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Telemedicine in Texas: Solving the Problems of Licensure, Privacy, and Reimbursement.

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COMMENTS

TELEMEDICINE IN TEXAS: SOLVING THE PROBLEMS OF LICENSURE, PRIVACY, AND REIMBURSEMENT

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I. INTRODUCTION

According to the Census Bureau, an estimated 100 million Americans are living with a chronic disease.[1] Additionally, federal researchers report that health care spending rose 6.9% in 2000, the largest one year percentage increase since 1993. Health care spending now makes up roughly 14% of our gross domestic product.[2] Solutions to the problems

1. Audrey Kinsella, *Home Telehealthcare: An Idea Whose Time Has Come-But with Safety Concerns*, MED. MALPRACTICE L. & STRATEGY, May 2002, at 5, ¶ 4, WL 19 No. 7 MEDMALLST 5.

2. Robin Toner & Sheryl Gay Stolberg, *Decade After Health Care Crisis, Soaring Costs Bring New Strains*, N.Y. TIMES, Aug. 11, 2002, at 19 (depicting national health care spending as a percentage of the United States GDP).

within the United States health care delivery system must be found now before they become epidemic.

Although many agree there are problems, few agree on the solutions. Within the past three years, federal legislation establishing a Patients' Bill of Rights[3] and prescription drug coverage for Medicare have been passed in the United States House and Senate; however, both failed after the two versions could not be reconciled.[4] These are just two examples of the gridlock plaguing the health care system at a national level. Frustrated by the lack of action, many states have begun to explore the possibilities of telemedicine as a way to increase access to health care services, improve health care quality, and reduce health care costs.[5]

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3. In his State of the Union Address, President Bill Clinton called on Congress to pass a "Patients' Bill of Rights" stating: "You have the right to know all your medical options, not just the cheapest. You have the right to choose the doctor you want for the care you need. . . . You have the right to keep your medical records confidential"). President Bill Clinton, State of the Union Address, 1 PUB. PAPERS 112, 116 (Jan. 27, 1998).

4. *On Patients' Rights and Prescription Drugs, Compromise Proves Elusive*, N.Y. TIMES, Aug. 11, 2002, at 19 (noting that the House and Senate bills could not be reconciled).

5. *See* Roman J. Kupchynsky & Cheryl S. Camin, *Legal Considerations of Telemedicine*, 64 TEX. B.J. 20, 26 (2001) (writing that in recent years at least twenty-three states passed legislative initiatives focusing on informed patient consent, confidentiality, and reimbursement). These states include: Arizona, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Montana, Nebraska, Oklahoma, Tennessee, Texas, Virginia, West Virginia, and Wyoming. *Id.* It is estimated that telemedicine use within the United States could save up to $36 billion in health care costs. *See* Robin Elizabeth Margolis, *Law and Policy Barriers Hamper Growth of Telemedicine*, HEALTHSPAN, Nov. 1994, at 14, 14, WL 11 No. 10 HTHSP 14. In 1999, the equipment required to provide telemedicine consultation cost less than $5,000 to maintain. *Telemedicine: Hearing Before the Senate Subcomm. on Sci., Tech., & Space of the Senate Comm. on Commerce, Sci. & Transp.*, 106th Cong. 14-19 (1999) (discussing a report from the American Telemedicine Association). The equipment costs associated with remote patient monitoring are less than $300. *Id.* However, the costs for training personnel and integrating telemedicine into existing health care frameworks can be substantial. *Id.* For example, start-up costs can range from $134,000 to $288,000 per institution. Kristen R. Jakobsen, Note, *Space-Age Medicine, Stone-Age Government: How Medicare Reimbursement of Telemedicine Services is Depriving the Elderly of Quality Medical Treatment*, 8 ELDER L.J. 151, 171 (2000), WL 8 ELDLJ 151. Additionally, there are annual transmission and maintenance fees of $19,000 to $80,000. *Id.* However, after these start-up costs are absorbed, telemedicine is seen as an economical method of delivering health care. *Id.* For example, private insurers reported that attracting sufficient telemedicine participation can bring down costs, estimating a potential nationwide savings of approximately $36 billion. *Id.* at 170. The cost reductions from telemedicine use are great and include: transportation savings; savings from accurate diagnosis and treatment; reduced hospital stays for patients who can use telemedicine to be monitored at home; and the profits for local hospitals, which are able to provide treatment via telemedicine rather than send patients to major metropolitan areas. *See* Chari J. Young, Note, *Telemedicine: Patient Privacy Rights of Electronic Medical Records*, 66 UMKC L. REV. 921, 925 (1998)

Texas has shown a serious commitment to the telemedicine movement.[6] For example, during the 2001 Texas legislative session, 20% of the bills passed into law and 19% of the vetoed bills were related to health care issues, including many dealing specifically with telemedicine.[7] In fact, the recently enacted S.B. 789 requires the Texas Health and Human Services Commission to begin: (1) overseeing Medicaid reimbursement for telemedicine services providers; (2) implementing various telemedicine pilot programs; and (3) setting minimum standards for operating system software and hardware used by health care facilities engaged in telemedicine.[8] If this present legislation accelerates Texas's telemedicine industry as much as supporters anticipate, it will come as a

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(explaining that although the equipment is expensive to purchase and set up, once in place, it is actually much more cost effective than traditional systems); *see also* Kristie Zamrazil, *Telemedicine in Texas: Public Policy Concerns*, FOCUS REP. (Tex. House of Representatives, House Research Org., Austin, Tex.), May 5, 2000, at 1, 3, http://www.capitol.state.tx.us/hrofr/focus/telemed.pdf (quoting University of Texas Medical Branch experts that basic telemedicine equipment costs have been reduced from $60,000 to around $15,000 to $20,000).

6. *See* Kristie Zamrazil, *Telemedicine in Texas: Public Policy Concerns*, FOCUS REP. (Tex. House of Representatives, House Research Org., Austin, Tex.), May 5, 2000, at 1,1, http://www.capitol.state.tx.us/hrofr/focus/telemed.pdf. Texas's leadership in the telemedicine industry is due to several factors, such as:

- the availability of federal and state grants;
- issues of health-care access and cost in rural areas and Texas prisons;
- the marketing of new software and hardware technologies by emerging high-tech industries;
- the formation of online businesses by traditional health-care providers and payers; and
- the research interests of medical centers.

Id. It should be noted that California has also taken significant steps to implement telemedicine on a larger scale, particularly in the rural sections of the state. *See generally* Ann Davis Roberts, *Telemedicine: The Cure for Central California's Rural Health Care Crisis?*, 9 SAN JOAQUIN AGRIC. L. REV. 141 (1999) (discussing California's legislation mandating a study of telemedicine in rural areas and requiring third-party payers to reimburse providers of telemedicine services).

7. *See* TEX. GOV'T CODE ANN. § 531.0216 (Vernon Supp. 2003) (establishing a commission to implement a system of reimbursement for health care providers who deliver health care services via telemedicine); TEX. GOV'T CODE ANN. § 531.0217 (Vernon Supp. 2003) (calling on the Texas Department of Health to establish pilot telemedicine programs in areas along the Texas-Mexico border that will offer health screenings and prenatal care, along with basic health care delivery); TEX. HEALTH & SAFETY CODE ANN. § 106.307 (Vernon Supp. 2003) (explaining the extent of allowable telemedicine uses); *see also The 77th Legislature – What a Difference a Biennium Makes!*, 64 TEX. B.J. 770, 775 (2001) (providing statistical data on the percentage of health care legislation addressed during the 2001 Texas legislative session).

8. *See* Tex. S.B. 789, 77th Leg., R.S. (2001) (promoting an increase in telemedicine reimbursement, utilization and security).

result of previous and concurrent legislation which provided a more liberal approach to licensure, broad Medicaid reimbursement of telemedicine providers, and standards to ensure privacy of patient information used in telemedicine.[9] Because of this legislative progress, Texas appears ready to lead the nation in accelerating the growth of telemedicine within its borders.

Part II of this Comment provides a detailed background and history of telemedicine. Part III discusses telemedicine's actual and potential benefits to Texas citizens as well as Texas's current approach to licensure, privacy and reimbursement issues within telemedicine. Finally, Part IV offers suggestions to strengthen Texas's telemedicine industry and further distinguish Texas as the leader in the telemedicine field. This Comment concludes with a proposal for federal and state cooperation.

II. BACKGROUND AND HISTORY OF TELEMEDICINE

A. *Defining "Telemedicine"*

Texas law defines telemedicine as "a health care service initiated by a physician or provided by a health professional . . . for purposes of patient assessment by a health professional, diagnosis or consultation by a physician, treatment, or the transfer of medical data, that requires the use of advanced telecommunications technology."[10] Telemedicine includes the use of interactive digital audio transmission, digital video transmission, and computer image transmission using still-image capture and "store and forward" technology.[11] Examples of telemedicine at work are presented in the following scenarios. First, a patient has a computed tomography scan performed at a rural health clinic. Within seconds, the

9. *See* 22 TEX. ADMIN. CODE § 174.3 (2002) (outlining procedures for obtaining special purpose license); 22 TEX. ADMIN. CODE § 174.13 (2002) (allowing for limited exceptions to the special purpose requirement); *see also* TEX. GOV'T CODE ANN. § 531.0217 (Vernon Supp. 2003) (requiring reimbursement under Medicaid for telemedicine services); TEX. HEALTH & SAFETY CODE ANN. § 241.152 (Vernon Supp. 2003) (outlining the requirements for disclosure of medical information); TEX. INS. CODE ANN. art. 21.53F, § 5 (Vernon Supp. 2003) (requiring a telemedicine health professional who "provides or facilitates the use of telemedicine medical services or telehealth services" to "ensure that the confidentiality of the patient's medical information is maintained as required" by applicable law).

10. TEX. UTIL. CODE ANN. § 57.042(12) (Vernon Supp. 2003).

11. *See* 7 C.F.R. § 1703.102 (2002) (referring to telemedicine as "a telecommunications link to an end user through the use of eligible equipment which electronically links medical professionals at separate sites in order to exchange health care information in audio, video, graphic, or other format[s] for the purpose of providing improved health care services"); *see also* 42 U.S.C. § 1395m(m)(1) (2000) (noting that "store and forward" technology provides "for the asynchronous transmission of health care information in single or multimedia formats").

image is sent via computer to the radiologist's location for interpretation. Within minutes, her diagnosis and any recommendations are sent back to the original location and further treatment for the patient is commenced. Second, a rural physician examines a patient with a small camera attached to the examination instrument.[12] Through the use of a two-way interactive system with color video, the consulting specialist 150 miles away receives "as clear a view of the patient as the examining physician."[13] A complex medical problem is correctly diagnosed and the patient does not miss work or spend money traveling to an urban hospital.[14] Instead, the patient is able to contribute to the local economy by paying her fees to the rural area providers.[15]

To complete the definition, "telemedicine" must be distinguished from "telehealth" and "cybermedicine." Telehealth concerns only the transfer of general health care information whereas telemedicine involves the actual and direct delivery of medical care.[16] Texas law explicitly states that mere use of the telephone or facsimile to transmit medical information is not considered telemedicine.[17] Cybermedicine is similar to telehealth in that it involves the distribution of health information. In this case, it is done via websites without any previous or sustained relationship between doctor and patient.[18] One author argues, "[T]elemedicine is the reality of

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12. *See* Andy Miller, *Medicine's Video Age: New Technology Expected to Help Rural Hospitals, Reduce Patient Costs*, ATLANTA J. & CONST., Apr. 6, 1993, at E1, WL 4/6/93 ATLNTAJC E1 (demonstrating some of the practical applications of the Medical College of Georgia's telemedicine program).

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

14. *See id.* (recognizing the time and money saved by the Medical College of Georgia's telemedicine program).

15. *See id.* (theorizing that keeping treatment and payment in the rural hospital will breathe new life into rural medicine).

16. *See* JOHN D. BLUM & ANDRE C. FRIEDEN, E-HEALTH & TELEMEDICINE § 19.7 (2002) (providing a definition and explaining the distinguishing features of telehealth); Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:1 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:1 (2001) (defining telehealth as "the use of telecommunications technologies to support long-distance clinical health care, patient and professional medical education, public health, [and] research"). Whereas telehealth is used primarily to educate and assemble health care data, telemedicine is viewed as a subset of telehealth, used to assist health care professions in providing direct patient care. *Id.*

17. *See* TEX. UTIL. CODE ANN. § 57.042(12) (Vernon Supp. 2003) (excluding telephone and facsimile communication from the definition of telemedicine).

