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The impact of the COVID-19 pandemic on the future of telehealth in primary care



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ABSTRACT

This policy paper reviews the history, use and significance of telehealth in primary care. The emergence of telehealth as a primary strategy to continue to deliver value based, timely primary care during COVID-19 is discussed with recommendations for future applications, payment and preparation of providers to continue to provide quality care of clients in the future using telehealth.

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Background

The COVID-19 pandemic radically transformed the delivery of primary care in the United States (U.S). In the face of a highly contagious virus, the fragility of the nation's reliance on in-person primary care was dramatically revealed, with implications for patient access to primary care, cost, and the financial sustainability of providers and primary care practices (Basu et al., 2020). Thus, to facilitate access to primary care for people and address revenue streams in primary care after the initial severe disruption, telehealth services regulations, administrative rules, payer policies, and

reimbursement were modified almost overnight. Providers quickly adapted, and more patients have become acquainted with primary health care offered in the comfort of their home, a care delivery model that eliminates travel time and time-consuming waits in primary care practices. Virtual care and other forms of technology-enabled interactions provided fresh approaches to primary care and have the potential to be efficient, collaborative, cost-effective, and patient-centered. Taken as a whole, the acceptance by both patients and providers of primary care services via telehealth suggests that telehealth in some form and configuration is here to stay. Thus, the purpose of this manuscript is to discuss the implications for telehealth in primary care,

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benefits and barriers for patients and providers, considerations and cautions, as well as reforms needed to ensure appropriate and equitable availability of telehealth services post-COVID 19 pandemic. But first, what, exactly is telehealth?

Telehealth Defined

The Health Resources and Services Administration (HRSA) defines telehealth as the “use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media and terrestrial and wireless communications. Telehealth is different from telemedicine. Telehealth refers to a broader scope of remote health care services than telemedicine. While telemedicine refers specifically to remote clinical services, telehealth can refer to remote nonclinical services, such as provider training, administrative meetings, and continuing medical education, in addition to clinical services” (Health IT, 2020).

An Overview of the History of Telehealth

Today’s telehealth finds its roots in telemedicine. Telemedicine spans nearly 100 years, beginning with the rudimentary idea of medical care being provided via radio with a television screen in 1924 (Myers, 2003). In the early 1950s, telemedicine was formally introduced at the 1951 New York World’s Fair. Subsequently, tele-radiology was initiated in 1957 with tele-education, and tele-psychiatry following in 1959. Federal funding was provided to seven sites in the 1960s and 1970s for telemedicine research and development projects that were predominately in rural areas or targeted specific populations such as Native Americans in Arizona and Alaska (Zundel, 1996, p. 72).

Telecommunications was implemented to manage the Mexico City disaster in 1985 employing satellite technology to support disaster recovery teams (Garchnek & Burkle, 1999). At the same time, the U.S. and the United Socialist Soviet Republic created an international telemedicine project to monitor the health of astronauts in space exploration. Another initiative, the Space Bridge Project was implemented for recovery efforts of the Armenian earthquake in 1988. Communication to the front-line was with four U.S. medical centers in Maryland, Houston, and Utah. These medical institutions provided real-time video consultation for sub-specialties in neurology, orthopedics, psychiatry, infectious diseases, and surgery (Garchnek & Burkle, 1999).

These early projects established the technological basis for telemedicine, demonstrating that telecommunications could be utilized as a substitute for travel to obtain medical care, as well as to provide specialized care during emergency situations (e.g., telestroke, teleICU, teleNICU). Nurses were always part of the team of health care professionals using this technology (Schweickert & Rutledge, 2020). Now, the Internet has evolved into a nearly ubiquitous platform for health care. Internet-based services have expanded access to consumers for medical information, access to health care portals, use of an array of blue-tooth enabled devices and applications that download health information to personal websites or for sharing with health care professionals. The Internet provides a platform for researchers to collaborate, educate students and professionals of all educational backgrounds, and for medical professionals to conduct web-based visits with patients for consultation, preventive care, monitoring, diagnosis, and chronic condition management and support (National Quality Forum, 2017).

