A STANDARDIZATION MODEL FOR ESTIMATING POPULATIONS OF PERSONS WHO INJECT DRUGS IN US STATES, 2017

Rosenberg E[1], Rosenthal E[1], Hall E[2], Udo T[1], Bradley H[3]

[1] University at Albany School of Public Health, State University of New York
[2] Rollins School of Public Health, Emory University
[3] School of Public Health, Georgia State University

Background: Persons who inject drugs (PWID) are a priority population for viral hepatitis and HIV transmission in the US. Estimates of PWID population sizes, crucial for calculations of epidemiologic rates and resource allocation, are not available for most states. We explored the feasibility of systematically estimating PWID populations in states using national PWID prevalence data together with state-level narcotic overdose mortality data. .

Methods: We first estimated the nationally-representative weighted population of past-year non-medical injection drug use among 18-64 year olds based on the 2017 US National Survey on Drug Use and Health. Using the 2017 National Vital Statistics System mortality microdata file, we then calculated a ratio of state-level narcotic overdose mortality rates over the national average to allocate the national PWID estimate to states. Because states with increased fentanyl in the drug supply may have higher fatality per PWID, a sensitivity analysis used imputed 2017 mortality rates based on linear trends from 2011-2014 mortality rates.

Results: This primary method yielded state-level estimates for the number of PWID ranging from 553 (South Dakota) to 78,805 (Pennsylvania), with Florida, Ohio, Pennsylvania ≥ 70,000. The percent of PWID ranged from 0.11% (South Dakota) to 1.31% (West Virginia), with Ohio, Pennsylvania, West Virginia ≥ 1.00%. In the sensitivity analysis, the range was narrower, with maximum number of PWID 71,187 (Ohio) and percent of PWID 1.05% (West Virginia).

Conclusion: This analysis provides a feasible approach for the first systematic estimates of the percent and number of PWID in all U.S. states utilizing the most recent national survey and local mortality data available. These estimates are likely underestimated due to limitations of the national estimate, which is based on household surveys. As national estimates and local indicators of PWID improve in the US, they can be synthesized via this method to provide updated estimates.

Disclosure of Interest Statement: None to declare