18. *See* Ross D. Silverman, *Regulating Medical Practice in the Cyber Age: Issues and Challenges for State Medical Boards*, 26 AM. J.L. & MED. 255, 264-67 (2000) (discussing the history and liability issues associated with cybermedicine); *see also* Shira D. Weiner, Note, *Mouse-To-Mouse Resuscitation: Cybermedicine and the Need for Federal Regulation*, 23

known physicians communicating with other physicians (or patients) for the benefit of the patient, while cybermedicine entails unknown physicians setting up sites on the Worldwide Web to diagnose unknown patients."[19] In Texas, telemedicine is allowed "only to supplement or enhance the health care services provided by the health professional," not to replace them.[20]

B. *Evolution of Telemedicine Technologies*

The use of telemedicine is not as new a concept as many believe. Actually, as early as the 1960s, NASA began utilizing telemetric technologies to transmit physiological data and monitor the health of astronauts in space.[21] This technology provided the infrastructure for the first telemedicine programs on earth, including one implemented by Massachusetts General Hospital to transmit video to-and-from the hospital's airport clinic.[22] During the mid-1970s, NASA satellites were used in Alaska to provide a connection by which local nonphysician providers could access information and consult with a distant physician.[23]

CARDOZO L. REV. 1107, 1114 (2002), WL 23 CDZLR 1107 (defining the practice of cybermedicine). Cybermedicine is the exchange of information "whereby patients submit information regarding symptoms and ailments and cyberdoctors respond with general information, medical advice or diagnoses regarding illnesses." *Id.*

19. *See* Ranney V. Wiesemann, Note, *On-Line or On-Call? Legal and Ethical Challenges Emerging in Cybermedicine*, 43 ST. LOUIS U. L.J. 1119, 1143 (1999) (recognizing the distinguishing characteristics of cybermedicine). With cybermedicine, the patient initiates contact with the physician by visiting a website. *Id.* at 1119. From there, communication between patient and physician is accomplished solely through electronic mail. *Id.* Since the physician (cyberdoctor) diagnoses the patient solely through information contained in these communications, the physician and patient never see or meet each other, and no objective information is exchanged. *Id.* at 1119-20.

20. *See* TEX. HEALTH & SAFETY CODE ANN. § 106.307 (Vernon Supp. 2003) (prohibiting health care professionals from delivering medical services exclusively through telemedicine).

21. *See* Patricia C. Kuszler, *Telemedicine and Integrated Health Care Delivery: Compounding Malpractice Liability*, 25 AM. J.L. & MED. 297, 300 (1999) (discussing the origins of telemedicine within the space industry). Initially, satellite transmission of voice and data was employed by the National Aeronautics and Space Administration (NASA) in order to monitor the health of astronauts while in space. *Id.* at 301.

22. *See* Daniel McCarthy, Notes & Comment, *The Virtual Health Economy: Telemedicine and the Supply of Primary Care Physicians in Rural America*, 21 AM. J.L. & MED. 111, 115 (1995), WL 21 AMJLM 111 (providing examples of the earliest uses of telemedicine). Unfortunately, the equipment used to provide the interactive video was very expensive and so large that two flatbed trucks were required to move it. *Id.* Because of the expense involved, the equipment was not updated or replaced; ultimately, the program, and others like it, did not last. *Id.*

23. *See* Patricia C. Kuszler, *Telemedicine and Integrated Health Care Delivery: Compounding Malpractice Liability*, 25 AM. J.L. & MED. 297, 299-301 (1999) (commenting on

Although these initial programs proved relatively successful, telemedicine's true emergence coincided with the information and technology boom of the mid-1990s.[24] The first of these programs were almost exclusively devoted to the use of interactive video, usually connecting a rural resident with an urban medical specialist.[25] The patient and physician would be able to see and speak with each other from distant locations.[26] As technology improved, telemedicine use was incorporated across an increasing number of platforms.[27]

Presently, the use of high resolution video, electronic patient records,[28] and "store and forward" technology are some of the more common uses of telemedicine.[29] High resolution video allows doctors to perform de-

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an early telemedicine program developed between NASA, the Indian Health Service, and the Papago Indian Tribe). This program was accomplished by bringing a "mobile health unit," which was linked to a distant public health hospital, onto the reservation. *Id.* Although the health care professionals reported many equipment difficulties, an evaluation of the program found the quality of care to be comparable to care delivered in person. *Id.*

24. *See* Jeffrey C. Bauer, *Rural America and the Digital Transformation of Health Care*, 23 J. LEGAL MED. 73, 76 (2002), WL 23 JLEGMED 73 (attributing the resurgence in telemedicine programs to the technological innovations of the mid 1990s).

25. *See id.* (recognizing that many telemedicine programs were used almost exclusively to connect a rural patient and an urban physician in real time). As technology has become less expensive and more accessible, telemedicine programs have become more sophisticated. *Id.* As a result, telemedicine is now seen throughout the health care delivery system, including rural-to-rural and urban-to-urban communication. *Id.*

26. *Id.*

27. *See* Jeffrey C. Bauer, *Rural America and the Digital Transformation of Health Care*, 23 J. LEGAL MED. 73, 76 (2002), WL 23 JLEGMED 73.

28. The electronic patient record is defined by the Computer-based Patient Record Institute as "electronically maintained information about an individual's lifetime health status and health care." CPRI-HOST, *Action Plan for Addressing Confidentiality and Security Issues in Implementing Computer-based Patient Record Systems*, *at* http://www.cprihost.org/resource/summit/cps.html (last visited Mar. 4, 2003). This electronic record has replaced the paper medical chart in most health care facilities and will eventually include scanned-in radiological images and video recordings. *Id.*

29. An example of a "store and forward" consult occurs in dermatology when a referring health care provider sends pictures of a lesion to a dermatologist for a diagnostic and/or therapeutic recommendation. *See* Dena S. Puskin, *Telemedicine: Follow the Money*, 6 ONLINE J. OF ISSUES IN NURSING 3, ¶ 10 (Sept. 30, 2001), *at* http://www.nursingworld.org/ojin/topic16/tpc16_1.htm (providing an illustration of how "store and forward" technology works); Derek Meek, Comment, *Telemedicine: How an Apple (or Another Computer) May Bring Your Doctor Closer*, 29 CUMB. L. REV. 173, 175 (1999) (categorizing telemedicine usage into three distinct categories of differing complexity); *see also* Daniel McCarthy, Notes & Comment, *The Virtual Health Economy: Telemedicine and the Supply of Primary Care Physicians in Rural America*, 21 AM. J.L. & MED. 111, 113-14 (1995), WL 21 AMJLM 111 (analyzing some of the present rural applications of telemedicine). The least complex systems are only capable of sending still images one-way, from local physician to consulting physician. *Id.* at 113. Any follow-up communication is done via telephone. *Id.* The next level of sophistication is seen in programs that transmit one-way, real-time audio and

tailed physical examinations on patients at greater distances than were possible with standard resolution interactive video technology.[30] Store and forward technology allows patients and health care providers to transmit information such as radiology images, pathological slides, and vital signs from their home or clinic to a distant hospital or laboratory.[31] This information is sent via computer and can be analyzed instantly, at a later time, or be immediately uploaded into the patient's electronic medical record for remote viewing by the prescribing physician.[32]

The future of telemedicine can be seen in telepresence surgery programs.[33] This combination of telemedicine and robotic technology enables surgeons to operate on patients located hundreds or thousands of miles away.[34] After a surgical technician creates small openings to insert remote control surgical probes, the distant surgeon works from images on a high-resolution monitor; it is "somewhat like a teenager playing a computer game with state-of-the-art graphics."[35]

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video, which are used mostly as educational tools, similar to taking a college telecourse. *Id.* at 114. The most sophisticated telemedicine programs transfer high quality, two-way audio and video and are often capable of transmitting signals from electronic diagnostic equipment. *Id.* These programs often include zoom cameras and can simultaneously transfer laboratory and radiology data. Daniel McCarthy, Notes & Comment, *The Virtual Health Economy: Telemedicine and the Supply of Primary Care Physicians in Rural America*, 21 AM. J.L. & MED. 111, 114 (1995), WL 21 AMJLM 111.

30. *See id.* at 114-15 (explaining that effective real-time physical examinations via telemedicine require two-way audio and video since a complete physical examination requires the physician to interpret symptoms through sight, hearing, and touch). This high-resolution technology gives the consulting physician "as clear a view of the patient as the examining physician" and prevents subtle symptoms from being lost during the transmission. *Id.* at 114.

31. *Id.* This two-way audio and video can transmit the electronic signals of electronic diagnostic equipment such as "electronic stethoscopes, otoscopes, endoscopes, microscopes, eclectro and echo-cardiograms and sonograms among others." *Id.*

32. *See* Chari J. Young, Note, *Telemedicine: Patient Privacy Rights of Electronic Medical Records*, 66 UMKC L. REV. 921, 924 (1998) (recognizing that the electronic medical record "gives greater access to health information stored in different locations and can [instantaneously] link providers"). The electronic medical record is a collection of the patient's health information that includes health and medication history, laboratory test results, allergies, immunization record, and physician and nursing notes. *Id.* Keeping this information in electronic form allows it to be quickly accessed by different members of the health care team who can simultaneously view the information from different locations. *Id.*

33. *See* Jeffrey C. Bauer, *Rural America and the Digital Transformation of Health Care*, 23 J. LEGAL MED. 73, 78 (2002), WL 23 JLEGMED 73 (discussing the emerging area of telepresence surgery).

34. *Id.*

35. *Id.*

With its increase in platforms, telemedicine has also moved to an increasing number of settings, particularly the underserved and difficult-to-manage populations.[36] For example, although the benefits of telemedicine may still be most obvious in the rural setting, this technology is also proving valuable within the chronically ill urban population.[37] This growth in urban usage has resulted in increased private sector investment in telemedicine technology which proponents feel will benefit all patients.[38]

III. TELEMEDICINE IN TEXAS

A. *Telemedicine's Actual and Potential Benefits to Texas*

1. Telemedicine in Rural Areas

Due to a variety of factors, rural areas have traditionally been underserved by the United States health care system.[39] As of 1998, over forty-seven million Americans were living in designated Health Professional

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36. *See* Patricia C. Kuszler, *Telemedicine and Integrated Health Care Delivery: Compounding Malpractice Liability*, 25 AM. J.L. & MED. 297, 302-03 (1999) (recognizing the growth of telemedicine in an increasing number of pediatric hospital, prison, and home health care settings).

37. *See id.* at 303-04 (reporting that home health agencies, once heavily dependant on nurses physically visiting their patients, have begun to use telemedicine technology to "televisit" these patients).

38. *See* Kristie Zamrazil, *Telemedicine in Texas: Public Policy Concerns*, FOCUS REP. (Tex. House of Representatives, House Research Org., Austin, Tex.), May 5, 2000, at 1, 3, http://www.capitol.state.tx.us/hrofr/focus/telemed.pdf (recognizing LifeMasters and Healtheon/WebMD among the growing number of companies investing in health care telecommunications equipment and software); *see also* Jeffrey C. Bauer, *Rural America and the Digital Transformation of Health Care*, 23 J. LEGAL MED. 73, 76-77 (2002), WL 23 JLEGMED 73 (discussing the increase in private investment in telemedicine). Because rural markets were too small to support the large costs associated with the first telemedicine projects, they had to be subsidized by the government or foundations. *Id.* However, supporters believe that as the market for telemedicine grows, so will investment from private, outside sources. *Id.*

39. *See generally* Daniel McCarthy, Notes & Comment, *The Virtual Health Economy: Telemedicine and the Supply of Primary Care Physicians in Rural America*, 21 AM. J.L. & MED. 111, 116-21 (1995), WL 21 AMJLM 111 (discussing the problems contributing to the lack of health care services in rural settings). Many of these problems are related to the rural area's inability to attract and retain physicians. *Id.* at 120. This inability is usually a result of lower income levels and diminished professional status and prestige among rural practitioners. *Id.* Additionally, although physicians who come from rural areas are more likely to practice in rural areas, these students are severely underrepresented in medical schools across the country. *Id.*; *see also* W. Eugene Basanta, *Rural Health Care Now and Tomorrow*, 23 J. LEGAL MED. 37, 37 (2002), WL 23 JLEGMED 37 (attributing much of the rural health care problems to the financial fragility of rural hospitals, the decreased availability of physicians and other health care providers in rural communities, decreased access to expensive medical technologies, and a high number of uninsured rural Americans).

Shortage Areas (HPSA).[40] These areas are defined a variety of ways, but generally include areas with a ratio of 3,500 or more people to one full time equivalent primary care physician.[41] HPSAs are most prevalant in rural areas—62% of all rural counties in the United States qualify as HPSAs.[42]

Predictably, some of those counties are in Texas. According to the Texas Office of Rural Health, 196 of Texas's 254 counties are considered rural.[43] In fact, Texas counties make up approximately 14% of the rural HPSAs in the United States.[44] Additionally, 33% of Texas's rural HPSA counties contain less than three primary care physicians.[45] The problem exists across the entire state, with a vast majority of counties classified as either "medically underserved" or HPSAs.[46] According to the Texas De-

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40. Katherine Huang, Note, *Graduate Medical Education: The Federal Government's Opportunity to Shape the Nation's Physician Workforce*, 16 YALE J. ON REG. 175, 180 (1999).

41. *Id.*; *see also* 42 U.S.C. § 254e (2000) (providing the definition of "Health Professional Shortage Area").

42. Katherine Huang, Note, *Graduate Medical Education: The Federal Government's Opportunity to Shape the Nation's Physician Workforce*, 16 YALE J. ON REG. 175, 180 (1999).

