

# A persisting parallel universe in diabetes care within America's capital

David Kerr,<sup>a\*</sup> McKenna Aram,<sup>a</sup> Keesha M. Crosby,<sup>b</sup> and Namino Glantz<sup>a</sup>

<sup>a</sup>Sansum Diabetes Research Institute, 2219 Bath Street, Santa Barbara, CA 93105, USA

<sup>b</sup>Tri-Guard Risk Solutions, Fairfax, VA, USA

In the United States (U.S.), changes in healthcare decision making are a result of the acquisition of new knowledge from a spectrum of sources. These sources span randomized clinical trials (RCTs) to real-world observational evidence (RWE). Currently, acquisition of data begins later in the life course of both the individual and the disease - when a diagnosis occurs or a cluster of risk factors for developing diabetes is recognised. Information on the social gradient of a community – and an individual's position on that gradient – is less often discussed, let alone measured. The social gradient in health refers to the phenomenon whereby the lower an individual's socioeconomic position, the worse their health.<sup>1</sup> This inverse association between social class and health plays out across the entire community. An individual's position in this downward social gradient begins early in life and ascending the social ladder can be a major challenge. Reliance on healthcare “solutions” based solely on easily-measured biological data while failing to consider population-level social gradients will perpetuate the status quo to the detriment of both individuals and communities facing a disproportionate burden of diabetes.

A microcosm of the impact of a social gradient in the U.S. today can be seen in the nation's capital within a stone's throw of the seats of legislative power. Washington, D.C., is divided into 8 wards spanning 6.5 miles. Despite geographic proximity, wards vary by race and by clustering of social factors known to impact diabetes care. For the Black community of Washington D.C., socioeconomic status, neighborhood and built environment, health access and social context are perpetual drivers of the progression of diabetes.<sup>2</sup> For example, Wards 7 and 8, home to overwhelmingly Black constituents - approximately 93% and 90% respectively - have rates of diabetes 1.5 to 5 times greater than Wards 2 and 6, which are populated by a much lower proportion of Black residents. These dynamics repeat across the social determinants, revealing a consistent downward social gradient from the healthy white wards to the comparatively unhealthy Black Wards (Table 1).

With the recent pivot to virtual diabetes care, existing disparities are likely to be exasperated by the high rate of

digital exclusion. Digital literacy and internet connectivity are “super” social determinants of health because they are prerequisites for addressing the other determinants.<sup>9</sup> The distribution of internet access, and computing hardware also varies across Washington, D.C., wards. As an example, 45% of households in Ward 7 and 48% in Ward 8 have broadband subscriptions, compared to 70% of households across Washington, D.C.<sup>8</sup> Many ward residents are without broadband access. These ward residents are highly dependent on smartphones with “pay as you go” or restrictive data plans if not free government-provided cellular phones with only text capabilities.

Disproportionate diabetes rates and inequities in social determinants, including a digital chasm, between Wards 2 and 6 – home to a predominantly white population including lawmakers – and adjacent Wards 7 and 8 – populated predominantly by Black families – form a parallel universe in diabetes care within the nation's capital. Urban minorities with diabetes have few options to ascend the social gradient ladder, and Black communities are especially impacted. These same populations, socioeconomically deprived on many levels from income to education, are dependent on professionals to deliver their care from poorly resourced centers and are embedded in environments that are diabetes-promoting and sustaining. Consequently, diabetes has become a racialised disease with deeply embedded structures perpetuating inequity.<sup>10</sup>

Political and healthcare leaders working in sight of this diabetogenic environment have thus far turned a blind eye to policy interventions to achieve equity in the America's capital. Washington, D.C., a microcosm of nationwide social gradients so close to the national seat of power, suggest that the drivers of inequity are deep-rooted and socioeconomic based. There is an imperative to link social support and medical care with the eradication of poverty and the promotion of environmental justice.

## Contributors

DK and KMC came up with the idea for the article. MA and NG sourced the data and created the Table. All authors were involved in drafting and editing the manuscript. All authors approved the final version prior to submission.

\*Corresponding author.

E-mail address: [dkerr@sansum.org](mailto:dkerr@sansum.org) (D. Kerr).

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Variable	Ward 2	Ward 6	Ward 7	Ward 8
<b>Population</b>	92,809	103,197	80,669	80,517
<b>Race</b>				
White	69.2%	49.5%	3.1%	4.3%
Black	13.3%	38.8%	91.7%	91.8%
<b>Clinical outcomes</b>				
Obesity (% adult population)	12.5%	19.1%	39.9%	41.9%
Type 2 diabetes (% adult population)	3.6%	9.1%	13.4%	19.7%
<b>Social determinants of health</b>				
Families below the poverty line	5.9%	7.90%	23.3%	26.6%
Education (adults, less than high school graduation)	4.3%	6.60%	13.3%	13.3%
Supermarkets/grocery stores per 100,000 population	12	14	2	1
Pharmacies per 100,000 population	39	24	9	15
<b>Health insurance (adults)</b>				
Public insurance	13%	15%	34%	45%
<b>Usual source of healthcare</b>				
Hospital outpatient/emergency department	7%	8%	12%	13%
Community health center/public clinic	4%	5%	19%	20%

**Table 1: Washington, D.C., wards 2, 6, 7 and 8 by total population, race, clinical outcomes, social determinants of health, healthcare access, and digital access.**<sup>3-8</sup>

## Declaration of interests

The authors have no declarations to make.

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