DRUG TRENDS

Patterns and correlates of pregabalin use among a sample of people who inject drugs in Australia

R. Sutherland, P. Dietze, N. Gisev, R. Bruno, Campbell, G., Memedovic, S. & A. Peacock

Background: Pregabalin in Australia

- Gamma-aminobutyric acid (GABA) analogue that has analgesic and anti-convulsant effects (i.e. non-opioid)

Background: Pregabalin in Australia

- Gamma-aminobutyric acid (GABA) analogue that has analgesic and anti-convulsant effects
- Registered in Australia in 2005 as a Schedule 4 (prescription only) medicine for treatment of neuropathic pain and epilepsy

Background: Pregabalin in Australia

- Gamma-aminobutyric acid (GABA) analogue that has analgesic and anti-convulsant effects
- Registered in Australia in 2005 as a Schedule 4 (prescription only) medicine for treatment of neuropathic pain and epilepsy
- Listed for subsidy on the Pharmaceutical Benefits Scheme in 2013

Background: Pregabalin in Australia

- Gamma-aminobutyric acid (GABA) analogue that has analgesic and anti-convulsant effects
- Registered in Australia in 2005 as a Schedule 4 (prescription only) medicine for treatment of neuropathic pain and epilepsy
- Listed for subsidy on the Pharmaceutical Benefits Scheme in 2013
- Sixth most prescribed subsidised drug in Australia, 2016-2017