43. *See* OFFICE OF RURAL CMTY. AFFAIRS, *Rural Health Demographics*, *at* http://www.orca.state.tx.us/maps/index.htm (last reviewed July 30, 2002) (providing a map of Texas with each county designated as either rural or urban). Out of the 254 Texas counties, the following are not considered rural: Archer, Bastrop, Bexar, Bell, Bowie, Brazoria, Brazos, Caldwell, Cameron, Chambers, Collin, Comal, Dallas, Denton, Ector, Ellis, El Paso, Fort Bend, Galveston, Grayson, Gregg, Guadalupe, Hardin, Harris, Harrison, Hays, Henderson, Hidalgo, Hood, Hunt, Jefferson, Johnson, Kaufman, Liberty, Lubbock, Mc Lennan, Midland, Montgomery, Nueces, Orange, Parker, Potter, Randall, Rockwall, San Patricio, Smith, Tarrant, Taylor, Tom Green, Travis, Upshun, Victoria, Wales, Webb, Wichita, Williamson, and Wilson. *Id.*

44. *See* Kristen R. Jakobsen, Note, *Space-Age Medicine, Stone-Age Government: How Medicare Reimbursement of Telemedicine Services is Depriving the Elderly of Quality Medical Treatment*, 8 ELDER L.J. 151, 164 (2000), WL 8 ELDLJ 151 (recognizing that there are 745 rural HPSAs in the United States); *cf.* M. Ray Perryman, Editorial, *Rural Texas Health Needs Shot in Arm*, SAN ANTONIO BUS. J., Aug. 18, 2000, http://sanantonio.bizjournals.com/sanantonio/stories/2000/08/21/editorial3.html (reporting that 54% of Texas's 196 rural counties were classified as HPSAs in 2000). Fifty-four percent of 196 is 106, which is approximately 14% of 745; thus, Texas rural HPSAs account for approximately 14% of the rural HPSAs in the United States.

45. *See* OFFICE OF RURAL CMTY. AFFAIRS, *Rural Health Demographics*, *at* http://www.orca.state.tx.us/maps/index.htm (last reviewed July 30, 2002) (finding that twenty-four Texas counties have no physician, nineteen Texas counties have one physician, and twenty-two Texas counties have two physicians).

46. *See* HEALTH PROFESSIONS RES. CTR., TEX. DEP'T OF HEALTH, *Primary Care HPSA Designations*, *at* http://www.tdh.state.tx.us/dpa/01phy-wc.htm (last visited Mar. 4, 2003) (listing 179 health professional shortage areas in Texas counties). Of the 179 counties, 131 received whole county "Health Professional Shortage Area" designation. *Id.* The

partment of Health, an estimated 6.2 million Texans, including a disproportionately large elderly population, reside within these medically underserved areas.[47]

Concerned with the growing disparity of health care access and quality between rural and urban patients, the federal government offered subsidies to states to establish or upgrade telemedicine programs among their rural populations.[48] In 1989, based on an Office of Rural Health Policy telemedicine grant, Texas was able to establish one of the first telemedicine outreach programs in the country.[49] HealthNet, the rural outreach program of Texas Tech University's Health Science Center in Lubbock, presently provides over fourteen medical specialty areas in support of rural and prison doctors.[50] With the use of two-way video, HealthNet has conducted more than 3,500 individual clinical telemedicine consultations since 1996 and, in 1998, initiated an interactive consultation video link to a rural West Texas school clinic in a county that did not have a single physician.[51] In addition to providing quality patient care to 108 Texas counties, HealthNet has also been one of the only telemedicine programs to successfully offer interactive telemedicine services across

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remaining forty-eight were recognized as partial county Health Professional Shortage Areas. *Id.*

47. *See* Kristie Zamrazil, *Telemedicine in Texas: Public Policy Concerns*, FOCUS REP. (Tex. House of Representatives, House Research Org., Austin, Tex.), May 5, 2000, at 1, 6, 10, http://www.capitol.state.tx.us/hrofr/focus/telemed.pdf (recognizing that Texas has an abundance of physicians and specialists, but they are concentrated in urban and suburban areas; therefore, most rural areas are medically underserved).

48. *See* Jonathan Gardner, *Medicare to Pay Docs Who Use Telemedicine*, MODERN HEALTHCARE, Sept. 8, 1997, at 24, 1997 WL 8802680 (discussing the various sectors of the federal government that are promoting the use of telemedicine). One sector is the Federal Communications Commission, which has authorized up to $400 million per year to subsidize upgrades to telemedicine technology used by rural hospitals. *Id.* The United States Department of Agriculture administers the Distance Learning and Telemedicine Program, which gives loans to help rural communities build the infrastructure needed for their telemedicine programs. 7 U.S.C. § 950aaa (1994 & Supp. V 2000).

49. *See* Deborah R. Dakins & Kathy Kincade, *The Best in the U.S.: Programs of Excellence 1997*, TELEMEDICINE & TELEHEALTH NETWORKS, Dec. 1, 1997, 1997 WL 15536265 (including Texas's HealthNet among its list of the United States' top 10 telemedicine programs). The HealthNet program has made the transition from government subsidy to self sufficiency and is expanding to provide medical care and education to prisons, rural clinics, schools, and hospitals across Texas and into New Mexico. *Id.*

50. *See id.* (emphasizing that a substantial percentage of HealthNet consultations come from rural and prison areas).

51. *See* TEX. TECH UNIV. HEALTH SCIS. CTR., *HealthNet Overview & History*, *at* www.healthnet.ttuhsc.edu/healthnet/overview.asp (last visited Jan. 25, 2003) (illustrating the emergence of HealthNet technology within school clinics). HealthNet officials recognize that "providing specialty care to rural school children i[s] yet another pioneering application of the technology." *Id.*

state lines.[52] By providing quality patient care and devoting significant resources to ensuring institutional and legislative support for rural health providers, HealthNet has established itself as "one of the oldest and most successful networks in the world."[53]

Texas, however, is not alone in its use of telemedical programs to improve health care delivery to rural areas. In Alamosa, Colorado (population 8,775), telemedicine has allowed children to receive medical care from the Shriner's Hospital in Salt Lake City, Utah.[54] Shriner's Hospital is part of a national system of twenty-two hospitals that specialize in complex pediatric surgeries.[55] With the use of basic videoconferencing technology, the surgeons are able to provide essential follow-up examinations from a location close to the patient's home.[56] The rural hospital's director of rehabilitative therapy conducts the "hands on" part of the exam, while the orthopedic surgeon in Salt Lake City interprets and informs patients on their progress and continued course of treatment.[57] A similar program developed by the University of North Carolina allows instantaneous cardiologic consultations of neonates in area hospitals.[58] With recently initiated programs, including one sponsored by the Public Utility Commission of Texas that promises to bring broadband internet access to rural and other small communities, Texans may soon see a greater number of rural specialty programs.[59]

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52. *See id.* (reporting that since 1998 HealthNet has provided interactive video telemedicine to a rural hospital in New Mexico).

53. *Id.*; *see also* Deborah R. Dakins & Kathy Kincade, *The Best in the U.S.: Programs of Excellence 1997*, TELEMEDICINE & TELEHEALTH NETWORKS, Dec. 1, 1997, 1997 WL 15536265 (stressing the importance of HealthNet's participation in legislative matters relating to rural health care and telemedicine). HealthNet officials have participated in the passage of federal Medicare reimbursement provisions for telemedicine services, including the Texas Telecommunications Act and three other bills passed by the Texas legislature calling for third-party Medicaid reimbursement for telemedical consults. *Id.*

54. Mark H. Hunter, *Telemedicine Clinics Keep Children, Doctors in Touch*, DENV. POST, Aug. 23, 2002, at A17, 2002 WL 6574157 (illustrating the uses of telemedicine in providing postsurgical care to pediatric patients living in remote areas of Colorado).

55. *Id.*

56. *Id.*

57. *Id.*

58. *See* Deborah R. Dakins & Kathy Kincade, *The Best in the U.S.: Programs of Excellence 1997*, TELEMEDICINE & TELEHEALTH NETWORKS, Dec. 1, 1997, 1997 WL 15536265 (discussing the benefits of instant review in eliminating the usual delays associated with sending the echocardiograms to UNC for review).

59. *See* Amy Glynn Hornick, *Cisco Teams with Leaders to Spotlight Broadband Accessibility in Rural Texas*, NEWS@CISCO, June 11, 2002, http://newsroom.cisco.com/dlls/ts_061102.html (reporting that the "Lonestar Broadband Project" will provide broadband internet access and education on its usage to most of Texas's rural areas); *see also* TEX. GOV'T CODE ANN. §§ 531.0217-536.02172 (Vernon Supp. 2003) (establishing pilot telemedicine program near the Texas-Mexico border); Kristie Zamrazil, *Telemedicine in*

2. Telemedicine and the Chronically Ill

In addition to rural patients, the chronically ill population has also experienced the benefits of telemedicine. Chronic diseases are those "of slow progression,"[60] which typically require periodic visits to a physician or hospital as the disease intensifies.[61] According to recent data, approximately two-thirds of all Americans over sixty-five are living with at least one chronic disease, usually congestive heart failure, chronic obstructive pulmonary disease, or diabetes.[62] A recent study further indicated that the number of these Americans with resulting activity limitations made up only 17% of the total United States population; however, they accounted for 47% of all medical expenditures.[63] The percentage of medical expenditures for those persons living with *multiple* chronic diseases was even higher.[64] For hospitals, these patients are especially costly be-

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Texas: Public Policy Concerns, FOCUS REP. (Tex. House of Representatives, House Research Org., Austin, Tex.), May 5, 2000, at 1, 2, http://www.capitol.state.tx.us/hrofr/focus/telemed.pdf (noting the success of a Texas rural telemedicine program linking rural health care providers from Cuero, Nixon, and Kennedy clinics with doctors in DeTar Hospital in Victoria).

60. TABER'S CYCLOPEDIC MEDICAL DICTIONARY 383 (18th ed. 1997).

61. *See* SHARON M. LEWIS ET AL., MEDICAL-SURGICAL NURSING: ASSESSMENT AND MANAGEMENT OF CLINICAL PROBLEMS 43 (1996) (discussing the problems encountered by patients living with chronic diseases). Many times, these diseases create multiple health problems and take a very unpredictable course. *Id.* Although the most serious phases are usually managed in a hospital, much care is received at home. *Id.* While at home, patients are often required to maintain prescribed drug, medication, and exercise regimens. *Id.* Even though many of these patients receive traditional home health care, telemedicine offers a more cost-effective and efficient way for patients with specially-equipped input devices to stay in close contact with their health care providers. *See* Amy Jurevic Sokol & Christopher J. Molzen, *The Changing Standard of Care in Medicine: E-Health, Medical Errors, and Technology Add New Obstacles*, 23 J. LEGAL MED. 449, 456 (2002), WL 23 JLEGMED 449 (discussing the benefits of home telemedicine within the chronically-ill population). Using this technology, patients are encouraged to monitor their health information and are able to provide accurate, up-to-date data to their health care providers. *Id.*

62. *See* Audrey Kinsella, *Home Telehealthcare: An Idea Whose Time Has Come-But with Safety Concerns*, MED. MALPRACTICE L. & STRATEGY, May 2002, at 5, ¶ 4, WL 19 No. 7 MEDMALLST 5 (providing data on the numbers of Americans living with chronic diseases).

63. *See* Catherine Hoffman et al., *Persons with Chronic Conditions*, 276 JAMA 1473, 1473-74 (1996) (discussing the disproportionate health care costs spent on people with chronic diseases).

64. *See id.* at 1474 (reporting that 10% of beneficiaries within the Medicare program account for 70% of the medical expenditures); *see also* BARRY S. FURROW ET AL., HEALTH LAW: CASES, MATERIALS AND PROBLEMS 684 (4th ed. 2001) (stating that in addition to the 70% of program payments going to 10% of beneficiaries, 22% have no program expenditures made on their behalf, and another 30% account for only 2% of total program spending); James T. Mulder, *Keeping Tabs on Patients; Monitor Lets Nurses Track Vital Signs Using the Telephone; Machine Monitors Vital Signs from Home*, THE POST-STANDARD

cause Medicare and most private insurers do not reimburse the costs for these patients if their hospital stays occur too frequently.[65] Using interactive technologies, health care providers are now able to provide health care services to these patients within their homes.[66] This new form of health care delivery, often referred to as "home telemedicine" or "telehomecare," allows data to be sent from a patient's home to designated receiving stations, where it can be interpreted by a physician or registered nurse.[67] Using telemedicine to monitor vital signs, verify medication compliance, and reinforce patient education has reduced the number of costly emergency room and hospital visits.[68]

In California, telemedicine allows diabetics to receive care from specialized endocrine satellite treatment centers that link to the UC Davis

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(Syracuse, N.Y.), July 23, 2002, at B6 (asserting that congestive heart failure is the leading national cause of hospital readmission and each related hospitalization requiring emergency care costs an average of $5,000).

65. *See* James T. Mulder, *Keeping Tabs on Patients; Monitor Lets Nurses Track Vital Signs Using the Telephone; Machine Monitors Vital Signs from Home*, THE POST-STANDARD (Syracuse, N.Y.), July 23, 2002, at B6 (emphasizing that for congestive heart failure, Medicare and most private insurances will not reimburse hospitals for services delivered if the patient has been hospitalized for the same problem within thirty days).

66. *See* Kip Poe, *Telemedicine Liability: Texas and Other States Delve into the Uncertainties of Health Care Delivery via Advanced Communications Technology*, 20 REV. LITIG. 681, 685 (2001) (discussing telemedicine as a useful tool for home health care); Audrey Kinsella, *Home Telehealthcare: An Idea Whose Time Has Come-But with Safety Concerns*, MED. MALPRACTICE L. & STRATEGY, May 2002, at 5, ¶ 3, WL 19 No. 7 MEDMALLST 5 (recognizing the emerging use of telemedicine within the home).

67. *See* Audrey Kinsella, *Home Telehealthcare: An Idea Whose Time Has Come-But with Safety Concerns*, MED. MALPRACTICE L. & STRATEGY, May 2002, at 5, ¶¶ 1-2, 24, WL 19 No. 7 MEDMALLST 5 (detailing the benefits and emerging safety concerns within the home telemedicine area). Before they can be used, home-health telemedicine devices must be rigorously tested and must obtain the same 510k device approval from the FDA as the medical equipment used in hospitals. *Id.* ¶ 1. As a result, most safety concerns involve potential patient misuse of the otherwise properly functioning equipment. *Id.* ¶ 2. These concerns may be minimized through the implementation of various precautions: assessing the technological capabilities of the patient, "matching the patient need and ability with the tele-tool," and providing 24/7 backup support with a personal emergency response system device. *Id.* ¶ 24.

