

## Submission to the

# House Standing Committee on Health, Aged Care and Sport

Prepared by

Daniel Stjepanović PhD, Gabrielle Campbell PhD, Tony Barnett PhD, Tianze Sun PhD, Jason Connor PhD, Tesfa M Yimer PhD, Carmen CW Lim PhD, Leanne M Hides PhD

on behalf of the

National Centre for Youth Substance Use Research

School of Psychology

The University of Queensland

Submitted 18 November 2024



### Committee Secretariat

House of Representatives Standing Committee on Health, Aged Care and Sport PO Box 6021
Parliament House
Canberra ACT 2600

Health.Reps@aph.gov.au

Dear Committee members,

Thank you for the opportunity to provide a submission to the House Standing Committee on Health, Aged Care and Sport on the *Inquiry into the health impacts of alcohol and other drugs in Australia*.

The Australian National Centre for Youth Substance Use Research (NCYSUR), at The University of Queensland, is committed to promoting the health and wellbeing of young people by increasing Australia's capacity to effectively respond to the harms associated with the use of alcohol and other drugs.

We recognise that the issue of substance use requires comprehensive strategies that operate across individual, community, and societal levels. Our multidisciplinary research encompasses epidemiology, neuroscience, policy, psychology, public health, and statistics. It allows us to generate evidence-based research and develop tailored interventions that meet the diverse needs of young Australians.

Our submission includes recommendations and evidence drawn from the published peer reviewed literature and research conducted by NCYSUR (accentuated in bold).

Yours sincerely, on behalf of the co-authors,

Dr Daniel Stjepanović



## **Executive Summary**

A large proportion of Australia's youth will experiment with alcohol and other drugs (AOD), with some experiencing short- and/or long-term harms as a consequence. To minimise and prevent these harms, it is essential to monitor substance use trends, associated harms, and to promote the availability and accessibility of evidence-based treatments across diverse groups. Given the variation in AOD policy in different Australian states and territories, the establishment of a national governance structure to oversee effective implementation of drug policy remains important.

There is a strong evidence base and set of Australian guidelines to inform AOD best practice treatments. However, the application of these is hampered by the lack of availability of treatment services, in particular challenges accessing services in regional and remote communities. There is also an opportunity to collect and analyse person reported outcome measures to provide information on quality and effectiveness of AOD treatment for different client groups.

Additionally, evaluating the effectiveness of existing interventions and investing in the development of new strategies is crucial to address harms emerging from AOD use. At present, current services are not able to deliver equitable outcomes and access for all Australians. Young people and other priority populations (e.g., people from culturally and linguistically diverse backgrounds), are disadvantaged by 'one-size-fits' all prevention and treatment programs that do not address their unique needs.

Further investment in harm reduction, harm prevention and early detection of new drugs is also important to reduce AOD harms. Investment in drug checking and supervised consumption services could better promote harm reduction, to enable individuals to make safer, more informed choices about drug use. More widely, communities benefit from the early detection of harmful substances and the availability of public safety alerts. Furthermore, by diverting people away from the criminal justice system through drug diversion programs, addressing AOD use as a health issue will further promote harm minimisation in the community. Emerging technologies such as artificial intelligence could be utilised to create more youth friendly and culturally appropriate messaging for use on social media and in school-based interventions. Lastly, technologies such as wastewater epidemiology could provide an important means of detecting new drugs across Australia that compliment existing approaches.

Addressing these themes, we provide a number of recommendations for the Committee to consider based on national and international evidence.



## Recommendations

- We strongly advocate for the re-establishment of a national alcohol and other drugs (AOD) governance structure.
- We strongly support further investment into AOD research to enable the development of innovative approaches to the prevention, diagnosis, and treatment of AOD-related issues.
- We recommend for the expansion of existing programs to provide more service contact per person, and for the availability of programs to be expanded.
- Further investment in clinician training is required to ensure they can effectively deliver evidence-based treatment.
- We recommend the development of National Minimum Data Set items to collect information on the specific subtype/s of treatments being delivered during withdrawal management, counselling, rehabilitation and pharmacotherapy treatment in AOD services to ensure they are safe and evidence based.
- We strongly advocate for the routine collection of Person Reported Outcome Measures as a crucial step towards improving AOD treatment services in Australia.
- It is crucial that there is funding to support future research that trials innovative approaches such as the provision of coordinated parallel care.
- We advocate for the development of culturally responsive AOD service initiatives that specifically address the unique needs and experiences of young people and culturally and linguistically diverse communities.
- We support continued investment in fixed-site drug checking services and trials in Australian jurisdictions where none currently exist. Additionally we support drug checking services at music festivals to reduce drug harms experienced by young people.
- We advocate for further public health and implementation research to inform the long-term establishment of global best-practice drug checking services in Australia based on local need.
- We advocate for the implementation, evaluation and trial of overdose prevention services in Australian jurisdictions, including in areas outside Sydney and Melbourne, based on local need.



- It is necessary to invest in research and evaluation of youth-focussed models
  of care within overdose prevention sites that focus on linking youth to holistic
  healthcare and social services and early intervention promoting long term
  recovery.
- We recommend that school-baed programs such as that developed at NCYSUR be deployed across states and territories to prevent AOD use initiation by young people.
- We recommend further investment into the use of emerging technologies such as artificial intelligence to enable the rapid deployment of health messaging tailored to young people.
- We call for an expansion of existing wastewater epidemiology programs to test for more licit and illicit substances and to geographically expand these programs to provide more rapid data regional and rural communities in Australia.



## Current Alcohol and Other Drug Policy Frameworks and Services

## 1.1 AOD Policy Framework

The Australian National Drug Strategy (NDS) 2017-2026 framework recognises the significant risks associated with drug use and the need for a comprehensive range of supports to progressively reduce drug-related harm within the general community (Department of Health, 2017). The NDS aims to reduce and prevent the harmful effects of AOD through three pillars: demand reduction, supply reduction, and harm reduction.