DRUG TRENDS

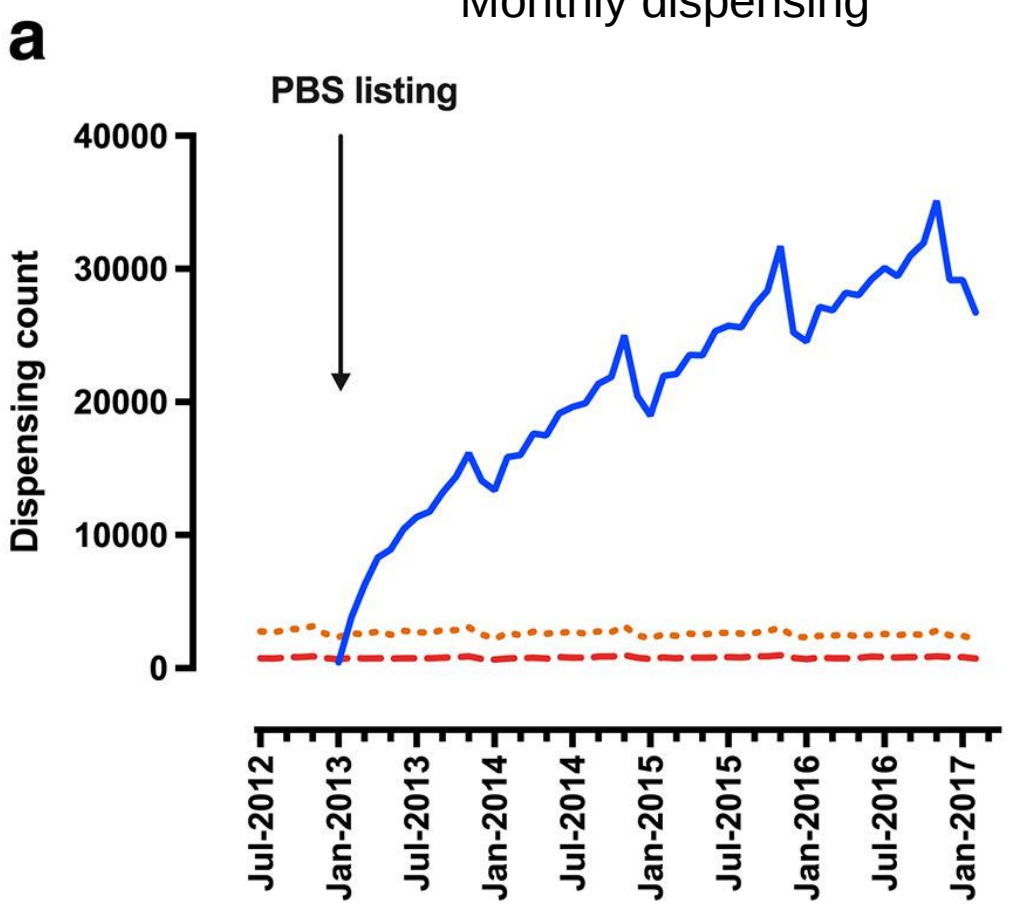
Background: Pregabalin in Australia

- Gamma-aminobutyric acid (GABA) analogue that has analgesic and anti-convulsant effects
- Registered in Australia in 2005 as a Schedule 4 (prescription only) medicine for treatment of neuropathic pain and epilepsy
- Listed for subsidy on the Pharmaceutical Benefits Scheme in 2013
- Sixth most prescribed subsidised drug in Australia, 2016-2017
- Increase in pregabalin-related harms

