

## **ESRD Network 13 Task 1 - Quality Improvement Work Plan (QIWP), July 2011 – June 2012**

Task 1 Quality Improvement (QI) work plan activities are determined by analyzing available clinical outcomes data within the Network. Those datasets currently include the monthly Fistula First Dashboard and database and the annual Lab Data Collection efforts. QI activities are consistent with the Network's statement of work as directed by the Centers for Medicare & Medicaid Services (CMS) and are forwarded to our CMS RO VI Project Officer for review and approval. Progress and updates to the Task 1 QIWP are reported internally during monthly staff meetings and to the project officer as part of the Quarterly Progress and Status Report.

Efforts towards partnerships with other entities (e.g., state survey agencies, QIO's, physicians, hospitals, etc.) will continue as resources allow. These efforts are towards making improvements at a system level. Partnership activities to date have been outreach and education based.

### **TASK 1.a. Vascular Access QI Project (Fistula First)**

Background: The Fistula First Breakthrough Initiative (FFBI) is a collaborative effort between CMS, ESRD Networks, and the renal community. In Network 13, the collaborative also includes the surgical and interventional radiology/nephrology communities. These entities are working to improve the likelihood that every eligible hemodialysis patient will receive the optimal form of permanent vascular access for that patient. In most cases, that access would be an arterio-venous fistula (AVF). QI activities have been underway in this area since 2003 and remain part of the Network's overall QI activities.

The National FFBI activities are currently directed by Network 2, IPRO ESRD Network of New York. Network 13 remains committed to FFBI membership and participation in activities. The Network's QID continues to be a member of the FFBI Clinical Practice Task Group and participates in the monthly FFBI QID learning sessions, as schedule and workload allows. In lieu of CROWNWeb implementation, the Fistula First Dashboard and database activities continue to be the mechanisms by which vascular access outcomes are collected, analyzed, and subsequently utilized for quality improvement reporting, measurement and technical assistance.

To address Fistula First, there are two activities under development. The first proposed activity is the establishment of facility-specific prevalent AVF use targets for all facilities with prevalent AVF use rates below 66% as of 03/31/2011. The Network will utilize the existing CMS Quality Deficit Reduction formula for generating facility-specific performance targets. The measurement timeframe for this activity will be from March 2011 to March 2012. The second proposed activity will be a QI project to perform region-specific root cause analysis (RCA) in our two underperforming regions specific to prevalent AVF use (Shreveport LA and Little Rock AR). The proposed RCAs are specific to health care professionals working with hemodialysis vascular access and to hemodialysis patients. Both perspectives will be critical in subsequently fine-tuning specific interventions based on results of root cause analyses. The task 1.a. project description is provided in the CMS templates which accompany this QIWP.

Provision of our educational sessions (e.g., vascular access evaluation and cannulation training sessions, physician offerings, and QI tools) will continue in our efforts to improve vascular access management (e.g., AVF placement and utilization rates) within our service area.

### **Task 1.b. Clinical Performance Measures (CPM)**

Background: The ESRD Clinical Performance Measures (CPM) project has been a national effort led by the Centers for Medicare & Medicaid Services (CMS) and its eighteen ESRD Networks to assist dialysis providers in improving patient care and outcomes. Secondary to the release and in conjunction with the implementation of the National Kidney Foundation (NKF), Dialysis Outcomes Quality Initiative (DOQI™) Clinical Practice Guidelines, the evolving and ongoing CPM efforts have provided a method of measuring quality of dialysis services in the United States.

As the ESRD community continues to transition into CROWNWeb and ultimately Pay-for-Performance activities, there have not been any formal CPM activities at the Network level. The Network remains aware of

the Phase III ESRD Clinical Performance Measures, effective April 1, 2008, as directed by the National Quality Forum. The Network has made accommodations to the existing CPM's through our current Network clinical standards and recommendations. Our clinical standards and recommendations also reflect potential reporting to be made available to the Network for QI activities following the nationwide initiation of the CROWNWeb data reporting system. Although the Network has not received written CMS direction as to our role and responsibilities specific to Phase III ESRD CPM, references are included this QIWP to facilitate consistent direction and applicability for ESRD providers.

Lab Data Collection: Network 13 continues participation in the annual Lab Data Collection (LDC) activity, coordinated by the Renal Network of the Upper Midwest, Inc. (Network 11), to assist with our Network-specific CPM QI work plan activities. The activity is based on a voluntary clinical element lab data collection (Timeframe: 4<sup>th</sup> quarter) for all existing, Medicare-certified dialysis facilities and their patients. The clinical elements included in this activity are:

1. Anemia Management:
  - a. Hemoglobin (Hgb);
  - b. Transferrin Saturation (TSAT); and
  - c. Ferritin (if done);
2. Adequacy of Dialysis:
  - a. pre/post BUN and Kt/V (hemodialysis adequacy) or
  - b. weekly CrCl or Kt/V (peritoneal dialysis adequacy)
3. Nutrition / Mineral Metabolism:
  - a. Albumin levels and methodology (nutrition) and
  - b. Calcium/phosphorus levels (mineral metabolism)

The objective of the lab data collection activity is to facilitate the Network's ability to stimulate and assist as necessary in ongoing facility-specific QI processes specific to the listed clinical indicators in a timely fashion. The areas of focus encompass anemia management, adequacy of dialysis, and nutrition/mineral metabolism. Our interactions center on the generation and Network-wide distribution of facility-specific comparative clinical profiles for QI activities in the areas previously mentioned. There is the potential for Network onsite QI visits for those facilities who continue to underperform in all Network performance guidance areas (e.g., adequacy, anemia management, and mineral metabolism). The data collection and reporting activity is manual for dialysis facilities not associated with large dialysis organizations (LDOs) and electronic for the LDOs. The current lab data collection activities were collected on all dialysis patients as of 10/15/2010. Patients included adult in-center hemodialysis patients; adult peritoneal dialysis patients; and all dialysis patients less than 18 years of age. We also had participation by our one Medicare-certified VHA dialysis facility for their hemodialysis and peritoneal dialysis patients.

The Network 13 Quality Improvement Committee (QIC), a subcommittee of the Network's Medical Review Board (MRB), as well as the MRB, reviews and analyzes Network-specific outcomes for directing and overseeing the Network's QI activities, including the development and implementation of the Network's Quality Improvement Work Plan (QIWP). This analysis is also utilized to establish Network-specific performance guidance as applicable within the CPM indicators. All of these interrelated clinical indicators (e.g. adequacy, anemia, vascular access, mineral metabolism, etc.) and available outcomes drive the development and implementation of the Network's Task 1 Quality Improvement Work Plan (QIWP). In our efforts to utilize the most current available clinical data sets for our QIWP activities, we have incorporated results from latest Lab Data Collection (4<sup>th</sup> quarter 2010) activities.

In conjunction with the QIC/MRB review of available clinical indicators, a review of dialysis patient population by modality was accomplished. As of 12/31/2010, there were 15,995 living dialysis patients receiving dialysis therapy in certified, ESRD providers within our three-state service area.

Network 13 Patient Population by Modality, 12/31/10	Counts	Percentages
Hemodialysis:	14,612	91.4%
Peritoneal Dialysis:	1,383	8.6%
Total:	15,995	100%

Source: CMS-2744, 12/31/2010

There is recognition that hemodialysis remains the primary modality of dialysis therapy within our patient population, which presents complexities when analyzing available peritoneal dialysis outcomes due to the small numbers at all levels (e.g., Network, state, and provider). In an effort to prioritize where Network QI technical assistance will impact at the greatest levels, review of modality-specific outcomes is an important component of developing our overall QI approach.

With regards to the Network's clinical performance goals, delivery of hemodialysis meets expectation in HD adequacy (Kt/V), nutrition, and mineral metabolism. The delivery of peritoneal dialysis currently meets only one component of mineral metabolism (e.g. phosphorus) and as such will receive attention through our Task 1.d. project activities. Anemia management for both modalities will be addressed through educational and outreach activities. .

Overall vascular access management continues to improve in both our prevalent and incident hemodialysis patient population, although the improvement is minimal specific to incident AVF placement. Both Tasks 1.a. and 1.b. will remain focused on vascular access management with the objective of achieving our CMS-contractual prevalent AVF use target, as well as reduction of catheters. Any improvement in vascular access management should concurrently lead to an improvement in adequacy of hemodialysis.

Table 1 provides the Network 13 CPM Review Plan Based on Preliminary 2010 Lab Data Collection results, while Table 2 provides the Network 13 Vascular Access Management QI Plan Based on March 2011 Data (05/12/2011 FF Dashboard). The subsequent graphs provide comparative overview and analysis utilized for development of the Task 1 QIWP.

TABLE 1: Network 13 Clinical Performance Measures (CPM) Review Plan Based on Preliminary 2010 Lab Data Collection Results

CPM Element	US Results	NW 13 Results	Plan / Associated Activities
<b>ADEQUACY OF DIALYSIS: HEMODIALYSIS (HD)</b>			
<p>2010 Network 13 Goals:</p> <p><i>Attain / maintain 90% of hemodialysis patients with URR <math>\geq</math> 65%</i></p> <p><i>Attain / maintain 94% of hemodialysis patients with Kt/V <math>\geq</math> 1.2.</i></p> <p><b>*Phase III CPM HD Adequacy Measures Where Applicable within QIWP (Facility Level):</b></p> <p><i>* Percentage of all adult (<math>\geq</math> 18 years old) patients in the sample for analysis who have been on hemodialysis for 6 months or more and dialyzing thrice weekly whose delivered dose of hemodialysis (calculated from the last measurements of the month using the UKM or Daugirdas II formula) was a spKt/V <math>\geq</math> 1.2 during the reporting period.</i></p> <p><i>*Percentage of all adult (<math>\geq</math> 18 years old) patients in the sample for analysis who have been on hemodialysis for 90 days or more and dialyzing thrice weekly, and have a residual renal function (if measured in the last three months) less than 2 ml/min/1.73m<sup>2</sup>), whose delivered dose of hemodialysis (calculated from the last measurements of the month using the UKM or Daugirdas II formula) was a spKt/V <math>\geq</math> 1.2 during the reporting period.</i></p> <p><i>*Number of eligible Medicare hemodialysis patients at the facility during the calendar year with a median URR value of 65% or higher.</i></p>	<p>91%</p> <p>95%</p>	<p>89%</p> <p>95%</p>	<p>While NW 13 meets the existing Kt/V performance goal, we continue to work towards achieving and/or exceeding both HD adequacy goals.</p> <p>The Network QI staff, QIC, and MRB have reviewed available analyses on the 4<sup>th</sup> quarter 2010 Lab Data Collection, specific to HD adequacy datasets. Secondary to our review, the Network has modified its existing performance guidance in HD adequacy as follows...</p> <p><i>2011 Network 13 Performance Guidance (HD Adequacy)</i></p> <ul style="list-style-type: none"> <li>• <i>96% of incenter HD patients achieving URR <math>\geq</math> 65% (new in 2011)</i></li> <li>• <i>94% of incenter HD patients achieving Kt/V <math>\geq</math>1.2</i></li> </ul> <p>Associated Activities:</p> <ol style="list-style-type: none"> <li>1. Provision of Network-specific directives (standards, recommendations) and resources (QI tools, patient/professional education, etc.) via our annual distribution of the Network 13 Facility Resources Materials CD and Web site.</li> <li>2. Network QI staff has reviewed and updated our Network 13 Self-Study on Adequacy of Hemodialysis for inclusion in the 2011 NW 13 Facility Resource Materials. The Self-study will also be used with any facility needing technical assistance in the area of HD adequacy.</li> <li>3. Network Clinical Practice Guideline (CPG) specific to HD adequacy, as well as "Performance of Routine Delivery of Care Audits". (NETWORK STANDARDS)</li> <li>4. General comparative report results (Lab Data Collection) via direct mailings and Web site.</li> <li>5. Educational opportunities via newsletters (patient/professional), WebEx sessions, and mentoring workshops.</li> <li>6. Educate facilities about expectations with regards to monitoring for delivery of hemodialysis utilizing methods (s/p Kt/V vs. URR) as directed by CMS in Phase III CPM measures.</li> <li>7. Facilitate and/or assist in facility-specific QI projects specific to adequacy of hemodialysis as prioritized by facilities (e.g., QIWP Template Task 1.d.)</li> </ol>

