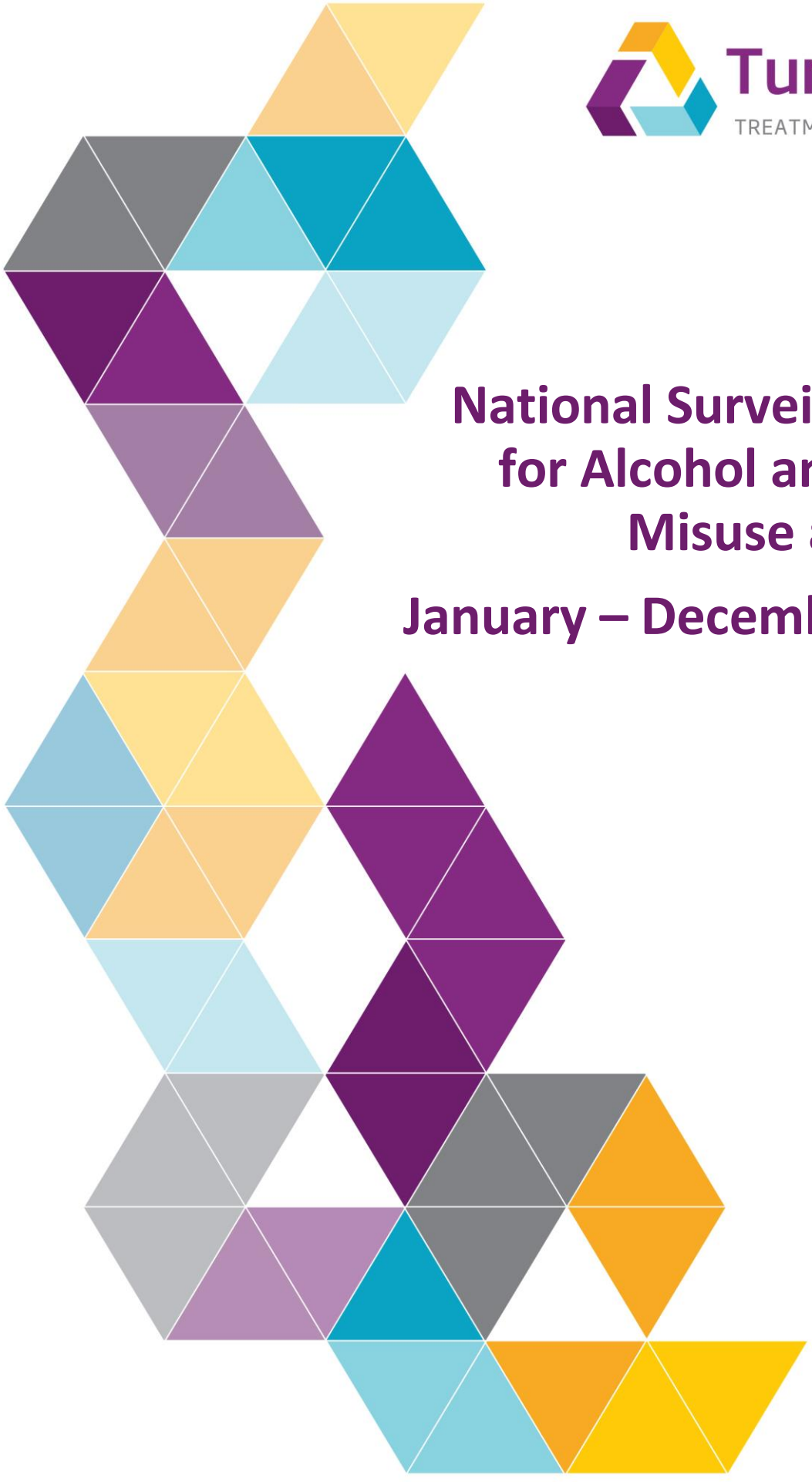

Turning Point

TREATMENT · RESEARCH · EDUCATION

National Surveillance System for Alcohol and Other Drug Misuse and Overdose

January – December 2018 Data

Foruhar Moayeri

Sharon Matthews

Jessica Killian

Cherie Heilbronn

Dhanya Nambiar

Rowan P. Ogeil

Debbie Scott

Dan Lubman

Final

September 2019

easternhealth

NATIONAL SURVEILLANCE SYSTEM FOR ALCOHOL AND OTHER DRUG- MISUSE AND OVERDOSE

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Final

September 2019

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Preface

The first phase of this project, involved the development of a national surveillance system for overdose and suicidal behaviour cases attended by ambulance. In 2016 the focus shifted from suicidal behaviour to alcohol and other drug-related ambulance attendances, including overdose. It is a collaborative project between Turning Point's Population Health Research Program, Monash University Eastern Health Clinical School, Ambulance Victoria, Ambulance Tasmania, ACT Ambulance Service, Ambulance New South Wales, Northern Territory St. Johns Ambulance Service and Queensland Ambulance Service. The project is funded by the Commonwealth Department of Health.