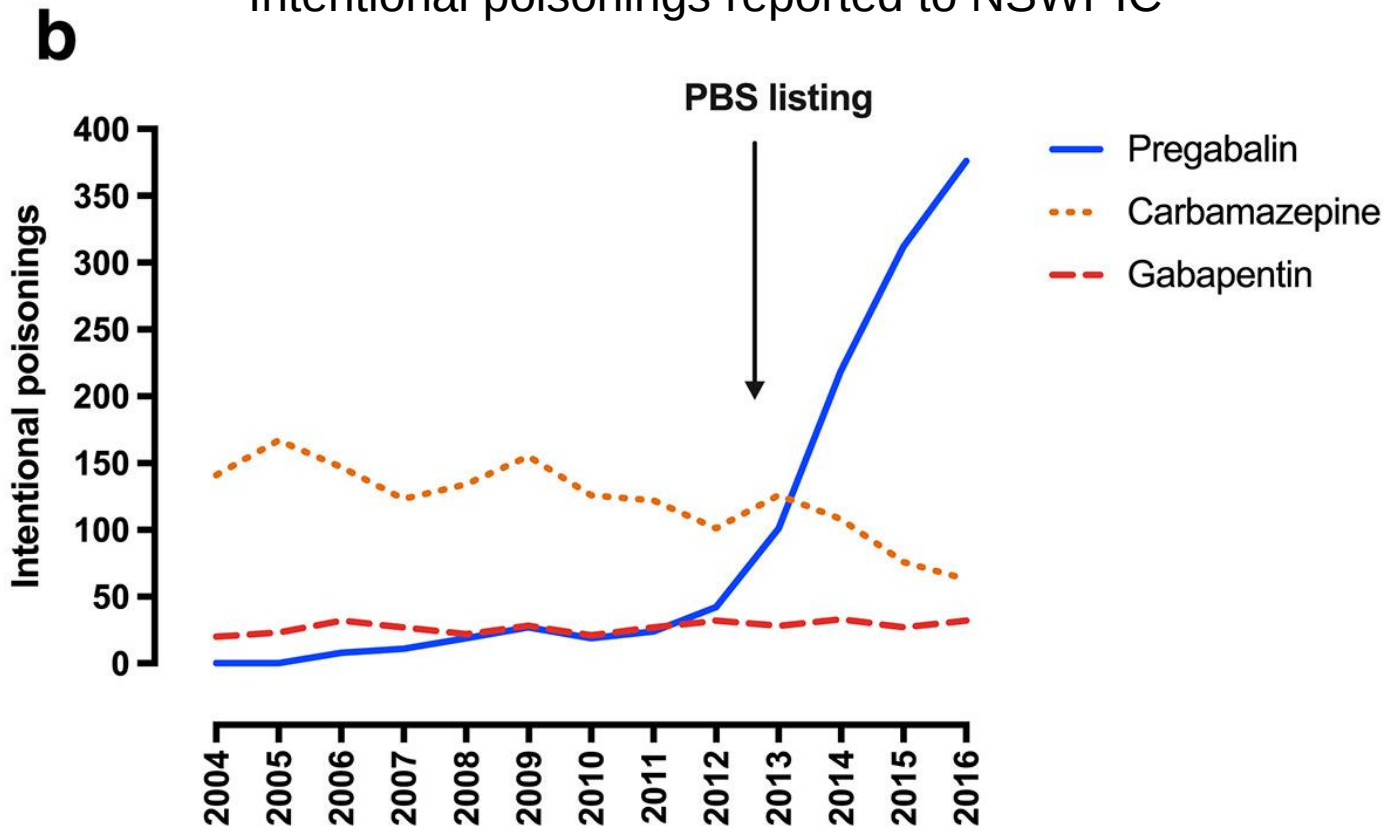
DRUG TRENDS

Background: Increasing evidence of harms

Monthly dispensing



Intentional poisonings reported to NSWPIC



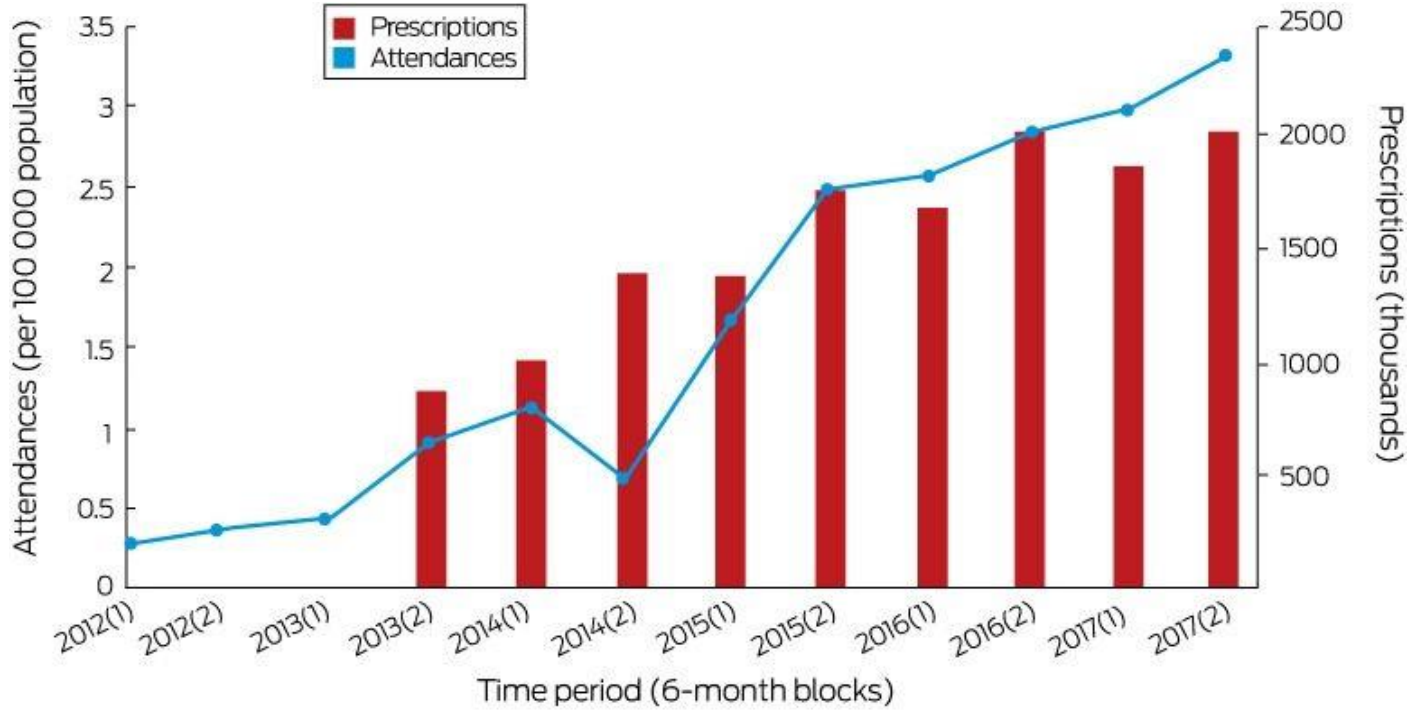
DRUG TRENDS

Cairns R, Schaffer AL, Ryan N, et al. Rising pregabalin use and misuse in Australia: trends in utilization and intentional poisonings. Addiction 2018; https://doi.org/10.1111/add.14412.