<b>ADEQUACY OF DIALYSIS: PERITONEAL DIALYSIS (PD)</b>			
<p>2010 Network 13 Goal: <i>Attain / maintain 90% of PD patients with weekly <math>Kt/V_{urea} \geq 1.7</math>.</i></p> <p><b>*Phase III CPM PD Adequacy Measures Where Applicable within QIWP (Facility Level):</b></p> <p>*Percentage of all adult (<math>\geq 18</math> years old) peritoneal dialysis patients with total solute clearance for urea (endogenous residual renal urea clearance &amp; dialytic) measured at least once in a four month time period.</p> <p>* Percentage of all adult (<math>\geq 18</math> years old) peritoneal dialysis patients whose delivered peritoneal dialysis dose was a weekly <math>Kt/V_{urea}</math> of at least 1.7 (dialytic + residual) during the four month reporting period.</p>	89%	86%	<p>The available analysis reflects that NW 13 does not meet our internal NW-specific goal in the area of PD adequacy as listed here.</p> <p><i>2011 Network 13 Performance Guidance (PD Adequacy)</i></p> <ul style="list-style-type: none"> <li>• 100% of adequacy testing on PD patients during a four month period.</li> <li>• 90% of PD patients achieving a weekly <math>Kt/V_{urea}</math> of at least 1.7 (dialytic + residual) during a four month period.</li> </ul> <p>The Network QI staff, QIC, and MRB have reviewed analyses on the 4<sup>th</sup> quarter 2010 Lab Data Collection datasets, specific to PD adequacy.</p> <p>Associated Activities:</p> <ol style="list-style-type: none"> <li>1. Provision of Network-specific directives (standards, recommendations) and resources (QI tools, patient/professional education, etc.) via our annual distribution of the Network 13 Facility Resources Materials CD and Web site.</li> <li>2. Network Clinical Practice Guideline (CPG) specific to "PD adequacy". (NETWORK STANDARD)</li> <li>3. General comparative report results (Lab Data Collection) via direct mailings and Web site.</li> <li>4. Educational opportunities via newsletters (patient/professional), WebEx sessions, and mentoring workshops.</li> <li>5. Educate facilities about expectations with regards to monitoring for delivery of peritoneal dialysis utilizing methods (<math>CrCl</math>, <math>Kt/V_{urea}</math>) as directed by CMS in Phase III CPM measures.</li> <li>6. Facilitate and/or assist in facility-specific QI projects specific to adequacy of PD as prioritized by facilities (e.g., QIWP Template Task 1.d.)</li> </ol>

<b>ANEMIA MANAGEMENT:</b>			
<p>2010 Network 13 Goal:</p> <p><i>Attain / maintain 70% of patients with mean hemoglobin between 10 - 12 gm/dL.</i></p> <p><b>*Phase III CPM Anemia Management Measures (Facility Level):</b></p> <p>*Percentage of all adult (&gt;=18 years old) hemodialysis or peritoneal dialysis patients prescribed an ESA at any time during the reporting period or who have a Hemoglobin &lt;11.0 g/dL in at least one month of the reporting period for whom serum ferritin concentration AND either percent transferrin saturation or reticulocyte Hemoglobin content (CHr) are measured at least once in a three-month period for in-center hemodialysis patients, and at least twice during a six-month period for peritoneal dialysis patients and home hemodialysis patients.</p> <p>*Adult hemodialysis and peritoneal dialysis patients, with ESRD ≥ 3 months, who have received ESA therapy at any time during a 3 month reporting period AND have achieved mean hemoglobin of 10.0-12.0 g/dL for the 3 month reporting period. The hemoglobin value reported for the end of each month (end-of-month Hemoglobin) is used for the calculation.</p> <p>*Adult hemodialysis and peritoneal dialysis patients, with ESRD &gt; 3 months, who have a mean Hemoglobin &lt;10.0 g/dL for a 3 month reporting period, irrespective of ESA use. The hemoglobin value reported for the end of each reporting month (end-of-month Hemoglobin) is used for the calculation.</p>	<p>HD: 68% PD: 58%</p>	<p>HD: 67% PD: 57%</p>	<p>The Network continues to monitor anemia management and is now reviewing outcomes by modality. We are aware of the continued scientific and reimbursement complexities of anemia management. In an effort to address those complexities, Network 13 has revisited our performance guidance to address a more realistic Hgb range, as well as address the outliers (e.g., Hgb &lt; 10; Hgb &gt;= 12 and Hgb &gt;=13 on ESA therapy), which have been associated with increased clinical risks to quality of life.</p> <p>Upon review and discussion, the Network QIC and MRB directed the modification of our existing performance guidance in anemia management as follows...</p> <p><i>2011 Network 13 Performance Guidance (Anemia Mgmt)</i></p> <ul style="list-style-type: none"> <li>• <i>Less than 10% of patients with Hgb's &lt; 10 gm/dL</i></li> <li>• <i>Minimal to zero patients with Hgb's &gt;= 13 gm/dL on ESA therapy</i></li> <li>• <i>Less than 10% of patients with Hgb's &gt;= 12 gm/dL on ESA therapy (new in 2011)</i></li> </ul> <p>Associated Activities:</p> <ol style="list-style-type: none"> <li>1. Provision of Network-specific directives (standards, recommendations) and resources (QI tools, patient/professional education, etc.) via our annual distribution of the Network 13 Facility Resources Materials CD and Web site.</li> <li>2. Network Clinical Practice Guideline (CPG) specific to "anemia management". (NETWORK STANDARD)</li> <li>3. General comparative report results (Lab Data Collection) via direct mailings and Web site.</li> <li>4. Provision of nephrologist-specific CMS-2728 profiles, which has pre-ESRD anemia management outcomes incorporated.</li> <li>5. Educational opportunities via newsletters (patient/professional), WebEx sessions, and mentoring workshops.</li> <li>6. Educate facilities about expectations with regards to monitoring for anemia management via iron stores and hemoglobin levels as directed by CMS in Phase III CPM measures.</li> </ol>

<b>NUTRITION / MINERAL METABOLISM:</b>			
<p>2010 Network 13 Goals:</p> <p>35% of dialysis patients to have a mean serum albumin <math>\geq</math> 4.0/3.7 gm/dL (BCG/BCP)</p> <p>50% of dialysis patient population achieving serum phosphorus levels between 3.5 – 5.5 mg/dL.</p> <p>80% of dialysis patient population achieving serum levels of corrected total calcium levels within normal range for lab used, preferably toward the lower end (&gt;8.4 and &lt;10.2 mg/dL)</p> <p><b>*Phase III CPM Mineral Metabolism Measures (Facility Level):</b></p> <p>*Percentage of all adult (<math>\geq</math> 18 years of age) peritoneal dialysis and hemodialysis patients included in the sample for analysis with serum calcium measured at least once within month.</p> <p>*Percentage of all adult (<math>\geq</math> 18 years of age) peritoneal dialysis and hemodialysis patients included in the sample for analysis with serum phosphorus measured at least once within month.</p>	<p>HD: 39% PD: 20%</p> <p>HD:55% PD: 57%</p> <p>HD: 83% PD: 79%</p>	<p>HD: 37% PD:15%</p> <p>HD: 52% PD: 53%</p> <p>HD: 83% PD: 77%</p>	<p>NW 13 does meet the overall existing expectations in the areas of nutrition and mineral metabolism. However, analysis reflects the need for improvement in both areas specific to peritoneal dialysis. The Network will continue to provide technical assistance to providers towards achieving optimal albumin levels, as well as heighten focus on associated mineral metabolism issues within our service area.</p> <p>The Network QI staff, QIC, and MRB have reviewed analyses on the 4<sup>th</sup> quarter 2010 Lab Data Collection datasets, specific to nutrition and mineral metabolism. No changes to existing performance guidance were deemed necessary at this time.</p> <p><i>2011 Network 13 Performance Guidance</i></p> <p><i>Nutrition:</i></p> <ul style="list-style-type: none"> <li>• 35% of dialysis patients achieving serum albumin levels <math>\geq</math> 4.0/3.7 (BCG/BCP)</li> </ul> <p><i>Mineral Metabolism:</i></p> <ul style="list-style-type: none"> <li>• 50% of dialysis patients achieving serum phosphorus levels between 3.5-5.5 mg/dL</li> <li>• 80% of dialysis patients achieving serum levels of corrected total calcium within the normal range for lab used, preferably toward the lower end (&gt; 8.4 and &lt;10.2 mg/dL)</li> <li>• 70% of dialysis patients achieving serum calcium-phosphorus products at &lt; 55 mg<sup>2</sup>/mL<sup>2</sup>, if monitored for facility-aggregate outcomes.</li> <li>• 70% of dialysis patients achieving intact PTH levels between 150-300 pg/mL (16.5 – 33.0 pmol/L).</li> <li>• Intact PTH levels need to be monitored quarterly at a minimum, however, if patient-specific levels are not in target range, monthly monitoring is appropriate.</li> </ul> <p><i>Associated Activities:</i></p> <ol style="list-style-type: none"> <li>1. Provision of Network-specific directives (standards, recommendations) and resources (QI tools, patient/professional education, etc.) via our annual distribution of the Network 13 Facility Resources Materials CD and Web site.</li> <li>2. Network Clinical Practice Guideline (CPG) specific to “nutrition” and “mineral metabolism”. Both areas are within the NETWORK STANDARDS.</li> <li>3. General comparative report results (Lab Data Collection) via direct mailings and Web site.</li> <li>4. Educational opportunities via newsletters (patient/professional), WebEx sessions, and mentoring workshops.</li> <li>5. Educate facilities about expectations with regards to monitoring for mineral metabolism management via calcium/phosphorus levels as directed by CMS in Phase III CPM measures.</li> </ol>

TABLE 2: Network 13 Vascular Access Management QI Plan Based on March 2011 Data (05/12/2011 FF Dashboard)

