on doctors not only for violating a duty of confidentiality expressly stated in state licensing and privilege statutes, but also for violating statutes where the duty is implied.⁹⁸

The physicians' use of the telecommunications networks to exchange information invariably raises two separate privacy questions. First, how absolute is the duty of confidentiality and which state's privacy laws apply in a telemedicine proceeding. Second, what are the ramifications of send-

cerning Telemedicine Licensure, (requiring "regular" telemedicine practitioners to be licensed in Connecticut) (West 1989)).

95. Cepelewicz, *supra* note 53.

96. FURROW ET AL., *supra* note 62, at 310.

97. Berkowitz, *supra* note 4.

98. FURROW ET AL., *supra* note 62, at 310.

ing confidential data over unsecured networks? Physicians must consider these two issues if they want to transfer or store patient data using telecommunications.

A. *How Absolute Are the Privacy Laws and Which State Law Prevails?*

With the transmission of patient information over telecommunications networks, the question arises: How absolute are the privacy laws that govern the physician-patient relationship? The physician-patient relationship has been described as a moral equation with reciprocal rights and obligations.⁹⁹ One of a physician's chief ethical obligations is to hold confident all patient information acquired during treatment.¹⁰⁰ The laws, courts, and medical boards of each state protect this confidential information. Doctors violating the confidentiality doctrine face potential tort liability.¹⁰¹

The Privacy Act¹⁰² states that the physician owns the data in a medical chart, although only the patient can release it. However, this requirement is not applicable to the transfer of information to another physician in the presence of the patient.¹⁰³ Under the Privacy Act, the question arises whether a telemedicine consultation and/or treatment is an exchange of confidential patient information or an on-site consultation?¹⁰⁴

A patient injured by the release of his or her information may find legal recourse under several theories, including invasion of privacy, breach of an implied contract of confidentiality, malpractice, defamation, and intentional infliction of emotional distress.¹⁰⁵ According to Don Haines, legislative counsel for the American Civil Liberties Union, there are two diverse approaches to the privacy issue. "One is that the individual should have control over the data. It's to be expected that it is not to be released without permission. The contending model is that other agencies ought to have the right to manage the health care of the individ-

99. Edmund D. Pellegrino, M.D., *Patient and Physician Autonomy: Conflicting Rights and Obligations in the Physician-Patient Relationship*, 10 J. CONTEMP. HEALTH L. & POL'Y 47, 58 (1994).

100. IRA M. ELLMAN & MARK A. HALL, HEALTH CARE LAW AND ETHICS 376 (1990).

101. *Id.* at 377.

102. Privacy Act of 1974, 5 U.S.C. § 552(a) (1994).

103. Berkowitz, *supra* note 4.

104. *Id.*

105. ELLMAN & HALL, *supra* note 100, at 378. See e.g., *Simonsen v. Swenson*, 177 N.W. 831 (Neb. 1920). See also, *Hammonds v. Aetna Casualty & Sur. Co.*, 243 F. Supp. 793 (N.D. Ohio 1965). See also, *Humphers v. First Interstate Bank*, 696 P.2d 527 (Or. 1985).

ual for his well-being.”¹⁰⁶ The conflict in these models is representative of the conflict facing telemedicine physicians.

Competing with a physician's duty to protect private medical information is his/her duty to provide competent care. Physicians are morally obligated to provide sound advice and practice.¹⁰⁷ Denying one physician access to another physician, through telemedicine, based on physician-patient confidentiality issues may place medical practitioners in the position of having to choose between providing inferior medical treatment or submitting themselves to tort liability.¹⁰⁸ In situations where the health and safety of patients are at risk, many believe that privacy must, at times, be surrendered to provide access to “information for the good of both individual patients and for human society.”¹⁰⁹