Background: Increasing evidence of harms

- Tenfold increase since 2012
- 18.4% increase for each additional 100,000 prescriptions
- Frequently used with other sedatives (e.g. benzodiazepines)

Pregabalin misuse related ambulance attendances (VIC)



Crossin, R., Scott, D., Arunogiri, S., Smith, K., Dietze, P. & Lubman, D. (2019) Pregabalin misuse-related ambulance attendances in Victoria, 2012–2017: characteristics of patients and attendances, Med J Aust; 210 (2); 75-79

DRUG TRENDS

Background: Deaths involving* pregabalin

Among Australians of all ages:

- <20 annually prior to 2015
- 72 deaths 2016 (total 1,858; 4%)
- 100 deaths 2017 (total 1,795; 6%)

*Most of these deaths were attributable to opioids

Concern that concomitant use of pregabalin and opioids can increase mortality risk

DRUG TRENDS

Chrzanowska,A., Dobbins,T., Degenhardt,L. & Peacock,A. (2019).Trends in drug-induced deaths in Australia,1997-2017. Drug Trends Bulletin Series. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney.

Aims

- Examine patterns of pregabalin use (prescribed and not prescribed) among a sample of people who frequently inject drugs (PWID) in Australia.

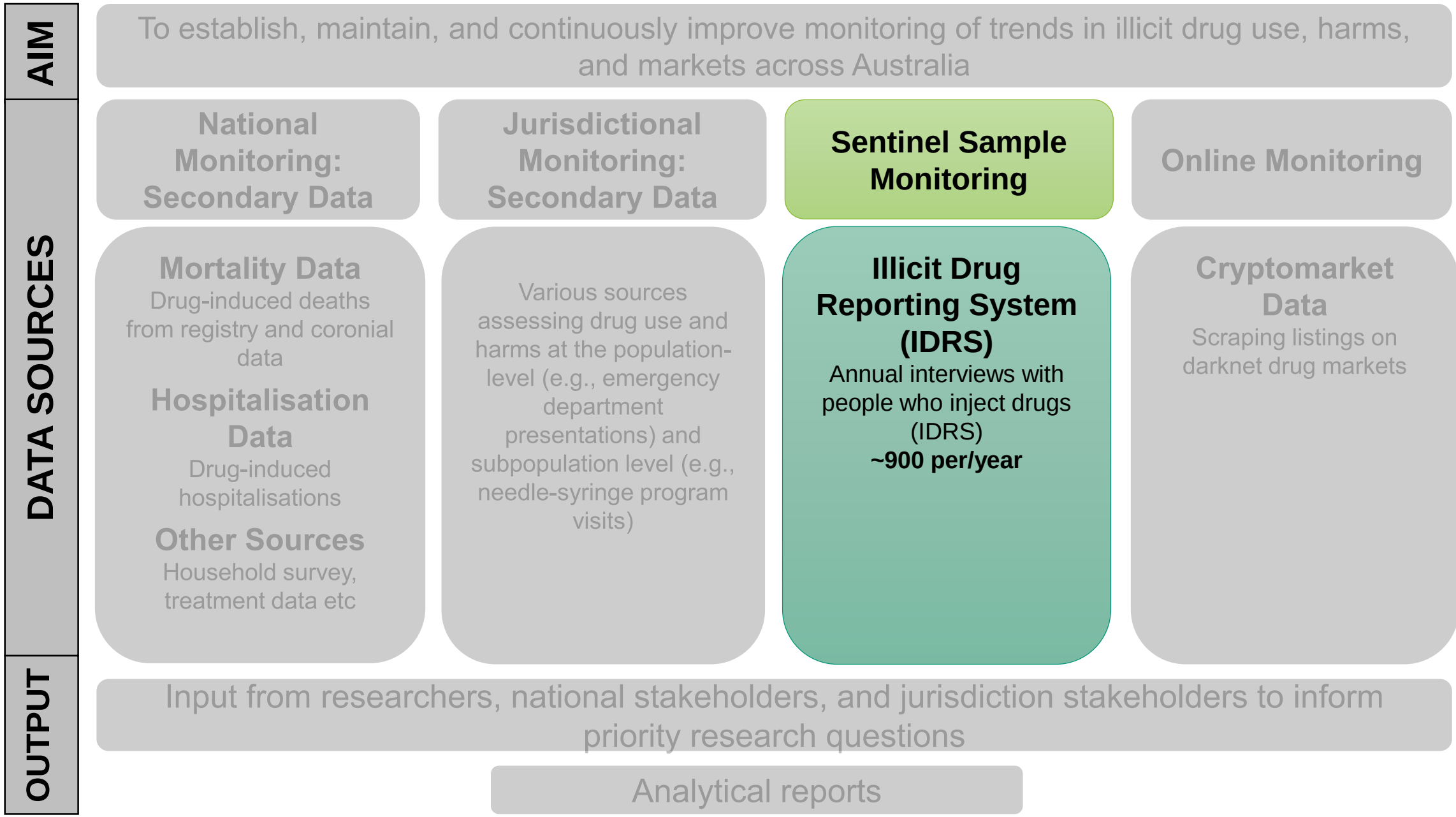
DRUG TRENDS

Aims

- Examine patterns of pregabalin use (prescribed and not prescribed) among a sample of people who frequently inject drugs (PWID) in Australia.

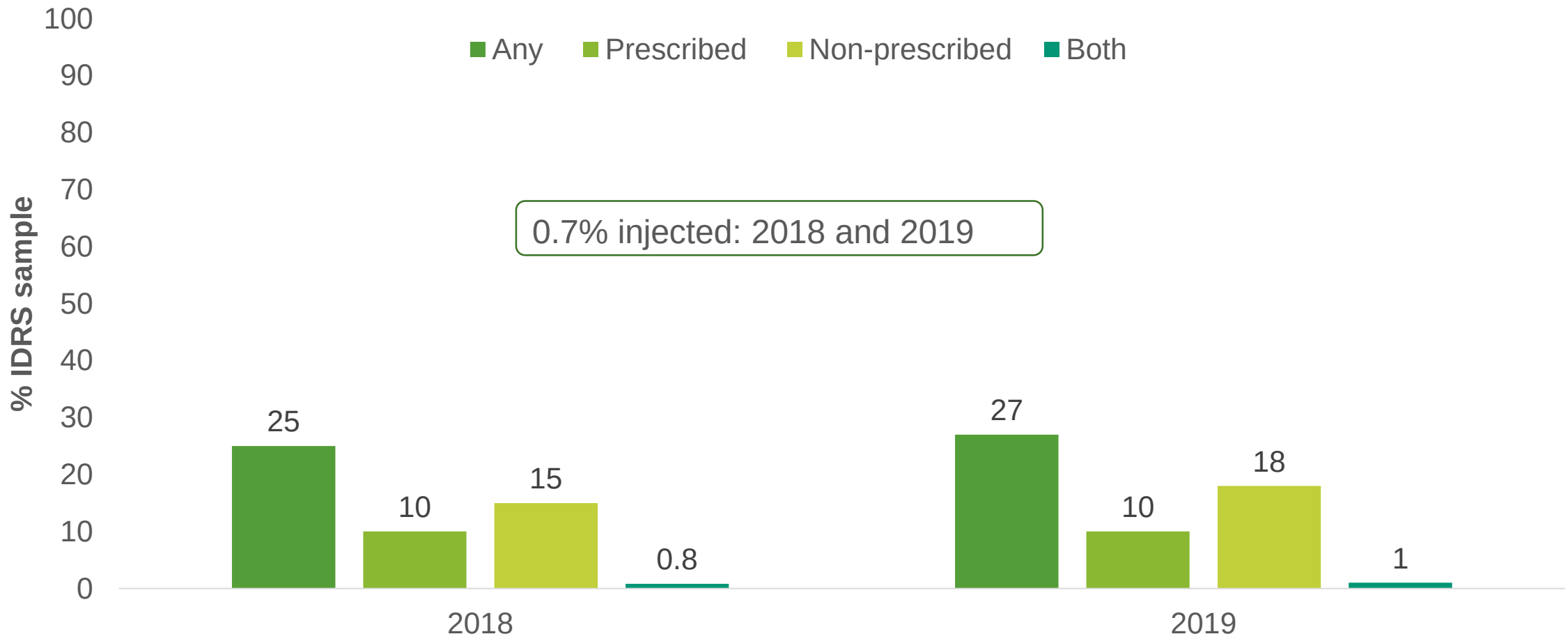
- Identify correlates of prescribed and non-prescribed pregabalin use among PWID.

