

## Immature Public Policy for Vascular Access

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The article by Hurst *et al.*<sup>1</sup> in this issue of *JASN* demonstrates a much greater proportion of patients with chronic kidney disease (CKD) initiate hemodialysis (HD) with a native arteriovenous fistula (AVF) when they are patients of the Veterans Administration or Department of Defense, federally capitated systems, *versus* patients in the US Renal Data System, who receive care in the commercial market. The problems of evaluating retrospective databases are widely known. Nonetheless, the magnitude of the difference described here argues for the validity of the observation. We accept both the premise that this measured event, preemptive AVF formation, and the Fistula First Initiative<sup>2</sup> are critically important for patient outcome and that the differences described in the databases are real. Thus, the key question becomes what accounts for these differences; some of them are socioeconomic or racially demographic<sup>3,4</sup> but not all.

Long-term reliable access to the circulation remains the largest technical barrier to successful long-term HD. The cumulative data as derived by the Dialysis Outcome Quality Initiative (DOQI) reveal that elective AVFs before initiation of dialysis are the most complication-limited, reliable, and long-lived form of vascular access.<sup>5,6</sup> Forming an AVF non-electively after the initiation of HD requires placement of a venous HD catheter while awaiting AVF maturation. The mortality and morbidity of extended catheter use are well described.<sup>7</sup> The successful increase in late AVF use in the prevalent patient population of the United States is also associated with a substantial increase in catheter use, a result at least in part of nonpreemptive AVF placement. Preemptive placement of AVFs eliminates the cost and risk associated with prolonged catheter-based dialysis.<sup>7</sup>

How did we get to this situation, and can we fix this problem? We arrived here on the basis of groundbreaking public

policy first passed into law in 1972 as an amendment to the Social Security Act that afforded dialysis care to many Americans when they reached a stage of renal failure requiring replacement therapy. Finally, in 1990, the Americans with Disabilities Act opened the door to dialysis for almost all Americans regardless of age or comorbidity. This public policy did not provide preventive care, but rather, like catastrophic insurance, it insured for the catastrophe itself.

The unintended consequences of this landmark action are not trivial. We now have a public policy that treats a catastrophic illness such as renal failure but does not act to prevent or ameliorate that catastrophe earlier, a setting in which political force has already expanded this catastrophic care to all Americans. The demographics of these patients who start HD now reflect an aging population with diabetes, who, as a consequence of their age and disease, are progressively more unlikely to have commercial insurance, which is the entity that seems most interested in preventive care to limit costs, especially of catastrophic illness such as renal failure.

The placement of native AVFs months in advance of the start of dialysis will improve morbidity and mortality and decrease costs.<sup>6,7</sup> This special form of preventive care, to be seen and treated by both a nephrologist and a vascular surgeon before the determination of dialysis dependence, is not covered by CKD reimbursement from Medicare, a carrier that supports most coverage for dialysis. In contrast, capitated care organizations, such as the Department of Defense and the Veterans Administration, receive direct incentives to reduce the costs of catastrophic illness by ameliorating complications and prevention of CKD progression including early referral as a matter of financial policy.

Thus, a farsighted and compassionate public policy for long-term dialysis care has unintended consequences.<sup>8</sup> The solution to this dilemma is business-simple but politically difficult. From a business standpoint, it makes medical and financial sense to extend Medicare coverage to those with advancing renal impairment. In this manner, both proper preparations for HD by creation of AVFs and indeed preventive therapies to slow the progression of renal disease are made incentives. Politically, of course, this approach extends a benefit at a time when many seek to limit benefits to the general population, an approach in CKD that may disproportionately affect certain demographics more than others<sup>9,10</sup>; however, the limited scope of extending public policy and the data supporting cost savings seem both logical and controllable. Independent of any argument for medical coverage for all Americans, my argument to mature a preexisting public policy by extending enrollment for advancing CKD makes compelling sense.

The association of predialysis care and initiating dialysis with an AVF is not simply a function of insurance or health

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care coverage, whether through capitated care organizations such as the Department of Defense or the Veterans Administration or private insurance, it is a function of a continuum of care. It is imperative that patients who are at-risk be referred to nephrologists early, because late referral is associated with increased morbidity and mortality.<sup>11</sup> Individuals can be evaluated with sufficient lead-time only when patients as well as physicians are educated about the detection and recognition of asymptomatic renal disease and the benefits of early referral to a nephrologist. As is alluded to by Hurst *et al.*,<sup>1</sup> universal health insurance is not the all-encompassing answer to increasing AVF use. The inference to be drawn from this work, which has much larger implications than AVF, is that policy dynamics need to reflect those of closed systems wherein definitive policy guidelines shape physician practice to achieve predetermined outcomes.

## DISCLOSURES

None.

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See related article, "Arteriovenous Fistulas among Incident Hemodialysis Patients in Department of Defense and Veterans Affairs Facilities," on pages 1571–1577.