



Implementation of kidney palliative care—lessons learned from the US Department of Veterans Affairs

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Abstract: Advanced kidney disease is a progressive life-limiting illness associated with high symptom burden, disability, and highly intensive care near the end of life. There is growing interest in integrating palliative care principles into the care of patients with advanced kidney disease to improve care and outcomes for these patients. The United States (US) Department of Veterans Affairs (VA) has been a leader in advancing palliative care initiatives across its health system and whose experience and approach may be instructive to other health systems seeking to develop kidney palliative care (KPC) services. Herein, we review current KPC programs in the VA and highlight the different models of care that programs have been adopted and how key components of goals of care conversations and advance care planning, symptom management, multidisciplinary care, patient selection, and quality improvement have been implemented across programs. VA KPC programs have adopted “parallel”, “merged”, and “embedded” models of KPC that reflect the different configurations of partnerships between nephrology and palliative care providers to deliver KPC. A primary service of VA KPC programs is providing goals of care conversations and advance care planning to referred patients and systematically documenting the outcomes of these discussions in standardized note templates in the electronic medical record. Symptom management is delivered by KPC providers through regular shared or sequential visits with patients’ nephrology providers and is guided by patient responses to validated symptom surveys. Programs are staffed by allied health professionals, such as chaplains, pharmacists, social workers, and dietitians, to provide whole-person care and regularly huddle with nephrology staff to reach a shared understanding of each patient’s care needs and plan. KPC programs implement champions who select patients in greatest need of KPC using a combination of clinical events that trigger referral for KPC and validated mortality risk prediction scores that are automatically generated in each patient’s medical record. KPC programs also routinely collect clinical, patient-reported, process, and care quality measures to assess its services. The experiences of the VA highlight novel approaches that strive to close the care gaps in meeting the KPC needs of patients with advanced kidney disease.

Keywords: Kidney palliative care (KPC); end-stage kidney disease; conservative kidney management; healthcare delivery; models of care

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Introduction

Patients with advanced kidney disease often face physical, psychological, social, and spiritual impacts brought on by their illness and the demanding forms of kidney replacement therapy (e.g., dialysis, kidney transplant) intended to treat the disease. The physical and psychological symptom burden of patients with advanced kidney disease is comparable to, if not greater than, that of patients with terminal cancers (1,2). Difficulty coping with their disease, spiritual distress, and anticipatory grief about their declining health are common for patients but frequently under-recognized by providers (3-6).

Most patients with advanced kidney disease also report very limited engagement in advanced care planning to prepare them for their illness course and for making treatment decisions that uphold what matters most to them (7). Most nephrologists are unaware of patients' healthcare values and goals (8,9), and frequently assume their patients' overriding goal is longevity (10). Many nephrologists also report reluctance and lack of training with discussing prognosis, end-of-life issues, or palliative options for care with patients (11-13). Not surprisingly, many living with kidney disease have unrealistic expectations about their prognosis (14,15) and receive highly intensive end-of-life care that may be discordant with their values and goals (16,17).

In the United States (US), there is also limited clinical infrastructure within usual nephrology care settings to support patients with advanced kidney disease who forgo kidney replacement therapy in favor of a palliative approach

to treatment of their kidney failure (18,19). In fact, when patients decide against dialysis, nephrologists frequently either "sign-off" from their care (19) or struggle to cobble together resources outside of nephrology to support patients (18), which can lead to gaps in care. Patients who forgo dialysis more often die in the hospital setting and are less likely to receive hospice care as compared with other patients with serious illness (20).

Kidney palliative care (KPC; also known as kidney supportive care) is a framework to support patients with advanced kidney disease. KPC is defined by the Kidney Disease: Improving Global Outcomes (KDIGO) as "services that are aimed at improving the health-related quality of life for patients with established kidney disease, at any age, and can be provided together with therapies intended to prolong life, such as dialysis" (21). Key principles of KPC include clarification of goals of care and advance care planning, careful symptom assessment and management, social and caregiver support, and interventions to support patients' psychological and spiritual well-being (*Table 1*). KPC takes a holistic approach to patient care that differs from the traditional disease-based approach to usual nephrology care (22).

