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Comparing Mandated Health Care Reforms: The Affordable Care Act, Accountable Care Organizations, and the Medicare ESRD Program

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Summary

In addition to extending health insurance coverage, the Affordable Care Act of 2010 aims to improve quality of care and contain costs. To this end, the act allowed introduction of bundled payments for a range of services, proposed the creation of accountable care organizations (ACOs), and established the Centers for Medicare and Medicaid Innovation to test new care delivery and payment models. The ACO program began April 1, 2012, along with demonstration projects for bundled payments for episodes of care in Medicaid. Yet even before many components of the Affordable Care Act are fully in place, the Medicare ESRD Program has instituted legislatively mandated changes for dialysis services that resemble many of these care delivery reform proposals. The ESRD program now operates under a fully bundled, case-mix adjusted prospective payment system and has implemented Medicare's first-ever mandatory pay-for-performance program: the ESRD Quality Incentive Program. As ACOs are developed, they may benefit from the nephrology community's experience with these relatively novel models of health care payment and delivery reform. Nephrologists are in a position to assure that the ACO development will benefit from the ESRD experience. This article reviews the new ESRD payment system and the Quality Incentive Program, comparing and contrasting them with ACOs. Better understanding of similarities and differences between the ESRD program and the ACO program will allow the nephrology community to have a more influential voice in shaping the future of health care delivery in the United States.

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Introduction

The Affordable Care Act of 2010 aims to extend health insurance coverage to virtually every American and authorizes novel strategies to deliver higher-quality care at lower costs, including increased sharing of financial risk and reward between payers and providers. Achieving this goal presents a challenge for providers and policymakers alike. However, examples of health care delivery systems with similar mechanisms already exist in the Medicare ESRD Program and may yield insights for reforming the delivery of, and payment for, health care in the United States.

Before passage of the Affordable Care Act, the Centers for Medicare and Medicaid Services (CMS) implemented the ESRD Prospective Payment System (ESRD PPS), a fully bundled, case-mix adjusted payment system (1). The ESRD PPS, also called the "bundle," was launched January 1, 2011, and covers virtually all outpatient dialysis-related services and products within a single prospectively determined payment to dialysis facilities. After implementation of the ESRD PPS, the CMS also launched the first-ever mandatory pay-for-performance program on January 1, 2012: the ESRD Quality Incentive Program (QIP) (2). These changes to payment for dialysis are similar to many changes authorized by the Affordable Care Act, with both programs shifting financial risk from payer to provider, requiring the development of monitoring systems to assess their effect on patient outcomes and access to care.

In this article, we highlight the similarities and differences between the accountable care organizations (ACOs) to be developed under the auspices of the Affordable Care Act with the ESRD PPS and QIP, developed under the auspices of the Medicare Improvements for Patients and Providers Act of 2008. Informing the nephrology community about the ACO program structure, in the context of the community's experience with ESRD payment reform and care delivery, positions the specialty to assure that the development of ACOs benefits from the ESRD experience.

Organization, Payment Mechanisms, and Cost Control

An ACO is a provider-led organization whose mission is to manage the full continuum of care and be accountable for the overall costs and quality of care for a defined population (3,4). Accordingly, ACOs are expected to be highly incentivized to coordinate care and save money by avoiding unnecessary tests and procedures. Seamless sharing of information will be crucial for ACOs to function with optimal efficiency. Compared with dialysis facilities, ACOs will maintain a minimum census of 5000 Medicare beneficiaries, with

most expected to be far larger. Participating organizations that save money as well as meet quality performance measures will keep a portion of the savings, and ACOs can opt for higher potential rewards if they elect a shared savings/losses model (Table 1). Initial projections are that most organizations will elect the lower-risk shared savings model, with an estimated potential savings to the CMS of $470 million in the first 4 years. If successful, it is likely that the program will expand in future years with greater incentives for ACOs to opt into the shared savings/losses model, resulting in greater risk but also greater potential rewards for providers (3).