Vascular Access Element	US Results	NW 13 Results	Plan / Associated Activities
<b>VASCULAR ACCESS [Arterio-Venous Fistula (AVF)]:</b>			
<p>CMS National Fistula First Goals: Increase the use of fistulas.</p> <p><i>Achieve and maintain 66% of adult prevalent HD patients with primary AVF as primary access used for hemodialysis</i></p> <p><i>At least 50% of incident hemodialysis patients over 18 years of age should have a native AVF</i></p> <p><b>*Phase III CPM Vascular Access Measures (Facility Level):</b></p> <p><i>*Percentage of patients on maintenance hemodialysis during the last HD treatment of month using an autogenous AV fistula with two needles</i></p> <p><b>*Phase III CPM Vascular Access Measures (Clinician Level):</b></p> <p><i>*Percentage of all ESRD patients aged 18 years and older receiving hemodialysis during the 12 month reporting year who have a functional autogenous AV fistula (defined as two needles used) or do not have such a fistula but have been seen by a vascular surgeon for evaluation for permanent access at least once during the reporting year.</i></p> <p><i>*Percentage of patients with advanced chronic disease (CKD4 or 5) or end-stage renal disease (ESRD) undergoing open surgical implantation of permanent hemodialysis access who receive an autogenous arteriovenous fistula (AVF).</i></p>	<p>58.0%</p> <p>35.7% YTD</p>	<p>57.0%</p> <p>34.3% YTD</p>	<p>Review of our vascular access datasets reflects that NW 13 performance does not meet the existing national CMS performance goal/target (66%) in the area of prevalent AVF utilization or expectation specific to incident AVF placement (50%). However, we met our internal target and exceeded the CMS March 2011 Network 13-contractual AVF use performance target of 56.7%.</p> <p>Our internal 2011-2012 Network 13 goal for prevalent AVF utilization has been established at 59.0% in an effort to help in meeting and subsequently exceeding CMS expected performance target/goal for March 2012 (58.8%).</p> <p>Last year's NW 13 goal was to achieve consistent 32% incident AVF placement by month via FF Dashboard analysis. Our year-to-date results reflect consistent achievement exceeding 34%.</p> <p>Associated Activities:</p> <ol style="list-style-type: none"> <li>1. Provision of Network-specific directives (standards, recommendations) and resources (QI tools, patient/professional education, etc.) via our annual distribution of the Network 13 Facility Resources Materials CD and Web site.</li> <li>2. Continued participation in Fistula First Breakthrough Initiative (FFBI) Activities.</li> <li>3. Annual distribution of Network CPG specific to "Vascular Access: AVF's". (NETWORK STANDARD)</li> <li>4. Continue to revise, develop, and provide updated vascular access management and QI tools.</li> <li>5. Report timely vascular access outcomes as available via Trends Reports (q 6 mos.), Web site, and Network newsletters (patient/professional).</li> <li>6. Development and provision of educational opportunities via WebEx sessions; mentoring workshops; partnerships with ANNA chapters; partnerships with QIO's; partnerships with local surgeon/interventional mentors; and physician meetings/courses.</li> <li>7. Provision of patient education materials specific to vascular access (i.e., waiting room posters, brochures, CD/DVD)</li> <li>8. Facilitate and/or assist in facility- and/or clinician-specific QI projects specific to vascular access (e.g., QIWP Templates Task 1.a., &amp; 1.b.)</li> <li>9. Provision of nephrologist-specific CMS-2728 profiles, which has pre-ESRD vascular access management outcomes incorporated.</li> <li>10. Provision of surgeon-specific profiles utilizing CMS Part B claims data specific to AVF placement rates.</li> </ol>

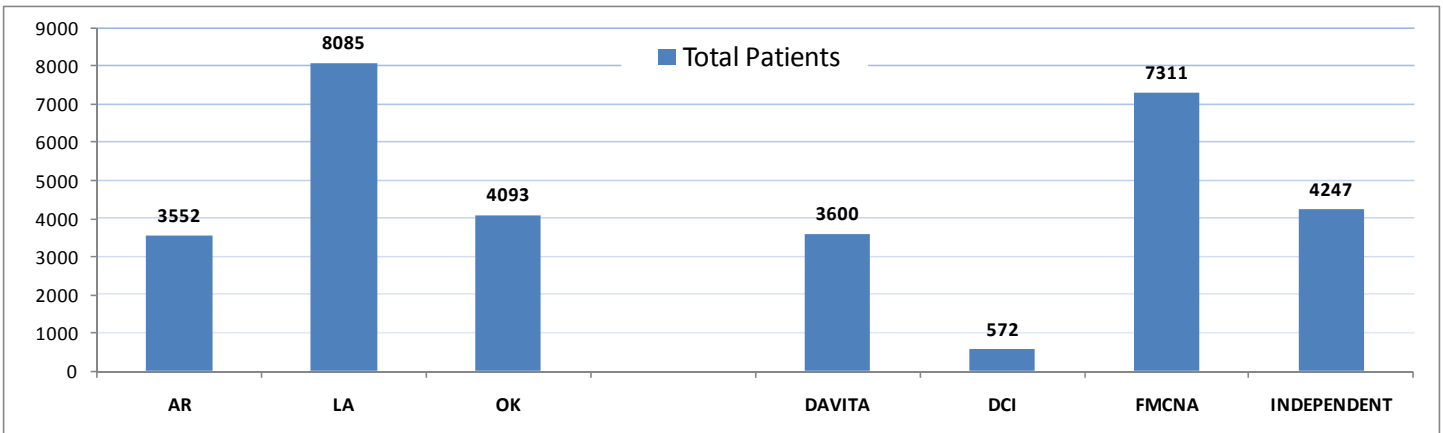
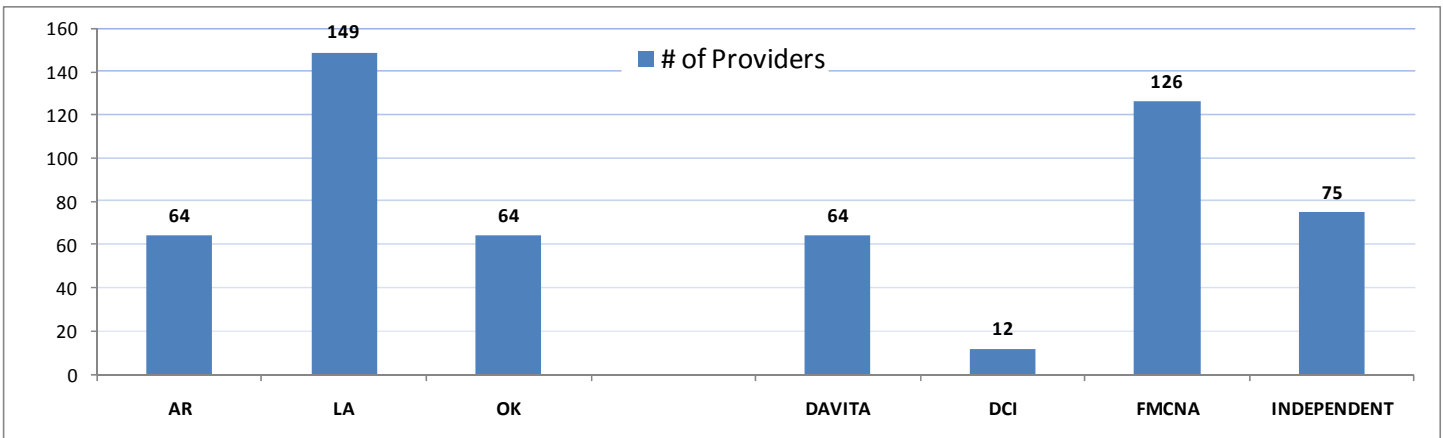
<b>VASCULAR ACCESS (Catheters):</b>			
<p>CMS Goal: Decrease catheter use to “Less than 10% of prevalent hemodialysis patients over 18 years of age should be maintained on catheters for longer than 90 days.”</p> <p><b>*Phase III CPM Vascular Access Measures (Facility Level):</b></p> <p>*Percentage of patients on maintenance hemodialysis during the last HD treatment of reporting period with a chronic catheter continuously for 90 days or longer prior to the last hemodialysis session</p> <p><b>*Phase III CPM Vascular Access Measures (Clinician Level):</b></p> <p>*Percentage of all ESRD patients aged 18 years and older receiving hemodialysis during the 12 month reporting year with a catheter after 90 days on dialysis who are seen by a vascular surgeon for evaluation for permanent access at least once during the 12 month reporting period.</p>	<p>Not Available</p>	<p>8.5%</p>	<p>Review of our vascular access datasets reflects that NW 13 performance does meet the existing CMS expectation in the area of catheter use per 05/12/11 FF dashboard. Note that this rate does not include catheters with AVF/AVG placed.</p> <p>Associated Activities:</p> <ol style="list-style-type: none"> <li>1. Provision of Network-specific directives (standards, recommendations) and resources (QI tools, patient/professional education, etc.) via our annual distribution of the Network 13 Facility Resources Materials CD and Web site.</li> <li>2. Annual distribution of Network CPG specific to “Vascular Access: CATHETERS”. (NETWORK STANDARD)</li> <li>3. Continue to revise, develop, and provide updated vascular access improvement tools.</li> <li>4. Report timely vascular access outcomes as available via Trends Reports (q 6 mos.), Web site, and Network newsletters (patient/professional).</li> <li>5. Development and provision of educational opportunities via WebEx sessions; mentoring workshops; partnerships with ANNA chapters; partnerships with QIO’s; partnerships with local surgeon/interventional mentors; and physician meetings/courses.</li> <li>6. Facilitate and/or assist in facility- and/or clinician-specific QI projects specific to reduction of catheter usage (e.g., QIWP Templates Task 1.b.)</li> <li>7. Provision of nephrologist-specific CMS-2728 profiles, which has pre-ESRD vascular access management outcomes incorporated.</li> </ol>

## NETWORK 13 CLINICAL PERFORMANCE MEASURES 4<sup>th</sup> QUARTER 2010 LAB DATA COLLECTION ANALYSIS (GRAPHS / TRENDS)

### 1. NETWORK 13 DEMOGRAPHICS, as of 10/15/2010

- a. Providers: 277
- b. Patients: 15,730 reported dialysis patients
  - i. Adult = 15,665
  - ii. Pediatric = 65