There has been very limited research done on how best to deliver KPC in the US. Available data indicate that KPC programs in the US are still in their infancy and primarily based at academic medical centers (23-25). These programs largely rely on a physician who is dually trained and board certified in nephrology and palliative care. Though available data indicate that these types of programs are appealing

Table 1 Key principles of KPC

| Principle | Definition |
|---|--|
| Goals of care and advance care planning | Sharing prognostic information with patients about their illness and expected outcomes with different treatments and clarifying patients' values, goals, and preferences for care to support informed and shared decision-making |
| Symptom management | Helping patients cope with physical and psychological symptoms through interventions that are not limited to those that treat their underlying biological mechanism |
| Spiritual support | Attending to patients' spiritual and existential distress brought on by their illness experience |
| Social and caregiver support | Addressing the social impact of patients' illness and caregiving needs |

KPC, kidney palliative care.

to patients (26), a diversity of approaches is likely needed to address the varied needs of patients and their individual circumstances. In order to guide further improvement in KPC delivery, this paper reviews the different KPC programs that have emerged within the US Department of Veterans Affairs (VA).

Why KPC in the VA?

The VA is the largest integrated health system in the US, serving over 9 million patients a year at its 1,243 facilities, which includes 170 medical centers, 130 nursing facilities, and 1,063 outpatient clinics. With its 74 dialysis units, 1,000,000 Veterans with advanced kidney disease, and 30,000 Veterans with kidney failure, the VA is also the largest provider of advanced kidney disease care in the US (27,28). Compared with the general population, Veterans are disproportionately affected by advanced kidney disease (29). They also tend to be older, have a greater burden of medical and mental health conditions as compared with the general US population (27,28) and represent a high-needs population for palliative care.

The VA has made distinctive efforts to create policies and initiatives that promote incorporating palliative care and its principles into the routine care of its patients. In 2002, the VA set policy to require establishment and staffing of palliative care teams at each of its facilities (VA Directive 2002-038) (30). In 2008, the VA launched a national quality improvement initiative to track quality of end-of-life care provided to its Veterans [Performance Reporting and Outcomes Measurement to Improve Standard of Care at End of Life (PROMISE)]. Consequently, bereaved family members of all patients who die in VA facilities are contacted to complete a survey (Bereaved Family Survey) assessing the patients' end-of-life experience. In 2017, the VA launched the Life-Sustaining Treatment Decisions Initiative, a system-wide campaign to promote proactive goals of care conversations and streamline documentation of patients' preferences for potentially life-sustaining treatments (LSTs), including dialysis (31). As part of this Initiative, the VA implemented a standardized LST note template in its electronic medical record to document patients' goals and preferences for LST. Treatment preferences documented in LST notes are executed as durable medical orders across the entire VA health system.

Not only has the VA instituted policies and initiatives to promote palliative care, but it is also uniquely positioned to provide palliative care to its patients with kidney failure in

a way that is less accessible to those in non-VA settings. For example, patients on dialysis who receive hospice incur fewer healthcare costs, less often undergo invasive procedures, and are less likely to die in the hospital as compared with those on dialysis who die without hospice (32). However, Medicare—the largest payor of dialysis care in the US—does not pay for concurrent hospice and dialysis care when the primary diagnosis for hospice care is related to a patient's kidney failure. This forces patients to choose either hospice or dialysis care despite potential benefit from both interventions. In contrast, the VA does not have this restriction. In fact, Veterans receiving dialysis paid for by the VA are much more likely to receive concurrent hospice than their counterparts who utilize their Medicare benefits (33). Likewise, due to limited reimbursement rates under the Medicare Hospice Benefit, certain therapies intended to support quality of life, such as erythropoietin stimulating agents, physical and occupational therapy, and intravenous medications, can be prohibitively expensive to use with patients with advanced kidney disease receiving hospice care. By comparison, Veterans who use their Medicare benefits for hospice care can continue to receive services from the VA that do not duplicate hospice benefits, which gives patients and health care providers access to more tools to treat patients with complex needs.

