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Campaign Update:

Welcome to the second Performance Excellence and Accountability in Kidney Care (PEAK) Campaign e-newsletter. In this edition, we update you on the Campaign's progress to date, as well as detail our featured best practice, *Reducing Catheter Use* and related recommended "Tools of Engagement" and resources.

While Kidney Care Partners continues to disseminate information on the PEAK Best Practices released to date, the purpose of this communication is to update you on progress in reducing first year mortality and to spotlight additional details about a particular best practice in order to help you incorporate it into your organization's patient care routine.

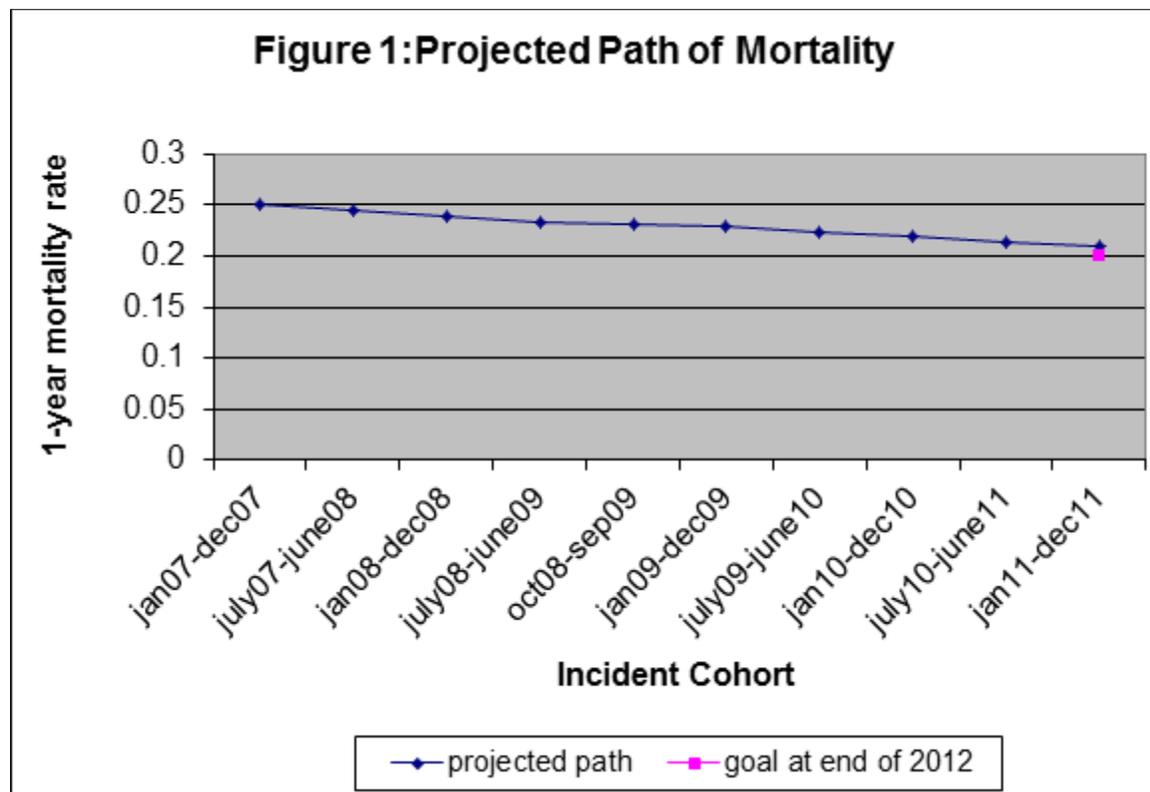
Preliminary Progress and Results:

To monitor progress toward the goal of reducing first-year mortality by 20 percent by the end of 2012, KCP's **Data/Results Panel**, comprised of data and research experts from academic and research institutions, dialysis providers, and manufacturers, compiled and reviewed data with some gratifying early markers that show progress in reducing first-year mortality in dialysis patients.

As noted previously, when PEAK was launched, the overall survival rate of ESRD patients had improved, but United States Renal Data System (USRDS) data then available indicated that mortality in the first year of dialysis had remained level during the last decade. New data available from USRDS in its 2009 and 2010 reports, however, indicate that the first-year mortality rate appears to be declining, as initiatives gain momentum and providers have begun to focus on first-year mortality as an important area for which outcomes could and should be improved.