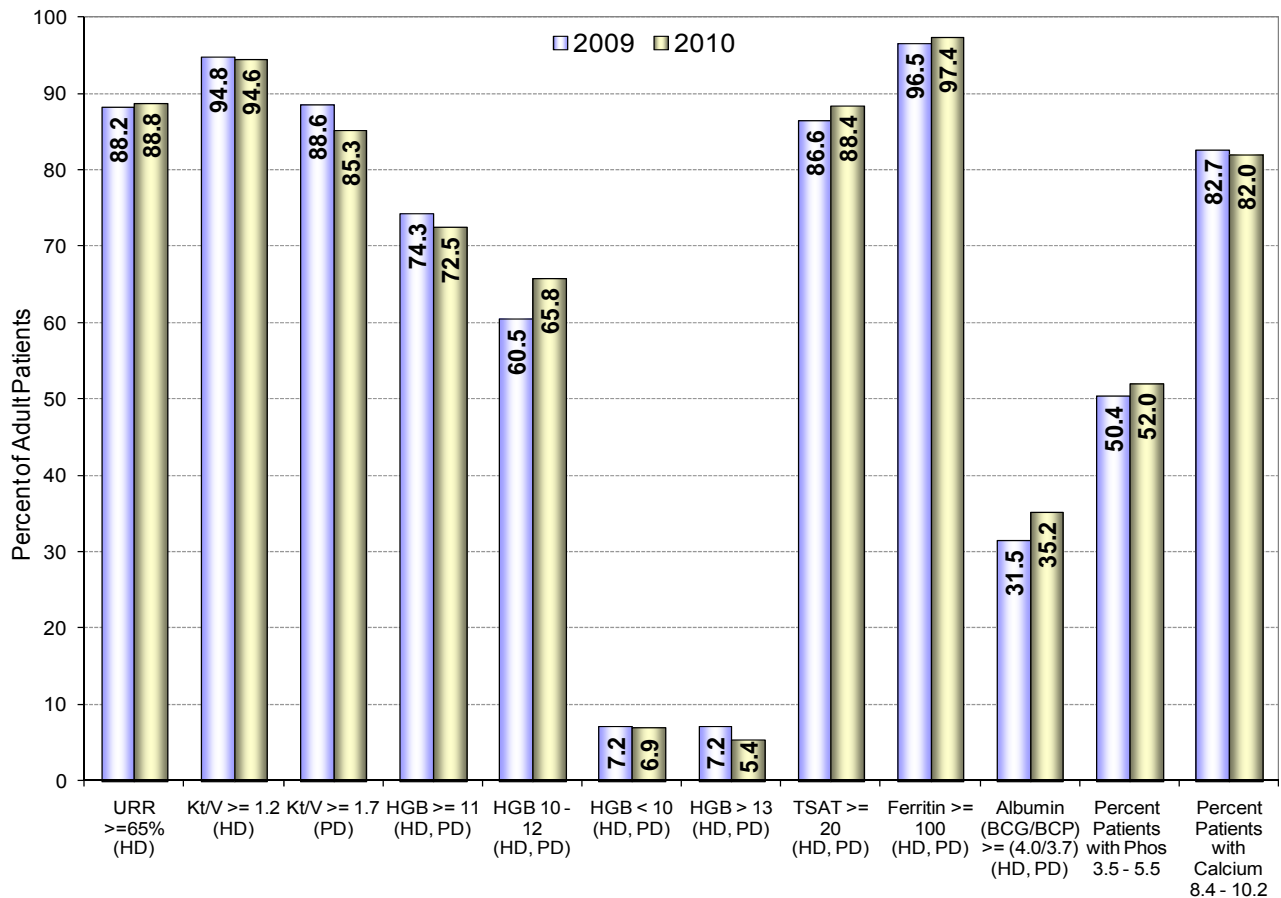
*Note that the variability in results provided here is from the different patient populations used for Network 13-specific analysis vs. comparative Networks/US analysis. The Network utilized data reporting for all dialysis patients within the Network vs. adult patient population utilized for the National comparative data analysis.*



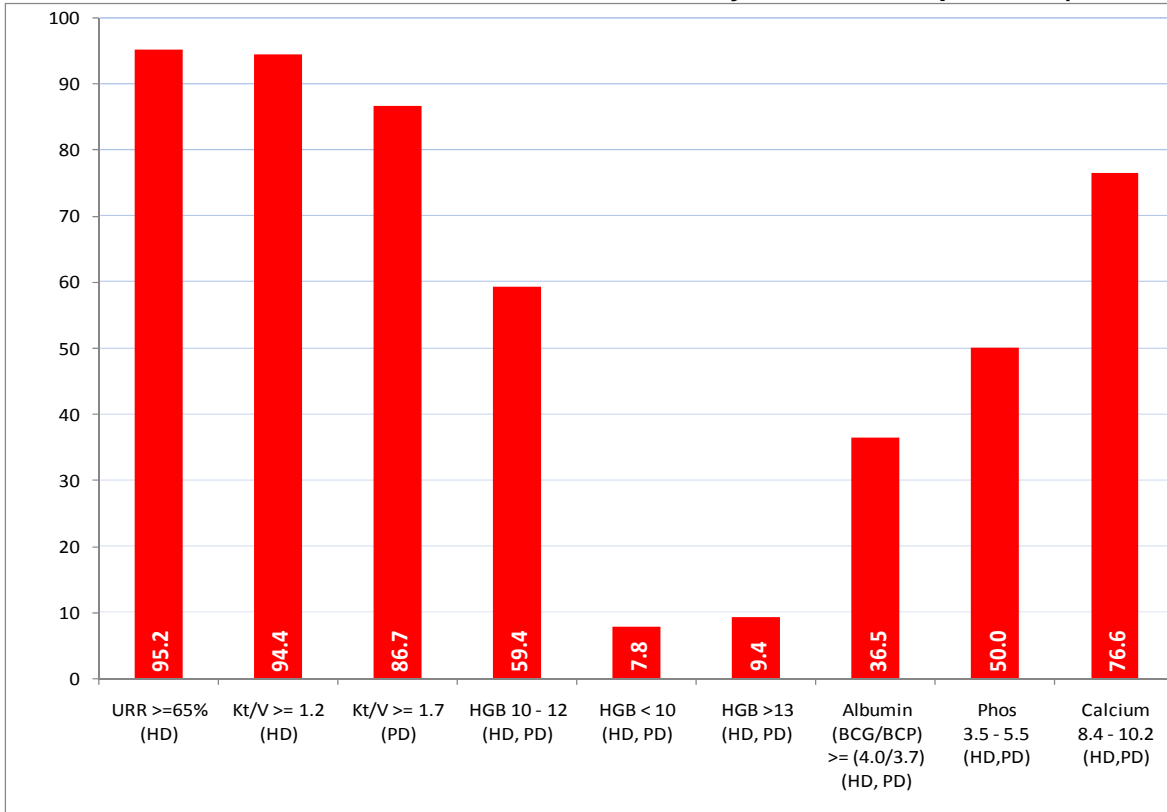
2. NETWORK 13 OVERALL ANALYSIS OF CLINICAL INDICATORS

- a. Adequacy of Dialysis
  - i. Hemodialysis (HD)
  - ii. Peritoneal Dialysis (PD)
- b. Anemia Management (hemoglobin = HGB, transferrin saturation = TSAT, ferritin)
- c. Nutrition Management (albumin)
- d. Mineral Metabolism
  - i. Phosphorus (Phos)
  - ii. Corrected Calcium

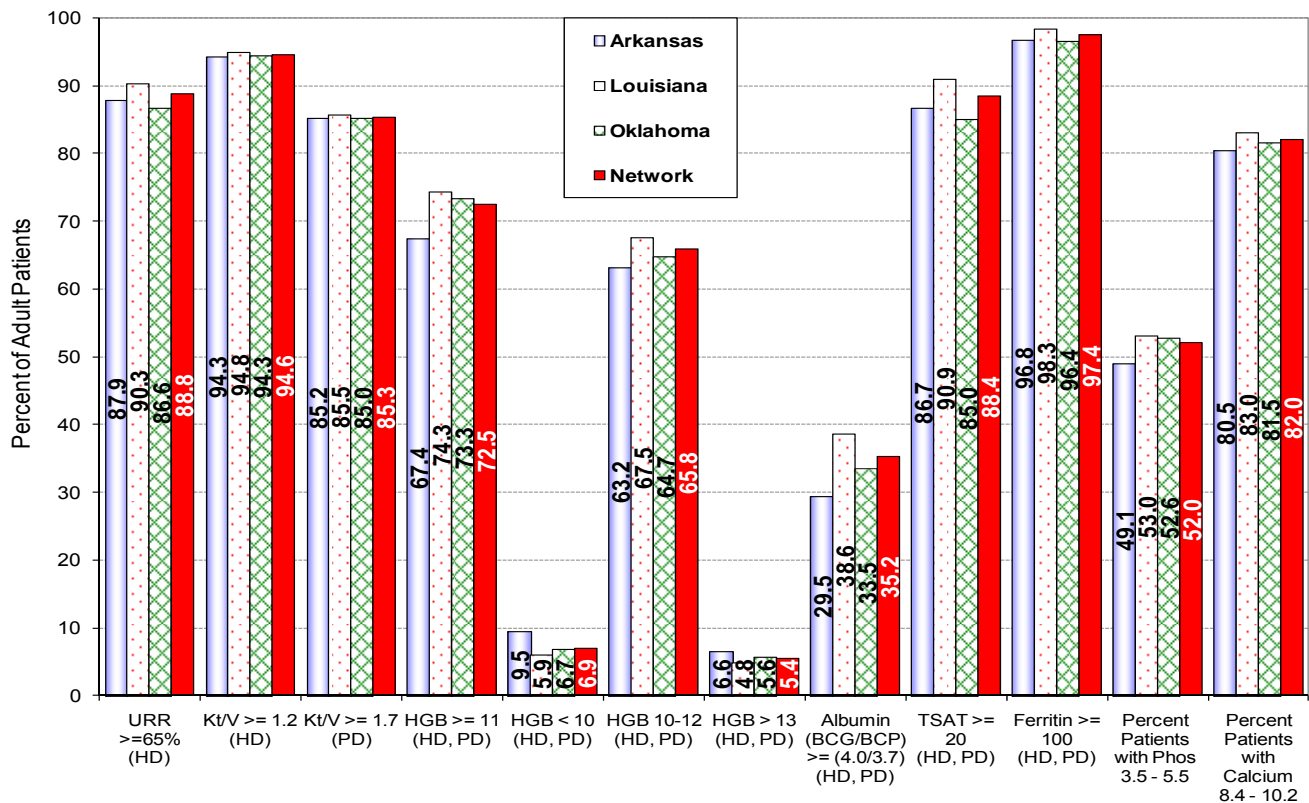
**GRAPH: Clinical Performance Indicators for Adult Dialysis Patient Population (4<sup>th</sup> QTRS 2009 / 2010)**



