Population Health NEWS

Integrated Care Model Helps Insurer Achieve Triple Aim for Dialysis Patients

by Bryan Becker, M.D., MMM, FACP, CPE

Program Objectives

- Enhance level of complex care management for Highmark patients with end-stage renal disease (ESRD) who receive dialysis.
- Determine the clinical and economic impact of integrated care delivery on enrolled patients with ESRD.

Program Description: When kidney function ceases, patients are diagnosed with ESRD. In order to sustain life, patients must receive a kidney transplant or begin dialysis, which cleans the body of toxins and removes excess fluid. Dialysis is most often administered in a dialysis center three times a week, with each session lasting approximately four hours. There are more than 699,773 prevalent cases of ESRD in the United States, and about 490,000 of these patients receive dialysis.[1]

ESRD patients often have other chronic conditions, making them some of the most medically complex, vulnerable patients in the healthcare system. Diabetes is the cause of kidney failure in nearly half (45.5%) of patients in dialysis while hypertension is attributed to 28%,[2] contributing to the average ESRD patient taking an estimated 19 pills a day[3] and spending approximately 11 days per year in a hospital.[4]

As a result, healthcare costs and utilization are high in this patient population. In 2017, ESRD patients:[5]

- Comprise 0.2% of the entire patient population.
- Represent less than 1% of Medicare beneficiaries, but 7.1% of Medicare fee-for-service expenditures.
- Cost the system an annual average cost of $87,597 per patient.
- Are hospitalized nearly twice a year.
- Have a 35.2% readmission rate.

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Highmark, a not-for-profit, health insurer, serves ESRD members enrolled in either Medicare Advantage (MA) or commercial insurance plans. Data from Highmark reveal that its ESRD patient population in 2012 produced more than $13 million in addressable costs and, similar to ESRD Medicare beneficiaries, averaged two hospitalizations and 13 hospital days per patient per year.[6]

Recognizing that ESRD patients demonstrate needs that are often unmet by a traditional fee-for-service healthcare system, Highmark aimed to provide an enhanced level of complex care management. The Centers for Medicare & Medicaid Services (CMS) has tested similar care models for small subsets of ESRD patients. Several programs, such as the CMS ESRD-specific Chronic Special Needs Plans (C-SNPs) and the ESRD Seamless Care Organizations (ESCOs) apply integrated care models to improve patient outcomes and produce savings across a healthcare system.

Despite a strong affiliation with an aligned health system and a physician network that enhances care coordination for approximately 30% of its ESRD population, Highmark identified capability gaps and care team misalignment in addressing the unique and complex needs of ESRD members. The insurer sought a partner with advanced care management capabilities and a willingness to collaborate on a model with aligned incentives for this high-cost, high-need group of patients.
Beginning in April 2013, Highmark initiated a contractual partnership with DaVita to implement an integrated care program to encompass kidney care management and dialysis coordination. DaVita's challenge was to achieve the triple aim of improving quality of care and patient experience, while reducing total cost of care for eligible Highmark members. Highmark's MA and commercial insurance members that are treated at DaVita centers in the greater Pittsburgh area of Pennsylvania are eligible for the program.

Highmark and DaVita agreed on a shared savings model with incentives contingent upon DaVita meeting or exceeding United States Renal Data System quality benchmarks. The quality benchmarks include hospital readmissions; rates of arteriovenous fistulas (AVF) placements and central venous catheters (CVC); and influenza and pneumococcal vaccinations. Savings are calculated by comparing the actual cost of care to a predetermined, actuarially derived, expected total cost of care. Incentive payments are based upon a contractually stipulated portion of calculated savings.

In the program, DaVita employs its patient-centered, integrated kidney care model and uses Highmark claims data to aid in risk

stratifying patients. This allows DaVita care teams to identify which patients need specific interventions to improve their care. For example, nephrologists focus on late-stage chronic kidney disease (CKD) interventions to encourage patients starting dialysis to begin with safer access, such as an AVF, to reduce the risk of blood-stream infection and subsequent hospitalizations.

Nurse care managers are an essential component of DaVita's integrated kidney care model. They provide additional support to advance care pathways and clinical protocols. Nurse care managers work within a multi-disciplinary team, including nephrologists, in-center dialysis staff and other specialists and/or hospital staff outside of the dialysis center to coordinate care plans and coach patients. For example, nurse care managers track fluid alerts, missed treatments and labs and medications and then communicate necessary adjustments to patient care plans.

Evaluation Process: DaVita collects data on patient outcomes and costs among Highmark plan members receiving dialysis at its centers, and then analyzes the results. MA and commercial insurance members are analyzed separately.

A historical baseline profile of costs and care utilization for these members was created for the period before program launch, and subsequent cost expectations were jointly determined for each of the next four program years.

Four types of patients are excluded from analysis, including:

1. Patients in the top 1% in terms of total annual aggregated, non-dialysis costs.
2. Patients who are missing dialysis/inpatient/skilled nursing facility claims in at least 50% of the identified eligible member months.
3. Patients who had dialysis/in-patient/skilled nursing facility claims less than $1,500 (commercial) or $1,000 (MA) per member per month in at least 50% of eligible member months.
4. Patients who received a kidney transplant (exclusion began in the month the transplant was received).

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Results: DaVita and Highmark were able to advance the triple aim for the ESRD population in the program. Year-over-year comparisons spanning the duration of the program show continuous reduction in hospital admissions, readmissions, CVC rate and addressable costs. As a result, ESRD patient quality of care and health-related quality of life improved, and unnecessary costs declined per contract methodology by more than $12 million over four years.

- Enhanced Patient Experience (relative to baseline)
  - 42% decrease in CVC rate.
  - 29% reduction in hospital admission rates.
  - 36% reduction in hospital bed days, resulting in more days at home with family.
  - Advanced care plans increased from 15% to 65% of the population (313% increase).
  - Increased depression screenings from 31% to 95% of the population (207% increase).
- Improved Population Health (relative to baseline)
  - 26% improvement in MA inpatient utilization.
  - 37% improvement in commercial inpatient utilization.
  - 29% improvement in controllable admissions.

Lessons Learned:

- There is a significant opportunity for risk-based partnerships to leverage a dialysis provider's expertise in kidney care, nephrologist relationships and the 12 to 15 hours a week patients are under dialysis to improve outcomes and achieve the triple aim.
- Dialysis patients, given their comorbidities and fragmented care, especially benefit from intensive care coordination efforts, as demonstrated by this program and the recent CMS ESCO results.
- Nephrologists are uniquely positioned to drive differential outcomes with aligned incentives as part of an integrated care team.
- Ongoing analysis and risk stratification are essential for focusing efforts on patients with the greatest need, producing specialized interventions and reducing overall cost of care.

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- *Ibid.*

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