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COMPREHENSIVE REVIEW OF TELEHEALTH LAW AND LITERATURE
Implications for Future Policy and Patients

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ABSTRACT

PURPOSE: The purpose of this Capstone is to determine whether telehealth is effective at producing positive health outcomes, and what the current status of state telehealth law is in the United States and how can the law be changed to improve the implementation and use of telehealth services. **METHODS:** A literature review of PubMed was used to find articles relating to telehealth and its effectiveness. A law review of each state's telehealth and telemedicine laws was conducted using Westlaw. **RESULTS:** The literature review uncovered that telehealth has the potential to produce positive health outcomes for a variety of conditions and settings. The law review revealed that each state is truly unique in its adoption and implementation of telehealth. Whether it is defining telehealth or telemedicine, determining reimbursement, or establishing licensure and consent requirements, no two states are the same. **CONCLUSION:** Telehealth does produce positive health outcomes and is beneficial for public health. However, more studies should be conducted to determine when telehealth interventions should be used and for what conditions to provide the best care for patients. In addition, telehealth law varies state to state, making it difficult for providers and attorneys to determine and advise what is required of providers that want to practice using telehealth. Uniform telehealth law should be created to help reduce confusion and encourage the use of telehealth.

Keywords: telehealth, telemedicine, effective, beneficial, public health, positive health outcomes, law, reimbursement, licensure, consent

INTRODUCTION

SPECIFIC AIMS:

For my Capstone, I want to address the legal aspect of telehealth and determine whether telehealth is beneficial to public health. If telehealth is not beneficial to patients, then further laws and regulations should prohibit the acceptance and use of telehealth. However, if telehealth is beneficial to patients, then I will analyze what policy makers can do to help implement telehealth. Therefore, my three main specific aims are:

Specific Aim 1: To evaluate whether telehealth is effective at producing positive health outcomes.

Specific Aim 2: To determine what laws, at the state level, exist regarding telehealth.

Specific Aim 3: To evaluate the strengths and weaknesses of state telehealth law and make policy recommendations.

RESEARCH QUESTIONS:

Research Question 1: Is telehealth effective at producing positive health outcomes?

Research Question 2: What is the current status of state telehealth law in the United States, and how can the law be changed to improve the implementation and use of telehealth services?

OBJECTIVES:

Objective for Specific Aim 1: Review the literature on telehealth by searching PubMed and determine the overall consensus on telehealth to see if telehealth is effective at producing positive health outcomes. Whether telehealth is effective at producing positive health outcomes will be based on each study's outcome(s) and whether the study was successful at achieving the results that were desired. For example, if the study examines whether telehealth helps increase positive eating habits, and the researchers found that telehealth did, then I would put telehealth was

effective at producing a positive health outcome. I will also create a chart of the studies, and include: the year, the author(s), the title, the objective of the study, the study's finding(s), the study's conclusion(s), and other relevant information about the study (bias, number of participants, location of the study, etc.).

Objective for Specific Aim 2: I will review all 50 US states' statutes regarding its telehealth laws by searching Westlaw. I will examine and create a chart regarding how each state defines telehealth, whether Medicaid covers telehealth services, whether private insurance will cover telehealth services, licensure requirements, consent requirements for using telehealth, and unique features about the state's law.

Objective for Specific Aim 3: I will evaluate the strengths and weaknesses of state telehealth law and make policy recommendations.

RATIONALE FOR THE REVIEW:

As a health care law attorney that practices in the State of Nebraska, several health care provider clients have asked about telehealth and what they can and cannot do for patients in and out of the state of Nebraska. Since there is no uniform law for telehealth and each state has different laws and requirements when it comes to telehealth, there is no easy answer for these providers.

The reason I chose to examine telehealth law was to help make some of these questions easier to answer for providers and attorneys. Before I reviewed the current state of telehealth law in the United States and made recommendations to help the implementation and use of telehealth, I wanted to make sure that telehealth actually produced positive health outcomes. Therefore, I did a literature review of telehealth and a review of telehealth law in the United States.

BACKGROUND AND LITERATURE REVIEW

The practice of telehealth dates back to the 1800s when the telegraph and telephone were invented (Olson & Thomas, 2017). Telecardiology usage, which used telephones to send heart rhythms to distant physicians, was documented in the early 1900s (Olson & Thomas, 2017). Many modern telehealth programs stemmed from programs like telestroke, which was implemented in the 1990s (Olson & Thomas, 2017). As of 2013, 50% of the hospital systems in the United States used telehealth in some form or another (Marcoux & Vogenberg, 2016). Telehealth has also reached the retail market, with national companies such as Walgreens launching their own telehealth programs and applications (apps) directly to consumers (Marcoux & Vogenberg, 2016).

