

Tracking the highs and lows: Methamphetamine and heroin price and purity shifts in Melbourne, Victoria (2009-2020)

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Burnet
reach for the many



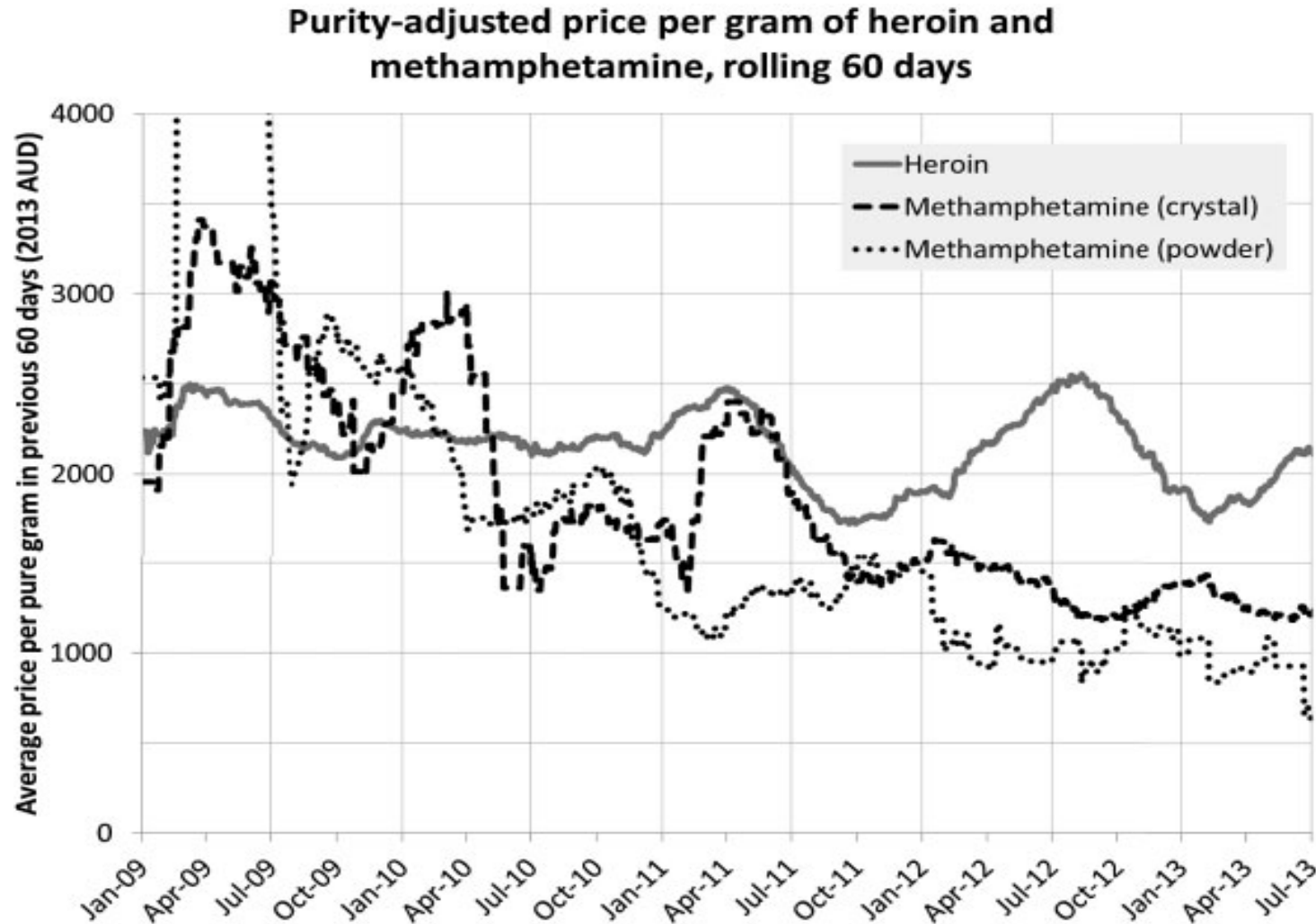
AT BURNET INSTITUTE, WE PROUDLY ACKNOWLEDGE
THE BOON WURRUNG PEOPLE OF THE KULIN NATIONS
AS THE TRADITIONAL CUSTODIANS OF THE LAND ON
WHICH OUR OFFICE IS LOCATED. WE PAY OUR
RESPECT TO ELDERS PAST AND PRESENT, AND EXTEND
THAT RESPECT TO ALL FIRST NATIONS PEOPLE.