One of the provisions of the model legislation developed by the Federation of State Medical Boards “requires physicians holding a special purpose license to abide by the confidentiality requirements of the state in which the patient resides and permit state medical boards to approve patient-granted waivers of confidentiality by physicians holding a special purpose license.”¹¹⁰ This is in contrast to the thoughts of Lawrence Gostin, Associate Professor of Law at Georgetown, who, when speaking at a workshop on medical records privacy, stated that a state-by-state approach to health care information does not work.¹¹¹ Health care information is rarely restricted to the state where it was collected. Having laws that only address information collection and dissemination within a state are “ill-suited to the collection and transmission of health data.”¹¹²

According to a newsletter distributed by the law firm, Arent, Fox, Kintner, Plotkin & Kahn, “the current lack of uniform privacy and confidentiality legislation negatively impacts the health care industry from providers to self-insured employers, for they are transmitting health information without guidance on what protections are required, which state's laws govern, and which state's courts have jurisdiction.”¹¹³ The result may be similar to the effect of the licensing laws, in that physicians

106. Charles Marwick, *Increasing Use of Computerized Record-keeping Leads to Legislative Proposals for Medical Privacy*, 276 JAMA 270, 272 (1996).

107. Pellegrino, *supra* note 99, at 59.

108. See ELLMAN & HALL, *supra* note 100, at 378.

109. Marwick, *supra* note 106, at 270 (quoting Lawrence O. Gostin, J.D., Associate Professor of Law at Georgetown University Law Center).

110. Buckler, *supra* note 69.

111. Marwick, *supra* note 106, at 270.

112. *Id.*

113. Arent Fox, *supra* note 55.

may choose not to practice due to the uncertainty, or they may do so at their own risk. In either case, telemedicine is impacted negatively.

B. Unsecured Networks

In many instances, the choice to release confidential data is not made by the physician practicing telemedicine. Unlike a case in which a physician makes a conscious decision to release private patient information, with telemedicine, the only mistake a physician may make is in storing and/or transmitting the information via computer. In such cases, information is often released, or stolen by computer hackers, from unsecured computer networks.

Computer hackers have existed for as long as there have been computers. "Hackers have penetrated hospital computer systems, [and] altered patient data In 1988, hackers accessed a computer system at Barrow's Neurological Institute . . . [creating problems] in accessing the database."¹¹⁴

Because the systems are not invulnerable, doctors must evaluate whether or not to subject patient information to the risk of computer networks. Physicians must ask themselves to what extent they will be subject to disclosure of confidential doctor-patient information when that information is taken from computer networks. Many types of insurers, employers, and credit investigators are constantly seeking medical information.¹¹⁵ Secondary users of medical information commonly receive their information through patient waivers, but at times these organizations receive their information surreptitiously.¹¹⁶ This "potential brokering of health care information"¹¹⁷ raises questions about accessibility to patient records and to what extent physicians will be held liable for inadvertent release of information.

The obvious concern is how fraudulently obtained information will be used. "In recent months, popular magazine articles have relayed stories of insurance companies denying coverage on the grounds that review of patient's medical records shows a potential health problem."¹¹⁸ Representative Jim McDermott, M.D. a Democrat from Washington, speaking at a workshop on medical records privacy in Washington, D.C., related the story of a man who lost his automobile insurance because he was a

114. *Id.*

115. FURROW ET AL., *supra* note 62.

116. *Id.*

117. *Arent Fox, supra* note 55.

118. Marwick, *supra* note 106, at 270.

carrier of a muscular dystrophy gene.¹¹⁹ As highlighted above, the release of this information may result in harm to the patient, and possible sanctions to the doctor.¹²⁰

To compound the problems created by the interaction of telemedicine and privacy laws, doctors may refuse to send information electronically unless they can be assured that only the people they select will have access to patient information.¹²¹ In an era where people have complete and simple access to one mode of electronic transfer, the Internet, this may be difficult, if not impossible, to guarantee. The result could be a slowing or even paralyzing of both the health care system and the nationwide implementation of telemedicine.¹²² Physicians' fear of violating state privacy laws may lead them toward inactivity.

