Drug driving

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Part of the Tranzinfo Hot Topics series, this issue offers a selection of recent research on the increase in drug driving in Australia and how to tackle it. Drug driving is on the rise across Australia, with data showing that more fatal crashes now involve drugs than alcohol.[1] In NSW alone, the number of drug driving charges rose from an average of 102 per quarter in 2008 to 3,296 in 2023, a 32-fold increase.[2]

Commonly-detected drugs include methylamphetamine, cannabis and MDMA (Ecstasy).[3] Offenders often have more than one drug in their system, increasing their level of impairment for driving, and several states have recently expanded their roadside screening programs to include cocaine.[4]

Unlike drink driving, drug driving tests operate under a zero-tolerance rule, meaning that any detectable amount of illegal drugs is an offence[5]. This creates a grey area for users of prescribed medicinal cannabis. Currently Tasmania is the only state where a person can legally drive with medicinal cannabis in their system.[6] Whilst some states, notably Victoria, are conducting investigations and considering reforms,[7] advocates for users of prescribed medicinal cannabis continue to call for changes to legislation.

Recent research has focused on reasons for the spike in drug driving, characteristics of drug drivers, and what needs to change in policy and prevention strategies to curb the problem.

A quick overview **Research**

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[1] Haghani, M, 'Australian drug driving deaths have now surpassed drink driving. Here's how to tackle it', *The Conversation*, November 17, 2025, < https://theconversation.com/australian-drug-driving-deaths-have-surpassed-drink-driving-heres-how-to-tackle-it-269496>.

[2] Teperski et al., *Trends in drug driving charges, roadside drug testing and drug use in NSW, 2008-2023*, NSW Bureau of Crime Statistics and Research, 2024, < https://bocsar.nsw.gov.au/documents/publications/bb/bb151-200/BB172-Report-mobile-drug-testing.pdf>.

[3] Schumann, J et al., 'Trends in alcohol, MDMA, methylamphetamine and THC in injured and deceased motor vehicle drivers and motorcyclists over a decade (2010-2019) in Victoria, Australia', *Injury Prevention,* Jan 21, 2025, < https://pubmed.ncbi.nlm.nih.gov/39837645/>.

[4] McKay, J, 'Drug drivers involved in more Queensland road fatalities than drunk drivers', ABC News, 11 November 2025, < https://www.abc.net.au/news/2025-11-11/qld-drug-driving-worse-than-drink-driving-cocaine-use-spikes/105992612>.

[5] Office of Road Safey, *Zero tolerance for drug driving by state and territory*, Australian Government, 2025, <https://www.officeofroadsafety.gov.au/sites/default/files/documents/infra6891-ors-rules-for-drug-driving-may2025.pdf>.

[6] Thannoo, J, 'Medicinal cannabis patients, advocates call for change to driving laws', ABC News, 16 March 2025, < https://www.abc.net.au/news/2025-03-16/medicinal-cannabis-driving-law-reform-push/104927466>.

[7] Victorian Government, 'Medicinal cannabis and safe driving closed circuit track trial', Victorian Government, 1 September 2025, < https://www.vic.gov.au/Medicinal-Cannabis-and-Safe-Driving-Closed-Circuit-Track-Trial>.

A quick overview

Australian drug driving deaths have surpassed drink driving. Here's how to tackle it
Haghani, M, *The Conversation*, Monday 17 November 2025
Tackling Australia's drug driving problem requires the right mix of laws, visibility, and social messaging, according to a Melbourne academic.

One in five drug drivers: Victoria's worst-offending region revealed
Grant, G & Morgan, C, *The Age*, Monday 24 November 2025
In one Melbourne suburb, drug drivers outnumber the next-worst neighbourhood threefold as police catch at least one a day.
Pakenham, on the city's south-eastern outer fringe, has topped Victoria as the suburb with the most drug drivers, after police caught 358 offenders there during the 2024-25 financial year.

