Overcoming Barriers for Uptake and Continued Use of Home Dialysis: An NKF-KDOQI Conference Report

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Home dialysis modalities are used in a minority of patients with kidney failure in the United States. During the 2018 National Kidney Foundation–Kidney Disease Outcomes Quality Initiative (NKF-KDOQI) Home Dialysis Conference, numerous ideas were suggested to help minimize barriers for the uptake and retention of home dialysis therapies. First, educational tools are needed to increase knowledge about home dialysis modalities (eg, continuous ambulatory peritoneal dialysis, continuous cycling peritoneal dialysis, and home hemodialysis). Implementation of a hub and spoke model, pairing smaller and/or newer home dialysis programs with larger more sophisticated programs that offer education and mentoring, may help dialysis programs to grow and prosper. This pairing can be facilitated by traditional conferences and newer modalities such as telemedicine and training applications. Peer support to patients, such as that offered through the NKF Peers Program, and support and respite to care partners can have beneficial effects toward both increasing the number of patients who choose home dialysis as a modality and improving retention in home dialysis programs. Anticipating and understanding both patient and care partner burden is important for the development and implementation of patient- and care partner–centered support programs that can be deployed before a patient ceases home therapy. Finally, aligning Medicare reimbursement to support appropriate increased home dialysis uptake to prioritize both transplantation and home dialysis as the first-line treatments for kidney failure.

Complete author and article information provided before references.

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Introduction

"Home first" was the rallying cry at the end of the second National Kidney Foundation–Kidney Disease Outcomes Quality Initiative (NKF-KDOQI) Home Dialysis Conference held in November 2018.[1] Four months later, a similar aim was voiced by US Department of Health and Human Services (HHS) Secretary Alex Azar when he announced to more than 100 Kidney Patient Advocates a goal of changing Medicare reimbursement payment methods to encourage a shift toward home dialysis and kidney transplantation for kidney replacement therapy (KRT). He referenced home dialysis rates of 80% and 51% in Hong Kong and Guatemala, respectively, showing that developed and developing countries alike are embracing home modalities.[2] This contrasts greatly with the United States, where peritoneal dialysis and home hemodialysis persist at a substantially lower rate.[3] This announcement was followed by the stated goal of the US Centers for Medicare & Medicaid Services (CMS) to have 80% of incident patients with kidney failure begin care with either pre-emptive kidney transplantation or a home dialysis therapy by 2025.[4]

How can the United States increase the uptake of home dialysis therapies? The 2018 NKF-KDOQI Home Dialysis Conference built on the goals of the first such conference held a year earlier, which focused on identifying barriers to home dialysis in terms of initiating home therapies and in retention of home dialysis patients.[5] The focus of the second conference was to develop practical action points that would benefit not only home dialysis programs but also patients and their care partners. The programs and recommendations for research discussed in this report are based on the discussions at the meeting with stakeholders in home dialysis, including patients, care partners, physicians, nurses, advanced practitioners, social workers, dietitians, technicians, and representatives from dialysis organizations and the CMS.

Awareness and Education

Background and Importance

Low patient awareness and education regarding home dialysis has been identified as a major barrier to increasing US home dialysis patients.[5] In 2016, ~35% of dialysis patients began dialysis with little to no nephrology care[3] and most began treatment in the hospital. There are many barriers to starting patients on a home therapy if they need to start dialysis emergently in the hospital. Reducing the need for urgent starts can provide greater opportunities for patients to select home dialysis. Early education has been associated with both improved clinical outcomes and fewer urgent starts.[6,7]

Conference participants found that if the United States is to embrace a home-first philosophy, increased awareness of home dialysis, standardized education on KRT modalities, and tools to measure the effectiveness of awareness and educational programs are needed. These goals should facilitate an increase in both interest and uptake of home dialysis modalities. However, the obstacles to these goals are many. Although educational materials about dialysis are readily available, they are segregated and scattered, with varied formats. In addition, educational programs for

patients with urgent-start dialysis are limited and are not reimbursed.