Medicare beneficiaries will be assigned to specific ACOs upon determination that they have received a sufficient level of the requisite primary care services from physicians associated with a specific ACO, which would then be considered to have basic responsibility for that beneficiary's care. Despite the use of the term *assignment*, patients will maintain their rights to exercise free choice to select providers. Nephrologists can be designated a primary care physician for the purpose of ACO assignment only if they are the *sole* primary care provider for that particular patient (3). Ultimately, an important component of the shared savings program will be timely and effective communication with beneficiaries concerning the program, their possible assignment to an ACO, and their retention of freedom of choice to remain under the Medicare fee-for-service program. ACOs do not require a capitated payment, rather utilizing a fee-for service structure with incentives for cost containment and meeting quality performance benchmarks; however, the Affordable Care Act does allow for ACOs to operate under a partial capitation payment. To note, provider fees are included when determining cost-containment incentive payments.

Juxtaposed against the ACOs is the Medicare ESRD Program, which was enacted in 1972 and is the only disease-specific entitlement program within the CMS (4). The program provides universal coverage for ESRD patients regardless of age or disability status. As with many elements of Medicare, the ESRD Program's costs far exceeded expectations, currently accounting for approximately 7% of Medicare spending for <1% of beneficiaries (5,6).

In contrast to the ACO model, the ESRD program utilizes a bundled payment for dialysis-related services to dialysis facilities in conjunction with fee-for-service payments for the services of the physicians as well as for procedures (*e.g.*, vascular access surgery) or services (*e.g.*, hospitalizations) that occur outside the dialysis facility. Until 2010, the dialysis facility payment had the following two components: a "composite rate" for many dialysis-related services, plus a "separately billable" fee-for-service component for injectable medications and some laboratory tests (Table 2) (7–9).

Table 1. ACO shared savings program financial overview

	Shared Savings Model	Shared Savings/Losses Model
Benchmark	Estimate of what the total Medicare fee-for-service Part A and Part B expenditures for ACO beneficiaries would otherwise have been in the absence of the ACO, even if all of those services were not provided by providers in the ACO. The benchmark will take into account beneficiary characteristics and other factors that may affect the need for health care services. The benchmark will be updated for each performance year within the agreement period	
Case-mix adjustment	Annual adjustment using the CMS hierarchal condition category prospective risk adjustment model that has been used under the Medicare Advantage program. Demographic factors will be used to adjust for severity and case mix for the continuously assigned population relative to the historical benchmark	
Other adjustments	Geographic payment adjustments and hospital value-based purchasing adjustments	
Maximum sharing rate	Up to 50% based on the maximum quality score	Up to 60% based on the maximum quality score
Quality sharing rate	Up to 50% based on quality performance	Up to 60% based on quality performance
Minimum savings rate	+2.0%–3.9% versus benchmark to qualify for shared savings	+2.0% versus benchmark to qualify for shared savings
Minimum loss rate	−2.0% versus benchmark to qualify for shared savings	−2.0% versus benchmark to qualify for shared savings
Performance payment limit	10% of the organization's Part A and Part B expenditure target	15% of the organization's Part A and Part B expenditure target
Shared savings	First dollar once the minimum savings rate is met or exceeded	
Shared loss rate	None	One minus final sharing rate applied to first dollar losses once minimum loss rate is met or exceeded; the shared loss rate cannot exceed 60%
Loss sharing limit	None	Dollar amount limited to 5% of the updated benchmark in the first year, 7.5% in the second year, and 10% in the third year. Losses in excess of this limit are not shared

ACO, accountable care organization; CMS, Centers for Medicare and Medicaid Services.

Table 2. The legislative genesis of a Medicare-funded bundled reimbursement program, balancing quality metrics with cost containment and presaging current CMS initiatives for shared risk and public reporting

