

Pre-Dialysis CKD Patient Education

Improving Patient Outcomes and Reducing Care Costs

By Marc Branson



We are all aware of the pressures that are continuing to make providing quality care to chronic kidney disease (CKD) patients more and more challenging. The number of patients with CKD is increasing dramatically with 20 million Americans having the disease. This growth in CKD patients represents a precursor to the number of patients that will eventually reach end-stage renal disease (ESRD) or Stage 5. Furthermore, costs related to treating ESRD patients are immense and increasing. For example, nearly 7 percent of the entire Medicare budget is spent on ESRD care, even though less than 0.5 percent of Medicare recipients suffer from ESRD. According to the 2006 annual report from the United States Renal Data System (USRDS), total Medicare expenditures for ESRD reached \$18.5 billion in 2004. Even at these rates, the funding and reimbursement elements of CKD care are becoming increasingly insufficient.

There is also a growing shortage of nephrologists and nephrology nurses, with that situation only expected to worsen over time. These realities place medical clinicians in the unenviable position of making difficult decisions on how to most effectively allocate their time.

Finally, late CKD patient referrals prevent patients from beginning to manage their disease and prepare for dialysis at an early stage. This issue is underscored by studies that have shown that when CKD patients receive their first referral to a nephrologist within 90 days of starting dialysis, they experience a 40 to 60 percent increase in risk of death during their first year of renal replacement therapy.

There is a palpable pressure being felt by all players in the CKD care industry including nephrologists, nurses, dialysis providers and payers. This acute situation places a burden on those in the industry to identify ways in which to positively

influence both patient outcomes and treatment costs to attain higher value for ESRD expenditures. In our experience, one logical area to expand efforts is with the pre-dialysis CKD patient population.

The Pre-Dialysis CKD Patient Outreach Void

The industry pressures outlined above have created a significant void in the area of pre-dialysis patient outreach. A main contributor to this situation is the industry-wide shortages of nephrologists and nurses. Additionally, the time constraints placed on nephrologists by the large ESRD patient population and federal and state budgetary realities have limited clinicians' opportunities to reach out to patients prior to their need for dialysis therapy. As a result, many pre-dialysis CKD patients lack the information they need to:

- Make good healthcare decisions
- Maintain their current levels of health
- Delay the need for renal replacement therapy
- Be prepared to make the best therapy selection at the time that dialysis is needed

With this in mind, we believe that an effective avenue for moderating rising ESRD costs while continuing to deliver superior patient outcomes is to increase the focus on pre-dialysis CKD care. This view is supported by the fact that leading industry groups are undertaking initiatives specifically focused on pre-dialysis CKD patient outreach. A recent example is the partnership between the Centers for Disease Control and Prevention (CDC) and the National Kidney Foundation (NKF) focused on early detection and treatment of CKD. This is addition to the NKF's ongoing nationwide Kidney Early Evaluation Program (KEEP). Furthermore, the NKF also recently formed a partnership



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with Abbott's Ross Products to develop educational programs focused on nutrition and CKD. Clearly, there is increasing industry interest in targeting CKD care earlier in the diseases' progression.

The Role of the Dialysis Provider

Pre-dialysis CKD patient outreach is a broad concept that consists of a variety of proactive tactics focused on managing CKD at an early stage. These can include comprehensive patient screening for CKD, monitoring of key indicators of CKD, and focused and proactive management of key clinical manifestations of CKD, among others. Patient education is another pre-dialysis tactic that has the potential to play an effective role in enhancing CKD care. However, effective pre-dialysis education is a time-consuming process that is often not adequately addressed due to funding limitations and the time-constraints of today's nephrologists. One potential solution for overcoming these barriers is for dialysis providers to take an active role in offering pre-dialysis patient education to Stage 4 patients. Dialysis providers have established relationships with nephrologists and are thus in a unique position to assist these physicians by delivering education programs to their CKD Stage 4 patients.

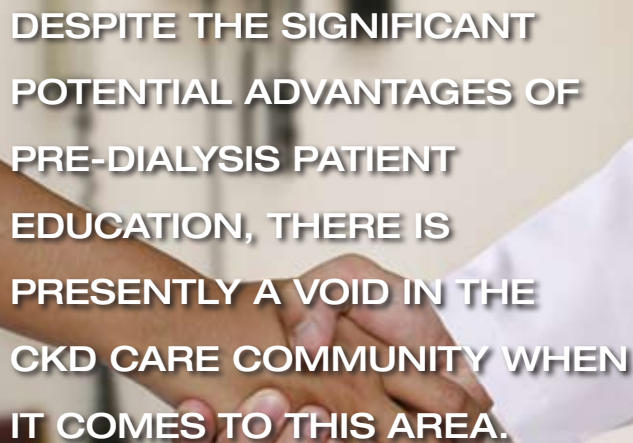
Pre-Dialysis Patient Education

For many CKD patients, diagnosis is a traumatic event that can lead to stress and depression. These emotions can prevent patients from taking the immediate and appropriate steps to best address their disease. As a result, they may miss the opportunity to stabilize and or maintain their health, prolong their need for dialysis, and properly prepare for the time that they will need dialysis. Patients with Stage 4 CKD are

particularly at risk if they suffer unmanaged, debilitating levels of stress that prevent them from proactively taking a part in their healthcare prior to their need for dialysis. This can set the stage for a worst case scenario in which a patient's health deteriorates without appropriate proactive CKD care, leaving them with very limited dialysis therapy options and high cost acute care interventions. However, this situation can be mitigated if appropriate and sensitive education programs are administered around the time of diagnosis. These programs can assist a patient in addressing the emotional burdens of diagnosis and empower them to address their long-term health at the earliest possible stage.