Action Items and How to Execute

To best identify and understand what educational tools and resources currently exist, the conference participants concluded that a task force will need to identify the various types, formats, content, and duration of patient and provider education and understand how patients and providers currently access these materials. The task force could then develop a tool to evaluate the effectiveness of the existing educational materials on patient decisions regarding dialysis modalities. After gaps in patient and clinician knowledge, education materials, and delivery methods are assessed, a multimodal education program could be created to better support health care teams' delivery of dialysis modality options (Box 1).

Execution of this type of program requires the development of a warehouse of existing education programs, a purposeful sampling of patients from all stages of chronic kidney disease (CKD) and on different dialysis modalities, and qualitative and quantitative evaluation of the effectiveness of present methods of education, including the type of teacher (physician, nurse, social workers, peer, etc), format (text, class, multimedia, etc), instructional content (including multiphase programs, understandability of material presented, and grade level of presented material), and location of instruction (in-hospital, clinician, transitional units, etc). With this information, NKF will then be able to establish a state-of-the-art CKD education program that can be piloted in selected programs nationally.

Potential Impact

The work of this task force could offer many benefits for the nephrology community and patients with kidney disease as a whole. We would have a better understanding of the knowledge gaps that exist in home dialysis education, and we would be better able to identify whether patients have access to education programs and if that education affects their modality choice. Last, we would be able to measure performance metrics before and after implementation of the pilot CKD education program, including patients' and clinicians' awareness of home dialysis, the educational program's impact on the dialysis modality choice made by patients, and incident and prevalent rates of various dialysis modalities.

Education and Mentorship for Home Dialysis Providers

Background and Importance

Home dialysis is an underused form of KRT.[5] Barriers against adopting home dialysis include the reluctance of

Box 1. Home Dialysis Awareness and Education Actionable Steps

Assessing Current Awareness and Education Programs

Background & Importance

- Education is a prerequisite for a "home first" philosophy.
- There is significant variability in patient and provider awareness of home dialysis as a KRT modality.
- Most literature suggests that timely and serial education is needed for patients of various CKD stages.

Action Items

1. Identify currently available patient and provider education.
2. Identify current access to CKD and KRT education resources.
3. Establish task force to develop a tool to evaluate the effectiveness of education programs.

How to Execute

1. Develop a warehouse of present education programs.
2. Develop a research task force to conduct a purposeful sampling of patients with CKD to understand current awareness of home dialysis.
3. Use task force to conduct qualitative and quantitative evaluation of the effectiveness of present methods of education including:
   a. Type of teacher: physician, nurse, social worker, peer, etc.
   b. Format: text, class, multimedia, etc.
   c. Location of instruction: in-hospital, clinic, at dialysis clinic, transitional units.

Potential Impact

1. Improved knowledge of present state of education program will allow the task force to identify gaps in home dialysis education.
2. Identify:
   a. Whether patients have access to education programs.
   b. If education modifies the choice of dialysis modality.
3. Evaluate the effectiveness of present mode of dialysis education.

Developing New Education and Awareness Program

Background & Importance

There is a significant knowledge gap for patients and physicians regarding the adoption of home dialysis.

Action Items

Create a multimodal education program delivered by all members of the CKD team.

How to Execute

Develop a state-of-the-art CKD education program to be piloted in selected programs nationally.

Potential Impact

Improvement in patients and physician awareness of home dialysis.

Abbreviations: CKD, chronic kidney disease; KRT, kidney replacement therapy.

health care providers to advocate for home dialysis modalities.[8] Therefore, the NKF convened a special task force to better understand potential strategies to overcome challenges to enhance home dialysis adoption.[5]

Action Items and How to Execute

Enhancing mentorship and education for all home dialysis care providers was an overarching theme during our meeting. Evidence has shown that the size of a home dialysis unit correlates directly with outcomes, whereby larger units have improved outcomes compared with smaller units. However, there are only a few larger high-performing units. Given this limitation and few clinical experts in home dialysis (especially in the United States), we recommend using a "hub and spoke" model, which will enable delivery of clinical education and practice mentorship in an efficient and sustainable manner (Box 2).