Despite the history of the development of successful telehealth applications, particularly in primary care with hard-to-reach clients, the implementation of these technologies has been uneven. Arguably, one of the reasons they have not proliferated in primary care prior to the COVID-19 pandemic relates to the strong tradition of in-person interactions in primary care between provider and patient. This is how health professional students have been taught, what they observe in practice, and—as Hyman (2020) notes—may even be central to their professional identity. Patients have also learned this tradition as they have encountered care throughout their lifespan and may perceive such care as a hallmark of quality primary care. This delivery model has been reinforced by the historical lack of reimbursement by public and private payers for primary care delivered through video or telephone. The COVID-19 pandemic prompted Centers for Medicare and Medicaid (CMS) to adjust telehealth reimbursement rules, resulting in a significant increase in video and phone visits in primary care. This allowed many more patients to experience the convenience of web-based care (Betancourt et al., 2020). Compared to February 2019 through February 2020 when medical claims for health services employing telehealth rose 121% nationally, the rise between March 2019 to March 2020 showed a dramatic 4,347% increase indicating the rapid expansion of telehealth services (Gelburd, 2020). Today, consumer demand has begun to drive the change as will long-term change in reimbursement from CMS and other payers (Mehrotra et al., 2020).

The Key Benefits and Barriers Related to Telehealth

Every mode of patient care delivery has benefits and limitations or barriers. Telehealth is no different. Table 1 reviews the primary strengths or benefits of

Table 1 – Key Benefits and Barriers to the Use of Telehealth

Benefits	Barriers
Patients can receive most elements of preventive care, ongoing care, education, counseling, therapeutic services, care management and coaching without leaving their home	1. Economic disparities impacting access to equipment such as computers, tablets, and smart phones.
Patient's exposure to infectious disease is reduced and those who are immunocompromised are protected.	2. Inadequate broadband particularly in rural and remote areas to support access, connectivity and speed.
Timely care between patient and providers, provider and specialty consultants and allied members of the health care team. .	3. Access and continuity of care influenced by licensure, payment parity, HIPAA, and provider preferences.

telehealth as well as the barriers to effective patient care utilizing telehealth.

Barriers

Although any form of health care can be fraudulently deployed, telehealth provides ready opportunities for abuse because “unscrupulous providers . . . have much greater reach with telehealth” (Cohen, cited in [Schulte, 2020](#), para 4). This reach includes “sham remote visits to increase the size and scale” of their criminal operations, states U.S. Health and Human Services Deputy Inspector General Christi Grimm (cited in [Berry, 2021](#), para 8) resulting in “enormous losses to payers through Medicare fraud” (Berry, para 9). And, because Medicare is financed through taxes and premiums paid by Medicare beneficiaries, the balance between opening access to care and preventing financial abuse is complex, particularly given the popular support for telehealth by those who are not aware of the potential for abuse. The problem is not limited to governmental payers such as Medicare, but also includes private payer such as commercial insurance.

Two current policy issues of contention can interact to accelerate fraud and excessive health care costs: 1) first dollar coverage of telehealth services, in which patients pay no cost sharing in the form of deductibles or copayments and thus have little incentive to question what is offered to them; and 2) providers being able to bill for telehealth for people they have never seen. Although both issues can increase access to needed care, they also create dramatic new openings for exploitation of taxpayer dollars through fraudulently billing of Medicare and Medicaid and manipulation of vulnerable, unsuspecting patients who cannot be aware that the services offered are a financial scheme rather than representing valuable services. Moreover, even outside of fraud, telehealth for some services has been found to be associated with more downstream use of health care services than in-person visits, which therefore limits telehealth cost effectiveness ([Li et al., 2021](#)). This phenomenon suggests that these telehealth services were “additive” rather than “substantive,” with the latter being a component of a value-oriented, postpandemic telemedicine regulation and payment orientation suggested by [Mehrotra et al. \(2020\)](#).

Fragmentation of care is also a risk that can be associated with telehealth services. Single-purpose telehealth providers already offer virtual consultations and prescriptions for a variety of conditions. Patients may or may not disclose these prescriptions to their primary care provider, resulting in potential safety issues. Optimal payment policy that is focused on delivering timely and effective primary care to patients will spur the uptake of telehealth that adds value and prevents downstream costs rather than increasing low value, unnecessary care, with both provider payment and patient cost sharing aligned with this critical aim. Value-informed nurses can play a key role in deployment of high-quality telehealth services.

