ESRD Network 13

Hemodialysis Vascular Access Management Trends Report

June 2018

HSAG HEALTH SERVICES ADVISORY GROUP

ESRD Network 13

Overview

HSAG: End Stage Renal Disease (ESRD) Network 13 remains an active partner with the renal community to improve permanent vascular access management for all eligible hemodialysis (HD) patients. The Network's primary role in this effort is to provide the most current technical assistance available for improving vascular access (VA) management within the HD community.

As part of the Network's technical assistance, this comparative report is supplied to give providers a sense of their performance relative to the performance of other facilities and organizations, both locally and regionally. The information in this report will assist providers in meeting their responsibility to ensure that:

- Optimal HD VA management is being practiced.
- All HD patients have an individualized VA management plan, ensuring the best permanent VA possible for optimal patient care outcomes.

Two regions within Network 13 have currently achieved the national Centers for Medicare & Medicaid Services (CMS) expectation of at least 68% of prevalent HD patients dialyzing with a primary arteriovenous fistula (AVF). Table 1 reflects both the national and Network 13-specific expectations regarding HD vascular access management.

Table 1: Expectations for Hemodialysis VA Management in 2018

Category/Process	National Expectation	NW 13 Expectation
(AVF Use	In at least **68%** of prevalent patients	Same as national
AVF Placement	As appropriate in **50%** of all new (incident) HD patients	Same as national
Reduction of Long-term Catheter (LTC) Use (≥ 90 days)	To **less than 10%** of your prevalent HD patients	Same as national
Process: Written VA Planning and Management	For **100%** of your HD patients	Same as national
Process: Monitoring for Access Dysfunction	In **100%** of adult HD patients utilizing AVFs or arteriovenous grafts (AVGs) as primary HD VA	Same as Kidney Disease Outcomes Quality Initiative (KDOQI) guidelines

The following pages provide HD VA outcomes for the Network 13 service area. The report includes analyses and information about issues associated with AVF placement and subsequent AVF use, as well as observations about the differences between AVF placement and use. Providers can review and use this information in conjunction with their individual data when addressing HD VA planning and oversight.

Data Reporting

The CMS Consolidated Renal Operations in a Web-Enabled Network (CROWNWeb) system is the data source for all HD VA comparative reporting. This internet-based data input program is the backbone of the CMS ESRD information system. ESRD Networks and dialysis facilities use CROWNWeb to enter and submit patient and clinical quality of care data for CMS.

As of June 2018, CROWNWeb's electronic reporting component had not yet achieved 100% of its reporting capability. This does limit comparative reporting to some extent.

The information and data presented in this report are based on data from September 2017 and December 2017 through June 2018, downloaded in September 2018. The Network is sharing the comparative data available at this time to emphasize the importance of ongoing quality improvement (QI) and expectations for delivery of care. Table 2 displays the overall demographics for this reporting.

Table 2: Numbers of Dialysis Facilities and HD Patients by Affiliations and Network

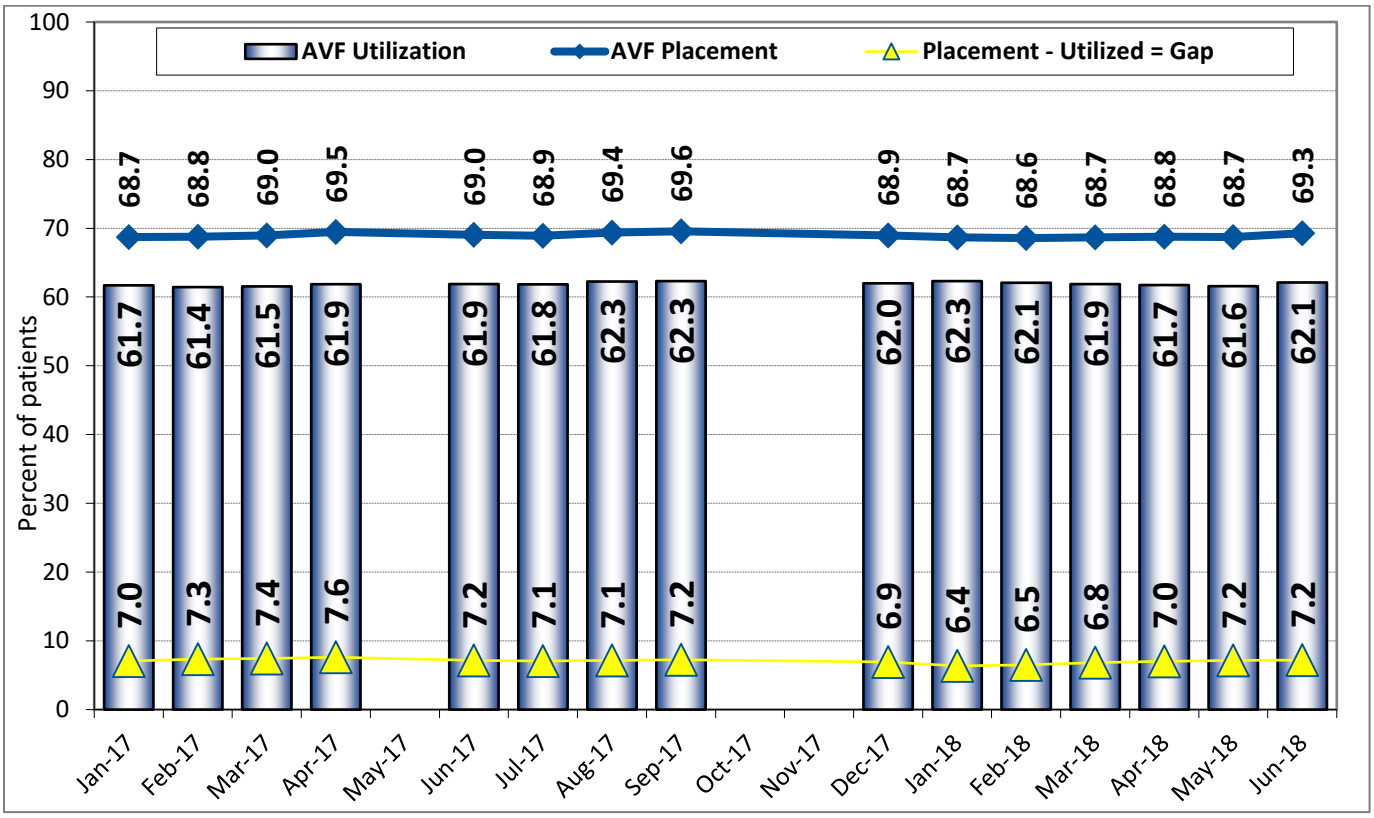
As of June 2018		
	Facilities	HD Patients
Large Dialysis Organizations (LDOs)	275	15,734
Independent Dialysis Facilities	49	2,141
Total Network 13 Facilities	324	17,875