Medicinal cannabis patients, advocates call for change to driving laws
Thannoo, J, *The Age*, Sunday 16 March 2025
Tasmania is the only state where a person can legally drive with medicinal cannabis in their system. Victoria has recently implemented a reform allowing a magistrate to decide not to suspend a person's licence if they have a prescription and were not impaired. Cannabis can impair a driver, but studies have not shown a clear relationship between THC levels and impairment. Advocates and patients are calling for changes to the law.

Drug-driving rates are soaring, but it's not just down to extra testing
Haghani, M, *The Age*, 31 October 2024
There has been a 32-fold increase in drug-driving in NSW in the past 15 years, and the scale of the mobile drug testing program isn't extensive enough to serve as an effective deterrent, according to a public safety expert.

Research

Alexandrescu, L, Mason, RR, Cronin, A, & Van Lamoen, N 2023, Uncovering the urgency for heightened drug testing, *Australasian Road Safety Conference, 2023, Cairns, Qld.*, pp. 49–51.
Drivers involved in traffic crashes are typically tested less for drugs than for alcohol. Estimates of the prevalence of various drug types present in traffic crashes are therefore based on incomplete data. To address this issue, a study involving the comprehensive reanalysis of blood samples collected from drivers hospitalised post traffic crashes was conducted in 2021. The toxicological results demonstrated that 47% of blood samples contained at least one drug of interest, and combinations of up to five drugs of interest were found in 18% of the samples. These results suggest that drug use among drivers involved in traffic crashes is prevalent, and this use consists of many drug types. Additionally, drugs of interest were detected in 39% of the blood samples that had previously only been tested for alcohol. This finding indicates that analysis for drugs other than alcohol could be relevant for all

drivers involved in severe traffic crashes.

Anderson, L, Love, S, Freeman, J, & Davey, J 2022, A real-world examination of targeted and randomised roadside drug testing, *Australasian Road Safety Conference, 2022, Christchurch, NZ*, pp. 155–157.
This research examined the effectiveness of randomised and targeted roadside drug testing (RDT) operations to identify potential drug driving offenders. A total of 8 random operations and 8 targeted operations were conducted by Queensland Police officers in 2021. The results highlight that targeted testing is an efficient use of a scarce resource. However, it is important to consider that this approach does not allow for the achievement and maintenance of a general deterrent effect.

Cameron, M, Newstead, S, Clark, B, & Thompson, L 2022, Evaluation of an increase in roadside drug testing in Victoria based on models of the crash effects of random and targeted roadside tests, *Journal of Road Safety,* vol. 33, no. 2, pp. 17–32.
Drug driving continues to be overrepresented in both fatal and serious injury crashes in Victoria. As an enforcement countermeasure, preliminary oral fluid tests to detect drug driving were introduced in Victoria, Australia in December 2004. The increase in roadside drug tests in Victoria from 42,000 in 2013 (1% of licensed drivers) to 100,000 per year (2.2% of drivers), particularly targeted tests, is estimated to have saved 33 fatal crashes (13.7% reduction) and at least 80 serious injury crashes (1.4% reduction) per year. Based on the findings from this research, further increases in targeted and random roadside drug tests are warranted, up to at least 390,100 total tests per year, which are estimated to save a further 46 fatal crashes and at least a further 134 serious injury crashes per year.

Baldock, M 2022, Characteristics of crash-involved drink and drug car drivers and motorcyclists, *Traffic Injury Prevention*, vol. 24, no. 1, p. pp 7-13.
Drug driving is an issue of growing concern among Australian jurisdictions, including South Australia. In order to have an appropriate response to drug driving in regard to policy and enforcement, it is important to have sound knowledge about the patterns of drug use among motorists and the associated risks of this behaviour. This study examined the characteristics of 1,277 hospitalized road users in South Australia in the years 2014 to 2017, with reference to whether or not they tested positive for alcohol or other drugs (the three drugs tested for according to the South Australian Road Traffic Act (1961): THC, methamphetamine, MDMA). Substance use differs by road user type and age, which has potential implications for enforcement practices.