68. *See* Kip Poe, *Telemedicine Liability: Texas and Other States Delve into the Uncertainties of Health Care Delivery via Advanced Communications Technology*, 20 REV. LITIG. 681, 686 (2001) (providing examples of home telemedicine use); *see also* James T. Mulder, *Keeping Tabs on Patients; Monitor Lets Nurses Track Vital Signs Using the Telephone; Machine Monitors Vital Signs from Home*, THE POST-STANDARD (Syracuse, N.Y.), July 23, 2002, at B6 (reporting that after implementation of home-telehealth programs, congestive-heart-failure-related admission to St. Joseph Hospital was cut by nearly 50%).

Medical Center.[69] Using video conference technology, high speed internet connections, and coordination between the health care professionals at each location, for example, patients are able to upload digital photos of their retinas to a hospital ophthalmologist who can quickly determine whether diabetes is affecting the health of the patients' eyes.[70] This technology should soon be available within the home because patients are already using technology to transmit blood glucose readings and vital signs.[71] Encouragingly, health care providers report that these telehomecare programs have resulted in greater patient compliance with their home care routines and significantly decreased medical costs.[72]

Telemedicine's benefit to Texas's chronically ill population has been recognized by Governor Rick Perry. He noted during his State of the State address in January 2001 that "technology like telemedicine could be instrumental in successfully combating health conditions, like diabetes and heart disease."[73] According to the Texas Department of Health, diabetes, either diagnosed or undiagnosed, affects 9.8% of Texas's adult population and is the State's sixth leading cause of death.[74] Among the Texas elderly (sixty-five and above), the prevalence of diagnosed diabetes has

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69. Ucilia Wang, *TV Link to Doctors; Round Valley Clinic Uses Video to Bring Specialists to Remote Patients*, THE PRESS DEMOCRAT (Santa Rosa, Cal.), Sept. 7, 2002, at B1, 2002 WL 24684738.

70. *Id.*; *see also* Associated Press, *Telemedicine Allows Long-Distance Care*, Sept. 3, 2002, WL, APWIRES Database (reporting the use of eye scans by rural diabetics in South Carolina).

71. *See* Audrey Kinsella, *Home Telehealthcare: An Idea Whose Time Has Come-But with Safety Concerns*, MED. MALPRACTICE L. & STRATEGY, May 2002, at 5, ¶ 5, WL 19 No. 7 MEDMALLST 5 (documenting home uses of telemedicine among diabetics).

72. *See id.* (discussing the valuable time saved "televisiting" rather than traveling to and from conventional visits, as well as the thousands of dollars saved by decreasing the number of in-hospital and emergency room expenses); Chari J. Young, Note, *Telemedicine: Patient Privacy Rights of Electronic Medical Records*, 66 UMKC L. REV. 921, 925 (1998) (declaring that although the equipment is expensive to purchase and set up, once in place, telemedicine is actually much more cost effective than traditional systems).

73. Press Release, Office of the Governor, Gov. Perry Signs HB 2700 To Establish Pilot Telemedicine Programs, Strengthen Health Care Services Along Texas Border (June 12, 2001) (on file with the *St. Mary's Law Journal*) (emphasizing that telemedicine will not replace local health care providers, but will provide them with additional resources and tools).

74. *See* TEX. DEP'T OF HEALTH, *Diabetes Fact Sheet 2001*, *at* http://www.tdh.state.tx.us/diabetes/data/facts.pdf (last visited Mar. 4, 2003) (reporting that 6.2% of the Texas adult population has been diagnosed with diabetes, while another 3.6% has diabetes, but has not been diagnosed). Based on Texas death certificates, diabetes was the sixth leading cause of death among Texas adults; however, diabetes is believed to be underreported as the primary cause of death on many death certificates because it affects so many other body systems. *Id.*

almost doubled.[75] Recognizing the costs associated with diabetes complications, Texas recently enacted an initiative to provide diabetics with free annual funduscopic eye examinations.[76] Proponents feel that with prompt detection and treatment, vision, as well as a significant amount of resultant health care costs can be saved.[77] Providing these exams via telemedicine serves to further these goals. As with the rest of the country, congestive heart failure and chronic obstructive pulmonary disease are also significant contributors to Texas's mortality rates.[78] Patients afflicted with any of these conditions stand to benefit from increased telemedicine programs targeted at the chronically ill and homebound populations.

3. Telemedicine Within the Prison System

One area where Texas has established telemedicine use is within the prison system. Presently, Texas Tech's HealthNet program includes ten prison remote sites and plans to increase this number.[79] In addition, the University of Texas Medical Branch in Galveston has established a telemedicine program that provides medical care to an estimated 100,000 prison inmates.[80] Using a portable, fully integrated videoconferencing system called TeleDoc, physicians are able to provide medical assessments, consultations, and education to the inmates.[81] In the program's

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75. *See id.* (showing that the number of people over sixty-five who have been diagnosed with diabetes is 11.87% compared to 6.2% of the general Texas population).

76. *See* 25 TEX. ADMIN. CODE § 61.21 (2002) (Tex. Dep't of Health, Diabetic Eye Disease Detection Initiative) (recognizing the problems associated with diabetes and providing a solution).

77. *See* 25 TEX. ADMIN. CODE § 61.21(a) (2002) (Tex. Dep't of Health, Diabetic Eye Disease Detection Initiative) (recognizing that although diabetes is a major cause of blindness in Texas, it is estimated that as much as 50% of blindness due to diabetic retinopathy could be prevented or delayed by prompt detection and treatment).

78. *See* Texas Health Data: Deaths of Texas Residents, http://soupfin.tdh.state.tx.us/death10.htm (last visited Feb. 6, 2003) (on file with the *St. Mary's Law Journal*) (computing the percentage of Texans that died in 2000 from heart-related diseases at 28.7% as compared to all causes of death).

79. *See* Deborah R. Dakins & Kathy Kincade, *The Best in the U.S.: Programs of Excellence 1997*, TELEMEDICINE & TELEHEALTH NETWORKS, Dec. 1, 1997, 1997 WL 15536265 (noting the program's expected addition of several more remote prison sites).

80. *See id.* (recognizing the University of Texas Medical Branch in Galveston's prison telemedicine program as one of the ten best in the nation).

81. *See* ReLinda Longan, *Telemedicine in Prison*, Interactive Multimedia Collaborative Communications Alliance, ¶ 5, *at* http://www.imcca.org/appTelemedicineInPrison.asp (last visited Mar. 3, 2003) (reporting telemedicine use within the Texas prison system). Before the consultation, the specialist has access to much of the patient's data, such as electrocardiograms (EKGs), lab work, or radiology exams. *Id.* During the exam, the physician is able to see and talk directly to the patient, enabling him to make a complete and

eight years of existence, the Texas Department of Criminal Justice has saved a substantial amount of time, money, and inconvenience.[82] Due to the positive results, the Galveston Medical Branch's program continues to add more remote sites to the network, including its first federal prison site.[83] Presently, the program provides health care services in twenty-two general and specialty areas.[84] Largely based on these two programs, Texas has established itself as a leader in delivering telemedicine to its prison population.

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accurate diagnosis. *Id.* When the examination is over, the physician sends a hard copy of his findings, which are immediately attached to the patient's chart. *Id.*

82. *See* Kristie Zamrazil, *Telemedicine in Texas: Public Policy Concerns*, FOCUS REP. (Tex. House of Representatives, House Research Org., Austin, Tex.), May 5, 2000, at 1, 4, http://www.capitol.state.tx.us/hrofr/focus/telemed.pdf (stating that in 1999, telemedical consultations accounted for approximately 27% of all prison specialty consultations, while the $1.6 million expense constituted less than 1% of Texas Department of Criminal Justice's annual health-care budget); *see also* Deborah R. Dakins & Kathy Kincade, *The Best in the U.S.: Programs of Excellence 1997*, TELEMEDICINE & TELEHEALTH NETWORKS, Dec. 1, 1997, 1997 WL 15536265 (noting that the program has saved "the Texas Department of Criminal Justice thousands of dollars in transportation costs alone"); ReLinda Longan, *Telemedicine in Prison*, Interactive Multimedia Collaborative Communications Alliance, ¶ 14, *at* http://www.imcca.org/appTelemedicineInPrison.asp (last visited Mar. 4, 2003) (reporting some recent research findings on the cost effectiveness of prison telemedicine use). According to the Texas Tech study, telemedicine consultations averaged $104.75 per patient encounter, while conventional consultations averaged $139.57. *Id.* In addition to saving money, telemedicine has also saved significant amounts of time. Since "[m]any physicians would rather avoid a meeting between inmates and other patients in the office," the prisoners and guards often must wait hours before being seen. *Id.* Through the use of telemedicine, a three-to-four-hour ordeal is reduced to about fifteen minutes. *Id.* ¶ 26.

83. *See* Deborah R. Dakins & Kathy Kincade, *The Best in the U.S.: Programs of Excellence 1997*, TELEMEDICINE & TELEHEALTH NETWORKS, Dec. 1, 1997, 1997 WL 15536265 (stating that users of the program report increased satisfaction). The article also tracked the growth of remote prison sites from four to eighteen. *Id.*

84. *See id.* (providing a list of the medical specialties provided by the HealthNet prison telemedicine program); *see also* ReLinda Longan, *Telemedicine in Prison*, Intereactive Multimedia Collaborative Communications Alliance, ¶¶ 21-24, *at* http://www.imcca.org/appTelemedicineInPrison.asp (last visited Mar. 4, 2003) (documenting the results of a six month pilot telepsychiatry program where Lubbock psychiatrists provided specialty consultation to a clinical psychologist within the Fort Stockton prison). The project studied the quality of care patients received from accessing a psychiatrist, every other week, via an interactive video program. *Id.* ¶ 24. Of the sixty tele-evaluations, 84% of the patients did not require a transfer to a psychiatric hospital within thirty days of the consultation, and 89% of the patients were determined to have been brought to, and maintained at, a medically safe level. *Id.* ¶ 23.

B. *Texas's Approach to Telemedicine Legal Issues*

1. Licensure

In the Unites States, regulation of the practice of medicine is a state affair.[85] It is well established that the states retain a constitutional police power that allows for the passage of regulations to protect the health and safety of their citizens.[86] Requiring standards for individuals seeking to practice medicine falls squarely within this power.[87] Based on this precedent, all fifty states currently regulate the practice of medicine within their borders.[88]

Telemedicine allows for the practice of medicine across state lines. However, state law dictates that to practice medicine within a state, the physician *must* be licensed in that state.[89] Physicians who do not comply with these statutes risk civil and criminal penalties, disciplinary proceedings, Medicare debarment, and invalidation of malpractice insurance policies.[90] In Texas, for example, a first-time offender is subject to

85. *See* U.S. CONST. amend. X (stating that "the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people").

86. *See* La. State Bd. of Med. Exam'r v. Fife, 111 So. 58, 60 (La. 1926), *aff'd*, 274 U.S. 720 (1927) (recognizing that although a state cannot prohibit the practice of medicine, under its police power, it may regulate it for the protection of the public health). *But see* Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:12 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:12 (2001) (recognizing that federal preemption of state licensure regulations is possible due to the significant effect on interstate commerce). In a 1997 report to Congress, the National Telecommunications and Information Administration of the Department of Commerce submitted a model of how a federal licensure system might look. *Id.* Under the model, all health professionals would be issued one license by the federal government. *Id.* This licensure would be based on established federal standards and would preempt state licensure laws. *Id.* Although the system would be administered by federal agencies, states could be involved in the implementation. *Id.*

87. *Fife*, 111 So. at 60.

88. *See* Stacey Swatek Huie, *Facilitating Telemedicine: Reconciling National Access with State Licensing Laws*, 18 HASTINGS COMM. & ENT. L.J. 377, 395 (1996) (recognizing states as the medical licensing authority within the Untied States); Ross D. Silverman, *Regulating Medical Practice in the Cyber Age: Issues and Challenges for State Medical Boards*, 26 AM. J.L. & MED. 255, 256-58 (2000) (documenting the historical precedent allowing states to license medical providers within their borders).

89. *See* P. Greg Gulick, *The Development of a Global Hospital Is Closer Than We Think: An Examination of the International Implications of Telemedicine and the Developments, Uses and Problems Facing International Telemedicine Programs*, 11 IND. INT'L & COMP. L. REV. 183, 201 (2000), WL 11 INICLR 183 (providing various methods to ensure that physicians are licensed within each state that they practice).

90. *See* Kerry A. Kearney et al., *Medical Licensure: An Impediment to Interstate Medicine*, HEALTH L., 1997, at 14, 15, WL 9 No. 4 HTHLAW 14 (acknowledging the range of penalties for physicians who practice medicine in violation of state licensing statutes).

prosecution for a Class A misdemeanor regardless of whether it results in any harm to the patient.[91] When an unlicensed person causes any physical or psychological harm, or is a repeat offender, the charge is upgraded to a third-degree felony.[92] Due to the significance of the problem, many different licensure standards have been proposed.[93] Currently, there are at least seven standards, ranging from stringent to almost nonexistent, which are either being utilized or considered by state legislatures.[94]

Presently, most states maintain "full licensure" laws which require telemedicine practitioners to be fully licensed in the state where their patients are located.[95] Therefore, in a full licensure state, telemedicine providers must apply, fulfill the requirements, and receive a license to practice medicine in their patient's state before they can legally provide care to that patient.[96] Thirty-nine states currently regulate telemedicine

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91. TEX. OCC. CODE ANN. § 165.152 (Vernon Supp. 2003).