Telehealth has several definitions. The American Telemedicine Association defines, “telehealth” and “telemedicine” as:

Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patients' health status. Closely associated with telemedicine is the term "telehealth," which is often used to encompass a broader definition of remote healthcare that does not always involve clinical services. Videoconferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education and nursing call centers are all considered part of telemedicine and telehealth. Telemedicine is not a separate medical specialty. Products and services related to telemedicine are often part of a larger investment by health care institutions in either information technology or the delivery of clinical care. Even in the reimbursement fee structure, there is usually no distinction made between services provided on site and those provided through telemedicine and often no separate coding required for billing of remote services. Telemedicine encompasses different types of programs and services provided for the patient. Each component involves different providers and consumers.

(American Telemedicine Association). The World Health Organization (WHO) defines “telehealth” as:

The delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication 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, in all the interests of advancing the health of individuals and their communities.

(World Health Organization, 2010). Furthermore, the American Medical Association states that “telemedicine,” “is the use of information technology to provide clinical health care from a distance” (American Medical Association). Simply put, telehealth is “the remote delivery of health care to a patient through technology” (Marcoux & Vogenberg, 2016, p. 567).

Telemedicine has historically referred to two-way communications between providers at different locations (Edmunds et al., 2017). For example, a doctor and a specialist at another hospital videoconferencing (Edmunds et al., 2017). The term “telehealth” refers to the “broader array of provider-to-provider and provider-to-patient communications, and has been defined as using telecommunications and information technologies and devices to share information, and to provide training and clinical, population health, and administrative services at a distance.” (Edmunds et al., 2017). In many articles, telehealth encompasses telemedicine. (Marcoux & Vogenberg, 2016). Telehealth uses innovative technologies, such as kiosks, website monitoring applications, mobile phone applications (apps), wearable devices, videoconferencing (Marcoux & Vogenberg, 2016), and secure messaging (Kruse et al., 2017) to remotely connect health care providers to patients.

Telehealth has many benefits. Telehealth tends to improve outcomes, is easy to use, is low cost, can decrease travel time, increase communication with providers, decreases readmissions, and can improve medication adherence (Kruse et al., 2017). In addition, telehealth can extend the services of providers to remote locations, expand a provider’s practice, use subject matter experts, overcome the barrier of proximity, and provides more convenience to patients (especially to those in rural areas, with small children, and those with mobility restrictions) (Kruse et al., 2017).

While a review of the literature suggests patients experience positive health outcomes when using telehealth, telehealth is not the best model for all patients, medical conditions, or situations (Chaet et al., 2017). Some patients may not have access to the requisite technology, necessary health care professionals, access to emergency care, and an acceptable level of comfort in obtaining care in this way (Chaet et al., 2017). There are also situations where hands-on physical examination is required and diagnoses can be gleaned only through direct physical contact (Chaet et al., 2017).

Federal and state laws and regulations shape telehealth (Yang et al., 2016). The Affordable Care Act (“ACA”), which was passed in 2010, encouraged the move toward telehealth services in health care coverage, but the ACA only implemented telehealth at the federal level through Medicare in selected circumstances (Yang et al., 2016).

Whether telehealth services will be covered by Medicaid and private payer telehealth reimbursement policies are in the hands of individual states (Yang et al., 2016). Meaning telehealth laws vary from state to state in terms of what services will be reimbursed (Yang et al., 2016). This variation and question of whether telehealth services will be reimbursed, or whether they are reimbursed at a lower level than in-person services, affects a provider’s ability and incentive to implement telehealth options and the patient’s ability to use these services (Yang et al., 2016). Some states are more conducive to telehealth growth than other states from a regulatory and financial perspective (Olson & Thomas, 2017). Some states require insurers to cover a wide variety of telehealth services, while other states require individual payers to pay for their telehealth services (Olson & Thomas, 2017).

“The portability of licensure across state lines remains a contentious issue, and many believe it inhibits the growth of telehealth services.” (Marcoux & Vogenberg, 2016, p. 569). These conflicting state provider licensure requirements can prevent telehealth services from being

provided across state lines and act as another regulatory barrier (Edmunds et al., 2017). In order for telehealth to reach its full potential, conflicting state regulations for practitioners and practice must be reconciled (Marcoux & Vogenberg, 2016).

METHODS

REVIEW OF LITERATURE:

A literature review was conducted using PubMed to find articles. I searched ("Telemedicine"[Mesh] OR telemedicine OR telehealth) effectiv* and used the filters: Meta-Analysis; Systematic Reviews; Publication date from 2015/01/01; Humans; English; Adult: 19+ years. After reviewing the abstracts of the articles, I eliminated articles based on relevancy, quality of studies, and not meeting the exclusion criteria. This left 30 articles.

These studies provide a broad overview of the effectiveness of telehealth in a variety of settings and patients. The articles did not exclusively focus on studies done in the United States, a specific gender, or a specific piece of technology. Several forms of telehealth were examined, including but not limited to: e-health, mHealth, telemonitoring, teleconsultation, teleconsultation, teleeducation, telecase-management, and telestroke. All of the studies examined individuals eighteen years of age and older. Some of the studies compared telehealth interventions to traditional face-to-face consultations and examined patient satisfaction.