BACKGROUND – Previous study

- Scott et al.¹ previously examined the trends in methamphetamine and heroin prices and purity in Victoria, Australia from 2009 to 2013.
- Powder and crystal methamphetamine: the purity-adjusted price per pure gram exhibited similar rapid declines of *65% and 49%* respectively,
- Heroin: the purity-adjusted price per gram of heroin remained mostly stable.



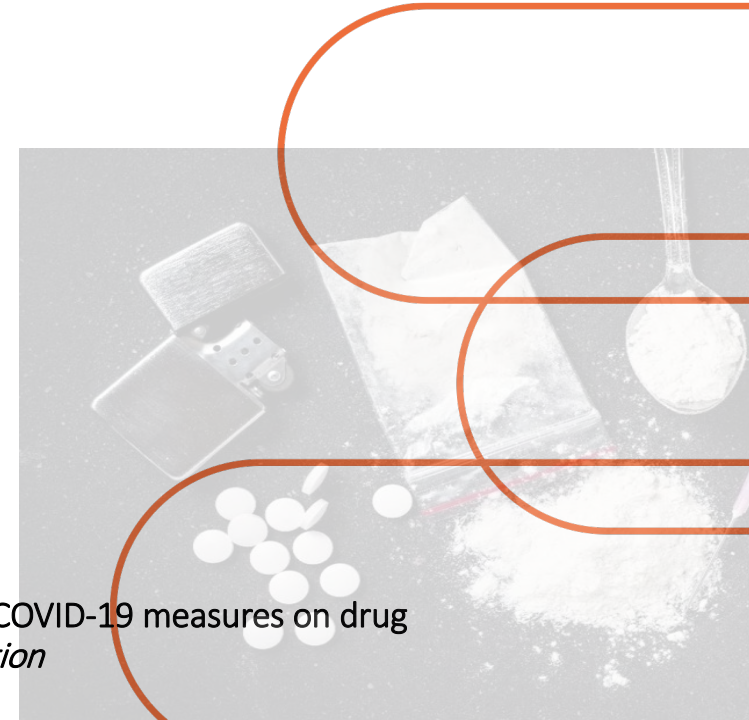
¹Scott, N., Caulkins, J. P., Ritter, A., Quinn, C., & Dietze, P. (2015). High-frequency drug purity and price series as tools for explaining drug trends and harms in Victoria, Australia. *Addiction*, 110(1), 120-128. doi:10.1111/add.12740



BACKGROUND – Previous study

- A notable limitation was the use of methamphetamine purchase data from metropolitan Melbourne, applied to purity records from seizures state-wide.
- A recent study by Rathnayake et al.² revealed significant disparities in methamphetamine prices between metropolitan Melbourne and rural Victoria.

²Rathnayake, K., Agius, P. A., Ward, B., Hickman, M., Maher, L., Stoové, M., . . . Quinn, B. (2023). The impacts of COVID-19 measures on drug markets and drug use among a cohort of people who use methamphetamine in Victoria, Australia. *Addiction*



