

## Kidney Solutions: delaying disease progression



Chronic kidney disease (CKD) affects more than 37 million adults in the U.S., largely as a result of increasing obesity, diabetes, heart disease and hypertension prevalence.<sup>1</sup> Since it is not possible to repair or reverse kidney damage, managing the disease appropriately is imperative. People with poorly managed CKD have more complications and progress to end-stage renal disease (ESRD) more quickly, often depending on dialysis or a kidney transplant for survival. This can have profound and costly implications for health plans, employers and members.

CKD can be difficult to diagnose in the early stages, as people are often asymptomatic. A person may not know they have kidney disease until it has progressed to a more serious stage. Progression of the disease is also not uniform, as many people can live long, active lives with CKD while others progress to ESRD more rapidly. Early intervention for CKD is critical in managing the disease and the significant health care costs associated with it. As the disease progresses toward ESRD, health care costs rapidly increase, especially when individuals begin dialysis. The total medical expense for someone on dialysis may approach \$23,000 per month.<sup>2</sup>



**37 million**

Chronic kidney disease affects more than 37 million adults in the U.S.

## Kidney Solutions

Optum has developed an evidence-based comprehensive kidney disease management solution that engages those diagnosed with CKD to help determine the right treatment protocol to slow disease progression and minimize disease impacts. Kidney Solutions focuses on four strategies to improve health outcomes and control costs:

- 1. Early identification and management:** Individuals with CKD are identified through lab results, procedure codes, revenue codes and diagnosis codes. Individuals may enter the program through provider referrals and health screenings.
- 2. Specialized renal case management:** Each program participant works with a dedicated renal nurse who averages over 10 years of kidney disease experience working in dialysis centers, nephrology offices and internal medicine clinics. Nurses drive renal interventions with participants that improve clinical outcomes for kidney disease.
  - Access placement
  - Home dialysis
  - CKD to ESRD transition planning
  - Kidney transplantation
  - Finding the right dialysis center
  - Comorbidity and discharge management
  - Social determinants of health
  - Medication reconciliation
- 3. Coordinated care:** Nurses close care gaps with the participant's nephrologist and the rest of their care team to coordinate care and advocate on behalf of the participant.
- 4. Evidence-based care:** The Kidney Solutions program follows the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative, augmented by evidence-based guidelines developed by renal and other specialty groups. Clinical leadership at Optum is provided by a full-time, board-certified nephrologist who is also UNOS-certified in abdominal transplant, including kidney, liver and pancreas.



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## Optum analysis of disease progression

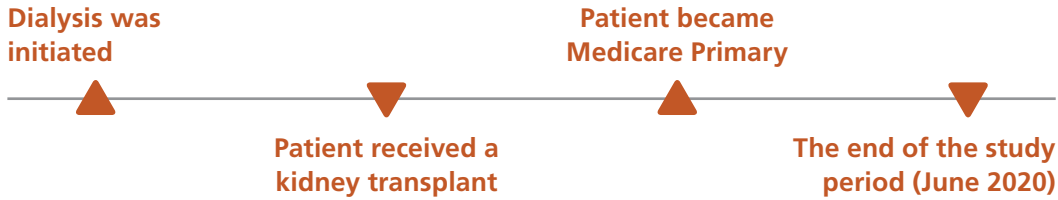
When an individual progresses from CKD to ESRD, this is marked by a transition to dialysis. Successful management of CKD is marked by a longer transition to dialysis, if needed. To assess the impact of the Kidney Solutions program on kidney disease progression, Optum recently conducted a study for the purpose of:

- Comparing transition time to dialysis for two sets of populations:
  - Commercial health plans with access to Kidney Solutions program (treatment)
  - Commercial health plans with no access to the Kidney Solutions program (control)
- Assessing the characteristics that are significantly associated with patients' transition time to dialysis

