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Telemedicine: The Solution to the Opioid Crisis?

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INTRODUCTION

On an average day in the United States, "more than 650,000 opioid prescriptions [are] dispensed"; 3,900 people start using prescription opioids recreationally; 580 people begin using heroin and "116 people...die from opioid-related drug overdoses."[1] The opioid addiction epidemic recently transitioned from urban cities to rural areas that already face many barriers to care.[2] While the government has created several grant programs to target rural areas, more efforts are needed to engage these rural areas in opioid prevention, treatment, and recovery.[3] This paper demonstrates the constraints and practicality of one method of care that the government should utilize: telemedicine.

Telemedicine allows doctors to evaluate, diagnose, and treat patients using digital communication.[4] Previously an underutilized treatment method, telemedicine is quickly becoming a mainstream healthcare program.[5] Telemedicine is a useful alternative to traditional methods of healthcare because it eliminates barriers to care through live interactions with patients that aren't in close proximity to quality medical care.[6] Telemedicine uses live two-way interaction to connect a patient in a rural area,

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[1] U.S. DEP'T OF HEALTH & HUMAN SERVS., *The Opioid Epidemic: By the Numbers* 1 (June 2016), http://www.hhs.gov/sites/default/files/Factsheet-opioids-061516.pdf [hereinafter *The Opioid Epidemic*].

[2] Christine Hancock et al., *Treating the Rural Opioid Epidemic*, NAT'L RURAL HEALTH ASS'N POL'Y BRIEF 1 (2017), https://www.Ruralhealthweb.org/NRHA/media/Emerge_NRHA/Advocacy/Policy%20documents/Treating-the-Rural-Opioid-Epidemic_Feb-2017_NRHA-Policy-Paper.pdf.

[3] *Id.* at 2.

[4] *Trendwatch: The Promise of Telehealth for Hospitals, Health Systems and Their Communities*, AM. HOSP. ASS'N 3 (Jan. 2015) [hereinafter *Trendwatch: The Promise of Telehealth for Hospitals*]; *Trends in Telehealth*, NTT DATA 1, 5 (2014), http://americas.nttdata.com/Industries/Industries/Healthcare/~/media/Documents/White-Papers/Trends-in-Telehealth-White-Paper.pdf [hereinafter *Trends in Telehealth*].

[5] *See* Lisa Rannefeld, *The Doctor Will E-mail You Now: Physicians' Use of Telemedicine to Treat Patients Over the Internet*, 19 J.L. & HEALTH 75, 77-79 (2005) (stating that the government has used telemedicine since the 1960s, such as by NASA to monitor the health of astronauts in space).

[6] *See Trendwatch: The Promise of Telehealth for Hospitals, supra* note 4, at 4, 7 (explaining that recent studies have found that 74% of US consumers would use telehealth services; 76% of patients prioritize access to care over the need for human interaction with a healthcare provider; 70% of patients are comfortable communicating with their health care providers through technology, in lieu

or area lacking in specialty physicians, with physicians in other areas.[7] Many doctors in rural areas are basic primary care physicians lacking knowledge about addiction therapy.[8] Telemedicine can train primary care physicians to handle emergency overdose situations, and help patients reach specialists in other areas to ensure their recovery from opioid addiction.[9]

This paper discusses the advantages that telemedicine provides toward helping those affected by opioid addiction, while also addressing the legal barriers that could prohibit telemedicine from becoming a widespread practice in combatting opioid addiction. Part I provides a detailed analysis of the opioid epidemic and its impact on individuals and communities. Part II discusses widespread rural opioid use, and rural vulnerabilities to medical access and telemedicine concerns. Part III examines telemedicine and the different modalities utilized by telemedicine. Part IV considers the legal barriers to telemedicine implementation, including physician licensure, reimbursement, HIPAA, and online prescribing. Part V discusses both short- and long-term treatment options for opioid addiction and overdose. Finally, part VI provides suggestions about how the government could facilitate widespread implementation, and proposes models that would best effectuate the use of telemedicine.

I. THE OPIOID EPIDEMIC

While opioids are a single class of drugs, they encompass a variety of equally potent substances that are highly addictive, including heroin.[10] Heroin use stems from prescription opioid use; many users switch to heroin because of its low price and ease of attainment.[11] Heroin is dangerous because of the drug's addictiveness, as well

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of seeing them; 30% of patients already use computers or mobile devices for medical or diagnostic information); *see also* Fred Pennic, *Survey: 76% of Patients Would Choose Telehealth Over Human Contact* (Mar. 8, 2013), http://hitconsultant.net/2013/03/08/survey-patients-would-choose-telehealth-over-human-contact/ (stating that 76% of patients would choose telehealth over human contact and 21% of patients prefer an email consultation with a doctor).

[7] *See Trendwatch: The Promise of Telehealth for Hospitals, supra* note 4, at 3 (stating telemedicine traditionally uses these three modalities of care, each with their own distinct applications within the telehealth industry).

[8] Christine Hancock et al., *supra* note 2, at 2-3.

[9] U.S. DEP'T OF HEALTH & HUMAN SERVS., AGENCY FOR HEALTHCARE RES. & QUALITY, *Increasing Access to Medication-Assisted Treatment of Opioid Abuse in Rural Primary Care Practices* (2016), http://www.ahrq.gov/professionals/systems/primary-care/increasing-access-to-opioid-abuse-treatment.html (last visited Nov. 6, 2017) [hereinafter *Increasing Access*].

[10] NAT'L INST. ON DRUG ABUSE, U.S. DEP'T OF HEALTH & HUMAN SERVS., *Opioids*, https://www.drugabuse.gov/drugs-abuse/opioids (last visited Nov 6, 2017).

[11] Nora D. Volkow, NAT'L INST. ON DRUG ABUSE, NAT'L INST. OF HEALTH., *America's Addiction to Opioids: Heroin and Prescription Drug Abuse* (May 14, 2014), https://www.drugabuse.gov/about-nida/legislative-activities/testimony-to-congress/2016/americas-addiction-to-opioids-heroin-prescription-drug-abuse (last visited Nov.6, 2017) (estimating that more than 100 million people suffer from chronic pain in this country—where opioid therapy is a common treatment—and the bulk of Americans who need relief from persistent moderate-to-severe non-cancer pain have back pain conditions); *see also* Dr. Sanjay Gupta, *Doctors Must Lead Us Out of Our Opioid Abuse Epidemic*, CNN (June 2, 2016), http://www.cnn.com/2016/05/11/health/sanjay-gupta-prescription-

as the uncontrolled varieties of purity injected by abusers.[12] Often combined with other drugs, heroin use exacerbates the likelihood of a lethal injection.[13] Heroin has historically been viewed as an urban problem that affects largely metropolitan areas, but recently heroin use has spread to small towns and rural areas due to its increasing availability.[14]

Heroin has always been viewed as a dangerous drug, but other prescription drugs also pose significant risks of overdose. Prescription opioids are a class of drugs that include powerful pain relievers such as oxycodone, hydrocodone, codeine, morphine, and others.[15] These drugs interact with opioid receptors in the brain, and are usually safe for short-term use when monitored by a doctor.[16] However, they produce euphoria and pain relief, which lead to recreational abuse.[17] Regular use produces dependence and, sometimes, fatal overdoses.[18] Although many people take prescription opioids responsibly, the CDC asserts that "some of the increased demand for prescription painkillers is from people who use them nonmedically."[19]

Perhaps the newest, and deadliest, member of the opioid addiction family is fentanyl. Fentanyl is a synthetic opioid pain reliever that is used to treat severe pain, and most commonly prescribed to cancer patients.[20] Fentanyl is "50 to 100 times [more potent] than morphine" and "30 to 50 times more potent than heroin."[21] Now produced as a street drug, fentanyl is sold in powder form and frequently mixed with other substances.[22] "Like heroin, fentanyl works by binding to the body's opioid receptors," and stimulating the brain's reward system.[23] While this can create a sense of euphoria and relaxation,

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addiction-doctors-must-lead/ (demonstrating that 80% of heroin users start off using prescription pain pills before switching to heroin).