A variety of comparative trends and analyses reflecting various degrees of improvement have been incorporated into this report for review and use in facility-specific QI activities.

Please note: due to the reporting of some VA types as "other" or "unknown" and rounding, totals may not equal 100%. Where N values are provided, they reference the HD patient population, unless otherwise noted.

As AVF placement requires a maturation period before utilization is possible, it is important to trend both placement and the actual transition to use of AVF for HD treatments. The difference between placement and utilization (i.e., gap) can provide insight into issues that may be affecting utilization (e.g., surgical placement problems and cannulation difficulties). Those issues can then be addressed with technical assistance. Chart 2 provides an example of such trending.

Chart 1: Network 13 AVF Placement and Utilization Trending



Note: May, October, and November 2017 data not available for reporting.

Table 3 provides counts and percentages for all HD VA categories and illustrates the overall HD VA management within Network 13.

Table 3: HD VA Utilization Rates in Network 13

	September 2017		January 2018		June 2018	
	N	%	N	%	N	%
Certified In-center Dialysis Facilities	316		318		324	
Registered HD Patient Census	17,604		17,670		18,003	
Patients Missing VA Data	245	**1.4%**	27	**0.2%**	25	**0.1%**
Patients w/ NA Checked	85	**0.5%**	71	**0.4%**	103	**0.6%**
AVF Only	10,764	**62.3%**	10,950	**62.3%**	11,103	**62.1%**
AVG Only	3,140	**18.2%**	3,185	**18.1%**	3,169	**17.7%**
AVG + AVF Maturing	14	**0.1%**	8	**0.0%**	4	**0.0%**
Catheter <90 days	1,230	**7.1%**	1,223	**7.0%**	1,391	**7.8%**
Catheter ≥90 Days	1,939	**11.2%**	1,990	**11.3%**	2,039	**11.4%**
Catheter + AVF Maturing	146	**0.8%**	188	**1.1%**	156	**0.9%**

	September 2017		January 2018		June 2018	
	N	%	N	%	N	%
Catheter + AVG Maturing	33	**0.2%**	24	**0.1%**	7	**0.0%**
Port Only	2	**<0.1%**	3	**<0.1%**	4	**<0.1%**
Unknown/Other	6	**<0.1%**	1	**<0.1%**	1	**<0.1%**
Patients w/VA Reported	17,274	**100%**	17,572	**100%**	17,875	**100%**

Dialysis Facility Performance

The Network recognizes that consistent and coordinated efforts are needed to achieve established HD VA performance goals, so Network 13 is pleased to see 95 dialysis facilities (29.3%) achieving the National CMS AVF utilization expectation of 68% (Table 4).

Table 4: Percent of AVF Use within Network 13 Dialysis Facilities

	September 2017		January 2018		June 2018	
Facility AVF Utilization Rates	# of Facilities	% of Facilities	# of Facilities	% of Facilities	# of Facilities	% of Facilities
No Data Reported	3	**0.9%**	0	**0.0%**	0	**0.0%**
<50	41	**13.0%**	35	**11.0%**	35	**10.8%**
50–59	83	**26.3%**	93	**29.2%**	89	**27.5%**
60–67	88	**27.8%**	94	**29.6%**	105	**32.4%**
68 +	101	**32.0%**	96	**30.2%**	95	**29.3%**
Total	316	**100.0%**	318	**100.0%**	324	**100.0%**

Acknowledgement

Network 13 would like to acknowledge the dialysis units listed on the following page for their current outstanding achievements. **Congratulations** to the dialysis units listed on page five of this report for their sustained accomplishments in the area of VA management for the time frame of January–June 2018.

