

Telehealth 2.0

Using Telehealth with Companion Device Technology to
Connect Senior Patients to a Culture of Prevention and Self-care

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“Our society must make it right and possible for old people not to fear the young or be deserted by them, for the test of a civilization is the way that it cares for its helpless members.”

- Pearl S. Buck

The long-term care of the elderly population has increasingly been a concern. The problem grows as the senior population ages. Despite the availability of institutional and community-based care, most people, for emotional and financial reasons, still prefer to remain in the comfort of their homes as long as possible and to receive whatever care is available from spouses, children, siblings, and close relatives, or the so-called uncompensated caregivers. The psychological and financial stress for the care of elderly relatives and the growing demand for caregivers is the catalyst for the invention of senior-focused technologies. Technologies such as robots, simulated pets, and wearable accelerometers are designed to help seniors to carry on with their daily activities and to help caregivers provide better care for their loved ones. Legal problems such as privacy issues and regulatory concerns still lurk in the corner. The future of elderly care will inevitably involve technologies, but there is much to explore in the ethical and legal terrain.¹

INTRODUCTION

Companion device technology can be used to provide access to resources and health information and reduce social isolation.² Current technology exists, with a virtual elder care companion application known as “GeriJoy”, which provides "conversational companionship and pet therapy" to senior citizens.³ The GeriJoy assistive device provides the user with constant reassurance, reminders, and re-orientation assistance to older persons suffering from mild cognitive impairment. To ensure health and nutritional needs are met, reminders are provided to the user to take medications and enjoy meals. A virtual “pet” is included in the tablet application to interact with the user. In addition to the companion application of GeriJoy, there is also "Grand Care," which enables a caretaker to custom program a set of behavioral parameters into the device, such as the older person's failure to get up at a certain time or departure from the premises after a certain time in the evening, will result in an alert being sent to a caretaker.⁴

The presence of this sort of technological oversight provides reassurance that the older person is safe and behaving normally.⁵ “ElliQ”, a social robot for seniors was introduced at the Consumer Technology Association (CES) 2018 conference. ElliQ is a tabletop robot with a swiveling head that connects seniors to friends for messages and video chats and makes it a bit easier for them to take advantage of online information and services.⁶ It suggests physical activities, such as taking

¹ [ARTICLE: Bridging the Uncompensated Caregiver Gap: Does Technology Provide an Ethically and Legally Viable Answer?](#), 22 Elder L.J. 399 at Highlight

² 2015-151101 National Academy of Elder Law Attorneys Journal (2017), 51

³ [ARTICLE: Bridging the Uncompensated Caregiver Gap: Does Technology Provide an Ethically and Legally Viable Answer?](#), 22 Elder L.J. 399 at [*153]

⁴ *Id.* at [*119]

⁵ *Id.* at [*120]

⁶ Evangelista, B. (2017, December 8). Smart-home tech might help older adults live independently longer. San Francisco Chronicle. Retrieved January 28, 2018, from <http://www.sfchronicle.com/business/article/Smart-home-tech-might-help-older-adults-live-12410863.php#photo-14661381>

medicine or going for a walk, and also makes personalized recommendations for news, music or games.⁷

HCDs for All

What if a telehealth inspired interactive companion product similar to ElliQ, GeriJoy and Grand Care existed for everyone as a counterpart to their healthcare? Incorporating a “Health Companion Device” (HCD) into a user-friendly application for daily use, encouraging users to succeed in routine activities, promoting a healthy lifestyle, paired with health/medical goals to provide user patients with an interactive plan that focuses on the needs of body, mind, and soul.

The HCD application elements currently exist in the Veterans Health Administration (VHA) Telehealth Program. As of 2016, over seventy thousand veterans have utilized different telemedicine technologies within the VHA Telehealth Program, such as messaging devices, which ask patients questions to help assess their health status and disease self-management capabilities, and monitoring devices, which help patients record and collect their vital signs.⁸ Veterans that have been assessed and deemed appropriate for home telehealth are provided telehealth technology that best meets the patient’s needs.⁹ The messaging interaction from the veteran’s program parallels technology that can be incorporated into a HCD for all ages use, and positions the healthcare industry with the advantage of a newly conscious population, responsible for self-monitoring, using companion device technology.

In an interview with MobiHealthNews, Doctor on Demand CEO Hill Ferguson stated, “I definitely envision a future where households have a kit of devices at their disposal, perhaps paid for by their health insurance companies, that enable them to take a number of vital readings, measurements, images, etc., that can be uploaded into that patient’s medical home in the cloud and then a doctor can consult on that information.”¹⁰ FirstHealth of the Carolinas, a five-hospital health system based in Pinehurst, N.C., launched a pilot program in 2015, providing high risk patients with a mHealth enabled tablet to track their own vital signs and send that data to FirstHealth.¹¹ According to FirstHealth officials, while the telehealth platform cost roughly \$700 per patient for a 60-day

⁷ Fowler, G., & Tsukayama, H. (2017, January 9). Snuggle robots and talking toilets: CES 2018’s wildest gadgets. The Washington Post. Retrieved January 13, 2017, from https://www.washingtonpost.com/news/the-switch/wp/2018/01/09/snuggle-robots-and-talking-toilets-ces-2018s-wildest-gadgets/?utm_term=.7ebf764a0796

⁸ [ARTICLE: CAN I SKYPE MY DOCTOR? LIMITED MEDICARE COVERAGE HINDERS TELEMEDICINE'S POTENTIAL TO IMPROVE HEALTH CARE ACCESS, 57 B.C. L. Rev. 1813 at \[*113\]](#)

⁹ U.S. Department of Veteran's Affairs. (2015). *VA Telehealth Services - Home Telehealth*. Retrieved April 12, 2018, from <https://www.telehealth.va.gov/ccht/index.asp>

¹⁰ Comstock, J. (2018, March 23). In-depth: Who owns telemedicine delivery — payers or providers? Retrieved April 12, 2018, from <http://www.mobihealthnews.com/content/depth-who-owns-telemedicine-delivery-%E2%80%94-payers-or-providers?sthash.S1rvZAvB.mjjo>

¹¹ Wicklund, E. (2017, March 2). Telehealth: A Vital Tool in the Home Healthcare Space . Retrieved April 12, 2018, from <https://mhealthintelligence.com/news/telehealth-a-vital-tool-in-the-home-healthcare-space>

care plan, rehospitalizations would have cost the health system more than \$8,000 for each patient – none of which is covered by Medicare, and some of which could have cost the health system even more in penalties.¹² Per Patty Upham, the health system’s director of care transitions, “In terms of cost to the payer, it was almost \$2 million [in savings] to the payer.”¹³

By engaging senior citizens, and other age groups, with ongoing use of the HCD, user patients that are afflicted with conditions such as conditions such as Drug Rehabilitation, Homelessness, Post Traumatic Syndrome Disorder, and Senior Anxiety, may have less or limited need to seek typical telehealth or in-person visits with their physician by advancing the use of relational health technology. The healthcare industry should focus efforts on member engagement in telehealth programs to inspire senior patients towards a culture of prevention and self-care.

BACKGROUND

The concept of telehealth has been around for centuries.¹⁴ Even though there is not a definitive date for the creation of telehealth, its origins can arguably be traced back to the Dark Ages.¹⁵ During this time, medical professionals would physically transport information about the bubonic plague across Europe.¹⁶ By the twentieth century, the telephone became a mainstay of telehealth, providing physicians and other health professionals with a tool to accurately communicate and transfer medical information.¹⁷ Some commentators have suggested the first telehealth consultation occurred on March 20, 1876, when Alexander Graham Bell, having spilled acid on himself, called his associate Thomas A. Watson to his assistance via the first telephone.¹⁸ In 1905, Willem Einthoven sent electrocardiogram and phonocardiogram data from the Academic Hospital of Leyden to his laboratory via telephone.¹⁹ By the 1920s, it was standard practice to transmit medical information via radios.²⁰ Nebraska implemented a two-way television educational service in the mid-1950s in response to the difficulties of providing face-to-face psychiatry services to patients across the state.²¹

¹² *Id.*

¹³ *Id.*

¹⁴ [COMMENT: Comment: An Examination of the Impact of Malpractice Law on Telepsychiatry Clinicians & Clients with Suicidal Ideations](#), 50 *Akron L. Rev.* 933 at [*937]

¹⁵ *Id.* at [*937]

¹⁶ *Id.* at [*937]

¹⁷ *Id.* at [*937]