Although the NDS outlines a nationally agreed goal, much of the funding and implementation responsibilities occur at state, territory, and local government levels. This decentralised approach means that the execution of strategies and allocation of resources can vary significantly between jurisdictions, which can lead to inconsistencies in the effectiveness of implemented initiatives.

Stronger governance at both Commonwealth and state/territory levels is essential to ensure alignment between national goals and local actions. However, a national AOD governance structure is currently lacking. The former Intergovernmental Committee on Drugs played a vital role in coordinating policies, systems, and funding across all states and territories. To ensure a nationally collaborative approach to monitoring demand and supply, as well as evaluating treatment effectiveness, we strongly advocate for the reestablishment of a national AOD governance structure. This body should bring together key senior stakeholders from Commonwealth, state, and territory governments to oversee the effective implementation of the NDS.

Additionally, there is a need for greater balance across the pillars of AOD policy spending. Although the three pillars of supply, demand, and harm reduction have equal emphasis in the NDS, the vast majority (64.3%) of funding is spent on law enforcement (supply reduction), 27% on treatment (demand reduction), 7% on prevention and only 2% on harm reduction (Ritter et al., 2024). This is despite the Australian national approach to AOD being based on principles of harm minimisation for four decades (Brown, 1986; Senate Standing Committee on Social Welfare, 1977). Importantly there is substantial evidence that a focus on law enforcement increases AOD-related harm (Bratberg et al., 2023). Investing in harm reduction strategies, such as drug checking services and police drug diversion programs, is key to reduce AOD-related harms.

We strongly support further investment into AOD research funding to enable the development of innovative approaches to the prevention, diagnosis, and treatment of AOD-related issues, including investment into hybrid implementation trials. Evidence-based treatments are estimated to be



CREATE CHANGE

available in only 25% of AOD treatment services (McGovern et al., 2013) largely due to limited use of implementation frameworks in substance use disorder treatment (Louie et al., 2021), alongside inadequate training and resources. Even when an intervention is found to be effective, it can take up to 17 years for evidence to change practice (Morris et al., 2011). Hybrid effectiveness-implementation trials, which blend the design components of clinical effectiveness and implementation research and are conducted in real-world settings, increase the speed of knowledge creation and its translation into clinical practice and policy. The use of implementation science frameworks to design and guide effectiveness-implementation trials in a rapid and iterative way can further enhance the translation of research into practice (Glasgow et al., 2020).

## 1.2 Existing AOD Services

There is considerable high-quality evidence of the most effective treatments for the use of alcohol (Connor et al., 2016; McPheeters et al., 2023), cannabis (Connor et al., 2021), stimulants (Ronsley et al., 2020), and opioids (Busse et al., 2018). There also exist Australian treatment guidelines for the application of these treatments such as the Guidelines for the Treatment of Alcohol Problems (Haber & Riordan, 2021) commissioned by the Commonwealth Government, or NSW Health's clinical care standards (NSW Health, 2020).

However, the demand for AOD treatment services outweighs the services available, and only 56% of the current treatment demand is being met (Ritter et al., 2019). Long waitlists in public services, high gap fees in private services and the lack of services available in regional and remote communities, make it difficult for many Australians to access treatment. For those who do, the average number of service contacts per year is only 1.8, which is not regarded as minimally effective treatment or consistent with evidence-based clinical guidelines (Australian Institute of Health and Welfare, 2024a). To ensure existing treatment guidelines are translated effectively and accessible to all Australians, AOD services must be funded to deliver evidence-based treatment and have trained staff to do so. We recommend the expansion of existing programs to provide more service contact per person, and for the availability of programs to be expanded to ensure equitable access for all Australians regardless of socioeconomic status, including those regional and remote communities and priority populations.

While various training programs for clinicians have been implemented to promote evidence-based psychosocial treatments (e.g., motivational interviewing, cognitive-behavioural therapy), there is limited research on how to best translate these treatments into practice to improve clinician skills, treatment quality, and client outcomes. We therefore recommend the expansion of existing programs to provide more service contact per person, and for the availability of programs to be expanded to ensure equitable access for Australians regardless of their socioeconomic status or location. **Further** 



## investment in clinician training is required to ensure they can effectively deliver evidence-based treatment.

## 1.3 National Quality, Evaluation and Monitoring of AOD Services

The National Quality Framework for AOD Treatment Services was developed in 2018 to improve the clinical safety and quality of AOD treatment services in Australia. However, the lack of funding and a national governance structure to oversee implementation of this framework means that some treatment services may be operating without an evidence-based treatment model, potentially leading to sub-optimal care.

The AOD Treatment Services National Minimum Data Set (AODTS NMDS) collects valuable data on the characteristics of people receiving treatment and the type of services provided in publicly funded AOD services. However, it lacks critical information on the safety, quality, and specifics of the treatment delivered. Instead, only information on the main physical setting (e.g., residential treatment facility, outreach setting) and broad type of treatment delivered (e.g., withdrawal management, counselling, rehabilitation, pharmacotherapy), is collected.

We recommend the development of NMDS items to collect information on the specific subtype/s of treatments being delivered during withdrawal management, counselling, rehabilitation and pharmacotherapy treatment in AOD services to ensure they are safe and evidence based.

## 1.4 The Need to Assess Client Outcomes

The NMDS also does not capture client outcomes, and currently only measures treatment completion defined as the completion of all immediate treatment goals as planned. However, this definition provides limited information on the quality, outcomes or effectiveness of treatment. Despite nearly two decades of calls to collect person reported outcome measures (PROMs) in Australia, there has been limited success to date, as AOD service providers lack the time, infrastructure and staffing to collect and utilise this valuable data (Lawrinson et al., 2009; Roche & Pollard, 2006). In addition, most AOD services which collect PROMs collect them manually (paper and pencil) at service entry, without any follow up or feedback to staff or clients.