In the articles selected for this Capstone, telehealth was examined for the following conditions, situations, and patients: asthma (1); blood pressure management (1); cancer (2); diabetes (4); heart health (2); insomnia (2); mental health (anxiety, suicide, depression, behavioral therapy, stress); (5), nutrition/weight (overweight and obese, vegetable and fruit intake, malnutrition, weight loss, and weight loss maintenance) (5); physical activity (2); pregnancy (2);

smoking (1); SNAPO (smoking rates, nutrition behaviors, alcohol intake, physical activity levels and/or obesity) (1); and stroke (2).

Appendix A provides a chart of the articles examined (See Appendix A). The chart provides: the date of publication; author(s); title; journal; summary of the article (the article's objective, findings, and conclusion); the technology used; and miscellaneous comments on the article (number of studies examined, study characteristics, potential for bias, etc.) (See Appendix A).

REVIEW OF LAWS:

A law review of each state's telehealth and telemedicine laws (not including the District of Columbia) was conducted using Westlaw. First, each state's statutes/codes on telehealth and telemedicine were reviewed. "Telehealth" was searched first, and each statute/code that had the word "telehealth" in it was reviewed. After that, "telemedicine" was searched, and each statute/code that had the word "telemedicine" in it was reviewed.

Appendix B lists each state's definition of "telehealth" and "telemedicine," whether Medicaid reimburses for telehealth services, whether private payors reimburse for telehealth services, licensure requirements and methods for carrying out the telehealth system, whether there is a consent requirement for providing telehealth services, and unique features about each state's telehealth system (See Appendix B). The statutes/codes used to complete the chart, are provided in the chart (See Appendix B, col. B). If the information needed to complete Appendix B was not in the state's statute/code, that state's regulation or guidance manuals were used to supplement Appendix B. The laws reflected in this table are current as of December 31, 2019. The legislative session of 2020 is not represented in this chart.

RESULTS

RESULTS OF LITERATURE:

A majority of the studies examined had more than one research interest (See Appendix A). Therefore, most of the studies found that telehealth was effective in some aspects and not effective in other aspects (See Appendix A). Of the thirty studies reviewed, twelve were found to be completely effective, sixteen were found to be partially effective, and two were found not to be effective at all or just as effective as the control group (See Appendix A).

Telehealth was effective in both articles that examined how telehealth could help patients with insomnia (Seyffert et al., 2016; Ye et al., 2016). Telehealth was also found to be effective in both articles relating to pregnancy (Lee et al., 2016; Sherifali et al., 2017), finding that telehealth was effective with perinatal mood disorders and managing weight in the postpartum period (Lee et al., 2016; Sherifali et al., 2017). However, telehealth was not effective in relieving asthma symptoms or being an effective way to treat suicidal ideation and suicidal behaviors in adults (Zhao et al., 2015; Leavey & Hawkins, 2017). In the rest of the articles, telehealth was found to be either completely effective or partially effective (See Appendix A).

Baratloo et al. (2018) was the only article discussed telehealth being used in rural or remote areas. The researchers concluded that telestroke was an effective way to extend stroke care expertise to rural and remote areas without compromising clinical outcomes of stroke care (Baratloo et al., 2018).

Three studies discussed telehealth reducing the number of hospitalizations, mortality rates, and the length of hospital stays (Baratloo et al., 2018; Clark, 2018; Inglis et al., 2015). Baratloo et al. (2018) found no difference between telestroke and control groups in terms of in-hospital mortality and 90-day mortality, but onset-to-door duration and length of hospital stay were

significantly shorter in the telestroke group than the control group. The two other articles were on heart health (Inglis et al., 2015; Clark, 2018). Inglis et al. (2015) found that telemonitoring reduced the risk of all-cause mortality for those 70 years of age and older, and compared to usual care, structured telephone support reduced the risk for hospitalizations due to heart failure in patients 70 years of age and older. These findings were confirmed a few years later in 2018 (Clark, 2018). Clark (2018) found again that, compared to usual care, structured telephone support reduced the risk for hospitalizations due to heart failure for patients over 70 years of age, and structured telephone support and telemonitoring interventions reduced mortality for patients over 70 years of age. These interventions also demonstrated improvements in health-related quality of life and heart failure knowledge and self-care behaviors (Clark, 2018). However, videophone and interactive voice response technologies were not effective (Clark, 2018).

Two studies looked at the utility of telehealth (Clark, 2018; Fu et al., 2017). Clark (2018) found that heart failure patients 70 years of age and older can quickly adapt to telehealth and found its use an acceptable part of their healthcare routine. Conversely, Fu et al. (2017) experienced major usability problems and meager satisfaction ratings with diabetes mobile applications for adults with type 2 diabetes. They suggest that efforts should be made to improve user satisfaction, incorporate established principles of health behavior change, and match apps to user characteristics to increase the therapeutic impact of diabetes apps (Fu et al., 2017).

Two studies looked at the feasibility of telehealth (Clark, 2018; Marx et al. 2018). Clark (2018) found that in three of the nine structured telephone support studies and one of the six Telemonitoring studies that reported on costs of the intervention or cost effectiveness reported a decrease in costs, and two Telemonitoring studies reported increases in cost, both due to cost of

the intervention and increased medical management costs. Marx et al. (2018) found that compared to usual care, malnutrition-focused telehealth appears cost-effective.