While breaking through the realities of stress and depression is an important initial role for education, the ultimate goal of these programs is promoting "health literacy" for patients. Health literacy has been defined as the ability to read, comprehend and act on medical instructions. For patients with a disease such as CKD, it refers to their ability to understand the disease and the best way to manage it. Health literacy represents an area of increasing interest and research in the healthcare industry. There are a number of studies across various disease categories that demonstrate that health literate patients take a more proactive role in their healthcare and experience superior clinical outcomes. For example, in the area of diabetes, research has demonstrated that patients with inadequate health literacy are more likely than patients with adequate health literacy to have poor glycemic control.

With regard to CKD, studies have shown that pre-dialysis education affects the involvement of patients in their healthcare. A patient that is well-versed in the details of CKD is more likely to establish behaviors that are consistent with



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maintaining their health and deferring disease progression. This can take the form of embracing exercise, altering diets, or monitoring and addressing important contributors to their disease. At the same time, increasing a patient's health literacy at an earlier stage also allows them delay their need for dialysis therapy. In short, a health literate individual with CKD makes for the type of proactive patient that best positions themselves to collaborate with healthcare providers to achieve successful health outcomes. With mounting pressures on CKD care delivery, pre-dialysis patient education and its beneficial impact on health literacy has the potential to provide key benefits to the CKD industry.

Health Literacy and CKD Patients

There are a wide variety of studies that have demonstrated the ability of pre-dialysis patient education and health literacy to result in an array of key patient benefits including:

- Delaying chronic renal failure and the need for dialysis
- Reducing early mortality
- Managing cardiovascular risk factors and other co-morbid conditions
- Improving anemia control
- Fostering higher serum albumin
- Initiating dialysis with higher residual renal function

By driving these improvements in clinical outcomes, pre-dialysis patient education is assisting CKD patients in stabilizing and maintaining their health while also prolonging their need for dialysis.

While the maintenance of a healthy lifestyle prior to the need for dialysis is an important result of health literacy, another area in which patient education plays a key role is patients' dialysis therapy selection. According to industry experts, up to 60 percent of Americans starting dialysis begin treatment in the hospital in an emergency situation. As such, it is not surprising that studies have shown hospitalization to be the major component of increased CKD patient costs in the six months leading up to dialysis initiation. In addition to placing the patient in a suboptimal therapy selection situation, emergency dialysis starts are also largely credited with the tremendous spike in acute care costs around the time of dialysis onset.

Once in these emergency hospital settings, a patient's disease has reached a point at which both their options and

their time for consideration are severely limited. Research has shown that psychological quality of life is negatively impacted for patients that do not have the freedom to choose a dialysis therapy. These patients are simply not prepared mentally or physically for living with dialysis and consequently defer care. This leads to incredibly high costs at the time these patients can no longer avoid treatment.

Being health literate with regard to therapy options positions patients to make the best and most appropriate treatment selection once dialysis is required. The benefits associated with self-care dialysis therapies such as peritoneal dialysis and home hemodialysis highlight the critical role therapy selection plays in patient outcomes and the cost of care.

Self-Care Dialysis' Impact

The reemergence of self-care dialysis in recent years has been partially driven by the growing library of data that shows the positive impact these therapies have on patients' clinical and quality of life outcomes. Findings from various studies have demonstrated that when compared to traditional in-center hemodialysis, self-care dialysis therapies lead to improvements in the following areas:

- Dialysis adequacy
- Mortality/survival
- Anemia status
- Blood pressure
- Hospitalization rates
- Fluid and dietary restrictions
- Prescription drug use

This list does not include the broad quality of life benefits experienced by self-care patients including enhanced energy/vitality, improved appetite, reduction in sleep disorders, improved sexual function, greater independence, more flexible schedules, increased involvement in and control of their health, and increased rate of employment. These quality of life benefits highlight the fact that self-care therapies are now finally beginning to fulfill the original promise of dialysis treatment. In 1972, the U.S. government decided to provide coverage for ESRD care partially based on the belief that dialysis could be an enabling therapy for patients, allowing them to continue to live productive lives, including the flexibility to remain employed. While in-center hemodialysis has had a difficult time meeting this goal, self-care therapies are finally making it a reality for many patients.