Project ECHO (Extension for Community Healthcare Outcome) is a distance health educational model that uses videoconferencing technology to connect care providers across multiple geographical settings and areas of expertise.[9,10] After conducting a needs assessment to identify knowledge gaps of dialysis providers, we envision creating a forum in which a high-performing home dialysis center will act as "host" institution and provide clinical expertise in home dialysis through a multidisciplinary team.[11]

Most home dialysis teams consist of nephrologists, home dialysis nurses and technicians, social workers, dietitians, and dialysis technicians. In this scheme, specialist care providers/clinicians with the appropriate expertise in home dialysis would cover a predetermined curriculum in home dialysis (home hemodialysis and peritoneal dialysis) serially followed by addressing a number of clinical scenarios, predetermined and requested by the audience, to help manage patients and teach management skills to other Project ECHO participants. This case presentation–based teaching method mimics that of residency training. (See Box 3 for an illustrative curriculum and examples of clinical cases.)

Potential Impact

Project ECHO has been tested across a range of clinical disciplines. Most studies have demonstrated success in enhancing knowledge base, care provider self-efficacy, and promotion of care team integration.[12-14] Furthermore, mixed-model studies and quantitative analyses have evaluated the patient and care partner satisfaction of Project ECHO.[12] Most published studies have confirmed a high degree of professional and patient satisfaction.[15]

Our task force envisions that our pilot Project ECHO should be trialed with 3 to 4 high-performing home dialysis centers. We propose 5 potential outcome measures: (1) home dialysis incidence rate; (2) knowledge acquired in home dialysis modalities, including identifying patients appropriate for home dialysis modalities, writing home dialysis prescriptions, and managing dialysis-related complications; (3) the educational program's impact on how clinicians help guide dialysis modality choices for their patients; (4) home dialysis attrition rate and reasons; and (5) providers' and patients' satisfaction and self-efficacy.

Box 2. Project ECHO: Actionable Steps and Potential Impact

Education for Providers

Background

There is significant variability in comfort level of nephrology providers in management of home dialysis patients; 55% of fellows graduating are not comfortable prescribing home dialysis.

Action Item

Identify knowledge gaps needed to improve home dialysis care. Provide a means of assessing improvement in home dialysis knowledge before and after didactic sessions.

How to Execute

1. Create surveys to be administered to providers at the time of videoconferences to identify areas of interest and knowledge gaps.
2. Create surveys to measure provider self-efficacy.
3. Develop a home dialysis curriculum that can be iteratively modified to address knowledge gaps and interest areas identified by the surveys.

Potential Impact

Improved knowledge and comfort with home dialysis, thus increased uptake and improved outcomes.

Mentorship for Providers

Background

Difficult home dialysis cases may be best managed by case presentation to experts.

Action Item

Create a forum by which providers can present cases to experts.

How to Execute

1. Develop a panel of experts in home dialysis including physicians, social workers, nutritionists.
2. Train staff members on conducting a learning community over videoconference.
3. Identify interested dialysis providers or dialysis units, ideally at the dialysis unit level. Encourage participating units to report outcomes such as hospitalization rate, adequacy standards, peritonitis rate, churn rate, and growth.
4. Provide participants with mechanisms to submit deidentified cases and participate in the project.
5. Conduct weekly education and case presentation sessions.

Potential Impact

Improved patient care for those presenting the case; ongoing learning from case presentations.

Abbreviation: ECHO, Extension for Community Healthcare Outcome.

Box 3. Proposed Virtual Curriculum for Project ECHO

Home Dialysis Knowledge
- Home dialysis infrastructure
- Dialysis access creation and maintenance
- Home dialysis training
- Home dialysis prescription
- Infectious complications
- Noninfectious complications
- Strategies to enhance home dialysis technique survival
- Transition from home PD to home HD or vice versa (home to home dialysis transition)

Clinical Scenarios
- Patient selection
- Training techniques and strategies for success
- Vascular access cannulation
- Treatment of peritonitis and hemodialysis access infection
- Clinical effects of more frequent hemodialysis
- Unique patient population for home dialysis
  - Pregnancy
  - Heart failure
  - Liver failure
  - Difficult to control blood pressure
  - Refractory hyperphosphatemia
- The use of telemedicine in home dialysis

Abbreviation: ECHO, Extension for Community Healthcare Outcome.