DRUG TRENDS


AIM
To establish, maintain, and continuously improve monitoring of trends in illicit drug use, harms, and markets across Australia
DATA SOURCES
National Monitoring: Secondary Data
Jurisdictional Monitoring: Secondary Data
Sentinel Sample Monitoring
Online Monitoring
Mortality Data
Drug-induced deaths from registry and coronial data
Hospitalisation Data
Drug-induced hospitalisations
Other Sources
Household survey, treatment data etc
Various sources assessing drug use and harms at the population-level (e.g., emergency department presentations) and subpopulation level (e.g., needle-syringe program visits)
Illicit Drug Reporting System (IDRS)
Annual interviews with people who inject drugs (IDRS)
~900 per/year
Cryptomarket Data
Scraping listings on darknet drug markets
OUTPUT
Input from researchers, national stakeholders, and jurisdiction stakeholders to inform priority research questions
Analytical reports

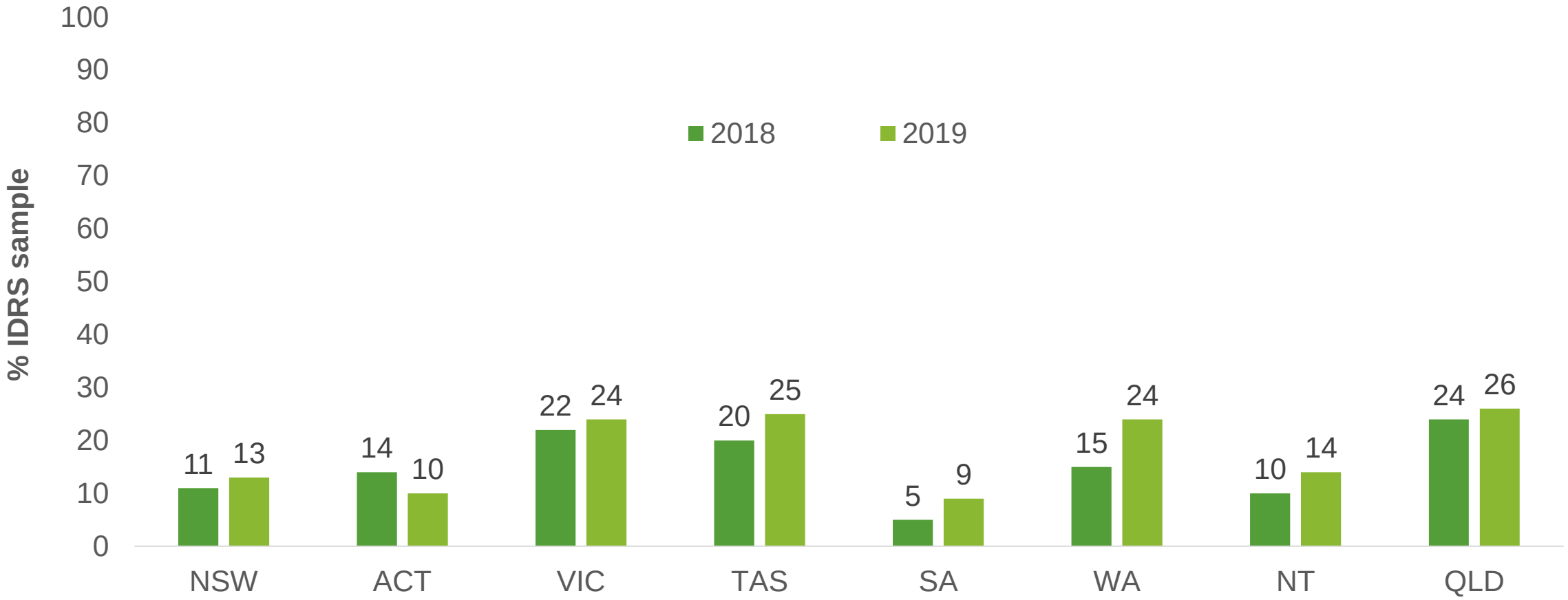
Aim 1: Patterns of pregabalin use, 2018-2019