The privacy problem is not entirely in the technology, but rather in the confusion surrounding what "privacy" entails. "In the context of a modern health information infrastructure, we're hopelessly outdated in the way we approach this privacy issue. . . . Our ethics and law is based on this trusting, confidential relationship between doctor and patient. All very well but it is not the reality."¹²³ The issue then, may not be privacy, but rather security. A report by the National Academy of Sciences noted that the privacy issue has very little to do with unauthorized access, rather it was legitimate access that was the problem.¹²⁴ Many organizations with noble and legitimate purposes want access to medical data. Simultaneously, patients may not want their data released, for personal or professional reasons. The answer for physicians may be in securing the information when it is entered into a computer network.

If physicians can secure patient information when placing it on a computer network, they may be fulfilling their duty to keep the information private. "One of the most effective ways of securing information sent over the Internet is to encrypt it."¹²⁵ Encryption is the process by which digital information is scrambled on one end of a transmission and decrypted on the other.¹²⁶ It uses mathematical formulas to hide the

119. *Id.*

120. FURROW ET AL., *supra* note 62.

121. Burns, *supra* note 21.

122. Marwick, *supra* note 106, at 270.

123. *Id.*

124. INSTITUTE OF MEDICINE, HEALTH DATA IN THE INFORMATION AGE: USE, DISCLOSURE, AND PRIVACY (M. S. Donaldson and K. N. Lohr, eds. National Academy Press, 1994).

125. Burns, *supra* note 21.

126. *Id.*

plain text of the message being sent.¹²⁷ The strength of the program, the measure of how difficult the encrypted message is to decipher, "depends on: (1) the integrity of the mathematical formulas used (i.e., that the formulas have no "back doors"); and (2) the length of the formula (the key) that encrypts and decrypts the message. The key is measured by the number of digits, or bits, included in the formula."¹²⁸ Different levels of encryption may be used depending on the sensitivity of the information being transferred.¹²⁹

A software system developed through a grant awarded by the National Library of Medicine ("NLM") to West Virginia University is undergoing field trials at two hospitals and a set of rural health clinics in West Virginia.¹³⁰ The system is attempting to use the Internet to locate, retrieve, and assemble digital records from multiple sites using a Web browser.¹³¹ Another new contract was awarded by the NLM. The project's goal is to "demonstrate the viability of secure clinical telemedicine via public computer networks and measure how it can result in cost savings and improved access to quality care for rural populations."¹³²

While the technology is being developed to lessen the chance that confidential physician-patient data may fall into the wrong hands, physicians may find some security in common-law exceptions to privacy laws.¹³³ Under some of these exceptions, physicians would be under a duty merely "not to gossip," "promiscuously disclose," or "disclose frivolously" patient information.¹³⁴ Although the exceptions exist, it is doubtful that these decisions will be controlling at the federal court level because they would take from the patient the protection afforded to them by the states.¹³⁵

Until legislation is adopted to address the interaction of telemedicine and the privacy of patient information, physicians will have to find a way to avoid the legal consequences of disclosing confidential patient information, or face the uncertainty of common-law exceptions to privacy rules. Even though no security system can guarantee patients' privacy,

127. *Id.*

128. *Id.*

129. John Morrissey, *Web Security Software in Testing Stage*, MOD. HEALTHCARE, Oct. 21, 1996, at 61.

130. *Id.*

131. *Id.*

132. *Id.*

133. See ELLMAN & HALL, *supra* note 100, at 380.

134. *Id.* (citing *Hague v. Williams*, 181 A.2d 345, 349 (N.J. 1962)).

