



Invited Commentary

Invited Commentary: Toward a Better Understanding of Disparities in Overdose Mortality

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The United States has been in the grip of an epidemic of drug overdose mortality for the past few decades, and deaths from drug overdose increased dramatically during the coronavirus disease 2019 pandemic. Townsend et al. (*Am J Epidemiol.* 2022;191(4):599–612) add to the growing literature highlighting the steep rise of drug overdose mortality among racial and ethnic minorities in the country. Using data from National Center for Health Statistics death certificates and employing principles of small-area estimation and a Bayesian hierarchical model to stabilize the estimates of smaller racial/ethnic groups and states, the authors found that combinations of opioid/stimulant drug overdose deaths saw a steep increase among racial and ethnic minorities, particularly Black Americans, between 2007 and 2019. The results from their analysis highlight the need to change the narrative around opioid deaths, to invest in targeted policies that address the growing burden of drug overdose faced by racial/ethnic minorities, and the importance of using innovative methods to address limitations to data disaggregation. The paper also demonstrates the importance of a holistic view of the challenges to the health of the American public.

health disparities; opioids; overdose; stimulants

Abbreviation: COVID-19, coronavirus disease 2019.

Editor's note: *The opinions expressed in this article are those of the authors and do not necessarily reflect the views of the American Journal of Epidemiology.*

The United States has been in the grip of an epidemic of drug overdose mortality for the past few decades. Between 1999 and 2017, opioid-involved drug overdose mortality saw a more than 4-fold increase (1). Deaths from drug overdose plateaued during 2019 for the first time in a decade, only to rise dramatically during the coronavirus disease 2019 (COVID-19) pandemic, when overdose mortality rose by more than 30% again in 2020 (2, 3). Preliminary analyses of the 2021 data indicate an even higher mortality rate (4). During the first year of the COVID-19 pandemic, about 100,000 Americans died from drug overdose; by way of comparison, that is more than 50% higher than annual deaths from acquired immune deficiency syndrome (AIDS) at the

peak of the human immunodeficiency virus/AIDS epidemic in the United States (5, 6).

Despite substantial national stigma against drug use and its attendant consequences, as overdose deaths rose there was a commensurate increase in attention focused on the problem, including several federal and state-based efforts aimed at mitigation (7). The public conversation around drug overdose has continued, largely, to consider opioids overdose a White American problem, despite growing evidence that rates of fatal overdose were increasingly growing faster among Black and Hispanic Americans (8). This therefore suggests an important role for science—to document clearly and effectively evolving trends in the overdose epidemic with a goal of pointing the way to efforts that can mitigate it. In this work, Townsend et al. do just that (9).

Townsend et al. (9) assessed state-level geographic trends in combinations of opioid and stimulants overdose mortality across racial and ethnic groups between 2007 and 2019. The authors used imputation to predict whether an unclassified overdose in the National Center for Health Statistics death

certificates involved any of the substances they assessed in their analysis. They also used the American Community Survey 1-year estimates to estimate overdose mortality per population. This study found that compared with White Americans, Black Americans experienced severe and worsening overdose mortality from combinations of opioids and stimulants, either cocaine or methamphetamine and other stimulants (MOS), during the study period. This trend was particularly evident in Eastern states. Moreover, mortality due to opioid/cocaine overdose increased sharply among Hispanic and Asian Americans. The analysis also showed geographic and racial/ethnic heterogeneity in trends. For example, while trends in MOS/opioid mortality remained relatively comparable across regions, there was a particularly steep increase among Black Americans in the Midwest and northern and central Appalachia. There were also several outlier states. For example, while Hispanic Americans experienced steep increases in overdose mortality due to cocaine/opioids in Indiana, Louisiana, and Maine, non-Hispanic White and Black people in those states did not experience such a trend (9).

To our mind, this paper highlights 3 important areas for future scholarship and interventions: the need for changing the narrative around opioid deaths, the importance of addressing limitations to data disaggregation, and the need for a holistic view of the challenges to the health of the American public.

CHALLENGING THE NARRATIVE AROUND THE OPIOID CRISIS

This study adds to the literature that documents the dramatic increase in overdose mortality due to combinations of opioids and stimulants. Importantly, the paper adds to the growing literature that opioid-related overdose mortality is having an increasingly devastating effect on Black Americans and other racial and ethnic groups (2, 8, 10–12).

As Townsend et al. note, several factors shaped by structural racism may contribute to these trends (9). These include the general conditions that Black and Hispanic Americans may have less access to treatment for substance use disorder than White Americans, may be more likely to live in low-resource communities with limited access to resources, and may have more mistrust in medical systems that have inadequately addressed their concerns over time (8, 12).