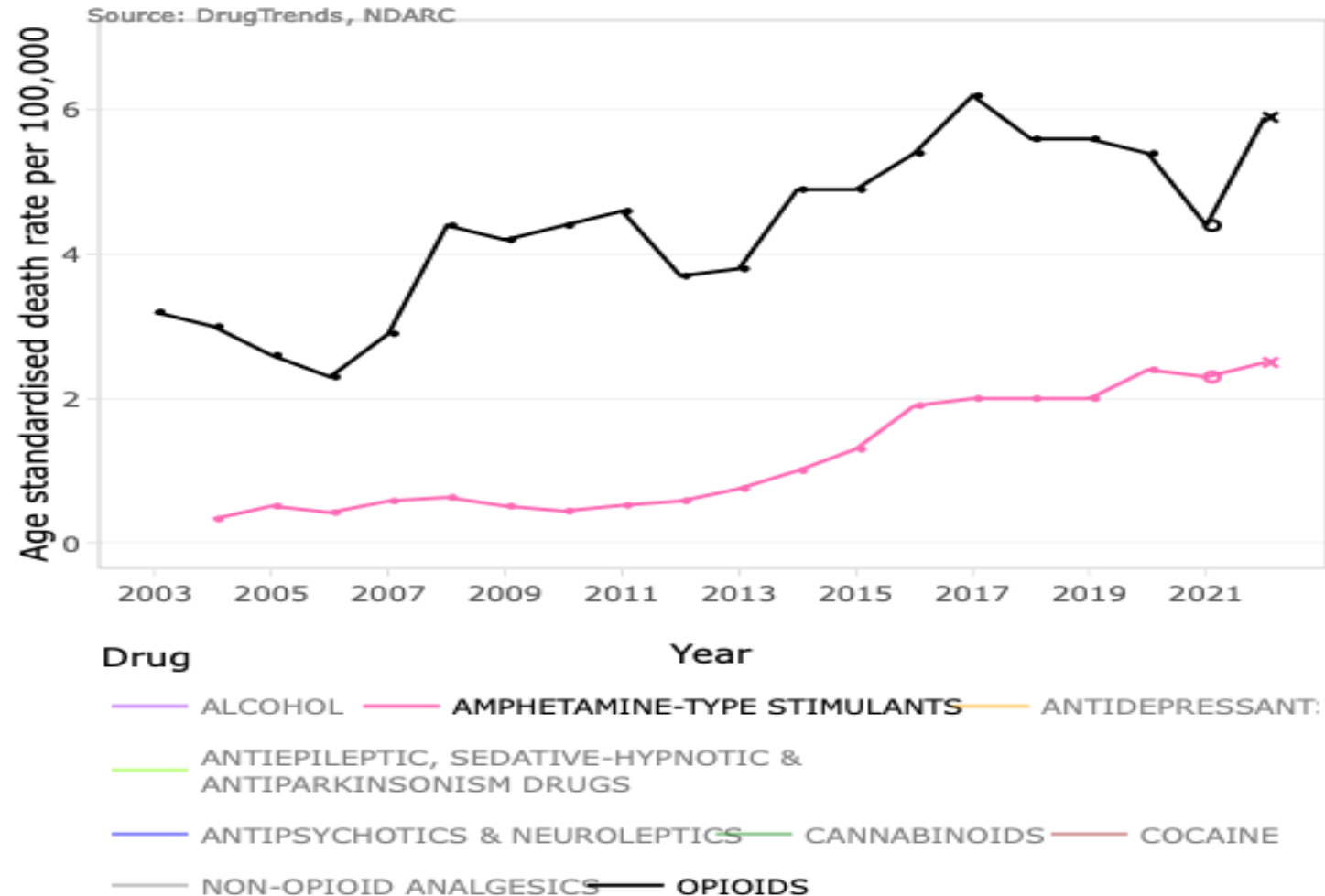


BACKGROUND –

Drug use related harms - OVERDOSE related deaths

Drug overdose death rate in 2020

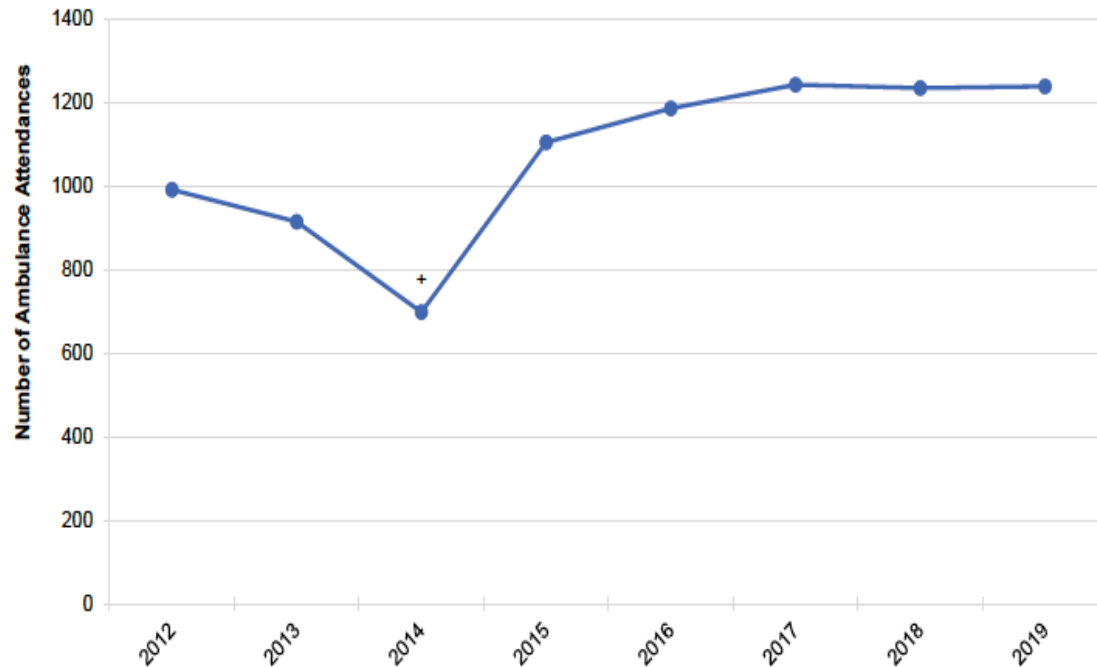
