A National Tracking System for Nonfatal Drug Overdoses

The Centers for Disease Control and Prevention (CDC) estimates that the nation experienced approximately 107,600 overdose deaths in 2021. This tragic figure demands a vigorous, data-driven, and effective response. President Biden’s recently released inaugural National Drug Control Strategy (NDCS) lays out a comprehensive approach to reduce overdose deaths. It calls for efforts to expand access to evidence-based prevention, harm reduction, treatment, and recovery support services and emphasizes the need to reduce the supply of illicit substances. The NDCS also calls for a major refocusing of data collection efforts to more effectively develop, implement, and evaluate these services. This Viewpoint describes current data gaps, needed actions, and the national benefits of better data systems focused on substance use.

Data Gaps Have Consequences
The consequential lack of real-time data for fatal and nonfatal overdoses in the US undermines the ability to respond accountably and restricts the potential to understand the effects of actions and investments. The NDCS recognizes that to implement data-driven responses to the overdose epidemic, collection and analysis must be substantially improved. Simply put, current national data systems have not kept up with the scale of the overdose epidemic and lack the timeliness, scope, and precision required to craft an optimally effective national response.

A critical predictor of a future fatal overdose is a history of nonfatal overdose. Efforts must immediately focus on building systems to assess nonfatal overdoses nationally and find ways to operationalize these data in the real-time deployment of public health and public safety resources. For each overdose death, there are multiple nonfatal overdose occurrences. In 2017, an estimated 967,600 patients with nonfatal drug overdoses were treated in emergency departments in the US. However, this is a considerable underestimate of the number of nonfatal drug overdoses because some persons who experienced drug overdose did not seek emergency department care or perhaps interact with any part of the health care system.

State-level data, when reported, support the assertion that fatal overdoses are far outnumbered by nonfatal ones. For instance, during December 2021, Maine reported 51 fatal overdoses and 718 nonfatal ones. Each nonfatal overdose is an opportunity to save a life, but only a fraction of persons who experience a nonfatal overdose are able to access relevant follow-up treatment. For each person who experiences a nonfatal overdose, it is vitally important that medical and public health systems ensure meaningful access to critical medical, behavioral, and social services and evaluate whether these services are successful in achieving the intended health outcomes. This is especially true for persons in vulnerable life circumstances that may place them at heightened risk for overdose and lack of needed services (eg, postincarceration).

For all persons who experience nonfatal overdose, it is important at a population level to understand the epidemiology of patterns of overdose, especially health disparities and the social determinants of these inequities. At the individual and the population level, nonfatal overdose occurrences in the US represent an opportunity for immediate, multilevel action to avert morbidity, prevent mortality, and build health equity. Given the complex racial and ethnic disparities in substance use disorder, and drug treatment needs and access, it is important to gather high-quality, actionable, nonfatal overdose data to assess disparities underlying this metric as well.

Given the consequences of fatal and nonfatal drug overdoses in the US, it is essential to build the necessary data system while taking urgent actions to prevent overdoses and save lives in the near term.

Needed Actions
To address these gaps, the NDCS calls for establishment of new data systems and analytic methods to meaningfully address substance use. It also lays out targeted actions to strengthen existing data systems, establishing new data systems and analytic methods to fill gaps, and enhancing the utility of drug data for policymakers, researchers, health care professionals, and persons with lived experience with substance use.

The NDCS highlights the desirability of making nonfatal overdose cases a notifiable condition so that national reporting may be more comprehensive and timely. Such data systems must incorporate the best principles of sound public health surveillance (including strategies for gathering fine-grained data yet protecting personal privacy). Furthermore, the more complete the nonfatal overdose data system becomes, the more critical it is that the data systems be as transparent and accessible as possible for all persons with a need to use the data to make individual-level, health care sector, and public sector programmatic and policy decisions.

However, because the public health system already has significant stresses related to the COVID-19 pandemic, building such a national reporting system for nonfatal overdose occurrences will be resource intensive and require the coordination of clinical, public health, first responder, private sector, and federal partners, as well as persons of lived experience with substance use. Establishing this comprehensive system will take time, perhaps 2 to 3 years, given the cycle of federal budgetary processes.
While this comprehensive national nonfatal overdose data system is constructed, in the immediate term the consequences of nonfatal and fatal overdose are so severe that action is needed now. That is why the Office of National Drug Control Policy, in partnership with federal agencies from across the government, have created a Drug Data Interagency Working Group with an initial focus on nonfatal overdose data. Immediate steps being taken include rapid reviewing of all existing sources of information about nonfatal overdose occurrences, including examining data from (a) the National Highway Traffic Safety Administration’s National Emergency Medical Services Information System (NEMSIS); (b) the CDC’s Drug Overdose Surveillance and Epidemiology (DOSE) system, which focuses on emergency department syndromic data; (c) the Veterans Administration data systems; (d) the Overdose Detection Mapping Application Program (a tool for collecting and analyzing overdose information at the local level); (e) published public- and private-sector reports on health information exchange analyses of overdose data; and (f) state- and local-level reports on overdose occurrences. This synthetic analysis will yield potentially imperfect yet sufficiently precise estimates of key metrics to allow actions to be taken; for instance, even an approximate estimate of the national ratio of nonfatal to fatal overdose could help enable improved planning, implementation, and evaluation of naloxone distribution programs.

The construction of a comprehensive national nonfatal overdose data system will require the innovative and timely engagement of all those involved in addressing overdose occurrences: from health care professionals, first responders, and health departments who gather, synthesize, and report overdose data; to researchers testing the most reliable, valid, and efficient methods for assessing overdose occurrences; to implementation scientists focused on packaging the data to be ready for uptake by decision makers; to federal partners receiving and analyzing state and local data and social service delivery needs locally, regionally, and nationally.

Benefits of Taking Actions

This national focus on nonfatal overdose data could allow for advances on several fronts. First, these efforts could allow for estimation of some key statistics such as the national incidence and prevalence of nonfatal overdoses, and the ratio of the 2 (this is estimated for some states but remains inconsistent nationally(5)). Second, better estimates of nonfatal overdose data could permit a more precise assessment of the unmet needs for overdose-related medical and social service delivery needs locally, regionally, and nationally.

Third, national estimates of nonfatal overdoses could allow for a better prediction and understanding of trends in the fatality rate of overdose cases and help enable public health systems to provide more effective responses. Fourth, a near-real-time nonfatal overdose data system could facilitate construction of effective strategies to help navigate patients through the medical and social service delivery system to monitor service access and health outcomes following overdose. Fifth, even for states in which this information exists, more real-time data could allow for better estimates of the success of overdose intervention programs such as naloxone administration and deployment of rapid response teams.

Additionally, better data on nonfatal overdose patterns could enable a systematic approach to analyzing emerging threats in the US. For example, evolving public health threats from synthetic opioids contribute to the greatest level of overdose mortality, and this calls for specific responses, such as naloxone provision and medication for opioid use disorder. However, the use of other drugs that contribute to comparatively less mortality (at least in some regions), such as methamphetamine, may require other customized interventions.

Conclusions

Given the consequences of fatal and nonfatal drug overdoses in the US, it is essential to build the necessary data system while taking urgent actions to prevent overdoses and save lives in the near term. Once established, this national system should rapidly yield high-quality, more complete, more timely, and more actionable data to inform increasingly effective policy making to prevent and treat overdose occurrences and build health equity. Doing so will require the partnership of many, but there is not a moment to lose.

REFERENCES