¹⁸ [COMMENT: LICENSE TO SCREEN: A REVIEW OF THE MEDICAL LICENSURE SCHEMES IMPACTING TELEHEALTH PROLIFERATION IN THE UNITED STATES, THE EUROPEAN UNION, AND AUSTRALIA](#), 32 *Emory Int'l L. Rev.* 317 at 323

¹⁹ [STUDENT NOTE / COMMENT: Crossroads: How the Intersection of Technology, Medicine, and the Law, Impact the Administration of Healthcare in Florida and Puerto Rico](#), 46 *U. Miami Inter-Am. L. Rev.* 209 at [*214]

²⁰ *Id.* at [*214]

²¹ *Id.* at [*214]

Even though telemedicine found its humble beginnings in the first half of the 1900's, it didn't begin taking firm root until the early 1960's when the National Aeronautics and Space Administration ("NASA") began monitoring physiological measurements of astronauts in space.²² Articles written in the 1970s lauded the potential of telemedicine to "free us from the limitations of time and space".²³ Twenty years later it was heralded, "telemedicine will do for health care what the personal computer has done for the office".²⁴ One of the earliest purposes of telehealth - the delivery of healthcare to individuals in remote areas - is still one of its premier objectives.²⁵

Today, telehealth connects patients to vital health care services through videoconferencing, remote monitoring, electronic consults and wireless communications.²⁶ Telehealth has not created new health services.²⁷ It has merely established new methods of delivering existing services.²⁸ Telemedicine is designed to complement "non-emergency primary care", not to be a substitute for all forms of non-emergency medical care.²⁹ Telehealth also provides a mechanism for increasing the efficiency of available medical resources.³⁰ Currently, the United States faces a shortage of healthcare professionals, particularly within specialty fields.³¹ Telehealth provides a potential way to increase the effectiveness of available clinicians by allowing them to increase their treatment radius.³²

Definitions

The differences between telehealth, telemedicine, and telecare must be understood before diving deeper into the subject.³³ First, telehealth is a broad term used to describe the delivery of health care services, health care education, and health information services over a distance.³⁴ Next,

²² *Id.* at [*214]

²³ [NOTE: Trust and Antitrust: State-Based Restrictions in Telemedicine, 50 U.C. Davis L. Rev. 1807](#) at [*1816]

²⁴ *Id.* at [*1816]

²⁵ [COMMENT: Comment: An Examination of the Impact of Malpractice Law on Telepsychiatry Clinicians & Clients with Suicidal Ideations, 50 Akron L. Rev. 933](#) at [*937]

²⁶ Fact Sheet: Telehealth. (2017, July). *American Hospital Association*. Retrieved March 31, 2018, from <https://www.aha.org/system/files/2018-01/fs-telehealth.pdf>, pg. 1

²⁷ [COMMENT: Removing Barriers to Telehealth in Oklahoma: Increasing Access to Care and Improving Health Outcomes Across the State, 68 Okla. L. Rev. 805](#) at [*806]

²⁸ *Id.* at [*806]

²⁹ [ARTICLE: TELEMEDICINE: A THERAPEUTIC PRESCRIPTION FOR OUR HEALTH CARE SYSTEM CONTAMINATED BY OLD ECONOMY RULES AND REGULATIONS, 17 N.C. J.L. & Tech. On. 74](#) at [*104]

³⁰ [COMMENT: LICENSE TO SCREEN: A REVIEW OF THE MEDICAL LICENSURE SCHEMES IMPACTING TELEHEALTH PROLIFERATION IN THE UNITED STATES, THE EUROPEAN UNION, AND AUSTRALIA, 32 Emory Int'l L. Rev. 317](#) at [*324]

³¹ *Id.* at [*324]

³² *Id.* at [*325]

³³ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE, 18 DePaul J. Health Care L. 135](#) at [*148]

³⁴ *Id.* at [*148]

telecare refers to technology that allows patients to remain in the safety of their homes by using "telecommunications technology including telephones, computers and mobile monitoring devices such as alarms, automatic gas shut-off devices and home entry videophones."³⁵ Further, telecare involves remotely monitoring a patient to help manage the patient's comfort and care at home.³⁶ Finally, telemedicine is defined as "the use of electronic communications and information technologies to provide clinical services to patients in other locations."³⁷ The American Telemedicine Association (ATA) uses the term "telehealth" interchangeably with either telemedicine or telecare.³⁸ Telemedicine and telehealth are gaining quick support in the United States, and internationally, due to the incredible medical benefits of diagnosing patients without needing the doctor to be physically present.³⁹ In pathology, telemedicine enables pathologists to look through microscopes hundreds of miles away ("telepathology"); in geriatrics, doctors use telemedicine to implement "hospital at home" models; in radiology, telemedical technology allows for long-distance transmittal of images to specialists.⁴⁰

Communications can be in real time (synchronous, e.g., live videoconferencing) or asynchronous (e.g., store and forward).⁴¹ A prevalent modality of telehealth: remote patient monitoring (RPM), is used for transmitting personal health and medical data collection from an individual in one location, to a provider in a different location.⁴² RPM is used primarily for the management of chronic illness, to transmit information including vital statistics (e.g., blood pressure, blood oxygen levels) to clinicians.⁴³ Mobile Health (mHealth) utilizes smartphone apps designed to foster health and well-being.⁴⁴ The apps range from programs which send targeted text messages aimed at encouraging healthy behaviors, to alerts about disease outbreaks, to programs or apps that help patients with reminders to adhere to specific care regimens.⁴⁵ mHealth data collection transfer for RPM is equivalent to the proposed HCD data transfer for RPM. Once mHealth data is collected, it must be filtered through the patient's medical record, so that the clinician receiving it knows it has value and can apply it to the patient's care plan.⁴⁶

³⁵ *Id.* at [*148]

³⁶ *Id.* at [*148]

³⁷ *Id.* at [*148]

³⁸ *Id.* at [*148]

³⁹ *Id.* at [*149]

⁴⁰ [NOTE: Trust and Antitrust: State-Based Restrictions in Telemedicine, 50 U.C. Davis L. Rev. 1807 at \[*1815\]](#)

⁴¹ [ARTICLE: TELEHEALTH AND TELEMEDICINE IN 2015, 25 Alb. L.J. Sci. & Tech. 495 at \[*500\]](#)

⁴² (Rep.). (2016). Retrieved February 1, 2018, from <https://aspe.hhs.gov/system/files/pdf/206751/TelemedicineE-HealthReport.pdf>, pg. 5

⁴³ *Id.* at pg. 5

⁴⁴ Wicklund, E. (2017, July 10). Challenges, Opportunities of Mobile Health Devices in the Hospital. Retrieved April 12, 2018, from <https://mhealthintelligence.com/features/challenges-opportunities-of-mobile-health-devices-in-the-hospital>

⁴⁵ *Id.*

⁴⁶ *Id.*

Telehealth - Yesterday and Today

On June 27, 2003, Medicare expanded coverage of telemedicine passed the U.S. Senate as part of the Medicare Prescription Drug Benefit bill.⁴⁷ The provision expanded the type of sites eligible for Medicare reimbursement of telemedicine services to include:

- Skilled nursing facilities;
- Assisted-living facilities;
- Board-and-care homes;
- County or community health clinics;
- Community mental health centers;
- Long-term care facilities;
- Facilities operated by the Indian Health Service or by an Indian tribe, tribal organization, or an urban Indian organization.⁴⁸

In the past, telemedicine was mainly used to provide medical care to patients in rural areas and to provide continuing education or training to doctors who practiced in rural areas and lacked the ability to travel.⁴⁹ Today, telemedicine is now becoming an integral component in the delivery of modern health care.⁵⁰ In essence, telehealth bridges the distance between patients and providers by allowing patients to conveniently stay in their communities and get treated by a specialist at a distant site.⁵¹ This bridge is particularly useful for those living in underserved rural and urban communities because it creates access to specialized health care that otherwise may not be available.⁵²

Successful Studies

The 21st Century Cures Act (Cures Act), was a directive from Congress for further study into the use of technology for the delivery of health care services.⁵³ The Act, signed into law on December 13, 2016, directs both the Medicare Payment Advisory Commission (MedPAC) and the Centers for Medicare & Medicaid Services (CMS) to study current Medicare coverage of telehealth and report the findings back to the congressional committees of jurisdiction.⁵⁴ More specifically, Section 3021 of the Cures Act requires CMS to identify and report on populations of Medicare beneficiaries who would benefit most from the expansion of telehealth services under the Social

⁴⁷ Josephs, A., Falcetano, J., Snell, R., & Troklus, D. (2007). *The Health Care Compliance Professionals Manual* (Vol. 1). New York: Wolters Kluwer., 40,460

⁴⁸ *Id.* at 40.460 Telemedicine and E-Health – Compliance Issues

⁴⁹ *Id.* at 40.460 Telemedicine and E-Health – Overview

⁵⁰ *Id.* at 40.460 Telemedicine and E-Health – Overview

⁵¹ [COMMENT: Removing Barriers to Telehealth in Oklahoma: Increasing Access to Care and Improving Health Outcomes Across the State](#), 68 Okla. L. Rev. 805 at [*806]

⁵² *Id.* at [*806]

⁵³ Petro, L. G. (2017). Telehealth to the Forefront in 2017: 21st Century Cures Act. *National Law Review*. Retrieved February 15, 2018, from <https://www.natlawreview.com/article/telehealth-to-forefront-2017-21st-century-cures-act>.