Nineteen of the thirty articles compared telehealth interventions to control groups (face-to-face interventions, offline interventions, nontechnology active interventions, or waitlisted individuals) (See Appendix A). These articles are designated by an asterisk (*) after the article's date. Eleven of those studies found that telehealth interventions were effective at producing beneficial health outcomes than the control groups in some areas, but not effective in other areas (See Appendix A). For example, Uthman et al. (2019) found that, in the short-term, mHealth-delivered interventions for people living with HIV were significantly more efficacious at increasing smoking cessation than no intervention or face-to-face interventions. However, there was no significant difference in smoking cessation rates in the long-term among those who received mHealth-delivered interventions, face-to-face interventions, or no intervention (Uthman et al., 2019). Seven studies found that the telehealth interventions were more effective than the control groups in all areas that were studied. (See Appendix A). Zhao et al. (2015) was the only study that found telehealth interventions did not make a difference compared to the control group. But, this study only focused on asthma function scores. Telehealth could be beneficial in other ways for patients with asthma.

RESULTS OF LAW:

Definition

Every state's definition of "telehealth" and/or "telemedicine" is different (See Appendix B, col. C). While each definition is similar, each is unique on what telehealth and telemedicine are and what qualifies as telehealth/telemedicine (See Appendix B). Some states even have multiple definitions for telehealth or telemedicine, such as: Georgia, Kentucky, Montana, North

Dakota, Ohio, Oregon, South Carolina, South Dakota, Vermont, and West Virginia (See Appendix B). Some states also distinguish between telehealth and telemedicine, such as: Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, New Jersey, New Mexico, New York, North Dakota, Ohio, Oregon, South Dakota, Tennessee, Texas, Vermont, Virginia, and Wyoming (See Appendix B).

Medicaid Reimbursement

Every state's Medicaid program reimburses for some telehealth services (See Appendix B, col. D). However, Minnesota's old statute providing Medicaid reimbursement was repealed and replaced by a new statute and became effective January 1, 2020. M.S.A. § 256B.0625. The new and old statute citation is not reflected in chart. In addition, Wisconsin's statute that provided Medicaid reimbursement was repealed. A new statute became effective in 2020. W.S.A. 49.45. It is not reflected in the chart.

Private Payor Reimbursement

Forty-one states have laws regarding private payor reimbursement (See Appendix B, col. E). This does not mean that all private payors pay for telehealth services or that all telehealth services will be reimbursed by a private payor, but in these forty-one states there is some law discussing private payors and reimbursement for some telehealth services.

Licensure/Methods

Several states discuss their methods for carrying out telehealth services that addresses, privacy and security, recordkeeping, establishing or requiring a provider-patient relationship (See Appendix B, col. F). Each is unique and has different requirements for each of these areas (See Appendix B, col. F).

Most states have licensure requirements (at least for some professions) in statute or code (See Appendix B, col. F). It does not appear that the scope and practice of a health care provider changes when using telehealth. (See Appendix B, col. F). So long as the standard of practice and care is not less than what is needed by the patient, the provider is allowed to use telehealth (See Appendix B, col. F). However, some states require providers to get telehealth licenses or register in that state in order to practice telehealth within the state, such as: Florida, Georgia, Louisiana, Maine, Minnesota, Nevada, New Mexico, Oregon, and Pennsylvania (See Appendix B, col. F). In other states, only providers with a license in that state can practice and provide telehealth services to patients in that state, such as: Arkansas, Illinois, Iowa, Maryland, Mississippi, Missouri, Oklahoma, West Virginia, and Wisconsin) (See Appendix B, col. F).

Consent

Thirty-nine states have laws that mention consent and telehealth (See Appendix B, col. G). Similar to defining telehealth and reimbursement, there is no consistent consent requirement (See Appendix B, col. G). For instance, Arkansas requires a provider to get informed consent before providing telehealth services, but in Indiana, separate written health care consent for telemedicine services is not required. A.C.A. § 17-80-404(e)(1) & IC 16-36-1-15. In Michigan, a health professional cannot provide a telehealth service without directly or indirectly obtaining consent for treatment, unless the health professional is providing a telehealth service to an inmate. M.C.L.A. 333.16284.

Unique Features

While every state has some law or regulation regarding telehealth, some states have entire telehealth acts (Arkansas, Georgia, Idaho, Kansas, Louisiana, Minnesota, Nebraska, New Hampshire, New Mexico, Oklahoma, Rhode Island, and Utah) (See Appendix B, col. H). Despite

the fact that these acts are similar in certain aspects, each one is distinctive and has unique features (See Appendix B, col. H). Even the states that do not have telehealth acts have unique features (See Appendix B, col. H).

