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PATHWAYS TO DRUG PREVALENCE ESTIMATION: SYNTHESIZING THREE COMMENTS ON TRIANGULATION

All three commentaries affirm the importance of improving the quality of information informing drug policy decisions, and the opportunities for doing so by synthesizing ('triangulating') multiple data sets.

McKetin's story of discordant trends in Australian methamphetamine series is a great example of the type of paradox that motivated us to write the original paper [1,2]. Hospitalization, treatment admissions, seizures and arrests all rose even as prevalence estimates from Australia's National Drug Strategy Household Survey (NHS) fell. Efforts to harmonize all of that dissonant evidence led to the plausible but potentially spurious assumption that a smaller number of people were consuming a more dangerous form of the drug. There was minimal consideration of the possibility that the consumer base grew or changed in ways that the NHS missed. Triangulation needs to be brutally unsentimental

about the limitations of the various indicators, in this case a general population survey's (GPS's) weakness at describing stigmatized, low-prevalence activities such as methamphetamine use.

Radhakrishnan's [3] concerns that describing specific flaws in the National Survey on Drug Use and Health (NSDUH) may erode faith in the survey as a whole, and that skepticism towards GPS should be communicated appropriately, needs qualification. We do not want to be the reason that babies are thrown out with the bathwater. Nevertheless, there are downsides to encouraging people to mistake bathwater for clear, distilled drinking water, so we repeat our agreement that NSDUH is essential for public health policy. For example, GPS contribute to understanding of cannabis use, a highly prevalent and increasingly socially accepted behavior, but we also repeat our statement that NSDUH (alone) is not appropriate to estimate the prevalence of frequent heroin use or characterize people who use heroin, and that is primarily because of under-reporting and selective non-response. The respondents who report use probably differ from non-responding users.

We are delighted that the Substance Abuse and Mental Health Services Administration (SAMHSA)'s Center for Behavioral Health Statistics and Quality is investigating how to complement NSDUH with data on emergency department mentions, treatment services and surveillance of populations excluded from NSDUH's sampling frame. We look forward to when SAMHSA releases reports organized around a topic or question, integrating data from all sources, rather than organizing reports around specific data collections, with each report drawing upon only one type of data.

Van Hasselt [4] identified opportunities and challenges in such triangulation. In particular, he notes that while new data sources and improving methods offer opportunities to improve descriptions of levels and trends, much work remains to produce reliable estimates from a set of varied indicators. He wisely cautions that triangulation is hard; there is no silver bullet algorithm for synthesizing data from different sources.

We might characterize van Hasselt's commentary as encouraging a formal, rigorous and statistical approach to triangulation. It is hard to argue against rigor. However, we note that drug use is just one-half of a complex market phenomenon that also involves supply. Hence (as McKetin also observes), entirely different indicators pertaining to production, purity, price, arrests and seizures, as well as intelligence data, e.g. on smuggling routes and methods, can also shed light on consumption. That makes drug use fundamentally different than most health conditions. There is no supply chain for depression or asthma, so there may be a tension between rigorously combining various data that all come from the demand

side and less rigorously stirring in additional information on supply-side activities.

Time may tell whether stressing rigor or the inclusion of diverse data ultimately offers a more comprehensive basis for policymaking. For now, we would encourage investment in both.

Declaration of interests

None.

Keywords Drug policy, general population surveys, heroin, hidden populations, household surveys heroin, triangulation.

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