NCYSUR leads the <u>NHMRC Meaningful Outcomes in Substance Use Treatment Centre of Research Excellence (https://mo-cre.centre.uq.edu.au/)</u> which is advocating for the routine collection of PROMs to evaluate client outcomes to improve the quality of AOD services in Australia. PROMs should focus not only on AOD use but also on other factors that matter to clients and staff, including mental health and quality of life (Pocuca et al., 2024). The integration of PROMs into AOD services has been shown to improve treatment retention, client

efficient and effective way.



functioning and may result in reductions in AOD use (Cordony et al., 2023). Importantly, funders are increasingly requiring the collection of PROMs. This highlights the growing need to provide AOD services with the systems required to streamline the collection, management and reporting of PROM data in an

To address these issues, developed **QuikFix** we (https://quikfix.psy.uq.edu.au/), an evidence-based PROM system designed specifically for AOD treatment services in 2019 with the assistance of funding from the Department of Health and Ageing. QuikFix collects client outcome measures and provides personalised feedback and information to both clients and staff at service entry and follow-up to facilitate collaborative treatment planning and progress monitoring and provide more personalised care. The QuikFix system has been used by Lives Lived Well Services since 2020 to collect PROMs at service entry and follow up from over 45,000 clients.

QuikFix was developed with maximum flexibility to ensure it can be adapted for use across a variety of AOD services and systems. It is not tied to a single service or treatment model, which makes it scalable for use in diverse settings, from public health programs to private sector treatment facilities. This adaptability allows for the broader adoption of PROMs across the Australian AOD sector, contributing to more standardised, evidence-based treatment practices. QuikFix also enables services to efficiently report client outcomes to funders, in line with increasing requirements for data reporting in the sector. The routine collection of PROMs is a crucial step towards improving AOD treatment services in Australia. By focusing on outcomes that matter most to clients, we can enhance the effectiveness of treatments, improve client engagement, and better monitor and report treatment progress. Systems like QuikFix provide a practical, scalable solution to the challenges of collecting and utilising PROMs. NCYSUR are currently expanding the use of QuikFix to other treatment services across Australia to supporting improved clinical decision-making and better treatment outcomes for Australians living with AOD use issues.

## 2. AOD Services and Priority Populations

## 2.1 AOD Services and Youth

AOD use is a top preventable cause of death among young people (GBD 2016 Alcohol Collaborators, 2018; Mokdad et al., 2016). The current Australian health system fails to engage or adequately treat young people with AOD use problems. Only 11% of male and 18% of female young Australians with AOD disorders seek treatment (Reavley et al., 2010). On average, there is an 18-year gap between the onset of AOD problems and the receipt of treatment, due to factors such as stigma that undermines treatment seeking, and a lack of accessible services (Chapman et al., 2015).



CREATE CHANGE

We recently published an Australian-first study that provided a comprehensive overview of the socio-demographic, substance use, mental health, social and risk behaviour profiles of people entering AOD treatment in a large nongovernment organisation (N = 9,413) (Campbell et al., 2024). Just over onefifth were young people (<25 years). Young people were more likely to identify as LGBTIQ+ (8.4%), compared to young adults (5.3%) and adults (3.3%). Although all age-groups presented with complex clinical profiles, young people had poorer mental health compared with young adults and adults. There were also higher rates of recent suicidal ideation in young people (47.5% vs 41.6% in young adults and 36.1% in adults). Additionally, although the experience of chronic pain was greater in the older age-groups, one-third of young people reported chronic pain, which is higher than the population prevalence estimate of 14.3% in people aged 18-25 years (Fayaz et al., 2016). This data clearly demonstrates that treatment services and clinicians need to be aware of the complex profiles that people can present to AOD treatment with in order to tailor services and treatment towards the needs of the client.

There have been repeated calls for the integration of treatment for co-occurring mental health disorders and medical conditions in AOD treatment (Savic et al., 2017). However, despite the high rates of co-occurring mental and physical health conditions, AOD, mental health and medical services often operate in silos (McGinty & Daumit, 2020). Although there is a growing body of evidence highlighting the effectiveness of integrated treatments addressing the complex needs of people with AOD problems (Savic et al., 2017), they are often not widely implemented, because of a lack of resourcing and the time burden of training staff (McGinty & Daumit, 2020; Sterling et al., 2011). It is crucial that there is funding to support future research that trials innovative approaches such as the provision of coordinated parallel care within AOD treatment services, and early intervention programs for young people, that are accessible in the environments in which they interact including social media and messaging apps, as well as well as settings where they are at higher risk of AOD-related harm, including universities, colleges and nighttime economies

## 2.2 Culturally and Linguistically Diverse Peoples

AOD services in Australia are failing to deliver equitable outcomes for individuals from Culturally and Linguistically Diverse (CALD) backgrounds. In Australia, the term "CALD" often refers to migrants who were born, or have parents who were born, in countries where English is the not the predominant language or whose culture may not align closely with Anglo-European norms. In 2021, nearly half of Australians were either born overseas or had at least one parent born overseas, and one in five spoke a language other than English at home (Australian Bureau of Statistics, 2022). However, CALD individuals remain substantially underrepresented in AOD research and underfunded by national health agencies compared to the mainstream population (Renzaho et al., 2016). This has resulted in a lack of culturally relevant and linguistically clear AOD



services, raising serious concerns about equity in service delivery (Bayly et al., 2019; Horwitz et al., 2024).

National data indicates that while people who are born overseas generally report lower rates of AOD use compared with people born in Australia who only speak English at home (Australian Institute of Health and Welfare, 2024d), those who are at risk of experience AOD-related harms face significantly greater challenges and barriers to accessing treatment and support services (VAADA, 2016). Figures from national surveys also likely underestimate true prevalence due to language and cultural barriers in English language surveys and a reluctance within some communities to report use due to stigma and cultural taboos (Browne & Renzaho, 2010).