Care practices for patients with kidney failure who receive care within the VA are also not subject to the same financial incentives that can occur under a fee-for-service reimbursement model in Medicare settings. Studies have shown that, irrespective of a Veteran's likely prognosis with dialysis, Veterans who choose to receive their medical care in Medicare fee-for-service settings are more likely to start dialysis and start this treatment earlier in the course of their disease as compared with Veterans who receive their care within the VA (34,35). Incentive programs under Medicare also tend to be longevity-oriented and impose rigidity to dialysis care and treatment burden on patients whose goals do not align with this approach (36). For instance, incentives promoting higher clearance targets lead to longer or more intensive dialysis treatments for patients, and those favoring use of fistulas over catheters for dialysis access require patients to undergo additional surgeries. In contrast, Veterans with kidney failure who choose to receive their care in the VA may have more opportunity to receive care that is focused on symptom management and improving quality of life over longevity. Specifically, these Veterans may choose to delay dialysis initiation, undergo shorter and less frequent dialysis treatments, use a dialysis catheter

rather than fistula or forgo dialysis entirely for conservative kidney management.

KPC programs in the VA

While the VA has made significant progress in improving access to palliative care for patients with advanced kidney disease, there are still opportunities for improvement. Among patients with advanced kidney disease who die in VA facilities, 38% receive a palliative care consultation within 90 days prior to death, 36% receive hospice care at the time of death, and 26% die in a dedicated VA inpatient hospice or palliative care unit (37). Palliative care consultations and hospice enrollment are typically prompted by illness crisis and tend to occur very close to the end of life (20). While Veterans are more likely to receive concurrent hospice and dialysis than non-Veterans, this benefit is used by only a minority of Veterans and can be difficult to arrange by providers and hospice agencies who are unfamiliar with these processes (11). Only a minority of Veterans with advanced kidney disease have completed an LST note, and notes are typically completed during hospitalization for acute illness (38). Likewise, only 55% of bereaved family members of patients with advanced kidney disease rate the overall end-of-life care that their loved ones receive as “excellent”, which is substantially lower than the rate (78%, according to internal communication with VA Palliative and Hospice Care Program Office) reported for the general Veteran population (37).

Given the high degree of mortality, morbidity, and unmet supportive care needs of patients with advanced kidney disease, there is strong interest in the VA to increase access to palliative care for Veterans. This current review summarizes KPC programs across the VA led by members of the VA Nephrology-Palliative Care Workgroup, a professional interest group of nephrology and palliative care health care providers within the VA. This group was established following a series of joint meetings between nephrology and palliative care providers that were facilitated by the VA Palliative and Hospice Care Program Office between 2021 and 2023. KPC programs included in this review encompass active (as of September 30, 2023) clinical programs that provide dedicated services to patients with advanced kidney disease using a structured and systematized approach to providing one or more principles of KPC (Table 1) (21). We discuss the different models of care that programs have adopted to delivery KPC and how

key components of goals of care conversations and advance care planning, symptom management, multidisciplinary care, patient selection, and quality improvement that have been implemented across programs summarized in Table 2.

Models of KPC

Partnerships between nephrology and palliative care to deliver KPC programs in the VA have assumed several configurations that are illustrated in Figure 1. At several programs, nephrology and palliative care providers work separately but in “parallel” within their respective care infrastructures, and mechanisms are in place to expedite referral of patients with KPC needs identified in nephrology settings to palliative care providers. At several VA sites, KPC programs will assume the care of patients from nephrology services and provide conservative kidney management when patients decide to forgo dialysis. At other programs, a “merged” model of nephrology and palliative care is led by a physician who is dually trained and board-certified in nephrology and palliative care or by a nephrologist with formal training in primary palliative care skills. There are also programs that use an “embedded” model in which palliative care providers are embedded within the usual nephrology care infrastructure to provide KPC.

Goals of care conversations and advance care planning

All KPC programs offer consultation services to complete goals of care conversations and advance care planning with referred patients. The outcomes of these discussions are then documented in LST notes in the electronic medical record. Multiple KPC programs also support patients and their nephrology colleagues with decision-making about treatment of kidney failure as well as decision-making around discontinuation of dialysis when patients are nearing the end of their lives.