Past six month pregabalin use, 2018-2019



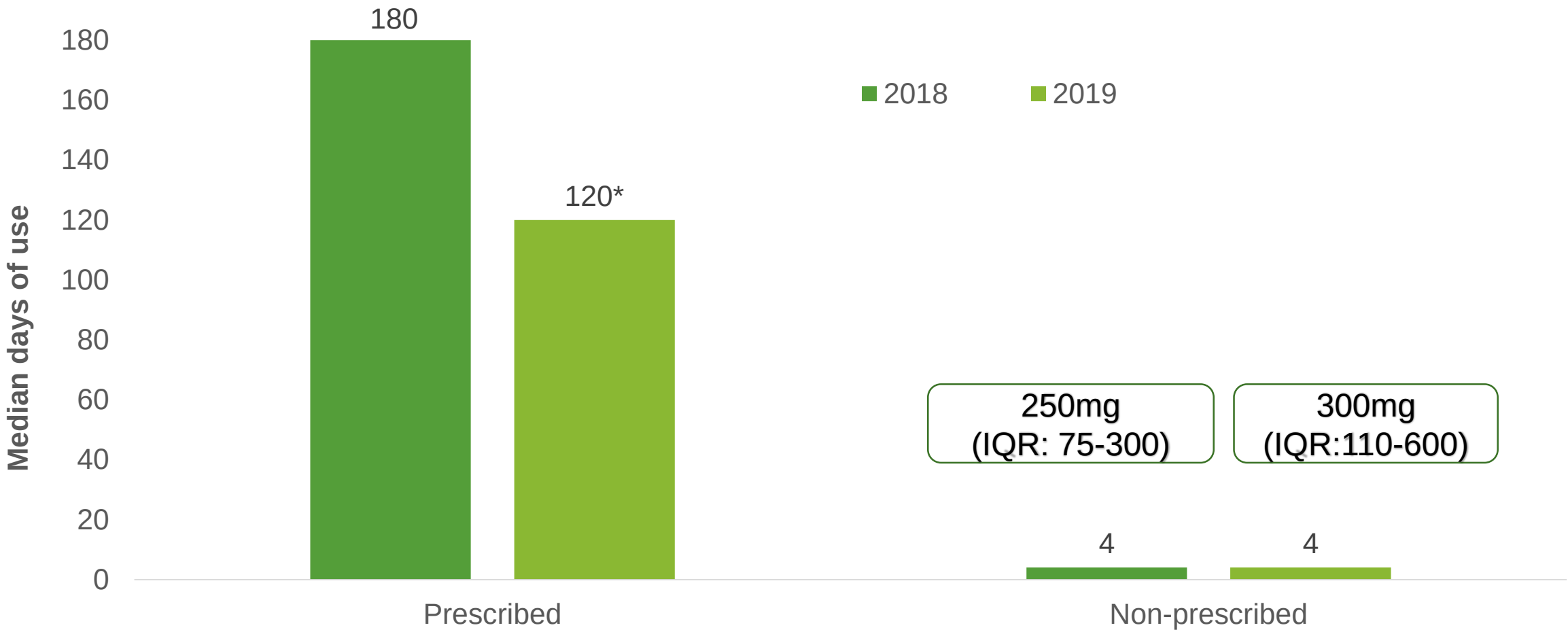
DRUG TRENDS

Past six month non-prescribed pregabalin use, by jurisdiction



DRUG TRENDS

Frequency of use, 2018-2019



DRUG TRENDS

*$p<0.05$

Aim 2: Who is using pregabalin?

Correlates of pregabalin use, 2018

- Age
- Gender
- Aboriginal or Torres Strait Islander
- Employment status
- Accommodation
- Substance use (heroin, OST, pharmaceutical opioids, benzodiazepines, stimulants)
- Dependence (opioids, stimulants)
- Hazardous alcohol consumption
- Bingeing
- Overdose
- Psychological distress (K10)
- Self-reported mental health problems
- Mobility problems
- Pain/discomfort

DRUG TRENDS

Correlates of pregabalin use, 2018

	No use (n=678)	Prescribed use only (n=86)	Non-prescribed use only (n=133)
Non-prescribed pharmaceutical opioid use %	26	46	49
Prescribed benzodiazepine use %	25	54	34
Non-prescribed benzodiazepine use %	24	31	55
Stimulant use %	76	80	92
Overdose (past year) %	18	31	36
Pain/discomfort (day of interview) %	50	81	53

Note: those who had used both prescribed and non-prescribed pregabalin (n=7) excluded from analysis