When CALD individuals do seek help, current AOD services lack culturally appropriate interventions and support systems which affect access to services and the quality of care received (Posselt et al., 2017). Research demonstrates that this lack of cultural tailoring results in distrust towards health services, decreased engagement, reduced self-efficacy in managing health, and poorer health outcomes (Berkman et al., 2011; Musa et al., 2009). Limited availability of interpreter services, particularly in regional areas, combined with insufficient multilingual resources can lead to delayed or inadequate treatment for non-English speaking individuals seeking help (Horwitz et al., 2024).

These challenges underscore the **urgent need for culturally responsive AOD service initiatives that specifically address the unique needs and experiences of CALD communities**. For example, culturally tailored smoking cessation programs have shown improved success rates compared to non-tailored approaches (Leinberger-Jabari et al., 2024). In response to these challenges, researchers at NCYSUR are engaging young people from diverse cultural backgrounds to co-design culturally acceptable health promotion campaigns.

## 3. Beyond Health: Harm reduction, harm prevention and early detection of new drugs

Moving beyond health, there exist a number of avenues that are currently underutilised which could be enhanced or leveraged more broadly to address the harm of AOD use experienced by priority populations such as young people, and the broader Australian community.

## 3.1 Drug Checking Services

Drug checking services (sometimes known as 'pill testing' services) are an important intervention to reduce the harms associated with drug use. Evidence, drawn largely from European drug checking services, demonstrates the public health benefits of drug checking, and the additional role these services provide



CREATE CHANGE

as an early warning system, detecting harmful substances circulating in drug markets (Colledge-Frisby et al., 2023; Maghsoudi et al., 2022). We support continued investment in fixed-site drug checking services and trials in Australian jurisdictions where none currently exist. Additionally we support drug checking services at music festivals to reduce drug harms experienced by young people.

Support for drug checking services has increased in Australia, with 64% of Australians supporting them in the National Drug Strategy Household Survey 2022-23 (Australian Institute of Health and Welfare, 2024c). However, and in view of the variations in drug policy across different jurisdictions, how drug checking services are being implemented and evaluated is inconsistent in Australia. We advocate for further public health and implementation research to inform the long-term establishment of global best-practice drug checking services in Australia based on local need.

## 3.2 Supervised Consumption and Overdose Prevention Services

Overdose prevention services (also known as supervised injecting facilities) provide an important health service where people who use drugs can be safely monitored, treated in the case of overdose, and referred to medical and healthcare services. There is global evidence that overdose prevention sites promote safer injecting and enhance service user access to primary healthcare (Potier et al., 2014).

In Australia, single-site overdose prevention services operate in Sydney and Melbourne. A recent review of the Medically Supervised Injecting Facility in Melbourne found that its central goal to reduce mortality and overdose-related harm had been achieved, and it had provided a gateway to health and social services for service users (Victoria Department of Health, 2023). However, the review highlighted that expanding its model of care to provide holistic treatment and a strengthened harm reduction focus was important. We therefore advocate for the implementation, evaluation and trial of overdose prevention services in Australian jurisdictions, including in areas outside Sydney and Melbourne, based on local need.

Whilst there is international evidence that service users of overdose prevention services tend to be middle to older-aged (Levengood et al., 2021), the service needs of young people (in particular those experiencing homelessness and from CALD backgrounds) remain an important consideration in service design and implementation. It is therefore necessary to invest in research and evaluation of youth-focussed models of care within overdose prevention sites that focus on linking youth to holistic healthcare and social services and early intervention promoting long term recovery.



## 3.3 Police Drug Diversion Programs

Police drug diversion programs divert people who use drugs away from the criminal justice system and offer an alternative to the criminalisation of drug use. Police drug diversion programs have been found to be effective in preventing criminal offending and show promising results for improving health outcomes and diminishing social costs as well as costs associated with processing drug-related offences (Blais et al., 2022). The NDSHS has found that while the majority of people were opposed to legalising illicit drugs, with the exception of cannabis, this opposition has been declining (Australian Institute of Health and Welfare, 2024e). Additionally, most people supported a health or education response to illicit drug use, with only a minority supporting a law enforcement response.

It is estimated that in a single year, the Queensland Police Service (QPS) will encounter approximately 20,000 people in possession of a small quantity of drugs for their own personal use. Under previous Queensland legislation, persons apprehended in possession of small quantities of cannabis could be diverted from the justice system into a Police Drug Diversion Program (PDDP), where they received an episode of assessment and education to help address their substance use. From May 2024 this was broadened out to include all illicit drugs and operates under a three-tiered model, whereby the first offence results in a warning, and the person is provided an opportunity to participate in a drug diversion assessment program for the second and third offences. This is based upon evidence that a law enforcement response alone is both less effective and more expensive than providing treatment for AOD dependence. The expanded PDDP is intended to achieve better health and social outcomes for individuals and to reduce pressure on the criminal justice system and strongly aligns with the Queensland Government priorities in the Achieving Balance and Better Care Together plans, as well as the harm minimisation policy objectives of the NDS.

We at NCYSUR are part of the 2-year evaluation of the Queensland PDDP that is led by the Institute of Social Science Research. Based on high quality Australian and international research, we believe the findings from this evaluation will also show promising results in diverting people away from the criminal justice system and avoiding the harms associated with the criminal justice system.

## 3.4 School Programs, Social Media and Emerging Technologies

School based programs are a useful avenue to target young people with AOD use prevention messaging. These programs, however, are frequently outdated and not informed by current international best practice. At NCYSUR, we have developed and implemented a vaping prevention program that we have delivered to over 4,000 students in Southeast Queensland. Our program is designed to empower young people by addressing misconceptions and fostering informed decision making. This approach is, however slow, and **we therefore** 



recommend that programs such as ours and other curriculum-based programs (e.g., the OurFutures Vaping Program) be deployed across states and territories, including rural and remote areas through the integration into the existing health curriculum.

One barrier to the success of health messaging is the targeting of young people with social media content that portrays AOD use positively (Cheng et al., 2024; Rutherford, Lim, Johnson, et al., 2023; Sun, Lim, et al., 2023). Exposure to such social media content may increase the likelihood of use due (Lim et al., 2024; Rutherford, Lim, Cheng, et al., 2023; Sun, Vu, et al., 2023). This has led to increasing community concern and calls for action to address the rampant proliferation of, for example, positive vaping messaging and targeted marketing (Demaio, 2022; Kinninment, 2019).