Table 5: Dialysis Facilities (31) Sustaining Both AVF in-Use Rates ≥ 68% and LTC rates <10%

CCN	FACNAME
042536	DAVITA - SOUTH ARKANSAS DIALYSIS
042540	DAVITA - BENTONVILLE
042549	DAVITA - SILOAM SPRINGS
042560	DAVITA - ASHLEY DIALYSIS CTR
042576	DAVITA - BRADLEY COUNTY DIALYSIS
042580	DIALYSIS CENTER OF SILOAM SPRINGS
190048	LADY OF THE SEA DIALYSIS CTR
192501	FMCNA - BATON ROUGE
192524	FMCNA - MANCUSO
192558	FMCNA - FOSTER DR DIALYSIS SVCS
192563	FMCNA - FERRIDAY
192568	FMCNA - WESTPORT
192574	FMCNA - THIBODAUX
192589	FMCNA - PICARDY KIDNEY CTR
192610	FMCNA - AIRLINE
192633	FMCNA - FARMERVILLE
192644	FMCNA - ASCENSION
192671	FMCNA - DIALYSIS SERVICES OF BON CARRE
192723	FMCNA - JH LEE
192734	FMCNA - GREATER BATON ROUGE HOME PROGRAM
372522	DAVITA - DUNCAN
372529	DAVITA - PRYOR
372536	HEARTLAND MIAMI DX LLP
372575	DAVITA - ANADARKO
372595	FMCNA - XANTHUS DIALYSIS
372598	USRC - ALTUS DX

Table 6: Dialysis Facilities (61) Sustaining AVF in-Use Rates ≥68%

CCN	FACNAME
042536	DAVITA - SOUTH ARKANSAS DIALYSIS
042540	DAVITA - BENTONVILLE
042549	DAVITA - SILOAM SPRINGS
042560	DAVITA - ASHLEY DIALYSIS CTR
042576	DAVITA - BRADLEY COUNTY DIALYSIS
042580	DIALYSIS CENTER OF SILOAM SPRINGS
042583	DCI - MCCRORY
043501	ST BERNARDS-WYNNE
190048	LADY OF THE SEA DIALYSIS CTR
192501	FMCNA - BATON ROUGE
192524	FMCNA - MANCUSO
192533	BIENVILLE DIALYSIS CTR NORTH
192544	FMCNA - PONTCHARTRAIN KIDNEY CTR
192556	DAVITA - SLIDELL KIDNEY CARE
192558	FMCNA - FOSTER DR DIALYSIS SVCS
192563	FMCNA - FERRIDAY
192568	FMCNA - WESTPORT
192574	FMCNA - THIBODAUX
192575	DCI - TULANE-NEW ORLEANS
192589	FMCNA - PICARDY KIDNEY CTR
192593	VACHERIE DX
192610	FMCNA - AIRLINE
192633	FMCNA - FARMERVILLE
192644	FMCNA - ASCENSION
192671	FMCNA - DIALYSIS SERVICES OF BON CARRE
192700	ST JAMES DIALYSIS
192708	FKC - EAST HOUMA
192709	FMCNA - OCHSNER NORTH ARNOULT
192714	FMCNA - NORTH HOUMA DIALYSIS
192723	FMCNA - JH LEE
192734	FMCNA - GREATER BATON ROUGE HOME PROGRAM
372505	DAVITA - STILLWATER
372512	DAVITA - TAHLEQUAH
372522	DAVITA - DUNCAN
372529	DAVITA - PRYOR
372536	HEARTLAND MIAMI DX LLP
372545	DAVITA - STILWELL DIALYSIS
372549	DAVITA - MUSKOGEE COMMUNITY DIALYSIS CTR
372558	FMCNA - ENID DIALYSIS CTR
372564	MCALESTER REGIONAL DIALYSIS CTR
372567	DAVITA - SOUTHCREST
372574	SOONER DIALYSIS - LAWTON
372575	DAVITA - ANADARKO
372583	US RENAL CARE - GROVE
372585	DAVITA - OWASSO DIALYSIS
372592	DAVITA - REDBIRD SMITH DX
372595	FMCNA - XANTHUS DIALYSIS
372596	FMCNA - SAPULPA DIALYSIS
372598	USRC - ALTUS DX