Grigg, J 2025, Tackling drink and drug driving through care, not just penalties, *Monash University Lens*, 31 October 2025.
By considering underlying health and socioeconomic issues related to drink and drug driving, researchers have identified an opportunity to intervene via a health-led response.

Hasan, R, Watson, B, Haworth, N, & Oviedo-Trespalacios, O 2022, A systematic review of factors associated with illegal drug driving, *Accident Analysis and Prevention*, vol. 168, p. 106574.
219 publications were reviewed within this systematic review. Drug drivers are more likely to be single, young males who often drive after using cannabis and who score high on sensation-seeking and impulsivity scales. Peer influence is the most important social factor that would either induce or inhibit drug driving. The effectiveness of current enforcement approaches to drug driving appears to be different between jurisdictions around the world. This systematic review seeks to identify factors associated with drug driving (i.e., driving after consuming drugs other than alcohol) to highlight gaps in existing knowledge and inform the design of more effective countermeasures.

Hasan, R, Watson, B, Haworth, N, & Oviedo-Trespalacios, O 2023, The self-reported psychosocial and legal factors contributing to drink and drug driving, *Transportation Research Part F, Traffic Psychology and Behaviour,* vol. 98, pp. 186–204.
Drug driving is recognised as a major road safety problem in many countries. In Australia, the primary response to this problem involved the adoption of roadside drug testing (RDT), which was modelled on the policies and practices used to conduct random breath testing (RBT) for alcohol. However, there remain important differences in the way that RDT and RBT are conducted, which might produce differential effects on drug and drink driving behaviour. In addition, various psychosocial factors are known to influence the two behaviours. Thus, there is a need to investigate the relative influence of legal and psychosocial factors on drug driving and explore how they may be similar or different to drink driving. Future research should identify countermeasures that integrate deterrence and psychosocial principles in order to reduce these risky driving behaviours.

Hasan, R, Watson, B, Haworth, N, & Oviedo-Trespalacios, O 2024, The path forward for better interventions to reduce drug driving, *Australasian Road Safety Conference, 2024, Hobart, Tas*, pp. 216-218.
There are growing concerns regarding the role of drug driving in road crashes in Australia. Currently, the primary emphasis lies on law enforcement as the predominant countermeasure to deter drug driving, while identifying the contributing factors has received less attention. Our research studies have provided a better understanding of drug driving by demonstrating that: a) there is a need to treat the problematic use of drugs, being a major contributing factor to engaging in drug driving, through health-based programs, b) better access to public transport is a prudent approach towards reducing the instrumental rewards anticipated from drug driving, c) changes to current policing practices and drug driving laws may be required to enhance the effectiveness of drug driving enforcement. The findings suggest that applying a multidisciplinary approach that includes law enforcement, healthcare professionals, government agencies and the wider community may achieve a sustainable reduction in drug driving.

Hasan, Razi, Watson, B, Haworth, N, Oviedo-Trespalacios, O, & Bates, L 2024, How do perceptions of procedural justice, police legitimacy, and legitimacy of laws influence intentions to drug drive?, *Journal of Safety Research*, vol. 90, pp 86-99.
There is a need for improved drug driving enforcement to promote greater driver compliance with drug driving laws. In Australia, Roadside Drug Testing (RDT) suffers from operational challenges that undermine its effectiveness in reducing drug driving. To identify potential improvements to RDT, this study investigated the extent to which drivers perceive RDT to be procedurally just and that the policing of drug driving and the associated laws are legitimate. These perceptions were then compared with those applying to Random Breath Testing (RBT) and examined in relation to their respective influence on intentions to drug and drink drive in the future. The results highlight the need for road safety authorities to enhance the perceived legitimacy of drug driving enforcement and associated laws. Changes to current police practices and/or drug-driving laws may also be needed to enhance the effectiveness of RDT.