To help address these concerns, researchers at NCYSUR have begun utilising artificial intelligence (AI) and youth input to cost-effectively and rapidly generate vaping prevention messages which are designed with social media as the focus. Preliminary data from over 600 young people showed that these rapidly generated AI messages are as effective as existing media campaigns which are more costly and time-consuming to create. NCYSUR are currently working to extend this technology to create tailored messages which are likely to work better than existing 'one-size-fits all' approaches, and will leverage the unique ability of social media to deliver messaging that aligns with a young person's interests and demographics. We recommend further investment into emerging technology to strengthen and advance existing prevention health messaging programs.

## 3.5 Rapid Drug Detection using Wastewater Epidemiology

Monitoring is necessary to be able to act swiftly to prevent use and reduce harm in those who are using alcohol and other drugs. A cogent example of the importance of monitoring is the rapid rise in vaping within the community, particularly amongst young people. The number of Australians—including young Australians—who smoked daily has been declining for decades (Australian Institute of Health and Welfare, 2024b) due to a series of successful tobacco cessation policies enacted by the Commonwealth, states and territories (Department of Health and Aged Care, 2024). The popularity of vaping devices threatened to undo these gains by introducing a novel nicotine product that is of appeal to young people.

This rapid uptake of vaping was missed by the existing AOD monitoring systems due to a reliance on national surveys to monitor AOD use. Such surveys are necessary to understand prevalence and factors that may influence uptake or continued use of a particular drug, but are slow to implement and may therefore miss rapidly shifting trends.



CREATE CHANGE

Wastewater epidemiology provides a compliment to existing monitoring by providing cost-effective and near real-time monitoring of drug use (Lai et al., 2018; Thai et al., 2023). By capturing what drugs and their quantity are used within a geographic region at regular (e.g., monthly) intervals, it is possible to quickly pick up shifting trends such as the rise in nicotine use that occurred due to uptake of vaping (Wang et al., 2024). Importantly, wastewater data is not influenced by the type of product being used. That is, while cigarette smoking continued to decline as measured by tax data, total nicotine use increased due to a shift to other products such as illicit tobacco and chop chop, vaping and nicotine pouches.

We therefore call on an expansion of existing wastewater epidemiology programs to test for more licit and illicit substances and to geographically expand these programs to provide more rapid data regional and rural communities in Australia.



## 4. Conclusion

A large number of young Australians will experiment with and use alcohol and other drugs in their lifetime. In response, it is necessary to have adequate supply reduction, demand reduction and harm reduction mechanisms to minimise their risk of harm. The establishment of a national governance structure to oversee effective implementation of evidence-based treatment and drug policy remains an important issue in Australia.

Further investment in AOD services is important to meet the needs of Australians seeking treatment. Alongside the expansion of services, enhanced reporting systems (e.g., nationally consisted data and collection of person reported outcome measures) will promote treatment quality and outcomes. This is necessary to ensure that existing services deliver evidence-based treatments. Additionally, service providers and treatments need to better tailor care to priority populations such as young people to ensure equitable healthcare access.

Finally, there exist a number of opportunities to address the harms from AOD use that are currently underutilised. There is a strong focus in capital cities for services such as drug checking, supervised consumption services and wastewater monitoring. An expansion within and beyond the capitals is necessary. School based programs and social media should be further leveraged to ensure that effective AOD messaging is able to reach young people.



CREATE CHANGE

## References

- Australian Bureau of Statistics. (2022). *Cultural diversity of Australia*. https://www.abs.gov.au/articles/cultural-diversity-australia
- Australian Institute of Health and Welfare. (2024a). Alcohol and other drug treatment services in Australia annual report, About. https://www.aihw.gov.au/reports/alcohol-other-drug-treatment-services/alcohol-other-drug-treatment-services-australia/contents/about
- Australian Institute of Health and Welfare. (2024b). *Alcohol, tobacco & other drugs in Australia, Tobacco and e-cigarettes*. https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/drug-types/tobacco
- Australian Institute of Health and Welfare. (2024c). *National Drug Strategy Household Survey 2022–2023*. https://www.aihw.gov.au/reports/illicituse-of-drugs/national-drug-strategy-household-survey
- Australian Institute of Health and Welfare. (2024d). *National Drug Strategy Household Survey 2022–2023: Alcohol, tobacco and other drug use among people with CALD backgrounds*. https://www.aihw.gov.au/reports/culturally-and-linguistically-diverseaustralians/alcohol-drug-use-cald
- Australian Institute of Health and Welfare. (2024e). *National Drug Strategy Household Survey 2022–2023: Support for alcohol and other drug-related policies*. https://www.aihw.gov.au/reports/illicit-use-of-drugs/alcoholdrug-policy-support
- Bayly, M., Cotter, T., & Carroll, T. (2019). 14.5 Targeting of public education campaigns and different types of media channels. In E. Greenhalgh, M. Scollo, & M. Winstanley (Eds.), *Tobacco in Australia: Facts & Issues*. Cancer Council Victoria. https://www.tobaccoinaustralia.org.au/chapter-14-social-marketing/14-5-targeting-of-public-education-campaigns
- Berkman, N. D., Sheridan, S. L., Donahue, K. E., Halpern, D. J., & Crotty, K. (2011). Low health literacy and health outcomes: An updated systematic review. *Annals of Internal Medicine*, 155(2), 97. https://doi.org/10.7326/0003-4819-155-2-201107190-00005
- Blais, E., Brisson, J., Gagnon, F., & Lemay, S.-A. (2022). Diverting people who use drugs from the criminal justice system: A systematic review of policebased diversion measures. *International Journal of Drug Policy*, 105, 103697. https://doi.org/10.1016/j.drugpo.2022.103697
- Bratberg, J. P., Simmons, A., Arya, V., Bhatia, A., & Vakharia, S. P. (2023). Support, don't punish: Drug decriminalization is harm reduction. *Journal of the American Pharmacists Association*, 63(1), 224–229. https://doi.org/10.1016/j.japh.2022.12.017
- Brown, V. A. (Ed.). (1986). *Our daily fix: Drugs in Australia*. Australian National Univ. Pr.