In addition to the long list of advantages provided to patients, self-care dialysis also offers key economic benefits to the healthcare industry. First, the clinical benefits delivered by self-care lead to healthier patients who are less reliant on healthcare resources in areas such as prescription drug use and hospital utilization. At the same time, self-care patients are more likely to retain their jobs and contribute to funding the country's healthcare system instead of relying on it to finance their care. Additionally, there is a general consensus in both the United States and Canada that peritoneal dialysis is less costly than traditional hemodialysis. This is largely attributed to the fact that patients on self-care therapies are healthier and consume fewer healthcare resources. As a result, they offer a potential solution for

overcoming the industry-wide staffing shortage, particularly as the CKD population continues to grow.

With all of the clinical, quality-of-life and economic benefits afforded by self-care dialysis, it is unfortunate that only 9 percent of U.S. dialysis patients utilize one of these therapies. One explanation for this apparent underutilization may lay in the results of the 1997 U.S. Renal Data System Dialysis Morbidity and Mortality Study. Findings from this study showed that only 25 percent of patients receiving in-center hemodialysis were presented peritoneal dialysis or home hemodialysis as initial therapy options. This clear lack of dialysis options education highlights an area in which patient education and health literacy may play a particularly important role.

Self-Care Selection

Industry studies have shown that patients would consider a self-care therapy almost 50 percent of the time when they have been properly educated on all dialysis treatment options. Through its own clinical experience, WellBound has corroborated this information, presenting its latest findings at the 2007 Annual Dialysis Conference. These results showed that approximately 46 percent of the 986 Stage 4 CKD patients who were provided with dialysis options education had selected a self-care therapy after they received early education on all available treatment options including conventional in-center hemodialysis (HD), peritoneal dialysis (either CAPD or CCPD), renal transplant, and various home hemodialysis regimens. Based on our experience, it is clear that one way to dramatically increase adoption of self-care therapies, and realize the clinical, quality of life and economic benefits associated with the treatments, is through pre-dialysis patient education.

The Pre-Dialysis Patient Education Solution

While effective pre-dialysis patient education is compelling, it is important to identify appropriate avenues for its implementation. To address this need, WellBound has established comprehensive pre-dialysis patient education programs as a core element of its overall service offering. The education programs we offer are designed as an adjunct to the care provided by nephrologists and are focused in two specific pre-dialysis areas: CKD wellness education and renal replacement therapy education. Our wellness education programs cover a variety of key topics relevant to pre-dialysis patients, including hypertension management, exercise, nutrition, stress reduction, and cardiovascular risk assessment. In an effort to reach the greatest number of pre-dialysis patients, we make these classes available to all CKD patients in the communities in which we operate. Our experience has shown that patients that take part in our classes are more health literate, more engaged in their healthcare, more prepared for choosing and starting a dialysis therapy and better able to maintain a health lifestyle.

When it comes to selecting a treatment modality, we aim to educate patients so that they, in collaboration with their physician, can make informed choices regarding the most

appropriate options. That is the primary purpose of our dialysis therapy education classes. These educational venues expose patients to all treatment options including transplant, in-center hemodialysis and self-care therapies. While as a provider focused solely on self-care dialysis therapies, we intentionally do not limit these classes to those therapies. We recognize that self-care is not appropriate for everyone and that it is not effective to steer inappropriate patients to self-care dialysis therapies. At the end of the day, we simply want all CKD Stage 4 patients to be informed on all of their renal replacement therapy options.

WellBound, an affiliate of Satellite Healthcare, is committed to delivering pre-dialysis patient education as a vehicle for improving the clinical and quality of life outcomes for CKD patients, while also reducing overall CKD care costs. We're proud of the programs that we offer and hope to serve as a model of how a provider can have an important impact in this area. However, there is still more to do in order to realize the full benefit of pre-dialysis CKD patient outreach. Unless the insufficient funding and reimbursement of pre-dialysis patient outreach is addressed, programs that dialysis providers can offer in this area will not be able to reach their full potential.

Summary

A number of industry pressures are making the delivery of CKD care more challenging and creating the need for innovative solutions to address these issues. One promising potential solution involves supplementing the CKD care already provided by nephrologists with an increased focus on pre-dialysis patient education. There is an increasing volume of research that demonstrates the potential of patient education to significantly impact clinical and quality of life outcomes for patients, as well as the overall cost of delivering care. A critical direct impact of increased health literacy is the increased adoption of self-care dialysis therapies, which has also been shown to contribute positively to patient outcomes and healthcare costs.

Despite the significant potential advantages of pre-dialysis patient education, there is presently a void in the CKD care community when it comes to this area. This is largely attributable to the time constraints and economic pressures that are placed on nephrologists in today's healthcare system. One way to overcome these hurdles is for dialysis providers to play a role in delivering pre-dialysis patient education. With this in mind, WellBound has established pre-dialysis CKD education programs designed to increase patient health literacy. The company believes that these programs are helping to drive clinical and quality of life benefits for patients, while providing economic advantages to the healthcare industry as a whole. **RBT**

Marc Branson is the CEO of WellBound and has more than 20 years of healthcare industry experience. WellBound is an affiliate of Satellite Healthcare, a dialysis industry leader with a clinical legacy spanning over 30 years.