92. *Id.* § 165.152(c).

93. *See* Kerry A. Kearney et al., *Medical Licensure: An Impediment to Interstate Medicine*, HEALTH L., 1997, at 14, 14, WL 9 No. 4 HTHLAW 14 (providing a brief overview of proposed state and federal solutions to the telemedicine licensure dilemma); *see also* JOINT WORKING GROUP ON TELEMEDICINE, TELEMEDICINE REPORT TO CONGRESS (1997), http://www.ntia.doc.gov/reports/telemed/ (acknowledging, in the legal issues section of the report, the proposed telemedicine licensure requirements: limited (special purpose) licensure, registration, national licensure, consulting exceptions, endorsement, reciprocity, and mutual recognition).

94. *See* Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK §§ 3:3-3:11 (Alice G. Gosfield ed., 2001), WL HTHLHB TOC (2001) (summarizing the various licensure models: full, consultation exception, special purpose, registration, endorsement, reciprocity, and mutual recognition). As an alternative to these systems, California has opted for a "registration" system of telemedicine licensure. *Id.* § 3:7. Under this system, a health care professional who is licensed in another state can practice medicine on a part-time basis in California by simply notifying the California Medical Board of his intent to do so. *Id.* By registering, the health care professional agrees to operate under California's legal authority and jurisdiction. *Id.* Another potential approach to licensure is the "endorsement" system. *See* Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:8 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:8 (2001) (discussing "endorsement" licensure and telemedicine). Although it is not currently used by any state, this approach has been advocated by the American College of Radiology and the College of American Pathologists. *Id.* Under this system, state medical boards are able to grant licenses to health professionals in other states, but only if the other state has equivalent licensing standards. *Id.* If the licensing standards are different, obtaining an "endorsement license" becomes just as troublesome as obtaining full licensure. *Id.* As a result, the "endorsement" model is seen as a viable solution only where the telemedicine provider seeks to practice in a state which has the same initial licensure requirements as the state he is currently licensed in. *Id.*

95. *See* Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:4 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:4 (2001) (listing the requirements of "full licensure").

96. *See id.* (discussing the process for complying with a full licensure requirement).

through the use of a full licensure requirement.[97] Proponents of full licensure statutes, including the American Medical Association,[98] believe that full licensure offers the greatest protection to state residents since it requires telemedicine providers to go through the same screening process for quality and character as any other applicant.[99] Moreover, uniform requirements ensure that telemedicine physicians will be subject to the same disciplinary laws and penalties as physicians physically located within the state.[100]

On the other hand, telemedicine advocates feel that full licensure does little to maintain quality control and is beneficial only to physicians seeking to limit competition.[101] These advocates assert that full licensure is the greatest impediment to interstate growth, because the costly and

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97. *See id.* § 3:12 (listing each state's telemedicine licensing criteria). The states that do not require full licensure include: Alabama (special purpose), California (registration), Delaware (special purpose), Hawaii (consultation exception), Montana (telemedicine certificate), Oregon (special license), South Dakota (special purpose), Tennessee (special purpose), Texas (special purpose with consultation exception), and Washington (sponsor system). *Id.* In addition, Colorado allows for telemedicine providers associated with the Shriner's Hospital to obtain a special purpose license. *Id.*

98. AM. MED. ASS'N, *The Promotion of Quality Telemedicine*, http://www.ama-assn.org/pf_online/pf_online?f_n=browse&doc=policyfiles/HOD/H-480.969.HTM (last visited Mar. 1, 2003) (adopting a policy that states should require full and unrestricted licenses for physicians practicing telemedicine within their borders).

99. *See* JOINT WORKING GROUP ON TELEMEDICINE, TELEMEDICINE REPORT TO CONGRESS (1997), http://www.ntia.doc.gov/reports/telemed/ (providing, in Box 15, an example of a physician licensee requirement). Usually, when physicians apply for an initial license they must:

> [P]resent original or certified transcripts, diplomas, test scores, birth certificates and other personal data, and may have to submit to an interview.
> Each state has its own requirements for which documents must be presented, how many copies, the accompanying fees and the time line for processing. Complying with these various laws can be time-consuming and expensive.

Id.

100. *See* Alison M. Sulentic, *Crossing Borders: The Licensure of Interstate Telemedicine Practioners*, 25 J. LEGIS. 1, 23 (1999) (recognizing the potential benefits of a full licensure requirement). Proponents point out that of all the potential licensure solutions, full licensure "least disturbs the state's current quality standards and its disciplinary system." *Id.* Since all physicians practicing within the state, through telemedicine or otherwise, pay the same licensure costs and are subject to the same licensure codes, the result is an even playing field that is not seen in any of the other licensure systems. *Id.*

101. *See id.* at 6-7 (discussing a full licensure statute's gatekeeping abilities). Combining a broad definition of the practice of medicine with strict licensure requirements significantly limits the number of qualified physicians who can practice medicine within a particular state. *Id.* at 7. Critics argue that full licensure requirements, aimed at minimizing out-of-state competition, limit patients' access to a full range of providers. Alison M. Sulentic, *Crossing Borders: The Licensure of Interstate Telemedicine Practioners*, 25 J. LEGIS. 1, 23 (1999). As a result, the nature and quality of health care are decreased. *Id.*

lengthy licensure process often outweighs the benefits for physicians seeking to engage in telemedicine services on a limited basis.[102] Critics also claim that it requires doctors to engage in telemedicine, not where it is needed most, but where they are able to obtain licensure more easily.[103] In spite of these concerns, full licensure is still required by a majority of states, including states that have not addressed telemedicine through specific legislation.[104]

Taking a more progressive approach to the licensure issue, Texas is one of only seven states that offers a "special purpose license" for out-of-state physicians who practice telemedicine[105] and exempts the licensure requirement in certain limited circumstances.[106] Special purpose licensure allows out-of-state physicians to provide health care within their medical specialty to patients within Texas.[107] However, physically practicing medicine within the state under a "special purpose license" is expressly unauthorized.[108] Under Texas law, out-of-state physicians are eligible to

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102. *See id.* at 22 (expressing the shortcomings of full licensure for part-time telemedicine providers).

103. *See id.* (illustrating the inappropriate relationship between full licensure and telemedicine). Telemedicine proponents feel that the substantial costs and time involved in obtaining full licensure are serious disincentives to prospective telemedicine providers. *Id.* Additionally, since some states have less restrictive forms of licensure, telemedicine providers are more likely to concentrate their efforts in these states rather than in full licensure states where medical services may be needed the most. Alison M. Sulentic, *Crossing Borders: The Licensure of Interstate Telemedicine Practitioners*, 25 J. LEGIS. 1, 22 (1999).

104. *See* Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:12 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:12 (2001) (listing the thirty-nine states and the District of Columbia that require telemedicine providers to obtain full licensure). These states are: Alaska, Arizona, Arkansas, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Utah, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming. *Id.*

105. *See* 22 TEX. ADMIN. CODE § 174.3 (2002) (providing a special purpose license for physicians who pass a Texas Medical Jurisprudence exam and are: at least 21 years of age, actively licensed in another state without restriction, and certified in a medical specialty). Other states that offer a "special purpose license" to telemedicine providers practicing across state lines are Alabama, Delaware, Montana, Oregon, and Tennessee. ALA. CODE §§ 34-24-500 to 508 (2002); S.D. CODIFIED LAWS § 36-4-41 (Lexis Supp. 2002); TENN. COMP. R. & REGS. 0880-2.16 (2002); S.B. 241, 140th Leg., Gen. Assembly (Del. 2000); H.B. 399, Reg. Sess. (Mont. 1999); S.B. 600, 70th Leg., Reg. Sess. (Or. 1999).

106. 22 TEX. ADMIN. CODE § 174.13 (2002).

107. *Id.* § 174.4.

108. *Id.* (recognizing that a special purpose license is not an option for physicians who physically practice medicine within the state's borders). Physicians physically present within the state must obtain full licensure. *Id.*

obtain a "special purpose license" if they are older than twenty-one years of age, are board certified in a medical specialty, hold an active license to practice medicine in another state, and have had no restrictions, probations, or disciplinary actions taken against them.[109] If eligible, out-of-state physicians can obtain licensure by submitting a fee and passing a Texas Medical Jurisprudence Examination.[110] Upon receiving licensure, the physician is subject to the Texas Medical Board's jurisdiction, and his special purpose license is subject to revocation or limitation.[111]

Although some supporters question whether a special purpose license goes far enough in ensuring access to telemedicine,[112] this licensure statute does resolve many of the problems faced by telemedicine practitioners in full licensure jurisdictions.[113] The special purpose license reduces the fees and length of process required by traditional full licensure systems.[114] By including common telemedicine procedures within the "practice of medicine" definition, uncertainty about what activities do and do not require licensure is greatly reduced.[115] By allowing only board certi-

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109. 22 TEX. ADMIN. CODE § 174.3 (2002).

110. *Id.*

111. *Id.* § 174.6.

112. *See* Alison M. Sulentic, *Crossing Borders: The Licensure of Interstate Telemedicine Practioners*, 25 J. LEGIS. 1, 24-25 (1999) (discussing the shortcomings of special purpose licensure). Because the special purpose license is issued by one state, without the cooperation of the others, that state must determine which entry level standards to use. *Id.* If the state uses its own standards, a possibility exists wherein a practitioner from another state, with different entry level standards, may find the process just as difficult and time consuming as receiving a full license. *Id.*

113. *See id.* (discussing the advantages of a special purpose license for physicians practicing telemedicine). First, the special practice license statutes provide substantial guidance in determining which telemedicine procedures are included within the practice of medicine. *Id.* at 24. Secondly, special purpose license statutes clearly define the practitioner's scope of practice, thus eliminating many uncertainties. Alison M. Sulentic, *Crossing Borders: The Licensure of Interstate Telemedicine Practioners*, 25 J. LEGIS. 1, 24-25 (1999). Lastly, these statutes retain the states' power to set their own entry-to-practice standards and give them the power to limit these licenses' scope to a level that the individual state deems manageable. *Id.* at 25.

114. *See* 22 TEX. ADMIN. CODE § 174.3 (2002) (listing the requirements for a special purpose license).

115. *See* TEX. OCC. CODE ANN. § 151.056(a) (Vernon 2001 & Supp. 2003) (describing telemedicine procedures). According to the Texas Occupational Code, the "practice of medicine" includes:

> A person who is physically located in another jurisdiction but who, through the use of any medium, including an electronic medium, performs an act that is part of a patient care service initiated in this state, including the taking of an x-ray examination or the preparation of pathological material for examination, and that would affect the diagnosis or treatment of the patient, is considered to be engaged in the practice of medicine in this state and is subject to appropriate regulation by the [medical] board.

fied specialists to cross state lines, Texas is providing an additional safeguard to its citizens. Since specialization requirements are determined by the American Board of Medical Specialties, the Texas Medical Board is not responsible for ensuring that the proper specialization requirements are met.[116]

In addition, Texas's consultation exception, which allows for telemedicine providers to forgo licensure in limited physician-to-physician situations, further facilitates telemedicine's place in the practice of medicine.[117] For example, out-of-state specialists who provide only episodic consultations to a person licensed in this state are exempt from the licensure requirement in the following situations: if the two physicians are licensed in the same medical specialty; the consultation is affiliated with a Texas secondary or medical school; if the medical assistance via telemedicine is donated for any purpose, including emergency and disaster situations; or when the out-of-state physician is located in a state whose borders are contiguous with Texas and orders home health therapy to be conducted by a Texas licensed agency.[118]

Recognizing that physicians are not the only health care providers who participate in health care delivery via telemedicine, Texas has also joined the licensure compact for Registered and Vocational Nurses.[119] Developed by the National Council of State Boards of Nursing, this form of mutual license recognition allows registered nurses who hold a valid nursing license in one state to enjoy a "multi-state licensure privilege" to practice in any state that is part of the licensure compact.[120] In the fourteen states that have become part of the compact, nurses involved in telemedicine interaction across state lines are able to deliver their ser-

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Id.

116. *See* 22 TEX. ADMIN. CODE § 164.4 (2002) (Tex. State Bd. of Med. Exam'rs) (requiring that physician "specialists" be certified by an organization that is a member of the American Board of Medical Specialties, the Bureau of Osteopathic Specialists, or the American Board of Oral and Maxillofacial Surgery).

117. *See id.* § 174.13 (recognizing the consultation exemption to the special purpose license).

118. *See id.* (outlining the six allowable exemptions from the special purpose license requirement).