For example, Alaska has a telemedicine business registry that tracks which businesses offer telemedicine services. AS § 44.33.381. In Georgia, hospitals can utilize telemedicine for acute stroke treatment and eye exams can be done via telemedicine. Ga. Code Ann., § 31-11-113(b)(1) & Ga. Code Ann., § 31-12-12(a)(3). Idaho gives grants for telehealth projects. I.C. § 39-5906(1)(a). Illinois' Department of Public Health is required to make and disseminate a brochure educating and advocating for telemedicine in rural areas and medically underserved areas. 20 ILCS 2310-306.

Iowa has several unique features (See Appendix B). In Iowa, telehealth can be used to deliver and coordinate interventions for the autism support program and to determine whether a person qualifies for an assistance animal or service animal. I.C.A. § 225D.2(2)(i) & I.C.A. § 216.8C. Iowa's hospitals and clinics have developed a comprehensive, statewide telemedicine network. I.C.A. § 8D.13(15).

In Maryland, providers can use telehealth to provide timely expert diagnosis of child abuse or neglect for emergency medical treatment, for opioid addiction, and substance use disorders. MD Code § 5-712(a)(2)(ii); MD Code § 8-1101(c)(2); & MD Code 15-103.6(b)(1)(i). In Minnesota, school-linked mental health grants can be used to provide mental health treatment and services to students and their families via telemedicine. M.S.A. § 245.4901. North Carolina allows telehealth to be used for veterinary medicine. N.C.G.S.A. § 90-186(10). All of South Carolina's primary stroke centers use telestroke. Code 1976 § 44-61-640; Code 1976 § 44-61-650; & Code 1976 § 44-61-660. Texas allows telehealth and telemedicine services to deliver prenatal and

postpartum care to pregnant women with a low risk of experiencing pregnancy-related complications. V.T.C.A. § 34.020(b).

A few states also discuss telehealth and abortions (See Appendix B, col. H). Arkansas, Kansas, and Kentucky do not allow telemedicine to be used to assist with abortions. A.C.A. § 17-80-407; K.S.A. 40-2,215; & KRS § 311.728. However, Idaho can make laws regarding telehealth and abortions. I.C. § 39-9502.

DISCUSSION

SUMMARY OF ARTICLES:

Based on my review of the literature, it is clear telehealth is effective at producing beneficial health outcomes in a variety of situations and conditions. In the articles I reviewed, telehealth was especially effective in the areas of pregnancy issues, blood pressure management, and insomnia (See Appendix A).

However, telehealth is not always effective as two of the thirty studies I examined did not find telehealth to be effective (Zhao et al., 2015; Leavey & Hawkins, 2017). Zhao et al. (2015) concluded that telemedicine interventions did not improve asthma function scores, and Leavey & Hawkins (2017) found that cognitive behavior therapy delivered via e-health was found not to be efficacious for reducing suicidal ideation and behavior. As previously mentioned, a majority of the studies examined had more than one research interest (See Appendix A). Therefore, most of the studies found that telehealth was effective in some aspects and not effective in other aspects (See Appendix A). For example, Clark (2018) found that structured telephone support and telemonitoring interventions reduced mortality in elderly heart failure patients, but that videophone and interactive voice response technologies were not effective in elderly heart failure patients.

In addition to producing beneficial health outcomes, telehealth also has other benefits. The articles suggest that telehealth can help extend care to a wider population, namely the rural and remote areas (Baratloo et al.), and reduce hospitalizations and mortality rates (Baratloo, et al., 2018; Inglis, et al., 2015; Clark, 2018). Results were mixed for usability (Clark, 2018 and Fu et al., 2017) and feasibility (Clark, 2018 and Marx, 2018).

SUMMARY OF LAWS:

Every state has its own unique telehealth laws and regulations (See Appendix B). Some have entire telehealth acts, and others do not have anything in statute (See Appendix B, col. B). Even the definition of telehealth and telemedicine are different in every state (See Appendix B, col. C). Sometimes telehealth and telemedicine have different definitions within a state's own statutory and regulatory scheme (See Appendix B, col. C). Not having a common and uniform understanding of what telehealth is could cause confusion among providers and lead to reimbursement and practice issues.

While each state's Medicaid program covers for some form of telehealth, not all of the states require private payors to reimburse for telehealth services (See Appendix B, col. D & E). A lack of reimbursement could hinder the use of telehealth and deter providers from using telehealth. In addition, if a patient is already paying for insurance, they may want to or can afford to pay out-of-pocket for telehealth services in addition to their insurance premiums.

Furthermore, each state varies on how telehealth should be carried out, what the licensure requirements are for providing telehealth services, and who can use and provide services via telehealth (See Appendix B, col. F). These issues are probably the most concerning and confusing aspects for providers. Can the provider treat a patient in another state? Does the provider need to be licensed the state where the patient is? Does that state have a separate telehealth license the

provider can get to treat a patient? Can a patient-provider relationship be established via telehealth? Are there consent requirements? What happens in the case of malpractice? Does telehealth alter my scope of practice? These are all questions providers ask about when considering using telehealth, and it is difficult to answer without looking at each state's individual laws. This uncertainty can also impede on telehealth's expansion.