⁵⁴ [Comment: Georgia's Telemedicine Laws and Regulations: Protecting Against Health Care Access*](#), 68 Mercer L. Rev. 489 at [*495]

Security Act, as well as the types of services suitable to furnish telehealth services, and potential barriers to the expansion of telehealth services under the Social Security Act.⁵⁵ The Cures Act includes language demonstrating the belief of Congress that any expansion of telehealth services under Medicare should acknowledge telemedicine as a "delivery of safe, effective, quality health care services," as well as the need to "meet or exceed the conditions of coverage and payment with respect to the Medicare program" under title XVIII.⁵⁶

One of the positive outcomes of the Cures Act study was elimination of the required reporting of the telehealth modifier GT for professional claims in an effort to reduce administrative burden for practitioners.⁵⁷ To accurately code for telehealth related billing, CMS is adding a list of several new codes to the list of telehealth services.⁵⁸

BENEFITS OF TELEHEALTH

Telemedicine can improve the quality of medical care for patients.⁵⁹ Earlier diagnoses and treatment, can further contribute to improved outcomes by addressing patient's illnesses before it escalates.⁶⁰ It is estimated that half of those taking medications in the United States aren't following doctors' orders, driving the nation's healthcare bill upwards by about \$310 billion in avoidable costs and \$100 billion in avoidable hospitalizations.⁶¹ The problem is acute among those taking multiple medications: the top 1 percent of high-acuity chronic disease patients accounts for 23 percent of that healthcare bill, or about \$107,000 per year per patient.⁶²

There is potential to improve patient accountability for medication adherence and self-care by implementing the HCD, as a mHealth/digital health tool: Per Waqaas Al-Siddiq, founder and CEO of Biotricity, a company developing digital solutions designed to aid chronic disease prevention and management, "There is a lot of room for digital health tools to ease illness management. We are seeing the very beginning of this trend within a limited context,"⁶³ "Today, these apps

⁵⁵ *Id.* at [*496]

⁵⁶ *Id.* at [*496]

⁵⁷ Final Policy, Payment, and Quality Provisions in the Medicare Physician Fee Schedule for Calendar Year 2018. (2017, November 2). Retrieved April 8, 2018, from <https://www.cms.gov/Newsroom/MediaReleaseDatabase/Fact-sheets/2017-Fact-Sheet-items/2017-11-02.html>, Medicare Telehealth Services

⁵⁸ *Id.* at Medicare Telehealth Services

⁵⁹ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 DePaul J. Health Care L. 135, [*153]

⁶⁰ *Id.* at [*153]

⁶¹ Wicklund, E. (2018). Using Telehealth to Help Patients With Medication Adherence. *MHealth Intelligence*. Retrieved March 15, 2018, from <https://mhealthintelligence.com/news/using-telehealth-to-help-patients-with-medication-adherence?elqTrackId=84fc27f3b7f4443c83499411bef3818c&elq=91e46a1818f145d481f3bb3f8a78b210&elqaid=4982&elqat=1&elqCampaignId=4629>

⁶² *Id.* – The problem is acute

⁶³ Brusco, Sam. "I'll Take My Healthcare 'To Go,' Please." *Medical Product Outsourcing*, 5 Oct. 2017, www.mpo-mag.com/issues/2017-10-01/view_features/ill-take-my-healthcare-to-go-please/.

primarily focus on medication reminders and promote patient mobility and exercise.⁶⁴ Healthcare professionals struggle to ensure day-to-day medication adherence and facilitate patient mobility, both of which are costly and time-consuming.⁶⁵ Digital health devices promote medication adherence and mobility by issuing reminders and increasing motivation.⁶⁶ This both aids illness management and accelerates recovery times, enabling healthcare professionals to better understand what is working and what is not in terms of treatment plans.⁶⁷ With the advent of mHealth devices, patient data can be captured electronically and sent to the care provider, who can then review that data, determine whether a care plan is working and make adjustments to improve that plan and keep the patient from suffering an adverse health issue.⁶⁸

Cost Savings

Telehealth can help improve cost, for both the consumer and government.⁶⁹ Transportation cost can sometimes be a hurdle for patients, especially if the commute is far or they need to pay for transport.⁷⁰ In nursing homes, a lack of access to a specialist can result in high transportation costs and higher cost if the patient is required to stay at a hospital overnight.⁷¹ However, with telemedicine, the patient can remain in their home or nursing home using home monitoring programs, which can reduce high cost hospital visits.⁷² Through telehealth technology, physicians are able to monitor any fluctuations in the patient's health and take corrective action by adjusting the therapy or medical treatment being administered to the patient.⁷³ Allowing patients to stay in their home or a home health care facility greatly reduces cost and improves recovery rates,⁷⁴ thereby maximizing individuals' independence and preventing unnecessary hospital visits.⁷⁵

⁶⁴ *Id.* - Today, these apps primarily focus

⁶⁵ *Id.* - Healthcare professionals struggle to ensure day-to-day medication adherence

⁶⁶ *Id.* - Digital health devices promote medication adherence

⁶⁷ *Id.* - This both aids illness management and accelerates recovery times

⁶⁸ Wicklund, E. (2017, July 10). Challenges, Opportunities of Mobile Health Devices in the Hospital. Retrieved April 12, 2018, from <https://mhealthintelligence.com/features/challenges-opportunities-of-mobile-health-devices-in-the-hospital>

⁶⁹ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 DePaul J. Health Care L. 135 at [*153]

⁷⁰ *Id.* at [*153]

⁷¹ *Id.* at [*153]

⁷² *Id.* at [*153]

⁷³ *Id.* at [*149]

⁷⁴ *Id.* at [*149]

⁷⁵ [ARTICLE: CAN I SKYPE MY DOCTOR? LIMITED MEDICARE COVERAGE HINDERS TELEMEDICINE'S POTENTIAL TO IMPROVE HEALTH CARE ACCESS](#), 57 B.C. L. Rev. 1813 at [*1833]

Industry Challenges

When medically underserved patients and physicians are physically located in separate states the issue of practitioner licensure arises.⁷⁶ Physician licensing is often a focal point of discussions concerning telemedicine because physicians are licensed based on state-by-state requirements.⁷⁷ During a telehealth encounter, the service is considered to take place at the physical location of the patient (as opposed to the provider).⁷⁸ This requires providers to comply with the laws and regulations associated with the appropriate professional licensing board in the patient's state.⁷⁹ Each state has laws prohibiting the unlicensed practice of medicine within its jurisdiction.⁸⁰ As some states maintain restrictive telemedicine regulations, justifying such as a means of protecting their citizens.⁸¹

State-by-state approaches for telemedicine access can prevent patients from receiving critical medical services for which a patient located just over the state line has access.⁸² This is because physicians are undoubtedly less likely to offer telemedicine services to states with rural populations that, in addition to being less lucrative, have time-consuming and costly licensure barriers.⁸³ Thus, patients living in rural areas with the least access to health care, for whom telemedicine was developed to serve, may remain among the most underserved.⁸⁴ Therefore, without uniform licensing across the nation, the full potential of telemedicine is thwarted by state law,⁸⁵ as each state has independent authority to regulate and oversee the practice of medicine within its boundaries.⁸⁶ Licensure is a state-based patient protection system.⁸⁷ Since

⁷⁶ [United States v. Valdivieso Rodriguez, 532 F. Supp. 2d 316 \(D.P.R. 2007\)](#) at [*326]

⁷⁷ [STUDENT NOTE / COMMENT: Crossroads: How the Intersection of Technology, Medicine, and the Law, Impact the Administration of Healthcare in Florida and Puerto Rico, 46 U. Miami Inter-Am. L. Rev. 209](#) at [*219]