Benefits

Virtual care may offer particular opportunities for effective teamwork and a dramatically re-envisioned professional life. No longer geographically bound, the opportunities to live or relocate as one wishes to create virtual “warm hand-offs” between team members and disciplines along with work hours that are acceptable to patients and providers versus being limited by facilities/office hours are appealing. However, the roles and dimensions of team members in primary care must be developed just as they are for in-person teams. Best practices in virtual team building incorporate creating trust, clarifying work roles inclusive of expectations and boundaries, developing strategies for effective delegation and referral, and using appropriate software and technology. At this point, it is unclear if telework will enhance provider satisfaction or create new forms of burnout for primary care providers. Will truncating commuting and other geographic-related efforts enhance provider satisfaction or, instead, will “ZOOM fatigue” ([Melsenzahl, 2020](#)) overwhelm any positive gains proffered by telework?

Trends in Telehealth Payment

The rapid and dramatic expansion of telehealth services in response to the COVID-19 pandemic could not have taken place without a concomitant willingness on the part of public payers, namely Medicaid and Medicare, to

remove regulatory barriers at least during this public health emergency period. Given that CMS is particularly charged with caring for the elderly and the low income who were particularly vulnerable during the epidemic, this has great significance for the nation.

Prior to the COVID-19 pandemic, Medicare allowed for several telehealth services, but they were limited by geography, provider type, and organizations. All of this changed in March 2020, when CMS issued waivers to its requirements; one of the first on March 17, 2020 allowed all beneficiaries to receive telehealth services in any location, including their homes. This was followed by a series of temporary waivers to make telehealth more readily accessible. Medicare reports that prior to the COVID-19 emergency, 13,000 beneficiaries in fee for service Medicare received a telemedicine service per week; this escalated to 1.7 million a week by the end of April (Verma, 2020).

Medicaid, of course, sets policy and is regulated at the level of each state. States have broad flexibility to cover telehealth through Medicaid, including the methods of communication (such as telephonic and/or video technology commonly available on smart phones and other devices (United State Department of Health and Human Services, 2020b). The flexibility of allowing telephonic only services is significant in overcoming the “digital divide” that low income and vulnerable populations may face in accessing care via telehealth.

Registered Nurses (RNs) are recognized for their ability to integrate traditional health care and person-centered approaches. They have been providing high quality telehealth services, utilizing telephone, internet, and remote patient monitoring technologies that focus on health promotion, chronic condition management, and coordination of care for many years. Studies have demonstrated effectiveness of RN interventions across populations, settings, and socioeconomic conditions (Swan et al., 2019), capacities they can effectively deploy in telehealth with enabling reimbursement.

RN roles in primary care have corresponding practice incentives to improve quality, safety, cost-effectiveness, and convenience for patients. Value-based reimbursement models and financial reward programs for quality such as the Merit Based Incentive Pay System (MIPS) have highlighted the need for care that extends beyond a traditional physician visit. Currently, RNs can bill select in-person services such as Medicare annual wellness visits under the direct supervision of a primary care provider. At this time, however, RNs are not identified as eligible providers of reimbursable telehealth services and while they can temporarily bill for video services under Public Health Emergency Waivers, they are currently not included in either the Coronavirus Aid, Relief, and Economic Security (CARES) Act (Public Law 116–136) or the Creating Opportunities Now for Necessary and Effective Care Technologies (CONNECT) for Health Act of 2019 (H.R. 4932/S. 2741), despite reimbursement availability for similar services provided in face-to-face delivery (Watkins & Neubrandner, 2020). Although reimbursement for RN services is not a new problem, it is more urgent as primary

care patients become more complex. With the passage of [The Patient Protection and Affordable Care Act \(2010\)](#), substantial changes have occurred in the organization and delivery of primary care, emphasizing greater team involvement in care and expansion of the roles of each team member, including RNs (Flinter et al., 2017). Incorporating RNs as team members can increase access to care, improve care quality and coordination for chronic conditions, and reduce burnout among primary care practitioners by expanding primary care capacity (Fraher et al., 2015; Ghorob & Bodenheimer, 2012; Lamb et al., 2015). In primary care, early evidence suggests that RNs are effective in supporting chronic condition management, promoting health and wellness, coordinating care for high need, complex patients and managing transitions of care while reducing unnecessary utilization of health services (Bodenheimer & Mason, 2016). Findings from a 2013 study of *The Primary Care Team: Learning from Effective Ambulatory Practices* (LEAP) suggest that a large majority of LEAP primary care practices, regardless of practice type or corporate structure, use RNs as a key part of their care team model (Ladden et al., 2013). This contrasts with a study of 496 practices in the CMS’s Comprehensive Primary Care initiative (Peikes et al., 2014) that found that only 36 percent of practices had RNs on staff, compared with 77 percent of LEAP sites (Flinter et al., 2017). If final regulations preclude RNs from billing for telehealth services currently paid for in the in-person environment, it represents a step backward in already limited reimbursement options and a disincentive to employ RNs.