Nebraska

Compared to other states, Nebraska has well established telehealth laws and reimbursement practices. In 1999, Nebraska passed its first version of the Nebraska Telehealth Act. The Nebraska Telehealth Act is codified under Neb. Rev. Stat. Sections 71-8501 to 71-8508. Under the Act, Nebraska defines "telehealth" as:

[...] the use of medical information electronically exchanged from one site to another, whether synchronously or asynchronously, to aid a health care practitioner in the diagnosis or treatment of a patient. Telehealth includes services originating from a patient's home or any other location where such patient is located, asynchronous services involving the acquisition and storage of medical information at one site that is then forwarded to or retrieved by a health care practitioner at another site for medical evaluation, and telemonitoring

Neb. Rev. Stat. § 71-8503(3). The Act defines "telemonitoring" as:

Telemonitoring means the remote monitoring of a patient's vital signs, biometric data, or subjective data by a monitoring device which transmits such data electronically to a health care practitioner for analysis and storage.

Neb. Rev. Stat. § 71-8503(5).

This Act does not alter the scope of practice of any health care practitioner or limit the patient's right to choose in-person contact with a health care practitioner for the delivery of health care services for which telehealth is available. Neb. Rev. Stat. § 71-8504. Any credential holder under the Uniform Credentialing Act may establish a provider patient relationship through telehealth. Neb. Rev. Stat. § 38-1,143(1). This does not apply to a credential holder under the

Cosmetology, Electrology, Esthetics, Nail Technology, and Body Art Practice Act, the Dialysis Patient Care Technician Registration Act, the Environmental Health Specialists Practice Act, the Funeral Directing and Embalming Practice Act, the Massage Therapy Practice Act, the Medical Radiography Practice Act, the Nursing Home Administrator Practice Act, the Perfusion Practice Act, the Surgical First Assistant Practice Act, the Veterinary Medicine and Surgery Practice Act, or the Water Well Standards and Contractors' Practice Act. Neb. Rev. Stat. § 38-1,143(4).

Before a patient has his or her first telehealth consultation, the health care practitioner delivering the health care services via telehealth needs to get written consent for the telehealth consultation and must provide written information to the patient. Neb. Rev. Stat. § 71-8505(1)-(3). However, written consent is not required in an emergency situation. Neb. Rev. Stat. § 71-8505(4). The written consent must contain information about being able to refuse the telehealth consultation, all existing confidentiality protections regarding the telehealth consultation, having access to all medical information resulting from the telehealth consultation, and a statement that any patient identifiable images or information from the telehealth consultation to researchers or other entities will not be disseminated without the patient's consent. Neb. Rev. Stat. § 71-8505(1).

Nebraska Medicaid and managed care plans reimburse for health care services delivered through telehealth that would otherwise be reimbursed in an in-person setting. Neb. Rev. Stat. § 71-8506(1). This includes reimbursement for two-way, real-time, and interactive communications between patients and providers. Neb. Rev. Stat. § 71-8506(3). These services are covered and reimbursed under Medicaid's fee-for-service program. Neb. Rev. Stat. § 71-8506(2). The reimbursement rate for a telehealth consultation cannot be less than an in-person consultation. Neb. Rev. Stat. § 71-8506(2). A telehealth consultation means "any contact between a patient and a

health care practitioner relating to the health care diagnosis or treatment of such patient through telehealth.” Neb. Rev. Stat. § 71-8503(4).

In addition to Nebraska Medicaid reimbursing for telehealth services, Nebraska has created a Telehealth Systems Fund. Neb. Rev. Stat. § 71-4732.01. The funds are used for any expenses related to the operation and maintenance of the telehealth system. Neb. Rev. Stat. § 71-4732.01. Nebraska’s Rural Health Training and Placement Program Act also supports and provides funding for telehealth supervision to rural clinic sites. Neb. Rev. Stat. § 71-5683(3). Funds from the Health Care Homes for the Medically Underserved Fund and Oral Health Training and Services Fund are also used to pay for health services provided via telehealth for residents of Nebraska. Neb. Rev. Stat. § 81-3140(2)(e) and § 85-1414.01(3).

Nebraska also has a statute regarding private payors. Neb. Rev. Stat. § 44-312(2) states:

Any insurer offering (a) any individual or group sickness and accident insurance policy, certificate, or subscriber contract delivered, issued for delivery, or renewed in this state, (b) any hospital, medical, or surgical expense-incurred policy, except for policies that provide coverage for a specified disease or other limited-benefit coverage, or (c) any self-funded employee benefit plan to the extent not preempted by federal law, shall provide upon request to a policyholder, certificate holder, or health care provider a description of the telehealth and telemonitoring services covered under the relevant policy, certificate, contract, or plan.

In sum, Nebraska’s law and reimbursement requirements for telehealth are well established, and has the potential to deliver care to many patients throughout the state.

COVID-19

During the course of writing this Capstone, the United States and several other countries were impacted by the coronavirus; also known as COVID-19. This pandemic impacted the United States’ economy, residents, health care system, and telehealth laws.