Year	Policy/Event	Quality Monitoring	Financial Implications	Incentivized Effect
1972	Medicare Parts A and B benefits extended to individuals with ESRD (of any age) entitled to receive Social Security benefits	N/A	Cost underestimated at $75 million for the first year and $250 million over initial 4 yr	Outpatient dialysis becomes widely available in the United States to virtually all individuals with kidney failure
1983	Initial composite rate payment established	N/A	Reimburses routine dialysis services at approximately $130/session and allows for additional separately billable items	Increasing outpatient dialysis availability nationwide
1989	Epoetin approved for use in ESRD	N/A	Reimbursed by CMS as a separately billable item at $40 per dose with an additional $30 payment for ≥10,000 units	Greater use of epoetin by not-for-profit versus for-profit providers (7)
1991	Epoetin reimbursement changed to reflect actual use	N/A	Ultimately approximately $10 per 1000 units	Greater use of epoetin by for-profit versus not-for-profit providers (8); epoetin becomes a revenue generator with charges approaching $2 billion by 2006 (9)
1994–1999	Balanced Budget Act of 1997 requires measuring and reporting quality of renal dialysis services	ESRD CIP and ESRD CPM project established; these similar ventures merge in 1999	None	None, given the absence of reimbursement implications and public reporting
2001	Dialysis Facility Compare launched	Publicly reports dialysis facility-specific performance measures including anemia control, dialysis adequacy, and survival	None	Incentivizes meeting the publicly reported measures
2003–2008	MMA (2003) proposes and MIPPA (2008) legislates an expanded bundle for "renal dialysis services: to include drugs, laboratory tests, and other commonly furnished items"	MIPPA mandates creation of a QIP that must include but is not limited to an anemia and a dialysis adequacy metric	Burgeoning costs of separately billable services, most notably epoetin, to be included in capped bundled fee	Implementation began January 1, 2011
2011	ESRD PPS enacted, with automatic 2% reduction in CMS reimbursement	ESRD QIP enacted, penalizing 0%–2% of dialysis facility income for failure to meet anemia and dialysis adequacy targets; QIP performance to be publicly reported	Shifts much but not all financial risk for costliest patients to the dialysis facilities LDOs post strong earnings for the first bundled year	Anticipated substantial reduction in use of separately billable items, particularly epoetin, financially incentivized over meeting QIP targets

CMS, Centers for Medicare and Medicaid Services; MMA, Medicare Modernization Act of 2003; MIPPA, Medicare Improvements for Patients and Providers Act of 2008; QIP, Quality Incentive Program; PPS, Prospective Payment System; CIP, Core Indicators Project; CPM, clinical performance measures; LDO, large dialysis organization.

By 2005, separately billable items accounted for 40% of facility payments, primarily driven by use of erythropoiesis-stimulating agents (ESAs) (6). However, because ESAs were separately billable items, there was a powerful financial incentive for overutilization because they were a major profit source for dialysis providers (9). Recognizing this, Congress mandated that the CMS implement a per-dialysis-session expanded bundled payment, removing the fee-for-service payment for ESA use (10). The per-session bundle now encompasses all "composite rate" items and all previously separately billable items related to a dialysis session, including ESAs. The expanded bundled payment system aims to reduce dialysis costs, paying no more than dialysis providers require to offer high-quality care (1). The drive for fiscal restraint is not subtle. In the ESRD PPS final rule, the CMS states the following: "The estimated amount of total payments under the ESRD PPS for 2011 must be equal to 98 percent of the estimated total amount of payments for renal dialysis services paid under Medicare, including payments for drugs, that would have been made with regard to services in 2011 if the new system was not implemented" (1,11).

By paying a prospectively fixed amount for the full range of dialysis session services, the CMS also disincentivizes provision of unnecessary tests or other care, creating an environment in which lower utilization will generate a greater financial margin for providers (1). This concept of shared risk, particularly when combined with the value-based purchasing within the ESRD QIP, is similar to the ACO model, in which providing high-quality, low-cost care could result in shared savings for both CMS and the dialysis facilities (3,12). However, unlike an ACO model, in which potential gains in cost control and quality are anticipated through better care coordination between the inpatient and outpatient settings, the ESRD PPS does not include costs for hospitalizations or dialysis access procedures (1). Some have theorized that this separation of risk sharing could result in unintended increases in overall costs to the healthcare system if patients are hospitalized due to insufficient dialysis care.