Jannink, A & Lee, S 2023, The road to solving impaired driving using Artificial Intelligence, *Australasian Road Safety Conference, 2023, Cairns, Qld.*, pp. 240–241.
Impaired driving is a phenomenon that encompasses a variety of instances – alcohol intoxication, drugs or sleep deprivation. Acusensus is partnering with the Office of Road Safety, Griffith University and the Queensland Police Service to produce a solution addressing impaired driving. Two rounds of internal simulator testing at Acusensus indicate that a list of promising, identifiable features can be linked to impaired driving: vehicle trajectory patterns, vehicle speed and lateral movements within lanes. Following successful simulator testing, Acusensus has conducted a roadside observation of random drug testing processes and plans to proceed to the real-world trial stage, working with the Queensland Police Service to conduct roadside data collection.

Love, S, Rowland, B, Stefanidis, KB, & Davey, J 2024, Are current drug driving enforcement strategies achieving the desired effect? Drug users' perceptions of drug driving legislation and enforcement in Queensland, *Journal of Police and Criminal Psychology*, vol. 39, no. 1, pp. 1–14.
This study examined how illicit drug users perceived roadside drug testing (RDT) in Queensland, a jurisdiction that enforces a zero-tolerance enforcement strategy to drug driving. The findings of this study may hold implications for future research in identifying limitations in the current evidence and help inform policing procedures and policy surrounding future drug testing approaches.

Mackay, A, Downey, L, & Hayley, A 2024, Attitudes and behaviours towards driving under the influence of drugs, *Australasian Road Safety Conference, 2024, Hobart, Tas.*, pp. 317–319.
Methamphetamine-affected drivers continue to be overrepresented in road

trauma; yet a clear intoxication-impairment matrix remains elusive. Therefore, exploring intrapersonal factors may provide insight into behavioural antecedents that increase risk for harm. This study examined whether attitudes toward drug driving predicts dangerous driving behaviour in individuals who use methamphetamine and how this may differ to individuals with no history of substance use. Targeted campaigns aimed specifically at reducing methamphetamine-related road trauma should focus on the risks and dangers of such behaviour, rather than the sanctions and influence of peers.

McManus, SA, Watson-Brown, N, & Truelove, V 2022, Investigating self-regulation in young adults who drug-drive, *Traffic Injury Prevention*, vol. 23, no. 3, pp 125-129.
Drug-driving among young adults is a growing concern. Methods other than enforcement are required to reduce engagement in such behaviour. Research has identified satisfaction of individual's inherent psychological needs is predictive of positive behavioural outcomes sustainable in the long-term via the internalization of self-regulatory processes. Drug-driving behaviour and self-regulation was explored through the lens of self-determination theory's needs-supportive model. The implications of these findings include recommendations for psychological-based interventions guided by self-determination theory targeting young adults' drug-driving and more generally their long-term safe driving practices.

Mills, Laura & Freeman, J 2023, Investigating predictors of driving immediately after consuming cannabis: A study of medical and recreational cannabis users in Australia, *Transportation Research Part F: Traffic Psychology and Behaviour*, vol. 96, pp. 213–221.
This study aimed to explore the length of time cannabis users typically wait between drug consumption and driving a vehicle, and what factors influence such decisions. A total of 839 Australian cannabis users participated in an online survey (26.3% had a prescription for cannabis). Participants ranged in age between 18 years and 75 years (M = 43.3) and 38.2% were female. Given cannabis use is likely to increase through impending decriminalisation and expansion of prescription access, identifying ways to educate cannabis users and extend the length of time they wait between consumption and driving is critical for road safety.

