

Community-Based CKD Screening in Black Americans

Keith C. Norris and Susanne B. Nicholas

Clin J Am Soc Nephrol 13: 521–523, 2018. doi: <https://doi.org/10.2215/CJN.02320218>

The test of our progress is not whether we add more to the abundance of those who have much—it is whether we provide enough for those who have too little.

Franklin D. Roosevelt (1937)

CKD, including ESKD, is a growing national public health problem that has become widely recognized as an important cause of premature cardiovascular (CV) morbidity and mortality that disproportionately afflicts minorities and low-income persons (1). The combination of a greater likelihood of being socioeconomically disadvantaged and a higher prevalence of APOL1 CKD risk gene variants contributes to persons of African descent having some of the highest rates of CKD and ESKD in the United States (1). In general, an important reason to consider CKD screening and surveillance programs is to identify patients and communities who are at a greater risk for ESKD and premature CV events to implement preventive and early interventions strategies. However, a major area of debate is whether screenings should be conducted at all and if so, what type (2–4). A report from the US Preventive Services Task Force (USPSTF) found insufficient evidence to assess the balance of the benefits and harms of routine screening for CKD in asymptomatic adults (2). This report and the lack of compelling cost-effectiveness data led the American College of Physicians to recommend against routine population-level screening practices (2). They also noted potential harms associated with screening for CKD, such as false positive results with attendant unnecessary testing and treatment and inappropriate disease labeling affecting insurability and increasing the cost of medical insurance for a given patient. By contrast, false negative results may create a misleading sense of reassurance, leading to a delay in needed early interventions when the actual disease and its risk for progression are present (4). There may be hidden costs associated with screening for CKD, including follow-up of abnormal results, potential unnecessary treatment, and potential complications or adverse effects of such treatments (4).

However, using a Markov decision analytic model to compare a strategy of annual screening with no screening, Boulware *et al.* (5) found that early detection of urine protein to slow progression of CKD and decrease mortality could be a cost-effective strategy

if selectively directed toward high-risk groups or conducted at infrequent intervals. Along these lines, the National Kidney Foundation and that Renal Physicians Association have recommended the screening of individuals at high risk for CKD (6). The early identification and management of CKD can (1) limit or prevent CKD progression, (2) ensure appropriate drug dosing, (3) limit drug-related nephrotoxic injury, (4) minimize the risk of drug-related and other causes of AKI, and (5) reduce the increased rate of CV events in patients with CKD (3). Of note, the USPSTF report noted that routine CKD screening in asymptomatic at risk adults actually improved clinical outcomes and that there was no evidence of its harm (7).

Despite the debate over general screening approaches, there continues to be support for targeted screenings for populations at high risk for CKD (3,6). However, do all high-risk populations want to be screened? This is especially true for blacks in the United States due to the historical and persisting institutionalized racism leading to mistrust and disengagement. In this issue of the *Clinical Journal of the American Society of Nephrology*, Umeukeje *et al.* (8) report on results from a series of interviews to gain a better understanding of the current sense of barriers and facilitators (Table 1) to the likelihood of blacks participating in community-based CKD screenings. Study participants included a mixture of community members—some who participated in prior CKD screenings and some who did not. Importantly, they approached this question using an established theoretical construct, the health belief model, which examines six key aspects of patients' health beliefs: perceived seriousness, susceptibility, barriers versus benefits, and threat as well as self-efficacy and cues to action. Guided by the Health Belief Model, they found several consistent themes. Study participants suggested that culturally sensitive provider education and stakeholder engagement are critical to increase trust, decrease fear, and maximize participation. Given the high prevalence of CKD and CKD risk factors in the black community, early identification of these conditions was viewed as important. The issue of mistrust of health care system stems from a legacy of negative personal experiences of blacks with the health care system, such as differential treatment and racism (personally mediated

Department of Medicine, David Geffen School of Medicine at the University of California, Los Angeles, California

Correspondence:

Dr. Keith C. Norris, Department of Medicine, David Geffen School of Medicine at the University of California, 911 Broxton Avenue, Suite 103, Los Angeles, CA 90024. Email: kcnorris@mednet.ucla.edu

Table 1. Major domains of barriers and facilitators of community screening for kidney disease in blacks

Barriers	Facilitators
<p>Knowledge themes</p> <p>Limited understanding of kidney disease Poor understanding of risk factors Low health literacy No belief that screening has benefits Lack of kidney disease education and testing from clinicians Ignorance is bliss</p> <p>Cultural issues</p> <p>Low trust in health care activities Limited value for health Strong spirituality beliefs Fear of side effects, ego, and machismo</p> <p>Emotions</p> <p>Explicit kidney disease–related fear Embarrassment and privacy</p> <p>Environmental/socioeconomic issues</p> <p>Financial burden Lack of convenience Poor or trivial advertisement Lack of onsite incentives</p>	<p>Increased knowledge</p> <p>Kidney disease education and testing from providers</p> <p>Culturally sensitive strategies</p> <p>Influence of church leaders Positive peer pressure Integration of small group sessions Increased participation from younger people</p> <p>Enhanced communication strategies</p> <p>Critical role of physicians as communicators Tailored mode of communication Communication of relevant statistics and information</p> <p>Convenience</p> <p>Timing Location Onsite benefits</p>
Modified from ref. 8, with permission.	

and institutional), which until recently, was somewhat diminishing but is now more directly on the minds of the black community. Similar to black participation in research studies, engaging minority participants in health screenings is more likely if culturally informed retention strategies are used, such as partnering with community organizations (*e.g.*, churches and barbershops), including investigators and staff from the same targeted communities as participants, and retaining the same staff/interviewers over time to ensure continuity (9).