Care Partner Support

Care partners are vital to the success of a home dialysis patient. Deciding to conduct home dialysis with a care partner, compared with solo treatment, must involve the whole family because it affects their entire living situation. It is therefore essential for care partners to realize that they are an important part of the care team and contribute significantly to their loved one's success on home dialysis. Studies show that home programs that ensure that the care partner is educated about all aspects of home hemodialysis will be more prepared regarding expectations as a care partner.[16] Identifying care partners' concerns before they become unmanageable and providing ongoing support of the patient–care partner team may lead to better communication and interventions.

A multidisciplinary work group collaborated for a year to address the challenges and barriers that care partners face. We propose conducting pilot programs in both care partner mentoring and assessment of care partner burnout (Boxes 4 and 5).[5]

Peer Mentoring

Background and Importance

The need for home dialysis patients and their care partners to gain further access to peer support was a recurrent theme during the conference. Peer support programs are available for patients throughout the United States. They vary in size, scope (ie, clinic-based, regional, and national), and format (ie, telephone, in-person, online community, and group).[17-20] However, support programs for care partners are extremely limited or nonexistent.

Box 4. Expansion of NKF's Peer Mentoring Program to Include Care Partners: Actionable Items and Potential Impact

Background and Importance
- Peer support can improve depression, social isolation, self-esteem, and self-management, thus leading to better health outcomes and survival.
- Support programs for care partners are extremely limited or nonexistent.
- Conference attendees expressed interest in expanding NKF's successful peer mentoring program (NKF Peers) to include support for care partners of home dialysis patients as well as build a more robust experience for home dialysis patients.

Action Items
1. Develop an expansion of NKF Peers specifically designed for care partners.
2. Recruit and train more home dialysis patients and care partners to become peer mentors.
3. Consider enhanced technological features, such as video chat.
4. Identify or develop educational material to support mentor/mentee relationship.

How to Execute
1. Collaborate with home dialysis patients, care partners, and healthcare professionals working in home dialysis to develop expansion of NKF Peers for care partners.
2. Collaborate with InquisitHealth to optimize PeerStrong app technology (ie, video chat, educational modules/library).
3. Seek funding and partnerships to support program expansion and technology.

Potential Impact
- Increase use of home dialysis modalities.
- Improve long-term success of patients on home modalities.
- Decrease care partner burnout or burden (see Box 5, care partner assessment tool).

Abbreviation: NKF, National Kidney Foundation.

Sharing experiences is at the core of what makes peer mentoring effective in helping patients adjust to and cope with a variety of chronic illnesses, including kidney failure. Peer support has helped patients with kidney disease adjust to kidney disease and long-term dialysis therapy.[17-21] Peer support has a number of benefits, including improving depression, social isolation, self-esteem, and self-management, which in turn leads to better health outcomes and survival.[17,18,20,22-25]

In 2011, the NKF developed and launched NKF Peers, a national peer mentoring program that has matched more than 800 patients with CKD seeking support from a trained peer mentor.[3] NKF Peers uses PeerStrong, a smartphone app created by InquisitHealth, to telephonically connect people who are interested in receiving support from a mentor with experiences like their own.[26] The app also provides mentors and mentees with the ability to connect

Box 5. Care Partner Burnout Inventory: Actionable Items and Potential Impact

Background & Importance
- A care partner's role, which is vital to the success of a home dialysis patient, is a significant commitment.
- Care partner concerns can become unmanageable and cause burnout.
- Stress, burnout, isolation and lack of support are part of care partner concerns.

Action Item
Test and validate care partner burnout inventory tool.

How to Execute
1. Identify a multistakeholder task force to manage this project.
2. Seek funding for a demonstration project using the tool.
3. Identify a clinical partner to assist in testing the tool.
4. Evaluate use and outcomes.

Potential Impact
- Earlier identification of care partner burnout and burden.
- Improved communication between the health care team and care partners.
- Improved home dialysis abandonment rates.

through private electronic messages, as well as the ability to chat with multiple mentors using the community forum feature. The NKF Peers program is overseen by a master's level social worker who trains peer mentors, assesses and matches mentees, and provides education, resources, and psychosocial support to participants throughout their involvement with the program. Mentee outcomes are assessed using the Patient Activation Measure (PAM), developed by Insignia Health, and a qualitative satisfaction survey.[18,27] Mentors are asked to provide feedback related to the training content and process.