Mills, Laura, Freeman, J, & Davey, J 2022, A study into the nature and extent of drug driving recidivism in Queensland (Australia), *Journal of Safety Research*, vol. 81, pp. 116–122.
While research has reported on overall prevalence rates of drug driving, the extent of recidivist offending has yet to be explored. The objective of this research was to examine recidivistic behaviours detected through Roadside Drug Testing (RDT) in Queensland (between December 2007 and June 2020), with a focus on: Delta-9-tetrahydrocannabinol (THC), 3,4-Methylenedioxymethylamphetamine (MDMA), and methamphetamine (MA). The findings provide evidence for the extent of drug driving recidivism on

Queensland roads. To deter recidivists and the greater motorist population from drug driving, there is need for greater resources dedicated to RDT to increase both the perceived and real likelihood of detection.

Mills, Laura, Freeman, J, Parkes, A, & Davey, J 2022, Do they need to be tested to be deterred? Exploring the impact of exposure to roadside drug testing on drug driving, *Journal of Safety Research*, vol. 80, pp. 362–370.
Maximizing the deterrent effects of Roadside Drug Testing (RDT) operations remains critical for improving road safety. While preliminary research has explored the impact of being tested at RDT sites, there is yet to be an investigation of different types of exposure (e.g., seeing an operation, being tested) and the subsequent relationship(s) with perceptions of certainty of apprehension and future intentions to offend. The overall objective of this research was to explore these relationships with a sample of drug takers. The results illuminate the extent of the drug driving problem and the need for greater resourcing to increase the real threat of detection. While the effect of exposure to enforcement was small, it was positive, incremental and supportive of increased roadside police enforcement as well as further research to quantify such deterrent processes.

Mills, L, Freeman, J, & Rowland, B 2023, Australian daily cannabis users' use of police avoidance strategies and compensatory behaviours to manage the risks of drug driving, *Drug and Alcohol Review*, vol. 42, no. 6, pp. 1577–1586.
Daily use of cannabis is increasing in Australia, yet there is limited understanding of the driving behaviours within this cohort, including how they perceive and manage the risks of being apprehended for drug driving and involved in a crash after consumption. Interventions and education which aim to challenge this perception that cannabis does not reduce driving ability may prove important for reducing drug driving among the most frequent consumers of cannabis.

Mills, L & Truelove, V 2024, Is drug driving more common among those who know where the police are? An investigation into the use and non-use of Facebook police location communities, *Safety Science*, vol. 169
Some individuals who consume drugs have been known to use police avoidance strategies, such as using Facebook police location communities (PLCs). Questions remain unanswered regarding the use of PLCs, including 1) what differentiates those who use these communities from those who do not, and 2) do these communities influence deterrence effects and offending behaviour? The current study aimed to answer these questions, with a sample of Queensland motorists who reported consuming either cannabis, methamphetamine, MDMA and/or cocaine in the last 30 days. The findings highlight that PLCs may assist motorists to engage in drug driving offences with a reduced risk of detection and have implications for how to operationalize RDT in a way that reduces the harmful effects of these sites.

Nightingale, C, Kippen, R, Ward, B, Stoove, M, Quinn, B, Sutton, K, & Dietze, P 2023, The prevalence of drug driving and being caught for a drug driving offense among community-recruited people who use methamphetamine in metropolitan and rural Victoria, Australia, *Traffic Injury Prevention*, vol. 24, no. 2, pp. 103–108.
This article examines the prevalence, frequency and characteristics of drug driving and being caught for a drug driving offense and their key correlates among people who used methamphetamine in rural and metropolitan areas of Victoria, Australia. Outcomes included self-reported drug driving (driving within three hours of consuming drugs, yes/no) and having been caught for a drug driving offense (yes/no). Sociodemographic (including rurality) and drug use variables were included in multivariable analyses. An enhanced focus on public health campaigns and strategies to prevent drug driving is needed.

Ramezani, M, Bambach, M, Levinson, D, & Moylan, E 2022, Optimal scheduling of random breath and mobile drug testing, pp. 252–253. *Australasian Road Safety Conference, 2022, Christchurch, NZ.*
This paper proposes a strategic day-to-day RBT and MDT scheduling method to improve drink driving and DUI general deterrence. The paper draws out the implications for operations guidelines of RBT and MDT in Australia. The paper contributes to the data-driven development of a unified and systematic framework that efficiently connects high- level road safety goals to operations of RBT and MDT with limited enforcement resources to reduce road trauma and DUI-related accidents on roads.