**GRAPH: Clinical Performance Indicators for Pediatric Dialysis Patient Population (4<sup>TH</sup> QTR 2010)**

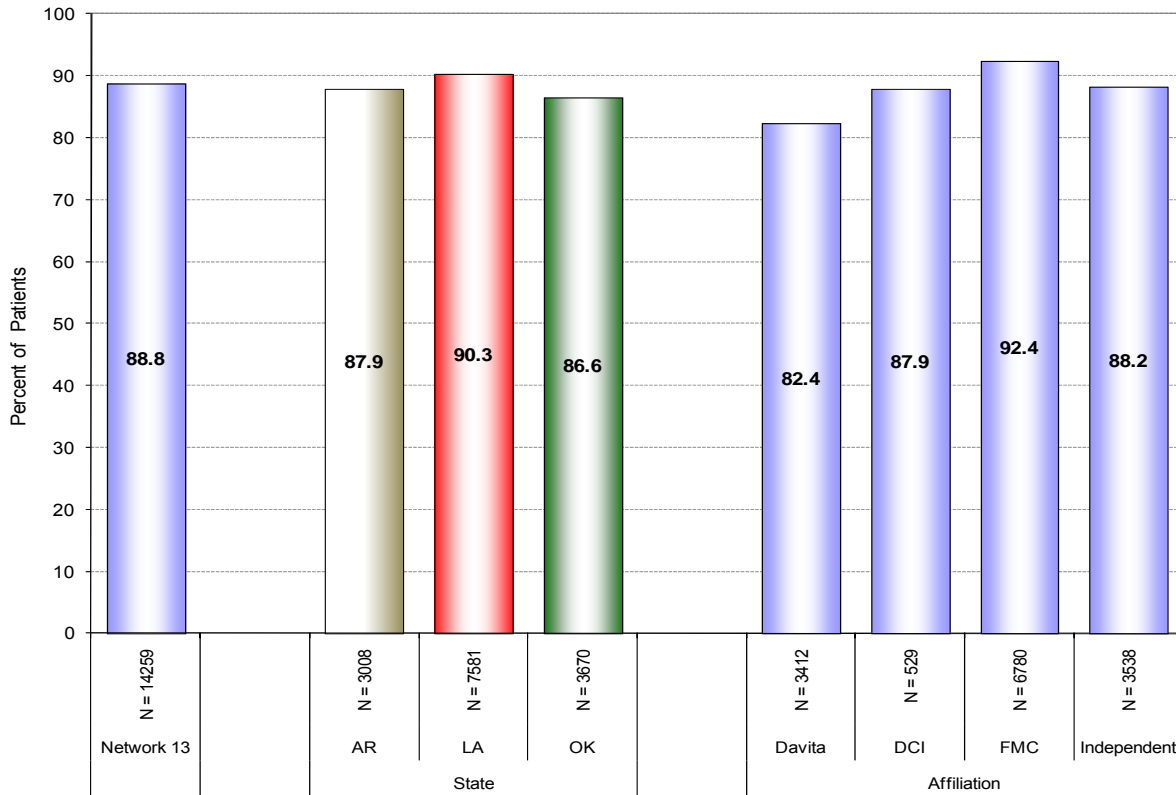


**GRAPH: Clinical Performance Indicators by State / Network Adult Dialysis Patient Population (4<sup>th</sup> Quarter 2010)**

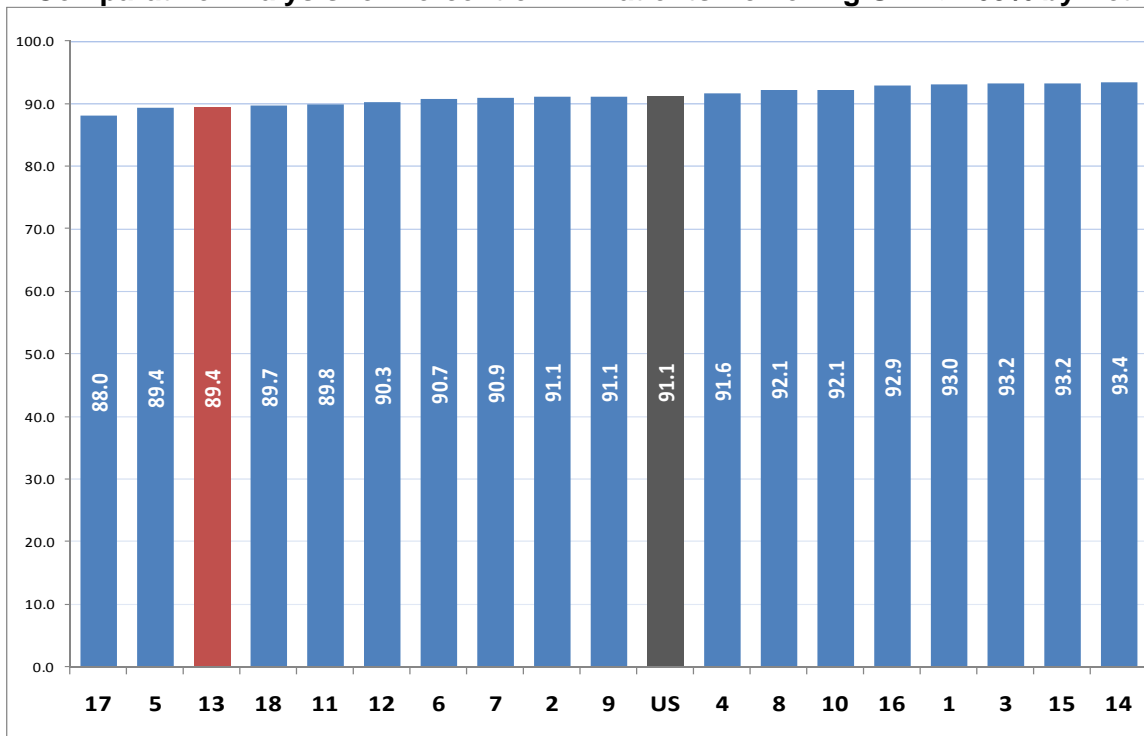


ADEQUACY OF DIALYSIS: HEMODIALYSIS (HD)

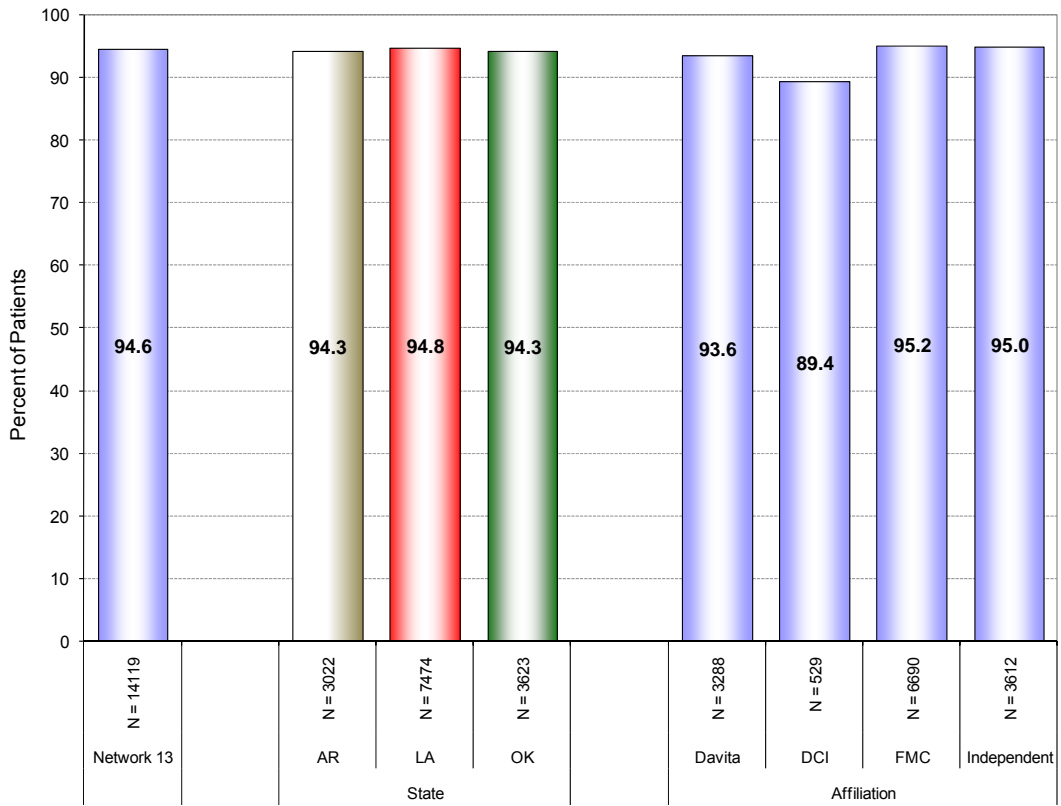
**GRAPH: Percent of Hemodialysis Patients with URR >= 65% by Network, State, and Affiliation**



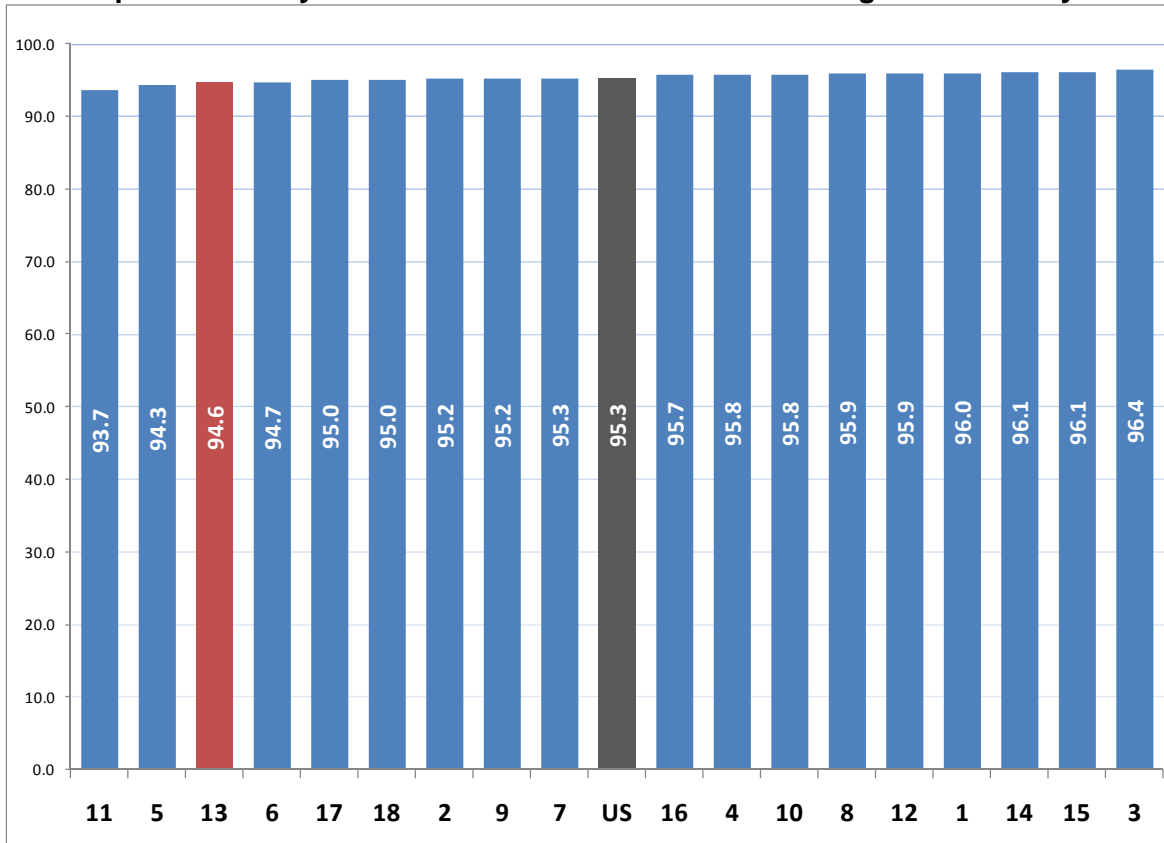
**GRAPH: Comparative Analysis for Percent of HD Patients Achieving URR >=65% by Network, US**



