

## EDITORIAL COMMENT

# Why Heterogeneity Matters

## Prevention Implications of Excess Diabetes-Related Deaths in Asian American Subgroups\*



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In 2021, more than 5 million deaths were attributed to diabetes around the globe.<sup>1</sup> Although there is some evidence to suggest that diabetes incidence may have plateaued in the United States,<sup>2,3</sup> diabetes inequities across race/ethnicity and other axes of social stratification persist.<sup>4,5</sup> In the case of Asian Americans, our understanding of diabetes risk and cardiovascular health more generally has only recently emerged, in large part because scholars have drawn attention to significant research gaps for this population.<sup>6,7</sup> In fact, it was only in 2010 that the NHANES (National Health and Nutrition Examination Survey), one of the nation's largest surveillance systems, began oversampling Asian Americans, allowing a wide range of investigations into the health and well-being of this fast growing segment of U.S. adults, including some work advanced by our research team.<sup>8,9</sup> Nevertheless, research gaps have remained in identifying who is most at risk for diabetes (or other cardiovascular risk factors) and how to target prevention efforts for the varied group of individuals classified as Asian American. Currently, Asian Americans constitute more than 22 million individuals, and the population is expected to double to more than 46 million by 2060.<sup>10</sup> The 6 largest groups in the United States include those of Chinese (21%), Indian (21%), Filipino (19%), Vietnamese (10%),

Korean (9%), and Japanese (7%) origin. Each subgroup of Asian Americans represents varied political histories and social, economic, and cultural backgrounds that can influence health in distinct ways.<sup>10,11</sup> Thus, understanding variation in cardiovascular health and risk factors in Asian American subgroups can support the development of more effective prevention efforts.

In this issue of *JACC: Asia*, the study by Shah et al<sup>12</sup> fills these research gaps and advances our understanding of diabetes risk in Asian American subgroups.<sup>12</sup> Specifically, the investigators examined diabetes-related mortality from all causes and for cardiovascular disease-related mortality, where diabetes was a contributing cause, for the 6 largest groups of Asian Americans. The investigators used publicly available mortality data from the Centers for Disease Control and Prevention's Wide-Ranging Online Data for Epidemiologic Research to understand diabetes mortality for the period from 2018 to 2021. The investigators note that they restricted their analysis to this study period because it was the earliest date for which data on Asian American subgroups were available, thereby reminding us of the critical role that national surveillance systems can play in identifying health patterns of the U.S. population. These investigators have paved the way for future studies to build on this evidence and consider how diabetes risk patterns change over time for Asian Americans. The study is also one of the first to show substantial variability in diabetes-related mortality among subgroups of Asian Americans. Specifically, Shah et al<sup>12</sup> show that Filipinos had a nearly 2-fold increased risk for diabetes-related death compared with other subgroups and with non-Latino Whites. This increased risk was evident for both men and women and regardless of the cause of diabetes-related mortality. In secondary analyses, the investigators found that diabetes-related mortality

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when COVID-19 was listed as a contributed cause was also highest among Filipinos as well as Vietnamese individuals.

Clearly the findings of Shah et al<sup>12</sup> indicate the importance of assessing heterogeneity among racialized groups living in the United States if we want to develop effective public health and clinical interventions. However, Shah et al<sup>12</sup> move beyond providing general interpretations of this heterogeneity and call our attention to the importance of broader social, cultural, and clinical contexts for interpreting results and considering prevention efforts. Their first cautionary point is that Asian American ethnic groups, or subgroups, represent varied sociopolitical histories of integration, or lack thereof, in the United States. And it may well be that this historical background explains the increased burden of death (and antecedent disease) observed in some groups. For instance, the investigators found consistently higher risk for diabetes among Asian Americans of Filipino origin, although, on average, this group has high levels of education and socioeconomic position. However, there is a long history of colonialism in the Philippines that began with Spain and ended with the U.S. invasion for close to 50 years, until the country gained its independence in 1946. These periods of colonialism impose changes in how societies operate via structural conditions (eg, monopolies on food systems) as well as cultural norms (eg, adopting lower quality diets).<sup>13</sup> In its more contemporary manifestation, as the investigators note, Filipinos have also filled occupational gaps in the health care sector in the United States, potentially creating work conditions that are unstable and demanding. This sociopolitical history of Filipinos in the United States is coupled with the rising acts of violence against people of Asian American origin<sup>14-16</sup> and immigrants more generally.<sup>17</sup> The toll of racism on the nation's health warrants more attention in cardiovascular health research.<sup>18</sup>

Last, these findings raise intriguing questions on how to develop effective prevention and treatment efforts. In terms of prevention, more targeted and culturally tailored efforts are needed to identify individuals who are at risk for developing diabetes via screening for prediabetes, for example. Similarly, we know from other national data that anywhere from 25% to 36% of adults are unaware of their diabetes status,<sup>19</sup> and getting groups of individuals, in this case Filipinos, diagnosed and into proper treatment is urgently needed. Other research has also suggested a higher frequency of select diabetes phenotypes because of poor "insulin secretion," for example, that may explain the higher risk for diabetes at lower body mass index for Asian Indians.<sup>20</sup> Further research is needed to determine if this mechanism is operating in Filipinos (or other Asian American subgroups) and how best to screen for these suggested phenotypes to identify groups most at risk and develop appropriate treatment options.

Overall, Shah et al<sup>12</sup> have provided much needed data on differences in diabetes mortality across Asian American subgroups. Equally important, they raise new questions for cardiovascular health researchers to consider if we are to reduce disparities and achieve health equity.<sup>21</sup>

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