In this issue of *Kidney360*, Ruchi et al. present their work with the United States Renal Data System examining the effect of kidney disease education (KDE) services in predialysis patients, which is now supported by reimbursement from Medicare (1). Although there is a strong association between provision of KDE and increasing arteriovenous fistula (AVF) and arteriovenous graft (AVG) usage and reduced rates of central venous catheter (CVC) use, only 1.4% of the population was recorded as having received this intervention. KDE is described as including counseling and patient education, including information about the kind of dialysis access that is available (2). The effect appears to be greatest for those patient subgroups without prior nephrology care, suggesting that patient education is beneficial even in patients who received delayed referral. Patient self-efficacy and improved motivation are undoubtedly related to the improved outcomes that were observed. Finally, there is a statistically significant interaction between KDE provision and nephrology care for arteriovenous access–related outcomes. The significance of the association in patients with improved referral may therefore be diminished with a matched cohort analysis. Despite this clear and unavoidable limitation of any retrospective review of administrative data, the implication that patient education leads to better patient outcomes is widely accepted.

There are other variables that likely affect provision of patient education, which were not captured in this analysis. These include factors such as prior formal education, insurance status, neighborhood characteristics, and distance to a dialysis center or nephrologist office (3). Moreover, there is likely a difference in the health status of patients who undergo an attempt at arteriovenous access surgery compared with patients who do not, whether or not the access is used (4). Hence patient selection rather than patient motivation may also have a significant effect on AVF and AVG usage.

Even with these limitations, the present work suggests that KDE is a cost-effective way to improve outcomes substantially at little clinical risk to the patient with a minimal investment. Patients report higher satisfaction with AVFs and AVGs than CVCs (5), giving further impetus to expanding the program and encouraging patients to avail themselves of it. In addition to promoting KDE provision, research is needed to understand other factors that prevent AVF and AVG use in incident hemodialysis patients. It is remarkable that despite all of the benefits described above, even in the KDE cohort, more than half the population is using a CVC at dialysis initiation. Part of the issue may be delays in referrals to vascular surgeons in patients with limited nephrology care. Another possibility is a shortage of trained vascular surgeons who are actively engaged in AV access creation. Previous data regarding geographic variation in the level of CKD care in the United States indicates that more care is associated with a mortality benefit (6). Information about regionalization of dialysis access procedures and results in high-volume versus low-volume regions is also required to realize the improvements that can come about with KDE services.

KDE can help improve patient outcomes, but it can only go so far without partners who can build on the educational foundation and then create an arteriovenous access successfully (7). By including surgeons who are responsive to the needs of CKD and ESKD patients, outcomes can be improved with a multi-pronged approach to patient education and patient care.

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Author Contributions
M. Hafeez wrote the original draft of the manuscript. T. Yuo reviewed and edited the manuscript.

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