- Browne, J., & Renzaho, A. (2010). Prevention of alcohol and other drug problems in culturally and linguistically diverse communities. *Prevention Research Quarterly*, 13, 1–24.
- Busse, J. W., Wang, L., Kamaleldin, M., Craigie, S., Riva, J. J., Montoya, L., Mulla, S. M., Lopes, L. C., Vogel, N., Chen, E., Kirmayr, K., De Oliveira, K., Olivieri, L., Kaushal, A., Chaparro, L. E., Oyberman, I., Agarwal, A., Couban, R., Tsoi, L., ... Guyatt, G. H. (2018). Opioids for chronic noncancer pain: A systematic review and meta-analysis. *JAMA*, 320(23), 2448. https://doi.org/10.1001/jama.2018.18472
- Campbell, G., Pocuca, N., Newland, G., Ellem, R., Glasgow, S., Dignan, J., Stokes, H., & Hides, L. (2024). Clinical profiles of people enrolling in alcohol and other drug treatment in Australia: Do youth differ from young adults and adults? *Drug and Alcohol Review*, 43(7), 2010–2020. https://doi.org/10.1111/dar.13925
- Chapman, C., Slade, T., Hunt, C., & Teesson, M. (2015). Delay to first treatment contact for alcohol use disorder. *Drug and Alcohol Dependence*, *147*, 116–121. https://doi.org/10.1016/j.drugalcdep.2014.11.029
- Cheng, B., Lim, C. C. W., Rutherford, B. N., Huang, S., Ashley, D. P., Johnson, B., Chung, J., Chan, G. C. K., Coates, J. M., Gullo, M. J., & Connor, J. P. (2024). A systematic review and meta-analysis of the relationship between youth drinking, self-posting of alcohol use and other social media engagement (2012–21). *Addiction*, 119(1), 28–46. https://doi.org/10.1111/add.16304
- Colledge-Frisby, S., Ottaviano, S., Webb, P., Grebely, J., Wheeler, A., Cunningham, E. B., Hajarizadeh, B., Leung, J., Peacock, A., Vickerman, P., Farrell, M., Dore, G. J., Hickman, M., & Degenhardt, L. (2023). Global coverage of interventions to prevent and manage drug-related harms among people who inject drugs: A systematic review. *The Lancet Global Health*, 11(5), e673–e683. https://doi.org/10.1016/S2214-109X(23)00058-X
- Connor, J. P., Haber, P. S., & Hall, W. D. (2016). Alcohol use disorders. *The Lancet*, 387(10022), 988-998. https://doi.org/10.1016/S0140-6736(15)00122-1
- Connor, J. P., Stjepanović, D., Le Foll, B., Hoch, E., Budney, A. J., & Hall, W. D. (2021). Cannabis use and cannabis use disorder. *Nature Reviews Disease Primers*, 7(1), 16. https://doi.org/10.1038/s41572-021-00247-4
- Cordony, I., Mills, L., Mammen, K., & Lintzeris, N. (2023). A systematic review on the effect of routine outcome monitoring and feedback on client outcomes in alcohol and other drug treatment. *Drug and Alcohol Review*, 42(7), 1701–1722. https://doi.org/10.1111/dar.13742
- Demaio, S. (2022, December 21). While Australians were focused on the pandemic, the vaping industry was executing its own plan. *ABC News*. https://www.abc.net.au/news/health/2022-12-22/vaping-e-cigarette-tricks-loopholes-industry-target-young-people/101793648



- Department of Health. (2017). *National Drug Strategy 2017–2026*. Commonwealth of Australia.
- Department of Health and Aged Care. (2024). Smoking and tobacco laws in Australia [Text]. Australian Government Department of Health and Aged Care. https://www.health.gov.au/topics/smoking-vaping-and-tobacco/about-smoking/laws-in-australia
- Fayaz, A., Croft, P., Langford, R. M., Donaldson, L. J., & Jones, G. T. (2016). Prevalence of chronic pain in the UK: A systematic review and meta-analysis of population studies. *BMJ Open*, 6(6), e010364. https://doi.org/10.1136/bmjopen-2015-010364
- GBD 2016 Alcohol Collaborators. (2018). Alcohol use and burden for 195 countries and territories, 1990–2016: A systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*, *392*(10152), 1015–1035. https://doi.org/10.1016/S0140-6736(18)31310-2
- Glasgow, R. E., Battaglia, C., McCreight, M., Ayele, R. A., & Rabin, B. A. (2020). Making implementation science more rapid: Use of the RE-AIM framework for mid-course adaptations across five health services research projects in the veterans health administration. *Frontiers in Public Health*, 8, 194. https://doi.org/10.3389/fpubh.2020.00194
- Haber, P. S., & Riordan, B. C. (2021). *Guidelines for the Treatment of Alcohol Problems (4th edition)*. Specialty of Addiction Medicine, Faculty of Medicine and Health, The University of Sydney.
- Horwitz, R., Brener, L., Prankumar, S. K., De Jesus, T., Jaworski, A., Jadran, A., & Bryant, J. (2024). Understanding cultural inclusion in alcohol and other drug services in New South Wales, Australia and assessing the acceptability of a cultural inclusion audit. *Drug and Alcohol Review*, 43(7), 1798–1808. https://doi.org/10.1111/dar.13883
- Khatri, R. B., & Assefa, Y. (2022). Access to health services among culturally and linguistically diverse populations in the Australian universal health care system: Issues and challenges. *BMC Public Health*, *22*(1), 880. https://doi.org/10.1186/s12889-022-13256-z
- Kinninment, M. (2019, August 28). Aussie teens lured to vaping by new 'alcopop' masking the taste of nicotine. *ABC News*. https://www.abc.net.au/news/2019-08-28/selling-vaping-to-teenagers-at-epidemic-levels/11452036
- Lai, F. Y., Gartner, C., Hall, W., Carter, S., O'Brien, J., Tscharke, B. J., Been, F., Gerber, C., White, J., Thai, P., Bruno, R., Prichard, J., Kirkbride, K. P., & Mueller, J. F. (2018). Measuring spatial and temporal trends of nicotine and alcohol consumption in Australia using wastewater-based epidemiology. *Addiction*, 113(6), 1127–1136. https://doi.org/10.1111/add.14157
- Lawrinson, P., Roche, A., & Copeland, J. (2009). Optimizing clinical care through implementation of outcome monitoring systems. *Drugs: Education, Prevention and Policy*, 16(3), 250–259. https://doi.org/10.1080/09687630902876015



