Optum

From preventive care to delayed progression

How an integrated approach produces better outcomes for renal disease – a common, complex and costly condition



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Overview



Rates of chronic kidney disease (CKD) have been climbing stealthily in recent years. The condition affects an estimated 1 in 7 U.S. adults, or roughly 37 million people.[1]

This may not surprise health care professionals, given that the rates of two main CKD predictors – diabetes[2] and hypertension[3] – have also been trending upward. COVID-19 also may play a role in the nation's rising rates. A large-scale study in the *Journal of the American Society of Nephrology* found that COVID-19 infection significantly increases a person's risk of kidney disease and incidence of end-stage renal disease (ESRD).[4]

Yet CKD's growing prevalence belies a frightening fact: The vast majority of people with the disease have no idea they have it. In fact, the Centers for Disease Control and Prevention estimates that as many as 90% of people with CKD are unaware of their condition.[5] That's an alarming statistic for patients and payers alike, as renal disease – unlike many other conditions – does not progress in a linear manner.

Many patients only discover they have the condition when their kidneys fail, requiring emergency hospitalization and costly medications to treat life-threatening complications. Unplanned dialysis initiation (or "crashing" into dialysis) is associated with longer hospital stays, more frequent readmissions, higher mortality rates and far greater health care costs.[6] For instance, researchers in a 2021 analysis found that the average total cost of care for crash starts was $95,036 – nearly four times more than the average $25,671 for patients with planned initiations.[7]

The need for a novel solution is even more urgent for patients of color. Black Americans are four times more likely to suffer from ESRD than their white counterparts.[8] And while the Latino population has roughly the same odds as white people of being diagnosed with CKD, they are 1.3 times more likely to see the disease progress to renal failure.[9]

Still, change is possible. And the interventions most likely to buoy all members' quality of life and health outcomes are also those with perhaps the greatest cumulative savings potential: better coordination of care, more patient support and delaying disease progression through a comprehensive program that considers the entire patient journey.

Strengthening the focus on preventive renal care

Ask someone to list the symptoms of a heart attack, and they probably wouldn't hesitate to say chest pain and tingling down the left arm.

But ask them to tell you the symptoms of renal disease and you're likely to be met with silence. Awareness of the disease – and its causes, symptoms and means of prevention – are simply not strong among the American public, leaving people poorly equipped to meaningfully take their kidney care in hand.

But patient awareness is only one part of the problem. Providers highly attuned to the early warning signs of diabetes and heart disease can easily overlook or misdiagnose the symptoms of renal disease, including fatigue, poor sleep and muscle cramping.[10]

Or, because nearly 90% of people with renal disease also have a comorbidity, they may spend the limited appointment time focused on addressing and managing that known condition.

Diagnosing kidney disease typically happens by assessing the serum creatinine in someone's blood and the protein in their urine.[11] But the connection between comorbidities and CKD risk isn't always made. For instance, one in three adults with diabetes may have CKD, and one in five with high blood pressure may have the disease.[12] The American Diabetes Association recommends that providers asses the urinary albumin at least once a year for patients with diabetes or hypertension.[13]

Yet the latest U.S. Renal Data System Annual Data report – analyzing data on Medicare beneficiaries older than 66 – found that urine protein testing fell far short of 50% for people with diabetes (with or without hypertension).[14] And for those with hypertension alone, testing dipped below 10%.[15]



Even when lab tests are taken, the results may not always trigger a diagnosis or be clearly communicated with patients. One analysis by the Centers for Medicare & Medicaid Services Office of Minority Health showed that 27% of patients whose lab results were positive for CKD had a diagnosis code.[16] In another study, medical professionals presented with a test case were able to correctly identify Stage 4 CKD only 63% of the time.[17]

So, the question becomes: How do we rectify this? Payers would be wise to consider a comprehensive approach.



Scrutinize the signs: Data analytics focused on claims and lab data can help surface patients recently diagnosed with CKD who may not have connected with a nephrologist or, perhaps more worrisome, those whose labs suggest CKD but haven't yet received a diagnosis.



Raise awareness among high-risk populations: Certain health conditions, such as diabetes, are heavily associated with increased risk of CKD. Consider targeting education efforts so patients understand the importance of regular testing and assessments.