Turning Point is a specialist alcohol and other drug organisation that integrates treatment and support services with research, education and training. This unique service model ensures that research informs clinical practice and vice versa, resulting in a best practice environment.

Turning Point amalgamated with public health provider Eastern Health in October 2009 and is formally affiliated with Monash University. Turning Point is part of the International Network of Drug Treatment and Rehabilitation Resource Centres for The United Nations Office of Drugs and Crime and is a member of the International Harm Reduction Association.

Turning Point strives to promote and maximise the health and wellbeing of individuals and communities living with and affected by alcohol and other drug-related harms. We aspire to be a world-leading service delivery and research and development centre.

To achieve this, we are continually:

- creating thriving service delivery, research and development cultures that produce the best possible knowledge;
- applying, using and translating this knowledge to promote change, build effective and rational policy, and demonstrate and contribute to world's best practice;
- building our own and our communities' capacity through strategic relationships, partnerships and collaborations;
- strengthening organisational capacity to provide the best environment for quality staff to achieve their potential.

Since being established in 1994, Turning Point has led research and its translation into policy and practice at a local, national and international level. To best respond to emerging issues, Turning Point employs staff from a range of professional backgrounds and collaborates with organisations across the research, health, education and community services sectors.

The organisation integrates activities across a diverse range of specialist knowledge and professional practice. This unique combination enables Turning Point to translate evidence into action. Our work is essential to understanding the complexities of alcohol and other drug use in our community and in developing effective approaches to prevent and treat dependence and other related harms.

Programs operate in the areas of research, treatment and support (incorporating state-wide and local outpatient and residential services, as well as state and national telephone-based and online services), and

state-wide and national education and training. The Turning Point Population Health Research team is responsible for investigating patterns of alcohol and drug use and related harm using population-based datasets available in Victoria. The staff in the Population Health Research team currently include: Debbie Scott (Strategic Lead), Sharon Matthews (Manager), Cherie Heilbronn, Jessica Killian, Rowan Ogeil, and Foruhar Moayeri (Research Fellows), James Wilson (Research Officer), Cass Connor, Nyssa Ferguson, Cathie Garrard, Annie Haines, Ellen Holmes-Preston, Isabelle Hum, Kate Jones, Liliana Laskaris, Elizabeth Le, Daniel Leung, Lisa Meyenn, Melissa Reed, Adam Scott, Julie Tennant, Amaya Munoz Labiano, Kay Van Namen and Merran Waterfall (Research Assistants), Mark Hoffmann (Database Manager) and Samuel Campbell (Data Scientist). The Population Health Research team examines patterns of drug use and harm in Victoria and provides information to policy makers, alcohol and drug workers, as well as other interested groups and individuals. Current projects include AODstats, The Ambo Project and Beyond the Emergency.

Acknowledgements

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- Turning Point acknowledges the role of ambulance services in this report including their contribution to data provision.

- Ambulance Service representatives:

    - Ambulance Victoria
        - Karen Smith

    - Ambulance Tasmania
        - Con Georgakas
        - Mike McDermott
        - Alex Wilson

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        - Emma Bosley

    - Ambulance Service of New South Wales
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    - ACT Ambulance Service
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    - St John Ambulance Northern Territory
        - Matthew Eastham

    - St John Ambulance Western Australia
        - Paul Bailey
        - Scott Higgins

    - Paramedics across all jurisdictions

Acronyms

ACT	Australian Capital Territory
AOD	Alcohol and other drug
AV	Ambulance Victoria
ePCR	Electronic patient care record
LAN	Local Area Network
MOU	Memorandum of Understanding
NSW	New South Wales
NT	Northern Territory
PCR	Patient care record
PWID	Person/people who inject drugs
QLD	Queensland

Executive Summary

This report provides an overview of findings for the 2018 calendar year for five jurisdictions – Victoria, New South Wales, Tasmania, Australian Capital Territory and Northern Territory. For the 2018 calendar year:

- Victorian data (January to December – 12 months of data) identified:
    - 27,223 alcohol intoxication-related attendances, with rates of 419.6 and 444.3 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
    - 4,228 amphetamine-related attendances, with rates of 68.3 and 59.3 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
        - 2,937 crystal methamphetamine-related attendances, with rates of 47.2 and 42.1 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
    - 3,545 cannabis-related attendances, with rates of 51.6 and 67.3 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
    - 3,262 heroin-related attendances, with rates of 62.2 and 16.7 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
    - 4,730 benzodiazepine-related attendances, with rates of 73.6 and 75.2 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
    - 1,262 opioid analgesic-related attendances, with rates of 17.7 and 26.1 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
    - 466 opioid pharmacotherapy-related attendances, with rates of 7.3 and 7.3 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
    - 15 emerging psychoactive substance-related ambulance attendances
- NSW data (March, June, September and December– four months of data) identified:
    - 10,348 alcohol intoxication-related attendances, with rates of 132.6 and 136.2 per 100,000 population in metropolitan Sydney and regional NSW, respectively
    - 1,099 amphetamine-related attendances, with rates of 14.0 and 14.6 per 100,000 population in metropolitan Sydney and regional NSW, respectively
        - 911 crystal methamphetamine-related attendances, with rates of 11.7 and 12.0 per 100,000 population in metropolitan Sydney and regional NSW, respectively
    - 1,258 cannabis-related attendances, with rates of 15.3 and 18.3 per 100,000 population in metropolitan Sydney and regional NSW, respectively
    - 492 heroin-related attendances, with rates of 8.1 and 2.6 per 100,000 population in metropolitan Sydney and regional NSW, respectively
    - 1,120 benzodiazepine-related attendances, with rates of 15.8 and 11.7 per 100,000 population in metropolitan Sydney and regional NSW, respectively
    - 438 opioid analgesic-related attendances, with rates of 4.9 and 7.3 per 100,000 population in metropolitan Sydney and regional NSW, respectively
    - 216 opioid pharmacotherapy-related attendances, with rates of 3.2 and 1.9 per 100,000 population in metropolitan Sydney and regional NSW, respectively
    - fewer than five cases of emerging psychoactive substance-related ambulance attendances

- Tasmania data (March, June, September and December – four months of data) identified:
    - 866 alcohol intoxication-related attendances, with rates of 170.2 and 159.2 per 100,000 population in Greater Hobart and regional Tasmania, respectively
    - 74 amphetamine-related attendances, with rates of 11.8 and 15.7 per 100,000 population in Greater Hobart and regional Tasmania, respectively
        - 42 crystal methamphetamine-related attendances, with rates of 8.8 and 7.3 per 100,000 population in Greater Hobart and regional Tasmania, respectively
    - 161 cannabis-related attendances, with rates of 32.4 and 29.0 per 100,000 population in Greater Hobart and regional Tasmania, respectively
    - 101 benzodiazepine-related attendances, with rates of 27.1 and 13.0 per 100,000 population in Greater Hobart and regional Tasmania, respectively
    - 42 opioid analgesic-related attendances, with rates of ≥8.1 and ≥4.3 per 100,000 population in Greater Hobart and regional Tasmania, respectively
    - 11 opioid pharmacotherapy-related attendances were recorded in Tasmania
    - No emerging psychoactive substance and less than five heroin-related ambulance attendances occurred in Tasmania.

- ACT data (March, June, September and December – four months of data) identified:
    - 640 alcohol intoxication-related attendances
    - 44 amphetamine-related attendances
        - 31 crystal methamphetamine-related attendances
    - 62 cannabis-related attendances
    - 105 heroin-related attendances
    - 65 benzodiazepine-related attendances
    - 31 opioid analgesic-related attendances
    - Less than five cases of opioid pharmacotherapy-related attendances
    - No emerging psychoactive substance-related ambulance attendances

- Northern Territory data (March, June, September and December – four months of data) identified:
    - 1,436 alcohol intoxication-related attendances
    - 39 amphetamine-related attendances
        - 25 crystal methamphetamine-related attendances
    - 142 cannabis-related attendances
    - 22 benzodiazepine-related attendances
    - ≥20 opioid analgesic-related attendances
    - No emerging psychoactive substance-, heroin- or opioid pharmacotherapy- related attendances

Chapter 1: Introduction

Alcohol and other drug (AOD) misuse and overdose represent significant public health issues that impact on individuals, communities, service providers and government. Robust surveillance of AOD misuse and overdose is a priority area of need in terms of an evidence base regarding trends and emerging patterns of harms at a population level. The development of a surveillance system to report these harms, using ambulance records, addresses a significant gap in evidence and provides the basis for a world-leading system with the capacity to both inform and evaluate prevention, intervention and education strategies at national, state and local levels.