Greater coordination and accountability was recently explored in the Medicare ESRD Disease Management Demonstration, which evaluated whether disease management organizations in the setting of Medicare Advantage plans could improve clinical outcomes and reduce Medicare expenditures. Two of the three disease management organizations participating in this pilot reported lower than expected mortality and hospital utilization with improvements in quality metrics (13,14); however, patients participating in this pilot were healthier than those in the overall Medicare ESRD Program. In addition, two of the three disease management organizations cost the CMS more than if they had been reimbursed under the traditional system. This finding may be a function of the pre-established capitated reimbursement rather than overall expenditures (13).

Monitoring the Effects of Policy Changes

A crucial component of ACO creation will be ongoing monitoring of the overall system to see if it is achieving its desired goals. Health information from multiple sources will be needed to ensure that cost and quality are maintained, necessitating a robust health information technology infrastructure as well as analysis of population data to identify successful patterns of effective care. These concerns already exist within the nephrology community because the CMS has not clearly elucidated active monitoring plans for aspects of the ESRD PPS (15). With the launch of the ACO program, the challenges of developing both accurate monitoring and case-mix adjustment systems will not be unique to nephrology.

Within the ESRD program, external monitoring of the effects of the expanded bundle largely relies on two systems. The first is the CMS planned electronic data entry system for collecting dialysis patient and treatment information, the Consolidated Renal Operations in a Web-Enabled Network. This network will be fully implemented in 2012, well more than a year after implementation of bundled payments (16). This delay in data collection limits the ability to compare treatment changes before and after the implementation of the expanded bundle. The other system, the Dialysis Outcomes and Practice Patterns Monitor, samples 3% of the approximately 4700 US dialysis facilities to monitor effects of the expanded bundle on practice patterns (17). Although the practice monitor may be limited by sample size and further affected by industry consolidation, it has the advantage of comparing prebundle and postbundle practices. Perhaps the most important example from the Medicare ESRD Program for other reform efforts is the importance of establishing robust patient data collection and analysis capability before implementing systems that alter practice patterns.

The introduction of the expanded bundle is anticipated to have the greatest effect on anemia management. Even before the implementation of the expanded bundle, the demonstrable lack of benefit with higher hemoglobin levels in clinical trials, concern for potential harm, and the change in drug labeling by the US Food and Drug Administration catalyzed lowered ESA administration (18). The expanded bundle may further accelerate this trend to lower ESA use (19). Reducing ESA use is generally perceived as a positive trend for patient safety. However, removal of the financial penalty for lower hemoglobin levels in the 2013 QIP could result in underutilization of these agents (20). Temporal trends from 1992 to 2005 showed that introduction of ESA use led to a two-fold decrease in transfusion rates in ESRD patients (21). Accordingly, it is necessary to monitor whether the changes in reimbursement structure lead to an inadvertent increase in the need for transfusions.

Another element requiring prospective monitoring is home dialysis utilization. Increased use of home dialysis as a result of restructuring dialysis payment could achieve the ultimate goal of health reform, which is to reduce costs while maintaining, or perhaps even improving, the quality of care. However, it remains unknown whether the comparable outcomes and lower costs currently associated with home dialysis will be sustained if its utilization grows (6). To note, dialysis providers, not the CMS, will recognize the cost savings with this group of dialysis patients because the CMS will be paying equivalent bundles to dialysis providers, regardless of modality. The effect of incentives to expand use of different therapies should be accompanied with plans to monitor outcomes, with the broader implication that ACOs and other shared risk payment mechanisms

should consider various areas in need of specialized monitoring to ensure that quality is not being compromised by the changes introduced within the new system.

Legislative Pay for Performance: ACOs and the ESRD QIP

Successful implementation and evaluation of ACOs will require measurement of performance, with 33 measures in four domains (patient/caregiver experience, care coordination/patient safety, preventive health, and at-risk population). These metrics were adopted from reasonably vetted measures from sources such as the National Quality Forum. Unfortunately, in ESRD, multiple well researched quality measures based on hard outcomes are lacking, such that the measures included in the QIP do not have strong evidence supporting a beneficial effect on important patient outcomes (Table 3) (22–28).

