



Performance Excellence and  
Accountability in Kidney Care



## TECHNICAL/CLINICAL TOOLS

### BEST PRACTICE 1: REDUCTION OF CATHETER USE

#### **WHY IS THIS IMPORTANT?**

The risk of hospitalization and death each has been reported to be 35% or more with catheter use for vascular access, rather than with fistulas. It also is greater than with other modalities, such as graft. Catheters figure as one of the top modifiable risks associated with first year mortality. This has 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

#### **BEST PRACTICE 1**

***Avoid catheter insertion or remove catheters within 90 days of dialysis initiation in at least 80% of patients.***

#### **HOW DO YOU ACHIEVE THIS BEST PRACTICE?**

1. For patients in whom dialysis is imminent, refer to nephrologist early, and address establishing early access for dialysis.
2. Establish critical thresholds to trigger an alert regarding CKD 4, glomerular filtration rate (GFR) <30 ml/min, creatinine >4 mg/dl, albuminuria, to notify provider regarding pre-dialysis status.
3. Educate patients about alternatives to in-center hemodialysis, such as renal transplantation, palliative care and in-home modalities including peritoneal dialysis.
4. Educate patient, family and staff about mortality and hospitalization risks of having a catheter.
5. Provide knowledge about reimbursement for providing vascular access.
6. Arrange vessel mapping and surgical evaluation early; if CKD 4 or ESRD is identified during hospitalization, evaluate formally prior to discharge.
7. Establish quality improvement (QI) surveillance for functioning access, days of catheter in place and reminders to remove.

## BEST PRACTICE #1 TECHNICAL/CLINICAL TOOLS AND RESOURCES

Tools and Resources	
<b>AVF Functionality Tool</b>	ESRD Network 13 <a href="http://www.network13.org/Citation.htm">www.network13.org/Citation.htm</a>
<b>Catheter Reduction Toolkit</b>	Renal Physicians Association <ul style="list-style-type: none"> <li>• <a href="#">Vascular Access Initiative</a></li> </ul> Fresenius Medical Care, Inc. <ul style="list-style-type: none"> <li>• Catheter Reduction Collaborative Overview</li> <li>• Catheter Reduction Collaborative Care Bundle</li> <li>• Catheter Reduction Collaborative Tracking Workbook</li> <li>• Patient-specific Vascular Access Plan</li> </ul> Medical Advisory Council, The Forum of ESRD Networks <ul style="list-style-type: none"> <li>• Downloadable Toolkit and Writable Forms</li> <li>• Toolkit PDF</li> </ul>
<b>Fistula Information</b>	Fistula First <a href="http://www.fistulafirst.org">www.fistulafirst.org</a>
<b>Reducing Venous Catheter Infections</b>	ESRD Network 15 <a href="http://www.esrdnet15.org/QI/C1a.pdf">www.esrdnet15.org/QI/C1a.pdf</a>
Supporting Literature	
<p>Kazmi WH, et al. <b>Late nephrology referral and mortality among patients with end-stage renal disease: A propensity score analysis.</b> 2004 <i>Nephrol Dial Transplant</i>. 19:1808-1814. <a href="http://ndt.oxfordjournals.org/cgi/content/abstract/19/7/1808">http://ndt.oxfordjournals.org/cgi/content/abstract/19/7/1808</a></p>	
<p>Lacson E Jr, et al. <b>Balancing Fistula First with catheters last.</b> <i>Am J Kidney Dis</i>. 2007 50(3):379-395. <a href="http://www.ncbi.nlm.nih.gov/pubmed/17720517">http://www.ncbi.nlm.nih.gov/pubmed/17720517</a></p>	
<p>Oliver MJ, et al. <b>Late creation of vascular access for hemodialysis and increased risk of sepsis.</b> <i>J Am Soc Nephrol</i>. 2004 15(7):1936-1942. <a href="http://www.ices.on.ca/webpage.cfm?site_id=1&amp;org_id=77&amp;item_id=2893&amp;morg_id=0&amp;gsec_id=2893">http://www.ices.on.ca/webpage.cfm?site_id=1&amp;org_id=77&amp;item_id=2893&amp;morg_id=0&amp;gsec_id=2893</a></p>	
<p>Thomson P, et al. <b>A prospective observational study of catheter-related bacteraemia and thrombosis in a haemodialysis cohort: Univariate and multivariate analyses of risk association.</b> <i>Nephrol Dial Transplant</i>. doi:10.1093/ndt/gfp667 Advance Access published online on January 6, 2010. <a href="http://ndt.oxfordjournals.org/cgi/content/abstract/gfp667v1">http://ndt.oxfordjournals.org/cgi/content/abstract/gfp667v1</a></p>	
<p>Tovbin D, et al. <b>High incidence of severe twin hemodialysis catheter infections in elderly women. Possible roles of insufficient nutrition and social support.</b> <i>Nephron</i>. 2001 89(1):26-30. <a href="http://content.karger.com/ProdukteDB/produkte.asp?Doi=46039">http://content.karger.com/ProdukteDB/produkte.asp?Doi=46039</a></p>	