This report provides technical and implementation information for the *National Surveillance System for Alcohol and Other Drug Misuse and Overdose*, a monitoring project utilising data derived from in-depth ambulance service records to examine misuse and overdose of heroin, alcohol, pharmaceutical drugs and other illicit substances. Importantly, this project provides consistent, detailed and timely data on harms associated with AOD use, not captured by other data systems. This national system has built on an ongoing project developed in Victoria, with project data informing policy responses and interventions that target AOD use, with numerous reports for local government (e.g. Paul et al, 2014; Heilbronn and Matthews, 2011), state government (e.g. Lloyd et al, 2016; Heilbronn et al, 2016) and other stakeholders (e.g. Pennay et al, 2014; Cogger, Dietze, & Lloyd, 2016) as well as peer-reviewed journal publications (e.g. Kaar et al, 2016; Arunogiri et al, 2016; Lloyd & McElwee, 2011).

This report provides an outline of progress of the project to date, including the background and rationale for the project, methods, and future directions.

Background

The *National Surveillance System for Alcohol and Drug Misuse and Overdose* has been developed to provide timely and robust information regarding acute harms associated with AOD misuse and overdose in Australia. This project extends the scope and focus of *The Ambo Project: alcohol and drug related ambulance attendances*, which is an ongoing project developed and undertaken in Victoria since 1998. The rate of fatal heroin overdoses was increasing in Victoria in the late 1990s (Dietze, Fry, Rumbold, & Gerostamoulos, 2001), and in response to increasing concern about the prevalence of overdose, the current project was established to examine non-fatal heroin overdose in detail using ambulance service records (Dietze, Cvetkovski, Rumbold, & Miller, 1998). The project is funded by the Victorian Department of Health and Human Services.

Examination of non-fatal overdose and other drug-related harms has been conducted through surveys of PWID (people who inject drugs) and other drug using populations (e.g., Kirwan, Dietze and Lloyd, 2012; Nguyen, Dietze and Lloyd, 2012). However, another potential source of information regarding acute harms are records of ambulance attendance (Bammer, Ostini, & Sengoz, 1995; Degenhardt, Hall, & Adelstein, 2001; Lloyd and McElwee, 2011; Lloyd, 2012). The rate of ambulance attendance at heroin overdose has been found to be as high as 56% of total overdoses (Darke et al., 1996a). Recognition of this fact has seen an increase in the use of ambulance service records to examine the nature and prevalence of heroin overdose (Bammer et al., 1995; Degenhardt et al., 2001; Dietze et al., 2003). In this regard, ambulance service records can provide rich information on heroin related overdose and have significant advantages over one-off surveys of PWID. For example, ambulance service records are not subject to the same sampling biases inherent in surveys of PWID (see Hser, 1993). Moreover, in contrast to one-off surveys, ambulance records are routinely collected and are thus sensitive to potential changes in heroin market characteristics such as changes in drug purity, policing practices and user behaviour.

In Victoria, ambulance paramedics are required to complete an electronic patient care record (ePCR) (VACIS®) for every incident that they attend and for which they provide a service. These electronic records are downloaded into the Ambulance Victoria (AV) Data Warehouse, which contains the details of incident location and incident result (hospital journey etc.) along with additional details about the incident, such as the patient's condition. This method of data collection superseded an earlier paper-based recording of incident and patient details.

In early 1997, Turning Point commenced discussions with the Metropolitan Ambulance Service, now Ambulance Victoria, with a view to establishing whether their records could be used to examine non-fatal overdose in Melbourne. The resulting project was designed to examine non-fatal heroin overdose using ambulance service records through the establishment of a database of all ambulance attendances at overdose events in the Melbourne metropolitan area. With enhanced data collection available from June 1998, attendances involving drugs other than heroin were included, and the project examines all alcohol and drug related attendances. Coverage for this project now includes both metropolitan Melbourne and regional Victoria. This project is unique to Australia and throughout the rest of the world.

National surveillance of AOD misuse and overdose

A national surveillance system utilising the methodological approach established in the Ambo Project was developed in 2011 to examine AOD misuse and overdose, and has been funded by the Commonwealth Department of Health. AOD misuse and overdose is a major public health issue that has significant costs for individuals, families and the broader community. Although AOD misuse has been identified as a priority area for the development and delivery of effective and sustained policy and treatment, there is currently a paucity of robust and timely data available for monitoring the nature and extent of acute AOD misuse and overdose at a population level.

