ESRD Network 13

Hemodialysis Vascular Access Management Trends Report

May 2019





Overview

Health Services Advisory Group (HSAG): End Stage Renal Disease (ESRD) Network 13 remains an active partner with the renal community to improve permanent vascular access (VA) management for all eligible hemodialysis (HD) patients. However, we are starting to transition from a singular focus on HD vascular access to an overall focus on dialysis access. So, be looking for more information on all dialysis modality access, including peritoneal dialysis (PD) in the future. In the meantime, the Network will continue efforts to motivate your continued analysis of outcomes and review of processes to improve overall dialysis access management within your communities.

As part of the Network's technical assistance, this comparative report is supplied to give providers an opportunity to gauge 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 patients have an individualized dialysis access management plan, ensuring the best permanent accesses possible for optimal patient care outcomes in their chosen modalities.

Only **one region** within Network 13 has currently achieved the national Centers for Medicare & Medicaid Services (CMS) expectations of at least 68% of prevalent HD patients dialyzing with a primary arteriovenous fistula (AVF) and less than 10% of prevalent HD patients dialyzing with a long-term catheter (LTC). Table 1 reflects both the national and Network 13-specific expectations regarding dialysis access management.

Category/Process	National / Network 13 Expectations					
AVF Use	In at least 68% of prevalent patients					
AVF Placement	As appropriate in 50% of all new (incident) HD patients					
Reduction LTC Use (≥ 90 days)	To less than 10% of prevalent HD patients					
Process: Written Access Planning and Management	 For 100% of all ESRD patients Consideration for VA to be given to those patients on PD, especially if there is a need for temporary HD (i.e., PD catheter issues and/or a transition in modality to HD) Vessel mapping and transition to permanent VA to be underway within 90 days of admission for chronic dialysis 					
Process: Monitoring for Access Dysfunction	In 100% of adult HD patients using AVFs or arteriovenous grafts (AVGs) as their primary HD VA					

Table 1: Expectations for Dialysis Access Management in 2019

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 them. While Fistula First focused on AVFs, it is important



to recognize that AVGs are preferable to LTCs when HD is the treatment modality. Providers should review and use this information in conjunction with their individual data when addressing dialysis access planning and oversight, including PD opportunities. It will become more important to gauge PD catheter issues (e.g., placement, peritonitis, adequacy) as home dialysis becomes more prevalent across the service area.

Data Reporting

The CMS Consolidated Renal Operations in a Web-Enabled Network (CROWNWeb) system is the data source for comparative reporting. ESRD Networks and dialysis facilities use CROWNWeb to enter and submit patient and clinical quality of care data for CMS.

The information and statistics presented in this report are based on available data from January 2018 through May 2019, downloaded in August 2019. The Network is sharing the comparative data 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 May 2019				
	Facilities	HD Patients			
Large Dialysis Organizations (LDOs)	292	16,354			
Independent Dialysis Facilities	44	2,026			
Total Network 13 Facilities	336	18,380			

A variety of comparative trends and analyses reflecting various degrees of performance 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 use 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 use (i.e., GAP) can provide insight into issues that may be affecting use (e.g., surgical placement problems, cannulation difficulties). Once identified, those issues can then be addressed with technical assistance. This analysis includes a review of your process for addressing LTCs, once a permanent access is successfully being used for treatments. The Network encourages focus on the GAP to keep it below 5 for optimal performance, as use should almost mirror placement. Chart 1 provides an example of such trending.





Chart 1: Network 13 AVF Placement and Use Trending

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 Use Rates in Network 13

	January 2018		July 2018		May 2019	
	Ν	%	Ν	%	Ν	%
Certified In-center Dialysis Facilities	318		328		336	
Registered HD Patient Census	17,670		18,069		18,481	
Patients Missing VA Data	27	0.2%	82	0.5%	23	0.1%
Patients w/ NA Checked	71	0.4%	101	0.6%	78	0.4%
AVF Only	10,950	62.3%	11,166	62.4%	11,517	62.7%
AVG Only	3,185	18.1%	3,148	17.6%	3,108	16.9%
AVG + AVF Maturing	8	0.0%	4	0.0%	7	0.0%
Catheter <90 days	1,223	7.0%	1,355	7.6%	1,377	7.5%
Catheter ≥90 Days	1,990	11.3%	2,055	11.5%	2,251	12.2%
Catheter + AVF Maturing	188	1.1%	136	0.8%	105	0.6%
Catheter + AVG Maturing	24	0.1%	17	0.1%	12	0.1%
Port Only	3	<0.1%	4	<0.1%	2	<0.1%
Unknown/Other	1	<0.1%	0	0.0%	0	0.0%
Patients w/VA Reported	17,572	100.0%	17,886	100.0%	18,380	100.0%



Dialysis Facility Performance

The Network recognizes that consistent, coordinated efforts are needed to achieve established HD VA performance goals, and is pleased to see 106 dialysis facilities (31.5%) achieving the National CMS AVF use expectation of 68% (Table 4).