⁷⁸ Telehealth Policy Barriers Fact Sheet. (2016, August). Retrieved February 16, 2018, from http://www.cchpca.org/sites/default/files/resources/Telehealth%20Policy%20Barriers%20Fact%20Sheet%20FINAL_0.pdf, pg. 2 - Licensure

⁷⁹ *Id.* at pg. 2 - Licensure

⁸⁰ [STUDENT NOTE / COMMENT: Crossroads: How the Intersection of Technology, Medicine, and the Law, Impact the Administration of Healthcare in Florida and Puerto Rico, 46 U. Miami Inter-Am. L. Rev. 209](#) at [*219]

⁸¹ [Comment: Georgia's Telemedicine Laws and Regulations: Protecting Against Health Care Access*, 68 Mercer L. Rev. 489](#) at [*514] - Licensure

⁸² *Id.* at [*514] - Licensure

⁸³ *Id.* at [*514] - Licensure

⁸⁴ *Id.* at [*514] - Licensure

⁸⁵ [STUDENT NOTE / COMMENT: Crossroads: How the Intersection of Technology, Medicine, and the Law, Impact the Administration of Healthcare in Florida and Puerto Rico, 46 U. Miami Inter-Am. L. Rev. 209](#) at [*219]

⁸⁶ (Rep.). (2016). Retrieved February 1, 2018, from

<https://aspe.hhs.gov/system/files/pdf/206751/TelemedicineE-HealthReport.pdf>

⁸⁷ [ARTICLE:TELEMEDICINE: RX FOR THE FUTURE OF HEALTH CARE, 6 Mich. Telecomm. Tech. L. Rev. 147](#), pg. 7 - Licensure

telemedicine poses, by its very nature, the probability that medicine will be practiced across state lines, state cooperation or federal regulation must be considered.⁸⁸

States also differ on whether and when a provider must physically see a patient to engage in telemedicine services.⁸⁹ These requirements may vary state by state. For example, Georgia and Texas, require an in-person follow-up with the provider after a telemedicine encounter, while Michigan has no such physical encounter restriction.⁹⁰ According to Massachusetts Institute of Technology Professor Amur Gupta, "[this] lack of consensus among states on licensing requirements, and telemedicine licensure requirements in particular, forces health care providers to incur higher business costs in order to meet compliance with differing state statutes."⁹¹

Remarkably, no two states are alike in how telehealth is treated despite some similarities in the policy language used.⁹² For example, some states have incorporated telehealth-related policies into law, while other states address issues within their Medicaid program guidelines.⁹³ States continue to pursue their own unique set of telehealth policies as more and more legislation is introduced each year.⁹⁴

To help facilitate the growing demand for telehealth services in the United States, the Centers for Medicare & Medicaid Services (CMS) included a provision to expand telemedicine coverage.⁹⁵ In October 2017, the Public Health Institute Center for Connected Health Policy (CCHP) released a fifty-state survey of state telehealth laws and Medicaid program policies.

⁸⁸ *Id.* at [*166]

⁸⁹ [ARTICLE: HEALTHCARE LAW: THE PROMISE OF TELEMEDICINE CURRENT LANDSCAPE AND FUTURE DIRECTIONS](#), 96 *MI Bar Jnl.* 38 at [*40]

⁹⁰ *Id.* at [*40]

⁹¹ [COMMENT: LICENSE TO SCREEN: A REVIEW OF THE MEDICAL LICENSURE SCHEMES IMPACTING TELEHEALTH PROLIFERATION IN THE UNITED STATES, THE EUROPEAN UNION, AND AUSTRALIA](#), 32 *Emory Int'l L. Rev.* 317 at [*319]

⁹² State Telehealth Laws and Reimbursement Policies Report. (2017). Retrieved February 17, 2018, from <http://www.cchpca.org/state-telehealth-laws-and-reimbursement-policies-report> – Fifty States, Fifty Approaches

⁹³ *Id.* at Fifty States, Fifty Approaches

⁹⁴ State Telehealth Laws and Reimbursement Policies - A Comprehensive Scan of the 50 States and the District of Columbia. (2017). Retrieved February 17, 2018, from <http://www.cchpca.org/sites/default/files/resources/Telehealth> Laws and Policies Report FINAL Fall 2017 PASSWORD.pdf at Introduction

⁹⁵ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 *DePaul J. Health Care L.* 135 at [*149]

Key findings include (See figure 1):

- **48 states and Washington, DC** provide reimbursement for some form of live video in Medicaid fee-for-service.⁹⁶
- **15 states** provide reimbursement for store-and-forward. **2 states**, Maryland and Oklahoma, have been added since April 2017.⁹⁷
- **21 state** Medicaid programs provide reimbursement for remote patient monitoring (RPM). While one state (OK) added reimbursement for RPM since April 2017, CCHP removed two states from the list due to no evidence of Medicaid programs implementing previously passed laws that included RPM reimbursement, resulting in a net loss of one state.⁹⁸
- Although the practice of restricting reimbursable telehealth services to rural or underserved areas, as is done in the Medicare program, is decreasing, some states continue to maintain this policy. **6 states** currently have some form of a geographic restriction.⁹⁹
- The practice of limiting the type of facility that can serve as an originating site has remained constant, at **23 states**, since April 2017.¹⁰⁰
- **32 state** Medicaid programs offer a transmission or facility fee when telehealth is used. This number has increased since CCHP's April 2017 update.¹⁰¹
- The number of states with private payer laws has increased by two, since April 2017, with **36 states and DC** having laws addressing private payer reimbursement for telehealth.¹⁰²

⁹⁶ State Telehealth Laws and Reimbursement Policies Report. (2017). Retrieved February 17, 2018, from <http://www.cchpca.org/state-telehealth-laws-and-reimbursement-policies-report> – Recent Findings

