Patient Education to Reduce Disparities in Renal Transplantation

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Healthcare disparities can be defined as differences in health outcomes that are unnecessary and avoidable, and in addition, that are considered unfair and unjust (1,2). The existence of such disparities in kidney transplantation has been recognized for over a decade (3,4). Despite our recognition of this issue, recent reports indicate the problem still exists (5,6) and may even be getting worse (7). Disparities between white and minority patients occur before, during, and after the transplant evaluation process. Although some of these differences are caused, at least in part, by biological factors, others may be explained by socioeconomic factors, lack of health literacy, and physician bias. Compared with white patients, minority patients are less likely to be referred for transplant (4,6,8,9), are less likely to get waitlisted (4,9–11), and take longer to complete the work up for listing (9,10,12–14). Even when patient preference is considered, with black patients having less preference for transplant, there is still decreased referral to transplant and increased time to listing in black versus white patients (4,10,14).

Nephrologists’ knowledge and skills, or lack thereof, may contribute to this problem. Thus, it has been reported that some nephrologists believe that black patients benefit less from transplant than white patients (15). In another survey study, some nephrologists reported being uncomfortable with the referral process (16). Patient education is also vitally important. Lower levels of patient education and lack of health literacy have been associated with decreased access to transplantation (12,17,18). Up to 30% of patients begin dialysis without being informed about transplant, despite the recent Centers for Medicare and Medicaid Services requirement to do so by introducing Form 2728 (5). It is clear that patient education needs to start before the initiation of dialysis, especially if patients are to derive the benefit of preemptive transplantation.

Despite the robust body of data on the topic of health care disparities in kidney transplantation, in which the factors associated with it are defined, there are very few studies describing any interventions to address this problem. Thus, the importance of the article by Patzer et al. in the current issue of CJASN (19). The authors hypothesized that an educational intervention would increase patient awareness and decrease loss to follow-up among a racially and socioeconomically diverse group of patients referred for a kidney transplant listing evaluation. While lacking the rigor associated with a randomized prospective study, the educational intervention significantly improved the likelihood that a referred patient would successfully complete the listing process.

The intervention was simple and easily replicable at most, if not all, transplant evaluation centers. As part of the evaluation process, transplant candidates at the Emory Transplant Center were required to attend a single, 4-hour, educational session. This session involved lectures from a transplant coordinator, financial coordinator, and a social worker (note that the transplant physicians did not participate). Of the 1126 patients studied, completion of the transplant evaluation within 1 year was significantly higher for the postintervention group (80.4% compared with 44.7% in the preintervention group). Evaluation completion, rather than time to waitlisting, was the metric used in this study, thereby focusing on the candidate’s likelihood of successfully advancing to the Recipient Review Committee independent of their final eligibility for listing. The positive effect on evaluation completion was seen for both blacks and whites. The percentage of blacks completing the evaluation process within 1 year increased from 41.0% to 79.8%. Whites also benefited with the rate of evaluation completion within 1 year, increasing from 49.7% to 81.6%. In fact, the educational intervention eliminated statically different rates of evaluation completion between blacks and whites that were present before the intervention. Additionally, evaluation completion increased for all patients, regardless of socioeconomic status.

Whereas several studies have identified the demographic and patient-specific factors that contribute to delay in transplant evaluation referral, fewer have examined the interval between transplant referral and evaluation completion (14). In a study performed at the Hospital of the University of Pennsylvania, it was observed that 200 days were required to list 50% of the evaluated patients, whereas more than 300 days were required to complete evaluations for 75% of the referred patients (13) Patzer et al. (19) observed a rate of completion of work up of 80% at 1 year after their educational intervention. The educational intervention likely improved the likelihood of transplant evaluation completion in more than one way, including
facilitating a higher level of health literacy with regard to the benefits of kidney transplantation, as well as establishing a stronger, more functional, and more productive relationship between the transplant candidates and their coordinators.

There are many kinds of interventions that could improve racial disparities in the pretransplant period. At our center, recognizing that the time from patient referral to transplant listing represented unaccounted waiting time, we introduced a plan for a 1-day, center-coordinated, outpatient evaluation (unpublished data). We found that this eliminated racial and socioeconomic wait listing disparities. Although there are many mechanisms by which this improvement could have been achieved, patient education was likely one of them.

Some important potential limitations of the Quality Improvement study of Patzer et al. are its susceptibility to temporal confounding and to effects related to the disproportionate sizes of the pre- and postintervention groups (the postintervention group is one-third the size of the pre-intervention group). Nonetheless, there is a growing appreciation that many interventions that improve healthcare outcomes may come from comparative effectiveness research (CER), of which randomized controlled trials can be a component but are not a requirement (20). This study is a significant step toward achieving the goals now outlined with the creation of the Patient-Centered Outcomes Research Institute (PCORI), which now guides both the conduct of CER research and the dissemination of CER findings (21). There can be no doubt that this intervention improved transplant health literacy among the participants and enabled them to make choices consistent with their healthcare values, goals, and preferences, all elements central to PCORI.

Although there is limited literature specifically evaluating the effect of an educational intervention on reducing healthcare disparities in kidney transplantation, there are other healthcare areas where such interventions have been successful. For example, counseling and education for behavioral change can be part of a strategy to reduce the cardiovascular disease health disparities seen in blacks (22). Additionally, it has been shown that Latinas have higher rates of breast and cervical cancer than non-Hispanic whites (23). An educational intervention helped reduce the ethnic disparity in cancer screening rates while highlighting the importance of delivering the educational message in a culturally tailored manner (23).

Recent articles by members of the nephrology and transplant community have called for a heightened awareness of the problem of racial inequality in transplant access, with a call to action to create interventions that can address the problem (1,14,24,25). They point out that this initiative must begin at the first recognition of CKD in our patients (1,11,25). Better education of physicians is needed regarding the referral process and the benefits of transplant, particularly in minority patients. This may best be done by members of the transplant community who are familiar with the process (25). Effective communication strategies should be devised for reaching patients with limited general literacy or health literacy skills. Although systems changes are needed to address disparities, there is no reason why individual nephrologists cannot address this issue as a quality improvement initiative in their own practice, as was done by Patzer et al. in their transplant program. Because this type of education and counseling has been shown to significantly affect patient outcomes, such as decreasing time to waitlisting and reducing racial disparities, it is an important component of care for which physicians should be reimbursed.

We in the transplant and nephrology community have a unique opportunity to become leaders in addressing healthcare disparities (24). We also have an obligation.

Disclosures
None.

References


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