Symptom management

Most KPC programs also provide symptom management on a consultation basis or through regular visits in addition to routine nephrology care throughout the course of a patient’s illness. KPC providers might share regular visits with patients’ nephrology providers or see patients sequentially immediately before or after patients’ visits with their nephrology providers. Shared or sequential visits are interspersed with traditional 1:1 visits between patients and

Table 2 Summary of KPC programs in the VA

| Site [year started] | Population targeted | Referral process | Program staff and structure | Services provided | Quality metrics tracked |
|----------------------------|---|--|---|--|---|
| New Mexico [2022] | <ul style="list-style-type: none"> • CKD 4–5 with high CAN scores • On dialysis without LST note • On dialysis with high CAN scores • Favor CKM | <ul style="list-style-type: none"> • Champions (NP and SW) in nephrology clinic proactively identify patients and place referral | <ul style="list-style-type: none"> • Designated dually trained nephrology and palliative care MD located in nephrology clinic and dialysis unit; leads dedicated KPC clinic; provides consultation visits for specific needs and regular sequential visits to other nephrology providers | <ul style="list-style-type: none"> • Goals of care and advance care planning • Symptom management • Social and caregiver support • CKM | <ul style="list-style-type: none"> • LST note completion • CKD treatment preference |
| Maine [2019] | <ul style="list-style-type: none"> • CKD 4–5 without AD or LST note | <ul style="list-style-type: none"> • Champions (MD and NP) in nephrology clinic proactively identify patients and places referral | <ul style="list-style-type: none"> • Designated palliative care MD; provides consultation visits for specific needs | <ul style="list-style-type: none"> • Goals of care and advance care planning | <ul style="list-style-type: none"> • LST note completion |
| Boston [2023] | <ul style="list-style-type: none"> • Any stage CKD with poor prognosis | <ul style="list-style-type: none"> • Champion (MD) in nephrology clinic proactively identifies patients and places referral | <ul style="list-style-type: none"> • Designated palliative care MD and SW • Designated palliative care MD embedded in nephrology clinic; provides consultation visits for specific needs and regular shared or sequential visits with nephrology providers for ongoing needs | <ul style="list-style-type: none"> • Goals of care and advance care planning • Symptom management | <ul style="list-style-type: none"> • LST note completion |
| Hines [2018] | <ul style="list-style-type: none"> • On dialysis • Aged ≥70 years without an LST note • Aged ≥70 years referred for CKD education[†] | <ul style="list-style-type: none"> • Champion (SW) in palliative care clinic proactively identifies patients and champion (MD) in nephrology clinic places referral | <ul style="list-style-type: none"> • Designated palliative care MD and NP who provides consultation visits for specific needs • Designated palliative care program coordinator to provide training to nephrology champions • Regular team huddle between champions and designated palliative care MD and NP to discuss patient cases | <ul style="list-style-type: none"> • Goals of care and advance care planning | <ul style="list-style-type: none"> • LST note completion • CKD treatment preference |
| Chicago [2022] | <ul style="list-style-type: none"> • On dialysis | <ul style="list-style-type: none"> • At discretion of any nephrology or palliative care provider or dialysis unit staff | <ul style="list-style-type: none"> • Designated palliative care MD embedded in dialysis unit; provides consultation visits for specific needs • Regular team huddle between designated palliative care MD and dialysis unit staff | <ul style="list-style-type: none"> • Goals of care and advance care planning • Symptom management | <ul style="list-style-type: none"> • LST note and AD completion |
| Pittsburgh [2021] | <ul style="list-style-type: none"> • On dialysis with high CAN scores • Referred for CKD education[†] • Favor CKM | <ul style="list-style-type: none"> • Champion (NP) in nephrology clinic proactively identifies patients and places referral | <ul style="list-style-type: none"> • Designated palliative care NP and chaplain embedded in nephrology clinic and dialysis; provides consultation visits for specific needs and regular shared visits with nephrology providers for ongoing needs | <ul style="list-style-type: none"> • Goals of care and advance care planning • Spiritual support • Symptom management • CKM | <ul style="list-style-type: none"> • LST note completion • Edmonton symptom scale • Quality of life survey |
| Puget Sound [2022] | <ul style="list-style-type: none"> • CKD 4–5 newly referred to nephrology clinic | <ul style="list-style-type: none"> • Referral at discretion of any VA provider | <ul style="list-style-type: none"> • Designated nephrology MD with formal training in primary palliative care skills, RD and PharmD • Regular shared visits between designated nephrology MD, PharmD, and RD • Regular team huddle between nephrology MD, PharmD, and RD to review patient cases | <ul style="list-style-type: none"> • Goals of care and advance care planning • Symptom management • CKM | <ul style="list-style-type: none"> • LST note and AD completion • CKD treatment preference • Rate of kidney function decline • If dialysis initiated, access (temporary catheter or permanent access) and setting (outpatient vs. inpatient) at dialysis start • If CKM initiated, hospice enrollment and place of death |
| Northern California [2023] | <ul style="list-style-type: none"> • CKD 4–5 with high CAN scores • On dialysis with high CAN scores • Favor CKM | <ul style="list-style-type: none"> • Referral at discretion of any nephrology provider | <ul style="list-style-type: none"> • Designated palliative care NP embedded in nephrology clinic and dialysis unit; provides consultation visits for specific needs and regular sequential visits with nephrology providers for ongoing needs | <ul style="list-style-type: none"> • Goals of care and advance care planning • Symptom management • CKM | <ul style="list-style-type: none"> • IPOS-renal survey • LST note completion • Hospitalizations • Dialysis discontinuation • Hospice enrollment |