Conference attendees expressed interest in building on NKF's successful peer mentoring program to include support for care partners of home dialysis patients, as well as build a more robust experience for home dialysis patients.

Action Items and How to Execute

NKF will develop an expansion of NKF Peers specifically designed for care partners, including training modules, manuals, educational tools, and resources. To further support this expansion, NKF plans to recruit and train more home dialysis patients and care partners to become peer mentors. Enhanced technological features may also be considered, such as video chat.

Conference participants discussed the role of education in the peer mentoring process. Existing peer support programs integrate educational content in a variety of ways. For example, tailored educational modules may be created and accessible within the PeerStrong app, which would be viewed by mentees in advance of discussions with mentors. Automatic prompts and/or talking points for mentors would facilitate discussions. Educational content could also be accessed more passively by mentees through a library of resources, which mentors could "push" to mentees through the app as needed.

A potential pilot program would include an assessment of the effect of peer mentoring on care partner burnout or burden and long-term success of patients on home modalities. Assessing the impact of peer mentoring on clinical indicators, quality-of-life metrics, and the impact of the newly developed Care Partner Assessment Tool (discussed further later) would also be included in a pilot study.

Potential Impact

Conference attendees believe that peer mentoring is a key factor in increasing the number of patients choosing home modalities, as well as improving long-term success rates on home modalities and quality of life. Expanding the NKF Peers program to care partners could decrease burnout and burden.

Care Partner Burden Inventory

Background and Importance

Home dialysis is a significant commitment for care partners, and as such, a challenge to that individual's ability to provide that care. Stress, burden, isolation, and feelings of being unsupported and undervalued are parts of this challenge. The work group determined that a self-assessment tool for care partners would facilitate identifying areas of concern, burnout, and support sustainability. They conducted a literature review and explored various illness organizations for guidance. This led to the identification of a tool that could be modified for this purpose: the short version of the Burden Scale for Family Care partners, intended for care partners caring for an older person at home[28] and used in the Department of Geriatrics at the University of Michigan. The Burden Scale for Family Care partners is a validated scale for measuring subjective burden in care partners. However, it was not intended for dialysis patients specifically so the work group customized the tool and lowered the literacy level (Fig 1).

The goal is to support continuation of home dialysis through regular check-ins using the tool to assess for signs of burnout, depression, and other aspects of burden. Based on the responses provided by the care partner, a health care professional would identify the type of intervention to deploy. The home program team would evaluate the responses and seek conversation with the care partner to further assess their needs.

Action Items and How to Execute

The tool has been tested at several work group members' clinics, but a pilot program formally testing and validating the tool in a dialysis setting, assessing its impact in identifying potential burnout and ultimately improving home dialysis abandonment rates needs to be conducted. NKF plans to convene a small task force to assist in the development of a pilot program. A clinical partner, as well as

As a care partner please tell us how much you agree with the following:

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I often feel physically exhausted.				
2. I often feel emotionally exhausted.				
3. Sometimes I wish I could "run away" to take a break.				
4. Our relationship is good.				
5. My finances suffer.				
6. My health suffers.				
7. My other relationships suffer (family, friends, coworkers).				
8. There are people I can turn to for help.				
9. My sleep suffers.				
10. I feel torn between providing care and my other demands.				
11. I am overwhelmed by managing supplies.				
12. I find ways to feel satisfied with my life.				
13. I don't think I can do this for more than one year.				
14. Sometimes I feel depressed and/or anxious.				
15. I feel frustrated when he/she doesn't follow their diet, take medicine, or do their dialysis as they should.				
16. The thoughts and feelings I have about being a care partner make me feel guilty.				

Please add any other concerns here:

If you did not complete this form in person - Would you like a member of the healthcare team to follow up with you?

☐ Yes ☐ No

Figure 1. Care partner burden inventory.

funding, will need to be identified before the pilot program can be initiated. It is estimated that it will take approximately 1 to 2 years to properly validate the scale.

The work group also discussed the importance of home programs offering respite care to their patients and care partners. Although no particular pilot project was discussed, the team plans to conduct a survey to assess how many programs offer respite care, how many patients use respite care, the duration of respite care, and how many patients abandon home dialysis after using respite care. This information will help inform potential solutions to patient and care partner burdens.