135. *See id.*

health care providers, especially those practicing telemedicine, should implement a system that guarantees access when needed, while maintaining confidentiality and privacy.¹³⁶ The physician's best defense to legal action may, in fact, be taking the precaution of implementing a system that is reliable.¹³⁷

C. Legislative Proposals

"Technology has moved forward so rapidly that unless we get this privacy issue discussed we will wind up with a situation none of us want."¹³⁸ How absolute the duty of confidentiality is and what the ramifications of having confidential data on unsecured networks are, are not issues exclusive to telemedicine. As doctors have converted from paper records to computerized record keeping, they have faced privacy issues.¹³⁹ Computerized record keeping poses an undeniable threat to the confidentiality of patients' records.¹⁴⁰ But, the benefits of computerized record keeping and electronic transfer are substantial.¹⁴¹ As telemedicine is implemented nationwide, these computerized systems become invaluable. Physicians with access to the system will be able to determine patients' allergies, their medical histories, and their prescriptions, at the click of a button.¹⁴² As our health care system changes, our laws must adapt to keep pace.

The United States Congress is considering a legislative proposal that deals directly with attempts to protect identifiable health care information.¹⁴³ It relies on the principle of patient consent.¹⁴⁴ Leaving the decision to share private information solely with the patient will remove some of the liability from the physician. It also will address the problem of dissemination of information to people with legitimate reasons to have the information. The above-mentioned legislation must contain explicit instruction for disseminating patient information to be effective. Professor Lawrence Gostin cited four general principles that should govern federal legislation intended to protect privacy:

- 1) The collection and use of information should include the in-

136. *Arent Fox*, *supra* note 55.

137. *Id.*

138. Marwick, *supra* note 106 (quoting Rep. McDermott, M.D. (D-Wash)).

139. *Id.*

140. *Id.*

141. James Rosenbaum, *Medical Liability in Cyberspace*, 8 HEALTH L. 10 (1995).

142. *See id.*

143. Marwick, *supra* note 106.

144. *Id.*

formed consent of the individual so that he or she may exercise some control over it

2) There should be rules regarding disclosure. If information is gathered for one purpose such as treatment, and is then used for another purpose, such as research, consent should be obtained.

3) Security is essential. When information is collected its security must be adequately regulated. Ensuring this [through encryption] would control unauthorized access.

4) Protection of the data is essential. An independent oversight body should be created, its members appointed by the U.S. Congress or the President, charged with ensuring that all the privacy systems are kept secure and all complaints investigated.¹⁴⁵

If federal legislation follows these four principals, it will protect both patients and doctors. Patients, on the one hand, will have control over dissemination of their private information, monitoring why and to whom the information is given. Physicians, on the other hand, will have a clear picture of the laws governing the dissemination of patient information. For any legislative proposal to work, it must preempt state laws. This may be the only way to deal realistically with the issue of privacy of medical records.¹⁴⁶

IV. THE FUTURE OF TELEMEDICINE - INTERIM AND LONG-TERM SOLUTIONS

Conservative forecasts have suggested that sales of multiple use telemedicine videoconferencing systems, teleradiology equipment, and telecommunications services could expand to over \$280 million by the year 2000.¹⁴⁷ In the next five years, as much as \$15 billion may be spent by health care providers on information technologies.¹⁴⁸ The results of this increase in capital expenditures will be seen across telemedicine.¹⁴⁹ Even with this infusion of capital, the long-term success of telemedicine may be tied, in part, to its ability to lower health care costs.

Although many medical benefits of telemedicine have been chronicled, the financial costs of such a system have not been analyzed in detail. Discussions regarding telecommunications infrastructure costs have been ongoing at the FCC,¹⁵⁰ but actual total cost figures are not readily avail-

145. *Id.*

146. *Id.*

147. See Cooper, *supra* note 7.

148. See Arent Fox, *supra* note 55.

149. See also, Morrissey, *supra* note 129.

150. See *Findings and Recommendations*, *supra* note 2.

able for an operating telemedicine system.¹⁵¹ "In Texas there has been an ongoing program since 1994 where they are really trying to crunch the numbers to determine the cost-effectiveness of telemedicine. . . ."¹⁵²