[12] *Id.*

[13] *Id.*

[14] *Id.*

[15] Volkow, *supra* note 11.

[16] *Id.*

[17] *Id.*

[18] *See id.* (finding that Vicodin and Oxycontin are the two most frequently abused drugs; one in twelve high school seniors reported recreational use of Vicodin in 2010 and one in twenty reported using Oxycontin).

[19] *See* Nat'l Ctr. for Injury Prevention & Control, Ctrs. for Disease Control and Prevention, *Opioid Painkiller Prescribing: Where You Live Makes a Difference*, (2014), http://www.cdc. gov/vitalsigns/opioid-prescribing/ (showing that providers wrote a quarter of a billion opioid prescriptions in 2013, which is enough prescriptions for every American to have their own bottle of pills).

[20] Nat'l Inst. on Drug Abuse, Nat'l Inst. of Health, *Fentanyl*, (2016) https://www.drugabuse.gov/publications/drugfacts/fentanyl (last visited Nov. 6, 2017).

[21] *Fentanyl vs. Morphine*, The Recovery Village: Personalized Addiction Treatment, https://www.therecoveryvillage.com/fentanyl-addiction/related-topics/fentanyl-vs-morphine/#gref (last visited Dec. 12, 2017).

[22] *Id.*

[23] *Id.*

these opioid receptors also control breathing rate.[24] High doses of fentanyl can cause breathing to stop completely.[25] This is especially common when fentanyl is mixed with other substances, such as heroin.[26] Many fentanyl overdoses occur when a person purchases what they believe to be pure heroin, but in fact, the heroin is laced with fentanyl.[27]

The impact of opioid abuse is debilitating to victims, their families, and the communities it affects.[28] The "health and social costs related to prescription opioid abuse each year" total around $55 billion; $20 billion is spent annually on emergency visits and "inpatient care for opioid [overdoses]".[29] Workplace costs amount to an average of $25.6 billion, health care costs account for $25 billion, and criminal justice costs total around $5.1 billion.[30] Workplace costs encompass lost earnings due to employee's premature death and reduced compensation/lost employment for those suffering from addiction.[31] Health care costs consist of excess medical and prescription costs.[32] Criminal justice costs arise from correctional expenses and police cost. Overall, these totals constitute a significant economic burden to society.[33]

II. RURAL OPIOID ABUSE

Rural areas are especially prone to and impacted by opioid addiction and overdose. Researchers attempting to understand the differences between rural and urban recreational opioid use identified four factors to explain the pattern.[34] The first factor is increased availability in rural areas.[35] There is an increased rate of per capita sales of opioids in rural areas, especially those areas rich with manual labor industries.[36] Because of the physicality of labor and mining occupations, locations with a high concentration of these occupations frequently report higher rates of opioid prescriptions.[37] The

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[24] *Id.*

[25] *Id.*

[26] *Fentanyl, supra* note 20.

[27] *Id.*

[28] *Ex-DEA Agent: Opioid Crisis Fueled by Drug Industry and Congress*, CBS NEWS (Oct. 17, 2017, 10:12 AM), https://www.cbsnews.com/news/ex-dea-agent-opioid-crisis-fueled-by-drug-industry-and-congress/.

[29] *The Opioid Epidemic, supra* note 1, at 1.

[30] *See* Howard G. Birnbaum et al., *Societal Costs of Prescription Opioid Abuse, Dependence, and Misuse in the United States* 12 PAIN MED. 657, 657 (2011) (estimating total US societal costs of prescription opioid abuse).

[31] *Id.* at 657.

[32] *Id.* at 660-665

[33] *Id.*

[34] Katherine M. Keyes et al., *Understanding the Rural Urban Differences in Nonmedical Prescription Opioid Use and Abuse in the United States*, 104 AM. J. PUB. HEALTH 52, 55 (Feb. 2014), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3935688/.

[35] *Id.* at 54-55.

[36] *Id.* at 54.

[37] *Id.* 54-55.

second factor is out-migration of young people.[38] These rural areas do not have strong economic infrastructure; thus, many high functioning youths migrate elsewhere, leaving young adults whom are more likely to have drug dependencies in a less-than-thriving economy.[39] The third factor is social network.[40] Rural areas tend to have stronger familial networks, which can lead to faster dispersing of prescription drugs to non-medical users; these close knit ties could lead to increased distribution of prescription drugs to potential non-medical users.[41] Given that prescription drugs are commonly received from a family member, close family ties could exacerbate opioid dispersion.[42] The fourth factor is structural stress of modern rural living.[43] The effects of economic downturns, such as poverty and unemployment, correlate with opioid drug use because this population is more likely to have jobs that require manual labor.[44] Laborers within rural areas are less likely to proactively adapt to the market, thus increasing the number of people seeking drugs when the economy shifts or plunges.[45]

Telemedicine is useful in rural areas not only because of the higher likelihood of opioid abuse, but also because of existing barriers facing doctors and patients. Some doctors in rural areas are not trained to handle complex addiction and overdose issues.[46] Similarly, patients within rural areas encounter barriers to care due to the distance from medical care, limited number of overall physicians, and lack of doctors specifically trained to treat opioid addiction.[47] Telemedicine mitigates these barriers because it serves rural patients at a lower cost, and cuts down on time traveled to receive specialized care. Telemedicine has been referred to as a medical solution that allows doctors to "have one foot in the city [while] being able to live and practice out in a rural area."[48] Telemedicine would allow patients to receive the necessary treatment for addiction while remaining in their communities.

While the benefits of successful telemedicine implementation are countless, rural communities suffer from a lack of resources that could potentially derail the success of this initiative.[49] One barrier to successful implementation includes the lack of necessary

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[38] *Id.*

[39] Keyes, *supra* note 34.

[40] *Id.*

[41] *Id.*

[42] *Id.*

[43] *Id.* at 55.

[44] Keyes, *supra* note 34.

[45] *Id.*

[46] Christine Hancock et al., *supra* note 2, at 2.

[47] J.T. Ripton & C. Stefan Winkler, *How Telemedicine is Transforming Treatment in Rural Communities*, BECKER's (Apr. 8, 2016), http://www.beckershospitalreview.com/healthcare-information-technology/how-telemedicine-is-transforming-treatment-in-rural-communities.html (last visited Nov. 6, 2017).

