

Colledge, S.¹, Peacock, A.¹, Leung, J.^{1,2}, Grebely, J.³, Hickman, M.⁴, Farrell, M.¹, Larney, S.¹, & Degenhardt, L.¹

National Drug and Alcohol Research Centre, UNSW, Australia (2) School of Public Health, Faculty of Medicine, University of Queensland, Australia (3) Kirby Institute, UNSW, Australia (4) School of Social and Community Medicine, University of Bristol England

The Difference is Research

Background & Aim

- There has been a recent and dramatic increase in the rate of overdose deaths in many parts of the world, including Australia, the United States and Canada.
- The experience of non-fatal overdose may result in extensive morbidity for the victim.
- There are an estimated 15.6 million people who inject drugs (PWID)¹, a population who are particularly vulnerable to experiencing overdose due to the high-risk nature of injecting.
- This study aims to establish the prevalence of recent and lifetime experience of non-fatal overdose among PWID globally.

Table: Number of countries in each region with non-fatal overdose estimates, and the range of recent and lifetime prevalence estimates by region

Region (number of countries)	Number of countries with any NFOD data*	Recent NFOD (regional range %)	Lifetime NFOD (regional range %)
Eastern Europe	8/17	4.8 – 27.1	36.1 – 63.0
Western Europe	9/31	14.0 – 40.2	39.1 – 53.8
East and southeast Asia	5/17	2.9 – 36.1	23.7 – 43.5
Central Asia	3/5	23.7 – 34.1	48.2 – 58.8
North America	2/2	22.9 – 30.1	34.3 – 59.0
Australasia	2/2	10.2 – 11.9	45.4**

* Denominator is countries in that region with evidence of IDU

** The lifetime non-fatal overdose estimate for Australasia was based on Australia's lifetime estimate

Methods

- Systematically searched peer-reviewed (Medline, Embase, and PsycINFO), internet, and grey literature databases.
- Search limited to papers published in 2008 and onward (after previous review²).
- Disseminated data requests to international experts and agencies.
- Searched for data on PWID including non-fatal overdose prevalence.
- Estimates reflect pooled estimates following random effects meta-analysis.

Results

- Data extracted from 1,147 eligible papers/reports.
- Prevalence estimates were provided for 39/179 countries with evidence of IDU; 23 countries had an estimate for recent (within the past year) experience, and 28 had an estimate for lifetime experience.
- Roughly 1 in 5 PWID had experienced a NFOD within the previous year.
- Nearly half of PWID had ever experienced a NFOD.
- PWID in Slovenia, Viet Nam and Tajikistan are experiencing far higher rates of non-fatal overdose than the global rate, with more than one in three PWID overdosing in the previous year (Figure 2).
- Prevalence of recent NFOD remained high across countries in Central Asia and North America (Table).
- There was high level of variability in most regions, particularly East and southeast Asia and Europe (Table).

Discussion & Conclusion

- Globally, around one in 5 PWID have experienced at least one non-fatal overdose in the past year.
- There is significant geographical variation, likely related to the types of drugs that are injected, the frequency of injecting and the availability of overdose prevention interventions.
- To reduce the risk of fatal overdose and the burden of non-fatal overdose morbidity, it is necessary to introduce and mainstream services such as:
 - opioid substitution therapy,
 - safe injecting room facilities, and
 - naloxone administration training.

References

1. Degenhardt, L. et al. A global profile of people who inject drugs: Systematic reviews of characteristics, prevalence of injecting and of HIV, hepatitis B and hepatitis C. *Lancet Global Health* 2017; 5: e1192-207
2. Mathers BM, Degenhardt L, Phillips B, et al. Global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review. *Lancet* 2008; 372: 1733–45

Figure 1: Lifetime prevalence of non-fatal overdose among PWID (for countries where data is available)



Figure 2: Recent prevalence of non-fatal overdose among PWID (for countries where data is available)