The recent USRDS data is reinforced by Brown University's analysis of Renal Management Information System (REMIS) data for KCP since PEAK's launch, which focuses on data newer than the USRDS reports. The PEAK Campaign's data analyses finds that the first-year mortality rate—as well as the 90-day and 120-day mortality rates are on the decline—most importantly, including the period since the launch of PEAK in June 2009. **According to the Brown analysts, if the current rate of decline is sustained, the kidney community will achieve the Campaign's target reduction of 20 percent by the end of 2012.**

The chart in figure 1 illustrates the decline of the one-year mortality rate, and provides a projection (all numbers after the Oct 08-sep09 incident cohorts are based on linear projections) representing the anticipated decline based on the real data available to date.



Notes: All estimates are adjusted for censoring due to death and transplant. Incident cohort over 1 year was chosen- as per USRDS norm.

To explore this trend in greater detail, Brown conducted additional analyses to get a clearer picture of the progress since PEAK’s launch. Specifically, since early mortality is a key indicator of PEAK progress, Brown analyzed the survival pattern, day-by-day, immediately following initiation of dialysis. Preliminary analyses find that patients who began dialysis in the third quarter of 2009 (right after PEAK’s launch) are surviving longer than those who started dialysis at the end of 2008—94% for the former and 92% for the latter. Survival at the 90-day mark is particularly important, since the published literature indicates that survival at 90 days is highly predictive of survival to a year and beyond.

Based on these very promising results, the Data Panel agreed that survival curves (90-day and 120-day) for patients should be prepared, and we will share those results with you in a future edition of PEAKPOINTS.

Finally, given the association of catheter use at dialysis initiation with higher mortality, we present for closer examination the *Reduction of Catheter Use* best practice recommended by PEAK's Technical Guidance/Curriculum Development Panel:

FEATURED BEST PRACTICE: Reduction of Catheter Use

Recommended Best Practice: Avoid catheter insertion or remove catheters within 90 days of dialysis initiation in at least 80% of patients

Vascular access is the “lifeline” for end-stage renal disease (ESRD) patients who receive hemodialysis, allowing the patient’s blood to be pumped from the body, cleansed through dialysis and returned. As you well know, the three most common types of vascular access are catheters, grafts and fistulas. However, experts agree the best access for hemodialysis is one that is permanent – an arterial-venous (AV) fistula or an AV graft.

The risk of hospitalization and death have each been reported to be 35% or more with catheter use for vascular access. In fact, catheters figure as one of the top modifiable risks associated with first-year mortality, which led the Technical Guidance/Curriculum Development Panel to recommend avoiding catheter insertion or the removal of catheters within 90 days of dialysis initiation in at least 80% of patients.

How do you achieve this Best Practice?

Progression to end stage can be slowed if kidney damage is detected at an early stage. Prognosis and outcomes in patients with chronic kidney disease have been related to the quality of predialysis care and the timing of referral. Many patients with chronic kidney disease are referred to a nephrologist close to the commencement of dialysis which can lead to complications and increased mortality. Evidence supports the view that patients need to be referred early in order to avoid complications. Early referral can be achieved through better education of patients and caregivers and improved communication between primary health caregivers and nephrology services.

The Technical/Curriculum Panel, which is comprised of nephrologists, nephrology nurses, dialysis clinicians, patients and family members, recommended the following steps to reduce catheter use:

- For patients in whom dialysis is imminent, refer to a nephrologist early, and address establishing early access for dialysis;
- Establish critical thresholds to trigger an alert regarding CKD 4, glomerular filtration rate <30 ml/min, creatinine >4 mg/dl, albuminuria, to notify provider regarding pre-dialysis status;

- Educate patients about alternatives to in-center hemodialysis, such as renal transplantation, palliative care and in-home modalities including peritoneal dialysis;
- Educate patient, family and staff about mortality and hospitalization risks of having a catheter.
- Provide knowledge about reimbursement for providing vascular access;
- Arrange vessel mapping and surgical evaluation early; if CKD 4 or ESRD is identified during hospitalization, evaluate formally prior to discharge;
- Establish quality improvement (QI) surveillance for functioning access, days of catheter in place and reminders to remove.

