Recent trends in acute synthetic cannabinoid harms resulting in ambulance attendance

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Synthetic cannabinoids and Australian NPS policy context

- Diverse group of psychoactive compounds – new psychoactive substances (NPS)
- Designed to mimic the desired effects of cannabis; different health challenges
- Fell outside of the scope of drug legislation - sold legally as ‘herbal’ highs
- Since 2011, multiple changes to Commonwealth and State legislation to ban new variants
Is the legislation working?

Australian general population data

Sentinel group of Australians who regularly use drugs
Past six month use of synthetic cannabinoids. Source: Australian Drug Trends 2019 (Peacock et al., 2019)
Ambulance attendance data

An alternative data source for profiling trends in synthetic cannabinoid use and acute harms

3,727 synthetic cannabinoid-related attendances in Victoria, Jan 2014 – Dec 2018

SCRA-related attendances in Victoria, 2014-18  ^Rate contains imputed value for 3 months missing data due to paramedic industrial action; count does not contain imputed value.
Patient and attendance characteristics

- Median age 33 years, 80.5% male
- 32% history of mental illness
- 7.7% homeless or unstable housing
- 30.4% co-occurring substance use
  - Predicted by female gender, unstable housing
- 69.4% transported to hospital
  - Increased probability in more recent years, suggesting a pattern of increasing toxicity / more severe clinical presentation
- 15.2% more than one attendance related to synthetic cannabinoid use
  - Predicted by male gender, unstable housing, history of mental illness. Decreased probability of co-occurring substance use.
Conclusion

- Ambulance attendance data – a valuable data source for profiling acute drug harms at the population level, and for tracing drug policy impacts
- Longer-term impacts of blanket NPS legislation are still to be determined
- We need to understand the health risks of synthetic cannabinoids still being accessed in Australia, to inform effective public health responses
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Time series analysis

Total 3,727 synthetic cannabinoid attendances

Mixed results for the impact of legislative changes on synthetic cannabinoid-related attendance rates:

Feb 2014: five synthetic cannabinoids banned
- Attendance rate remained stable over time (p = 0.46)

October 2016: thirteen synthetic cannabinoids banned
- Significant upward trend in attendance rates (p < 0.001)

November 2017: blanket ban commenced
- Significant downward trend in attendance rates (p < 0.001)