- Opioids: 5.4 deaths per 100,000 people
- Amphetamines: 2.4 deaths per 100,000 people





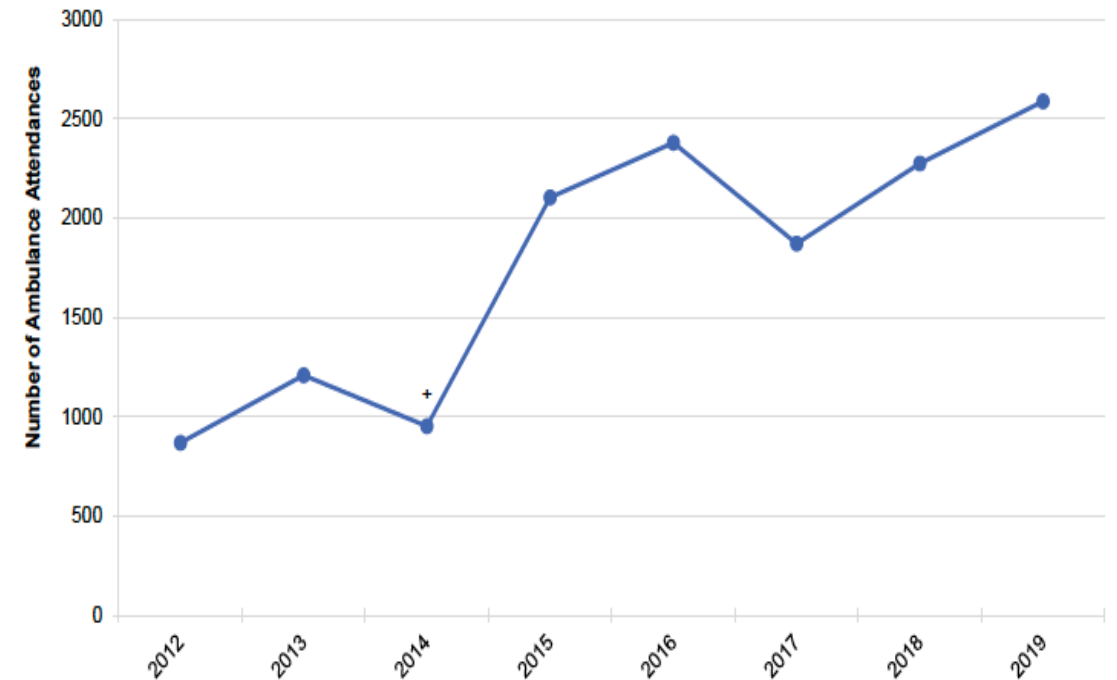
BACKGROUND – Drug use related harms – Ambulance attendances