[†], patients who are referred for CKD education on conservative kidney management and kidney replacement therapies are those at high risk for kidney failure. KPC, kidney palliative care; VA, Veterans Affairs; CKD, chronic kidney disease; CAN, Care Assessment Need; NP, nurse practitioner; SW, social worker; MD, physician; LST, life-sustaining treatment; CKM, conservative kidney management; AD, advance directive; RD, renal dietician; PharmD, pharmacist; IPOS, Integrated Palliative Outcome Score.

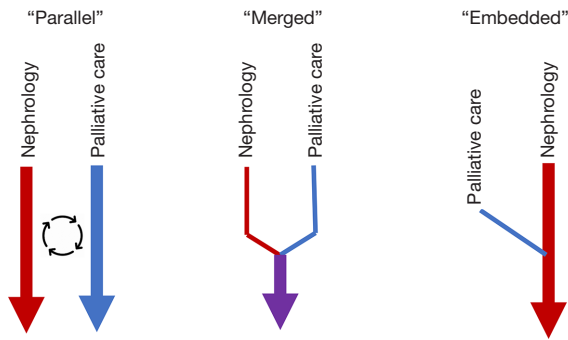


Figure 1 Models of KPC delivery in the US Department of VA. (In “parallel” models, KPC is delivered through partnership of nephrology and palliative care providers each working within their respective care infrastructures; in “merged” models, KPC is delivered by provider with training in both nephrology and palliative care; in “embedded” models, KPC is delivered by palliative care providers embedded within a usual nephrology care infrastructure). KPC, kidney palliative care; US, United States; VA, Veterans Affairs.

their nephrology providers. Several programs administer Integrated Palliative Outcome Score (IPOS)-Renal and Edmonton Symptom surveys (39) to assess quality of life and symptom burden and use this information to guide treatment plans.

Multidisciplinary care

Several programs also have allied health professionals, such as chaplains, pharmacists, social workers, and dieticians, on their KPC teams and therefore also provide spiritual, social and caregiver support to patients. KPC providers and allied professionals routinely huddle as a team and with nephrology staff to discuss their shared patients and reach a mutual understanding of each patient’s care needs and plan. KPC providers and allied health professionals also conduct shared or sequential visits with patients to facilitate a collaborative approach to developing care plans.

Patient selection

KPC programs have implemented “champions”—physicians, nurse practitioners or social workers working in nephrology settings to identify patients who might be in greatest need of KPC and place referrals to KPC programs. Patients who are targeted for KPC services are those who are at high-risk for kidney failure, hospitalization, disability,

and death, which are determined using several strategies. At a few programs, referral to kidney disease education classes is coupled with an automatic referral to the KPC program to assist patients with decision making about kidney failure treatments. At one program, patients who are referred late to nephrology clinic when they have already reached stage 4–5 kidney disease are proactively triaged to the KPC program for intensive education about treatment options for kidney failure and goals of care conversations to facilitate decision-making. Several programs utilize Care Assessment Need scores (a validated risk prediction score for 90-day and 1-year risk of hospitalization and mortality that is based on structured demographic and clinical data from the electronic medical record) (40) that can be automatically generated in each patient’s VA medical record to triage patients to KPC programs. At several programs, there is also a routine screening of the electronic medical records for patients on dialysis or with stage 4–5 kidney disease who have not completed an LST note, which is information that is also automatically generated in each patient’s medical record. KPC champions also use 6-month mortality risk calculators (41) specific for patients on dialysis to stratify potential patients for KPC.

