

Telehealth and Home Dialysis

A New Option for Patients in the United States

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Introduction

On February 9, 2018, after a brief government shutdown, the Bipartisan Budget Act of 2018 was signed into law (1). This act contained key elements of the Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act of 2017, including provisions expanding access to home dialysis (Table 1) (2). Language included in the Act modified provisions regarding access to home dialysis therapy for both traditional Medicare and Medicare Advantage plans to facilitate telehealth delivery. Previously, for a physician to use and bill for telehealth, the dialysis patient needed to be in an approved originating site during the telehealth encounter. These originating sites were limited to certain health care facilities, including hospitals, doctor's offices, hospital-based dialysis centers, and skilled nursing facilities. The Act expanded originating sites to also include the home of a dialysis patient, defining this as an additional site of health care delivery for home dialysis patients.

The legislation explicitly states that individuals receiving home dialysis therapy “may choose to receive monthly end stage renal disease-related clinical assessments furnished on or after January 1, 2019 via telehealth.” Patients treated with dialysis must receive face-to-face assessments monthly for the first 3 months of home dialysis and at least once every 3 months thereafter. For physicians based in hospitals, where a facility or technical fee may be charged along with the professional fee, this hospital facility fee cannot be charged if the patient's home is the site of the visit. This does not change the payment that the dialysis facility receives, which is determined by the ESRD prospective payment bundle.

The criteria for what constitutes a telehealth visit are set by the Secretary of Health and Human Services, and they likely will be revisited. Current requirements include interactive two-way communication using a real time audio and video connection by a health care provider who is not at the same location as the patient. Under the new law, existing geographic requirements limiting the originating site for telehealth to rural or underserved areas will not apply to patients treated with home dialysis. Therefore, patients from well served urban areas in close proximity to their providers could also use telehealth for the monthly visit. Under this law, payment for telehealth services to the physician who is located at a distant site would be the

same as if the patient was seen without the use of telehealth services, and payment to the dialysis facility would remain the usual bundled rate.

Potential Advantages of Telehealth for Home Dialysis Encounters

Using telehealth for the provision of care to patients with kidney disease is not a new idea, with experiences treating hepatitis C in rural New Mexico extended to nephrology-focused telehealth systems within the Veterans Affairs health care system (3,4). In Australia, telehealth is used widely for patients receiving home dialysis (5,6). However, there remain little data available to compare the quality of care delivered by telehealth with that of traditional care for patients receiving home dialysis.

From the patient perspective, dialysis is a medical intervention with tremendous effect on day-to-day life. No other chronic health condition is as burdensome in terms of time required to receive therapy. Beyond physical and, potentially, cognitive effects, patients treated with dialysis lose independence, and, perhaps most significantly, suffer a loss of time. Decreasing the burden of time spent on visits to providers in clinics may benefit patients from a quality of life standpoint, aligning with patient goals (7,8). Although it is easy to appreciate benefits for patients in rural settings distant from dialysis providers, it is also conceivable that patients in suburban and urban areas will benefit by avoiding the need to brave traffic, public transportation, and/or parking to see their nephrologist. Telehealth can allow greater flexibility in scheduling from a patient standpoint, potentially allowing patients to miss less work time. Telehealth visits may also facilitate patient evaluation during times of limited access to transportation, such as can occur during periods of severe weather or natural disasters. Children and their families may also benefit given the potentially long travel times to see pediatric nephrologists in a dialysis center and limited daytime hours that may result in school and work absences. In summary, providing this additional option to patients can be seen as more patient-centered and equitable care, particularly for patients with limited resources.

For providers, encounters *via* telehealth may also be desirable, with more streamlined logistics that may allow greater efficiency or more timely patient evaluation during

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Table 1. Key elements of the Bipartisan Budget Act of 2018 that may affect kidney care**Dialysis specific**

- Expands Telehealth coverage to patients on home dialysis by allowing the home to serve as an originating site (Section 50302)
- Provides continued access to Medicare Advantage Special Needs Plans for vulnerable populations, specifically designating ESRD, HIV/AIDS, and chronic and disabling mental illness as conditions that meet the definition of a severe or disabling chronic condition (Section 50311)
- Allows independent accreditation of dialysis facilities (Section 50403)