Fistulas and, in some cases, grafts are the optimal access for dialysis patients – they last longer, have fewer complications, and are associated with lower rates of infections, hospitalization and death for ESRD patients, according to PEAK Panel members. PEAK panel members also recommend education at every stage as integral to catheter reduction *and* mortality reduction.

Reduction of Catheter Use: Related Efforts

The reduction of catheter use, as recommended by PEAK, is also an important focus of others in the kidney community. The Centers for Medicare and Medicaid Services (CMS) has been leading a similar initiative since 2003, Fistula First, with the common goal of increasing the use of AV fistulas for hemodialysis access in Medicare beneficiaries with ESRD. The goal is to increase fistula use as recommended by the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative (K/DOQI):

- AV fistula rates of 50 percent or greater for new patients.
- AV fistula rates of 40 percent or greater for those already on hemodialysis.

Still, only about 30 percent of hemodialysis patients nationwide dialyze with a fistula.

In June of last year, the Renal Physicians Association (RPA) launched a community-wide effort, the Vascular Access Initiative, to improve the state of vascular access care nationwide.

According to RPA, despite the renal community's robust efforts to develop and implement practice guidelines about the appropriate placement of AV access, and the outstanding progress of the Fistula First Breakthrough Initiative (FFBI) in raising the percentage of incident patients with fistulas to 50%, the percentage of incident patients with a CVC has increased. Indeed, 82% of incident hemodialysis patients start dialysis with a CVC, 28% of all patients in the US have the catheter in place after 90 days, and far too many patients maintain a CVC as their permanent access.

RPA acknowledged the success of FFBI but suggests that the push for the ideal access, an AVF, has had unintended consequences. Despite these efforts the rate of CVC has not changed. In addition, many patients have a non-usable AVF. This high percentage of non-usable AVFs suggests that there is a population of patients in whom AVFs should not be placed and for whom the AVG should be considered as perhaps the better option for avoiding the prolonged use of a CVC.

Thus, both the VAI and PEAK suggests that the kidney community's goal and responsibility should be to reduce CVC use and maximize the number of AVF in use (with the important recognition that AVG are a better alternative than CVC).

According to PEAK Panel Experts, if patients, family members and caregivers understand the options early on, it is more likely the patient will be prepared for dialysis with a fistula in place, or the catheter will be removed in a timely manner - especially if they and their caregivers are made aware of the improved outcomes and quality of life that can be achieved with a fistula or graft.

Tools and Resources:

At the outset of the VAI launch, RPA acknowledged that achievement of this goal will require hard work and a coordinated plan within the renal community. They have created materials providing information for their members and the entire kidney community on the role of nephrologists in access placement and reducing use of CVCs. These are included at the links below.

And to support PEAK's efforts to reduce catheter use, the Technical/Curriculum Expert Panel has also provided tools and resources (see chart) for nephrologists, patients, family members and other caregivers, including those developed by RPA as well as others, to help KCP members and the kidney community at large achieve this best practice.

REDUCTION of CATHETER USE: TOOLS and RESOURCES

AVF Functionality Tool	ESRD Network 13 http://www.network13.org/favicon.ico
Catheter Reduction Toolkit	Renal Physicians Association <ul style="list-style-type: none">• Vascular Access Initiative Fresenius Medical Care, Inc. <ul style="list-style-type: none">• Catheter Reduction Collaborative Overview• Catheter Reduction Collaborative Care Bundle• Catheter Reduction Collaborative Tracking Workbook• Patient-specific Vascular Access Plan Medical Advisory Council, The Forum of ESRD Networks <ul style="list-style-type: none">• Downloadable Toolkit and Writable Forms• Toolkit PDF
Fistula Information	Fistula First http://www.fistulafirst.org/
Reducing Venous Catheter Infections	ESRD Network 15 http://www.esrdnet15.org/QI/C1a.pdf

Additional information to learn more about catheter reduction can be found at:

http://www.kidneycarequality.com/PDF/technical_best_practice_01.pdf

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