	Januar	nuary 2018		July 2018		2019
Facility AVF	# of	% of	# of	% of	# of	% of
Use Rates	Facilities	Facilities	Facilities	Facilities	Facilities	Facilities
No Data Reported	0	0.0%	1	0.3%	0	0.0%
<50	35	11.0%	35	10.7%	33	9.8%
50–59	93	29.2%	87	26.5%	93	27.7%
60–67	94	29.6%	110	33.5%	104	31.0%
68 +	96	30.2%	95	29.0%	106	31.5%
Total	318	100.0%	328	100.0%	336	100.0%

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

Regional Comparative Analysis

The majority of VA placement in our Network occurs in urban settings. Recognizing that regional practices vary within the service area, the Network 13 Medical Review Board (MRB) established a regional comparative analysis by reviewing the "who and where" of VA placement by dialysis facilities. We do recognize that some placements occur within the rural setting; however, due to criteria for public release of data reporting, a consolidation of regions has occurred for this reporting. The mapping below reflects this regional consolidation from 14 regions to 10 regions.

Map 1: Network 13—Defined Regions for VA Analysis and Reporting





The Network has seen overall improvement and stability in data reporting, with minimal missing VA data from January 2018–May 2019, as evidenced in Table 5. Network staff continue to actively work with facilities to ensure VA data are entered completely and accurately.

Table 5: HD VA Management by Region

	January 2018						
	Patients w/ VA Reported	AVF Rates	# of Dialysis Providers	AVG Rates	Overall Catheter Rates	*Missing VA Data	
Arkansas-Fayetteville	1,608	63.8%	26	14.9%	21.2%	0.1%	
Arkansas-Little Rock	1,375	51.7%	24	24.7%	23.6%	0.1%	
Arkansas-Northeast	840	62.0%	18	13.5%	24.5%	0.1%	
Louisiana-Baton Rouge	1,596	68.4%	30	22.7%	8.9%	0.0%	
Louisiana-Lafayette	1,775	56.4%	33	23.9%	19.7%	0.1%	
Louisiana-Monroe	1,404	59.5%	25	22.4%	18.1%	0.1%	
Louisiana-New Orleans	2,912	62.6%	57	21.1%	16.2%	0.1%	
Louisiana-Shreveport	1,513	56.2%	24	18.6%	25.1%	0.5%	
Oklahoma-Oklahoma City	2,389	66.3%	43	12.8%	20.9%	0.2%	
Oklahoma-Tulsa	2,160	69.7%	38	9.0%	21.3%	0.2%	
Network 13	17,572	62.3%	318	18.2%	19.5%	0.2%	
		May 2019					
Arkansas-Fayetteville	1,701	63.4%	27	14.2%	22.5%	0.0%	
Arkansas-Little Rock	1,449	53.1%	25	23.1%	23.9%	0.1%	
Arkansas-Northeast	905	59.7%	18	12.9%	27.4%	0.0%	
Louisiana-Baton Rouge	1,635	71.6%	31	19.0%	9.4%	0.1%	
Louisiana-Lafayette	1,820	57.6%	34	21.2%	21.3%	0.0%	
Louisiana-Monroe	1,389	62.2%	27	20.2%	17.6%	0.1%	
Louisiana-New Orleans	3,065	63.4%	66	21.0%	15.6%	0.1%	
Louisiana-Shreveport	1,591	56.7%	25	18.1%	25.2%	0.0%	
Oklahoma-Oklahoma City	2,544	65.3%	43	12.9%	21.8%	0.4%	
Oklahoma-Tulsa	2,281	67.7%	40	8.2%	24.2%	0.2%	
Network 13	18,380	62.7%	336	17.0%	20.4%	0.1%	

*Missing VA Data percentage generated from Registered HD Patient Census

The regions appear to be improving or holding ground regarding AVF use, as indicated in Map 2. The map no longer includes any red, indicating that AVF use rates across the region are all \geq 50%. However, seven regions reflect twice the expected rates for catheters, indicating opportunities for improvement, as indicated in Map 3.



MAP 2: AVF Use by Region, May 2019



It is important to note the HD VA practice patterns from January 2018 (Chart 2) through May 2019 (Chart 3). Optimal permanent HD VA management (e.g., AVFs *preferred*, AVGs *acceptable*, LTCs *option of last resort*) can be achieved through coordinated efforts and effective communication. However, efforts to reduce the use of catheters, especially LTCs, require that placement practices must be reviewed and process updates explored. An important question to ask is, *In the areas of both incident and prevalent permanent VA placement, can an AVF or AVG be used in lieu of placing temporary catheters*?





Chart 2: HD VA Management by Region, January 2018











State and Affiliation-Specific VA Data

VA management comparisons are provided in the areas of state and affiliation-specific outcomes in Charts 5 and 6.

Chart 5: HD VAs in Use by State and Network

Chart 6: HD VAs 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.
- Quality Improvement Activity (QIA), *Reducing Long-Term Catheter (LTC) Rates in the Adult Hemodialysis Population* is being conducted with a subset of facilities with an LTC rate in excess of 15% of the prevalent HD 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: <u>www.hsag.com/nw13PerformanceGuidance</u>.

Feedback and Evaluation

Questions, requests, comments, and suggestions are welcome. Network 13 encourages feedback via a brief online evaluation of this report, available at <u>https://www.surveymonkey.com/r/YY2VZTM</u>.