- Leinberger-Jabari, A., Golob, M. M., Lindson, N., & Hartmann-Boyce, J. (2024). Effectiveness of culturally tailoring smoking cessation interventions for reducing or quitting combustible tobacco: A systematic review and meta-analyses. *Addiction*, 119(4), 629–648. https://doi.org/10.1111/add.16400
- Levengood, T. W., Yoon, G. H., Davoust, M. J., Ogden, S. N., Marshall, B. D. L., Cahill, S. R., & Bazzi, A. R. (2021). Supervised Injection Facilities as Harm Reduction: A Systematic Review. *American Journal of Preventive Medicine*, 61(5), 738–749. https://doi.org/10.1016/j.amepre.2021.04.017
- Lim, C. C. W., Sun, T., Hall, W., Gartner, C., & Connor, J. P. (2024). Swipe to inhale: Tobacco-related content on social media and susceptibility to tobacco use. *American Journal of Preventive Medicine*, 0(0). https://doi.org/10.1016/j.amepre.2024.07.020
- Louie, E., Barrett, E. L., Baillie, A., Haber, P., & Morley, K. C. (2021). A systematic review of evidence-based practice implementation in drug and alcohol settings: Applying the consolidated framework for implementation research framework. *Implementation Science*, 16(1), Article 1. https://doi.org/10.1186/s13012-021-01090-7
- Maghsoudi, N., Tanguay, J., Scarfone, K., Rammohan, I., Ziegler, C., Werb, D., & Scheim, A. I. (2022). Drug checking services for people who use drugs: A systematic review. *Addiction*, 117(3), 532–544. https://doi.org/10.1111/add.15734
- McGinty, E. E., & Daumit, G. L. (2020). Integrating mental health and addiction treatment into general medical care: The role of policy. *Psychiatric Services (Washington, D.C.)*, 71(11), 1163–1169. https://doi.org/10.1176/appi.ps.202000183
- McGovern, M. P., Saunders, E. C., & Kim, E. (2013). Substance abuse treatment implementation research. *Journal of Substance Abuse Treatment*, 44(1), 1–3. https://doi.org/10.1016/j.jsat.2012.09.006
- McPheeters, M., O'Connor, E. A., Riley, S., Kennedy, S. M., Voisin, C., Kuznacic, K., Coffey, C. P., Edlund, M. D., Bobashev, G., & Jonas, D. E. (2023). Pharmacotherapy for Alcohol Use Disorder: A Systematic Review and Meta-Analysis.

  JAMA, 330(17), 1653. https://doi.org/10.1001/jama.2023.19761
- Mokdad, A. H., Forouzanfar, M. H., Daoud, F., Mokdad, A. A., El Bcheraoui, C., Moradi-Lakeh, M., Kyu, H. H., Barber, R. M., Wagner, J., Cercy, K., Kravitz, H., Coggeshall, M., Chew, A., O'Rourke, K. F., Steiner, C., Tuffaha, M., Charara, R., Al-Ghamdi, E. A., Adi, Y., ... Murray, C. J. L. (2016). Global burden of diseases, injuries, and risk factors for young people's health during 1990–2013: A systematic analysis for the Global Burden of Disease Study 2013. The Lancet, 387(10036), 2383–2401. https://doi.org/10.1016/S0140-6736(16)00648-6
- Morris, Z. S., Wooding, S., & Grant, J. (2011). The answer is 17 years, what is the question: Understanding time lags in translational research. *Journal of*



- the Royal Society of Medicine, 104(12), 510–520. https://doi.org/10.1258/jrsm.2011.110180
- Musa, D., Schulz, R., Harris, R., Silverman, M., & Thomas, S. B. (2009). Trust in the health care system and the use of preventive health services by older black and white adults. *American Journal of Public Health*, 99(7), 1293–1299. https://doi.org/10.2105/AJPH.2007.123927
- NSW Health. (2020). *Clinical Care Standards: Alcohol and Other Drug Treatment*. NSW Ministry of Health.
- O'Mara, B., Carey, G., & Weier, M. (2020). Community-based health promotion about alcohol and other drugs in a multicultural Australia—what works? A review of evidence. *Health Education Research*, *35*(5), 437–449. https://doi.org/10.1093/her/cyaa027
- Pocuca, N., Tisdale, C., Campbell, G., Beck, A. K., Ellem, R., Quinn, C. A., Kelly, P. J., Larance, B., Baker, A. L., Connor, J. P., Marsden, J., Chan, G. C. K., Connelly, L., Lenzen, S., Farrell, M., & Hides, L. (2024). Routine outcome monitoring and feedback in alcohol and other drug treatment: A qualitative study of client perspectives on implementation. *Drug and Alcohol Review*, dar.13962. https://doi.org/10.1111/dar.13962
- Posselt, M., McDonald, K., Procter, N., De Crespigny, C., & Galletly, C. (2017). Improving the provision of services to young people from refugee backgrounds with comorbid mental health and substance use problems: Addressing the barriers. *BMC Public Health*, *17*(1), 280. https://doi.org/10.1186/s12889-017-4186-y
- Potier, C., Laprévote, V., Dubois-Arber, F., Cottencin, O., & Rolland, B. (2014). Supervised injection services: What has been demonstrated? A systematic literature review. *Drug and Alcohol Dependence*, 145, 48–68. https://doi.org/10.1016/j.drugalcdep.2014.10.012
- Reavley, N. J., Cvetkovski, S., Jorm, A. F., & Lubman, D. I. (2010). Help-seeking for substance use, anxiety and affective disorders among young people: Results from the 2007 Australian national survey of mental health and wellbeing. *Australian & New Zealand Journal of Psychiatry*, 44(8), 729–735. https://doi.org/10.3109/00048671003705458
- Renzaho, A., Polonsky, M., Mellor, D., & Cyril, S. (2016). Addressing migration-related social and health inequalities in Australia: Call for research funding priorities to recognise the needs of migrant populations. *Australian Health Review*, 40(1), 3. https://doi.org/10.1071/AH14132
- Ritter, A., Chalmers, J., & Gomez, M. (2019). Measuring unmet demand for alcohol and other drug treatment: The application of an Australian population-based planning model. *Journal of Studies on Alcohol and Drugs, Supplement*, s18, 42–50. https://doi.org/10.15288/jsads.2019.s18.42
- Ritter, A., Grealy, M., Kelaita, P., & Kowalski, M. (2024). *Monograph No 36: The Australian 'drug budget': Government drug policy expenditure 2021/22*. UNSW Sydney. https://doi.org/10.26190/UNSWORKS/30075