⁹⁷ *Id.* at Recent Findings

⁹⁸ *Id.* at Recent Findings

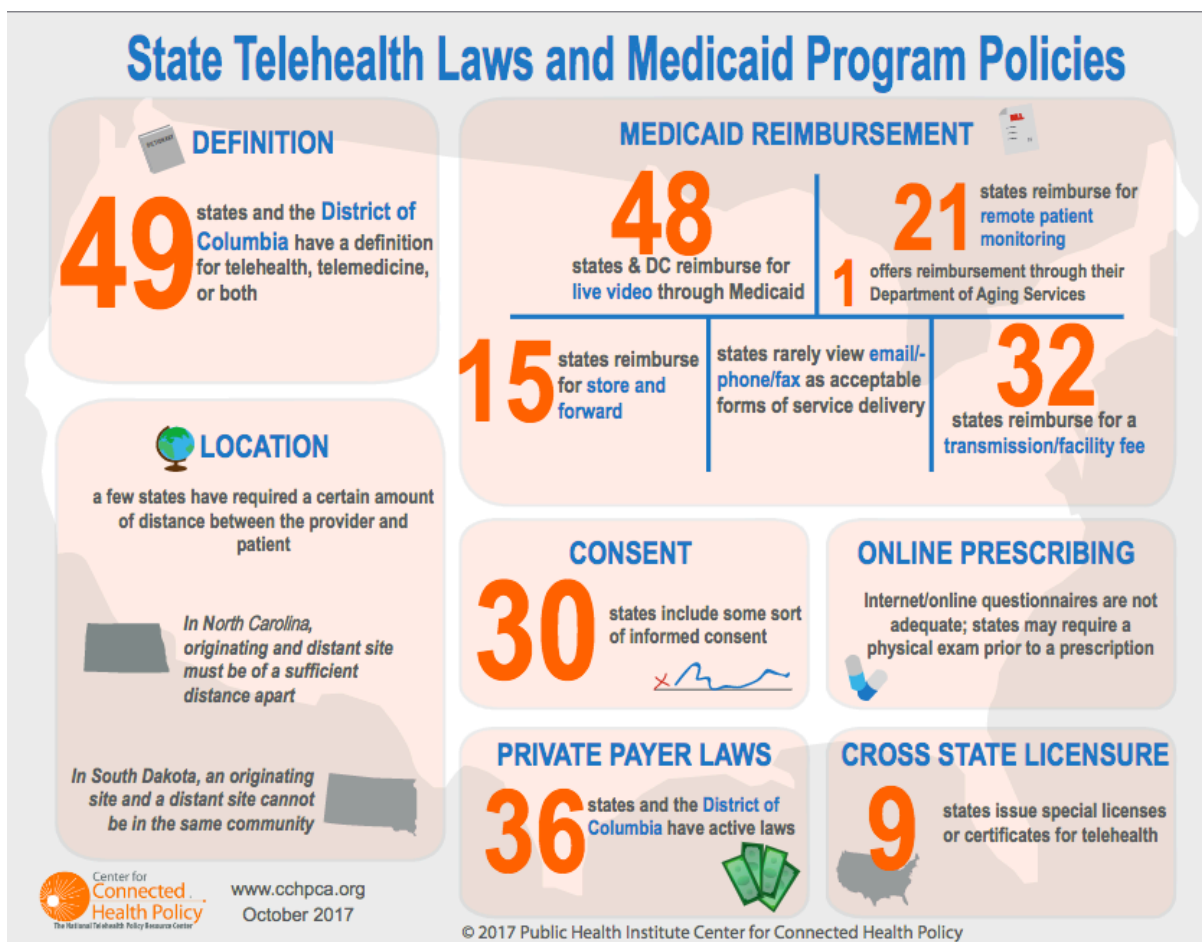
⁹⁹ *Id.* at Recent Findings

¹⁰⁰ *Id.* at Recent Findings

¹⁰¹ *Id.* at Recent Findings

¹⁰² *Id.* at Recent Findings

Figure 1



Source: Public Health Institute Center for Connected Health Policy, (2017)¹⁰³

The federal government plays a limited role in regulating telehealth, and this role is largely constrained to Medicare reimbursement.¹⁰⁴ Though the federal government can limit some aspects of states' ability to regulate health, most decisions regarding health care regulation are left to the individual states.¹⁰⁵ This authority is rooted in each state's general police power to further the health, safety, and welfare of its population, as reserved by the Tenth Amendment to the U.S. Constitution.¹⁰⁶

¹⁰³ State Telehealth Laws and Medicaid Program Policies. (2017, November). Retrieved February 17, 2018, from <http://www.cchpca.org/sites/default/files/resources/50%20states%20summary%20infographic%20Oct%202017%20Final.pdf>

¹⁰⁴ NOTE: Telehealth: Current Barriers, Potential Progress, 76 Ohio St. L.J. 409 at [*428]

¹⁰⁵ COMMENT: Removing Barriers to Telehealth in Oklahoma: Increasing Access to Care and Improving Health Outcomes Across the State, 68 Okla. L. Rev. 805 at [*814]

¹⁰⁶ *Id.* at [*814]

Privacy & Security

The telemedicine industry is especially vulnerable to exposing private patient health information given its reliance on electronic data collection and storage and frequent distant data transfer.¹⁰⁷ Since its enactment in 1996, the Health Insurance Portability and Accountability Act (HIPAA) dictates the privacy and security regulatory framework to protect identifiable patient health information when it is collected and shared by "covered entities" such as healthcare providers and health plans.¹⁰⁸ The HITECH Act of 2009 extends several HIPAA privacy and security requirements to certain "business associates" that "create, receive, maintain, or transmit" identifiable health information while performing a service or function on behalf of a covered entity.¹⁰⁹ Whether a patient-facing telemedicine technology vendor is a HIPAA business associate subject to these regulations is a complex question depending on multiple variables.¹¹⁰ Electronic health records, video storage devices, telemedicine devices, and any other data-generating or receiving device involved in the telemedicine interaction carries the potential to collect and store protected health information.¹¹¹

Technology alone cannot make one HIPAA compliant.¹¹² Human action is required in order to meet the necessary level of compliance that is required.¹¹³ HIPAA does not have specific requirements related to telehealth.¹¹⁴ Therefore, a telehealth provider must meet the same requirements of HIPAA as would be needed if the services were delivered in-person.¹¹⁵ However, to meet those requirements an entity may need to take different or additional steps that may not have been necessary if the service was delivered in-person.¹¹⁶ For example, a tech support person who would not be exposed to protected health information if a practice was strictly in-person may be in a different situation where telehealth is involved because that tech support person may be required to enter an exam room to help with the equipment.¹¹⁷ At the outset, it should be noted that the encroachment upon privacy that results as a consequence of use of technology is a byproduct of what has been termed "self-surveillance."¹¹⁸ The accumulation of private information

¹⁰⁷ [ARTICLE: HEALTHCARE LAW: THE PROMISE OF TELEMEDICINE CURRENT LANDSCAPE AND FUTURE DIRECTIONS, 96 MI Bar Jnl. 38](#) at [*39]

¹⁰⁸ *Id.* at [*39]

¹⁰⁹ *Id.* at [*39]

¹¹⁰ *Id.* at [*39]

¹¹¹ *Id.* at [*40]

¹¹² Telehealth Policy Barriers Fact Sheet. (2016, August). Retrieved February 16, 2018, from http://www.cchpca.org/sites/default/files/resources/Telehealth%20Policy%20Barriers%20Fact%20Sheet%20FINAL_0.pdf, pg. 3 HIPAA/Privacy/Security

¹¹³ *Id.* at pg. 3 HIPAA/Privacy/Security

¹¹⁴ *Id.* at pg. 3 HIPAA/Privacy/Security

¹¹⁵ *Id.* at pg. 3 HIPAA/Privacy/Security

¹¹⁶ *Id.* at pg. 3 HIPAA/Privacy/Security

¹¹⁷ *Id.* at pg. 3 HIPAA/Privacy/Security

¹¹⁸ [ARTICLE: Bridging the Uncompensated Caregiver Gap: Does Technology Provide an Ethically and Legally Viable Answer?, 22 Elder L.J. 399](#) at [*430]

is occurring as a result of the patient's voluntary use of a given device to meet his or her own needs, and is not the result of any intrusion by government or corporate entities.¹¹⁹

INCORPORATING SMART HOME TECHNOLOGY FOR SOCIAL WELFARE

With incorporation of smart home technology to integrate a HCD to monitor the user's activities to provide them with alerts, recommendations, and reminders, the consumer "Internet of Things" is suddenly reality, not science fiction.¹²⁰ Electronic sensors are now ubiquitous in our smartphones, cars, homes, electric systems, health-care devices, fitness monitors, and workplaces.¹²¹ These connected, sensor-based devices create new types and unprecedented quantities of detailed, high-quality information about our everyday actions, habits, personalities, and preferences.¹²² Computer software learns to recognize daily routines.¹²³ In the event of a change in routine, that information is transferred to the call center, which can notify family members and social workers.¹²⁴ Much of this undoubtedly increases social welfare.¹²⁵ With the logic associated with usage of certain household technology, the HCD will have a reasonable profile of the user patient's habits and will be able to identify activity and moods to provide solutions to the assigned user patient.

Smart home technology currently exists in the form of entertainment devices such as smart televisions.¹²⁶ Smart televisions and gaming consoles collect consumer data from the users for the purposes of establishing an account.¹²⁷ They also collect data at myriad data points during television viewing and game play.¹²⁸ The data collected will tell advertisers who is lonely, who is hungry, and, of course, who is interested in the shopping channels. This information may be transmitted to third parties without notice.¹²⁹ For example, Cnet noted in February 2015, that "Samsung's Smart TV privacy policy warns that customers should 'be aware that if your spoken words include personal or other sensitive information, that information will be among the data captured and transmitted to a third party through your use of Voice Recognition'".¹³⁰ Does this method of data collection violate privacy? Privacy is always an individual calculation.¹³¹ Privacy is still important to older users of home monitoring devices, but the calculation may result in a

¹¹⁹ *Id.* at [*430]

¹²⁰ [Article: Regulating the Internet of Things: First Steps Toward Managing Discrimination, Privacy, Security, and Consent](#), 93 *Tex. L. Rev.* 85 at Highlight

¹²¹ *Id.* at Highlight

¹²² *Id.* at Highlight

¹²³ [2015-151101 National Academy of Elder Law Attorneys Journal \(2017\)](#), 53

¹²⁴ *Id.* at 53

¹²⁵ *Id.* at 53

¹²⁶ [ARTICLE: WEATHERING THE NEST: PRIVACY IMPLICATIONS OF HOME MONITORING FOR THE AGING AMERICAN POPULATION](#), 14 *Duke L. & Tech. Rev.* 192 at [*210]

¹²⁷ *Id.* at [*210]

¹²⁸ *Id.* at [*210]

¹²⁹ *Id.* at [*210]

¹³⁰ *Id.* at [*211]

¹³¹ *Id.* at [*219]

different decision.¹³² For elderly users, the ability to be identified and located is an important value if the purpose is to get immediate attention.¹³³ In many cases, the elderly, and particularly the frail or disabled elderly, are willing to downgrade the general expectation of privacy in order to receive the benefits of safety and monitoring technology in the home.¹³⁴