Health care costs are of major concern in the United States. They represent over 12% of the current Gross Domestic Product.¹⁵³ This number is expected to increase to 18% by the year 2000.¹⁵⁴ Proponents of telemedicine hope that it will help to lower health care costs.¹⁵⁵ Many of the telemedicine projects currently being reviewed were initiated to determine the cost-effectiveness of telemedicine.¹⁵⁶ Benefits such as early detection of illnesses as a result of access to advanced equipment, more extensive use of less expensive facilities, and the involvement of mid-level health professionals are expected to produce cost savings.¹⁵⁷ What is not yet known is whether start-up costs and the increased number of patients potentially generated by telemedicine will outweigh the cost savings.¹⁵⁸

The National Information Infrastructure Testbed ("NIIT") suggests that some federal and state law changes may be needed to implement their telemedicine network, including, "a uniform federal medical records privacy statute that would preempt state laws on the subject."¹⁵⁹ NIIT also suggests adoption of a national medical licensing standard, such as the one used by the United States armed forces, to preempt state legal and ethical requirements.¹⁶⁰ In the alternative, one solution discussed above may be to classify telemedicine practitioners as consulting physicians, thereby avoiding the need to be licensed in each state.¹⁶¹ Because present law is not designed to handle a nationwide health network, an interim solution must be established for evolution to continue.

An interim answer to the privacy question may be that medical practitioners will have to solicit the permission of their patients¹⁶² prior to disseminating private medical information over the Internet or via telecommunication means, and then use the most advanced encryption

151. See Huie, *supra* note 3, at 388.

152. Cooper, *supra* note 7.

153. *Id.*

154. *Id.*

155. *Id.*

156. *Id.*

157. *Id.* at 388-89.

158. *Id.* at 388-92.

159. Margolis, *supra* note 6.

160. *Id.*

161. *Id.*

162. Marwick, *supra* note 106 (quoting Lawrence O. Gostin, J.D., Associate Professor of Law at Georgetown University Law Center).

equipment available. With respect to licensing, in order to avoid malpractice suits arising in either the state in which the doctor resides or the state where the patient resides, medical practitioners will have to know and comply with the licensing laws of both states.

So far, there are no legal or medical precedents to answer whether a doctor in one state who telepractices in another state is practicing without a license. Indeed, while the intrastate practice of telemedicine appears to be making inroads, at least five states . . . bar physicians without a state license from practicing telemedicine within that state, and about 20 other states are considering similar restrictions.¹⁶³

In the interim, as a result, knowledge of state laws surrounding telemedicine is a must.

Without legal precedent, telemedicine physicians must proceed cautiously. This may entail either being designated as a consulting physician, thereby avoiding the need to be licensed, or simply going through the licensing procedure in the states where the physician practices telemedicine. Further, physicians may be forced to secure patient consent before sharing any information. Although unwieldy, prior patient consent may be the only way to avoid harmful legal ramifications until a more permanent solution is found. The permanent answer to these legal issues may be the promulgation of federal legislation that promotes the rapid development of telemedicine while addressing state licensing and privacy issues. Promoting development without addressing legal concerns may stall the implementation of telemedicine.

V. CONCLUSION

Telemedicine's time has come. The benefits to both patients and physicians have been chronicled, and are invaluable. Further, cost savings seem to be a beneficial by-product of the implementation of telemedicine. Unfortunately, several imposing obstacles bar the expanded development of telemedicine systems. Congress must address funding, reimbursement, licensing, and privacy issues surrounding telemedicine. Federal law that preempts the myriad of state laws and regulations concerning reimbursement, licensing, and privacy will allow physicians to understand better the legal world in which they are practicing. However, federal laws must recognize that telemedicine is an evol-

163. *Medical Malpractice Law and Strategy*, 13 *MED. MALPRACTICE L. & STRATEGY* 12 (1996).

ing technology that needs adaptable laws. Until that time, physicians will have to be acutely aware of licensing and privacy laws of both the state in which they are licensed, and the state where the patient resides. When uniform federal laws unite with both individual states' and the federal government's desire to implement telemedicine, and problems such as the funding of telemedicine infrastructure and payments for telemedicine services are addressed, the result will be nationwide implementation of a much needed revolutionary approach to the practice of medicine.

Christopher Guttman-McCabe