[48] *Id.*

[49] *See id.* (Stating rural hospitals are also struggling; forty-eight rural hospitals closed since 2010, and another 283 are in danger of closing, according to the National Rural Health Association. The issues affecting rural health areas are reduced populations, higher percentage of uninsured patients,

broadband infrastructure for telemedicine.[50] Rural communities likely have less sophisticated technology that could derail the effectiveness of telemedicine services.[51] Real-time interactions require strong, high-speed connections such that telehealth could significantly benefit from robust broadband connectivity.[52] Broadband networks are more expensive to customers in rural areas because customers are forced to bear additional costs resulting from implementation in rugged terrain and undeveloped electronic systems.[53] While remote correspondence may be an alternative, if the connection is spotty due to a weak broadband connection, then the services lose their value.[54] Despite potential barriers, rural areas could benefit from telemedicine due to the unique factors contributing to increased opioid abuse.

III. THE INS-AND-OUTS OF TELEMEDICINE

i. Telemedicine Modalities

The World Health Organization defines telemedicine as:

> the delivery of health care services, where distance is a critical factor, by all health care professionals using information and communications technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities.[55]

Some distinguish telehealth and telemedicine by defining telemedicine as applying only to remote physician care, and telehealth as applying to all remote health care services.[56] For the purpose of this article, the terms are synonymous and used interchangeably.[57]

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underused equipment, absence of specialty services, and shortage of doctors willing to work in rural areas).

[50]   *See id.*; *see generally* David Pratt, *Telehealth and Telemedicine in 2015*, 25 ALB. L.J. SCI. & TECH. 495, 511-13 (2015), http://www.albanylawjournal.org/Documents/Articles/25.3.495-Pratt.pdf (illustrating a significant gap in a key policy area for telehealth, broadband connectivity).

[51]   *Id.* at 513.

[52]   Dale C. Alverson, *Broadband Connectivity*, *in* THE ROLE OF TELEHEALTH IN AN EVOLVING HEALTH CARE ENVIRONMENT 21-22 (Tracy A. Lustig rapporteur, Nat'l Acad. Press 2017), http://www.ic4n.org/wp-content/uploads/2014/06/IoM-Telehealth-2012-Workshop-Summary.pdf; Rick Schadelbauer, SMART RURAL COMMUNITY, *Anticipating Economic Returns of Rural Telehealth* (March 2017), http://www.frs.org/images/AnticipatingEconomicReturnsOfRuralTelehealth.pdf.

[53]   Schadelbauer, *supra* note 52, at 6.

[54]   *Id.*

[55]   WORLD HEALTH ORG., *A Health Telematics Policy in Support of WHO's Health-For-All Strategy for Global Health Development,* 10–16 (1998), http://apps.who.int/iris/bitstream/10665/63857/1/WHO_DGO_98.1.pdf.

[56]   Kara Kaufman, *Is There a Difference Between Telehealth, Telemedicine and Telecare?* (Jan. 3, 2017), https://www.e-idsolutions.com/difference-telehealth-telemedicine-telecare/ (last visited Nov 6, 2017).

[57]   *What is Telehealth?* CTR. FOR CONNECTED HEALTH POL'Y, http://www.cchpca.org/what-is-telehealth (last visited Nov. 6, 2017).

There are three service modalities offered by telemedicine. One modality is real-time, live, two-way interaction between a patient and a health care provider.[58] This is used to consult, diagnose, and treat patients through audiovisual technology;[59] think of this program as "skyping" your doctor instead of an in-person visit. Another is store-and-forward.[60] Store-and-forward involves the transfer of a patient's health history through a secured electronic communication system to a health care provider;[61] this mode of communication transmits information from one physician to another, likely a specialist, for aid in diagnosis or treatment.[62] The third modality is remote patient monitoring, which involves the collection of a patient's personal health and medical data through electronic communication.[63] The data is collected and then transmitted to a health care provider in a different location, allowing the provider to continue tracking the patient's progress once they have been moved home or to another facility.[64]

Recent emphasis on technology and the rise of technological advancements have furthered the use and innovation of telemedicine. Although telemedicine has been a part of the healthcare conversation for years, the recent dependence on computers and smartphones has expanded potential patient access.[65] Telemedicine holds promise of revitalizing the healthcare industry, but many issues such as licensing, reimbursement, variation of state and federal laws, and concerns about quality act as potential barriers to the mainstream application of telemedicine services.[66]

IV. BARRIERS TO TELEMEDICINE IMPLEMENTATION

While telemedicine is a very useful healthcare alternative, there are several barriers to care outlined in the section below. These barriers include Medicaid/Medicare reimbursement, online prescribing, physician licensure and telehealth security.

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[58] *Id.* (explaining that this modality can be used for simple doctor's visits, but is also available for video conferencing to connect emergency providers with medical specialists in other locations).

[59] *Id.*

[60] *See id.* (showing, for example, the patient or referring health professional sends an e-mail with a description of a medical case to an expert who later sends back an opinion regarding diagnosis and optimal case management strategies; also showing that store-and-forward allows doctors to send x-rays, MRIs, photos and patient data to other medical professionals for aid in diagnosis).

[61] *Id.*

[62] *Id.*

[63] *What is Telehealth?*, *supra* note 57 (information that can be monitored includes vital signs, weight, heart rate, blood pressure, etc).

[64] *Id.*

[65] *See generally* Mohammad Bajwa, *Emerging 21st Century Medical Technologies*, 30 PAK. J. MED. SCI. 649, 649-50 (2014), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4048524/ (illustrating the computing activities capable by smart phones).

[66] *Id.* at 653.

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i. Medicaid/Medicare Reimbursement

Telemedicine methods hold great promise, but the $75 billion question is: How will we pay for it?[67] This question is exacerbated by the ambiguity in reimbursement protocol. Medicaid reimbursement is largely dictated by state determinations of what services will be covered.[68] Due to the flexibility afforded to states, almost every state Medicaid program has some form of coverage for telehealth services, but this coverage is largely piecemealed together.[69] Only a few modalities are generally covered by Medicaid reimbursement; live video interactions are most frequently covered, while store–and–forward and remote patient monitoring are seldom covered.[70] Some states go even further to require that telemedicine reimbursement is only available in rural areas.[71] Telemedicine parity laws could streamline services covered by reimbursement and make the process more uniform and concise.

While Medicaid reimbursement is piecemealed together, Medicare reimbursement is further lacking in uniformity. Medicare reimbursement was limited to rural areas through the Benefits Improvement and Protection Act (BIPA).[72] BIPA provided Medicare coverage to beneficiaries of telehealth medicine, receiving services from rural area facilities, defined as counties not located in Metropolitan Statistical Areas.[73] The BIPA definition severely inhibited the use of telemedicine in non-rural areas, given that these areas may suffer from physician shortages and lack of access to specialty care.[74] The Centers for Medicare & Medicaid Services (CMS) amended, "the definition of 'rural' to include facilities in a rural census tract."[75] Similarly, "BIPA listed five types of provider settings that may serve as originating sites."[76] The sites referenced in the statutes include hospitals, physician offices, critical access hospitals, rural health clinics, and federally qualified health centers.[77]

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[67] *The Opioid Epidemic, supra* note 1, at 1. The estimated annual impact of opioid addiction is around $75 billion.

[68] Latoya Thomas & Gary Capistrant, AM. TELEMEDICINE ASS'N, 50 State Telemedicine Gaps Analysis: Coverage & Reimbursement 1, 4 (Jan. 2016), https://higherlogicdownload.s3.amazonaws. com/AMERICANTELEMED/3c09839a-fffd-46f7-916c-692c11d78933/UploadedImages/Policy/ State%20Policy%20Resource%20Center/Coverage%20-%202016_50-state-telehealth-gaps-analysis—coverage-and-reimbursement.pdf.