Congress mandated implementation of the ESRD QIP to provide less costly care against minimally acceptable quality standards. The QIP, as currently structured, incentivizes a basic level of care. However, like any other approach that establishes a level of practice that is appropriate for most patients, the QIP runs the risk of disincentivizing individualized patient care. Balancing the benefits of quality thresholds with the risk of generalizing care practices may be challenging in a population with limited life expectancy, in which conservative goals may be more appropriate for some. Furthermore, unlike previous voluntary programs such as the Physician Quality Reporting Initiative, which offered bonus payments, the QIP reduces payment up to 2% annually for facilities failing to meet performance metrics (2). Similarly to the QIP, ACOs must report on quality measures that the CMS will use to determine the amount of savings and/or losses experienced by the ACO providers. Similarly to the Physician Quality Reporting Initiative, ACOs will also offer bonus payments for achieving certain quality thresholds.

In capitated and similar systems in which incentives to provide less care exist, it is essential to have checks in place to prevent care from falling below accepted standards. Accordingly, the three 2012 QIP measures (minimum and maximum hemoglobin level, and dialysis dose) reflected high-cost/resource items (ESAs and time on dialysis), rendering them feasible markers of a minimum level of care. Although achieving these practice measures generally had been considered consistent with a basic standard of care, there are no data to support the concept that treating patients to reach these QIP targets improves patient outcomes. For 2013 and 2014, CMS altered the policy for anemia, eliminating the minimum hemoglobin metric, further incentivizing less ESA utilization by removing the marker of minimum anemia

Table 3. Evolution of the CMS QIP: 2012–2014 (2,20)

QIP Element	2012	2013	2014[a]
Clinical measures	Hemodialysis adequacy (URR ≥65% in >96% of patients)	Hemodialysis adequacy (URR ≥65% in 96% of patients)	Hemodialysis adequacy (URR ≥65% in >91% of patients)
	Minimum Hb (<10 g/dl in <2% of patients)		Maximum Hb (>12 g/dl in ≤14% of patients)
	Maximum Hb (>12 g/dl in <26% of patients)	Maximum Hb (>12 g/dl in <16% of patients)	Vascular access type (fistula in ≥44% and catheter in ≤24%)
Process measures (all yes or no)	None	None	Dialysis event reporting Patient survey with ICH CAHPS Mineral metabolism monitoring
Minimum Hb level	10 g/dL	None	None
Measure weighting	50% Hb <10 g/dl	Measures weighted equally	90% clinical measures, each of equal weight[b]
	25% to two other measures		10% process (yes/no) measures, each of equal weight[c]
Performance score for full payment[d]	26–30	30	Likely 56 points

CMS, Centers for Medicate and Medicaid Services; QIP, Quality Incentive Program; URR, urea reduction ratio; Hb, hemoglobin; ICH CAHPS, In-Center Hemodialysis Consumer Assessment of Healthcare Providers and Systems Survey.

[a]The 2014 performance standard levels are the achievement thresholds described in the QIP final rule. Facilities below the achievement threshold will receive 0 points on that performance measure, with points increasing incrementally as a facility's score rises above the achievement threshold. There are incentives for improvements in performance that are not included here that may result in a facility receiving points despite being below the achievement threshold.

[b]CMS proposes to determine performance standards based on national data collected between July 1, 2010 and June 30, 2011 for the first five measures listed.

[c]CMS proposes that facilities will attest on a yes/no basis whether they have complied with the last three "structural/reporting" process measures.

[d]Thirty points on a performance score are available in 2012 and 2013. The minimum hemoglobin measure carried 50% of the weight in the 2012 QIP, with the other two metrics weighed at 25% each. The two metrics for 2013 are equally weighted, with the number of points for each metric multiplied by 1.5 to achieve a 30-point scale. In 2014, CMS proposes a 100-point scale.