Quality improvement

Although it is too early to determine the efficacy of the VA KPC programs described in this article, most of these programs are beginning to collect measures of quality of care to assess its KPC services. At all VA KPC programs, activities of advance care planning and goals of care conversations are evaluated using LST notes and/or advance directive completion rates. To further assess for treatment concordant care, one program records measures of preparedness for treatment of kidney failure to determine the degree of proactive support provided to patients in pursuing their preferred treatment option. For patients opting for dialysis, dialysis access (temporary catheter *vs.* permanent access) and setting (outpatient *vs.* inpatient) at the time of dialysis initiation are collected. For patients opting for conservative kidney management, information on hospice enrollment and place of death are recorded.

A variety of clinical and patient-reported outcomes are also tracked by several KPC programs to assess delivery of symptom management and its downstream outcomes. IPOS-Renal and Edmonton Symptom surveys are not only used to inform patient care but also assess patient outcomes. These programs also collect longitudinal information on

rate of kidney function decline, hospitalization, place of death and dialysis discontinuation.

Opportunities to advance KPC

Diverse KPC programs have emerged in the VA to address the unmet palliative care needs of patients with advanced kidney disease. Early insights from these programs provide directions for next steps to advance KPC delivery and outcomes, which we detail below.

Effectiveness and implementation research

An important next step in advancing KPC is to expand research in this area. The KPC models currently in practice in large part reflect the local resources, personnel, and capacity to support specific models. Rigorously designed studies are still needed to determine their comparative effectiveness. There is also a relatively small number of VA sites with KPC programs, and therefore highlight opportunities to research barriers to implementation and dissemination of KPC program. Existing KPC programs in the VA can also serve as sites for research networks testing novel KPC-related interventions to determine their benefit to patients and providers.

Growing the KPC workforce

Current VA KPC programs rely on a relatively high degree of skills provided by one or a small group of health care providers and allied health professionals. Thus, strategies are needed to grow the KPC workforce to support expansion of KPC programs. Programs outside the VA have looked to training nephrology providers and allied health professionals in primary palliative care skills to provide first-line and bridging therapy to specialty palliative care to address patients' needs (42-44). Dialysis unit settings have been an important target for this approach as multidisciplinary care teams, including a social worker, pharmacist, and dietician, are already required in VA and community dialysis facilities, and therefore are well-positioned to provide whole-person care with the additional support of primary palliative care training. The US Accreditation Council for Graduate Medical Education is also currently piloting combined nephrology and palliative care fellowship training programs to streamline training in KPC for physicians (45).

Expanding the reach of KPC programs

Current KPC programs in the VA are limited to the health system's tertiary medical centers. KPC programs could further leverage the robust healthcare delivery mechanisms within the VA to extend their care reach beyond its medical centers to meet patients where they are. The VA has an expansive telemedicine network in which its health care providers can conduct telephone and video visits via patients' personal devices or loaned VA devices to patients in their homes or at outlying VA satellite clinics (46). KPC delivered through telemedicine may be highly acceptable to patients and a worthwhile compromise for patients living in highly rural areas who would otherwise have to travel long distances for in-person care (47).

Integrating KPC across the VA health system

Current KPC program in the VA are limited to collaborations between palliative care and nephrology and have not fully leveraged the strength of the VA as an integrated health system that offers both primary and specialty care. Many of the challenges and unintended harms experienced by patients with advanced kidney disease are attributable to the siloed approach to care found in many areas of medicine where important and related medical decisions are made in a disjointed fashion with different providers, in different locations and at different times (48,49). Additional models of KPC are needed to enhance collaboration between primary and specialty care for patients opting for KPC that facilitates care coordination and a shared understanding of treatment plans across providers so that patients receive care that is consistent with their overall values and goals of care. One potential strategy in the VA is to leverage its Patient-Aligned Care Teams (PACT), which are primary care teams that use a patient-centered home model of primary care (50). There are PACT teams that have been developed to serve special populations with high needs (51). KPC programs could collaborate with dedicated kidney PACT teams serving patients with advanced kidney disease and who, in turn, can assist with guiding patient care across the health system such that it is aligned with KPC. This holistic approach of care is inherently demanding and requires concerted efforts by VA KPC programs to cultivate a local culture and environment of interprofessional collaboration (52).