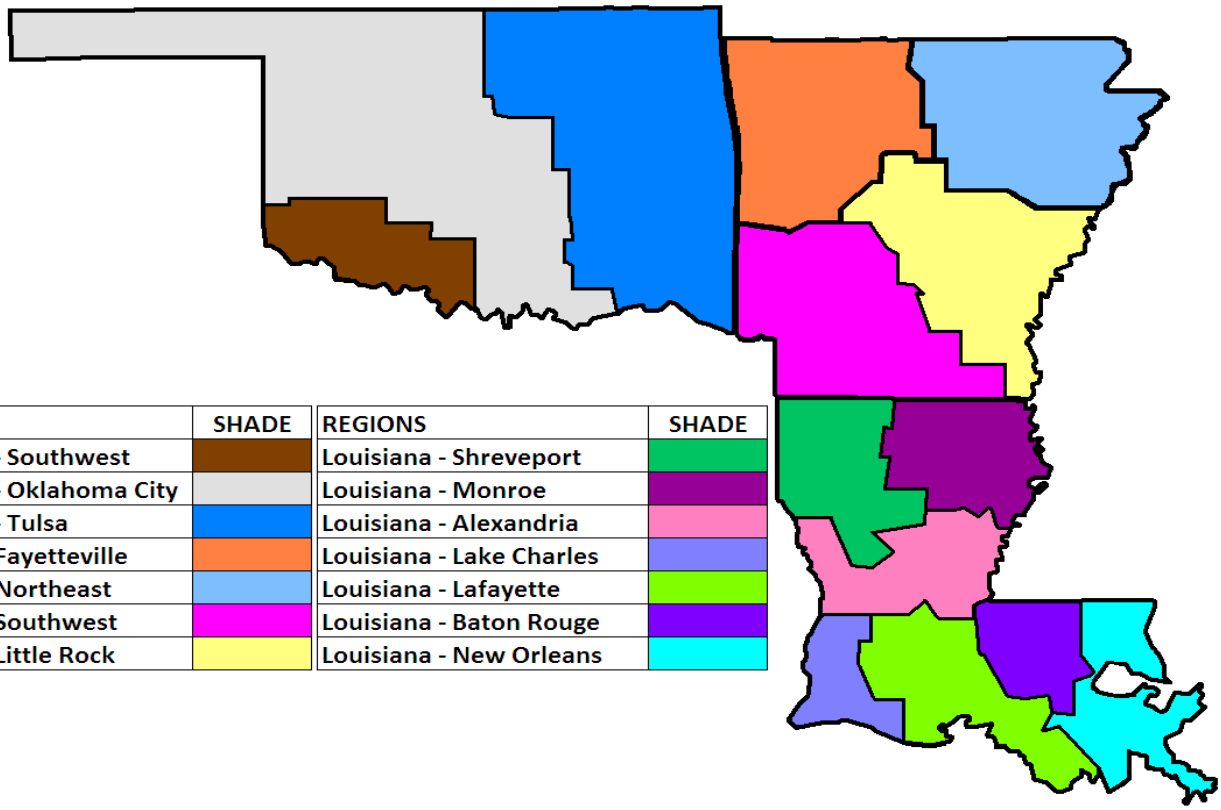
Table 7: Dialysis Facilities (92) Sustaining LTC Rates <10%

CCN	FACNAME
042508	DAVITA - RIVER VALLEY DIALYSIS
042512	DAVITA - DEGRAY KIDNEY CTR
042513	DAVITA - SPRINGHILL DIALYSIS
042514	DAVITA - SEARCY DIALYSIS CTR
042517	DAVITA - CONWAY DIALYSIS CTR
042534	DAVITA - OSCEOLA RENAL CTR
042535	DAVITA - PULASKI COUNTY DX
042536	DAVITA - SOUTH ARKANSAS DIALYSIS
042539	DAVITA - FAYETTEVILLE
042540	DAVITA - BENTONVILLE
042543	FMCNA - MONTICELLO
042545	DAVITA - SW ARKANSAS DIALYSIS-MAGNOLIA
042547	DAVITA - LITTLE ROCK MIDTOWN DIALYSIS
042548	DAVITA - NORTH LITTLE ROCK DIALYSIS CTR
042549	DAVITA - SILOAM SPRINGS
042560	DAVITA - ASHLEY DIALYSIS CTR
042576	DAVITA - BRADLEY COUNTY DIALYSIS
042580	DIALYSIS CENTER OF SILOAM SPRINGS
042586	DAVITA - ROGERS DIALYSIS
190048	LADY OF THE SEA DIALYSIS CTR
192501	FMCNA - BATON ROUGE
192507	DAVITA - WESTBANK CHRONIC RENAL CTR
192511	FMCNA - METAIRIE
192524	FMCNA - MANCUSO
192531	FMCNA - OCHSNER NEW ORLEANS
192534	DAVITA - CHATEAU DIALYSIS
192538	FMCNA - CROWLEY
192539	FMCNA - BAKER
192551	DAVITA - MAGNOLIA DIALYSIS
192558	FMCNA - FOSTER DR DIALYSIS SVCS
192563	FMCNA - FERRIDAY
192564	FMCNA - DELHI DIALYSIS CTR
192568	FMCNA - WESTPORT
192572	FMCNA - DONALDSONVILLE
192574	FMCNA - THIBODAUX
192587	FMCNA - FRANKLIN
192589	FMCNA - PICARDY KIDNEY CTR
192592	FMCNA - ZACHARY CROSSROAD
192599	DAVITA - KENNER REG DIALYSIS
192602	FMCNA - NEW ROADS
192606	FMCNA - PLAQUEMINE
192610	FMCNA - AIRLINE
192613	DAVITA - DIALYSIS SYSTEMS OF COVINGTON
192616	DAVITA - EAST BATON ROUGE
192628	FMCNA - UNION PARISH DX