GERIATRIC CARE MANAGEMENT

In the case of monitoring elderly and disabled consumers, the cost of a home health care aide may be excessive or prohibitive, relative to purchasing a small device, even with monthly fees.¹³⁵ Thus, because just the necessary devices may be purchased, the home monitoring system may be more cost-effective as well as more structurally flexible to scale up and down based on individual needs for assistance.¹³⁶ With any burden of expensive chronic illnesses that require constant oversight, telemedicine specifically addresses the needs of elderly patients through remote monitoring of vital signs and accessibility to health professionals through virtual communications.¹³⁷ Further, empirical studies have shown that older individuals value home monitoring devices because such devices allow them to age in place, among other reasons.¹³⁸

Families have attempted to accommodate older family members to remain in their homes as long as possible, and anecdotal accounts of the sacrifices made by "sandwich generation" caregivers have become commonplace.¹³⁹ For example, a caregiver who is over age fifty and must quit their job in order to provide care to a loved one can expect to lose lifetime income and benefits averaging \$303,880.¹⁴⁰ As caregiving is stressful, and caregivers are known to be subject to psychological fatigue and mental health issues, with estimates that as high as seventy percent of those providing care to older adults suffer from clinical depression.¹⁴¹ With use of home monitoring utilizing a HCD for telehealth, this may lessen depression, stress and work for the "sandwich generation" caregivers, and promote success for Geriatric Care Management in the home setting. While an HCD will not replace physical in-home care or meal preparation, it would lessen those custodial duties for the caregiver, and contribute to success with the patient's medication reminders, motivation, and social interaction, providing respite for the caregiver.

¹³² *Id.* at [*219]

¹³³ *Id.* at [*219]

¹³⁴ *Id.* at [*194]

¹³⁵ *Id.* at [*194]

¹³⁶ *Id.* at [*194]

¹³⁷ [ARTICLE: CAN I SKYPE MY DOCTOR? LIMITED MEDICARE COVERAGE HINDERS TELEMEDICINE'S POTENTIAL TO IMPROVE HEALTH CARE ACCESS, 57 B.C. L. Rev. 1813 at \[*1824\]](#)

¹³⁸ [ARTICLE: WEATHERING THE NEST: PRIVACY IMPLICATIONS OF HOME MONITORING FOR THE AGING AMERICAN POPULATION, 14 Duke L. & Tech. Rev. 192 at \[*194\]](#)

¹³⁹ [ARTICLE: Bridging the Uncompensated Caregiver Gap: Does Technology Provide an Ethically and Legally Viable Answer?, 22 Elder L.J. 399 at \[*403\]](#)

¹⁴⁰ *Id.* at [*405]

¹⁴¹ *Id.* at [*405]

Reducing Senior Isolation

“Elder orphans” is a term used by geriatric specialists to describe single seniors with no relatives to help them deal with physical and mental health challenges.¹⁴² Single seniors have always existed, but demographic and social changes have slowly transformed aging America; with the combination of increased longevity, the decline in marriage, the rise in divorce, increased childlessness and family mobility has upended the traditional caregiving support system.¹⁴³ These factors are contributing towards health decline in elder orphans; loneliness has been linked to elevated stress, impaired immune system function, inflammation, high blood pressure, depression, cognitive dysfunction and an earlier-than-expected death in older adults.¹⁴⁴ According to University of Chicago researchers, seniors who expressed feelings of extreme loneliness and social isolation had a 14% higher risk of dying prematurely than socially connected patients.¹⁴⁵ The risk is comparable to that of having a low socioeconomic status, and the lack of social connection serious impact outcomes among the vulnerable Medicare population.¹⁴⁶ Pairing a HCD with activities and interaction offer seniors opportunity to connect with others and prevent feelings of loneliness.

To combat isolation, one nonprofit developed “Virtual Senior Center” software in collaboration with Microsoft, the New York City Department of Aging, and the New York City Department of Technology and Telecommunications.¹⁴⁷ The Virtual Senior Center allows homebound seniors to engage in activities such as discussion groups, video-based classes, face-to-face communication with peers, and wellness classes.¹⁴⁸ User surveys show significant reduction in anxiety, depression, and loneliness.¹⁴⁹ Other social connectedness technologies include senior-friendly social networking websites, easy-to-use email systems, email-to-paper communications systems, easy-to-use videophones, and video conferencing systems.¹⁵⁰

Elder Justice Act

Elder abuse is defined as "intentional actions that cause harm or create a serious risk of harm to another person," (whether or not harm is the intended outcome) and includes such acts as physical

¹⁴² Jayson, S. Alone and Aging: Creating A Safety Net for Isolated Seniors. *Kaiser Health News*. Retrieved April 3, 2018, from <https://khn.org/news/alone-and-aging-creating-a-safety-net-for-isolated-seniors/>

¹⁴³ *Id.*

¹⁴⁴ Graham, J. (2017, May 18). Like Hunger Or Thirst, Loneliness In Seniors Can Be Eased. *Kaiser Health News*. Retrieved May 10, 2018, from <https://khn.org/news/like-hunger-or-thirst-loneliness-in-seniors-can-be-eased/>

¹⁴⁵ Bresnick, J. (2014, February 18). Loneliness in seniors raises premature death risk by 14%. Retrieved April 1, 2018, from <https://healthitanalytics.com/news/loneliness-in-seniors-raises-premature-death-risk-by-14>

¹⁴⁶ *Id.*

¹⁴⁷ 2015-151101 National Academy of Elder Law Attorneys Journal (2017), at [*54]

¹⁴⁸ *Id.* at [*55]

¹⁴⁹ *Id.* at [*55]

¹⁵⁰ *Id.* at [*56]

abuse and neglect, financial exploitation, and mental abuses.¹⁵¹ Smart home technology will help to identify a patient user's mental state, which may lead to identification of elder (or any age) abuse in a home setting by providing activity and health information to a care provider by use of a HCD. This can be achieved by device settings that measure the user's emotional, nutritional, and individual care needs. Ideally for protection of senior citizens, should measurements not meet baseline patient monitoring criteria, it would alert healthcare providers and/or social services to escalate follow up with the HCD user to ensure their health and safety.

ADVANCING ACCESS TO CARE

Access to healthcare by means of technology will engage plan members by means of interactive HCD sessions. Telemedicine today is the confluence of a number of areas, with most of the laws, regulators and professionals sharing the principle that telemedicine's end should be to improve the public good¹⁵². In general, telehealth holds promise as a means of increasing access to care and improving health outcomes.¹⁵³ The use of telemedicine will continue to increase as technology advances and as patients become more tech-savvy.¹⁵⁴ Telemedicine is intriguing to the newest generation of doctors, who see a way to better manage patients with chronic illnesses and expand access to rural areas.¹⁵⁵

By design, telemedicine bridges a gap which enables practitioners to remain in urban areas while the patient lives in a rural town.¹⁵⁶ Proponents of telemedicine argue that technology's integration with health care is a tool that can make accessing care much more convenient for typically underserved populations.¹⁵⁷ By no longer relying on in-person communication, medically underserved patients have better access to previously inconvenient and expensive care.¹⁵⁸ Bridging services through telemedicine is a tremendous leap in advancing access to specialized services; Telepsychiatry, a highly utilized specialty in telemedicine, increases access to care and

¹⁵¹ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 DePaul J. Health Care L. 135 at [*138]

¹⁵² [ARTICLE:TELEMEDICINE: RX FOR THE FUTURE OF HEALTH CARE](#), 6 Mich. Telecomm. Tech. L. Rev. 147 at [*160]

¹⁵³ (Rep.). (2016). Retrieved February 1, 2018, from <https://aspe.hhs.gov/system/files/pdf/206751/TelemedicineE-HealthReport.pdf>, pg. 4 - Importance of Telehealth Services

¹⁵⁴ [ARTICLE: CAN I SKYPE MY DOCTOR? LIMITED MEDICARE COVERAGE HINDERS TELEMEDICINE'S POTENTIAL TO IMPROVE HEALTH CARE ACCESS](#), 57 B.C. L. Rev. 1813 at [*1814]

¹⁵⁵ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 DePaul J. Health Care L. 135 at [*154]

¹⁵⁶ [ARTICLE: H.R. 2068: EXPANSION OF QUALITY OR QUANTITY IN TELEMEDICINE IN THE RURAL TRENCHES OF AMERICA?](#), 11 N.C. J.L. & Tech. On. 99 at [*111]

