

# Economics and the Next Decade of Dialysis Access Intervention

A brief perspective on how health care economics will affect dialysis access in the United States.

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We are in the midst of a fundamental change in the way we look at health care—a key determinant in deciding between different health care constructs is now *value*, which is defined as outcomes over cost. I would argue that we currently provide very poor value in dialysis vascular access care to our patients, as well as the health care system as a whole. Specifically, our outcomes are poor (50% success at 6–12 months for most vascular access procedures), and in order to achieve these poor outcomes, we spend a very large amount of money (\$1–2 billion annually). Therefore, it is not unexpected that economics will dominate the next decade of dialysis access intervention in the United States. The big question is how this will happen, and while the jury is still out, this article summarizes some thoughts on what the future might bring.

## INNOVATION COULD BE INCENTIVIZED

There is currently a lot of interest in global payment systems such as the End-Stage Renal Disease Seamless Care Organization (ESCO), where an agreement is made to provide all of the medical care for a certain number of hemodialysis patients (usually by a consortium that could include some combination of a dialysis organization, a nephrology practice, a health care provider, and possibly a hospice organization), while meeting certain quality metrics. The consortium then shares in the profit or accepts the risk for a loss. One potential benefit of the ESCO system is that it could incentivize innovation in dialysis vascular access. Currently, a device that costs \$2,000 but serves to enhance arteriovenous fistula (AVF) maturation, reduce the duration of tunneled dialysis

catheter use and subsequent episodes of catheter-related bloodstream infection, and also reduce the number of endovascular and surgical procedures needed for maturation may not generate much excitement because the costs for the device and the costs for AVF complications hit different buckets. However, in a global payment system such as the ESCO, where the ESCO would take on the total cost of health care for a patient for a fixed sum, the use of the \$2,000 device could save \$20,000 as a result of fewer AVF complications and thus it becomes extremely attractive.

## PROCESS OF CARE IMPROVEMENTS

Global payment systems could also incentivize the process of care improvements in vascular access. These could include (1) hiring of a dedicated vascular access coordinator(s) for each ESCO; (2) implementation of effective surveillance and monitoring (physical examination) programs that reduce thrombosis rates but do not significantly increase preemptive intervention rates; (3) identification of committed and experienced vascular access physicians, including surgeons and interventionalists; and (4) aggressive AVF placement during the chronic kidney disease phase. All of these process of care interventions would likely pay for themselves many times over in an ESCO system by reducing hospitalizations, but they might not be as cost-effective in a more conventional payment system.

## ADOPTION OF APPROPRIATE METRICS

Global payment systems must have safeguards to prevent the delivery of cheaper but substandard care.

It is critically important that the entire vascular access community participates in the development of such metrics. In particular, the focus needs to be on patient-centric care and, even more specifically, on both quality-of-life and survival parameters. Optimizing fluid removal and improving cannulation techniques and outcomes could be some examples of such patient-centric metrics.

## SUMMARY

Economic issues will, without question, play a big role in determining the sort of vascular access care that we provide to our patients. The challenge is for all the involved parties (ie, health professionals, patients, payors, regulators, and industry partners) to work together to ensure that the focus is on patient-centric, cost-effective care. ■

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