Figure 20: Annual number of heroin-related events attended by Ambulance Victoria, Melbourne, 2012–2019



Note. + = Data missing from October–December 2014 due to industrial action. Source: Turning Point

Figure 29: Annual number of methamphetamine-related events attended by Ambulance Victoria, Melbourne, 2012–2019



Note. + = Data missing from October–December due to industrial action. Source: Turning Point

Source: <https://aodstats.org.au/explore-data/ambulance-attendances/>



AIMS

- to explain the trends in methamphetamine and heroin use related harms after addressing the limitations in the previous study
- to explain the changes for both metropolitan Melbourne and rural Victoria, which enable us to identify the differences of those two drug markets



DATA

PURITY DATA

- Methamphetamine and heroin seizures was obtained from the Victoria Police Forensic Services Department (VPFSD) for the period between 2009 and 2020
- Reflecting the long trend of a shift to crystalline methamphetamine in Australia's methamphetamine market, powder methamphetamine seizures were rare and excluded from analyses.





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DRUG PURCHASE PRICE DATA

- Methamphetamine and heroin purchase price were collected from two cohorts:
 - Melbourne Injecting Drug User cohort study ('SuperMIX'— started in 2008 and based in metropolitan Melbourne) and
 - Victorian methamphetamine cohort study ('VMAX' - started in 2016 and based in metropolitan Melbourne and rural Victoria).





