



Published in final edited form as:

Am J Transplant. 2013 February ; 13(2): 247–248. doi:10.1111/ajt.12060.

Measuring the Disparity Gap: Quality Improvement to Eliminate Health Disparities in Kidney Transplantation

R. E. Patzer^{a,b,*} and S. O. Pastan^{a,c}

^aEmory Transplant Center, Atlanta, GA

^bDepartment of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA

^cDepartment of Medicine, Renal Division, Emory University School of Medicine, Atlanta, GA

Health disparities pervade a variety of health outcomes in the United States. Evidence suggests the equality gap is not shrinking for many patient populations, including those of differing age, race, ethnicity and gender. The most recent annual *National Healthcare Disparities Report* found that there were no reductions in disparities in the aforementioned populations for nearly half of 250 health care measures examined in the United States from 2002 to 2008; 40% of these measures disappointingly showed an increase in the disparity gap (1).

In kidney transplantation, racial, ethnic and SES differences in risk factors for kidney disease, the incidence of ESRD, access to kidney disease care, and health outcomes have been well recognized. Minorities and those with lower SES are less likely to access multiple steps of the transplant process, or to receive a living or deceased donor transplant; they also have poor kidney transplant outcomes compared to white ESRD patients. Almost 25 years ago, Kjellstrand et al. first reported race, age and gender disparities in access to kidney transplantation, and called for nephrologists and transplant surgeons to “strive to correct the existing imbalances among transplant recipients” (2). Decades later, we now have a wealth of knowledge regarding causative factors that contribute to racial disparities in access to kidney transplantation. The causes of these disparities are multi-factorial and multilevel, and include SES factors, medical comorbidities, health literacy, cultural beliefs/values and social networks, provider knowledge of transplantation and provider bias, and system-level factors such as policies that result in delays in access or outcomes on the basis of race, ethnicity or SES (3).

Healthy People 2000, 2010 and 2020 identified the elimination of health disparities as a national priority, yet there have been few interventions that specifically measure and demonstrate a reduction of the racial disparity gap among patients with kidney disease, including ESRD (4). The recently released AHRQ report *Quality Improvement Interventions to Address Health Disparities* reviewed the literature from 1983 to 2011 to identify evidence-based quality improvement (QI) interventions designed to reduce disparities in nine different patient populations, including ESRD (as well as asthma, cancer, cardiovascular disease, cystic fibrosis, depression, diabetes, pneumonia and pregnancy) (5). Of 791 papers that underwent full text review, only 14 studies met the inclusion criteria for adequately describing a QI intervention and measuring a potential change in inequity of

© Copyright 2013 The American Society of Transplantation and the American Society of Transplant Surgeons

*Corresponding author: Rachel E. Patzer, rpatzer@emory.edu.

Disclosure: The authors of this manuscript have no conflicts of interest to disclose as described by the *American Journal of Transplantation*.

care. No study was identified that adequately addressed health disparities in the ESRD population by demonstrating a reduction in health disparities as an endpoint.

What efforts have been made to address health disparities in access to kidney transplantation? Certainly major structural changes to the healthcare system have been suggested and implemented. National policy changes, such as the 2003 UNOS allocation policy that eliminated points for HLA-B matching, reduced racial disparities in access to deceased donor kidney transplantation by 23% (6). The proposed allocation change to include time on dialysis in the calculation for kidney transplantation allocation is also expected to decrease the disparity in transplant rates for minorities (7). There are numerous important studies dedicated to improving transplant knowledge, education, access and donor registration (8–10). However, studies of the effectiveness of these important interventions must go one step farther and examine the intervention effect on *disparities reduction*. Does the intervention improve access and outcomes for all races/ethnicities— and thus does not reduce disparities overall—or does the intervention specifically improve outcomes for racial/ethnic minorities compared to Caucasians and reduce the disparity gap? For an intervention to be effective in disparities reduction, the intervention must be *more effective* in the disadvantaged group compared to the advantaged group.

In an attempt to reduce health disparities among ESRD patients, the Centers for Medicare and Medicaid Services ESRD Network 2013 Statement of Work now includes a requirement to measure and reduce health disparities in all ESRD Network activities, including access to kidney transplantation at the dialysis facility level. This is a unique opportunity for the transplant community to work with ESRD Networks to develop QI interventions to directly intervene on the underlying causes of health disparities and eliminate the remaining disparities in kidney transplant access. In order to develop successful QI interventions, these interventions must specifically measure disparity reduction as an outcome, and should use a randomized design or other appropriate concurrent or historical controls. We as researchers should involve community stakeholders, such as ESRD Networks, QI organizations or patient advocacy groups, to ensure that we address the root causes of health disparities and implement sustainable solutions on a health systems level. Academic research institutions and funding institutions like the National Institutes of Minority Health and Health Disparities and the Patient Centered Outcomes Research Institute, are now well situated to engage communities in research through community-based participatory research methods. The findings of the AHRQ report are sobering; they challenge the transplant community to target our intervention efforts to measurably reduce the disparity gap, and to renew our commitment to achieve the ultimate goal of eliminating health disparities in access to kidney transplantation.

References

1. National Healthcare Disparities Report. [Accessed September 28, 2012] 2011. Available at: <http://www.ahrq.gov/qual/nhdr11/nhdr11.pdf>
2. Kjellstrand CM. Age, sex, and race inequality in renal transplantation. Arch Intern Med. 1988; 148:1305–1309. [PubMed: 3288159]
3. Patzer RE, McClellan WM. Influence of race, ethnicity and socioeconomic status on kidney disease. Nat Rev Nephrol. 2012; 8:533–541. [PubMed: 22735764]
4. Asch WS, Bia MJ. Patient education to reduce disparities in renal transplantation. Clinical journal of the American Society of Nephrology : CJASN. 2012; 7:527–529. [PubMed: 22403275]
5. Quality Improvement Interventions to Address Health Disparities. [Accessed September 28, 2012] 2012. Available at: http://www.effectivehealthcare.ahrq.gov/ehc/products/386/1242/EvidReport208_CQHealthDisparities_FinalReport_20120824.pdf

6. Hall EC, Massie AB, James NT, et al. Effect of eliminating priority points for hla-B matching on racial disparities in kidney transplant rates. *Am J Kidney Dis.* 2011; 58:813–816. [PubMed: 21802805]
7. OPTN. [Accessed September 28, 2012] Proposal to substantially revise the national kidney allocation system (Kidney Transplantation Committee). 2012. Available at: (http://optn.transplant.hrsa.gov/PublicComment/pubcommentPropSub_311.pdf)
8. Boulware LE, Hill-Briggs F, Kraus ES, et al. Protocol of a randomized controlled trial of culturally sensitive interventions to improve African Americans' and non-African Americans' early, shared, and informed consideration of live kidney transplantation: the Talking About Live Kidney Donation (TALK) Study. *BMC Nephrol.* 2011; 12:34. [PubMed: 21736762]
9. Sullivan C, Leon JB, Sayre SS, et al. Impact of navigators on completion of steps in the kidney transplant process: a randomized, controlled trial. *Clinical journal of the American Society of Nephrology : CJASN.* 2012; 7:1639–1645. [PubMed: 22798540]
10. Rodrigue JR, Cornell DL, Kaplan B, Howard RJ. A randomized trial of a home-based educational approach to increase live donor kidney transplantation: effects in blacks and whites. *American journal of kidney diseases : the official journal of the National Kidney Foundation.* 2008; 51:663–670. [PubMed: 18371542]