[69] *Id.* at 3.

[70] *Id.* at 14-15.

[71] *Id.* at 8.

[72] Medicare Reimbursement, CENTER FOR TELEHEALTH AND E-HEALTH LAW (2014), http://ctel.org/ expertise/reimbursement/medicare-reimbursement/.

[73] *Id.*

[74] *Trendwatch, Realizing the Promise of Telehealth: Understanding the Legal and Regulatory Challenges,* AM. HOSP. ASS'N 2 (May 2015), http://www.aha.org/research/reports/tw/15may-tw-telehealth.pdf [hereinafter *Realizing the Promise of Telehealth*].

[75] *Id.; see also* 42 C.F.R. § 410.78(b)(4) (2016) (defining rural census tract of a metropolitan statistical area, and applying the most recent Goldsmith Modification); *see also* Benefits Improvement and Protection Act of 2000 (BIPA).

[76] Medicare, Medicaid & SCHIP Benefits Improvement & Protection Act of 2000 § 511.

[77] *Id.*

Congress also expanded the definition of originating sites in the 2008 Medicare Improvements for Patients and Providers Act[78] to account for additional telehealth facilities.[79] These include community mental health centers, skilled nursing facilities, and hospital- and community-based dialysis centers.[80] Access to telehealth services is further limited because CMS narrowly defines coverage. BIPA defines acceptable telehealth services as professional consultations, office visits, office psychiatry services, and any additional services specified by the Secretary.[81] However, CMS approves Medicare telehealth service codes on a case-by-case basis, which has proven to be stringent.[82] In 2015, only 75 of more than 10,000 physician services receiving Medicare coverage qualified for telehealth reimbursement.[83] Telemedicine services covered by Medicare are further limited because only specific technology modalities are approved.[84] BIPA provides that Medicare may only cover, "telehealth services provided by a real-time video-and-voice telecommunications system."[85] Despite the growing evidence of benefits from store-and-forward and remote patient monitoring services,[86] Medicare does not cover those services.[87]

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[78] *See* Medicare Improvements for Patients & Providers Act of 2008, Pub. L. No. 110-275, 122 Stat. 2494 (July 15, 2008) (amending Section 1834(m)(4)(C)(ii) of the Social Security Act, 42 U.S.C. § 1395m(m)(4)(C)(ii), by adding hospital-based or critical access hospital-based renal dialysis centers, skilled nursing facilities, and community mental health centers).

[79] *Realizing the Promise of Telehealth*, *supra* note 74.

[80] *Id.*

[81] *Telehealth Services and the Medicare Program*, MEDPAC (2016), http://www.medpac.gov/docs/default-source/reports/chapter-8-telehealth-services-and-the-medicare-program-june-2016-report-.pdf?sfvrsn=0. *See* 42 U.S.C. § 1395m(m)(4)(F)(i) (2017) (defining telehealth service as "professional consultations, office visits, and office psychiatry services, and any additional service specified by the Secretary").

[82] *Realizing the Promise of Telehealth*, *supra* note 74 (describing the limited telehealth services covered by Medicare by code). *See* 42 U.S.C. § 1395m (defining HCPCS code as "a code under the Health Care Common Procedure Coding System (HCPCS); *see also* CY 2015 List of Services Payable under the Medicare Physician Fee Schedule when Furnished via Telehealth, http://www.cms.gov/Medicare/Medicare-General-Information/ Telehealth/Telehealth-Codes.html.

[83] *Realizing the Promise of Telehealth*, *supra* note 74. CMS approves new Medicare telehealth services on a case-by-case basis by individual Current Procedural Terminology (CPT) or the Healthcare Common Procedure Coding System (HCPCS) code.

[84] *See Advancing Telehealth Through Connectivity: Hearing Before the Subcomm. on Communications, Technology, Innovation, & the Internet of the S. Comm. on Commerce, Science, & Transportation*, 114th Cong. 99-102 (2015) (introducing the statement of the American Hospital Association as explaining that three traditional modalities of telehealth include real-time, store-and-forward, and remote patient monitoring).

[85] *Realizing the Promise of Telehealth*, *supra* note 74. *See id.* (defining the telehealth modality "real-time" as a live, two-way interaction between a patient and health care provider using audiovisual technology, "store-and-forward" as involving the transmission of a patient's recorded health history through a secure system to a health care provider, and "remote patient monitoring" as involving the collection of a patient's personal and medical health data that allows providers to continue tracking the patient's data once the patient has been released).

[86] *Id.* at 99 (explaining that store-and-forward technologies are beneficial for patients requiring specialty care when providers are not available locally because a specialist can remotely access the patient's data).

[87] *Realizing the Promise of Telehealth*, *supra* note 74.

There is potential to simplify Medicaid/Medicare licensure of telehealth services through implementation of the following initiatives. States could provide more comprehensive Medicare coverage and payment policies for telehealth services in order to increase patient access.[88] Similarly, states could eliminate geographic requirements, expand the types of covered services, simplify the process to expand covered services by type rather than service code, and include store-and-forward and remote patient monitoring systems for Medicaid reimbursement.[89] Telehealth is a rapidly developing field and simplifying licensure would contribute to an efficient increase in patient access to telehealth services. Similarly, Medicare/Medicaid reimbursement issues are important to overcome given the large number of people dependent on covererage and Congressional ability to change procedures.

ii. Online Prescribing

Even when a physician receives reimbursement for telemedicine services, prescribing medication across state lines presents another obstacle for telehealth providers. Some state laws require a physician to establish a patient-physician relationship before prescribing medication.[90] The goal of a state law requiring a patient-physician relationship prior to the prescription of medication is to ensure that online prescribing does not succumb to fraud and abuse by providers.[91] To achieve this goal, most states require that, prior to prescribing medication, a physician must establish a physician-patient relationship.[92] States requiring a physician-patient relationship assert that a physical examination must be performed prior to prescribing; what specifically constitutes a physical examination is not clarified by most state statutes.[93] Twenty states allow a physical examination to be performed via electronic or telehealth communication.[94]

Each state's approach tends to vary, interpreting physical examination requirements on a narrow to broad spectrum. However, many states prohibit prescribing based solely on the information about a patient that is gathered in an initial online questionnaire.[95] Other states attempt to regulate online prescribing through pharmacy laws providing pharmacists with the authority to decline prescriptions that don't have an established

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[88] *Id.* at 14.

[89] *Id.*

[90] *Id.* at 8.

[91] *Id.*

[92] *Id.*; *See also Model State Legislation: Telemedicine Act,* AM. MED. ASS'N 1 (2017), https://www.ama-assn.org/sites/default/files/media-browser/specialty%20group/arc/AMA-Issue-Brief-Model-State-Telemedicine-Bills.pdf (requiring a physician-patient relationship to safeguard the use of telemedicine).

[93] *Model State Legislation, supra* note 92, at 1-2.

[94] *Realizing the Promise of Telehealth, supra* note 74, at 8. (explaining that Maryland allows the physical examination to use real-time auditory communications to create the exchange of information between the patient and physician and to facilitate a physician-patient relationship for reimbursement purposes); *see also* MD. Code Regs. § 10.32.05.05 (explaining the same).

