

Integrated Care in ESKD

A Perspective of Nephrologists

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In an effort to control rising health care costs and improve quality of care, public and private payers are shifting from traditional fee-for-service reimbursement to value-based models that attempt to link payment to quality. The bipartisan Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) cemented physicians' part in this transition by mandating that those treating a requisite number of Medicare beneficiaries participate in either the Merit-based Incentive Payment System or advanced alternative payment models (AAPMs). Merit-based Incentive Payment System adjusts fee-for-service physician payments according to performance on quality and resource-use metrics. In AAPMs, physicians who assume a "nominal" financial risk for their patients' resource use can share in savings accrued through integrated health care delivery.

Tying reimbursement to value is not new to the field of nephrology. Since 2012, the ESRD Quality Incentive Program has linked payment for dialysis care to a growing number of quality metrics. Although Quality Incentive Program payment incentives apply to dialysis facilities rather than individual physicians, they encourage coordination and integration among health care providers. For example, good performance on hospital readmission and vascular access measures requires coordination between dialysis facilities, physician specialists, and hospitals.

Increased physician participation in value-based payment models for advanced kidney disease could generate substantial cost savings and improve the quality of care delivered if these payment models are led by nephrologists and focus on coordination and integration during important care transitions. Patients with advanced kidney disease (CKD stages 4–5 and ESKD) incur high costs and experience poor health outcomes. On average, Medicare spends \$19,000 annually on beneficiaries with stage 4 CKD (1). Costs increase three- to six-fold in the months after the transition to ESKD (2), and annual per-capita expenditures for ESKD are \$35,000 and \$88,000 among transplant and dialysis recipients, respectively (3). Yet, patients with advanced kidney disease face a three- to seven-fold higher risk of mortality and a poorer health-related quality of life (3–5). Patients commonly receive care within a fragmented system of health care providers who lack the means to effectively communicate among one another.

Frequent transitions between health care settings and disease stages put patients with advanced kidney disease at particularly high risk of incurring costly medical therapies and experiencing poor health outcomes. The transition from advanced CKD to ESKD is associated with clinical instability, prolonged hospitalization, and death. Transitions out of hospitals and skilled nursing facilities present another vulnerable period; more than one third of patients receiving dialysis are readmitted to the hospital within 30 days of hospital discharge (3). End-of-life health care expenditures are also particularly high. In one study, median health expenditures in the final year of life across patient categories ranged from \$78,000 to \$279,000, and all patient categories demonstrated high or escalating expenditures in the last 3 months of life (6).

Improved care coordination during these critical transitions could reduce costs and improve care quality. For instance, efforts to delay the onset of ESKD, facilitate the adoption of peritoneal dialysis (which may be less costly than in-center hemodialysis), and encourage pre-emptive kidney transplantation may lead to reduced costs and improved quality of care delivered. Improving advanced CKD care by facilitating non-emergent, outpatient dialysis initiation with a functioning arteriovenous fistula or graft (the preferred forms of vascular access) has been projected to generate \$0.7–\$1.4 billion in annual savings (7). Careful clinician oversight after hospital discharge may reduce costly hospital readmissions (8). For some patients with advanced age or multiple medical comorbidities, discussing conservative medical management and palliative care options as an alternative to dialysis initiation may lead to higher value, patient-centered care (9).

Nephrologists' involvement in treating patients with advanced kidney disease across nearly all health care settings and stages of the disease continuum positions them well to lead improvement efforts around these care transitions. Unfortunately, the current reimbursement system prevents many nephrologists from realizing this potential. An emphasis on frequent in-person visits to patients receiving maintenance dialysis shifts valuable time and effort away from coordinating care for, and treating patients with, advanced CKD. In many practice settings, nephrologist time spent with patients discussing goals of care, providing education about ESKD treatment options (including home dialysis and

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conservative care), and setting expectations for disease progression erodes a physician's "productivity" because this time could otherwise be spent providing more remunerative dialysis visits. In contrast to best practice guidelines, many patients report receiving little education about home dialysis options, a majority of patients in the United States begin dialysis in the hospital with a central venous catheter, and palliative care alternatives to dialysis are infrequently discussed (3,9). New payment models have the potential to align physician reimbursement incentives with activities that reduce costs and maximize care quality.