Integrate kidneys into the care landscape: In a bid to both educate providers about CKD and boost early diagnosis among patients, some health care organizations arrange for nephrologists to visit primary care facilities. Others, such as the nonprofit Rosgosin Institute, use community-based outreach to promote kidney screenings in local venues and churches.[18]



Empower patients early: Renal disease isn't reversible, but that doesn't mean patients are powerless to slow its progression. Early engagement, particularly on diet and lifestyle habits, can have a significant impact.[19] One study at Good Samaritan Hospital found that CKD patients who received kidney health education were less likely to crash into dialysis, and demonstrated increased self-efficacy and confidence toward the management of their renal care.[20]



Correlate quality incentives to high-cost encounters: The 2019 Executive Order 13879, Advancing American Kidney Health, was a landmark in the battle for CKD care, offering financial incentives to providers who place a greater emphasis on preventive CKD testing and disease awareness in their daily practice.[21] Health systems can similarly embrace quality incentives as a way to take aim at particularly high-cost CKD events, such as frequent hospitalizations.

Connecting the dots to proactively delay progression

Health care professionals agree: The earlier someone is engaged in their disease, the better.

Patient engagement can increase follow-through for referrals to nephrologists, endocrinologists, nutritionists and transplant centers. Engagement can also minimize avoidable utilization — all while preserving patient's quality of life and sense of self-efficacy.

How is this accomplished? Health care payers and systems are leveraging data analytics, claims and lab data to proactively identify those patients who have a CKD diagnosis but haven't seen a nephrologist.

Connecting CKD patients to this type of specialist can have dramatic effects. Research shows that patients with an early nephrology referral face slower disease progression and fewer hospitalizations.[22] These patients also have a mortality rate approximately 30% lower at 5 years after dialysis initiation, compared with their counterparts who were referred later.[23]



$23,000

The total medical expense someone on dialysis may approach monthly[24]

The earlier stages of CKD is a prime time to educate patients on what they can do to slow the disease's progression, as well as dispel any misconceptions that all patients with kidney disease progress to kidney failure. Kidney-friendly lifestyle changes — such as quitting smoking, getting active, and tightening control of blood pressure and blood glucose — can make a real difference.[25] But implementing those changes may feel overwhelming, particularly if the patient is also asked to juggle new medications or specialist appointments.

Care management is far more effective when using dedicated care managers with years of CKD experience. With deep knowledge on the full continuum of care for this condition, CKD-specialized clinical advocates can help patients navigate the complexities of their condition and the health care system. They can also be invaluable for helping them set realistic expectations and prioritize next steps.



$1,166

per member per year: the cost savings associated with delayed ESRD transition, after considering attrition rates[26]

A health plan can save over $1.1 million per year for every 1,000 stage 4 and 5 CKD member it insures.[27]

Finally, a dedicated care manager can fill in the gaps of patient knowledge when it comes to understanding their treatment options. Consider preemptive living donor kidney transplants, in which a patient receives a transplant before their kidney function deteriorates to the point of needing dialysis. These transplants allow patients with CKD to sidestep the grueling process of dialysis entirely, while avoiding an estimated $211,000 in health care costs.[28] They've also improved quality of life for patients, with a preemptive transplant lasting between 15 and 20 years on average.[29]

Yet only 2.5% of all kidney transplants are preemptive, according to the *Clinical Journal of the American Society of Nephrology*.[30] As the researchers note, "There is clearly a mismatch between the value of preemptive transplantation and its use."[31]

What's behind the low adoption rates of an option that's superior in so many dimensions? Lack of timely referrals to transplant clinics is certainly part of the problem, as are lengthy donor evaluation processes, often further exacerbated by the lengthy administrative process. Here too, specialized patient support can help clear hurdles by better educating patients (and donors) on the preemptive transplant process, facilitating timely referrals and helping to smooth logistical speed bumps.