Table 4. The ESRD PPS and QIP: Intended and potential unintended consequences

	Goals	Intended Effects	Theoretical Unintended Consequences	Monitoring and Alternative Options
CMS PPS	Decrease costs for outpatient dialysis services	Pay less for the same level of care	Increase adverse clinical outcomes related to aspects of dialysis care provided for but not monitored by CMS, resulting in increased hospitalizations and higher overall costs	Monitor transfusion rates
	Minimize and control costs related to separately billable medications and services	Decrease ESA use by eliminating incentive for use	Increase transfusions, which may effect kidney transplant immune sensitization	Monitor other meaningful patient outcomes
		Increase home dialysis modality use	Limit physician prescribing abilities (via dialysis facility formularies restricted to medications for which the facility has negotiated a contract)	Provide financial incentives for ESRD product development
			Reduce innovation and new product development for dialysis care	Monitor changes in drug prescribing patterns
			Limit "individualized" medical care	Increase comparative effectiveness research funding
			Increase cherry picking of dialysis patients, creating access-to-care issues for sickest, most difficult to treat, or most vulnerable patients	Monitoring dialysis facility admission rates and withdrawals to determine patient access to care
			Increase in overall cost of care for dialysis patients (*e.g.*, hospitalizations)	
			Foster further consolidation in the dialysis market with smaller providers less able to negotiate favorable medication pricing	
2012–2014 CMS QIP	Contain costs	Change in practice patterns, including reduced ESA use	Increase transfusions, which may effect kidney transplant immune sensitization	Real-time monitoring of changes in transfusion rates, practice patterns, access to care, health disparities, hospitalizations, mortality
	Improve care delivered to ESRD patients over time	Increase arteriovenous fistula rates and reduce catheter rates	Incentivize practices that are not supported by clinical data, because it has never been prospectively demonstrated that achieving these clinical targets leads to improved clinically important patient outcomes	Support additional research on optimal ESA dosing and/or target hemoglobin level strategies in diverse dialysis populations

Table 4. (Continued)

Goals	Intended Effects	Theoretical Unintended Consequences	Monitoring and Alternative Options
	Improve attention to patient perceptions Document infections in hemodialysis	Restrict individualized medical care Increase cherry picking of dialysis patients, creating access issues for sicker, more difficult to treat, or more vulnerable patients Foster further consolidation in the dialysis market with smaller providers less able to absorb QIP payment withholds	Generate more evidence on optimal ESRD care by implementing a Children's Oncology Group model, in which every patient is entered into a protocol to see which protocol produces better outcomes over time

CMS, Centers for Medicare and Medicaid Services; PPS, Prospective Payment System; QIP, Quality Incentive Program.

management while maintaining a penalty (in addition to the cost of the agent) for higher utilization (20). Beginning in 2014, the CMS also added new quality measures, most notably a vascular access performance measure (Table 3) (20).

These considerations highlight the need for more investigation in areas in which the CMS will consider value-based purchasing. The ESRD program should be studied as it matures, because it could contribute significantly to the understanding of the effectiveness of financial incentives on patient care using intermediate measures. Various effects and strategies are summarized in Table 4.

Economies of Scale, "Desirable" Patients, and Equitable Access

When introducing novel reimbursement schemes, it is imperative to ensure that equitable patient access is available to the beneficiaries. In this context, one basic tenet of ACOs is that they will not require patients to stay in their network, which was required by health maintenance organizations and led, in part, to their undoing.

Currently, significant industry consolidation exists among dialysis providers in the United States with two for-profit corporations providing care for >70% of patients (6). Smaller dialysis providers may have limited resources to execute new bundle-related responsibilities and to assume greater shared risk. The cost- and risk-sharing structure of the ESRD PPS favors providers that are vertically integrated with the market power to negotiate lower prices. Not surprisingly, the pace and size of mergers and acquisitions among dialysis providers has accelerated, exemplified by the August 2011 acquisition of the third-largest provider (262 dialysis facilities) by the largest dialysis provider (1860 dialysis facilities). Interestingly, some early data showed that larger, more fully integrated ACOs provide higher-quality care than smaller more loosely integrated ones (29). Nonetheless, the existence of a potential oligopoly in any area of medicine may affect flexibility for patients seeking care, particularly in rural areas where there is little provider diversity (30). Similarly, in rural markets where there can be an exception in place to antitrust regulations, a concern is that an ACO could grow large enough to employ a majority of providers in a region. One safeguard for patient access may be inclusion of the patient's voice. Mirroring a national emphasis on patient centeredness, the 2014 ESRD QIP mandates measurement of patient experience in the dialysis facility (20), whereas Medicare recipients have a choice to opt out from an ACO assignment and return to traditional fee-for-service models.

