Ongoing Lessons from the Comprehensive ESRD Care Program

Alan C. Kinlaw and Abhijit V. Kshirsagar

The federal government’s action to provide financial support for dialysis is arguably one of its most successful disease-specific investments. Since passage of the Medicare ESRD Act in 1972, dialytic therapies have extended life for millions of patients with kidney failure by an average of 5 years. Initially estimated to annually treat about 10,000 patients with few comorbidities, the program has grown to support nearly 500,000 individuals with maintenance dialysis (1).

During this time of growth, the care of these individuals has also become complex, costly, and often uncoordinated. Along with increasingly common comorbidities such as diabetes mellitus, hypertension, and cardiovascular disease, patients typically receive dialysis treatment at an outpatient facility or at home for between 3 and 7 days per week. Given their high burden of disease, patients with ESRD experience high hospitalization rates and have 59% mortality within 5 years after onset of ESRD (1).

Perhaps in response, the Centers for Medicare and Medicaid Services (CMS) have slowly guided the ESRD program toward models that have come to be known as value-based care with the twin goals of better health for individuals and lower costs. In a time-limited program from the late 1990s to the early 2000s, providers received capitated payments for the total cost of care (dialysis services, medications, hospital care, and other specialists) for patients with kidney failure receiving dialysis in selected markets (2). Lessons from this experiment likely informed subsequent legislation expanding bundled dialysis composite payments linked to performance metrics and patient experience (surveys) starting in 2011. Yet services and medications outside of maintenance dialysis, have remained under traditional fee-for-service and constitute a large percentage of overall costs (1).

In 2016, CMS launched the Comprehensive ESRD Care (CEC) program (3), a major step forward toward value-based care. Nephrologists and dialysis organizations organized into ESRD Seamless Care Organizations (ESCO) that were considered Accountable Care Organizations for dialysis patients. The CEC program was revolutionary for several reasons. It represented the first time that participating nephrologists and dialysis organizations jointly managed both dialysis and nondialysis care. Staff in CEC clinics also assessed new, patient-focused measures such as depression and falls risk. Additionally, ESCOs, incentivized to provide coordinated care with hospitals and other non-nephrologist providers via performance metrics, made investments in care management resources and information technology. Finally, both nephrologists and dialysis providers were responsible for the total cost of care of their group of patients. Because the CEC program adopted a two-sided financial risk approach, providers could participate in any shared savings while being responsible for losses. At its peak, the CEC program counted 37 ESCOs with three large dialysis organizations and four other dialysis organizations and included 12% of all dialysis facilities nationally (4).

The CEC program attained at least one goal of value-based care: better health for individuals. Patients aligned to ESCOs had higher rates of preventative services (e.g., dilated eye exams, lipid screening), optimal dialysis (e.g., less frequent dialysis catheter use), and a reduction in hospitalizations compared with patients not aligned to ESCOs (4). Attainment of the second goal of value-based care, reduced costs, was nuanced. During its first 2 years, the CEC model resulted in a $68 million reduction in spending; yet, after accounting for shared savings ($114 million), there was a net loss for the CMS (5). By the time of the most recent financial analysis, CEC-aligned beneficiaries had a significant reduction in Parts A and B Medicare compared with traditional fee-for-service beneficiaries; however, total Part D drug costs increased among CEC beneficiaries relative to traditional fee-for-service beneficiaries (4).

Hirth and co-authors have now published new results from the CEC program (6). Motivated to understand the drivers of improvements in the number of maintenance dialysis sessions, they investigated the effect of CEC clinics on dialysis treatment adherence. The study defined adherence as attending as-scheduled treatments and attending rescheduled treatments that were missed for reasons other than hospitalizations. The study included data from the CEC program, 2014–2019, and used a difference-in-difference approach to examine

1Division of Pharmaceutical Outcomes and Policy, University of North Carolina School of Pharmacy, Chapel Hill, North Carolina
2Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina
3UNC Kidney Center and Division of Nephrology and Hypertension, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

Correspondence: Dr. Abhijit V. Kshirsagar, 7004 Burnett Womack Building, CB 7155 Chapel Hill, NC 27599-7155. Email: abhijit_kshirsagar@med.unc.edu

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adherence differences over time between patients who were treated at CEC-aligned or non-CEC-aligned clinics: 1037 CEC facilities were propensity score matched one-to-one with non-CEC facilities (original n=3931) that were deemed eligible comparator facilities. After matching on facility, the authors analyzed facility-clustered data at the patient level, comparing 338,334 CEC-aligned patients versus 277,342 patients who were not aligned with CEC facilities, and controlling in binomial regression models for additional patient-level covariates.

The authors’ first key finding from this study was that patients at CEC-aligned facilities had a marginally higher odds of attending all as-scheduled treatments over time (odds ratio [OR]=1.02). To disentangle statistical significance from clinical/policy relevance, we translated a few of the odds and OR estimates to absolute probabilities and differences (probability=odds/[1+odds]). Using information from table 2 to transform the baseline odds (exp[1.088]=2.97) and difference-in-difference OR (1.018) into probabilities of attending all as-scheduled treatments, the observed difference in probabilities was approximately 0.3% (75.1% for CEC-aligned patients versus 74.8% for non-CEC aligned patients). Additionally, the authors found that the CEC group had higher odds of rescheduled treatments over time (OR=1.09). Using information from table 4 and the same conversion approach, the observed difference in probability of rescheduled treatments was approximately 0.1% (9.6% for CEC-aligned patients versus 9.5% for non-CEC-aligned patients).

As the authors state, certain patient characteristics may modify the potential effects of CEC alignment on treatment adherence. Although the effect of CEC on rescheduled treatments differed between patients aged <70 years (OR=1.12) versus those aged ≥70 years (OR=0.99; P value for homogeneity=0.005) (7), the clinical/policy importance of this heterogeneity may be minimal, given the small absolute magnitude of the difference in probabilities between CEC groups in probabilities between CEC groups. Future analyses on care coordination strategies should follow their example to conduct subgroup analyses assessing potential heterogeneity of effects—as the authors did for sex and age group in their study—especially when working with large databases. For example, such analyses among dually eligible individuals or nursing home residents might clarify perceptions of the authors and should not be considered medical advice or recommendation. The content does not reflect the

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References

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