Nephrologists’ Perceptions Explain Some of the Demographic Disparities in Transplantation

By Daniel M. Keller

Urban and rural physicians involved in kidney transplantation have different perceptions about various aspects of the procedure, including whether it should be done in the course of end stage renal disease (ESRD) and for which patients. While several socioeconomic, racial, gender, geographic, and logistical factors have been explored previously to account for differences in transplantation rates, researchers at Pennsylvania State University College of Medicine in Hershey investigated physicians’ perceptions about transplantation as another possible explanation for the disparities.

Rural patients in general have a lower rate of being waitlisted or transplanted than their urban counterparts, said Hooman Hajian, MD, MPH, an internal medicine resident at Penn State. Rural African-Americans are less likely to be transplanted than urban blacks or rural or urban whites. Hajian was lead author of a poster session titled “Differences in Perceptions of Transplantation among Urban and Rural Nephrologists in the United States.”

To test the hypothesis that provider perceptions and preferences may be important contributors to disparities in transplantation, Hajian conducted a web-based survey of nephrologists and transplant surgeons (International Survey of Physician Opinions on Renal Transplantation). The 52-question survey asked about various aspects of physicians’ perceptions, level of involvement in kidney transplantation, and various aspects of physicians’ perceptions about transplantation. Of the 1375 physicians completing the survey, 399 practice in the United States (292 urban, 107 rural).

“The urban groups by a wide margin favored preemptive transplantation, considered transplantation as a treatment of choice for elderly patients more than 60 years old, and also transplantation as a treatment of choice across all age groups as an overall option,” Hajian said. Urban physicians also were more likely to favor research on xenotransplantation and were more likely to be in favor of living anonymous donation and paired donation.

Obese Donors Have Good Kidney Function at Six Months and One Year after Kidney Donation; Long-Term Effects Less Clear

Kidney function in obese kidney donors remains strong one year after donation.

Long-term effects on renal function are uncertain, said Peter Reese and his colleagues at the University of Pennsylvania-Philadelphia at a Renal Week session.

As transplant centers work to maximize appropriate live donor transplantation, uncertainties remain concerning the potential risks of accepting kidneys from donors with obesity or other risk factors for future kidney disease. Also unclear are risks obese donors may face during and after the surgical procedure.

To shed light on this issue, Reese and his colleagues studied the use of kidneys donated by live obese and non-obese individuals at transplant centers across the United States. Of the 5300 donors studied, nearly 1200 (22.5 percent) were obese. The authors analyzed 2004–2005 registry data from the Organ Procurement and Transplantation Network.

The investigators found that obesity is common among live donors, especially among black and Hispanic donors, who are also more likely to develop kidney disease. Compared with non-obese donors, obese donors also had higher blood pressure prior to kidney donation. Peri-operative outcomes were not worse for obese donors.

To compare the health of obese and non-obese donors after surgery, the investigators measured blood pressure, hypertension status, and kidney function at six months and one year after the surgery.

Obese donors had slightly higher blood pressure and were more likely to be hypertensive than non-obese donors at follow-up, but they were less likely to have poor kidney function. The study’s major limitation was missing data on donor outcomes at follow-up. Approximately 40 percent of donors had no data on kidney function reported at six months.

Although both urban and rural physicians felt that race and socioeconomic factors were the main contributors to disparities, urban physicians saw age and inner city residence as additional major contributors, while the rural group considered gender and rural residence as contributors to the disparities, Hajian found.

Prior to the study, Hajian thought there might be some difference in perceptions between urban and rural physicians, but the differences were larger than he had expected and covered many aspects of transplantation.

In a related study, Pritika Shrivastava, MD, a nephrology fellow at Penn State, surveyed nephrologists to gauge their perceptions on transplantation as the treatment of choice for the majority of patients with ESRD, on preemptive transplants, and on providing the procedure to the elderly. She segmented the data according to whether respondents were transplant or nontransplant (general) nephrologists. Shrivastava presented her findings at a poster session on “Variations in Nephrologists’ Perceptions of Patient Suitability for Renal Transplantation.”

“We found that transplant nephrologists favored transplant. Preemptive transplant was favored by transplant nephrologists and . . . if the physician was less than 50 years old or . . . in practice less than 10 years,” Shrivastava said. “And for the elderly, again, transplant nephrologists seem to favor it.” All differences were statistically significant at the P<0.005 level or better.

Physicians’ perceptions about patient age and suitability for kidney transplant were also significantly associated with their own age and proportion of time in practice.

“Physicians who were more than 50 years old favored transplant in patients who were more than 60 years old,” Shrivastava said. Compared to physicians ≥50 years old, 50 percent more younger physicians opposed transplant in patients ≥60 years old (OR=1.5; P=0.009). Those in clinical practice for less than 50 percent of their time were 30 percent more likely to oppose transplant in older patients compared to nephrologists in clinical practice more than 50 percent of their time.

Shrivastava concluded that nephrologists’ demographic and practice characteristics influence their perceptions of patients’ suitability for kidney transplantation. Given the differences in perceptions that her study discovered, she acknowledged, “Maybe also it’s indicating that patients should go to transplant nephrologists if they want to be considered for transplant.”