Potential Impact

Use of this type of tool could lead to improved communication between clinicians and care partners, as well as earlier identification of care partner burnout. The tool also has the potential to improve home dialysis abandonment rates.

Aligning Medicare Reimbursement to Increase Home Dialysis Uptake

Background and Importance

On July 10, 2019, Secretary Azar and the President announced the Advancing American Kidney Health Initiative and on the same day released a proposed End-Stage Renal Disease Treatment Choices (ETC) model that proposes to move reimbursement incentives toward transplantation and home dialysis and away from in-center dialysis.[29] The ETC model includes some minimal positive payment incentives to both nephrology practitioners and dialysis facilities by boosting payments by 3% in the first year to the monthly capitated payment (MCP) and to the Medicare per-treatment dialysis payment made to facilities. These initial upside-only payments will decline by 1% in the subsequent years of the model until they are eliminated completely in the third year. The model includes substantial cuts to payments to dialysis facilities that are not able to achieve a yet-to-be-defined home dialysis rate. If this proposed rule is finalized it could be mandatory for about half the country's nephrologists and dialysis facilities.

This formal announcement and proposed rule followed many months of public comments by leadership at the HHS focused on prioritizing transplantation and home dialysis as the first-line kidney failure treatments by leveraging changes to Medicare reimbursement to kidney care providers. During the Home Dialysis Conference, Amy Bassano, Deputy Director of the Centers for Medicare & Medicaid Innovation (CMMI), addressed HHS and CMMI leadership's vision to shift misaligned reimbursement incentives to increase the number of patients with kidney failure who receive a transplant or home dialysis.

In the current incentive structure, Medicare reimburses dialysis facilities at an equal base rate for all modalities.

Training for home dialysis is an additive reimbursement to the facility.[30] In addition to the MCP, physicians or advanced practitioners also receive a payment of $500 for each patient who completes training for home dialysis.[31] However, the MCP for treating home dialysis patients is less than the highest level of reimbursement that physicians can receive for the monthly care of an in-center patient.[32] While receiving the highest MCP for an in-center patient requires seeing each patient more frequently during the month, it is widely believed among clinicians that rounding on multiple patients in-center during the month is more efficient than meeting 1-on-1 in a home dialysis clinic. This discrepancy in the reimbursement rates and the efficiency of achieving higher reimbursement for in-center patients is a barrier to physicians recommending home dialysis for their patients.

The Bipartisan Budget Act of 2018, signed into law and effective January 1, 2019, may have improved the efficiency of visiting home dialysis patients by allowing clinicians to bill the MCP for these patients monthly without having to provide a face-to-face visit every month. Instead, MCP-eligible clinicians can conduct monthly visits virtually using telecommunications technology; they need to see the patient face to face only once every 3 months. The exception to this policy is that patients within their first 90 days of home dialysis must be seen face to face monthly.[33] Because this change in law was implemented as of 2019, there is limited experience with billing and reimbursement to determine whether increases in virtual visits will occur and what effect it may have on uptake of home dialysis. The use of telehealth may facilitate uptake of home dialysis primarily by increasing convenience for clinicians and patients.[34]

Numerous operational and regulatory barriers persist for virtual visits for dialysis patients. For one, despite the CMS rules surrounding the telehealth benefit for home dialysis patients,[35] practitioners are still required to inspect vascular access sites in person monthly. These contradictory policies need clarification. Furthermore, although CMS may have provided an avenue to provide virtual visits, dialysis providers' internal policies may require revision to fully utilize virtual visits. Details regarding the billing of telehealth visits also pose a barrier to telehealth implementation. For example, electronic billing systems must be modified to submit telehealth claims by affixing a place of service type 2. These changes may take time to implement and as such may also limit the adoption of telehealth by clinicians. If clinicians or dialysis providers are unclear about the rules, this could result in conservative behavior in conducting and billing the MCP when a virtual visit occurred (Box 6).

