Telehealth and Kidney Disease Care
Role after the Public Health Emergency?

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The provision of health care remotely by means of telecommunications technology defines telehealth. Although much enthusiasm exists for the use of telehealth to improve access to care, identifying how to optimally utilize this tool remains a priority. The application of telehealth in patients with CKD and kidney failure being treated with dialysis or kidney transplant was evaluated in selected studies by Young et al. in this issue of CJASN (1). This article demonstrates that care via telehealth has better or comparable patient clinical outcomes, health care utilization, efficiency measures, and patient- or physician-reported outcomes measures such as satisfaction. We have drawn similar conclusions from our own work evaluating telehealth programs in patients with kidney failure (2).

Before the coronavirus disease 2019 (COVID-19) pandemic regulatory waiver–induced surge in usage, telehealth was available to US Medicare beneficiaries if they did not live in a metropolitan statistical area, or if they did, the area was rural and in a Primary Care or Mental Health geographic Health Professions Shortage Area and had limited adoption (3,4). Limitations existed for both the originating and remote sites that created barriers for patients to access care via telehealth and disincentivized clinicians to offer telehealth as an option.

Providing or receiving an in-person doctor visit became a challenge for the clinician and office staff and patient, respectively, when social distancing and stay-at-home policies were endorsed in 2020 due to the COVID-19 pandemic. Both patients and outpatient practices quickly adapted to telehealth once Centers for Medicare & Medicaid Services (CMS) issued waivers lifting geographic restrictions and expanding originating and remote sites to home (5). States waived state licensure requirements for cross-state practitioners as long as they held an active state license in any state. In addition, CMS provided payment for video and phone visits. The waivers allowed almost any convenient video platform to be used for telehealth, forgoing many privacy and security requirements that created barriers for practices to implement telehealth quickly and cost effectively. However, this created the challenges of working within numerous nonintegrated applications to conduct video visits, document care, and complete practice management activities (compliance, billing, coding, payment collection, etc.).

Telehealth was available to patients on home dialysis as early as 2019 under the Bipartisan Budget Act of 2018 (6). The legislation allowed patients receiving home dialysis to opt for telehealth with home as the originating site and without geographic restriction. The only stipulation centered on frequency. A patient must have three monthly in-person visits before beginning telehealth encounters. Thereafter, for each in-person visit per quarter, the patient may elect two monthly telehealth visits. When CMS issued COVID-19 waivers for telehealth, these waivers superseded the federal regulations. Thus, the patient no longer needed to be seen monthly for three visits to establish care. Moreover, all visits could be via telehealth. Operationalizing a monthly visit has many components (7,8). The dialysis nurse schedules an appointment, teaches the patient how to access and sign in to the desired platform, and participates in the visit. Because electronic health records are the norm rather than the exception, the clinician has access to the patient’s chart remotely, allowing the clinician to document the visit, reconcile and renew medications, order laboratory tests, and review laboratory test results.

For the first time, the in-center hemodialysis unit could be an originating site. A dialysis unit staff member (i.e., dietitian, social worker, nurse, or technician) became the clinical presenter. The clinical presenter would establish a connection with the provider via a desired video platform. The device, either a tablet, phone, or laptop computer, would allow the patient to be seen by the clinician as the clinical presenter moved from patient to patient in the dialysis unit.

Widespread use of telehealth will add to understanding social determinants of health, patient outcomes, and cost of care as highlighted by Young et al. in this issue (1). One might consider telehealth the disaggregation of care. For example, patients can benefit from access to their care providers, receive multidisciplinary care, include distant relatives in visits, and have the convenience of staying at home. Stakeholders no longer need to commute to a health facility, resulting in patient and accompanying individual (family member, chaperone, assistant) time and cost savings.
Home care visits can be incorporated via a visiting nurse, and lab draws can occur within the community.

During the early part of the pandemic, many practices found telehealth appointments to have low no-show rates. An email, text message, or phone call from the clinician or office staff usually alerts the patient to sign in to the platform. It remains to be seen if this reduction in no-show rates will persist once social distancing is relaxed and patients have other competing priorities to appointment attendance.

The telehealth literature has consistently reflected high patient satisfaction. For those who are skeptical about telehealth, we feel a telehealth visit is better than no visit at all for new or existing patients. However, it is important to ensure clear escalation guidelines to in-person and emergency care.

To perform telehealth, one must have adequate connectivity. Not surprisingly, those living in remote areas and in the lowest socioeconomic strata may have limited internet access. Even those with internet access may not have adequate bandwidth to support an effective video visit, or the comfort and skill with the use of the technology to optimize its usefulness. Bridging the digital divide of technology access and knowledge and skills to use it effectively must be tackled by national and local governments. For example, the District of Columbia is contemplating the use of a digital health corps, which consists of trained individuals who can support both clinical practices and patients on the use of technology to improve health outcomes.

Today, no special equipment is needed except for a commonly used device such as a computer, tablet, or smartphone with video capability for video-based telehealth encounters. It is important to connect those who may not have a capable device to resources, such as the Federal Communications Commission (FCC) Lifeline program, which provide smartphones and low-cost or subsidized subscription plans. A major component of the digital divide is digital health literacy. The ability to effectively use a device, such as a computer or smartphone, poses a challenge for patients who may also have low health literacy.

Privacy and security continue to be ongoing issues related to health care data and may be a reason patients are reluctant to connect via video or fully leverage digital health tools. Some patients may be hesitant to connect over video because they do not want to reveal their living space to the clinician. In contrast, clinicians can learn a lot about how they might help patients improve their health by noticing the unhealthy food in the refrigerator, fall hazards, or disorganization. The balance between insights into the social determinants of health and patients’ willingness to let clinicians “into their home” will require improved health literacy and building trust.

Both clinicians and patients should recognize that a physical examination can be performed virtually, but may be limited. A “no touch” examination requires the clinician to practice observational skill with or without the patient performing certain maneuvers. A more comprehensive examination may require a caregiver or other layperson to assist as a telepresenter. Laypersons can effectively learn and convey examination findings that might be difficult to assess by the clinician over video. Telehealth peripheral devices are available, that is, digital stethoscope for auscultation, but their uses are limited due to cost, sound reliability, and fidelity. As technology improves, more simple-to-use devices will assist the remote practitioner assess the patient. Additionally, there will be more home-based point-of-care testing and physiologic data tracking to further enhance the evaluation and management of complicated patients. The degree of telehealth penetration in health care after CMS waivers are lifted remains to be determined. But, it is clear telehealth will remain an effective and important means of providing health care.

We are at the forefront of telehealth use and data collection on access to care, patient outcomes, and cost of care. Big databases such as claims data from CMS and other providers will be informative. The role of telehealth in health care will continue to evolve as technology advances and demand changes; however, it has clearly become another useful tool for clinicians and patients attempting to increase touchpoints and simplify care delivery. Young et al raise some quality measurements that will guide the future role of telehealth. Additional observational and interventional studies will be needed to measure telehealth outcomes as its use evolves and technology continues to advance.

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