"Cherry picking" patients who minimize provider financial risk is another concern with bundled payments or mandatory pay-for-performance programs. Surveys of nephrologists report that cherry picking occurred in the prior payment system, when adverse financial consequences of these patients were less substantial (31). To ensure equitable access for patients with substantial comorbidities, the CMS plans to adjust the value of the bundled payment for patients with more costly conditions (1). Although this may increase the desirability of some "sicker" patients, the algorithm focuses on a limited number of conditions from administrative data that relate primarily to anticipated ESA requirements and has no mechanism to update for the de-emphasis on ESA dosing that has occurred since passage of the final rule. Accordingly, it remains unclear whether the CMS case-mix adjustment will create incentives to improve or limit access to care.

In contrast to the risks described above, the effects that the ESRD PPS may have on streamlining processes of care as providers strive to meet quality measures while minimizing costs may serve as positive examples for other payment programs in the United States, including ACOs. For example, dialysis providers have placed an increased emphasis on patient education before kidney failure in order to make transitions to kidney replacement therapy more efficient and less costly (32). In addition, large

dialysis providers have greater resources to create and implement management protocols. For example, prior studies in ESRD populations suggest that the use of anemia management protocols results in less ESA utilization and more patients achieving target hemoglobin (33–35). Similarly, in non-ESRD populations, evidence-based protocol-driven care has been shown to reduce errors and increase utilization of effective medications. The hope is the same for the ACO program—that care will be streamlined with improved quality and performance. Policymakers designing and implementing future reform programs should consider these and other examples emerging from the ESRD PPS, evaluating the benefits of a bundled payment system while avoiding pitfalls that could result in unintended consequences.

The ESRD PPS: A Case Study for Healthcare Delivery and Payment Reform

The CMS recently released the final rule for ACO regulations, in which a quality measurement component is just one of many items that is similar to the ESRD PPS and QIP (Table 5) (12). As the ESRD PPS and QIP programs mature, the dialysis experience should help both dialysis stakeholders and the wider medical community understand the effect of these changes on practice patterns, access to care, hospitalizations, and mortality. Accounting for these effects should be crucial when designing and implementing other bundled payment systems and pay-for-performance programs in medicine.

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Table 5. Similarities and differences between the ESRD PPS and ACOs

	ESRD PPS	ACOs
Congressional mandate	Improve quality and decrease cost	Improve quality and decrease cost
Target of mandate	Outpatient dialysis care	Full continuum of care
Payment mechanism	Bundled payment for ESRD services except provider fees; not fully capitated system	Either fee-for-service or bundled payment; all costs, including hospital and provider costs incorporated; not capitated *per se* but ACOs penalized for exceeding expected benchmark costs
Performance measures	QIP, which penalizes up to 2% of payment	Pay for performance, with pay dependent on achieving both cost savings and performance on 33 metrics, awarding up to 50%–60% of the difference between expected benchmarks and actual costs to the ACO not to exceed 10%–15% of the organization's Part A and Part B expenditure target; if the actual costs exceed expected costs, there will be no pay for performance
Financial incentives	Dialysis provider retains unused funds from capitated payment	Shared savings from first dollar and meeting performance metrics
Financial risk	Outlier payments funded by 1% initial "penalty" reallocated for most expensive patients	Varies based on ACO election to shared saving versus shared savings/losses model
Monitoring	CROWNWeb DOPPS Practice Monitor	No fully outlined mechanism beyond ACO self-monitoring
Patient choice	Free to select dialysis facility; facilities do have some latitude to not accept patients	Free to seek care from any CMS provider, including opting out of ACO assignment
Primary "driver" of care	Dialysis provider (facility)	Primary care provider (organization)

PPS, Prospective Payment System; ACO, accountable care organization; QIP, Quality Incentive Program; CROWNWeb, Consolidated Renal Operations in a Web-Enabled Network; DOPPS, Dialysis Outcomes and Practice Patterns Study.

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