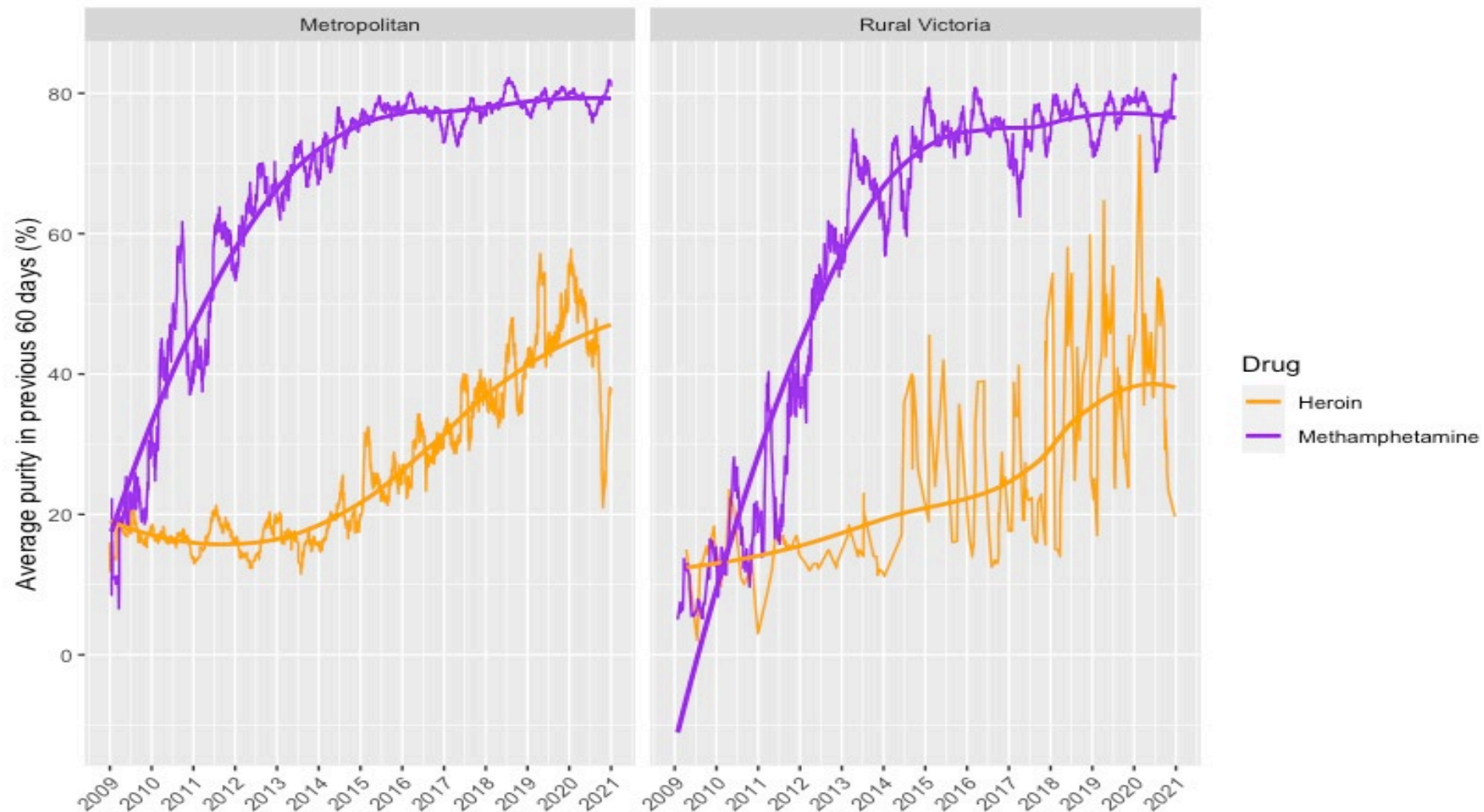
RESULTS – Purity data

Methamphetamine:

- Mean purity increased exponentially during early phase of the study, following more gradual increase, reaching almost 80% for both metropolitan Melbourne and rural Victoria

Heroin:

- Mean purity remained consistently low, around 15%-20% until 2013-2014, after which they began to increase gradually



Purity (60-days moving average) for heroin and methamphetamine seizures by the location of seizure



