Integrated Renal Care: Are Nephrologists Ready for Change in Renal Care Delivery Models?

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Abstract

The Affordable Care Act is the most visible element of health care reform. However, both before the Affordable Care Act and now with the acceleration since its passage, the Centers for Medicare and Medicaid have been and are testing integrated care models in medicine in general as well as nephrology. The pressures to do so come from the well known increasing costs of health care in the face of a number of clear gaps in quality. The future will likely be more and more integrated care with less and less fee for service. More measurement of quality and the linking of quality measures to payments are also all but certain future elements of the health care economy. Nephrologists need to educate themselves on these trends and be prepared to engage them for the good of the profession and the improvement in care for patients.

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Introduction

United States health care spending has escalated alarmingly over the last few decades to $2.8 trillion in 2012, which is 17.2% of gross domestic product (GDP) (1–3). This trajectory is reflected in the so-called health care cost curve. On a yearly per-person basis, we spend $8915, nearly two times that of any other country (1). Until recently, these projections have indicated that health care spending would continue to increase to 25% of GDP by 2037 (2). However, more recent data suggest that the real spending for health care increased only 0.8% in 2012 (4). Indeed, there was a concurrent fall in the percentage of GDP spent on health care from 18% to 17.2% (1), reflecting a "bending of the cost curve" (1). It is unclear if this shift in the previously escalating costs is a result of the recession or a product of health care reform and cost controls imbedded in the Affordable Care Act (ACA). Despite these trends, even current spending is far higher than can be sustained. The ACA is an attempt to provide quality care and improved population health while decreasing costs (the so-called Triple Aim).

Costs of care provided for patients with ESRD generally reflect these overall trends but are, in some ways, more extreme. The Medicare costs for ESRD have risen from about $5 billion in 1991 to about $30 billion in 2011 (5). However, annual per patient expenditures for patients on hemodialysis rose less precipitously from about $40,000 to $90,000 over that period (5), but they are still 10 times higher than in the general population (5). Of course, substantial increases in patient number and modest increases in survival underlie the disproportionate rise in total and individual costs. However, ESRD beneficiaries consume over 7–8% of Medicare's costs but represent only about 1% of all its beneficiaries (5). Thus, ESRD is a very expensive item for Medicare.

Despite this unprecedented spending, there is evidence that there is a gap in the value of health care that we deliver. This gap is noted in the general health care population but more pronounced in the CKD population. With respect to ESRD care, major gaps are all too easy to identify. The mortality at about 20% per year is 7-fold that of the general Medicare population. Annual hospitalization rates have been relatively fixed at two per year, and rehospitalization within 1 month of discharge occurs in 36% of patients (5). The excessive and inappropriate use of central venous catheters used in dialysis and the frequent initiation of ESRD care on an acute basis are also well known causes of morbidity, mortality, and expense.

Approaches toward Achieving the Triple Aim

Several strategies are being tested to control costs. Hussey *et al.* (6) posit that the major effect in cost control would arise from bundled payments, which could control spending by 5.9%. Other potential interventions to lower costs include implementation of health information technology (IT), use of disease management programs, and use of advanced practitioners. The Center for Medicare and Medicaid Innovation (CMMI; known as the Innovation Center) was statutorily formed as part of the ACA and is charged with development of various health care innovations programs designed to achieve the Triple Aim; it is funded at $10 billion over 10 years. Programs being tested under the auspices of the Innovation Center include efforts, like the Medicare Acute Care Episode Demonstration project (see below), bundled payments, and various shared savings program (including accountable care organizations described below), are designed to result in reductions in use and potential savings (6).

A wide range of other approaches to control costs has been envisioned (4). Straightforward across the board cutting of expenditures is obvious but politically fraught. Others might include selectively reducing benefits, increasing cost-sharing, restricting eligibility, and cutting payments to providers. A combination of cost-saving and pressure to improve care might entail penalties to hospitals with, for example, excess rehospitalizations and hospital-acquired conditions (7). Some estimate that various forms of waste account for as much as one third of spending and would theoretically be attractive targets. Additional potential adjustments include reforming the system of payments to providers, reforming delivery systems, reducing administrative costs, engaging consumers in making better health care choices, and making health care data more available. Regarding the reform of payments, a shift from Medicare fee for service to alternative payment methodologies is almost a certainty. Such alternatives may include risk-sharing arrangements, value- or performance-based payments, capitation, and global budgeting.