Cost Sharing

Prior to the COVID-19 crisis, private insurance coverage for telehealth varied from payer to payer and differences between plans. Since then, several health plans announced that they would support telehealth services including no fee or copay for subscribers. Also of note, a Blue Cross and Blue Shield survey found that 75% of Americans with behavioral health conditions are still able to continue therapy due to the availability of telehealth services. However, 42% of Americans reported delaying routine healthcare (Blue Cross & Blue Shield, 2020b). Unfortunately, the number of people affected by the pandemic still grows, variants emerge, and the need for social distancing continues. Vulnerable people may fear in-person medical visits and may be delaying routine and chronic disease maintenance care. Thus, there is a pressing need to continue the ability to have continued access to telehealth visits.

Nursing Education

Entry Level

There is a recognized need for additional primary care capacity. To accommodate this “growing need for primary care providers, educators will have to

increase coursework and student clinical experiences in primary care settings, which in turn could lead to more graduates choosing careers in primary care and ambulatory and community-based settings” (NASEM, 2021b, p. 30). In response to these and other contemporary factors, the American Association Colleges of Nursing (AACN) has shifted toward a competency-based curriculum. As part of this effort, AACN published a new *Essentials of Baccalaureate Education for Professional Nursing Practice* (2021) that identifies 10 domains for nursing education. These domains include informatics and health care technologies. More specifically prelicensure nursing students are to be able to “identify the basic concepts of electronic health, mobile and effectively use electronic communication tools (AACN, 2021, p 51). Within these 10 domains are specific competencies that AACN believes are essential for nursing practice, including, engaging in effective partnerships, advancing equitable population health policy, demonstrating advocacy strategies, using information and communication technologies and informatics processes to deliver safe nursing care to diverse populations in a variety of settings, and using knowledge of nursing and other professions to address the health care needs of patients and populations (p.196). On a practical level, students in primary care will need grounding in the technical skills of telehealth as well as a framework to address ethical challenges that may arise within an interdisciplinary team and administration of services. Educational experiences can incorporate interprofessional learning in telehealth (Rutledge et al., 2017). COVID-19 gives the opportunity for advanced practice students to work with providers who are actively using telemedicine visits.

Graduate level

Graduate level nurse abilities add to these core competencies to include care redesign; developing, maintaining and evaluating virtual teams; workflow optimization, and oversight of cost, quality, and value outcomes. For advanced practice registered nurses (APRN) and all licensed independent providers on the primary care team, the core challenge may well be developing the confidence and competence to be able to conduct the full visit, from history to physical exam, assessment, diagnosis(es), and treatment all in the context of virtual care, using new tools such as remotely monitoring devices.

Preparation for Providers

As the COVID-19 crisis loomed, providers who had never used telehealth services were engaged in a steep learning curve in developing competency in telehealth visits. Going forward telehealth needs to be

part of the competencies for all practicing RN’s and advanced practice nurses. Clinicians should participate in telehealth service continuing education such as prevention education etiquette, how to deliver care via telehealth visits and navigate home monitoring data sharing (i.e., glucose, blood pressure, electrocardiogram) with technological devices. It is also important for clinicians to learn the regulatory aspects of telehealth, how to maintain standards of care, ethics, prevention of fraud, and the economics of telehealth. Education methods should include didactic content, but also telehealth experiences through simulation with standardized patients (Rutledge et al., 2017).

Licensure and Regulation

The National Council of State Boards of Nursing (NCSBN) plays an important role in nursing, including administration of initial practice (NCLEX) and other certification examinations, oversight of school curricula, and regulation of nursing practice. In order to ensure that the NCLEX accurately reflects entry level nursing practice, the NCSBN conducts both triennial and continuous practice analyses. These analyses include extensive literature review, input from new graduate nurses, and nurse leader interviews (Williams et al., 2014). The dramatic changes heralded by COVID-19 reveal new essential, virtual competencies that must be urgently incorporated in school curricula and tested in NCLEX examinations to meet its mission of reflecting current practice and ensuring safe patient care.

Nursing licensure is also regulated through the National Council of State Boards of Nursing (NCSBN). Recognizing that patient care does not always follow state lines, the NCSBN promotes the Nurse Licensure Compact (NLC). The NLC enables a nurse to have one multistate license allowing practice in both the home state and other compact states, facilitating the provision of telehealth services.