DRUG TRENDS

Correlates of pregabalin use, 2018

	No use (n=678)	Prescribed use only (n=86)	Non-prescribed use only (n=133)
Non-prescribed pharmaceutical opioid use %	26	46 ↑	49 ↑
Prescribed benzodiazepine use %	25	54 ↑	34 ↑
Non-prescribed benzodiazepine use %	24	31	55 ↑
Stimulant use %	76	80	92 ↑
Overdose (past year) %	18	31	36 ↑
Pain/discomfort (day of interview) %	50	81 ↑	53

No use as the referent category; those who had used both prescribed and non-prescribed pregabalin (n=7) excluded from analysis

DRUG TRENDS

Correlates of pregabalin use, 2018

	No use (n=678)	Prescribed use only (n=86)	Non-prescribed use only (n=133)
Non-prescribed pharmaceutical opioid use %	26	46 ↑	49 ↑
Prescribed benzodiazepine use %	25	54 ↑	34 ↑
Non-prescribed benzodiazepine use %	24	31	55 ↑
Stimulant use %	76	80	92 ↑
Overdose (past year) %	18	31	36 ↑
Pain/discomfort (day of interview) %	50	81 ↑	53

No use as the referent category; those who had used both prescribed and non-prescribed pregabalin (n=7) excluded from analysis

DRUG TRENDS

Correlates of pregabalin use, 2018

	No use (n=678)	Prescribed use only (n=86)	Non-prescribed use only (n=133)
Non-prescribed pharmaceutical opioid use %	26	46	49
Prescribed benzodiazepine use %	25	54	34
Non-prescribed benzodiazepine use %	24	31	55 ↑
Stimulant use %	76	80	92
Overdose (past year) %	18	31	36
Pain/discomfort (day of interview) %	50	81	53 ↓

Prescribed use is the referent category; those who had used both prescribed and non-prescribed pregabalin (n=7) excluded from analysis

DRUG TRENDS

Implications

- Little overlap, indicating sufficient prescribing

DRUG TRENDS

Implications

- Little overlap, indicating sufficient prescribing
- Harm reduction messages re: concomitant use of opioids and pregabalin (consumers and prescribers), incorporated into existing overdose materials

DRUG TRENDS

Implications

- Little overlap, indicating sufficient prescribing
- Harm reduction messages re: concomitant use of opioids and pregabalin (consumers and prescribers)
- Non-prescribed pregabalin consumers appear to be a riskier group of consumers (e.g. non-fatal overdose, stimulant use)

DRUG TRENDS

Implications

- Little overlap, indicating sufficient prescribing
- Harm reduction messages re: concomitant use of opioids and pregabalin (consumers and prescribers)
- Non-prescribed pregabalin consumers appear to be a riskier group of consumers (e.g. non-fatal overdose, stimulant use)
- Motivations for non-prescribed use unclear

DRUG TRENDS

Implications

- Little overlap, indicating sufficient prescribing
- Harm reduction messages re: concomitant use of opioids and pregabalin (consumers and prescribers)
- Non-prescribed pregabalin consumers appear to be a riskier group of consumers (e.g. non-fatal overdose, stimulant use)
- Motivations for non-prescribed use unclear

Molero et al BMJ 2019; 365: l2147

DRUG TRENDS

Acknowledgements

Funding

- Australian Government Department of Health for funding provided under the Drug and Alcohol Program

Current Team

- National Drug and Alcohol Research Centre: Amy Peacock, Daisy Gibbs, Toni Karlsson, Anant Mathur, Julia Uporova, Rosie Swanton, Agata Chrzanowska, Louisa Degenhardt and Michael Farrell
- Burnet Institute: Amy Kirwan, Cristal Hall, Campbell Aitken and Paul Dietze
- School of Medicine, University of Tasmania: Ellie Bucher, Callula Sharman and Raimondo Bruno
- National Drug Research Institute (WA): Jodie Grigg, Seraina Agramunt and Simon Lenton
- School of Public Health, The University of Queensland (QLD): Caroline Salom
- Northern Territory Department of Health (NT): Chris Moon

And the many people here at NDARC and elsewhere who have contributed to the program over the last two+ decades!

Other Acknowledgements

- IDRS participants: for the time they give to complete the interview
- Data custodians: for the timely provision of data and input on analysis and interpretation
- Stakeholders and Advisory Committee: for engagement with and input on Drug Trends

Further questions?

rachels@unsw.edu.au