192630	FMCNA - LINCOLN KIDNEY CTR
192632	FMCNA - NORTH BOULEVARD
192633	FMCNA - FARMERVILLE
192636	DCI - KIDNEY CARE OF ACADIANA-NEW IBERIA
192637	FMCNA - DIALYSIS SERVICES AVONDALE
192640	FMCNA - KENTWOOD
192643	FMCNA - BREAUX BRIDGE
192644	FMCNA - ASCENSION
192651	DCI - KIDNEY CARE OF ACADIANA-LAFAYETTE
192652	FMCNA - FELICIANAS DIALYSIS CTR
192656	DCI - CROWLEY
192659	FMCNA - LEESVILLE DIALYSIS
192665	DCI - OPELOUSAS
192671	FMCNA - DIALYSIS SERVICES OF BON CARRE
192674	FKC - TCHEFUNCTE RIVER
192676	FMCNA - MOREHOUSE PARISH DIALYSIS
192678	DAVITA - METAIRIE
192680	FKC - O'NEAL LANE
192681	DAVITA - RIVER PARISHES DIALYSIS
192684	FMCNA - WALKER
192688	FMCNA - RUSTON
192692	FMCNA - DENHAM SPRINGS
192694	DAVITA - MARRERO DIALYSIS CENTER
192697	FMCNA - BARATARIA
192701	FMCNA - WEST MONROE
192703	DCI - KIDNEY TREATMENT OPTIONS CTR, LLC (KTOC)
192706	FMCNA - HOWELL PLACE
192710	FKC - ABITA
192712	FMCNA - SOUTH MONROE
192715	DAVITA - NOLA
192716	DAVITA - ESSEN LANE DIALYSIS
192720	DAVITA - SCOTLANDVILLE DX
192723	FMCNA - JH LEE
192725	DAVITA - MID CITY DIALYSIS
192730	FMCNA - GONZALES
192734	FMCNA - GREATER BATON ROUGE HOME PROGRAM
192735	DAVITA - GENTILLY DIALYSIS
372522	DAVITA - DUNCAN
372529	DAVITA - PRYOR
372533	FMCNA - SHAWNEE
372536	HEARTLAND MIAMI DX LLP
372565	DAVITA - DURANT DIALYSIS
372573	FMCNA - ADA DIALYSIS CTR
372575	DAVITA - ANADARKO
372582	DAVITA - ARDMORE DIALYSIS RANCH
372586	DAVITA - ROSE ROCK DIALYSIS
372595	FMCNA - XANTHUS DIALYSIS
372598	USRC - ALTUS DX
372602	DAVITA - IDABEL DX
372605	DAVITA - PAULS VALLEY DIALYSIS