119. *See* TEX. OCC. CODE ANN. § 304.001 (Vernon 2001 & Supp. 2003) (recognizing that individual state licensure is both "cumbersome and redundant to both nurses and the states"). Under this statute, any Texas registered or vocational nurse who is duly licensed and in good standing has the ability to practice in any other compact state without restriction. *Id.*

120. *Id.*; *see also* NAT'L COUNCIL OF STATE BDS. OF NURSING, *Nurse Licensure Compacts*, http://www.ncsbn.org/public/nurselicensurecompact/mutual_recognition_nurse.html (last visited Jan. 26, 2003) (providing an example of bill language that has been enacted by various state legislatures).

vices with one license.[121] However, if a nurse is licensed or is practicing in a state that has not adopted the compact, he or she must comply with the full licensure requirements before rendering care.[122] By removing many of the barriers associated with traditional licensure structures, compact licensure offers greater flexibility for health care professionals while maintaining patient safety.[123]

2. Privacy and Confidentiality

Although not explicitly stated in the Constitution, the Supreme Court of the United States has recognized an implied constitutional right to privacy since 1965.[124] In attempting to define the parameters of privacy, the Supreme Court noted that an individual's ability to keep her health information private was encompassed within this right.[125] Accordingly, fed-

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121. *See* Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:11, at n.83 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:11 (2001) (listing Arkansas, Delaware, Iowa, Maine, Maryland, Mississippi, Nebraska, North Carolina, South Dakota, Texas, Utah, and Wisconsin as members of the nursing licensure compact). In 2002, Idaho and Arizona also became part of the Nurse Licensure Compact. *See* NAT'L COUNCIL OF STATE BDS. OF NURSING, *Nurse Licensure Compact, Compact Maps*, *at* www.ncsbn.org/public/nurselicensurecompact/mutual_recognition_state.htm (last visited Jan. 26, 2003) (recognizing that legislation is pending in North Dakota, Tennessee, Indiana, and New Jersey that would also include those states in the compact).

122. *See* Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:11 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:11 (2001) (providing an overview of the mutual recognition compact approach to licensure).

123. *See id.* (discussing the benefits of the nurse licensure compact "mutual recognition system"). One of the exclusive benefits of mutual recognition is the creation of a database. *Id.* Therefore, every state that enters the nurse licensure compact must share information about disciplinary occurrences within their state. Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:11 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:11 (2001). Through these efforts, quality of care and compliance with minimum professional standards are ensured. *Id.* These kinds of safeguards are especially important to protect consumers in a new industry, such as telemedicine. *Id.* Additionally, eliminating the regulatory barriers created by licensure laws encourages a more even distribution of nurses. *Id.*; *see also* Kevin Outterson, *Health Care, Technology and Federalism*, 103 W. VA. L. REV. 503, 532 (2001) (discussing how the nurse licensure compact can help ease the nursing shortage situation, particularly in states with a low nurse-to-patient ratio, such as Texas).

124. *See* Griswold v. Connecticut, 381 U.S. 479, 486 (1965) (holding that a state law prohibiting contraception violated a married couple's "zone of privacy"); *see also* Stanley v. Georgia, 394 U.S. 557, 564 (1969) (recognizing that a state's power to regulate obscenity does not extend to mere possession by an individual within his own home).

125. *See* United States v. Westinghouse Elec. Corp., 638 F.2d 570, 577 (3d Cir. 1980) (recognizing that "medical records, which may contain intimate facts of a personal nature, are well within the ambit of materials entitled to privacy protection"). After weighing several factors, the court held that "[i]nformation about one's body and state of health is matter which the individual is ordinarily entitled to retain within the 'private enclave

eral legislation was enacted to ensure this protection.[126] Unfortunately, telemedicine brings forth unique privacy problems,[127] and prior laws that sought to ensure medical privacy have become ineffective and outdated.[128] Within the telemedicine context, privacy concerns regarding readily accessible "electronic patient information, the conveyance of

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where he may lead a private life'"; as a result, an individual's medical and health information did not have to be disclosed. *Id.*

126. *See* U.S.C. § 552a(b) (2000) (mandating that federally funded hospitals adhere to specific privacy standards in the collection, use, and disclosure of personal medical information). According to the Privacy Act, the physician owns the information in the medical chart; however, only the patient can authorize its release. Leslie G. Berkowitz, *Is There a Doctor in the House? The Rise of Telemedicine*, COLO. LAW., June 1996, at 19, 19, WL 25-Jun COLAW 19. Unfortunately, this requirement is not applicable to the transfer of information to another physician when the patient is present. *Id.* Within the telemedicine context, it is often difficult to determine whether the interaction is an exchange of confidential information that requires patient authorization, or an on-site consultation which does not. *Id.* Additionally, since the Federal Privacy Act of 1974 applied to only governmental disclosures of medical data, up to 95% of all patient data, including that held by private hospitals, insurance companies, and physicians, remained unprotected. Christina M. Rackett, *Telemedicine Today and Tomorrow: Why "Virtual" Privacy is Not Enough*, 25 FORDHAM URB. L.J. 167, 184-85 (1997).

127. *See* Christina M. Rackett, *Telemedicine Today and Tomorrow: Why "Virtual" Privacy is Not Enough*, 25 FORDHAM URB. L.J. 167, 183-84 (1997) (recognizing that the prevalent use of "computer technology in telemedicine makes it easier than ever to access, duplicate, and even transmit private patient images and data for improper purposes"). The lack of a solid definition of what constitutes a physician-patient relationship within the telemedicine context is also problematic in maintaining confidentiality. *See* Chari J. Young, Note, *Telemedicine: Patient Privacy Rights of Electronic Medical Records*, 66 UMKC L. REV. 921, 926 (1998) (discussing the basis for the patient's right to confidentiality of their medical records and information). If no physician-patient relationship is established, then there is no legal duty to provide care and no legal duty to ensure the confidentiality of the patient's medical information. *Id.* Although the development of a physician-patient relationship between the patient and the diagnosing or treating physician is easily established, the relationship between the patient and the other health care professionals who offer only consultation or assistance may not be. *Id.* This uncertainty creates a dilemma for telemedicine practitioners who seek to both share information and maintain their patient's confidentiality. *Id.* Additionally, maintaining confidentiality among the various staff members needed to operate the telecommunications equipment presents an additional problem. *See generally* Susan E. Volkert, *Telemedicine: RX for the Future of Health Care*, 6 MICH. TELECOMM. & TECH. L. REV. 147, 214-16 (2000) (discussing the unique confidentiality problems that arise in the telemedicine context). Because they are not health care workers, the audio or video operators are not bound by the ethical obligations to maintain confidentiality; however, the patient is still protected by his or her legal right to privacy from unauthorized use of personal medical information. *Id.* at 214 n.241.

128. *See* Christina M. Rackett, *Telemedicine Today and Tomorrow: Why "Virtual" Privacy is Not Enough*, 25 FORDHAM URB. L.J. 167, 183-84 (1997) (stating that the current federal law was ineffective in dealing with telemedicine's privacy problems and expressing a need for new federal privacy legislation that specifically addressed privacy issues involved in telemedicine).

video images, the presence of additional persons, the possible loss of control over the route of medical information, the integrity of electronic record keeping, and the potential for unauthorized access and disclosure of records" do exist.[129] On the other hand, one of the main advantages of electronically stored information is the increased accessibility that it affords health care professionals.[130] To satisfy this conflict, several federal bills were introduced which promised to expand medical privacy and provide a better fit within the current state of health care technology;[131] however, none of these measures were passed.

By enacting The Health Insurance Portability and Accountability Act of 1996 (HIPAA), Congress put an end to this gridlock.[132] HIPAA required that the National Committee on Vital and Health Statistics recommend a uniform standard for electronically maintaining patient medical and health information that would allow health care organizations to communicate more efficiently with insurance companies and other health

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129. Susan E. Volkert, *Telemedicine: RX for the Future of Health Care*, 6 MICH. TELECOMM. & TECH. L. REV. 147, 215-16 (2000) (discussing the need to ensure privacy of electronically stored medical records before telemedicine can truly be regarded as a viable treatment alternative). According to a 1993 poll, 85% of people reported that ensuring medical record confidentiality was either "absolutely essential" or "very important." Christina M. Rackett, *Telemedicine Today and Tomorrow: Why "Virtual" Privacy is Not Enough*, 25 FORDHAM URB. L.J. 167, 175-76 (1997); *see also* Charity Scott, *Is too Much Privacy Bad for Your Health? An Introduction to the Law, Ethics, and HIPAA Rule on Medical Privacy*, 17 GA. ST. U. L. REV. 481, 486 (2000) (citing reports that people have been denied employment, lost jobs, or insurance coverage when information about their genetic risks were disclosed). For example, a banker was able to access computerized medical records to determine which of his customers had cancer, and in order to ensure payment, he called in their loans early. *Id. at* 487.

130. *See* Charity Scott, *Is too Much Privacy Bad for Your Health? An Introduction to the Law, Ethics, and HIPAA Rule on Medical Privacy*, 17 GA. ST. U. L. REV. 481, 486 (2000) (recognizing the ethical balancing between the benefits of privacy and the benefits of disclosure); *see also* Lawrence O. Gostin & James G. Hodge, Jr., *Personal Privacy and Common Goods: A Framework for Balancing Under the National Health Information Privacy Rule*, 86 MINN. L. REV. 1439, 1440 (2002) (discussing patient's and society's rights in regard to the dissemination of medical information).

131. *See, e.g.*, Fair Health Information Practice Act of 1997, H.R. 52, 105th Cong. (1997); Medical Privacy in the Age of New Technology Act of 1996, H.R. 3482, 104th Cong. (2d Sess. 1996); *see also* Medical Records Confidentiality Act of 1995, S. 1360, 104th Cong. (1995) (seeking to ensure added protection and confidentiality of patients' medical records by designating a health trustee who could receive medical information from a patient only for purposes directly related to the purpose for which the information was initially received).

132. Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, 110 Stat. 1936 (1996) (codified as amended in scattered sections of 18, 26, 29, 42 and 45 of U.S.C.).

care entities.[133] The HIPAA provisions also stated that if Congress did not pass additional legislation addressing medical privacy within a specified time, Health and Human Services would issue the necessary regulations.[134]

General privacy rules were codified in 2001.[135] Health care entities were given until April 14, 2003 to comply.[136] According to the regulations, all "individually identifiable information," including information in written, electronic, or spoken form between health care providers is protected.[137] This "protected information" cannot be disseminated without the patient's consent and, with certain exceptions,[138] can only be used for "treatment, payment, and healthcare operations."[139] Since virtually all

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133. *See* 42 U.S.C. § 242(k)(5)(B) (2000) (directing the National Committee on Vital and Health Statistics to adopt uniform standards for patient medical information and the electronic exchange of health information to ensure privacy and confidentiality).

134. *See* 42 U.S.C. § 1320d-2 (2000) (allowing the implementation of security standards that would prevent "unauthorized access" to health care information and mandating that future legislation be passed to further safeguard medical privacy).

135. *See* 45 C.F.R. § 164.502 (2002) (outlining the general rules for disclosure of protected health information). Although there are many exceptions, a health care entity may not give out a patient's personal health information unless it is necessary to complete treatment or payment arrangements. *Id.*

136. *See* 45 C.F.R. § 164.534 (2002) (requiring health care providers, health plans, and health clearinghouses to comply with the privacy requirements by April 14, 2003); *see also id.* § 164.534(b)(2) (noting that small health plans will have an additional year to comply).

137. 42 U.S.C. § 1320d(4) (2000). "Health information" is:

> [A]ny information, whether oral or recorded in any form or medium, that—
> (A) is created or received by a heath care provider, health plan, public health authority . . . ; and
> (B) relates to the past, present, or future physical or mental health or condition of an individual, the provision of health care to an individual, or the past, present, or future payment for the provision of health care to an individual.

Id.; *see also* Kevin B. Davis, *Privacy Rights in Personal Information: HIPAA and the Privacy Gap Between Fundamental Privacy Rights and Medical Information*, 19 J. MARSHALL J. COMPUTER & INFO. L. 535, 544-53 (2001) (providing analysis of HIPAA's privacy rule provisions).

138. *See* 45 C.F.R. § 164.512 (2002) (outlining the public policy based exceptions). This section allows disclosures by covered entities (1) as required by law; (2) to certain persons or entities involved in public health or FDA regulated activities (such as those investigating reported child abuse), persons who may have been exposed to certain communicable diseases, or to employers where required by workplace safety laws. 45 C.F.R. § 164.512(b)(1)(i)-(v) (2002). Although not required, disclosure of medical information to a governmental agency is permitted when the health care professional or other covered entity "reasonably believes" that the patient is a victim of abuse, neglect, or domestic violence. 45 C.F.R. § 164.512(c)(1) (2002).

139. *See* 45 C.F.R. § 164.508 (2002) (defining the allowable authorized uses of protected information). "Treatment" includes consultation with other physicians and access by other health care providers. *Id.* "Payment" allows billing clerks to obtain enough infor-

medical information within the telemedicine context is delivered in electronic form, the data obtained during a telemedicine examination or consultation arguably falls within the regulation's scope and should be protected. Since HIPAA imposes penalties on any entity not in compliance,[140] all health care providers are required to implement appropriate technological and procedural security measures to prevent and/or handle security breaches.[141] Although some within the health care industry have criticized the new regulations as being too costly or overbearing, many see it as a necessary step in an age of technologically advanced health care delivery.[142]

Texas recently enacted legislation that incorporates many of these privacy requirements.[143] Specifically, Texas laws seek to ensure medical pri-

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mation so that the appropriate codes can be assigned and reimbursement can be obtained. *Id.* "Health care operations" include utilization review and peer review procedures done by the hospitals. *Id.* The law also requires that a specific authorization be obtained before the information can be used for other purposes, such as research. *Id.*

140. *See* 42 U.S.C. § 1320d-5 (2000) (describing the penalties for not complying with the requirements and standards). For inadvertent violations, a fine of up to $100 can be assessed for each violation, with a maximum total of $25,000 per year; however, the Secretary of Health and Human services has the discretion to forgo imposition of the fine if there is reasonable cause and it is corrected quickly. *Id.* For those who "knowingly" obtain or disclose protected health information, a fine up to $50,000 and/or imprisonment for not more than one year may be imposed. 42 U.S.C. § 1320d-6(b) (2000). If the violation is done under "false pretenses" the fine can reach as much as $100,000 with a prison term of up to five years. *Id.* Violations done with the "intent to sell, transfer, or use individually identifiable health information for commercial advantage, personal gain, or malicious harm" carry the harshest penalty. *Id.* These violators can be fined up to $250,000 and imprisoned for up to ten years. *Id.*

141. *See* 42 U.S.C. 1320d-2(d) (2000) (outlining the mandatory health information security standards and safeguards).

