

Addressing Kidney Health Disparities among Rural Populations

By Kiri Bagley and Brianna Borsheim

Twenty percent of Americans live in rural areas. Many face health disparities caused by geographic isolation, transportation limitations, and a lack of access to local specialty health care (1, 2). Americans living in rural areas also are more likely to be uninsured, to have lower rates of access to preventive health services, and to engage in unhealthy behaviors (such as tobacco use) (2–5). They also have greater incidence rates of potentially preventable diseases, including heart disease and stroke, and higher mortality rates than their urban counterparts (2, 4, 5). Likewise, children living in rural America experience higher rates of poverty and obesity and are less likely to obtain preventive health and dental examinations (6). Rural hospital closures pose another obstacle: increasing patients' travel distances to receive medical services (7). These closures reached a record high in 2020, when the COVID-19 pandemic-related financial strain compounded underlying hardships that rural safety-net institutions already faced (8, 9).

These inequities have significantly impacted kidney health, as evidenced by the greater incidence of kidney failure in rural areas (10). People with chronic kidney disease (CKD) and kidney failure who live in rural areas have difficulty accessing nephrology care. A recently published systematic review by Scholes-Robertson et al. (11) elaborates patient and caregiver perspectives on access to kidney replacement therapy in rural communities. In 18 studies of populations worldwide, rural patients with CKD identified numerous difficulties in accessing care. These included the financial and scheduling burdens incumbent in traveling for care, separation from family and community while receiving care, and other associated sacrifices. Additionally, rural patients frequently reported discomfort with health care systems, stemming from an unfamiliarity with the systems' language and cultural norms. Although the review by Scholes-Robertson et al. (11) included studies from 8 countries (including the United States), a study of rural North Carolinians' perspectives about kidney disease reflected similar themes (12). This concordance of findings suggests that kidney disease presents a profound challenge for affected rural populations, domestically and globally.

The COVID-19 pandemic has amplified these rural inequities (13). In addition to rural hospital closures, limited access to home health and broadband presents ongoing barriers for those living in rural America. Rural dialysis centers' lower patient volumes and profit margins suggest they may be more vulnerable to closure, leaving rural patients to bear a significant travel burden if their home dialysis centers close. Moreover, the disruptions in transportation access for rural dialysis patients during the pandemic further highlight their vulnerability to care discontinuity (10, 14). Caregivers in rural communities, also feeling the impact of the COVID-19 pandemic, are more than twice as likely to report increases in caregiver burden than their urban counterparts (15).

Studies have shown mixed findings when assessing outcomes for patients with CKD and kidney failure in rural areas (16–22). This may be, in part, because rural populations, although less heterogeneous than urban populations,

are diverse. As such, it is important to recognize that racial and ethnic disparities also occur within rural communities (23). For example, among rural patients with CKD, patients of Black race are less likely to receive early nephrology and dietitian care than their White counterparts (18). It is important to identify and address the racial or ethnic disparities within rural communities, in addition to addressing the overall rural-urban disparities between communities.

Rural populations, like many marginalized and underserved groups, are often overlooked. This article highlights the susceptibility, social vulnerability, and substantial health disparities experienced by people with CKD and kidney failure living in rural communities. Currently, there are gaps in the literature investigating rural-urban health disparities. To combat these disparities and inform future policy decisions, additional research assessing the efficacy of different mitigation strategies will be critical. Additionally, improving rural population health is essential to ASN's commitment to health equity and its focus on engaging with social determinants of health to target upstream factors and root causes of disparities (24). As such, rural populations must be a priority in research. Policymakers should continue exploring innovative policy solutions to improve rural health. Clinicians, investigators, and the broader nephrology community should continue to invest in progress toward high-quality care for all. ■

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