Regional Comparative Analysis

The majority of VA placement in our Network occurs in urban settings. The Network recognizes that regional practices vary within the service area, so regional comparative analysis was established by our Medical Review Board (MRB) by reviewing the "who and where" of VA placement by dialysis facilities. The mapping below reflects this.

Map 1: NW 13-Defined Regions for VA Analysis and Reporting



REGIONS	SHADE	REGIONS	SHADE
Oklahoma - Southwest		Louisiana - Shreveport	
Oklahoma - Oklahoma City		Louisiana - Monroe	
Oklahoma - Tulsa		Louisiana - Alexandria	
Arkansas - Fayetteville		Louisiana - Lake Charles	
Arkansas - Northeast		Louisiana - Lafayette	
Arkansas - Southwest		Louisiana - Baton Rouge	
Arkansas - Little Rock		Louisiana - New Orleans	

The Network has seen variable reporting regarding missing VA data from September 2017–June 2018, as evidenced in Table 8. The QI department continues to actively work with facilities to ensure access data is being entered completely and accurately.

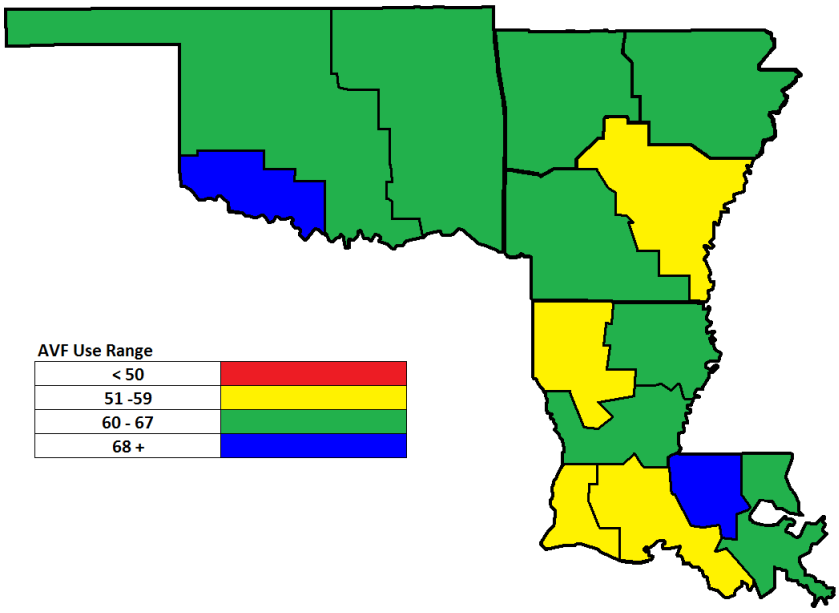
Table 8: HD VA Management by Region

	September 2017					
	Patients w/ VA Reported	AVF Rates	# of FAC	AVG Rates	Catheter Rates	*Missing VA Data
Arkansas-Fayetteville	817	**65.9%**	11	**9.3%**	**24.8%**	**0.4%**
Arkansas-Little Rock	1,323	**52.5%**	24	**25.2%**	**22.2%**	**3.1%**
Arkansas-Northeast	806	**62.2%**	18	**14.3%**	**23.6%**	**1.9%**
Arkansas-Southwest	779	**65.3%**	15	**18.4%**	**16.3%**	**2.5%**
Louisiana-Alexandria	531	**59.7%**	8	**17.7%**	**22.4%**	**0.6%**
Louisiana-Baton Rouge	1,539	**68.1%**	30	**24.1%**	**7.8%**	**0.1%**
Louisiana-Lafayette	1,324	**57.6%**	25	**25.0%**	**17.4%**	**0.4%**
Louisiana-Lake Charles	365	**51.2%**	8	**23.3%**	**25.2%**	**16.6%**
Louisiana-Monroe	866	**58.8%**	17	**25.5%**	**15.7%**	**0.3%**
Louisiana-New Orleans	2,901	**61.7%**	57	**21.3%**	**17.0%**	**0.6%**
Louisiana-Shreveport	1,515	**56.5%**	24	**18.9%**	**24.6%**	**0.5%**
Oklahoma-Oklahoma City	2,114	**65.1%**	34	**12.7%**	**22.2%**	**0.6%**
Oklahoma-Southwest	287	**71.8%**	7	**10.5%**	**17.8%**	**0.7%**
Oklahoma-Tulsa	2,107	**69.8%**	38	**8.7%**	**21.5%**	**1.7%**
Network 13	17,274	**62.3%**	316	**18.3%**	**19.4%**	**1.4%**
	June 2018					
Arkansas-Fayetteville	827	**63.2%**	12	**9.7%**	**27.1%**	**0.2%**
Arkansas-Little Rock	1,400	**52.0%**	24	**22.9%**	**25.1%**	**0.1%**
Arkansas-Northeast	852	**62.6%**	18	**13.0%**	**24.3%**	**0.3%**
Arkansas-Southwest	825	**64.1%**	15	**20.4%**	**15.5%**	**0.8%**
Louisiana-Alexandria	521	**61.8%**	8	**18.2%**	**20.0%**	**0.0%**
Louisiana-Baton Rouge	1,589	**69.9%**	31	**22.2%**	**8.0%**	**0.0%**
Louisiana-Lafayette	1,350	**59.0%**	25	**22.6%**	**18.4%**	**0.0%**
Louisiana-Lake Charles	469	**54.2%**	8	**20.5%**	**25.4%**	**0.0%**
Louisiana-Monroe	885	**60.8%**	17	**24.4%**	**14.8%**	**0.0%**
Louisiana-New Orleans	2,978	**61.7%**	60	**21.2%**	**17.1%**	**0.0%**
Louisiana-Shreveport	1,545	**56.2%**	24	**19.0%**	**24.7%**	**0.1%**
Oklahoma-Oklahoma City	2,160	**64.5%**	36	**13.2%**	**22.3%**	**0.2%**
Oklahoma-Southwest	284	**68.7%**	7	**9.9%**	**21.5%**	**0.0%**
Oklahoma-Tulsa	2,190	**67.3%**	39	**8.9%**	**23.8%**	**0.3%**
Network 13	17,875	**62.1%**	324	**17.8%**	**20.1%**	**0.1%**

*Missing Vascular Data percentage generated from Registered Patient HD Census

The regions appear to be improving or holding ground in regard to AVF use, as indicated in Map 2. The map no longer includes any red, indicating that AVF use rates across the region are all ≥50%.

MAP 2: AVF Use by Region, June 2018



It is important to note the HD VA practice patterns from January 2017 (Chart 2) through June 2018 (Chart 3). Optimal permanent VA management (e.g., AVFs *preferred*, AVGs *acceptable*, LTCs *option of last resort*) can be achieved through coordinated efforts and effective communications. However, as focus intensifies on reducing the use of LTCs, placement practices must be reviewed and process updates explored. In the areas of both incident and prevalent permanent VA placement, should an AVF or AVG be used in lieu of placing catheters?

