Patient Perspectives on Factors Influencing AVF Placement for Dialysis

Humberto Gonzalez Rodriguez, MPH[1]; Karen-Marie Eaton, BS[1]; Bethany Sarosiek, RN, MSN, MPH[1]; Tier Carter[1]; Eric Weinhandl, PhD[1,2]; Steven M. Brunelli, MD, MSCE[1]; Francesca Tentori, MD, MS[1]

[1]DaVita Inc., Denver, Colorado; [2]Department of Pharmaceutical Care and Health Systems, University of Minnesota, Minneapolis, Minnesota

Introduction and Objective

- Arteriovenous fistulas (AVF) are the widely preferred vascular access option for hemodialysis (HD) due to their durability and lower risk of infection and clotting.
- However, AVF use among US prevalent patients is only roughly 60%.[1]
- Reasons for lower AVF use include strains on surgical centers during COVID-19 and reduced reimbursement for outpatient vascular access procedures due to changes in Medicare Part B.[1]
- Lower rates of AVF placement have also been attributed to "patient choice", a broad and vague classification.
- This study sought to understand how patient perceptions and experiences influenced decisions towards AVF placement.

Methods

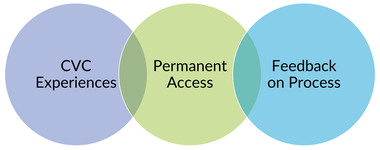
Participant Cohort

- We sampled adults (18-75 years) receiving in-center HD at a large kidney care organization who were either:
  - **Group 1 (Declined AVF)** - an AVF candidate, with no plans to get an AVF, and using a central venous catheter (CVC) for >90 days, or
  - **Group 2 (Accepted AVF)** - had previously declined AVF placement (was previously part of group 1) and has or is getting an AVF.

Data collection and analysis

- Audio-recorded semi-structured phone interviews (Figure 1) were conducted with 18 participants in California, North Carolina, and Texas from May-July 2025.
- Verbatim transcripts were inductively analyzed using narrative and thematic techniques.[2,3]

Figure 1: Interview Guide Domains



Results

Table 1: Participant Characteristics

Characteristic	Group 1 (Declined AVF) N=9	Group 2 (Accepted AVF) N=9	Total
Age, mean (range)	53 (37-70)	57 (39-75)	55 (37-75)
Gender			
Female	3	3	6
Male	6	6	12
Race			
Black	5	1	6
Hispanic	2	7	9
White	1	0	1
Mixed	1	1	2
Language: Spanish	0	4	4
Interview length, mean (range)	45 (21-67)	44 (36-55)	45 (21-67)
Months on dialysis, mean (range)	27 (5-72)	19 (8-48)	20 (5-72)
Months with CVC, mean (range)	27 (5-72)	12 (4-36)	23 (5-72)

Table 2: AVF Concerns among Participants

Perceived Concerns	Group 1 (Declined AVF)	Group 2 (Accepted AVF)
Changes to body appearance	X	X
Fear of needles/pain	X	X
Unable to work with AVF in arm	X	X
AVF are "tubes that stick out" of arm	X	X
Fears of "bleeding out"	X	
Pursuing transplant (AVF is plan C)	X	
AVF fail often, need upkeep	X	
AVF discouraged by family	X	
Keeping AVF dry		X
Doesn't know enough about AVF		X

Table 3: Reasoning around AVF among Group 1 (Declined AVF) Participants

Future AVF placement	Decision-making Factors	
	Get AVF	Continue with CVC
Wants to	When "feels ready" AVF is "easier on heart"	Feels "anxious, scared" But "Family against AVF"
Unlikely anytime soon	AVF unviable with current lifestyle Will revisit if and when needed	Can't work with AVF (heavy lifting) CVC "is working fine" ("no issues") Pursing transplant (high on waitlist)
Never	Nothing will change participant's decision	Extreme needle phobia Doesn't want "deformity"

Table 4: Facilitating Factors for AVF Placement among Group 2 (Accepted AVF)

Facilitating Factor	Description
Benchmarked with PD	AVF is more desirable or feasible than PD
Sought more info	Understand AVF's impact on daily life & treatment goals
Time & space to decide	Seek, confirm, and/or process information about AVF
"Needed" AVF to seek transplant	(incorrectly) Told AVF is "needed" to seek a kidney transplant

Table 5: Permanent Access Communication Experiences among Participants

Communication Style	Group 1 (Declined AVF)	Group 2 (Accepted AVF)
Helpful	• Discuss participant concerns • Approach topic thoughtfully	Help understand • What an AVF is and is not • What is done • What it will mean *for me*
Unhelpful	• Too frequent, repetitive • Upset by *how* things were said • Focus is on AVF placement, not on an individual person	• Provide incorrect information or inaccurate advice

Figure 2. Participant Quotes

"And sometimes the fistulas don't work and the graft don't work. And then what? The [AVFs] fail. They fail. They fail probably more constantly than we think." (Declined AVF, Female, 37)

"It was that, like [I wanted to know], 'What is it?' Like, that was my main thing. Like, 'What is it? What do they do? Why does your skin get bumpy?'" (Accepted AVF, Female, 48)

Conclusions

- Patients' willingness to engage in discussions and process information was a salient factor towards consideration of permanent access placement.
- Patients receiving in-center HD may benefit from personalized and intermittent AVF communication to facilitate dialogue about AVF placement.
- Patients who declined an AVF mentioned concerns of "bleeding out", AVF failure, and discouragement from family members. Patients who accepted an AVF mentioned concerns about keeping the AVF dry and not knowing enough about the AVF.

References and Acknowledgments

1. 2024 USRDS Annual Data Report: Epidemiology of kidney disease in the United States. NIH, NIDDK, Bethesda, MD, 2024.
2. Maxwell J, Miller BA. Categorizing and connecting strategies in qualitative data analysis. Handbook of Emergent Methods. New York: Guilford; 2008:461-477.
3. Hasso Plattner Institute of Design at Stanford University. 2024. https://dschool.stanford.edu/resources-collections/browse-all-resources

We specifically acknowledge Kathryn Husarek of DaVita, Inc. for editorial contributions in preparing this poster.

Correspondence: Humberto.Rodriguez@davita.com. Presented at ASN Annual Meeting 2026 Kidney Week, Denver, Colorado

© 2026 DaVita, Inc. All rights reserved. Proprietary. May not be copied, reprinted or distributed without the permission of DaVita, Inc.