¹⁵⁷ [ARTICLE: CAN I SKYPE MY DOCTOR? LIMITED MEDICARE COVERAGE HINDERS TELEMEDICINE'S POTENTIAL TO IMPROVE HEALTH CARE ACCESS](#), 57 B.C. L. Rev. 1813 at [*1819]

¹⁵⁸ *Id.* at [*1822]

reduces health disparities across a variety of social and ethnic groups.¹⁵⁹ By reducing travel time, cost, and distance, telepsychiatry increases access to care and reduces mental health disparities for individuals living in rural areas, veterans, and for the incarcerated.¹⁶⁰

Risk Management

One of the biggest issues with telemedicine is that the error rate may be higher than in other medical fields, leading to a decrease in quality.¹⁶¹ Some potential issues are electronic glitches, physician resistance, tricky reimbursement models, and fewer in-person consultations.¹⁶² Without a doubt, technology has limitations.¹⁶³ Computer malfunctions, Internet connection issues, poor video quality, weather complications, power outages, or lack of face-to-face consultation all attribute to a long list of potential lawsuits.¹⁶⁴ With any quality issues in telemedicine, potentially the doctor, hospital, insurance company, the telemedicine program, the internet provider may all be liable.¹⁶⁵ While an in-person exam is often necessary in many situations, there are minor urgent conditions, follow-up, and post-op check-ins that can be successfully completed via telehealth, without a physical exam and without a higher risk of liability.¹⁶⁶

Informed Consent

Telemedicine does not alter the physician's general duty to inform the patient about the intended care, but it actually may require a more regimented approach in advising the patient.¹⁶⁷ As such, the necessity for informed consent may be of a higher order in a telemedical practice because some telemedical applications are still considered experimental or riskier than an in-person consultation or procedure.¹⁶⁸ The process of informed consent occurs when communication between a patient and physician results in the patient's authorization or agreement to undergo a specific medical intervention.¹⁶⁹ Since telemedicine may be perceived as a new method of providing treatment to

¹⁵⁹ [ARTICLE: Rewiring Mental Health: Legal and Regulatory Solutions for the Effective Implementation of Telepsychiatry and Telemental Health Care](#), 17 *Hous. J. Health L. & Pol'y* 21 at [*45]

¹⁶⁰ *Id.* at [*45]

¹⁶¹ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 *DePaul J. Health Care L.* 135, at [*154]

¹⁶² *Id.* at [*154]

¹⁶³ *Id.* at [*154]

¹⁶⁴ *Id.* at [*154]

¹⁶⁵ *Id.* at [*154]

¹⁶⁶ [ARTICLE: TELEMEDICINE: A THERAPEUTIC PRESCRIPTION FOR OUR HEALTH CARE SYSTEM CONTAMINATED BY OLD ECONOMY RULES AND REGULATIONS](#), 17 *N.C. J.L. & Tech. On.* 74 at [*105]

¹⁶⁷ [ARTICLE: TELEMEDICINE: RX FOR THE FUTURE OF HEALTH CARE](#), 6 *Mich. Telecomm. Tech. L. Rev.* 147 at [*189]

¹⁶⁸ *Id.* at [*189]

¹⁶⁹ Informed Consent - Physicians should take certain steps to ensure a patient provides informed consent for recommended treatments. (n.d.). *American Medical Association*. Retrieved April 7, 2018, from <https://www.ama-assn.org/delivering-care/informed-consent>.

patients, it is equally critical that the use of telemedicine be discussed and documented thoroughly.¹⁷⁰

Reducing Risk

Telemedicine allows providers and patients to overcome geographical, temporal, and resource barriers.¹⁷¹ Of special concern are rural individuals who have higher mortality rates; a greater chance of being unnecessarily hospitalized; and have one-third as many specialists per capita as do persons living in cities.¹⁷² By no longer relying on in-person communication, medically underserved patients have better access to previously inconvenient and expensive care.¹⁷³ Providers located in remote or isolated areas also benefit from telemedicine because they are able to remotely consult with other providers to better care for patients in communities where specialists are typically sparse.¹⁷⁴

IMPACT TO HEALTHCARE PROVIDERS

Not long ago, the patient's relationship with his doctor was not merely clinical, but personal as well.¹⁷⁵ There weren't any intermediaries, or providers, or insurance forms.¹⁷⁶ Since that time, health care has changed and many more parties are involved in the delivery of services: the federal and state governments, insurance companies, Medicare, Medicaid, managed care, and the litany of HMOs, IPOs, PPOs, MSOs - providers of care in every size, shape and form.¹⁷⁷ The patient, once the sole focus of the doctors' attention, now must navigate a new regulatory course to obtain the very treatment sought.¹⁷⁸ Telemedicine holds the promise of reuniting the doctor to the patient.¹⁷⁹ Additionally, physician-patient relationships are of the utmost importance, as

¹⁷⁰ [ARTICLE:TELEMEDICINE: RX FOR THE FUTURE OF HEALTH CARE, 6 Mich. Telecomm. Tech. L. Rev. 147 at \[*189\]](#)

¹⁷¹ [ARTICLE: CAN I SKYPE MY DOCTOR? LIMITED MEDICARE COVERAGE HINDERS TELEMEDICINE'S POTENTIAL TO IMPROVE HEALTH CARE ACCESS, 57 B.C. L. Rev. 1813 at \[*1822\]](#)

¹⁷² (Rep.). (2016). Retrieved February 1, 2018, from <https://aspe.hhs.gov/system/files/pdf/206751/TelemedicineE-HealthReport.pdf>, pg. 4 - Importance of Telehealth Services

¹⁷³ [ARTICLE: CAN I SKYPE MY DOCTOR? LIMITED MEDICARE COVERAGE HINDERS TELEMEDICINE'S POTENTIAL TO IMPROVE HEALTH CARE ACCESS, 57 B.C. L. Rev. 1813 at \[*1822\]](#)

¹⁷⁴ *Id.* at [*1822]

¹⁷⁵ [ARTICLE:TELEMEDICINE: RX FOR THE FUTURE OF HEALTH CARE, 6 Mich. Telecomm. Tech. L. Rev. 147 at \[*157\]](#)

¹⁷⁶ *Id.* at [*157]

¹⁷⁷ *Id.* at [*157]

¹⁷⁸ *Id.* at [*157]

¹⁷⁹ *Id.* at [*158]

telemedicine promotes strengthening these relationships for older adults who, more than any other population, seek familiarity, trust, and consistency in physicians who examine them.¹⁸⁰

With telehealth comes an impact to the providers; with some physician resistance to telehealth from doctors that cannot adjust to the use of technology in their practices.¹⁸¹ At times the equipment may be costly, difficult to use, or not readily available.¹⁸² Yet telemedicine is also intriguing to the newest generation of doctors, who see a way to better manage patients with chronic illnesses and expand access to rural areas.¹⁸³ One of the biggest hurdles for physicians, old and young, is the struggle with payment for services when using new telemedicine services; primarily because there has been a slow transition into the payment options.¹⁸⁴ The payment environment is evolving across the public and private sector with a considerable amount of variability from one payer to another.¹⁸⁵ Prior to 2015, coverage of telehealth services had been uneven across payers due in part to uncertainty regarding the value of telehealth and program integrity concerns regarding duplication of services.¹⁸⁶

On April 15, 2015, Congress passed the "Doc Fix" Bill, originally titled Medicare Access and CHIP Reauthorization Act (H.R. 2).¹⁸⁷ "Doc Fix" completely changes the reimbursement system and financing of health care in the United States.¹⁸⁸ The most notable shift is the departure from the traditional fee-for-service model and towards accountable care organizations (ACOs), risk-based payment, and a focus on quality and population health.¹⁸⁹ Even after "Doc Fix," Medicare reimbursement for telemedicine services is limited.¹⁹⁰ Reimbursement for telehealth by Medicaid

¹⁸⁰ Edmondson, T., MD. (2017, May). Long Term Care: Telehealth — An Untapped Opportunity for Nursing Facilities. *Today's Geriatric Medicine*. Retrieved April 6, 2018, from <http://www.todaygeriatricmedicine.com/archive/MJ17p28.shtml>

¹⁸¹ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 DePaul J. Health Care L. 135, at [*154]

¹⁸² *Id.* at [*154]

¹⁸³ *Id.* at [*154]

¹⁸⁴ *Id.* at [*155]

¹⁸⁵ National Conference of State Legislatures. Telehealth policy trends and considerations. December 9, 2015. Washington, DC; Sprague L. Telehealth: Into the mainstream? Issue Brief #853. March 10, 2014. Washington, DC: National Health Policy Forum.