Chart 2: HD VA Management by Region, January 2017

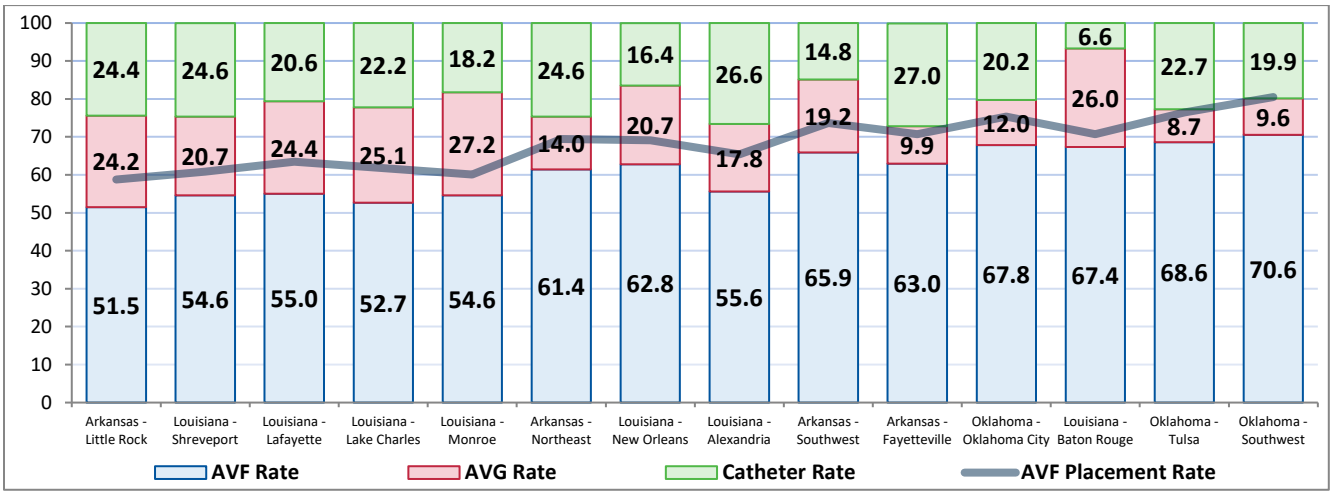
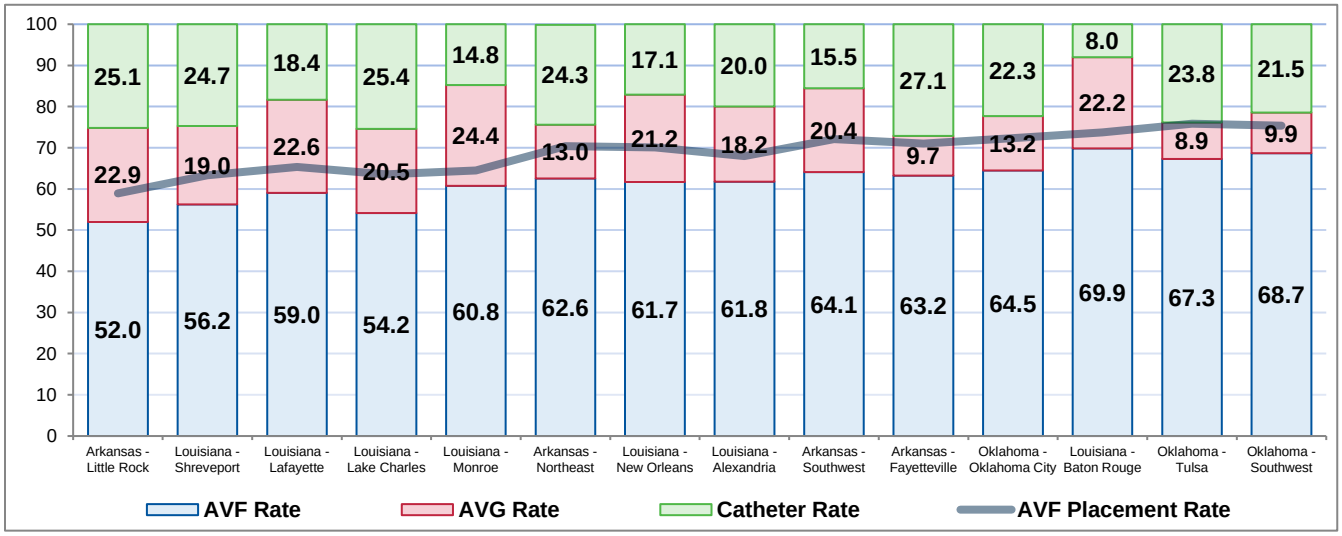


Chart 3: HD VA Management by Region, June 2018



State and Affiliation Vascular Access Data

VA management comparisons are provided in the areas of state and affiliation-specific outcomes in Charts 4 and 5.