Accountable Care Organizations Will Be One Strategy to Reach the Triple Aim

Accountable Care Organization (ACO) refers to networks of provider-led organizations with the mission to manage the full continuum of care and be accountable for the overall costs and quality of care for a defined population (8). Many of the elements of reform noted above are embedded in the ACO structure (*e.g.*, improved IT, disease management, physician extenders, etc.). At its initiation, the Congressional Budget Office estimated that ACO models would save some $5 billion over 10 years (9).

A major rationale for implementing ACOs was the first pay-for-performance initiative for physicians under the Medicare Program referred to as the Medicare Physician Group Practice (PGP) Demonstration (10,11). The PGP Demonstration sought better coordination of health care furnished under fee-for-service Medicare through increased investment in administrative structures and processes for more efficient service delivery and rewards for physicians who improved health care processes and outcomes (10). The PGP Demonstration consisted of 10 group practices, including some of the most prestigious, well managed practices in the country. The PGP Demonstration yielded $108 million in savings to Medicare Trust Funds over the course of 5 years, with seven of 10 practices showing savings. The groups hit 30 of 32 established quality benchmarks. Performance payments totaling $36.2 million were shared (10). A noted critical success factor was that physicians took leadership roles in the PGP Demonstration. At the state level, these elements of health care reform are progressing, with states like Massachusetts mandating a move to global payment arrangements and encouraging formation of ACOs.

ACOs for Medicare fee-for-service patients were established with the ACA in 2010. Initially, there were some 255 Medicare ACOs, including 32 programs in more advanced forms referred to as Pioneer ACOs covering some 5.3 million beneficiaries. Centers for Medicare and Medicaid Services (CMS) recently released the initial results of this Shared Saving Program starting in 2012. Of 114 Medicare Shared Savings ACOs, 54 ACOs lowered expenditures to the tune of $128 million net savings to the Medicare Trust fund, and 29 ACOs generated enough savings ($126 million) to be shared (12). The Pioneer ACOs generated gross savings of $147 million, and nine of 23 Pioneer ACOs had significantly lower spending (nine Pioneer ACOs dropped out of the program). More recent data suggest that the number of ACOs has grown to over 400. Of interest, over 50% of the national ACOs are physician groups. S. Ian Drew, Chief Medical Officer of Heritage Provider Network, identified three key factors for success of the ACOs, including (*1*) education of and leadership by physicians, (*2*) knowledge of the cost of care for the population, and (*3*) use of resources, including IT and coordination of care (13).

Other examples of improved care and cost-savings include the Hospital Value-Based Purchasing program and the ESRD Prospective Payment Systems, including the Quality Incentive Program (discussed below). Additional models include the State Medicaid Innovation Initiative aimed at delivering high-quality care at lower costs and improving performance; some $300 million has been awarded to states for these initiatives.

Among CMMI programs is the Bundled Payments for Care Improvement initiative, which will bundle payment for services that patients receive across a single episode of care (EOC) and may result in alignment of incentives between primary care providers, specialists, and hospitals (11,14). There are four models of care that are identified in this initiative, and nephrologists may encounter EOCs in their local communities, because renal failure, nutritional and metabolic disorders, vascular disorders, and volume overload are potential EOCs.

An alternative model of care that may have relevancy to nephrologists is the Patient-Centered Medical Home (PCMH) (15,16). The concept of the PCMH has been proffered as a means of improving the quality of health care delivered by primary care physicians while controlling costs. Establishing a PCMH requires significant cost and infrastructure as well as certification by the National Committee for Quality Assurance. The model emphasizes a team-based approach to primary care. The Primary Care Physician acts as the team leader to coordinate care by other providers. Since 2007, there have been numerous pilot programs throughout the country. A recent study by Friedberg *et al.* (17) reporting a pilot study of 32 primary care PCMHs in southeastern Pennsylvania (the Pennsylvania Chronic Care Initiative) failed to reduce use or cost while showing limited improvement in quality. However, the accompanying editorial by Schwenk (15) points out that savings and improved quality may be more likely seen in selected patients groups that consume most of the health care dollar. Indeed, a recent publication provided a survey of 17 PCMHs with the greatest health risk. In this subset, PCMH cost reductions seem to have been driven by lower rates of hospitalization, and total costs fell, although use of specialist care saw significant increases in the first 2 years. Because CKD is the poster child for high costs and because nephrologists can form a PCMH (referred to as the PCMH Neighborhood) (16), this program may be a potential program for nephrologists. Indeed, in some recent discussions on the repeal of the sustainable growth rate, physicians would get bonuses for participating in alternative payment models, including the Patient Centered Medical Home (PCMN).

