Kidney Transplantation Rates of Veterans Administration–Listed Patients Compared with Rates of Patients on Nonveteran Lists

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Since 1962, the Department of Veterans Affairs (VA) has offered kidney transplantation services, including comprehensive pretransplant and follow-up care, coverage of immunosuppressant medication, and travel benefits (including lodging) for veterans, living kidney donors, and caregivers. Most VA-enrolled veterans also qualify for the Medicare ESRD program.1 Together, VA and non-VA transplant programs offer opportunities for veterans to access life-saving kidney transplantation.

Of veterans who receive kidney transplants, 15% use a Veterans Affairs Transplant Center (VATC) for this intervention.2 However, the number referred to the VA kidney transplant program is increasing, having grown by 50% between 2012 and 2016 (National Surgery Office, Veterans Health Administration, personal communication). Data are lacking, however, on whether the setting of kidney transplantation (VA versus community) affects the likelihood of receiving a transplant. The recent VA Mission Act, modifying transplant settings for veterans, living kidney donors, and caregivers. Most VA-enrolled veterans also qualify for the Medicare ESRD program.1 Together, VA and non-VA transplant programs offer opportunities for veterans to access life-saving kidney transplantation.

A decade ago, Gill et al.3 showed that VA and Medicare cohorts had a lower likelihood of receiving a kidney transplant compared with privately insured individuals. The lower VA transplantation rate was partially attributed to a cumbersome transplant referral process at that time. (The VA has since instituted an electronic referral process and telehealth services to streamline candidate determination decisions, resulting in a median time from referral to evaluation of <30 days.4) However, Gill et al.3 also found that waitlisted VA-insured patients had a lower adjusted likelihood of transplantation compared with patients with private insurance, which suggested the existence of other contributing factors.

In this issue of the Journal of the American Society of Nephrology, Augustine et al.5 report on differences in time to kidney transplantation for a national cohort of 302,457 adults listed in the United States categorized by primary insurer type. Characteristics and outcomes of veterans listed at the VATCs were compared with those of candidates covered by Medicare, Medicaid, or private insurance at non-VA centers between 2004 and 2016.5 Multivariable Cox regression analyses were used to gauge the relationship between insurer and time to transplantation.

Compared with patients who underwent a transplant in the community, particularly the privately insured, the 3663 VA-listed patients (1.2% of the total cohort) were older and more likely to be men, diabetic, obese, and of black race; they also had been receiving dialysis for longer, had less formal education, and lived farther from their transplant center.

The kidney transplant rate was lower among the VA-listed patients than among the privately insured or Medicare cohorts, but it was comparable with that of the Medicaid cohort. This difference in overall rate was primarily driven by a much lower frequency of living donor transplants among the VATC patients. The reasons for the low living donor transplant rate among the VATCs in the national cohort analysis are unclear. Data suggest that more than one half of all potential living donors, regardless of veteran status, fail the initial health screen.6 Because potential living donors for veterans are likely to share the latter’s unfavorable demographic characteristics, they may be less available and have a higher dropout rate. Limited social support and impaired health literacy as well as patient preferences related to living donation and center acceptance criteria also may be contributors.

Notably, compared with waitlisted adults under any other insurer, VA-listed patients were more likely to be delisted (due to health deterioration) but less likely to die. Considered together, the increased delisting and the decreased mortality of VA waitlisted patients suggest a tradeoff of more cautious transplantation practices in the VA that favor patient survival.

The interpretation of these data is confounded by the marked geographic disparity in kidney transplant rates (including preemptive transplantation) in the United States, perhaps attributable to inter-regional health system differences.7 The authors addressed this by comparing four VATCs with their academic affiliate programs in the same donor service area. Again, the VA population was older, had more comorbidities with greater likelihood of delisting, and had lower rates of kidney transplantation compared with privately insured patients. However, when the authors used an adjusted competing risk regression model to account for differences in mortality between the cohorts, VA patients were as likely as Medicare patients to undergo a transplant overall, with living donor and deceased donor transplant rates comparable to those of Medicare patients.
Historically, federally insured (VA and Medicare) patients have been less likely than privately insured nonveterans to preemptively undergo a transplant or be placed on a kidney waiting list before dialysis initiation.\(^3\) The reasons for this have been ascribed to population differences between Medicare/Medicaid patients and the privately insured as well as health system differences. Compared with non-VA populations, VA enrollees are overwhelmingly older, have lower income, and have greater multimorbidity, and they are most similar to the men in the Medicare population.\(^8\) The similarity of kidney transplant rates for veterans at VATCs and Medicare patients at four non-VA transplant centers in the same donor service area suggests that comparability of waitlisted patients may trump intercenter differences in determining kidney transplant rates.

A positive finding for veterans is that VA-listed patients were more likely to be listed at multiple centers. In addition, the number of veterans listed at VATCs increased significantly over the study period (one half of the VA cohort was listed in the study’s final 4 years). Lastly, the results show that, unlike the finding for non-VA transplant centers, distance to VATCs was not significantly associated with likelihood of transplantation or mortality.

This study is notable for its large sample size, use of a national data system, focus on waitlisted patients, adjustment for death as a competing variable, and application of multiple sensitivity analyses, including those scrutinizing the effect of the 2014 kidney allocation system.

Study limitations include unmeasured or residual confounders (e.g., smoking, heart disease, patient hospitalization rates, and transplant preferences) that may influence kidney transplantation rates differently between VA and non-VA settings. Undetermined socioeconomic factors also may differentially affect transplantation rates as suggested by the national parity in rates of deceased donor kidney transplants for VA-transplanted veterans and non-VA patients covered under Medicare or Medicaid in contrast to the rate reported for privately insured individuals. The longer hospitalizations reported for VA patients with ESRD may also reduce their availability for transplant.\(^1\) The higher delisting rate among VA patients supports this assertion. Lastly, aggregate data from four independent programs may obscure significant variability between them. Three of four VATCs have transplant rates equal or higher than expected.\(^9\)

Although the VA has implemented multiple initiatives to expand veteran access to kidney transplantation, it remains incumbent on the learning health system to identify mechanisms that may further enhance veteran kidney transplantation opportunities, especially living donor transplants. The study by Augustine et al.\(^5\) suggests that there are poorly understood factors that influence time to kidney transplantation for waitlisted patients. Additional study is warranted to characterize differences in population health, health system practices, and patient preferences that affect health system kidney transplantation rates.

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**DISCLOSURES**

M.R. and S.T.C. are Veterans Affairs nephrologists.

**REFERENCES**

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