¹⁸⁶ (Rep.). (2016). Retrieved February 1, 2018, from <https://aspe.hhs.gov/system/files/pdf/206751/TelemedicineE-HealthReport.pdf>, pg. 6 - Reimbursement

¹⁸⁷ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 DePaul J. Health Care L. 135 *Id.* at [*149]

¹⁸⁸ *Id.* at [*150]

¹⁸⁹ *Id.* at [*150]

¹⁹⁰ *Id.* at [*155]

and private insurers varies greatly, as do the types of clinical services covered.¹⁹¹ Since 2016, 48 state Medicaid programs now provide some level of telehealth coverage.¹⁹²

Telehealth raises a number of legal concerns, especially regarding cross-state practice and reimbursement.¹⁹³

Credentialing and Privileging

Credentialing and privileging are the processes for verifying the qualifications of providers utilizing their facilities and for defining the scope of services each clinician has the authority to render therein.¹⁹⁴ Telehealth transactions often involve providers communicating from two different hospitals.¹⁹⁵ Therefore, if a health care organization must go through the process of credentialing and privileging every time a new distant site provider is used in a telehealth consultation, this can create a considerable administrative burden.¹⁹⁶ In order to alleviate this burden, The Joint Commission (TJC) issued standards that allow hospitals to “privilege by proxy”, permitting hospitals receiving services to accept the distant site hospital’s credentialing and privileging decisions.¹⁹⁷ Both CMS and the Joint Commission now deem the hospital where a patient is located to have ultimate decision making authority regarding “privileging” for the purposes of care delivered via telehealth.¹⁹⁸

Credentialing by proxy may occur by CMS approved regulations that allow hospitals and critical access hospitals (CAH) to allow a clinic (the originating site) to contract with another hospital, CAH or telemedicine entity (the distant site) to provide services via telehealth and credential those providers by relying on the credentialing work done by the distant site, if certain conditions are met.¹⁹⁹ This creates a faster, more cost effective method for clinics and hospitals to access needed specialty care.²⁰⁰

¹⁹¹ (Rep.). (2016). Retrieved February 1, 2018, from <https://aspe.hhs.gov/system/files/pdf/206751/TelemedicineE-HealthReport.pdf>, pg. 7 - Reimbursement

¹⁹² Thomas L, and Capistrant G (2016). 50 state telemedicine gaps analysis: Coverage and reimbursement. Washington, DC: American Telemedicine Association.

¹⁹³ Telehealth Legal and Regulatory Module. (2018). *Telehealth Resource Centers*. Retrieved March 31, 2018, from <https://www.telehealthresourcecenter.org/legal-regulatory>

¹⁹⁴ (Rep.). (2016). Retrieved February 1, 2018, from <https://aspe.hhs.gov/system/files/pdf/206751/TelemedicineE-HealthReport.pdf>

¹⁹⁵ *Id.*

¹⁹⁶ Credentialing and Privileging. (2018). *Telehealth Resource Centers*. Retrieved March 31, 2018, from <https://www.telehealthresourcecenter.org/toolbox-module/credentialing-and-privileging>

¹⁹⁷ *Id.*

¹⁹⁸ *I* (Rep.). (2016). Retrieved February 1, 2018, from <https://aspe.hhs.gov/system/files/pdf/206751/TelemedicineE-HealthReport.pdf>

¹⁹⁹ Telehealth Policy Barriers Fact Sheet. (2016, August). Retrieved February 16, 2018, from http://www.cchpca.org/sites/default/files/resources/Telehealth%20Policy%20Barriers%20Fact%20Sheet%20FINAL_0.pdf

²⁰⁰ *Id.*

What's Ahead

In coming years, the judicial system may see a staggering rise in telemedicine cases, especially because of the incentives to implement Parity Laws for private insurance coverage of telemedicine.²⁰¹ When it comes to the reimbursement fee structure and coding for billing, there is typically no distinction made between traditional services provided on-site and services provided through means of telemedicine.²⁰² Most states have telemedicine parity laws that say commercial payers must reimburse telemedicine and in-person services comparably, pending legislation in Congress that would expand the kinds of telehealth visits reimbursed by Medicare.²⁰³ State policymakers are increasingly focusing their attention on telehealth.²⁰⁴ Today, 33 states and the District of Columbia have enacted “parity” laws, which generally require health insurers to cover and pay for services provided via telehealth the same way they would pay for services provided in person.²⁰⁵

On February 2, 2018, President Donald Trump signed the Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act into law.²⁰⁶ Targeted at Medicare’s telehealth and telemedicine reimbursement rules, the new law:²⁰⁷

- eliminates geographic restrictions on telestroke consultation services, beginning in 2019;²⁰⁸
- expands telehealth coverage under Medicare Advantage Plan B, beginning in 2020;²⁰⁹
- gives Accountable Care Organizations more flexibility to use telehealth services;²¹⁰

²⁰¹ [ARTICLE: THE BABY BOOMERS ARE BOOMING: THE FUTURE OF NURSING AND HOME HEALTH CARE](#), 18 DePaul J. Health Care L. 135 at [*150]

²⁰² [Comment: Georgia's Telemedicine Laws and Regulations: Protecting Against Health Care Access*](#), 68 Mercer L. Rev. 489

²⁰³ Arndt, R. Z. (2017, November 22). Modern Healthcare. Retrieved December 02, 2017, from <http://www.modernhealthcare.com/article/20171122/NEWS/171129962/telemedicine-is-still-hindered-by-limited-reimbursement>

²⁰⁴ Fact Sheet: Telehealth. (2017, July). *American Hospital Association*. Retrieved March 31, 2018, from <https://www.aha.org/system/files/2018-01/fs-telehealth.pdf>

²⁰⁵ *Id.*

²⁰⁶ Wicklund, E. (2018, February 9). Telehealth, Telemedicine Reimbursement Score Big in New Budget Deal. Retrieved February 17, 2018, from https://mhealthintelligence.com/news/telehealth-telemedicine-reimbursement-score-big-in-new-budget-deal?utm_campaign=Monthly%20Newsletters&utm_medium=email&hsenc=p2ANqtz-9kcNKUon3qINla4pZAb3P5UqW41LyEL6zfSriTyswbL2A4514FOy9I4nE9O-vNz6H2FUcuCUYGx2LN0EUrJNKN-lo3Bw&utm_content=60690228&utm_source=hs_email&hsCtaTracking=744fac52-d0f2-472f-b30c-6452ee2a7172%7C3d429ee7-ea8b-494d-a004-8af21ed851ab

²⁰⁷ *Id.*

²⁰⁸ *Id.*

²⁰⁹ *Id.*

²¹⁰ *Id.*

- adds the patient’s home freestanding dialysis facilities, without geographic restriction, to the list of originating sites for monthly telehealth assessments with a nephrologist, beginning in 2019, though Medicare would not provide a separate originating site payment if the service was conducted at home; and²¹¹
- extends for two years the Centers for Medicare & Medicaid Services’ Independence at Home demonstration, which establishes home-based primary care teams for Medicare beneficiaries with multiple chronic conditions and increase the cap on the total number of participating beneficiaries from 10,000 to 15,000.²¹²

CONCLUSION

Technologies that allow collecting and storing data and connecting systems make it possible to move from reactive care towards preventive and personalized care, and it will be more and more so in the future.²¹³ Telehealth personalization to engage the patient user, whether a senior citizen or another age group, will allow for concurrent daily benefit for both the patient and their healthcare providers. With my recommendation of the Health Companion Device (HCD), a telehealth inspired interactive companion product, I aspire for the healthcare industry to create standards for provision of and daily use of companion devices, utilizing existing mHealth app data transfer technology to connect HCDs for remote patient monitoring, assistive technologies, artificial intelligence (AI), and proactive solutions to cultivate a “partner” for patient users.

As the healthcare industry advances in use of telehealth to manage their individual members’ care for services that do not require an in-person visit, the proposed HCDs will work in concert with providers to keep users on a path towards health goals. For seniors with chronic conditions, this may allow for aging in place with the comforts of home and the satisfaction of freedom and independence from regular trips for medical appointments. Health Care laws and regulations will need to evolve with the emergence of the potential HCDs to ensure oversight by government programs to provide HIPAA security protections to patient users of HCDs.

²¹¹ *Id.*

²¹² *Id.*

²¹³ Mesko, B. (n.d.). Technologies Change Health Insurance: The Most Innovative Ventures. Retrieved March 7, 2018, from <http://medicalfuturist.com/technologies-change-health-insurance-innovative-ventures/>