- Roche, A. M., & Pollard, Y. (2006). Improved Services for People with Drug and Alcohol Problems and Mental Illness: Assisting Alcohol and Other Drugs (AOD) Non-Government Organisations to better respond to people with co-morbid AOD and Mental Health Issues. National Centre for Education and Training on Addiction. https://nceta.flinders.edu.au/application/files/2516/0156/0188/EN164.p
- Ronsley, C., Nolan, S., Knight, R., Hayashi, K., Klimas, J., Walley, A., Wood, E., & Fairbairn, N. (2020). Treatment of stimulant use disorder: A systematic review of reviews. *PLOS ONE*, *15*(6), e0234809. https://doi.org/10.1371/journal.pone.0234809
- Rutherford, B. N., Lim, C. C. W., Cheng, B., Sun, T., Vu, G. T., Johnson, B., Daniel Paul Ashley, Chung, J., Huang, S., Leung, J., Stjepanović, D., Connor, J. P., & Chan, G. C. K. (2023). Viral Vaping: A systematic review and meta analysis of e-cigarette and Tobacco-Related social media content and its influence on youth behaviours and attitudes. *Addictive Behaviors*, 147, 107828. https://doi.org/10.1016/j.addbeh.2023.107828
- Rutherford, B. N., Lim, C. C. W., Johnson, B., Cheng, B., Chung, J., Huang, S., Sun, T., Leung, J., Stjepanović, D., & Chan, G. C. K. (2023). #TurntTrending: A systematic review of substance use portrayals on social media platforms. *Addiction*, 118(2), 206-217. https://doi.org/10.1111/add.16020
- Savic, M., Best, D., Manning, V., & Lubman, D. I. (2017). Strategies to facilitate integrated care for people with alcohol and other drug problems: A systematic review. Substance Abuse Treatment, Prevention, and Policy, 12(1), 19. https://doi.org/10.1186/s13011-017-0104-7
- Senate Standing Committee on Social Welfare. (1977). *Drug problems in Australia: An intoxicated society*. The Parliament of the Commonwealth of Australia.
- Sterling, S., Chi, F., & Hinman, A. (2011). Integrating care for people with cooccurring alcohol and other drug, medical, and mental health conditions. *Alcohol Research & Health: The Journal of the National Institute on Alcohol Abuse and Alcoholism*, 33(4), 338–349.
- Sun, T., Lim, C. C. W., Chung, J., Cheng, B., Davidson, L., Tisdale, C., Leung, J., Gartner, C. E., Connor, J., Hall, W. D., & Chan, G. C. K. (2023). Vaping on TikTok: A systematic thematic analysis. *Tobacco Control*, 32(2), 251–254. https://doi.org/10.1136/tobaccocontrol-2021-056619
- Sun, T., Vu, G., Lim, C. C. W., Johnson, B., Stjepanović, D., Leung, J., Connor, J. P., Gartner, C., Hall, W. D., & Chan, G. C. K. (2023). Longitudinal association between exposure to e-cigarette advertising and youth e-cigarette use in the United States. Addictive Behaviors, 146, 107810. https://doi.org/10.1016/j.addbeh.2023.107810



- Thai, P. K., Tscharke, B. J., O'Brien, J., Gartner, C., Bade, R., Gerber, C., White, J. M., Zheng, Q., Wang, Z., Thomas, K. V., & Mueller, J. F. (2023). Increased Nicotine Consumption in Australia During the First Months of the COVID-19 Pandemic. *Nicotine and Tobacco Research*, 25(6), 1194–1197. https://doi.org/10.1093/ntr/ntac275
- VAADA. (2016). CALD AOD Project Final Report. Victorian Alcohol And Drug Association. https://www.vaada.org.au/publications/cald-aod-project-final-report/
- Victoria Department of Health. (2023). Review of the Medically Supervised Injecting Room—Final report. https://www.health.vic.gov.au/publications/review-of-the-medically-supervised-injecting-room-2023
- Wang, Z., Zheng, Q., O'Brien, J. W., Tscharke, B. J., Chan, G., Thomas, K. V., Mueller, J. F., & Thai, P. K. (2024). Analysis of wastewater from 2013 to 2021 detected a recent increase in nicotine use in Queensland, Australia. *Water Research*, 250, 121040. https://doi.org/10.1016/j.watres.2023.121040



## Acknowledgments

The authors wish to thank Professor Wayne Hall and Ms Sarah Yeates for providing edits and feedback on drafts of this report.