142. *See generally* Mary Beth Johnston & Leighton Roper, *HIPAA Becomes Reality: Compliance with New Privacy, Security, and Electronic Transmission Standards*, 103 W. VA. L. REV. 541, 552-54, 570 (2001) (categorizing the HIPAA criticisms into four categories: high implementation costs, regulatory burdens, conflict with preexisting privacy laws, and other miscellaneous deficiencies); Charity Scott, *Is too Much Privacy Bad for Your Health? An Introduction to the Law, Ethics, and HIPAA Rule on Medical Privacy*, 17 GA. ST. U. L. REV. 481, 511-27 (2000) (discussing the benefits and criticisms of the privacy regulations). Most of the criticism centers around the high regulatory burdens, the confusing interaction between HIPAA and preexisting state and federal privacy laws, and the high costs of implementation. Mary Beth Johnston & Leighton Roper, *HIPAA Becomes Reality: Compliance with New Privacy, Security, and Electronic Transmission Standards*, 103 W. VA. L. REV. 541, 552-54 (2001). Data organizations and industry representatives estimate that it will cost approximately $3.8 billion for the first five years and up to $22.5 billion for the health care industry to come into full compliance with the new regulations. *Id.* at 545 & n.25.

143. *See* TEX. HEALTH & SAFETY CODE ANN. § 241.151(2) (Vernon Supp. 2003) (defining health care information broadly as "information recorded in any form or medium that identifies a patient and relates to the history, diagnosis, treatment, or prognosis of a

vacy by imposing stiffer penalties[144] and restricting the use of health-related information for "marketing purposes."[145] However, in an effort to not be overly restrictive, the privacy statutes offer exemptions to public health authorities,[146] such as the Red Cross,[147] and other nonprofit agencies.[148] In addition, Texas law specifically requires telemedicine practitioners to comply with these privacy statutes or risk revocation or limitation of their special purpose licenses.[149] Recognizing that some disclosure of information is necessary, telemedicine providers are allowed to communicate information related to treatment decisions with other health care providers or participants in a health care arrangement without violating the law.[150] Unfortunately, few other states have a

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patient"); *see also* TEX. INS. CODE ANN. art. 21.53F, § 5 (Vernon Supp. 2003) (requiring any telemedicine "health professional who provides or facilitates the use of telemedicine medical services or telehealth services" to "ensure that the confidentiality of the patient's medical information is maintained as required" by applicable law). *See generally In re* Columbia Valley Reg'l Med. Ctr., 41 S.W.3d 797, 799 (Tex. App.—Corpus Christi 2001, no pet.) (discussing the various medical record privacy safeguards available under Texas law).

144. *See* TEX. HEALTH & SAFETY CODE ANN. § 181.201 (Vernon Supp. 2003) (allowing for injunctive relief in addition to a fine of no more than $3,000 per violation or $250,000 for violations that have occurred with such "frequency as to constitute a pattern or practice"); *id.* § 181.202 (allowing for probation or suspension of the individual's or facility's license for privacy violations after an investigation and disciplinary proceeding); *id.* § 181.203 (excluding privacy violators from participation "in any state-funded health care program").

145. *See* TEX. HEALTH & SAFETY CODE ANN. § 181.152 (Vernon Supp. 2003) (outlining the procedure for properly obtaining consent from an individual, before his health information can be used, disclosed, or sold for marketing purposes).

146. *See id.* § 181.103 (describing the different types of public health authorities that may receive protected health information without express written authorization).

147. *See id.* § 181.056 (stating that the Red Cross may access information necessary to carry out certain duties in the event of a disaster).

148. *See* TEX. HEALTH & SAFETY CODE ANN. § 181.053 (Vernon Supp. 2003) (exempting "nonprofit agenc[ies] that pay[ ] for [the] health . . . services or prescription drugs for an indigent person," as long as, "the agency's primary business is not the provision of health care or reimbursement for health care services"); *see also id.* § 181.054 (allowing exemption for workers' compensation insurance); *id.* § 181.057 (exempting information related to individuals within the state's custody with mental impairments); *id.* § 181.058 (exempting educational records from the "protected health information" coverage).

149. *See* 22 TEX. ADMIN. CODE § 174.9 (2002) (Tex. State Bd. of Med. Exam'rs) (requiring a special purpose license holder to abide by Texas patient privacy laws).

150. *See* TEX. HEALTH & SAFETY CODE ANN. § 181.001 (Vernon Supp. 2003) (explaining that "communication[s] for treatment or health care operations by . . . health care provider[s], health plan[s], [and] participants in an organized health care arrangement" are excluded form the patient authorizations required for marketing purposes).

telemedicine privacy statute; these states choose to address patient privacy indirectly through licensing laws or physician ethic codes.[151]

3. Reimbursement

For much of its history, telemedicine's greatest impediment was the lack of reimbursement for telemedicine services.[152] With little prospect of payment, interest among physicians was limited and most programs were sustained largely through grants and special contracts.[153] To alleviate this problem and provide Medicare reimbursement for telemedicine services, Congress had to overcome many hurdles.[154] However, after much debate, Congress passed section 4206 of the Balanced Budget Act of 1997, requiring Medicare reimbursement of telemedicine services to begin on January 1, 1999.[155]

With the passage of the Balanced Budget Act, reimbursement for telemedicine services is now required by federal law.[156] Under this act, Medicare reimbursement rates for physician teleconsultations are set at 75% of in-person reimbursement rates.[157] Additionally, reimbursement is expanded to include health care provided by physician assistants, nurse practitioners, and other specialized health professionals;[158] however, re-

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151. *See* Kevin B. Davis, *Privacy Rights in Personal Information: HIPAA and the Privacy Gap Between Fundamental Privacy Rights and Medical Information*, 19 J. MARSHALL J. COMPUTER & INFO. L. 535, 543-44 (2001) (recognizing Texas as one of the few states with a comprehensive medical privacy statute and discussing some of the alternate approaches used to protect medical information taken by other states); *see also* Susan E. Volkert, *Telemedicine: RX for the Future of Health Care*, 6 MICH. TELECOMM. & TECH. L. REV. 147, 216 (2000) (finding that most states maintain a right to medical record privacy and confidentiality through an inadequate "web of statutes, regulations and polices," which leave gaps as well as overlapping laws).

152. *See* Dena S. Puskin, *Telemedicine: Follow the Money*, 6 ONLINE J. OF ISSUES IN NURSING 3, ¶ 2 (Sept. 30, 2001), *at* http://www.nursingworld.org/ojin/topic16/tpc16_1.htm (attributing the lack of telemedicine use before the late 1990s to severely limited reimbursement programs).

153. *See id.* ¶ 3 (discussing the problems associated with a lack of third-party reimbursement).

154. *See* Kristen R. Jakobsen, Note, *Space-Age Medicine, Stone-Age Government: How Medicare Reimbursement of Telemedicine Services is Depriving the Elderly of Quality Medical Treatment*, 8 ELDER L.J. 151, 161-62 (2000), WL 8 ELDLJ 151 (discussing the debates preceding the passage of the Balanced Budget Act of 1997).

155. Balanced Budget Act of 1997, Pub. L. No. 105-33, § 4206, 111 Stat. 251, 377 (1997) (codified as amended in sections of 42 U.S.C.).

156. *Id.*

157. Medicare Program; Revisions to Payment Policies and Adjustments to the Relative Value Units Under the Physician Fee Schedule for Calendar Year 1999, 63 Fed. Reg. 58,814, 58,879 (Nov. 2, 1998).

158. *See id.* at 58,886 (outlining the requirements for a health care professional to receive reimbursement for providing telemedicine services).

imbursement for telephone charges is not allowed.[159] Since most private insurance carriers base their reimbursement and coverage decisions on Medicare and Medicaid, these changes have had even broader implications.[160] With the passage of this legislation, an increasing number of managed care organizations began to cover telemedicine services.[161]

Unfortunately, the narrow scope of the Balanced Budget Act of 1997, led to restricted implementation and limited results.[162] First, reimbursement was only offered for health care services provided to HPSA patients.[163] Consequently, specialists would not be reimbursed for providing care to patients in rural communities with sufficient primary care resources, even if they had little or no specialty resources.[164] Secondly, although there were some exceptions,[165] reimbursement generally required that the patient actually be present.[166] While services provided

159. *See id.* (denying reimbursement for telephone charges and prohibiting the provider from billing the patient for these costs).

160. *See* Kristen R. Jakobsen, Note, *Space-Age Medicine, Stone-Age Government: How Medicare Reimbursement of Telemedicine Services is Depriving the Elderly of Quality Medical Treatment*, 8 ELDER L.J. 151, 166-67 (2000), WL 8 ELDLJ 151 (emphasizing the relation between Medicaid and Medicare guidelines and private insurance providers).

161. *Id.*

162. *See* Dena S. Puskin, *Telemedicine: Follow the Money*, 6 ONLINE J. OF ISSUES IN NURSING 3, ¶ 4-6 (Sept. 30, 2001), *at* http://www.nursingworld.org/ojin/topic16/tpc16_1.htm (recognizing the limitations of the 1997 Balanced Budget Act).

163. *See id.* ¶ 7-8 (noting that under the Balanced Budget Act of 1997, reimbursement was limited to those areas designated as HPSAs).

164. *See id.* ¶ 8-9 (acknowledging that rural areas with adequate primary medical services and no specialty services were denied the ability to receive any reimbursement under the Balanced Budget Act of 1997). It is possible for a county to have an inadequate number of primary care physicians to qualify as a HPSA and not qualify for reimbursement under the Balanced Budget Act of 1997, yet have very few or no specialists. *Id.*; *see also* 42 U.S.C. § 254e (2000). "Health care shortage area" is determined by the ratio of medical personnel to the population in general without making a distinction between specialists and primary care physicians. *Id.*

165. *See* Dena S. Puskin, *Telemedicine: Follow the Money*, 6 ONLINE J. OF ISSUES IN NURSING 3, ¶ 10 (Sept. 30, 2001), *at* http://www.nursingworld.org/ojin/topic16/tpc16_1.htm (discussing the exceptions to the general Balanced Budget Act of 1997 requirement that the patient actually be present for the telemedical consultation to be reimbursed). The few telemedicine services traditionally reimbursed under Medicare, such as electrocardiogram (EKG) or echoencephalograph (EEG) interpretation, telepathology, and teleradiology consults, continued to be reimbursed, and were not affected by the Balanced Budget Act. *Id.*

166. Medicare Programs; Revisions to Payment Policies and Adjustments to the Relative Value Unites Under the Physician Fee Schedule for Calendar Year 1999, 63 Fed. Reg. 58,814, 58,886 (Nov. 2, 1998); *see also* Dena S. Puskin, *Telemedicine: Follow the Money*, 6 ONLINE J. OF ISSUES IN NURSING 3, ¶ 10 (Sept. 30, 2001), *at* http://www.nursingworld.org/ojin/topic16/tpc16_1.htm (addressing the reimbursement requirements under the Balanced Budget Act of 1997).

by physician assistants, nurse practitioners, and other health care professionals were eligible for reimbursement, it often required that the referring health care provider be present and be an "eligible referring practitioner."[167] Most critics blame the Balanced Budget Act's limited scope for the fact that in the first two years of its implementation, Medicare reimbursed only $20,000 for 301 teleconsultation claims.[168]

Due to this lack of effectiveness, the Balanced Budget Act was amended by the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000.[169] This amendment expanded reimbursement to those patients not only within a HPSA, but within any county "not included in a Metropolitan Statistical Area."[170] Additionally, the act eliminated the requirement that the prescribing physician be present during the telemedicine consultation in order to be reimbursed and allowed teleconsultations to be reimbursed at the same rate as in-person consultations.[171] Although a few reimbursement limitations remained unchanged, most feel that the Benefits Improvement and Protection Act of 2000 effectively removed most of the limitations placed on telemedicine reimbursement by the Balanced Budget Act of 1997.[172]

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167. *See* Dena S. Puskin, *Telemedicine: Follow the Money*, 6 ONLINE J. OF ISSUES IN NURSING 3, ¶ 12-14 (Sept. 30, 2001), *at* http://www.nursingworld.org/ojin/topic16/tpc16_1.htm (providing a definition of "eligible referring practitioner" and discussing how these requirements were not practical within the telemedicine context). In many telemedicine cases, the patient is "presented" by someone other than the referring physician. *Id.* ¶ 13. These presenters are often nurses or other health care professionals who are employed by the local hospital or remote clinic, not by the referring physician, and are thus not eligible for reimbursement. *Id.* ¶ 14.

168. *See id.* ¶ 4 (citing statistics from the Department of Health and Human Services showing the lack of telemedicine reimbursement under the Balanced Budget Act of 1997).

169. *See generally* Medicare, Medicaid, and State Children's Health Insurance Program (SCHIP) Benefits Improvement and Protection Act of 2000, Pub. L. No. 106-554, § 1(a)(6), 114 Stat. 2763 (2000) (enacting several amendments to the Balanced Budget Act).