[95] *Internet Prescribing Language,* FED'N OF STATE MED. BDS. (2012). States prohibiting prescribing based on online questionnaire include Arizona, Arkansas, California, Florida, Hawaii, Idaho, Indiana, Kentucky, Louisiana, Maine, Maryland, Michigan, New Hampshire, New York, Oregon, Texas, Utah, Washington.

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physician-patient relationship.[96] The American Medical Association (AMA) sought to create legislation that provides guidelines on how to practically establish a patient-physician relationship through telemedicine.[97] The model legislation requires a "face-to-face interaction to establish a patient-physician relationship, if the same would be required to provide treatment to a new patient in-person."[98] According to the AMA, twenty-one states are considering adoption of this legislation in their state legislatures.[99]

iii. Licensure

Another barrier to widespread telemedicine use is ambiguity in licensure laws. Each state has its own physician licensure requirements, creating understandable anxiety for a physician looking to provide telemedicine services across state lines.[100] The various approaches to licensure law create a grey area regarding applicability to patients in different states. There are three different solutions to this barrier. The first is reciprocity, whereby states enter into agreements that allow for recognition of licenses issued by other states.[101] Recognition of out-of-state licenses is akin to reciprocity of drivers' licenses.[102] If a doctor is licensed in one state, another state is able to reciprocally accept the licensure from the originating state and allow the physician to practice without further inquiry into the physician's credentials.[103] Another option is licensure by endorsement.[104] Although not accepted in many states, licensure by endorsement allows an out-of-state physician to obtain an in-state license based on the physician's home state requirements[105] Typical requirements for licensure by endorsement include good standing and possession of a full and unlimited license to practice in the physician's home

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[96] *Realizing the Promise of Telehealth, supra* note 74, at 8-9.

[97] *Id.* at 9.

[98] *Id. See Model State Legislation, supra* note 92, at 1-2 (explaining that the legislation: (1) outlines steps to establish physician-patient relationship, (2) confirms treatment and recommendations are held to the same standard of care as in-person consultations, (3) requires technological face-to-face examination(s) prior to diagnosis and treatment, and (4) clarifies that health professionals must follow state and federal laws for informed consent, privacy, fraud and confidentiality).

[99] *Realizing the Promise of Telehealth, supra* note 74, at 9.

[100] *See* Daniel J. Gilman, *Physician Licensure and Telemedicine*, 14 J. HEALTH CARE L. & POL'Y 87, 89-90 (2011) (stating that the primary functions of medical boards are to protect patients from incompetent physicians and protect physicians from out-of-state competition).

[101] Telemedicine, AM. ACAD. OF FAMILY PHYSICIANS, https://www.aafp.org/dam/AAFP/documents/advocacy/health_it/telehealth/BKG-Telemedicine.pdf. See also Thomas & Capistrant, supra note 68, at 4 (explaining that D.C., Maryland, New York and Virginia are the only states that allow licensure reciprocity from bordering states, and ten other states extend a conditional license to an out-of-state physician).

[102] *Id. See also* Heather A. Daley, *Telemedicine: The Invisible Legal Barriers to the Health Care of the Future*, 9 ANNALS HEALTH L. 73, 92 (2000).

[103] *Id.*

[104] Licensure By Endorsement, FED'N OF STATE MED. BDS. (1995), https://www.fsmb.org/Media/Default/PDF/FSMB/Advocacy/1995_grpol_Licensure_by_Endorsement.pdf (defining endorsement as a process whereby a state issues an unrestricted license to practice medicine to an individual who holds a valid and unrestricted license in another jurisdiction).

[105] *Id.*

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state.[106] Endorsement allows physicians to obtain licenses in states where they wish to provide services, yet still requires the out-of-state physician to apply for licensure—a sometimes burdensome process.[107]

The third and most promising licensure application is an interstate compact. The Federation of State Medical Boards (FSMB) oversees state medical licensure to ensure an effective licensing system.[108] FSMB "[d]elegates unanimously passed a resolution to develop an Interstate Compact to expedite physician licensure and facilitate multistate practice."[109] For a state to join the compact, their state legislature must enact the compact into state law.[110] The compact allows physicians to obtain a license to practice in the states that adopt the compact, while the Interstate Commission provides oversight and administration over the compact.[111] A minimum of seven states must enact the Interstate Medical Licensure Compact for its operation to begin;[112] as of January 2016, the Compact was implemented in twelve states, including: Alabama, Idaho, Illinois, Iowa, Minnesota, Montana, Nevada, South Dakota, Utah, West Virginia, Wisconsin and Wyoming.[113] While the Interstate Compact is fully operational in those states, other states should continue to enact the necessary legislation to reap the benefits of the compact.

Congress could simplify physician licensure process by synchronizing state laws to increase physician licensure, easing licensure approval for nurse practitioners and physician assistants, increasing the flexibility in what qualifies as a physical examination for the purpose of online prescribing, and clarifying medical malpractice rules. The interstate compact offers the easiest and most efficient physician licensure program; by simplifying the process, more state involvement would increase physician licensure and reciprocity, thereby supporting the compact's growth and success.

iv. Telehealth Security

Telehealth is extremely useful, but also has potential to create a large amount of electronic health records.[114] Thus, physicians must be especially agile in keeping the information private and secure.[115] There are specific issues under both the Health Insurance

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[106] *Id.*

[107] *Id.*

[108] *Realizing the Promise of Telehealth, supra* note 74, at 6. (stating that the Federation of State Medical Boards is an organization representing seventy medical and osteopathic boards of the US and territories; in 2012, it received a three-year grant to study physician licensure and portability).

[109] *Id.*

[110] *Id.*; *Expanding Access, Protecting Patients: The Interstate Medical Licensure Compact*, INTERSTATE MED. LICENSURE COMPACT (2016), http://www.licenseportability.org/wp-content/uploads/2016/01/InterstateCompactJan19_2016.pdf.

[111] *Realizing the Promise of Telehealth, supra* note 74, at 6.

[112] *Id.*

[113] *Expanding Access, supra* note 109.

[114] *See* Barbara Fox, *Mobile Medical Apps: Where Health & Internet Privacy Meet*, 14 HOUS. J. HEALTH L. & POL'Y 193, 214-15 (2014) (defining protected recorded information, and discussing how a patient's personal information can be protected as technology continues to evolve).

[115] *Realizing the Promise of Telehealth, supra* note 74, at 10.

Portability and Accountability Act (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH) concerning telehealth security.[116] Because telehealth encompasses both visual and audio electronic communication, there are significant risks concerning the unauthorized disclosure of a patient's information to someone other than the patient/physician.[117] While there are existing protocols and procedures in hospitals and physicians' offices to protect against HIPAA violations, they should be modified to ensure effective identification of patients involved in telehealth.[118] Hospitals participating in information sharing with other hospitals should create shared responsibility protocols for securing and managing health information.[119] Such protocols should address data breach notification and reporting, and the verification of secured information.[120]

Given that telehealth programs rely on multiple information systems to correspond and transfer information, it may be difficult to know when a breach of data occurs.[121] Similarly, electronic transmissions are vulnerable to interference, signal errors, or outages that may result in varied communications and potential loss of private information.[122] When recognizing the use of programs for telehealth interactions, hospitals should consider a few issues: "whether the data should be maintained as part of the medical record (such as whether video recordings of patient should be saved or if the record sufficiently documents the content)";[123] "whether the state laws require that data be maintained as part of the record under HIPAA (some states use HIPAA as a starting point and impose restrictive state requirements also)";[124] and "[w]here data that are included as part of a patient's medical record...[is] secured."[125] Providers must maintain increased oversight and awareness of these particular security issues to ensure adequate patient protection in the midst of proliferating telehealth capabilities.[126]

V. HOW TO TREAT THE OPIOID ADDICTION

Assuming that telemedicine issues can be tackled, it is important to apply these methods to opioid addiction treatment practices. Opioid addiction has several proven methods of treatment that are most effective; thus, telemedicine strategies should be tailored to effectively implement these treatment methods.

