

Racial disparities seen in initial access to blood flow for hemodialysis

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Black and Hispanic patients will less frequently than white patients start hemodialysis with an arteriovenous fistula (connecting an artery to a vein for vascular access), a procedure for initial blood flow access known to result in superior outcomes compared with either catheters or arteriovenous grafts, according to a report published online by *JAMA Surgery*.

End-stage kidney disease affected more than 593,000 people in the United States in 2010 and more than 383,000 of them were treated with hemodialysis, a process that replaces the blood filtering usually done by the kidneys, according to background in the information in the study.

Mahmoud B. Malas, M.D., M.H.S., of the Johns Hopkins Medical Institutions, Baltimore, and coauthors examined national trends in initial hemodialysis access with respect to race/ethnicity further divided by co-existing illnesses, nephrology care and medical insurance status.

Their study was a retrospective analysis of 396,075 patients with end-stage renal disease in the U.S. Renal Data System who started dialysis from 2006 through 2010. The main outcomes of the study were utilization rates of arteriovenous fistula (AVF), arteriovenous graft (AVG) and intravascular hemodialysis catheter (IHC). Most of the patients (55.4 percent) in the study were white, followed by 30.3 percent black patients and 14.3 percent Hispanic patients.

The authors found that more white patients initiated hemodialysis with

an AVF than black or Hispanic patients (18.3 percent vs. 15.5 percent and 14.6 percent, respectively), although black and Hispanic patients tended to be younger and had less coronary artery disease, chronic obstructive pulmonary disease and cancer than white patients with an AVF. Regardless of medical insurance status, both black and Hispanic patients started hemodialysis with an AVF less frequently than white patients. AVF utilization at initial hemodialysis also was lower among black patients and Hispanic patients compared with [white patients](#) among patients who had nephrology care for longer than one year.

The authors note it is possible black and Hispanic patients with chronic kidney disease may be progressing too quickly to end-stage renal disease to make AVFs a viable initial hemodialysis access option because AVFs generally take six to 12 weeks to mature and grow stronger.

"The racial/ethnic disparities in incident AVF access that we describe deserve elucidation. The high rates of catheter use despite national programs to reverse this trend is unacceptable. ... The sociocultural underpinnings of these disparities deserve investigation and redress to maximize the benefits of initiating hemodialysis via fistula in patients with ESRD [end-stage [renal disease](#)] irrespective of race/ethnicity," the study concludes.

In a related commentary, Laura A. Peterson, M.D., M.S., and Matthew A. Corriere, M.D., M.S., of the Wake Forest School of Medicine, Winston-Salem, N.C., write: "Their analysis of the U.S. Renal Data System contributes useful insight into racial/ethnic differences in [arteriovenous fistula](#) (AVF) utilization, accounting for patient comorbidities, insurance status and health care provider specialty, but the overall rates of AVF use (or more appropriately the lack of AVF use) at first hemodialysis are perhaps the more important and concerning finding. Rates of AVF use at hemodialysis initiation were 18.3 percent, 15.5 percent and 14.6 percent among white, black and Hispanic patients,

respectively. These results are especially sobering compared with the 2006 goals from the National Kidney Foundation, including prevalent functional AVF in more than 65 percent of [patients](#) and cuffed catheters in less than 10 percent. ... Given the mismatch between goals and current outcomes, the more appropriate quality improvement focus may be lowering the dismal overall catheter rates instead of a less than 5 percent difference in AVF rates between races/ethnicities."

More information: *JAMA Surgery*. Published online April 29, 2015. [DOI: 10.1001/jamasurg.2014.0287](https://doi.org/10.1001/jamasurg.2014.0287)
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