Integrating KPC across VA and non-VA settings

Because many Veterans with advanced kidney disease receive their nephrology care in the community that is financed by the VA, models of care are also needed to help these patients benefit from KPC. Veterans who receive their care outside the VA are commonly subject to care fragmentation, incomplete medical record sharing and communication breakdown between VA and non-VA providers (53). These challenges will likely place increased demands on KPC program staff and providers to track down and communicate with non-VA providers and serve as liaisons between non-VA providers and the wider VA health system to ensure that patients receive care that aligns with KPC across the different healthcare settings (53). Models of KPC are also needed to assist nephrology providers and patients with arranging concurrent hospice care for patients on dialysis who are close to the end of their lives. Because the VA frequently contracts out dialysis and hospice care to community providers where Medicare policies have considerable sway, Veterans commonly encounter confusion and obstacles to receiving concurrent care (54). Thus, VA KPC programs could play a vital role in community partnerships and advocacy that support Veterans who are seeking concurrent care.

Improving patient screening for KPC

In step with expanding KPC services, strategies are needed to identify patients who are most likely to benefit from KPC. The difficulty with identifying these patients lies in the large number of patients to screen and the lack of an efficient means of screening patients. Current approaches to targeting patients with the highest KPC needs employed by KPC programs in the VA include using automated computer algorithms to identify patients who have not completed an LST note or have high Care Assessment Need (CAN) scores (i.e., at higher risk of death and hospitalization) and to make this information immediately accessible in the patient medical record. Additional approaches are needed to identify patients with high symptom burden, those experiencing frailty and significant functional limitations, and those with inadequate psychosocial, spiritual and caregiver support. Another potential population-based screening method might be the use of natural language processing software to analyze the descriptive text documented in medical record notes to identify patients who might benefit from KPC (55). Software algorithms could search for series of keyword or

phrase combinations related to a patient's symptoms and health concerns that might suggest high KPC needs.

Other approaches to identifying patients with unmet KPC needs could include patient-reported outcome and experience surveys with patients (56). Likewise, screening tools for health care providers could also be incorporated into routine patient assessments. For instance, the Surprise Question (which asks health care providers whether they would be surprised if the patient would die in the next year) is a well-validated tool among patients with advanced kidney disease and predictive of mortality (57,58). These assessments could be incorporated as part of routine visits or after sentinel events of worsening health, such as hospitalization, diagnosis of serious illness or fall.

Adopting KPC quality performance measures

VA KPC programs have already begun to routinely collect patient-reported outcomes (e.g., symptoms, quality of life), clinical outcomes (e.g., hospice referral, hospitalization) and process measures (e.g., LST note completion) as part of their own quality improvement assessments. The Bereaved Family Survey exemplifies a population-based, system-level approach to assessing KPC delivery near the end of life that can inform KPC practices and related policy for patients with advanced kidney disease. Incorporation of KPC measures into quality-of-care metrics within routine nephrology care could also potentially standardize and incentivize proactive KPC delivery to patients. Quality improvement measures are generally selected based on the importance of the health issue related to the measure, scientific evidence of the measure, the usability of the information derived from the measure, and feasibility of collection of the measure (59). Including KPC measures as clinical targets in nephrology care would place stronger obligations on health systems to ensure that there is sufficient availability and capacity of KPC services to improve these measures.

Conclusions

In conclusion, patients with advanced kidney disease have a high degree of palliative care needs and has fueled interest in innovative strategies to best meet these needs. KPC programs in the VA have implemented several novel models of KPC and approaches to goals of care conversations and advance care planning, symptom management, multidisciplinary care, patient selection, and quality improvement to advance

KPC delivery. The KPC experiences in the VA highlight the importance of policies and the clinical infrastructure of a health system to support delivery of KPC as well as the research and care gaps that still need to be addressed to support further development of KPC.

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Footnote

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Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <https://apm.amegroups.com/article/view/10.21037/apm-23-584/coif>). P.M.P. reports serving as immediate past president of the National Kidney Foundation and is a member of the National Kidney Foundation Board of Directors. S.P.Y.W. receives research funding from the National Palliative Care Research Center, National Institutes of Health, Department of Veterans Affairs and Doris Duke Foundation. S.P.Y.W. has also received speaking honoraria from US Renal Care and nominal financial support to attend scientific meetings held by the National Kidney Foundation and American Society of Nephrology. The other authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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