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[116] *Id.*

[117] *Id.*

[118] *Id.*

[119] *Id.*

[120] *Realizing the Promise of Telehealth, supra* note 74, at 10.

[121] *Id.*

[122] *Id.*

[123] *Id.* at 10-11.

[124] *Id.* at 11.

[125] *Id.*

[126] *Realizing the Promise of Telehealth, supra* note 74, at 11.

i. The Quick Fix

Naloxone, also known as Narcan, is a life-saving drug for opioid addicts. The drug is capable of saving an addict's life in the event that they overdose.[127] Naloxone works by counteracting the depression of the central nervous and respiratory systems, allowing the overdosed individual to breathe normally.[128] Symptoms of an opioid overdose include excessive sleepiness, shallow or stopped breathing, small pupils, and unresponsiveness.[129] Naloxone treats the overdose for about twenty to ninety minutes, so it is a short-term solution until the victim is taken to an emergency room.[130] Traditionally administered by emergency personnel, it may be prescribed to known opioid abusers or prescribed opioid users so that their family members can administer it in the event of an emergency.[131] Naloxone can be injected into the muscle or vein, or sprayed into the nose, thus providing a quick life-saving intervention.[132]

ii. Long-term Solutions

While administering naloxone is the first step in saving an addict's life, long-term treatment is necessary to ensure patient recovery. The most effective long-term treatment method is Medication Assisted Treatment (MAT).[133] MAT is a comprehensive opioid addiction treatment that includes medication assistance for detoxification and maintenance.[134] MAT is more effective than singular detoxification or abstinence treatments for "reducing the frequency and [amount] of opioid use, [limiting] the risk of overdose, improving social functioning, and decreasing [both] criminal activity and [spreading of diseases]."[135] It combines both medication and psychological counseling to tackle the physical and emotional elements of addiction.[136] Medication is used to block the effects of opioids, "reduce the craving for other opioids, and/or mitigate

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[127] *Understanding Naloxone,* HARM REDUCTION COAL. (2016), http://harmreduction.org/issues/overdose-prevention/overview/overdose-basics/understanding-naloxone/.

[128] *Id.*

[129] *Recognizing Opioid Overdose,* HARM REDUCTION COAL. (2016), http://harmreduction.org/issues/overdose-prevention/overview/overdose-basics/recognizing-opioid-overdose/.

[130] WORLD HEALTH ORG., *Management of Substance Abuse, Information Sheet on Opioid Overdose* (Nov. 2014), http://www.who.int/substance_abuse/information-sheet/en/ [hereinafter *Management of Substance Abuse*]. *See Understanding Naloxone, supra* note 126 and accompanying text (explaining that one way to counter the effects of opioid overdose is with a specific, temporary, injectable solution).

[131] *Understanding Naloxone, supra* note 126.

[132] *Id.* There is a risk of re-overdose when naloxone is administered because it triggers withdrawal from opioids; overdose patients must be immediately taken to the emergency room to prevent re-overdose. *Management of Substance Abuse, supra* note 129.

[133] *See* OFF. OF NAT'L DRUG CONTROL POL'Y, EXEC. OFF. OF THE PRESIDENT, *Medication-Assisted Treatment for Opioid Addiction* 3-4 (Sept. 2012) (stating that, due to the likelihood of relapse using other treatments, MAT may be the best approach to treatment).

[134] *Id.*

[135] *Increasing Access, supra* note 9, U.S. DEP'T OF HEALTH & HUMAN SERVS., AGENCY FOR HEALTHCARE RES. & QUALITY, *Medication-Assisted Treatment Models of Care for Opioid Use Disorder* 1 (Feb. 2016) [hereinafter *Medication-Assisted Treatment Models*].

[136] *Medication-Assisted Treatment Models, supra* note 135, at 1-2.

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the [debilitating] symptoms of opioid withdrawal."[137] Psychological interventions include addressing the contributing emotional factors that led to addiction with "individual therapy, group counseling, family behavior therapy," and assessment of other psychiatric needs.[138]

MAT is not used universally because application requires a medical intervention that few physicians are qualified to administer.[139] In many rural areas, there is often not a single MAT prescriber available.[140] Even in addiction settings, MAT is severely underutilized, with only about one-third of rural providers capable of administering MAT treatments.[141] MAT is a key component of optimal treatment strategies for opioid addiction; creating access in rural areas and knowledge of its benefits is crucial to opioid rehabilitation and prevention.[142] Many doctors who utilize this treatment in metropolitan areas have specialty training to administer MAT to opioid patients. But in rural areas, most doctors are primary care physicians who lack both the certification required to dispense the medication and the training to administer psychological counseling. Widespread training of physicians to provide ease of access to MAT could help millions of rural patients and slow the epidemic of overdose deaths.[143]

VI. RECOMMENDATIONS

Many persisting problems make telemedicine potentially unfeasible for combatting the opioid epidemic, but there are several potential solutions that may improve access to the tool. Below are changes and new services that would aid telemedicine in becoming an effective practice and overcoming the legal barriers to widespread enactment.

i. Naloxone Prescribing

Described above as a 'quick fix,' naloxone is a potential lifesaver for those experiencing overdose,[144] but there are substantial barriers to its administration. Though typically prescribed by a physician to known opioid abusers or prescribed opioid users, recently,

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[137] *Id.*

[138] *Id.* at 1-2.

[139] *See* Hancock et al., *supra* note 2, at 2, 4 (2017) (stating that in order to prescribe the most common MAT medication, buprenorphine, physicians must complete a training course and receive a waiver from the DEA; therefore, those physicians lacking the ability to participate in MAT prescribing are unable to prescribe such medications necessary for the treatment).

[140] *See id.* at 4 (reporting that in 2016 only 38.7% of rural counties had a physician with a DEA waiver and in 41.3% of those counties there was only one provider with a waiver).

[141] *See id.* (stating that in 2016, only 56% of providers nationwide were capable of administering MAT treatment).

[142] *See id.* at 6-7 (recommending the elimination of reimbursement, funding, training, and licensure barriers that prevent the wider use of MAT in rural areas).

[143] *Cf. id.* at 1, 4 (reporting that over 2.5 million Americans suffer from opioid addiction and MAT has shown to be an effective treatment).

[144] *See* NAT'L INST. ON DRUG ABUSE, NAT'L INST. OF HEALTH, *Opioid Overdose Reversal with Naloxone (Narcan, Evzio)* (Sept. 2016), https://www.drugabuse.gov/related-topics/opioid-overdose-reversal-naloxone-narcan-evzio (stating that naloxone was designed to rapidly reverse the effects and restore normal breathing, as an opioid antagonist).