**GRAPH: Percent of Hemodialysis Patients with Kt/V  $\geq$  1.2 by Network, State, and Affiliation**

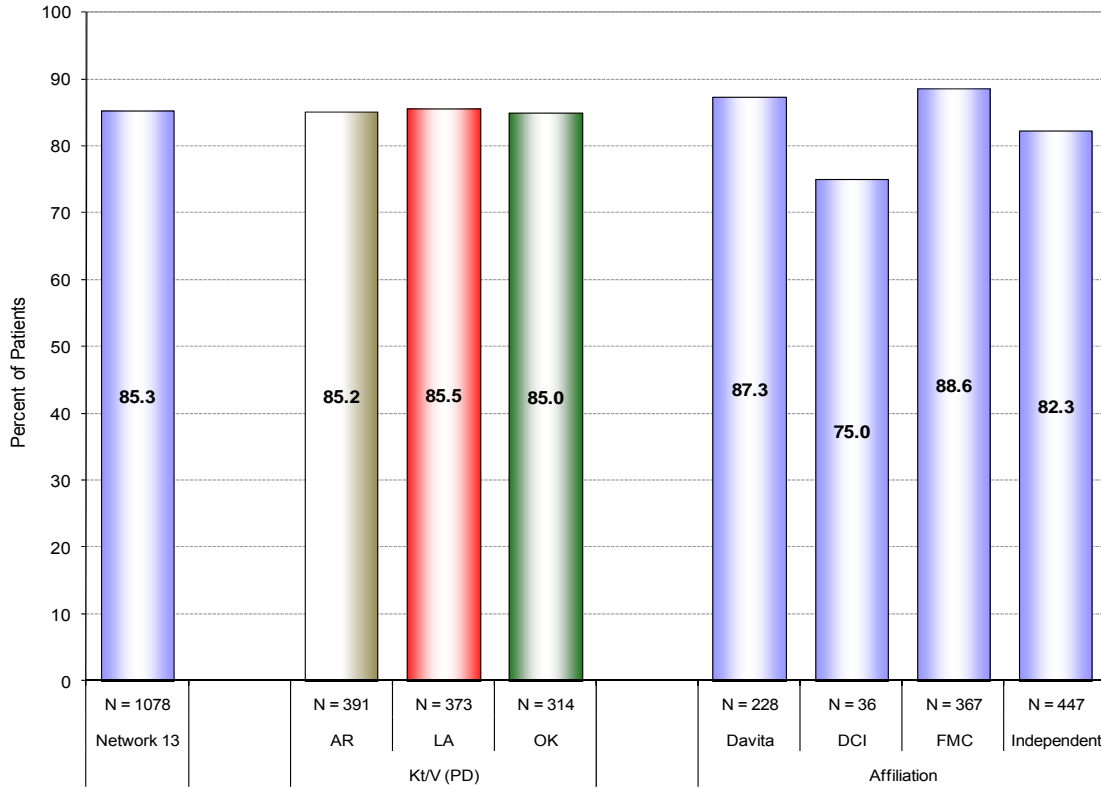


**GRAPH: Comparative Analysis for Percent of HD Patients Achieving Kt/V  $\geq$  1.2 by Network, US**

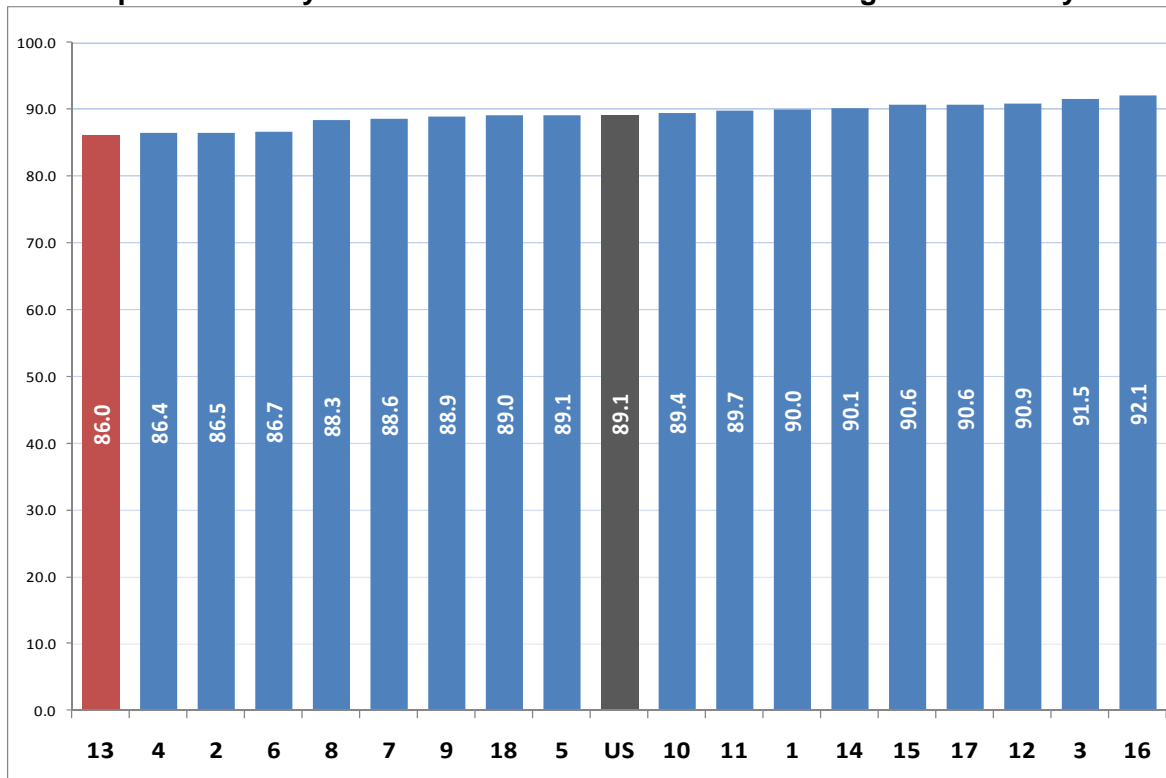


ADEQUACY OF DIALYSIS: PERITONEAL DIALYSIS (PD)