Other elements relevant to nephrology practices

- Allows prospective, voluntary assignment of Medicare fee-for-service beneficiaries to accountable care organizations (Section 50331)
- Extends the Independence at Home demonstration program (Section 50301)
- Expands Telehealth coverage for Medicare Advantage patients by permitting beneficiaries to pay the same for Telehealth consultations as they would for in-person visits and thereby, reduce cost-sharing obligations (Section 50323)
- Expands testing of the Medicare Advantage Value-Based Insurance Design test model (Section 50321)
- Changes the MACRA MIPS and Physician Fee Schedule (Section 50801)
 - Reduces the effect of the cost domain from a mandatory 30% of MIPS to 10%–30%*
 - Eliminates Part B medications from the MIPS Cost Domain and MIPS Eligibility Determinations*
 - Slows implementation of performance thresholds, potentially delaying both bonuses and penalties until 2022*
 - Reduces the Base Physician Fee Schedule Update from 0.5% to 0.25% in 2019*
- Accelerates the Reduction of the Medicare Part D “Donut Hole” Coverage Gap, potentially reducing enrollees out-of-pocket expenditures (Section 53116)
- Delays for 2 years reductions in reimbursement to disproportionate share hospitals, protecting these hospitals against potentially lower enrollment in ACA plans and less than anticipated state expansion of Medicaid coverage that would result in a corresponding higher number of uninsured and underinsured patients (Section 50204)
- Extends CHIP funding and funding for Community Health Centers (Sections 50101 and 50901)
- Allows accountable care organizations to operate beneficiary incentive programs, with incentives up to \$20 (Section 50341)

Each element is followed by identification of the section of the Bipartisan Budget Act of 2018 in which it appears. MACRA, Medicare Access and Children’s Health Insurance Program Reauthorization Act; MIPS, Merit-Based Incentive Payment System; ACA, Affordable Care Act; CHIP, Children’s Health Insurance Program.

an acute medical event. Home dialysis specialists could share their expertise from a distance with a greater number of patients in regions where such expertise does not exist. Increased efficiency may also allow providers to spend more time with the patient during telehealth encounters. For nephrologists who have their monthly patient encounters in settings where a facility fee is charged, this will no longer be applicable, reducing costs for both the health care system and patients. Providers who previously did not do in-person home visits also may gain valuable insight into the home environment, and they may be better able to modify the dialysis prescription to best suit patients and their lifestyles.

Ultimately, patients still need to have monthly laboratory tests, and they will receive erythropoiesis stimulating agents, iron, and other medications and supplies from their dialysis facilities, making it likely but not essential that, for these logistic reasons, many patients will continue to be seen by nurses and other dialysis facility staff at least once a month. If this in-person visit occurs, it will not always need to be coordinated with the physician schedule, and, in months when this coordination is not feasible, a visit by the patient to a clinic specifically to see the nephrologist would be unnecessary. This flexibility is important, particularly when recognizing that many individuals who select home dialysis do so to increase their time to pursue other activities, including jobs, family responsibilities, and travel and other leisure activities (9).

Potential Disadvantages of Telehealth for Home Dialysis Encounters

Perhaps the most cited concern with telehealth encounters is the inability to fully examine patients, including

physical evaluation of volume status and the dialysis access. It is conceivable that these assessments will be more limited during a telehealth encounter. Although some telehealth systems have developed remote capabilities for auscultation and close visual inspection, these systems may not be available for reliable or widespread use. There has yet to be a substitute for palpation, and three-dimensional observations are sometimes lost on a two-dimensional screen; the risk of missing opportunities for timely intervention on volume or access issues is greatest among patients who are not thriving with home dialysis or who have acute symptoms that are better evaluated in person.

Significant costs involved in establishing telehealth systems may be a disincentive for providers to offer this service, whereas differences in patient resources, including reliable internet access, may highlight existing disparities in care. Furthermore, lack of a facility fee may make it difficult for some health care systems to justify the cost of starting a telehealth program. Additionally, providers may find greater efficiency during in-person encounters in the clinic than with telehealth encounters.

As many providers have witnessed with the advent of electronic medical record systems, not all systems are created equally or with physicians’ interests in mind. Poorly designed telehealth systems or systems with delays or dropped connections may ultimately frustrate patients and providers alike and lead to lower-quality encounters. A well designed and functioning telehealth system, however, could lead to better retention of patients on the telehealth platform (10).