A potential weakness of this study, as with most focus group projects, is the concern of generalizability. In addition to the themes being consistent with the barriers and facilitators to research participation reported by George *et al.* (9), they are also consistent with other reports of factors influencing similar types of screening in blacks. Greenblatt *et al.* (10) recently explored reasons influencing receptivity among 194 older minorities (72 blacks) to hypertension and diabetes screening, two major CKD risk factors, in the dental setting. They overall found similar findings, such as the role of mistrust, perceived lack of need, anxiety, *etc.*, reinforcing the generalizability of the work by Umeukeje *et al.* (8).

In summary, Umeukeje *et al.* (8) provide a timely and well balanced set of recommendations capturing key barriers and facilitators to consider in advancing CKD screening that are simultaneously important system and population health considerations to engage and attempt to build trust for blacks with the health care system. Ongoing authentic engagement with respect and partnership can help to attenuate the mistrust and activate black communities to take a more proactive stand in their health. The issue of screening for health conditions, including CKD, has fueled multiple debates over the last several years. A major challenge is trying to balance conflicting studies on screening cost-effectiveness as well as the potential untoward consequences, such as overdiagnosis, which may lead to increased stress and anxiety for patients, or false negative tests, which can

contribute to a misleading sense of reassurance when the actual disease and its risk for progression are present. However, a better understanding of the prevalence, risk factors, and distribution of CKD in black communities can play an important role in advancing population-level health strategies. Thus, population-level screening for multiple cardiorenal and metabolic factors or targeted CKD screenings for high-risk individuals seem to have broad support from many organizations. Using the principals of engagement outlined by Umeukeje *et al.* (8), they should be implemented in high-risk CKD communities and especially, communities of African descent in the United States, where there is often the dual risk of exposure to adverse social determinants of health coupled with the high prevalence of at-risk CKD gene variants.

Acknowledgments

K.C.N. is supported by National Institutes of Health grants UL1TR000124 and P30AG021684. S.B.N. is supported by National Institutes of Health grants UL1TR000124 and UL1TR001881.

The content is solely the responsibility of the authors.

Disclosures

None.

References

- Nicholas SB, Kalantar-Zadeh K, Norris KC: Socioeconomic disparities in chronic kidney disease. *Adv Chronic Kidney Dis* 22: 6–15, 2015
- Kliger AS: Screening for CKD: A pro and con debate. *Clin J Am Soc Nephrol* 9: 1987, 2014
- Berns JS: Routine screening for CKD should be done in asymptomatic adults... selectively. *Clin J Am Soc Nephrol* 9: 1988–1992, 2014
- Qaseem A, Wilt TJ, Cooke M, Denberg TD: The paucity of evidence supporting screening for stages 1–3 CKD in asymptomatic patients with or without risk factors. *Clin J Am Soc Nephrol* 9: 1993–1995, 2014

5. Boulware LE, Jaar BG, Tarver-Carr ME, Brancati FL, Powe NR: Screening for proteinuria in US adults: A cost-effectiveness analysis. *JAMA* 290: 3101–3114, 2003
6. National Kidney Foundation: Renal Physicians Association Urge Screening for Those at Risk for Kidney Disease. Available at: <https://www.kidney.org/news/newsroom/nr/NKF-RPA-Urge-Screening-for-atRisk-KD>. Accessed February 9, 2018
7. Moyer VA; U.S. Preventive Services Task Force: Screening for chronic kidney disease: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med* 157: 567–570, 2012
8. Umeukeje EM, Wild M, Maripuri S, Davidson T, Rutherford M, Abdel-Kader K, Lewis J, Wilkins CH, Cavanaugh K: Black Americans' perspectives of barriers and facilitators of community screening for kidney disease. *Clin J Am Soc Nephrol* 13: 551–559, 2018
9. George S, Duran N, Norris K: A systematic review of barriers and facilitators to minority research participation among African Americans, Latinos, Asian Americans, and Pacific Islanders. *Am J Public Health* 104: e16–e31, 2014
10. Greenblatt AP, Estrada I, Schrimshaw EW, Metcalf SS, Kunzel C, Northridge ME: Acceptability of chairside screening for racial/ethnic minority older adults: A qualitative study. *JDR Clin Trans Res* 2: 343–352, 2017

Published online ahead of print. Publication date available at www.cjasn.org.

See related article, “Black Americans’ Perspectives of Barriers and Facilitators of Community Screening for Kidney Disease,” on pages 551–559.