During the conference, the need for greater use and improvement in patient awareness and education before KRT was cited as the best way to increase patient use of home dialysis. Medicare offers patients with CKD stage 4 a Kidney Disease Education (KDE) benefit. Patients are subject to 20% coinsurance. The education must be overseen by a physician and can be delivered only by a physician or advanced practitioner.[36] Program requirements preclude the use of this program for urgent-start dialysis patients. The limited reimbursement for delivering effective education and the patient coinsurance obligation are also barriers to patients selecting home dialysis and persisting on the modality. Multiple studies provide evidence that modality education, delivered to patients before KRT initiation, increases their selection of home dialysis.[37-40] In addition, in a cohort of 667 patients who received education through the KDE benefit, of the 150 who required KRT, 30 initiated home dialysis. The researchers concluded that KDE has a positive impact on home dialysis uptake.[41]

Box 6. Policy Recommendations

Background & Importance

The current administration has prioritized advancing home dialysis, and new reimbursement changes are on the horizon. Prior to the administration's announcement, HHS leaders began publicly discussing the need for more patients to do dialysis at home.

Action Items

1. Modify the MCP to equalize the payment to nephrologists treating home patients.
2. Incentivize the creation and maintenance of urgent-start home dialysis programs to increase home dialysis uptake and provide patients with a better opportunity to choose and transition to home dialysis or other options.
3. Modify the Medicare KDE benefit by increasing the reimbursement to providers and allow for other types of providers to bill and oversee the delivery of the education, expand the benefit to include non-KRT patients with CKD stage 5, remove the coinsurance obligation for patients, and allow for patients' homes to be the site of service so KDE can be offered virtually.
4. Clarify contradictory CMS requirements and provide regulatory guidance for the provision of telehealth visits.

How to Execute

Further actions of Congress and by the Administration are necessary to secure these policy changes.

Potential Impact

Reimbursement changes coupled with additional policy changes to better empower patients to make informed choices about home dialysis are necessary to ensure a sustainable increase in uptake.

Abbreviations: CKD, chronic kidney disease; CMS, the Centers for Medicare & Medicaid Services; HHS, US Department of Health and Human Services; KDE, Kidney Disease Education; KRT, kidney replacement therapy; MCP, monthly capitated payment.

Action Items

Reimbursement changes, such as those proposed in the ETC model, may not be enough alone to encourage successful and long-term growth in home dialysis uptake and could continue to disempower patients by limiting their choices. Initial efforts to increase home dialysis uptake should also include the following policy changes:

- Modify the MCP to equalize the payment to nephrologists to treat home patients
- Incentivize the creation and maintenance of urgent-start home dialysis programs as a way to increase home dialysis uptake and provide patients with a better opportunity to choose and transition to home dialysis or other options
- Increase uptake of the Medicare KDE benefit by increasing reimbursement to providers and allow for other types of providers to bill and oversee the delivery of the education, expand the benefit to include patients with CKD stage 5 who are not already on KRT, remove the coinsurance obligation for patients, and allow for patients' homes to be the site of service so KDE can be offered virtually
- Clarify contradictory requirements and provide regulatory guidance for the provision of telehealth visits by CMS regarding vascular access inspection requirements

Some of these recommendations will require legislative changes or need to be conducted under CMMI's demonstration authority (eg, expanding the KDE benefit and waiving coinsurance), while others (eg, changing reimbursement for the MCP) could be done by CMS through the regulatory process or integrated into the ETC model.

Potential Impact

Payment incentives to increase home dialysis or measuring dialysis facilities on the percentage of home patients they treat could have other unintended consequences of penalizing facilities or nephrologists for patients for whom home dialysis would not be appropriate. However, incentives could be appropriate if unintended consequences were minimized and monitored. Equalizing physician reimbursement between the in-center and home visits coupled with clarifications in telehealth policy may help create nephrologist champions necessary to increase home uptake and help patients succeed at home. Policy changes to enhance patient education are also likely to help patients make informed and shared decisions about home dialysis.

Conclusion

There remains a great deal of work to develop, test, and refine these proposals to prioritize the use of home dialysis modalities. The work group is presently developing a roadmap of initiatives that address the concepts discussed in this report, as well as a timeline for implementation of these projects. The work group is hopeful that this multipronged approach will facilitate an increase in both the uptake and retention of home dialysis modalities by patients with kidney failure.

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