On March 26, 2020, the American Health Law Association (AHLA) released a podcast titled: “Telehealth and COVID-19.” In the podcast, Sarah Swank, counsel at Nixon Peabody LLP,

and Terrence M. Lewis, Senior Associate Counsel at University of Pittsburgh Medical Center, discussed how facilities ramped up their telehealth programs in response to the coronavirus pandemic.

In response to COVID-19, Congress passed a stimulus package, which provided funds for telehealth and the ability for CMS to waive telehealth requirements (Swank & Lewis, 2020). The Office of Civil Rights (OCR) also relaxed HIPAA requirements to accommodate telehealth during this pandemic (Swank & Lewis, 2020). Lewis believes that, by doing these things, the federal government is telling our health care system and our providers to treat our patients, citizens, and population as best as you can right now given the tough circumstances we are in (Swank & Lewis, 2020). Lewis is happy that the government is recognizing the value of telehealth and providing care to patients during national health care crisis where patients should not be traveling (Swank & Lewis, 2020). While telehealth has often been associated with providing care to patients in rural areas, the outbreaks of COVID-19 in some of the United States' larger cities, like New York, have proved that telehealth is beneficial at providing care to those in urban areas as well (Swank & Lewis, 2020). Mr. Lewis also believes that it will be this point in history that will be the tipping point for telehealth recognition in the United States (Swank & Lewis, 2020).

In addition to the federal government loosening its requirements for telehealth, states, such as Connecticut, have relaxed their licensure requirements for telehealth, and other states have enacted emergency declarations regarding licensure during this crisis (Swank & Lewis, 2020). However, one still needs to look at each individual state's rules because every state has different requirements (Swank & Lewis, 2020). According to Mr. Lewis, some states are telling providers to "go do it" while other states are requiring providers to fill out paperwork (Swank & Lewis, 2020).

Due to the pandemic, there has been a surge of patients using telehealth (Swank & Lewis, 2020). Lewis was able to state first-hand that on March 23, 2020, the University of Pittsburgh Medical Center had over 6,000 virtual visits on its various telehealth platforms (Swank & Lewis, 2020).

In summary, Appendix B does not reflect the temporary or permanent changes to state law due to COVID-19.

RECOMMENDATIONS & FUTURE POLICY NEEDS:

My first policy recommendation would be to create a uniform telehealth act. A uniform telehealth act would provide consistent rules and procedures for telehealth across all fifty states and make it easier to understand and use telehealth. The uniform law could create a uniform definition for telehealth and telemedicine, address licensure and reimbursement requirements, and procedures regarding consent, privacy, and provider-patient relationships.

States could not be forced to adopt a uniform telehealth act, but if a uniform telehealth act was created, it could be proposed to each state's legislature and considered for adoption. States could use the uniform telehealth act as a template and make changes to the uniform telehealth act to fit their state's needs. Although not all states would adopt the uniform act, and the ones that would adopt it would likely have some variations, the law would be more consistent and easier to use than what is currently in place.

In 2019, the Uniform Law Commission created a telehealth committee, but there have been no discussions or documents produced by the committee. (Uniform Law Commission). "This committee will study the need for and feasibility of state legislation on telehealth, focusing on the doctor-patient relationship through telemedicine, the corporate practice of telemedicine, and

broader emerging issues of telehealth including the use of mobile devices and artificial intelligence.” (Uniform Law Commission). In 2014, the Federation of State Medical Boards created a model policy for telehealth to serve as a guidance to state medical boards for regulating telehealth in their states, and would be a good starting point for the Uniform Law Commission (Federation of State Medical Boards, 2014). The model policy addresses establishing a physician-provider relationship, definitions, guidelines for the appropriate use of telemedicine technologies in medical practice, licensure, evaluation and treatment of a patient, informed consent, continuity of care, referrals for emergency services, medical records, privacy and security of patient records and exchange of information, disclosures and functionality, prescribing, and parity of professional and ethical standards (Federation of State Medical Boards 2014).

My second policy recommendation is to work and create a policy that would allow telehealth to expand to its full potential by allowing providers to practice and provide care across state lines using telehealth. Marcoux and Vogenberg (2016) said, “[t]he portability of licensure across state lines remains a contentious issue, and many believe it inhibits the growth of telehealth services.” (Marcoux & Vogenberg, 2016, p. 569). I agree.

If telehealth is going to provide patients with access to more or specialized care, then the issue of licensure needs to be addressed. This issue is extremely complex because it would require cooperation among states, health boards, malpractice insurers, insurance companies (re: reimbursement issues), and health care facilities (re: facility privileges). This issue would likely be addressed in a uniform law, but if one is not created, each state could create a telehealth license for out-of-state providers or a Telehealth Licensure Compact (like the Nursing Licensure Compact) could be created to help address these issues and make it easier for providers to provide care across state lines.

Nebraska could do more to improve the Nebraska Telehealth Act by including a statute allowing out-of-state providers to get a Nebraska telehealth license to practice in this state. This could help Nebraskans get access to care and specialized care. The Nebraska Legislature and the Nebraska Department of Health and Human Services would have to figure out the logistics of this license, but a telehealth licensure board could be created to govern and oversee the out-of-state providers.