A persistent framing of opioid-related overdoses as an issue that predominantly affects White Americans can thus limit our collective ability to develop efforts to mitigate the crisis among the groups that are increasingly affected by it. Papers such as the work of Townsend et al. then go some way towards shifting the narrative and highlighting the need for geographically targeted interventions. Such interventions can close the gap that racial and ethnic minorities face in health-care access for substance use disorders (e.g., harm reduction interventions) while addressing the longstanding, and rightful, mistrust minorities have towards a system that often used a criminalizing, rather than a public health, approach to address substance use disorders among racial/ethnic minorities in the past.

ADDRESSING LIMITATIONS OF EXISTING DATA

One of the challenges that the literature has faced in better documenting geographic and racial/ethnic heterogeneity in the overdose epidemic has been limited availability of data that allow for accurate estimates of small samples. To overcome this challenge, Townsend et al. used principles of small area estimation and a Bayesian hierarchical model, which allowed for information-sharing between groups, to stabilize the estimates of smaller racial/ethnic groups and states. This approach enabled the authors to show heterogeneity of the results by states and race/ethnicity.

Innovative methodological approaches to address limitations to existing data are an important adjunct to approaches to guide effective policy responses, as the authors note (9). This may be particularly important in the United States due to the decentralized nature of the health-care system and policy jurisdictions and the relatively limited centralized data-gathering mechanisms. In addition to demonstrating which groups are most affected by a condition, the approach used by Townsend et al. can also help identify groups that may most benefit from preemptive strategic resource investment. For example, as the authors note, this paper can serve as an early warning that opioid/stimulant mortality may be worsening among Hispanic Americans and Asian Americans and Pacific Islanders.

The need for better surveillance approaches and the adoption of innovative methodological approaches for data disaggregation where data are not readily available is heightened by the COVID-19 pandemic. The pandemic has worsened many of the US social, economic, and health indicators that were disproportionately evident among racial and ethnic minorities. This suggests that the widening health inequities observed during the time period of the Townsend et al. study may have widened even more over the past 2 years and will continue after the COVID-19 pandemic. A recent study, for example, found that American Indian/Alaska Native Americans had the highest rate of overdose mortality in 2020 of any racial/ethnic group, and for the first time since 1999, Black Americans had the largest percentage increase in overdose mortality rates in 2020, overtaking the rate among White Americans (12). This strongly suggests that, in the long-term, there is a need to invest in collecting suitable geographically disaggregated data for different racial and ethnic groups that can allow us to monitor these trends, so that we may intervene as necessary.

A HOLISTIC VIEW OF THE CHALLENGES TO THE HEALTH OF THE AMERICAN PUBLIC

The COVID-19 pandemic has dominated, rightly, the research and policy landscape in the United States over the past 2 years. This paper and other efforts that have documented worrisome increases in overdose mortality provide insights into the range of challenges facing the health of the US population. It is important that we recognize that the tragic toll of the pandemic is not restricted only to COVID-19-related deaths, which currently are approaching

1 million. The consequences of the pandemic also include deaths from other conditions like drug overdose, and all need to be the focus of public health attention.

The overall trend in declining life expectancy in the United States should be a clarion call to redouble focus on public health efforts that are comprehensive and encompass causes of death that extend well beyond COVID-19. Unfortunately, as the current COVID-19 wave wanes in the United States, the consequences of other health conditions will likely remain with us for years to come. This points to 3 potential actions. First, there is a need to invest more in scholarship and action that aim to address the foundational causes of health. This requires reckoning with the lack of investment in economic and social systems that have led to the United States being uniquely vulnerable in the face of the COVID-19 pandemic, as well as consistently having worse health indicators compared with peer countries. Second, an important area to focus on is addressing the structural racism that continues to shape health outcomes. Many of the social and economic injustices in the United States are due to centuries of laws, practices, economic systems, and societal norms that discriminated against racial/ethnic minorities, particularly Black and Native Americans (13).

Third, there is a need to recalibrate and ensure that other causes of deaths are the focus of scholarship and policies commensurate with their burden. In 2020, there were well above 10,000 publications related to COVID-19, about 6% of all articles indexed on PubMed (14). A PubMed search showed that by February 2022, the *American Journal of Epidemiology* published 61 COVID-19-focused articles, constituting 8.5% of the articles published by the journal since 2020. The current focus on COVID-19 creates the challenge of trying to extract, from the single-minded focus on one disease, benefits that can extend more broadly to create health in the long-term. This is challenging because, once established, funding and publishing practices develop substantial inertia that limits the possibility to change or expand focus (15). This suggests that it is well worth being deliberate about the attention we are paying to COVID-19 to mitigate the full impact of the pandemic, as well as the efforts to tackle other challenges that threaten the health of populations now and in the coming years.

FUTURE DIRECTIONS

Townsend et al. have added to the growing literature on drug overdose in the United States, pointing to investments needed to mitigate the rise in overdose mortality, particularly among racial/ethnic minorities. The paper also highlights the need for data disaggregation and the role of innovative methods to address small-sample-sizes limitations. This suggests that it is well worth being deliberate about investing in scholarship and efforts to mitigate both the full impact of the pandemic and the other challenges that threaten the health of populations now and in the coming years.

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