	CKD members
Program access	3,561
No program access	4,431

### Measurement and methods

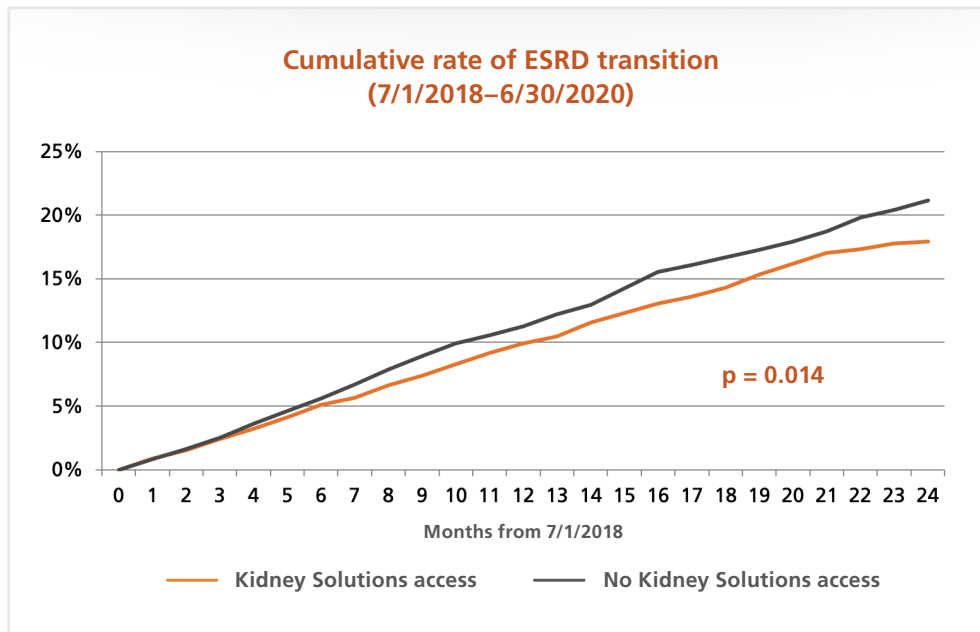
Members were traced from the beginning of the study period in July 2018 **until whichever event occurred earliest:**



Survival analysis was conducted on time to dialysis without controlling for patient risk. A Cox proportional hazards model was conducted for evaluation with risk adjustment.

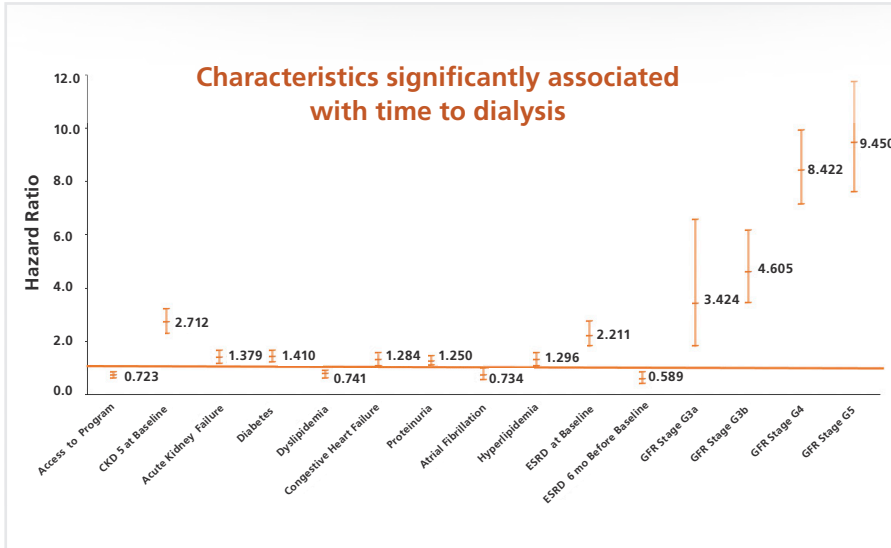
### Delay time to ESRD

The results of the survival analysis show that members with access to the Kidney Solutions program initiated dialysis later than members without access to the program. Results are statistically significant ( $p = 0.01$ ).



### Reduced risk of dialysis initiation

Results of the Cox model show that members with access to the Kidney Solutions program had a 28% reduced risk of initiating dialysis after adjusting for patient risk and characteristics, including access to other care management programs.



### 28% reduction

Results of the Cox model show that **members with access to the Kidney Solutions program** were 28% less likely to initiate dialysis after adjusting for patient risk and characteristics.

### Cost savings

Health care costs associated with ESRD are extremely high. Delaying the transition from CKD to ESRD drives cost savings for individuals, employers and health plans. Results of this analysis show that the cost savings associated with delayed ESRD transition is approximately \$1,166 per member per year, after considering member attrition rates. Health plans can save over \$1.1 million per year for every 1,000 stage 4 and 5 CKD members it insures.

### Conclusion

CKD and ESRD are serious conditions that require proper management to mitigate negative health outcomes and the significant costs associated with them. Kidney Solutions is designed to help members manage their kidney disease and steer them to the most appropriate treatments with the goal of prolonging the member’s quality of life and lessening their associated health care costs.

Contact Optum to learn more about how the Kidney Solutions program can help members living with chronic kidney disease.

**Call: 1-866-427-6845**

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**Visit: [optum.com](https://www.optum.com)**



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#### Sources

1. National Institute of Diabetes and Digestive and Kidney Diseases. Kidney disease. [niddk.nih.gov/about-niddk/research-areas/kidney-disease](https://www.niddk.nih.gov/about-niddk/research-areas/kidney-disease). Accessed June 7, 2021.
2. In-network medical expense allowed based on 2019 Optum Healthcare Economics (HCE) analysis of large commercial and Medicare Advantage health plans, 2017 data.