An important aspect of the temporary Public Health Emergency Waiver was dropping the requirement for the provider to be licensed in the patient’s state. Some state requirements still apply, but this opens patient access to specialty providers and eliminates patient problems with transportation over distances to get to providers in other states (Center for Connected Health Policy, 2020).

Disparities

The digital divide remains a concern. Both providers and patients need to have resources to properly conduct a telehealth visit. However, not everyone has access to required resources. According to U.S. 2015 census data,

89% of households had some sort of computer and internet (Ryan, 2018). Differences exist based on age, ethnicity, socioeconomic status, and region. This means some people such as those over 65 years of age (47% with internet) have access deficits. One potential solution came with the April 30, 2020 Public Health Emergency Waiver. This opened telehealth visits to the use of both video and audio-only telehealth services in response to organized medicine efforts. CMS matched payments for audio-only telephone visits between Medicare patients and their providers to similar office and outpatient visits. As well, payments were retroactive to March of 2020 (American Medical Association, 2020).

Health literacy is a concern in any patient encounter. However, in a telehealth encounter, clear communication practices with a plan for the patient to review their understanding of what has been communicated by the provider is essential. Universal precautions for health communication assumes that all patients are at risk for miscommunication and misunderstanding, regardless of education, socioeconomic status, or literacy skills (DeWalt et al., 2011); recognizes that patients may go to great lengths to conceal their lack of understanding (Parikh et al., 1996); and, acknowledges that healthcare professionals are poor at detecting when patients do not understand (Coleman, 2011). All personnel should use simple language and clear communication practices to support lowering barriers to comprehension for all patients, whether communicating via telehealth or in-person.

Ensuring Health Insurance Portability and Accountability Act (HIPAA) Compliance

Privacy concerns exist in all of health care but have additional nuances in telehealth. Basic rules for following HIPAA include that both the patient and provider should be in private spaces such as the provider alone in an office and the patient in a quiet place at home. If this is not possible, other means of maintaining privacy such as low voices and lack of screen view should be practiced. The United States Department of Health and Human Services (2020a) provides guidance and a partial listing of “non-public facing” HIPAA-compliant video communication. The vendors of these communication products need to verify they are “HIPAA compliant and will enter into HIPAA business associate agreements (BAAs) in connection with the provision of their video communication products”. Public-facing products such as a public chat room are not permissible because of wide, uncontrolled access. During the COVID pandemic, the “Office for Civil Rights (OCR) exercises enforcement discretion and waive penalties for HIPAA violations against health care providers that serve patients in good faith through everyday communications technologies, such as FaceTime or Skype” (United States Department of Health and Human Services, 2020a).

Recommendations

Policy

The policy recommendations for the future are based on the evidence to date but will require ongoing monitoring and development of telehealth as it becomes more widespread and embedded into routine primary care. We recommend the following:

1. Payment policy should support provision of primary care services provided by RN's, APRNs and other members of the health care team, particularly those that replace other services, diminish low value and unnecessary care, and support cost-effective, high-quality outcomes.
2. Patient cost sharing should be designed to maximize access to telehealth services that address patient needs and reduce use of expensive downstream care.
3. Primary care services delivered through telehealth should be subject to the same standards, regulations, and quality expectations as visits as in person visits.
4. Telehealth technology and platform must be subject to the same stringent privacy regulation as in person care.
5. Federal funding is essential to enable widespread broad band expansion with particular attention to rural, low income, and special needs populations.
6. Federal research funding should prioritize the use and effectiveness of telehealth in primary care addressing key national health priorities.

Nursing Education

1. Schools of Nursing should invest in telehealth resources for the provision of telehealth clinical learning experiences across the curriculum.
2. Current knowledge and practices in telehealth should be incorporated in nursing curriculum at the pre-licensure and advanced levels of nursing education, inclusive of the ethical obligation to prevent fraud and abuse.
3. Current Clinicians should have ongoing opportunities for learning of the latest telehealth applications for primary care.
4. Evidence-based frameworks for the evaluation of telehealth in nursing and health care practice need to be developed.
5. Telehealth has arrived, demonstrated acceptance from providers and patients, and now must be integrated into health policy, payment and nursing education to ensure long term viability and improve patient-centered care for all consumers and providers of primary care. 2012 credentialing and privileging process for that distantly located institution.

Author Contribution Statements

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