The American College of Physicians Council of Subspecialty Societies, indeed, has posited that specialty practices

that provide long-term principle care for chronic conditions should be eligible to form the PCMH (18). The above study by Friedberg *et al.* (17) regarding the Pennsylvania initiative has pertinence to the patient population that nephrologists care for with their high comorbidities and cost of care. Accomplishing the goals of the PCMH is challenging and can be a daunting task. The terminology used refers to nephrologists (or any specialist) as the principle care physician with the implication of coordination of care (not providing primary care). The Renal Physicians Association (RPA) has established a white paper, which provides characteristics for the nephrologists who participate (www.renalmd.org).

Nephrology and Trials of Health Care Reform

A number of efforts have been introduced to control costs while maintaining or improving quality to the ESRD population. These efforts include the ESRD Disease Management Demonstration project (demo project) and more recently, the Medicare Prospective Payment System (bundle). In addition, alternate payment methodologies have been proposed, including the PCMN (mentioned above) and most recently, the ESRD Seamless Care Organization (ESCO; discussed below).

The demo project evaluated the effect of implementing disease management principles to patients with ESRD within a Medicare Advantage plan in three ESRD-specific disease management organizations (19). The disease management project provided a capitated amount, whereas providers (nephrologists, specialists, and the hospital) were paid on the Fee for Service or negotiated rate. If targeted savings occurred, nephrologists were given bonuses if they attained certain predetermined quality factors. The results were mixed. One of the disease management organizations showed lower hospitalization rates and mortality; one disease management organization showed a decreased overall cost of care, and another provider showed reduced hospital and inpatient costs. The results and experiences gained within the demo project have been used by nephrologists and dialysis providers to justify participating in the proposed ESCO model (see below).

The bundle was a result of the 2008 Medicare Improvements for Patients and Providers Act legislation and launched January 1, 2011. Bundled payments have a track record (20,21) and were successful in Medicare's Acute Care Episode and Heart Bypass to reduce cost while maintaining quality (14). The prospective payment system is an expanded bundled case-mix adjustment payment covering dialysis care, including intravenous drugs and their oral equivalents and cost of the dialysis (previously the partially bundled composite rate) but not physician or hospital services. The goal was to align incentives to control costs (in particular, erythropoietin-stimulating agents [ESAs] and iron use) while maintaining quality. On January 1, 2012, CMS unveiled the first ever pay-for-performance model in the outpatient Medicare realm, referred to as the Quality Incentive Program (QIP). The QIP is not an incentive program; indeed, it withholds up to 2% of reimbursement, and the provider recoups the money if certain quality metrics are met. Details of the bundle and QIP have been well delineated elsewhere. Of note, the bundled payment and QIP are focused on dialysis providers rather than the capitation received by nephrologists for care of patients with ESRD.

The bundled payment and pay-for-performance methodologies have already had a dramatic effect on costs and reimbursement while maintaining quality (21,22). With inclusion of anemia management in the bundle, ESA use has fallen (8, 9) by as much as 20%, perhaps in part because of changes in Food and Drug Administration labeling. Indeed, when 2012 ESA use was compared with the 2007 rates used to establish the bundle, it was determined that providers were overpaid, resulting in rebasing of the base rate by $29 for treatment years 2014–2017. For 2014 and 2015, the rate was adjusted, resulting a minor cut in reimbursement, but there are projected cuts in reimbursement of $16 per treatment for 2016 and 2017. These cuts were recently effectively reversed for 2016 and 2017. On the quality front, CMS published the results on the first year of the bundle and showed no effect in any quality metric, including hospitalization and mortality rates. There were a higher number of transfusions as hemoglobin fell and less ESA was used, but those trends have reversed in year 2 of the bundle (unpublished data). Other byproducts of the bundle include increasing numbers of patients going to home dialysis.

Effect of Health Care Reform on Nephrologists

The shift from fee-for-service reimbursement to performance- or value-based methodologies seems inevitable. The ACA mantra of the Triple Aim reflects changes in health care reform that will address the escalating costs of care. A number of approaches have been outlined. Although the bundle and QIP address these issues, unless the nephrologist is an equity owner of the dialysis facility, the bundle and QIP have little effect on the nephrologist. However, threats to nephrology care do exist.

The Medicare Payment Advisory Commission (MEDPAC) has already opined on other aspects of dialysis payments to align payment and care. MEDPAC suggested that physician services (the monthly capitated fee) should be considered within the bundle to align physician with providers. Another change with potential effects on nephrologists would be bundling of vascular access management.