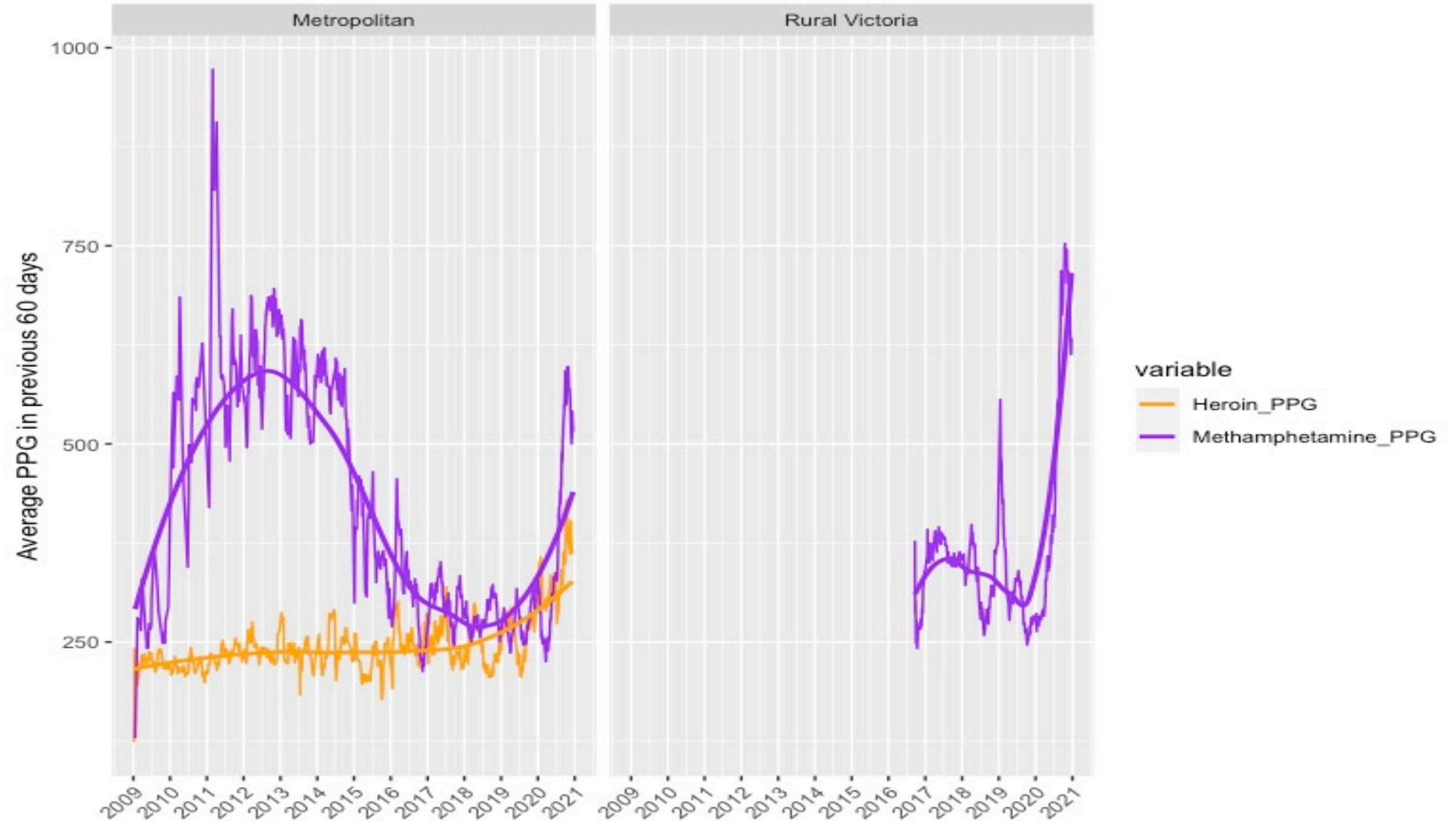
RESULTS – Price data

Methamphetamine:

- The average PPG rose significantly between 2009 and 2012, followed by a decline by 2019, and subsequent increases afterwards in metropolitan Melbourne and a similar trend was observed from 2016 for methamphetamine in rural Victoria

Heroin:

- The average PPG remained stable, with minimal fluctuations between from 2009 until 2018. After 2018, the average PPG increased slightly



Average PPG (60-days moving average (not adjusted for purity))
for heroin and methamphetamine purchases