STRENGTH AND LIMITATIONS:

Strengths

With the literature review, I was able to examine telehealth in a variety of settings and for various medical conditions. I was also able to analyze different types of telehealth and whether or not they were effective at producing beneficial health outcomes for these various medical conditions and patients.

With the law review, I thoroughly examined each state's statutes/codes regarding telehealth to determine how each state defines telehealth and telemedicine, whether or not Medicaid and private payors would reimburse for telehealth services, the method for carrying out telehealth and the licensure requirements for providers, whether or not the state requires consent by a patient before using telehealth, and any other unique features that state may have regarding telehealth. If the information was not provided in statute, I searched that state's regulations and manuals to find the missing information.

Limitations

With the article review, I only ended up with 30 articles and they were broad in their research topics and goals. I was the only one to review the articles and determine whether they were relevant or not. There may be selection bias.

With the law review, I did not do a review of each state's regulations regarding telehealth. I only turned to state regulations when I could not find the information needed to complete Appendix B in the state's statutes/codes. I suspect that a lot of information and requirements are provided in these regulations regarding reimbursement and licensure. Furthermore, I did not look at pharmacy and prescription requirements or restrictions, malpractice insurance issues, licensure compacts and telehealth, or privacy or security requirements with regard to telehealth. I also did not include any new potential laws that were passed during the 2020 legislative session, therefore, some of these laws may not be current. Additionally, each state's law on telehealth may be altered temporarily or permanently due to the COVID-19 pandemic.

CONCLUSION

In conclusion, telehealth is capable at producing positive health outcomes and is beneficial for public health. For these reasons, states should create and implement telehealth laws that encourages telehealth use and expands telehealth services. Every state currently has telehealth laws, but each state is unique and has different requirements. This causes confusion and deters providers from utilizing telehealth services. Therefore, these laws need to become more uniform in order to decrease confusion. If telehealth is going to reach its full potential, it needs the states to work together and create consistent telehealth laws.

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APPENDICES

Appendix A: Review of articles.

Appendix B: Review of law.

BIOGRAPHY & CV

I am from Minden, Nebraska. My parents are Douglas Kristensen, Chancellor of the University of Nebraska at Kearney (UNK), and Terri Harder, 10th Judicial District Judge of the State of Nebraska. I have one younger sister, Paige Kristensen, who is a senior at UNK.

Both of my parents have law degrees. Therefore, it was not a shock when I showed an interest in law and decided to be an attorney. However, my equal love and interest in health care did not make that decision easy. I almost went into nursing instead of law. But, when I learned I could get a dual degree in law and public health (JD/MPH) from the University of Nebraska at Lincoln College of Law (UNL- COL) and the University of Nebraska Medical Center College of Public Health (UNMC- CPH), I decided that was the perfect degree for me and never looked back.

I obtained a Bachelor of Science in political science and a minor in public health from UNK in May of 2015. That fall I attended law school at UNL, and received my Juris Doctorate in May of 2018. I took the bar exam in July of 2018, and was admitted to the Nebraska State Bar in September of 2018. I was accepted to UNMC- CPH in 2015 as a joint degree student (JD/MPH). I expect to graduate from UNMC- CPH in May of 2020.

Currently, I live and work in Lincoln Nebraska. I am associate attorney at the law firm of Johnson, Flodman, Guenzel, & Widger. I started clerking there as a law student in 2016 and joined them as an associate attorney in 2018. My primary practice areas are health care and civil litigation.

Between being a full-time attorney and a graduate student, I do not have a lot of free time. But, in my limited spare time, I enjoy going to my family's cabin at Johnson Lake, going to trivia night, and visiting my friends around Nebraska.

MORGAN C.H. KRISTENSEN

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PROFESSIONAL EXPERIENCE

Summary:

Passionate, hard-working, detail-oriented associate attorney. Experienced in a variety of practice areas, especially administrative and health care law. I am well versed in legal research and writing. Adept at drafting and reviewing policies. Zealously represent nursing and assisted living facilities and health care providers.

Experience & Expertise:

- | | | |
|--------------------------------------|---|------------------------------------|
| – Appellate Practice | – HIPAA | – Litigation Strategy & Management |
| – Collections | – Informal Dispute Resolution & Mediation | – Medicare & Medicaid |
| – Guardianships & Power of Attorneys | – Licensure Defense | – Negotiations |
| – Health Policy | | |

Admissions:

- Nebraska State Bar
 - September 2018 to present
- United State District Court of the District of Nebraska
 - September 2018 to December 2019

Professional Associations & Memberships:

- Nebraska State Bar Association
- Lincoln Bar Association

EDUCATION

University of Nebraska Medical Center – College of Public Health

- MPH Student 2015 to present

University of Nebraska – College of Law

- JD 2018
- General Litigation Concentration

University of Nebraska at Kearney

- Bachelor of Science: Political Science
- Minor: Public Health