Chart 4: HD VA in Use by State and Network

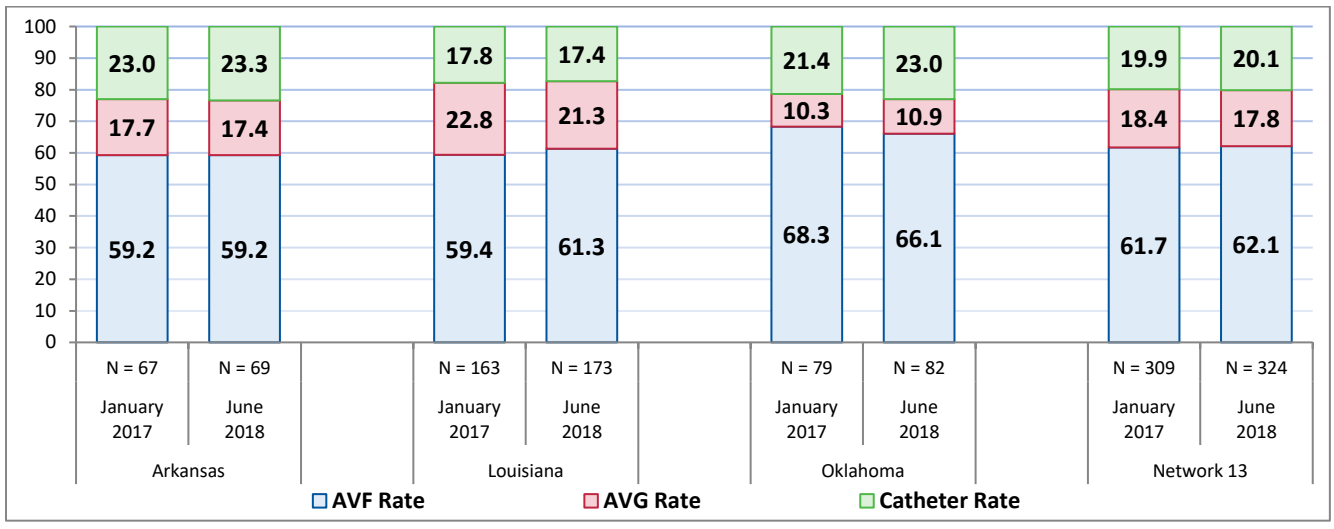
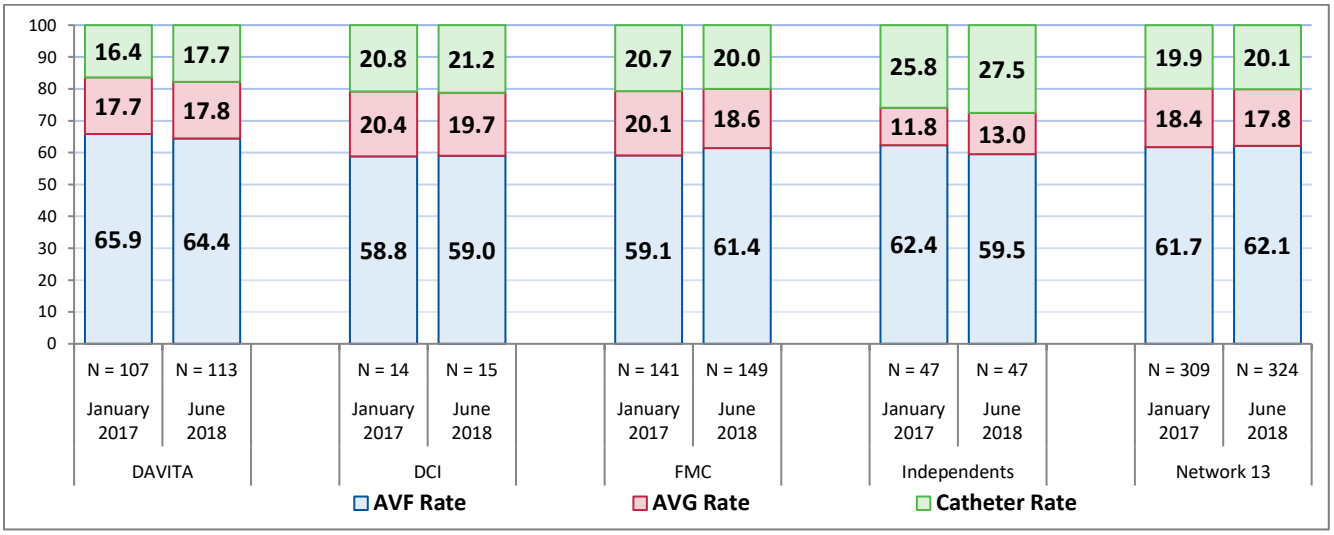


Chart 5: HD VA in Use by Affiliation and Network



Technical Assistance

In conjunction with the VA outcomes reporting activities, Network 13 has a variety of QI and educational activities underway to assist facilities in improving HD permanent VA management processes and outcomes. Requests for Network assistance are welcome.

Educational/Networking Activities and Resources:

- **Cannulation Training Sessions** are geared toward front-line dialysis clinicians (e.g., dialysis nurses, patient care technicians). These sessions offer continuing education (CE) credits, and include pre-/post-event testing for evaluation purposes.
- **Conducting a Quality Improvement Activity (QIA)**, *Reducing Long-Term Catheter (LTC) Rates in the Adult Hemodialysis Population* with a subset of those facilities with LTC rates in excess of 15% of the prevalent hemodialysis population.
- **Physician Education/Networking Sessions** are geared to the audience, as needed or requested (e.g., surgeons, nephrologists, associated healthcare professionals and interventionalists). These sessions are planned and developed with local healthcare professionals and are facilitated by Network 13's QI Director, Lynda Ball. Ms. Ball can be reached at 405.948.2241 or LBall@nw13.esrd.net.
- ***ESRD Network 13: Performance Guidance*** for VA management can be located online at: www.hsag.com/nw13PerformanceGuidance.
- **ESRD National Coordinating Center (NCC) Website** contains a variety of current Fistula First Catheter Last (FFCL) tools and resources: http://esrdncc.org/ffcl.

Feedback and Evaluation

Questions, requests, comments, and suggestions are welcome. Network 13 encourages feedback via a brief online evaluation of this report, available at https://www.surveymonkey.com/r/PH6XSTW.

This material was prepared by HSAG: ESRD Network 13, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. OK-ESRD-13A141-10232018-01