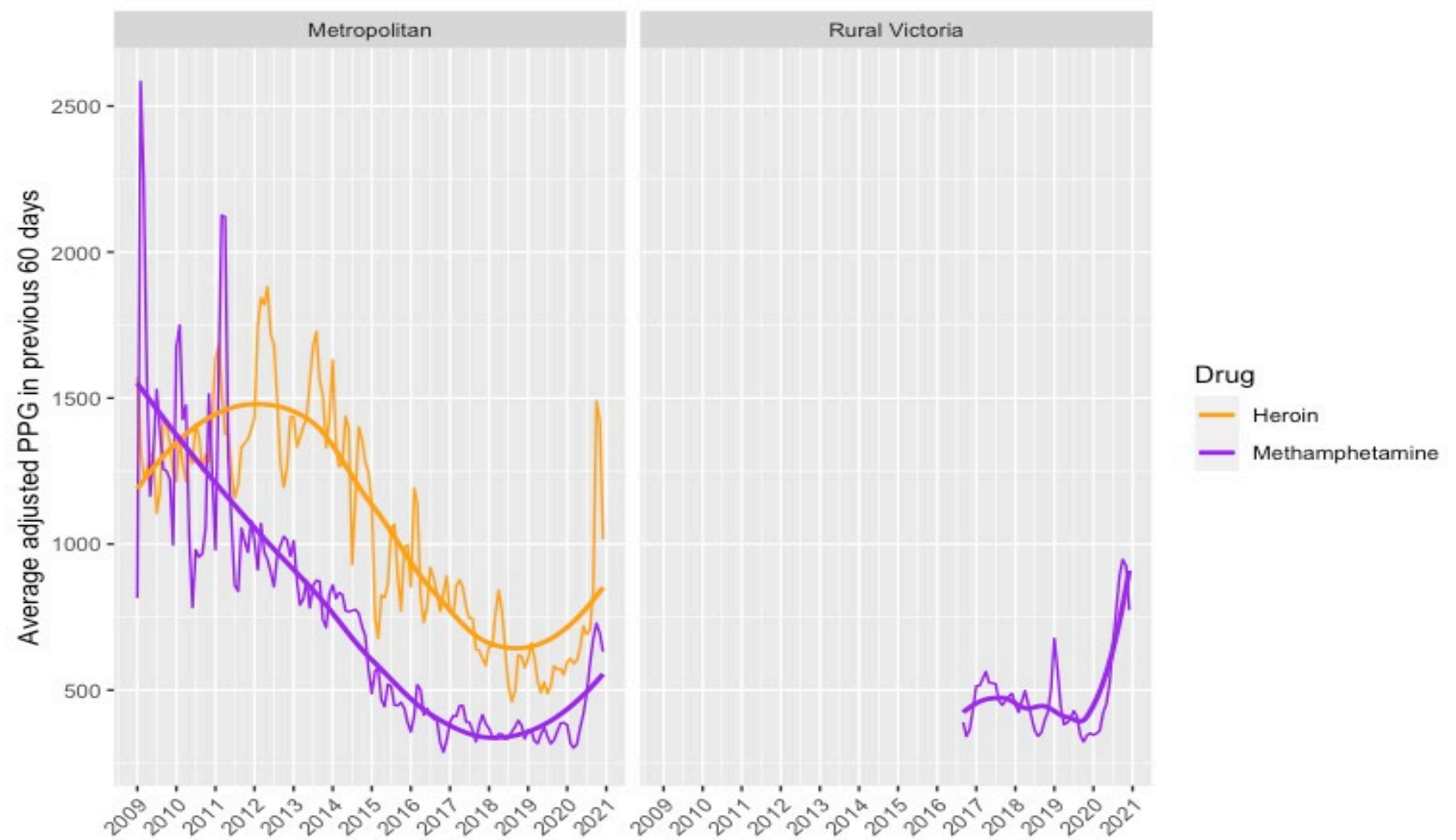
RESULTS – Purity adjusted price data

Methamphetamine:

- The purity-adjusted prices were relatively high during the initial phase of the study in 2009 in metropolitan Melbourne. This price gradually decreased throughout the study period until 2016, then stabilised and after 2019, there was a slight increase. Similar to metropolitan Melbourne, prices then decreased slightly until 2019, followed by an increase in rural Victoria.

Heroin:

- The purity-adjusted price was gradually increased until 2012 before starting to decrease. By 2019, the price had fallen, then increased again



Purity adjusted average PPG (60-days moving average) for heroin and methamphetamine purchases



SUMMARY

- The increase in unadjusted methamphetamine prices observed in the early stages of the study was offset by increases in purity, leading to a decline in purity-adjusted prices between 2009 and 2016, after which they stabilised resulting an **overall decrease of 65%**.
- In contrast, the average purity-adjusted PPG for heroin was slightly increased between 2009 and 2014 after which it declined resulting an **overall decrease of 41%**.
- The overall declines in both methamphetamine and heroin purity-adjusted prices suggests that people who use these drugs now receive more drug for a given purchase compared to what they received in the past.
- This also explains the increases in methamphetamine and heroin use related harms we observed earlier.



Thank you

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