



CREATING A CULTURE OF QUALITY

Catheter Reduction QI Project

A performance improvement project was conducted to decrease the rates of catheter use in a subset of patients where permanent vascular access is clinically feasible. The project included an education phase and data collection/reporting tool to track and determine barriers in process, baseline and follow up assessment of catheter rates, and assistance with development of action plans for catheter reduction.

Organization Name: ESRD Network 13

Authors: Cheryl George, RN; Linda Duval, RN, BSN, QI Director; Nellie Hedrick, MSc, Tool Development

Project title: QIWP Task 1.b., CPM Measures QIP 2010-2011 Vascular Access (Catheters) Identification & Intervention to Expedite the Placement of Permanent Vascular Access in Catheter-Using Patients Where Permanent Vascular Access is Clinically Feasible

This project was developed to reduce catheters in patients where AVFs or AVGs were probable alternatives to a hemodialysis (HD) catheter. This QIP was performed in partnership with 18 dialysis facilities. There were a total of 1,217 HD patients. Of that total, 423 patients were using a catheter for dialysis at the initiation of the QIP. The project subset consisted of 370 patients after excluding 53 patients using catheters who met absolute contraindication criteria.

Data collection and reporting was done through a tool developed to measure not only outcomes, but processes as well. The tool measured not only the total number of patients utilizing a catheter for dialysis at the beginning and end of the project, but the subset of patients utilizing a catheter for dialysis at the beginning and end of the project. Previous QI interactions to assist facilities improve vascular access rates identified a primary weakness in the overall tracking of placement and use of all vascular accesses. Data collection and reporting tools were developed to focus not only on outcomes but to audit processes. Monthly use of the tool reflected “snapshots” of the performance of processes leading to use of permanent access or removal of catheter. “Triggers” were built into the tools as reminders for timely scheduling (i.e. referrals, surgical consults, interventions); patient follow-up, initial cannulation & potential complications, and catheter removal. In addition, a sample patient interview was provided for use with patients who were resistant to permanent access placement. The interview tool performed a ‘mini’ root cause analysis, which identified reasons why patients “refuse”, leading to patient-specific education and/or interventions as needed.

Improvement secondary to QIP activities was demonstrated at six months by reducing catheters by 33.5% within the subset of catheter patients and reducing overall catheter rates from 34.75% at baseline to 32.28%. Note that due to influx of new patients, it remains difficult to substantiate the success of the QIP through outcomes, as there will be catheter-using patients with absolute contraindications to other permanent access in overall catheter rates. However this QIP provides an effective QI approach shown to be successful at ensuring consistent performance of processes necessary to achieve optimal vascular access management through isolating subsets of individuals to follow over set timeframes, use of standardized tools to collect & measure data, monitor & track processes, and ensure timely interventions to achieve optimal vascular access management.