170. *See* 42 C.F.R. § 410.78(b)(4) (2002) (stating that the originating site for the telemedicine consultation must come from "either a rural health professional shortage area" or a county "not included in a Metropolitan Statistical Area as defined in section 1886(d)(2)(D) of the" Public Health Service Act (42 U.S.C. 254e(a)(1)(A))). Additionally, entities participating in a federal telemedicine demonstration program can receive reimbursement regardless of their geographic location. *Id.*

171. *See id.* § 410.78(c) (recognizing that the prescribing physician presence is not a prerequisite for payment unless their presence is medically necessary as determined by a physician or practitioner at the distant site).

172. *Id.* § 410.78(a)(4); *see also id.* § 410.78(d) (allowing reimbursement for store and forward technology in Alaska and Hawaii demonstration programs only); 42 C.F.R. § 410.78(a)(3) (2002) (recognizing that medical advice or treatment provided over the telephone, fax machine, or e-mail does not meet the definition of "interactive telecommunications system" and is not eligible for federal reimbursement).

On the state level, Texas passed legislation to *expand* telemedicine coverage to its Medicaid population and eliminated many of the Balanced Budget Act restrictions.[173] Medicaid is a "joint program between the federal and state governments whereby the states have some leeway in deciding coverage."[174] Enacted during the 2001 legislative session, Texas's statute requires the Texas Health and Human Services Commission to ensure Medicaid reimbursement for telemedicine services initiated or provided by a physician and to establish unique billing codes and fee schedules.[175] Presently, reimbursement for telemedicine services is done at the same rate as comparable in-person medical services, with payment split between professionals at the sending and receiving sites.[176] In addition, health care plans must allow medical care for children with special health care needs to be provided through telemedicine medical services.[177] To ensure coverage by private insurance plans, Texas is one of five states that prohibits private health benefit plans from excluding coverage for telemedicine services solely because they are not provided through face-to-face consultation.[178] By the enactment of this legislation, Texas has ensured that telemedicine services will be reimbursed now and in the future.

IV. CONCLUSION

Telemedicine has the potential to revolutionize the health care delivery industry. Texas's unique mixture of high technology urban centers, vastly underserved rural areas, and large chronically-ill and prison populations make it the ideal place for further institutionalizing telemedicine. Based

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173. Act of Apr. 18, 2001, 77 Leg., R.S., Ch. 1255, 2001 Tex. Gen. Laws 2970. Other states that passed legislation to expand telemedicine reimbursement included Arkansas, California, Georgia, Illinois, Iowa, Kansas (limited), Louisiana, Minnesota, Montana, Nebraska (limited), North Carolina, North Dakota, Oklahoma, South Dakota, Utah, Virginia, and West Virginia. CTRS. FOR MEDICARE & MEDICADE SERVS., *States Where Medicade Reimbursement of Services Utilizing Telemedicine Is Available*, *at* http://cms.hhs.gov/states/telelist.asp (last visited Mar. 1, 2003).

174. Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:18 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:18 (2001).

175. *See* TEX. GOV'T CODE ANN. § 531.0217(b) & (c) (Vernon Supp. 2003) (directing the commission to encourage physicians, teaching hospitals, federally qualified health centers, state owned health care facilities, and small rural hospitals to participate in a telemedicine health care delivery system).

176. *Id.* § 531.0217(c).

177. TEX. HEALTH & SAFETY CODE ANN. § 62.157 (Vernon Supp. 2003).

178. TEX. INS. CODE ANN. art. 21.53F, § 3(a) (Vernon Supp. 2003). The other states that prohibit coverage denials due to lack of face-to-face interaction are California, Hawaii, Kentucky, and Oklahoma. *See, e.g.*, CAL. HEALTH & SAFETY CODE § 1374.13(c) (West 2002); HAW. REV. STAT. § 431:10A-116.3 (Michie 2002); KY. REV. STAT. ANN. § 304.17A-138 (Michie 2002); OKLA. STAT. ANN. tit. 36, § 6803(A) (West 2002).

on its progressive approach to recognizing and facilitating telemedicine use, the Texas legislature seems to agree. As with any program of this scale, there are many hurdles that must be overcome before it can be fully integrated into the existing system.

Although other liability issues may remain,[179] much of the present discussion focuses on licensure, privacy, and reimbursement. In telemedicine, patients must be sure that they are receiving adequate care and that confidentiality of their medical records is not being compromised. On the other hand, physicians must be able to practice across state lines and be sure that they will receive compensation for services rendered.[180] While most states have not adequately dealt with these issues, Texas has positively addressed each one.

First, most critics agree that the traditional "full licensure" laws must be revised.[181] As of 2001, Texas was one of only eleven states that had amended or repealed their full licensure requirements within the telemedicine context in order to strike a more even balance between

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179. *See* Kristie Zamrazil, *Telemedicine in Texas: Public Policy Concerns*, FOCUS REP. (Tex. House of Representatives, House Research Org., Austin, Tex.), May 5, 2000, at 1, 11, http://www.capitol.state.tx.us/hrofr/focus/telemed.pdf (asserting that as of 2000, no one in Texas has claimed malpractice by a physician using telemedicine); *see also* TEX. INS. CODE ANN. art. 21.53F, § 6 (Vernon Supp. 2003) (stating that the Texas Medical Board has the duty to ensure that all persons providing telemedicine services maintain an adequate standard of care); JOINT WORKING GROUP ON TELEMEDICINE, TELEMEDICINE REPORT TO CONGRESS (1997), http://www.ntia.doc.gov/reports/telemed/ (analyzing the peculiar aspects of telemedicine within the malpractice context). *See generally* Kip Poe, *Telemedicine Liability: Texas and Other States Delve into the Uncertainties of Health Care Delivery via Advanced Communications Technology*, 20 REV. LITIG. 681, 686-87 (2001) (explaining possible liability issues with telemedicine).

180. *See* Christopher Guttman-McCabe, Comment, *Telemedicine's Imperilled Future? Funding, Reimbursement, Licensing and Privacy Hurdles Face a Developing Technology*, 14 J. CONTEMP. HEALTH L. & POL'Y 161, 178 (1997) (discussing the physician's conflicting duties of protecting medical information and providing competent care).

181. *See* P. Greg Gulick, *The Development of a Global Hospital Is Closer Than We Think: An Examination of the International Implications of Telemedicine and the Developments, Uses and Problems Facing International Telemedicine Programs*, 11 IND. INT'L & COMP. L. REV. 183, 202 (2000), WL 11 INICLR 183 (recognizing full licensure as "the most serious impediment to a nationwide telemedicine program" and proposing several alternative licensing policies as potential solutions); Kerry A. Kearney et al., *Medical Licensure: An Impediment To Interstate Telemedicine*, HEALTH LAW., 1997, at 14, 15, WL 9 No. 4 HTHLAW 14 (suggesting that "unless licensure requirements are eased," telemedicine use will be limited to isolated, intrastate networks); Alison M. Sulentic, *Crossing Borders: The Licensure of Interstate Telemedicine Practioners*, 25 J. LEGIS. 1, 24-25 (1999) (discussing the disadvantages of a full licensure requirement for physicians practicing telemedicine across state lines).

quality assurance and patient access.[182] Second, to ensure confidentiality of electronic medical records, HIPAA was passed in order to upgrade state medical privacy statutes.[183] Texas confidentiality laws offer patients even *more* protection than the federal government requires; moreover, Texas is one of the few states that specifically mentions confidentiality standards within the telemedicine framework.[184] Lastly, to ensure that doctors receive compensation, the federal government has mandated reimbursement for a limited number of telemedicine services. Texas is one of a minority of states that has expanded coverage to all Medicaid recipients and has prohibited private insurers from denying reimbursement for telemedicine services.[185]

Based on these positions, Texas has established itself as a pioneer in telemedicine. The telemedicine programs established by Texas Tech University Health Science Center and the University of Texas Medical Branch in Galveston continue to grow. However, in order to reach the vast amount of patients that have yet to benefit from these kinds of services, more funding will be needed.[186] Recently enacted federal legisla-

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182. *See* Wendi Johnson et al., *Telemedicine: Diagnosing the Legal Issues*, *in* HEALTH LAW HANDBOOK § 3:12 (Alice G. Gosfield ed., 2001), WL HTHLHB S 3:12 (2001) (listing the eleven states that no longer require full licensure for out-of-state telemedicine providers).

183. *See* Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, § 261, 110 Stat. 1936 (1996) (codified as amended in scattered sections of 18, 26, 29, 42 and 45 of U.S.C.) (stating that HIPAA's purpose is to "encourag[e] the development of a health information system through the establishment of standards and requirements for the electronic transmission of certain health information").

184. *See* TEX. HEALTH & SAFETY CODE ANN. § 181.152 (Vernon Supp. 2003) (outlining the procedure for properly obtaining consent from an individual before his health information can be used, disclosed, or sold); TEX. INS. CODE ANN. art. 21.53F, § 5 (Vernon Supp. 2003) (requiring telemedicine health professionals "who provide[ ] or facilitate[ ] the use of telemedicine medical services or telehealth services" to "ensure that the confidentiality of the patient's medical information is maintained as required" by applicable law); *see also* TEX. HEALTH & SAFETY CODE ANN. § 181.201 (Vernon Supp. 2003) (allowing for injunctive relief in addition to a fine of no more than $3,000 per violation, or $250,000 for violations that have occurred with such "frequency as to constitute a pattern or practice"); *id.* § 181.202 (allowing for probation or suspension of the individual's or facility's license for privacy violations after an investigation and disciplinary proceeding); *id.* § 181.203 (excluding privacy offenders from participation "in any state-funded health care program").

185. *See* TEX. INS. CODE ANN. art. 21.53F (Vernon 2003) (prohibiting health insurers from denying reimbursement "because the service is not provided through a face-to-face consultation").

186. *See* Kristen R. Jakobsen, Note, *Space-Age Medicine, Stone-Age Government: How Medicare Reimbursement of Telemedicine Services is Depriving the Elderly of Quality Medical Treatment*, 8 ELDER L.J. 151, 170-71 (2000), WL 8 ELDLJ 151 (analyzing the costs associated with the implementation of a telemedicine project). Start up costs can range from $134,000 to $288,000 per institution. *Id.* at 170. Additionally, there are annual transmission and maintenance fees of $19,000 to $80,000. *Id.* However, after these start-up

tion called for more funding to be dispersed to investigate and implement new telemedicine programs.[187] At this point, it becomes logical to concentrate that funding within states such as Texas. Texas has the ability to maintain data on telemedicine's wide-scale effectiveness, major telemedicine programs already in existence, and laws in place to both encourage telemedicine use and ensure its safety. Increasing federal telemedicine funding to Texas would allow the infrastructure to continue its expansion across the state and could also expand telemedicine usage and reimbursement to the home health care area.[188] In return, the federal government would receive data that would allow for more efficient telemedicine expenditures in the future. With the expansion of its services and increased analysis of its effectiveness, telemedicine's place in the new health care revolution will be greatly enhanced.

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costs are absorbed, telemedicine does become economical. *Id.* For example, private insurers have reported that attracting enough participation can bring down costs and commentators have estimated a potential nationwide savings of approximately $36 billion by employing telemedicine. *Id.*; *see also* Chari J. Young, Note, *Telemedicine: Patient Privacy Rights of Electronic Medical Records,* 66 UMKC L. REV. 921, 925 (1998) (reiterating that although the equipment is expensive to purchase and set up, once in place, it is actually much more cost effective than traditional systems).

187. *See* Rural Health Care Improvement Act of 2001, H.R. 2157, 107th Cong. § 202 (2001) (acknowledging the development of a "high technology acquisition grant and loan program"). Under this program, the Secretary of Health and Human Services has the authority to make loans and grants to health care entities that purchase technology in an attempt to improve the quality of health care in rural areas. *Id.* § 203. The program also awards grants to public or nonprofit hospitals to establish telehealth resource centers to serve patients in rural areas. *Id.*; Telehealth Mental Health Services Act, S. 1283, 107th Congress § 2 (2001) (awarding grants of at least $1.5 million to entities that establish demonstration projects to provide mental health services and education to special populations via telemedicine technologies); Telecommunications Act of 1996, Pub. L. No. 104-104, § 254, 110 Stat. 56 (1996) (codified as amended in scattered sections of 47 U.S.C.) (requiring the FCC to ensure that health care providers in rural areas have access to necessary telecommunications services at rates comparable to urban facilities); *see also* 42 U.S.C. § 247d-3a (2000) (authorizing grants to develop a system through which information about biological attacks and other public health emergencies can be rapidly communicated among local, state and federal health care entities, and agencies).

188. *See* Improving Health Care in Rural America Act, S. 1273, 107th Cong. § 3 (2001) (authorizing the Secretary to establish a "telehomecare" demonstration project). This project consists of up to five, three-year grants to home care providers for the provision of telehomecare services. *Id.* Lawmakers are hopeful that telehomecare use will "improve patient care, prevent health care complications, improve patient outcomes, and achieve efficiencies in the delivery of care to [home bound] patients." *Id.*; *see also* Kristen R. Jakobsen, Note, *Space-Age Medicine, Stone-Age Government: How Medicare Reimbursement of Telemedicine Services is Depriving the Elderly of Quality Medical Treatment,* 8 ELDER L.J. 151, 166 (2000), WL 8 ELDLJ 151 (recognizing Kansas as the only state that, in certain situations, offers reimbursement for telehomecare services).