Schumann, J, Di Rago, M, Woodford, N, Glowacki, L, Fitzpatrick, J, Kelly, M, Beck, B, Drummer, O, Gerostamoulos, D, & Dipnall, J 2025, Trends in alcohol, MDMA, methylamphetamine and THC in injured and deceased motor vehicle drivers and motorcyclists over a decade (2010-2019) in Victoria, Australia, *Injury Prevention*, vol. Jan 21, 2025.
Driving under the influence of alcohol and other drugs contributes significantly to road traffic crashes worldwide. This study explored trends of alcohol, methylamphetamine (MA), 3,4-methylenedioxy-N-methylamphetamine (MDMA) and Δ9-tetrahydrocannabinol (THC), in road crashes from 2010 to 2019 in Victoria, Australia. Despite enhanced road safety measures in Victoria, drug-driving persists, indicating a need for revised prevention strategies targeting this growing issue.

Teperski, A, Boiteux, S, & Brown, C 2024, Trends in drug driving charges, roadside drug testing and drug use in NSW, 2008-2023, NSW Bureau of Crime Statistics and Research.
Mobile Drug Testing was introduced in NSW in 2007 along with a new suite of offences for driving a motor vehicle with a prescribed illicit drug present in a driver's system. These changes improved the ability of the NSW Police Force to identify and proceed against drug driving offenders, as previously they could only charge an offender with driving under the influence of a drug based on a subjective assessment of the driver's level of intoxication. Similar to Random Breath Testing (RBT), it was anticipated that the high visibility of

roadside drug testing would increase the perceived risk of detection amongst drug drivers thereby reducing drug driving behaviours. The Mobile Drug Testing program in NSW is now one of the largest roadside drug testing programs in Australia, representing a quarter of all roadside drug tests undertaken nationwide.

Victorian Auditor-General 2023, Reducing the harm caused by drugs on Victorian roads
Drug driving is a major road safety and public health issue. Victoria Police's roadside drug testing program aims to detect and deter offending. However, it only has funding to deliver 150,000 tests per year. Given this, Victoria Police must use its limited resources effectively to maximise the program's impact on road safety. The program makes a positive contribution to reducing drug driving, but it is not fully effective. This is because Victoria Police does not: 1. have a clearly documented test allocation process; 2. monitor whether officers comply with program rules; 3. have a coordinated approach to improving the program. By not addressing these issues, Victoria Police is missing opportunities to further reduce drug driving and related trauma. We made 10 recommendations to Victoria Police to improve its: 1. documentation practices; 2. oversight of key processes; 3. program management.

Wakelin, D, Millward, S, Colley, B, & Sterling, K 2024, Evaluation of the NSW combined drink and drug driving offence, Australasian College of Road Safety, Mawson, ACT.
The Combined Drink and Drug Driving Offence commenced in NSW on 28 June 2021. The combined offence was introduced to address the significant risk posed by drivers who combine alcohol and illicit drug use before driving, which can increase the risk of a fatal crash. In 2022, Transport for NSW commissioned an independent review of the combined offence to address evaluation questions about the early implementation of the offence and identify successes, challenges, and areas where implementation could be improved.

Watson, A & Le, V 2023, Roadside drug testing and risky driver behaviour, *Australasian Road Safety Conference, 2023, Cairns, Qld.*, pp. 526–527.
The risks posed by drug driving are well established in road safety data and research. However, understanding the characteristic differences between drivers/riders testing positive to one or more types of illicit drugs requires further investigation. Using Roadside Drug Testing (RDT) data obtained through the Queensland Police Service (QPS), this study aimed to examine and compare the characteristics of drivers/riders testing positive to THC only with those testing positive to an amphetamine type stimulant (ATS).

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