**GRAPH: Percent of PD Patients with Kt/V  $\geq$  1.7 by Network, State, and Affiliation**

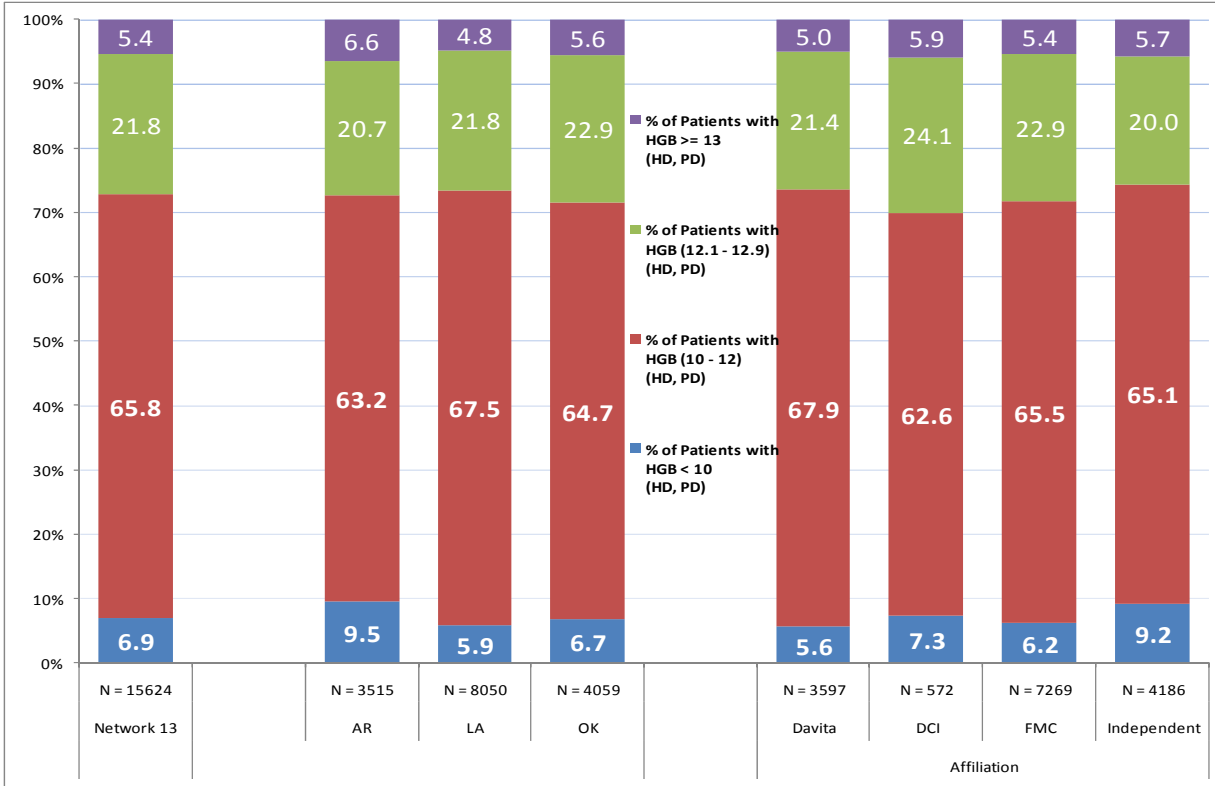


**GRAPH: Comparative Analysis for Percent of PD Patients Achieving Kt/V  $\geq$  1.7 by Network, US**

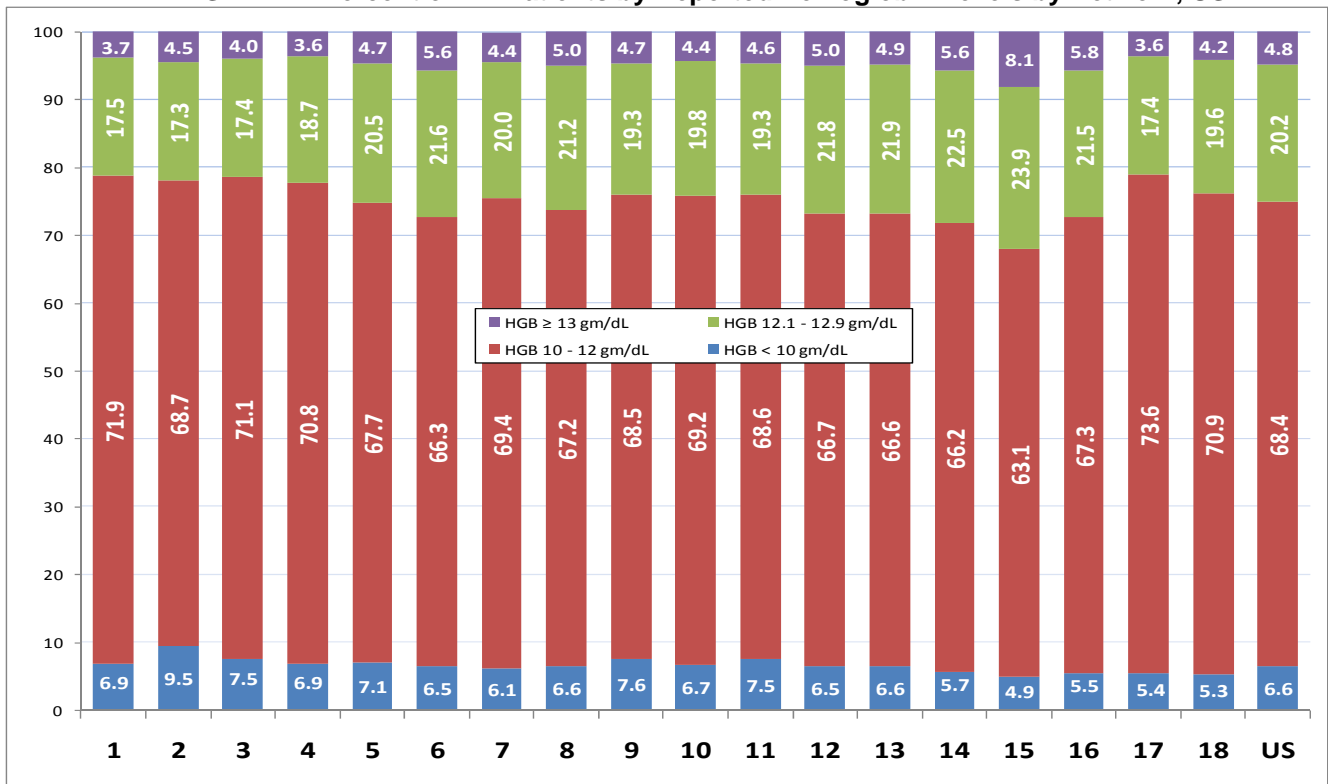


# ANEMIA MANAGEMENT

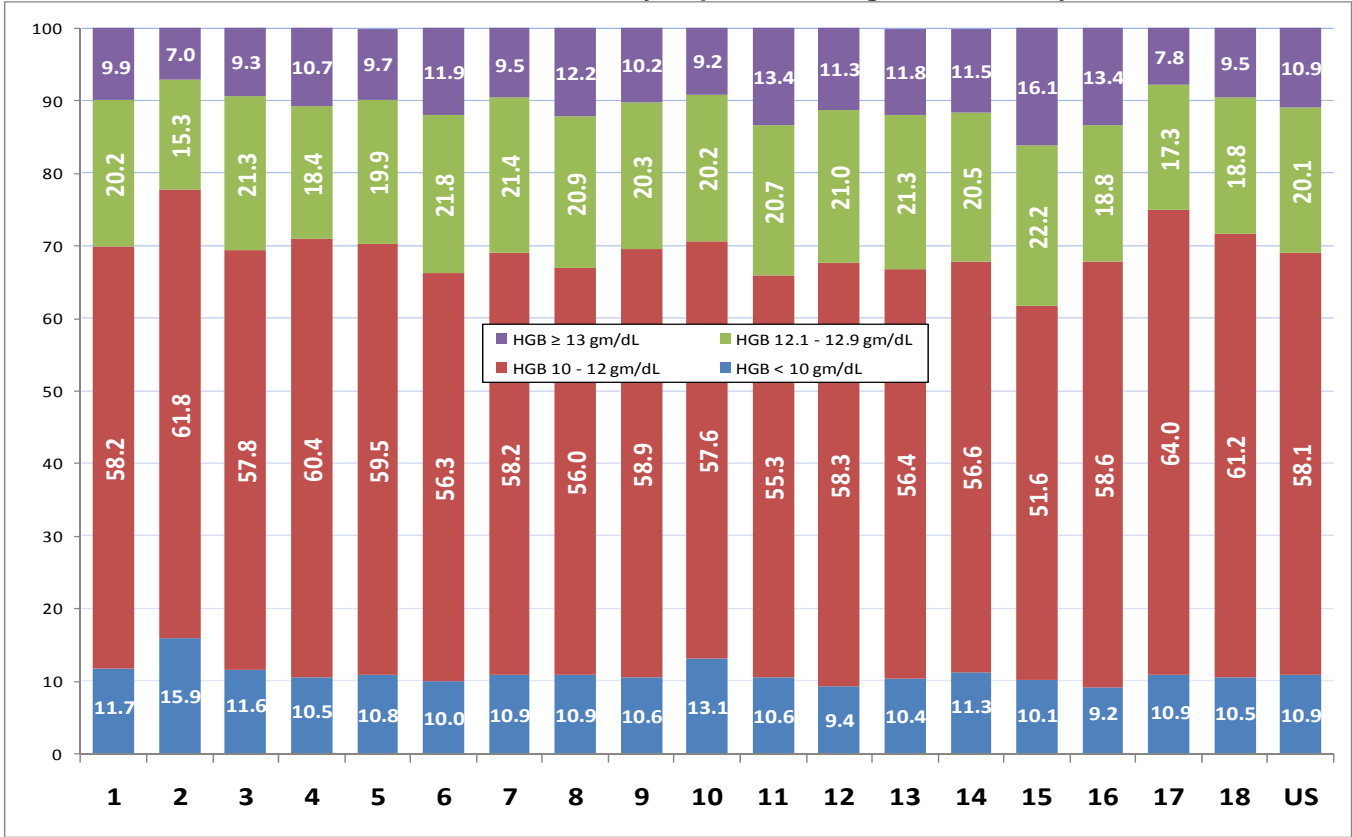
**GRAPH: Percent of Dialysis Patients by Reported Hemoglobin Levels by Network, State, and Affiliation**