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other health care individuals have claimed an interest in prescribing naloxone.[145] Pharmacists are key providers that could vastly affect access to naloxone.[146] Some states have amended their state codes, allowing pharmacists to prescribe naloxone without the oversight of a physician if they first complete a training and safety course.[147] A few states have already implemented online and in-person training programs that equip the pharmacist with the knowledge to recognize an overdose and to explain naloxone use to family or friends of an addict, thereby ensuring proper administration.[148] Other states have implemented a standing order, providing pharmacists with the ability to dispense naloxone under the order of the Physician General.[149] Despite some states' proactive efforts in expanding pharmacists' prescribing rights, there are still many states that have not adequately addressed pharmacists' rights to prescribe naloxone.[150]

Many pharmacists are confused about their authority to prescribe naloxone, leading many addicts to go without the drug's protection because of inconsistent regulations. Most states still require pharmacists to receive training to obtain naloxone prescribing capacity.[151] A training course is the perfect opportunity for states to utilize telemedicine.[152] The training could provide front line healthcare providers the opportunity to directly communicate with victims of opioid addiction, and save lives while abusers await treatment. States can use telemedicine as a vehicle to provide training in areas where there is not a mandated online course. This is especially useful in rural areas, where pharmacists do not have the ability to travel long-distance for training courses.

The most effective mode of telemedicine training would be a live, two-way communication where a training representative would speak with the pharmacist, or store the program and send it to the pharmacists for training at their own accord. Thereby, telemedicine would allow more pharmacists to receive training for naloxone prescribing and facilitate better access to the life-saving drug.

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[145] *See id.* (stating that in some states "[l]aw enforcement, EMS, and community-based naloxone distribution programs can apply to be a Qualified Purchaser" and provide naloxone).

[146] *See* Gerald Gianutsos, *Expanding Access to Naloxone: Role of the Pharmacist,* U.S. PHARMACIST (Oct. 1, 2016), https://www.uspharmacist.com/ce/expanding-access-to-naloxone-role (reporting that forty-one states now allow naloxone to be administered by pharmacists without a prescription).

[147] *Id.*

[148] *See Training for Pharmacists to Prescribe Naloxone is Now Available,* STATE OF CONN. DEP'T OF CONSUMER PROTECTION, *www.ct.gov/dcp/cwp/view.asp?Q=570138.; See New Naloxone Training Program for Pharmacists Take Aim at Opioid Epidemic,* AM. PHARMACISTS ASS'N, https://www. pharmacist.com/new-naloxone-training-program-pharmacists-takes-aim-opioid-epidemic.

[149] *Examples of Successful Advocacy Efforts in Different Settings Around the World,* NALOXONEINFO. ORG, http://naloxoneinfo.org/case-studies/standing-orders (last visited Nov. 12, 2017).

[150] *See id.* (reporting that over half of the states have standing order procedures for naloxone).

[151] *See* Gianutsos, *supra* note 145.

[152] *See* Susan D. Hall, *Future Physicians Need Telemedicine Education, Training,* FIERCEHEALTHCARE (Dec. 11, 2015, 10:56 AM), https://www.fiercehealthcare.com/it/future-physicians-need-telemedicine-education-training (stating that telemedicine training is now a key part of medical education, and educators can help prepare new physicians by having them practice remote evaluations).

Potential barriers to this training program include funding and certification. While all states require pharmacists to receive training before prescribing naloxone, states would have to approve the use of telemedicine for an online training and traditional payment methods through this medium. To be a qualified training program, the telemedicine program would also have to possess DEA certification.[153] Certification requires approval of the course before introduction to pharmacists, which might incur additional time and resources.

ii. MAT Training

The government is increasingly aware of the MAT treatment's efficiency, leading it to issue several funding grants for the program. Yet the treatment program must be even further expanded to reach additional vulnerable communities. The Agency for Healthcare Research and Quality (AHRQ) currently seeks to expand MAT access and funding to explore the best methods for providing MAT to rural areas.[154] The AHRQ MAT access program was announced on July 15, 2016; it will provide $12 million over a 3-year period to facilitate access to MAT in rural areas.[155] The organization specifically targets Muskogee County, Oklahoma.[156] This area has ten opioid-related deaths per one-hundred thousand citizens every year, and no primary care physicians capable of providing MAT.[157] AHRQ will use "patient-controlled smart phone apps and remote training with Project ECHO."[158] Project ECHO is a telehealth program that links academic specialists to primary care providers working in rural communities.[159] The program hopes to provide a MAT model applicable to other rural communities facing access barriers.[160] Together, AHRQ and Project ECHO "will build a blueprint for how other communities and primary care teams can overcome the barriers of providing MAT and ensure access to care across America's rural communities."[161]

A common theme among successful existing and expected grant programs is an established network of trained doctors who coordinate areas that lack certain specialties.[162] This model could also be used to connect trained specialists with rural primary care physicians if a solid network is established. Many predominantly rural states have access to local academic hubs. For example, Alabama has the University of Alabama in Birmingham, Mississippi has the University of Mississippi in Jackson, and

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[153] *See Hancock* et al., *supra* note 2, at 2, 4 (noting that MAT treatments have been limited because physicians are required to gain a waiver from the DEA to prescribe buprenorphine).

[154] *Increasing Access, supra* note 9.

[155] *See id.* (stating the grant money would go towards four programs meant to expand access, training, and primary care physicians who can perform MAT).

[156] *Id.*

[157] *Id.*

[158] *Id.*

[159] *Id.*

[160] *Increasing Access, supra* note 9.

[161] *Id.*

[162] *See e.g., id.* (explaining that several academic, government and provider partnerships will provide training by experienced MAT physicians in Pennsylvania, North Carolina, Colorado, and Oklahoma to providers in rural areas to expand access to MAT).

Georgia has both Emory University and University of Georgia in Atlanta and Athens, respectively. Because these academic hubs possess high levels of healthcare knowledge, they are capable of facilitating training in rural communities. Academic campuses could implement telemedicine to train rural physicians on MAT procedures, providing a higher level of care to opioid patients.

Despite rural doctors' lack of training as addiction specialists, with the help of academics and doctors at these large medical universities and hospitals, doctors could be trained on best practices and treatment methods without leaving their offices. Telemedicine offers both face-to-face interaction (helpful for advice and consultations) and store-and-forward (allowing primary care providers in rural areas to share information through a secure network).[163] Utilization of academic hubs would provide a sense of community and sharing of best practices, while also training the doctors to effectively treat patients in communities that are susceptible to opioid overdose.

If states do not want to undertake the daunting task of training doctors, nurses could bridge the gap in a physician/patient telemedicine transaction. When a physician uses telemedicine to virtually connect with the patient, they could request the presence of a nurse local to the patient during the appointment. That doctor could then direct the nurse to administer in-person care to the patient, and write prescriptions online.[164] Thus, in-person physical presence would not be required for patient care. This model was adopted by many hospitals in emergency and intensive care situations.[165] The model could be applied to opioid addiction treatments as long as the physician using telemedicine is trained in MAT, and the facility can appropriately establish an electronic communication connection.[166]

iii. Reimbursement Efficiency

MAT and other treatments that designate medication use in conjunction with telemedicine may have limited promise due to their inability to meet current reimbursement requirements. One of the largest Medicare reimbursement issues facing physicians using telemedicine is the "patient-provider relationship", which must be established before medication is prescribed.[167] Given that medication is crucial for MAT to be effective, the relationship barrier to reimbursement is of ultimate importance. One way of combatting

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[163] *What is Telehealth? supra* note 57.