A concern of utmost importance is protecting the patient’s choice of encounter. Some patients may feel isolated,

abandoned, or anxious about being at home without regular in-person visits. Under the Bipartisan Budget Act of 2018, use of telehealth is the patient's choice, not the provider's choice. Despite the law clearly calling out patient choice in where patient visits occur, it is conceivable that providers may develop systems that do not offer that choice, citing unavailability of providers at times when patients are available and other logistic issues; accordingly, in the regulation to come, safeguards need to be in place to ensure that patients will not be limited to quarterly visits with their providers if that is not their desire. Similarly, many providers cherish in-person patient interactions, where the subtleties of communication and body language may contribute substantially to patient assessment and patient-physician relationships; accordingly, although a viable option, clinicians also should not be compelled to use telehealth by the dialysis provider. Critically, exposing providers to more screen time and fewer face-to-face patient-provider interactions could further provider burnout and dissatisfaction.

In conclusion, the Bipartisan Budget Act of 2018, in addition to other major effects, allows the provision of telehealth encounters to patients on home dialysis. Although there are many potential advantages and disadvantages to the utilization of telehealth for management of home dialysis in end stage kidney failure and considerable details remain to be determined in regulations from the Centers for Medicare and Medicaid Services, this legislation has the potential to provide patients and providers greater freedom to choose where their care is delivered and for that reason, should be considered a positive change.

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References

1. H.R. 1892—Bipartisan Budget Act of 2018. Available at: <https://www.congress.gov/115/bills/hr1892/BILLS-115hr1892enr.pdf>. Accessed March 4, 2018
2. S.870—Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act of 2017. Available at: <https://www.congress.gov/bill/115th-congress/senate-bill/870>. Accessed January 4, 2018
3. Arora S, Thornton K, Murata G, Deming P, Kalishman S, Dion D, Parish B, Burke T, Pak W, Dunkelberg J, Kistin M, Brown J, Jenkusky S, Komaromy M, Qualls C: Outcomes of treatment for hepatitis C virus infection by primary care providers. *N Engl J Med* 364: 2199–2207, 2011
4. Crowley ST, Belcher J, Choudhury D, Griffin C, Pichler R, Robey B, Rohatgi R, Mielcarek B: Targeting access to kidney care via telehealth: The VA experience. *Adv Chronic Kidney Dis* 24: 22–30, 2017
5. Mitchell JG, Disney AP, Roberts M: Renal telemedicine to the home. *J Telemed Telecare* 6: 59–62, 2000
6. Rohatgi R, Ross MJ, Majoni SW: Telenephrology: Current perspectives and future directions. *Kidney Int* 92: 1328–1333, 2017
7. Evangelidis N, Tong A, Manns B, Hemmelgarn B, Wheeler DC, Tugwell P, Crowe S, Harris T, Van Biesen W, Winkelmayer WC, Sautenet B, O'Donoghue D, Tam-Tham H, Youssouf S, Mandayam S, Ju A, Hawley C, Pollock C, Harris DC, Johnson DW, Rifkin DE, Tentori F, Agar J, Polkinghorne KR, Gallagher M, Kerr PG, McDonald SP, Howard K, Howell M, Craig JC: Standardized Outcomes in Nephrology—Hemodialysis (SONG-HD) Initiative: Developing a set of core outcomes for trials in hemodialysis: An international delphi survey. *Am J Kidney Dis* 70: 464–475, 2017
8. Urquhart-Secord R, Craig JC, Hemmelgarn B, Tam-Tham H, Manns B, Howell M, Polkinghorne KR, Kerr PG, Harris DC, Thompson S, Schick-Makaroff K, Wheeler DC, van Biesen W, Winkelmayer WC, Johnson DW, Howard K, Evangelidis N, Tong A: Patient and caregiver priorities for outcomes in hemodialysis: An international nominal group technique study. *Am J Kidney Dis* 68: 444–454, 2016
9. Morton RL, Snelling P, Webster AC, Rose J, Masterson R, Johnson DW, Howard K: Dialysis modality preference of patients with CKD and family caregivers: A discrete-choice study. *Am J Kidney Dis* 60: 102–111, 2012
10. Weinhandl ED, Collins AJ: Relative risk of home hemodialysis attrition in patients using a telehealth platform [published online ahead of print December 6, 2017]. *Hemodial Int* doi:10.1111/hdi.12621

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