**GRAPH: Percent of HD Patients by Reported Hemoglobin Levels by Network, US**

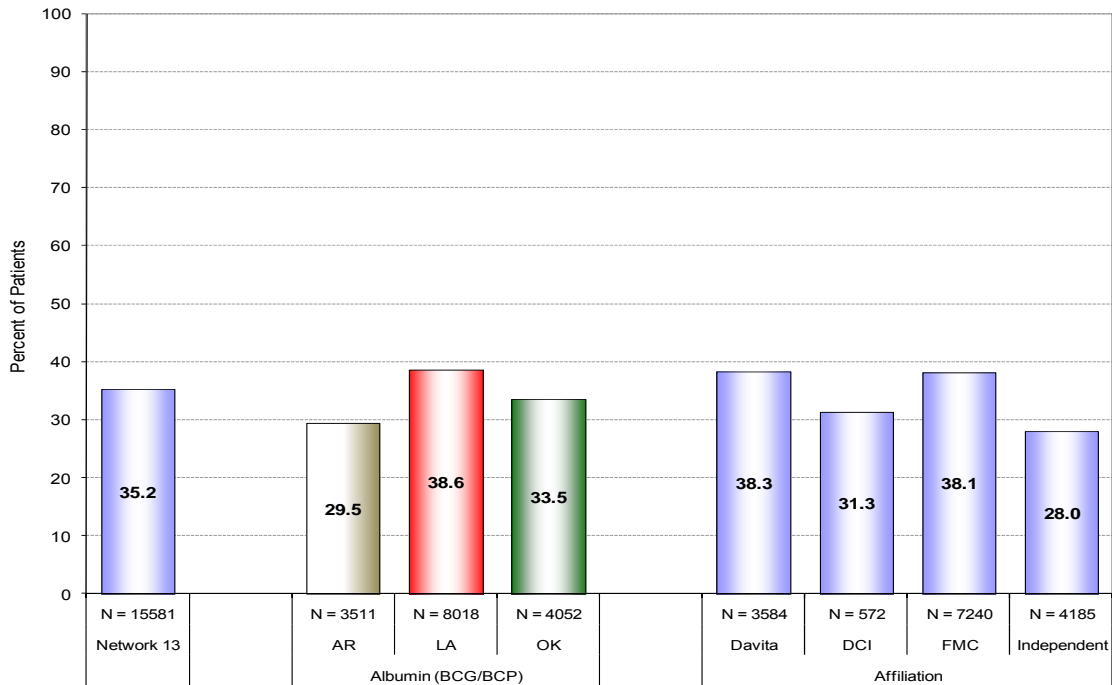


**GRAPH: Percent of PD Patients by Reported Hemoglobin Levels by Network, US**



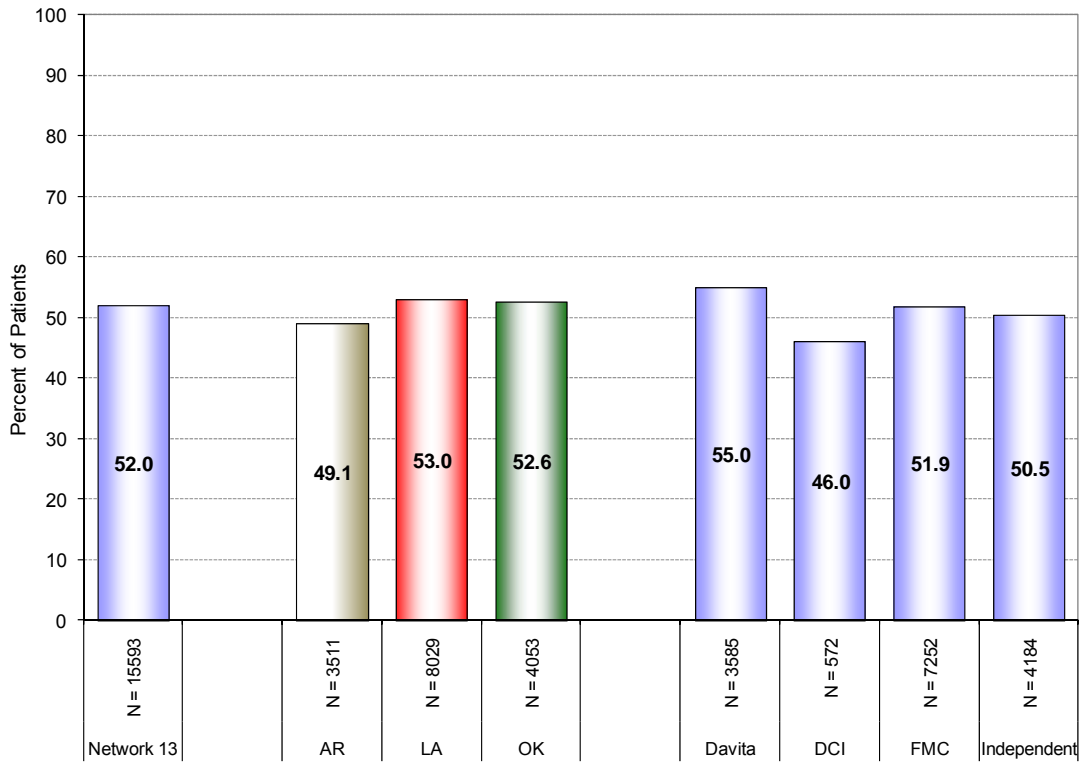
**NUTRITION MANAGEMENT**

**GRAPH: Percent of Patients with Albumin >= 4.0/3.7 (BCG/BCP) by Network, State, and Affiliation**



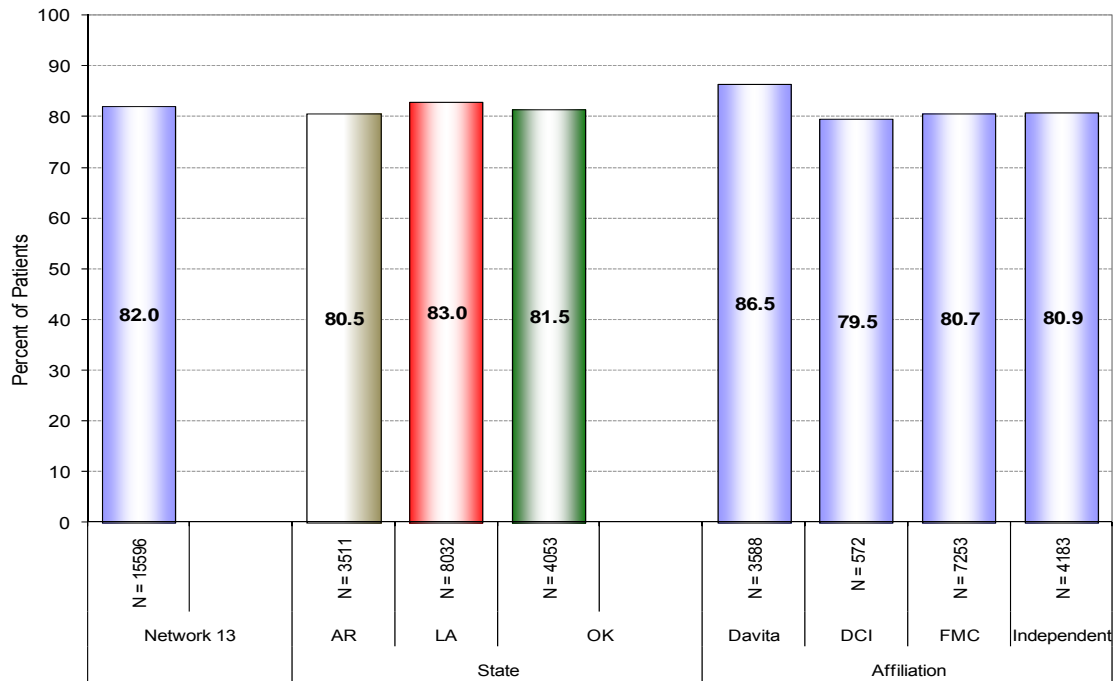
**MINERAL METABOLISM MANAGEMENT: PHOSPHORUS (Phos)**

**GRAPH: Percent of Patients with Phosphorus between 3.5 – 5.5 mg/dL  
By Network, State, and Affiliation**



**MINERAL METABOLISM MANAGEMENT: CORRECTED CALCIUM (Ca)**

**GRAPH: Percent of Patients with Corrected Calcium Levels between 8.4 – 10.2 mg/dL  
By Network, State, and Affiliation**



## NETWORK 13 CLINICAL PERFORMANCE MEASURES 2011 VASCULAR ACCESS MANAGEMENT, MARCH 2011 FISTULA FIRST DASHBOARD (05/12/2011)

	SEPTEMBER 2009		APRIL 2010		MARCH 2011	
	Prevalent		Prevalent		Prevalent	
	N	%	N	%	N	%
<b>Prevalent Patients</b>	13948		14212		14562	
AVF Only	7441	53.3%	7742	54.5%	8293	56.9%
AVG Only	2777	19.9%	2785	19.6%	2795	19.2%
AVG +AVF Maturing	107	0.8%	103	0.7%	100	0.7%
Catheter < 90 days	819	5.9%	919	6.5%	965	6.6%
Catheter >= 90 Days	1493	10.7%	1380	9.7%	1240	8.5%
Catheter + AVF Maturing	1043	7.5%	1017	7.2%	999	6.9%
Catheter + AVG Maturing	239	1.7%	242	1.7%	169	1.2%
Unknown/ Other	29	0.2%	24	0.2%	1	0.0%
<b>Total / Network 13</b>	<b>13948</b>	<b>100%</b>	<b>14212</b>	<b>100%</b>	<b>14562</b>	<b>100%</b>

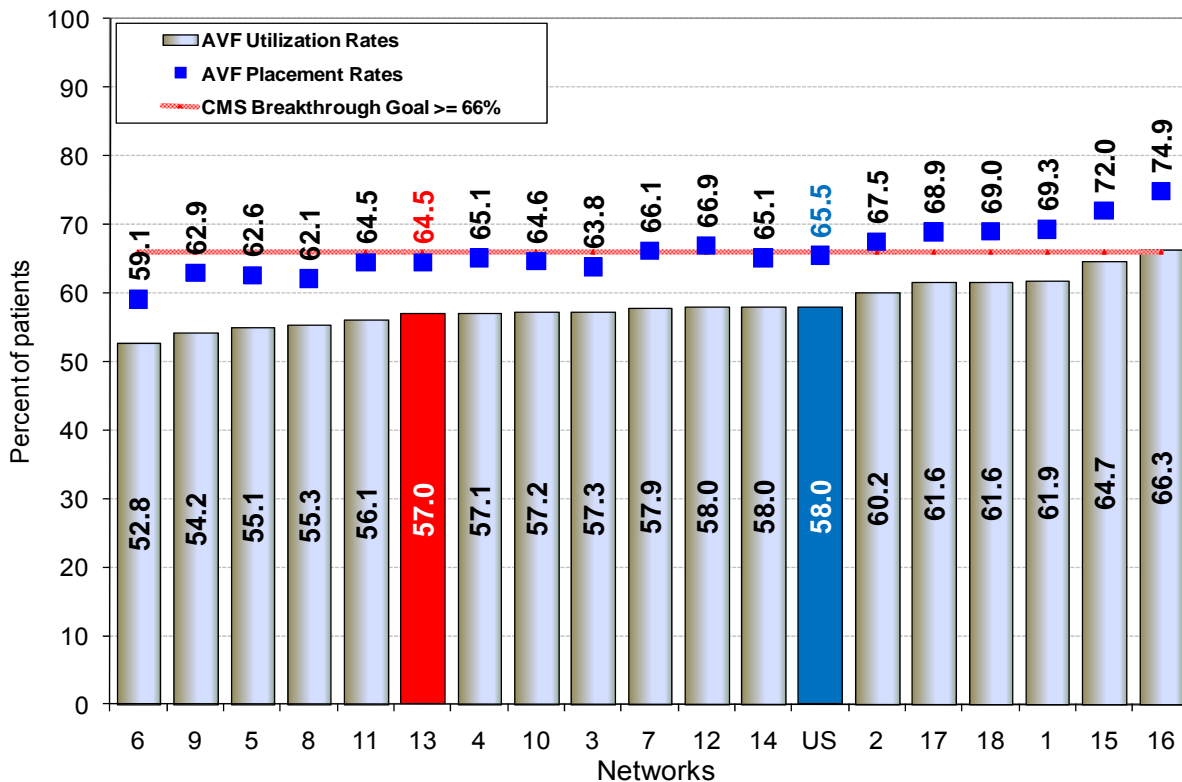
  

	SEPTEMBER 2009		APRIL 2010		MARCH 2011	
	Incident		Incident		Incident	
	N	%	N	%	N	%
<b>Incident Patients</b>	294		311		328	
AVF Only	41	13.9%	42	13.5%	39	11.9%
AVG Only	8	2.7%	12	3.9%	10	3.0%
AVG +AVF Maturing	30	10.2%	30	9.6%	32	9.8%
Catheter < 90 days	195	66.3%	199	64.0%	204	62.2%
Catheter >= 90 Days	1	0.3%	0	0.0%	8	2.4%
Catheter + AVF Maturing	17	5.8%	24	7.7%	28	8.5%
Catheter + AVG Maturing	2	0.7%	3	1.0%	7	2.1%
Unknown/ Other	0	0.0%	1	0.3%	0	0.0%
<b>Total / Network 13</b>	<b>294</b>	<b>100%</b>	<b>311</b>	<b>100%</b>	<b>328</b>	<b>100%</b>

	SEPTEMBER 2009		APRIL 2010		MARCH 2011	
	N	%	N	%	N	%
<b>Prevalent Facilities</b>	273		278		278	
Facilities Reporting Incident	156	57.1%	158	56.8%	158	56.8%
Facilities Not Reporting Incident	117	42.9%	120	43.2%	120	43.2%

### SNAPSHOT: Network 13 Prevalent AVF Placement and Utilization Compared with US and Other ESRD Networks, March 2011



### Task 1.c. Network-Specific Quality Improvement Project:

Quality improvement activities are to be implemented at a Network wide level. The activities are in alignment with our quality goals and focus on areas of the most need and potential impact for quality improvement in the Network service area. These activities may be derived from available clinical indicators data, vascular access data (Fistula First Dashboard), and may also be identified based on individual or trended patient complaints or grievances, requests for technical assistance from the local ESRD community, referrals from State Survey Agencies and collaborative activities with other quality improvement organizations.

Our previous year's July 2010 - June 2011, Task 1.c., Network-specific QIP was directed at infection control surveillance secondary to our review of literature, as well as the national [Health & Human Services (HHS) and the Centers for Medicare & Medicaid Services (CMS)] focus on Healthcare Acquired Infections. During the project, the Network entered into a partnership with the Centers for Disease Control & Prevention (CDC) on their "Prevention of Bloodstream Infections in Chronic Hemodialysis Patients" collaborative project in September 2010. The Network is subsequently incorporating CDC technical assistance in the form of standardized definitions and reporting towards improving Network-wide infection control surveillance. Our initial QIP data collection activity was to verify that infection control surveillance was underway in all of our certified dialysis facilities. However, the initial QIP analyses exposed inconsistencies in reporting, which is now the main focus of the Network-specific QIP going forward into the July 2011-June 2012 Task 1.c. Infection Control Surveillance QIP. A consistent reporting mechanism must be standardized to ensure measurements reflect existing practices to validate and/or improve existing processes within the dialysis facilities. Details of our Network-wide QIP activities will be located in the accompanying CMS project templates.

Healthcare acquired infection management impacts across several dimensions of dialysis care (e.g., vaccinations, catheter prevention/reduction, water quality, environmental, hand hygiene, and most importantly, bloodstream infections). Standardizing infection control surveillance and reporting at a facility and Network level, will be the first step to the current Triple Aim of "Better care for individuals"; "Better care for populations"; and "Lower costs through improvement, for patients with CKD and ESRD, over time and across settings".

### Task 1.d. Facility-Specific Quality Assessment and Performance Improvement Project:

Quality improvement activities are implemented at the level of a specific facility, or grouping of facilities. Facility level projects may also result in potential interventions to be taken to a Network wide level utilizing a spread strategy. Adequacy of dialysis for both modalities (HD, PD) will be the focus on the 2011-2012 Task 1.d., QI project and details provided in the QIWP Task 1 templates.

*As of June 29, 2011*