[164] *See supra* Section IV(ii).

[165] *See e.g., Telemedicine Consultations Significantly Improve Pediatric Care in Rural Emergency Rooms*, UCDavis Health, (Aug. 8, 2013), https://www.ucdmc.ucdavis.edu/publish/news/newsroom/7757 (reporting that University of California, Davis is seeing improved outcomes in pediatric patients staying at rural hospitals that consult with UC Davis because providers at rural hospitals are able to consult with specialists and adjust orders accordingly).

[166] *See e.g.,* Jess White, *1st 'Virtual Hospital' Cares for Patients Using Telemedicine*, Healthcare Bus. & Tech. (Sept. 16, 2016), http://www.healthcarebusinesstech.com/virtual-hospital-telemedicine/ (reporting that the Mercy Hospital, located in St. Louis, is a $54 million facility staffed entirely by providers who evaluate patients remotely, using live, two-way correspondence to monitor vital signs through iPads).

[167] *See* Ctr. for Connected Health Pol'y, *State Telehealth Laws and Reimbursement Policies* 4-5 (July 2013) [hereinafter *State Telehealth Laws and Reimbursement Policies*] (reporting that

the barrier is by using a model similar to that of Baptist Health Foundation Corbin. In their recent grant award, which created "ten school-based health centers and two primary care sites," the Foundation stationed nurses and doctors at each center and site to establish a physician-patient relationship, thereby facilitating treatment and ensuring reimbursement coverage kicks in.[168]

The Baptist Health Foundation Corbin grant currently exists only in Kentucky, but other states could adopt the same model. Different schools and primary care facilities across the state could serve as hubs for doctors to establish a relationship with the patient, thereby satisfying the on-going relationship requirement for online prescribing.[169] After completing the first consultation, patients will have a relationship with the physician and their telehealth services and prescribing rights will continue to be covered under traditional Medicare reimbursement strategies.[170]

Another way that this initial visit and continuing relationship could be satisfied is by funding mobile physician units to travel throughout a state and meet with patients in need of care. This would take the form of a blood-mobile: physicians would drive through a state, meet with those facing opioid addictions, and give them the necessary initial care that would enable future telemedicine correspondence.[171] The mobile unit could travel a few days a month, and provide services to cities that are easily accessed by rural area patients.

Although mobile platforms still require rural patients to travel to-and-from mobile units, proper platform distribution could cut down on how far patients have to travel. Additionally, this model facilitates physician-patient interaction by establishing a patient-physician relationship and an understanding of telemedicine services. After the initial visit takes place and a relationship is formed, patients can then use telemedicine from the comfort of their own homes and engage in MAT while also receiving Medicare coverage for the services.[172] The telemedicine services would require state funding and

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most states require more than an online questionnaire to establish the necessary patient-provider relationship for writing prescriptions).

[168] Anne Mayberry, *USDA Announces Telemedicine Funding to Address Opioid Epidemic in Appalachia*, U.S. DEP'T OF AGRIC. (June 30, 2016), http://www.usda.gov/wps/portal/usda/usdamedi afb?contentid=2016/06/0155.xml (proceed to usda.gov; follow the hyperlink to "media"; insert the title of this source in the search bar).

[169] *See id.* (reporting that Virginia will use its USDA grant money to incorporate telemedical projects and mobile units that will canvass counties providing on-site care); *see also State Telehealth Laws and Reimbursement Policies*, *supra* note 167, at 4-5 (illustrating most states consider internet/online questionnaires inadequate, while not all states require in-person examination).

[170] *Cf. Realizing the Promise of Telehealth*, *supra* note 74, at 9 (adopting the position by the American Medical Association allowing a telemedicine consultation to be sufficient enough to create the patient-physician relationship necessary for prescribing privileges).

[171] *See e.g.,* Mayberry, *supra* note 167 (explaining that University of Virginia will establish two mobile units to provide care and consultations to patients in rural areas).

[172] *See Realizing the Promise of Telehealth*, *supra* note 74, at 2 (stating that Medicare originating sites are limited to: "hospitals;" "the office of a physician or other practitioner;" "critical access hospitals (CAHs);" "rural health clinics (RHCs);" and "federally qualified health centers

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direction, and would focus on the areas of need in each state to ensure that physicians strategically reach the most fragile patients.

Opioid patients can use mobile units to not only provide a patient-physician relationship, but also to provide direct telemedicine use to those without access. The University of Virginia (UVA) implemented a model where two mobile health units canvassed six counties in need while providing on-site care and telemedicine video conferencing with doctors and specialists.[173] The mobile units bring nurses and technology to vulnerable areas, and allow direct telemedicine correspondence with physicians in other locations. UVA previously used mobile units equipped with telehealth services to reach over 50,000 patients in more than forty medical specialties, including psychiatry and diabetes.[174] The mobile units traveled to over 150 sites, and saved patients an estimated 16.1 million miles of travel.[175] Application of this model to the opioid crisis would capitalize on previous telehealth success to reach patients struggling with opioid addiction in rural areas.

The UVA model allows doctors to be virtually present, but physically absent. Both of these mobile unit options provide a broad range of potential benefits: they provide access to those in rural areas; decrease travel time for those without access to providers in their area; limit workforce time missed by providing access in rural areas or nearby towns; provide telemedicine services to those that might not have access to technology in their own homes; allow comprehensive explanations of telemedicine and the process to ensure effective use and understanding of the technology; and provide care to patients struggling with opioid addiction in order to hopefully limit the number of repeat users who experience an overdose.[176] While this model may lower costs because doctors do not need to be physically present on the mobile unit, it still presents online prescription reimbursement issues.

VII. CONCLUSION

There are many barriers to service that make the expansion of telemedicine a daunting and seemingly impossible task. The issues of reimbursement, licensure, and online prescribing are not only concerning, but they also elucidate issues with the legislative process that could take time to sort out. The nature of telemedicine and its correlating technological concerns also create a potential barrier to HIPAA support. Furthermore, because rural areas are a specific target, minimal infrastructure and broadband support also pose feasibility issues. If telemedicine is used to treat the opioid epidemic, there

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(FQHCs)"). *But see id.* at 14 (reporting the American Medical Association Model law suggesting that telemedicine reimbursement be expanded and more uniform across the individual states).

[173] Mayberry, *supra* note 167.

[174] *UVA Receives Federal Grant to Fight Southwest Virginia Opioid Epidemic*, NBC (July 11, 2016, 9:22 AM), http://www.nbc29.com/story/32414957/uva-receives-federal-grant-to-fight-southwest-virginia-opioid-epidemic.

[175] *Id.*

[176] Bonnie Darves, *Telemedicine: Changing the Landscape of Rural Physician Practice*, NEW ENGLAND J. OF MED. CAREER CTR. (May 17, 2013), http://www.nejmcareercenter.org/article/telemedicine-changing-the-landscape-of-rural-physician-practice; *see also* Mayberry, *supra* note 168.

would need to be cooperation and correspondence between physicians and providers, and a network of specialists created to aid rural physicians with administering this multi-faceted treatment. While the barriers are notable and there are questions surrounding the ability of Congress to resolve these issues, there is still promise that this medium could be used as a solution to the opioid epidemic.