When patients receive such personalized support, they're more empowered to take action in a timely manner, meaning they may be able to receive a transplant before dialysis becomes necessary. A study in the *American Journal of Kidney Disease* found that 13% of patients taking part in a care management program underwent preemptive transplants – more than five times the national average.[32] And an analysis of the Optum® Kidney Solutions program found 13.9% of members had a preemptive kidney transplant in 2020.[33] The costs of the transplant are offset in less than seven months, with net savings of $101,800 in the first year alone.[34]

Taking a comprehensive approach to end-stage renal disease

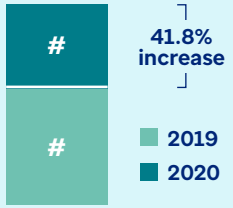
While a focus on prevention and slowing of disease progression are essential pieces of the CKD puzzle, there are still currently 786,000 ESRD patients in need of customized and outcome-driven care.[35]

The end stage of renal disease can be one of both incredible complexity and volatile costs. Without careful coordination, spikes in inpatient admissions, readmissions, emergency room and specialist visits may cause large variability in claims. That utilization adds up fast. Annual medical expenses for a single ESRD patient are approximately $260,000 for an average of nearly three years.[36]

Patients are often managing multiple comorbidities and may struggle to manage the underlying cause of their renal failure. In addition, they may experience new health conditions related to ESRD, such as anemia, depression or cardiovascular disease. And as much as their disease management depends on their ability to adhere to a treatment plan, a growing list of clinical requirements and lifestyle changes will prove impossible for some, a challenge for most.

One study found that non-adherence was a relatively common behavior among patients with ESRD, with non-adherence to dialysis, dietary and fluid restrictions, and medical treatment all significantly associated with increased hospital admissions and mortality.[37] For some ESRD patients, COVID-19 has only made adherence more challenging, further exacerbating the issue.

Reported ESRD cases in the U.S.



41.8%

The increase in reported ESRD cases in the U.S. between 2000 and 2019, an uptick diabetes and hypertension rates[38]

Against this high-stakes, high-cost backdrop, imagine a coordinated cohort of health care professionals providing personalized attention to each patient, with a renal care specialist acting as a single, trusted point of contact. This team of CKD experts and highly trained nurses would consider each patient's complex array of needs, including their social determinants of health, attendant medical concerns and specific level of health literacy. Text-based communication and education, telehealth appointments and at-home visits are all powerful ways to reduce barriers to access.

With primary care physicians forming partnerships with renal care management experts, a more complete circle of care becomes possible. And a trusted resource can be placed within reach of patients navigating this complex disease. The results of such an approach are self-evident. Members with access to the Optum ESRD program experience significantly lower health care costs (more than 5% lower), compared with members without access to the program, after the first six months on an annualized basis.[39]



2.5x

The rate participants were more likely to be evaluated for a kidney transplant than those not participating in the program[40]

A well-structured care team also takes a comprehensive view of ESRD, meaning not only the disease itself, but the management of any comorbidities and the financial, emotional and practical concerns that may be at the root of noncompliance or reduced engagement. Part of this may involve a renal care specialist liaising with a patient's partner or caregiver or connecting with a social worker involved in their care.

Another significant factor in an ESRD patient's quality of life is the way in which they receive dialysis. A better approach to ESRD care would maximize accessibility to dialysis, with an expansive network of dialysis clinics, as well as the use of at-home dialysis treatment when appropriate. An intensive ESRD care program can locate in-network dialysis options, guiding patients toward a clinical setting that is both financially attainable and outcome driven.

At-home dialysis has been shown to result in better patient outcomes.[41] If home dialysis is the best approach for the patient, a care team will be well poised to educate the patient and arrange the necessary elements of treatment. Finally, if the time comes for a patient to undergo a kidney transplant, the patient can seamlessly transition to the transplant care team, which helps coordinate the process and guide the patient from donor match to post-op recovery.

Conclusion

The gaps in renal disease detection, treatment and care coordination are numerous. But with a comprehensive, data-driven and clinically rigorous approach, these gaps can be filled, resulting in better health outcomes and more predictable and contained health care costs.

Optum Kidney Solutions is an integrated, evidence-based disease management program targeted at CKD stages 4 and 5, and ESRD patients. Our proprietary data analytics expertise and specialized identification software scrutinizes claims and lab data, enabling us to identify and engage members before their kidneys fail and dialysis becomes necessary. Our dedicated renal care team possesses advanced clinical knowledge and experience to proactively manage the care complexities of individuals with renal disease, reducing the likelihood of costly inpatient admissions.

Working one-on-one with CKD patients, our renal care specialists ensure education on preemptive transplantation and referral to nephrology care. If dialysis is needed, the care specialists prepare patients for a smooth transition, providing modality and access education and helping find quality in-network dialysis facilities.

Learn more about Optum Kidney Solutions for employers and health plans.



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