Nephrologists need to be aware of several other potential uncertainties in reforms. These include the previously mentioned Bundled Episode of Care (11,14). There are a number of potential renal-related episodes that your hospital might engage that address the continuum of care between inpatient and outpatient setting. These EOCs are designed to address parts A and B Medicare and will allow for revenue sharing. General medical ACOs have the potential of excluding nephrologists not within their employ and may espouse quality measures inappropriate to many patients with ESRD. On the more positive side, among potential alternate forms of payment, nephrologists might consider becoming PCMNs (discussed above).The one test of a specialty ACO so far proposed by CMMI is in ESRD care. The stimuli to this proposal include ESRD's high costs and poor outcomes and expectations, which can be readily improved with alignment of incentives. The ESCO is a shared savings program within CMMI (22,23). The ESCO as originally proposed requires a dialysis provider and nephrologist or nephrology group to form a legal entity and enroll at least 350 patients. It is a value-based program with the need to attain certain quality metrics (yet to be fully defined

but under a comment period). There are two models. One model is the two-sided risk model, where a percentage of shared shavings is available if target financial and quality factors are met, but there is also a down-sided risk in that, if one does not achieve the targets, one will need to pay back the money. The second model is 2 years of upside without downside risk, but the third year is a two-sided risk model. Among the possible approaches in an ESCO are payments to physicians for performance goals, such as permanent access rates, or patients for completing transplant workups. However, these would require waivers, and the extent of such waivers is still uncertain.

As originally proposed by CMMI, the ESCO has a number of problems (some of which probably contributed to a poor response from potential participants). Probably most important were the lack of specific quality metrics and the plan to rebase payments in the last 2 years of the project. Other disappointing aspects included the lack of patients with late-stage CKD and the lack of incentives to transplantation. An overarching weakness is the lack of a prespecified end point. This latter deficiency was pointed out recently in the lay press (24). CMMI has released a new Request for Application and has taken comments from numerous segments of the renal community (23). The new Request for Application makes several adjustments to the initial one (notably, the rebasing was deleted), and it creates more opportunity for a one-sided risk model and allows nephrologists employed by providers to participate. The quality measures and how they will be tailored to patients with ESRD remain unclear.

Nephrology Practice Engagement in Health Care Reform and Payment Methodologies

As renal health care reform and payment methodologies proceed, nephrologists need to collaboratively engage with Large Dialysis Operator and local health care delivery. CKD care and education will be a focus in which nephrologists will need to be at the forefront. Finally, nephrologists need to engage their health system and regional health care insurers to make sure that they are involved in decision making regarding payment methodologies, including bundled payments, episodes of care, and global capitation. Nephrologists within a practice need to assume a leadership role to address issues with their hospital, hospital system, and insurers. The challenge is avoiding complacency and allowing the systems to control outcomes. Engaging medical societies, including the RPA, the American Society of Nephrology (ASN), and the State Medical Society, provides nephrologists with the necessary tools to prepare their practice for the noted changes. In conclusion, as we get deeper into performance-based payment methodologies and health delivery reform, it is no longer business as normal. Although some models of fee for service will exist, nephrologists need to be prepared or be left behind. Properly conceived, these reforms have the potential for providing better care at lower costs.

The following list provides guidance to nephrologists on how to survive in the current and future health care environment:

(*1*) Providing a high quality of care to our patient is of paramount importance.

(*2*) It is clear that physician leadership is critical. Sitting on the sidelines is not acceptable. If nephrologists are not involved, hospitals and dialysis provider groups will, if only by default, determine the care of patients with CKD and ESRD.

(*3*) Education of nephrologists is essential, and the community—particularly the RPA and the ASN—should work together to meet this important challenge. Development of a team approach is mandatory in an integrated care model.

(*4*) Partnering with the right person, be it a dialysis provider, hospital system, or fellow nephrologists, is important. Many commercial products are in the market formulating health care reform with your local health care systems. Nephrologists need to familiarize themselves with these relationships.

(*5*) Nephrologists must develop an approach and understanding for population management in addition to providing care for individual patients.

(*6*) Nephrologists and others within the renal care space must be at the table and take the lead in establishing the quality measures.

Although our focus must be on outstanding high quality of care for our patient, nephrologists must realize that they practice within an economic system.

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E.R.J. declares that he has served as a consultant for Fresenius Medical Care, Reliant Renal Care and Physician Choice Management; serves as a board member for Cytosorbent System which manufactures sorbent systems (receives options). He is a Counselor to the Renal Physician Association. T.H.H. declares that he has had a consultancy agreement and served as a Scientific Advisor with Genzyme. He also has rounding duties at the Centers for Dialysis Care. These disclosures are unrelated to the manuscript content.

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