Current options for nephrologists to participate in AAPMs are limited to partnerships with larger health care organizations. One option allows nephrologists to partner with a dialysis organization to form a comprehensive ESKD care model. A second option allows nephrologists to join an integrated health care system that participates in an accountable care organization (ACO). Although not currently legislated, the Dialysis PATIENTS Demonstration Act of 2017 was introduced into the most recent Congress, and would create an integrated ESKD care model centered on dialysis providers.

In many ways, large health care delivery systems and dialysis providers are also well positioned to lead efforts to coordinate and integrate advanced kidney disease care. Economies of scale allow larger organizations to distribute fixed infrastructure and personnel costs of care coordination across a broad patient population, and larger organizations are structurally suited to assume financial risk for the care of patients with advanced kidney disease. Although physicians may be able to achieve some of these advantages by joining together in "virtual physician groups," in many instances the development of integrated care models will likely require partnerships between nephrologists and larger health care organizations.

Yet, payment models that focus disproportionately on organizational entities and/or a single disease state can have limitations. Institutional providers may have limited incentives to reduce health care expenditures that serve as a revenue source (10). For instance, a large hospital organization leading an ACO may, on balance, favor revenue generation over the potential shared savings accrued by reducing overall health care costs through fewer inpatient admissions. Similarly, a dialysis facility participating in a payment model for patients with advanced kidney disease could face competing incentives between keeping patients off of dialysis or facilitating kidney transplants and generating more procedural revenue for dialysis provision. As ACOs focus on primary care delivery, patients with advanced kidney disease comprise a small portion of their risk-incented population, which may limit investment into resources directed toward treating advanced kidney disease. In time, however, ACOs may follow the lead of early-adopting private sector corporations, such as CVS, who have identified the high costs of advanced kidney disease as an important area for targeted investments. It will be important for new payment models to preserve incentives for nephrologists to optimize care transitions independent of institutional partners.

Part of the MACRA legislation provides an opportunity to pilot new physician-focused payment models after review and approval from the Centers for Medicare and Medicaid Services (CMS) Physician-Focused Payment Model Technical Advisory Committee (PTAC). Two payment models centered on advanced kidney disease have been proposed to PTAC,

including a model focused on care delivery during the first 6 months of dialysis and another focused on provision of home dialysis in skilled nursing facilities. Although these models offer exciting first steps toward nephrologist-led reimbursement reforms, neither of them substantially shifts the focus for payment reform "upstream" from ESKD to advanced CKD, and neither includes explicit incentives to encourage transplantation. The American Society of Nephrology recently announced a promising initiative to accomplish these objectives through the development of a nephrologist-led care delivery model (11).

Successful implementation of a nephrologist-led integrated care model will require addressing several challenges. First, partnerships between nephrologists and other organizations that preserve nephrologists' role in leading care transitions will require a willingness by both parties to assume financial risk. Smaller nephrology groups may be unwilling to incur these risks, whereas larger, nonphysician organizations may hesitate to delegate economically consequential decisions about patient care to their physician partners. Second, it will be important that patients retain the ability to change physicians if they are unhappy with the care they receive. If integration among providers simply extends trends seen in consolidated dialysis markets into physician care markets, patients with fewer choices among competing providers may fare worse in the long run. Third, successful payment models will require application of evidence-based quality metrics to each disease stage and care setting to ensure that cost reduction efforts do not jeopardize care quality. Fourth, patients can only make an informed decision about where to receive care if they are aware of their providers' financial relationships. Transparency about all relevant financial arrangements will be important. Finally, although nephrologists are naturally positioned to lead integrated care efforts for their patients, dedicated training in leading these initiatives would accelerate their adoption. Federal funding sources, such as the CMS's Transforming Clinical Practice Initiative, could support efforts by professional societies and others to help practicing nephrologists transform care delivery.

High costs, poor health outcomes, and a fragmented system of health care delivery create unique opportunities for nephrologist-led models of integrated care delivery to reduce costs and improve the quality of care delivered to patients with advanced kidney disease. To leverage these opportunities, integrated care models should focus on optimizing key patient transitions between health care settings and disease stages. In practice, these models may include a combination of individual or virtual physician groups or partnerships between physicians and other public or private organizations. The success of any integrated care model will require organizational and payment structures that entice providers to overcome participation challenges while preserving physician autonomy, enabling patient choice, promoting transparency, and championing care quality.

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