Coding and analysis of ambulance service records provides an excellent basis to develop an ongoing monitoring system of acute AOD misuse and overdose ambulance presentations at a population level. This is invaluable in identifying emerging patterns in AOD misuse, including differences across subpopulations or geographic regions, or clustering within distinct time periods, and will inform both prevention and treatment responses, as well as acting as a potential evidence base to support evaluation of policy initiatives and intervention effectiveness.

The initial aim of this project is to provide a population level AOD misuse and overdose case monitoring system that records presentations for acute AOD harms. To deliver a robust surveillance system for identification and monitoring of AOD misuse and overdose, the methodology and expertise developed in the Victorian Ambo Project was applied to ambulance data across jurisdictions. The strong collaboration with ACT Ambulance Service, Ambulance Tasmania, Ambulance Victoria, NSW Ambulance, Queensland Ambulance Service, St Johns Ambulance Northern Territory, St Johns Ambulance Western Australia and South Australia Ambulance Service allows for a partnership approach, with ongoing engagement and dialogue to maximise utility, relevance and accuracy of the data derived from the project. It also allows a direct feedback loop for paramedics that informs their training needs and practice approaches. Importantly, it represents coverage of over 80% of the Australian population, and provides a basis for surveillance of AOD misuse and overdose across diverse population groups and geographical settings.

While ambulance services are often the first (and frequently primary) contact with health services in the event of an acute substance related presentation, little is known about populations at elevated risk of harm, or trends in harms at a population level. In order to effectively utilise accurate, robust data regarding these

presentations, additional review and coding is required to validate patient data. Our experience with alcohol and drug related ambulance attendance monitoring in Victoria has demonstrated the effectiveness of developing and maintaining a timely and robust monitoring system that builds on information provided in ambulance patient care records to identify acute aetiology and correlates of presentations.

Through enhanced coding and analysis of AOD-related ambulance service records, data are available at a whole population level, as well as for specific populations of interest (e.g., young people, people with co-occurring conditions, patients who present frequently to services). Also, invaluable data regarding service responses, clinical factors and treatment outcomes will be available.

Importantly, in addition to core ongoing monitoring and reporting, the availability of robust evidence regarding AOD misuse and overdose presentations in the community supports the development of targeted work to enhance service delivery, screening, referral and intervention opportunities. The surveillance system also has the capacity to inform research exploring pathways through care and broader service systems (utilising our expertise in data linkage across health and other population level data). In Victoria, the AOD attendance data has been used in projects involving data linkage to explore patient pathways through care, and to identify opportunities for targeted referral and intervention opportunities for populations at risk of harms. At a national level, our data has similarly been used to inform whole-of-population interventions to improve the health and wellbeing of Australian males (*Beyond the Emergency* project) and inform policy such as National ICE Action Strategy and National Drug Strategy 2017-2026). The utility of this system can be expanded to mental health-, self-injurious thought and behaviours- and interpersonal violence-related cases in response to identified areas of need in policy and service delivery contexts at a national level.

The current report does not include South Australia, Western Australia, New South Wales (September and December) or Queensland. The South Australia Ambulance Service do not use an electronic patient care record system, however an agreement stands for inclusion of South Australia once electronic system has been implemented. While St John Ambulance Service Western Australia has previously provided coded data to Turning Point, this coded data did not match the standing project coding framework. Western Australia has now agreed in principle to provide raw data for coding by Turning Point. We are currently negotiating data access, terms and definitions, and are optimistic of reporting Western Australian data in 2020 reports. Queensland data will not be included in this report as the Queensland Ambulance Service implemented a new electronic information system in late 2017, and data was not reliable from late 2017 to December 2018. Accordingly, it is expected that January 2019 Queensland data will be available for inclusion in future reports. The delivery of NSW data to Turning Point for the July to December 2018 time period was delayed until June 2019. Accordingly, the initial submission of the report (July 2019) included only March and June NSW data, and this revised report includes March, June, September and December NSW data.

Three reports are provided each calendar year, two six monthly reports (January-June date, July to December data), and an annual report reporting on the calendar year. Victoria is the only state that reports on all 12 months, the remaining jurisdictions report on snapshot months, specifically the third month of each fiscal quarter, commencing with March.

Project reports to date include:

1. Moayeri, Matthews, Killian, Heilbronn, Scott, Lubman (2019) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-Dec 2018 Data (July 2019) – current report

2. Moayeri, Matthews, Heilbronn, Scott, Lubman (2019) National Surveillance System for Alcohol and other Drug Misuse and Overdose: July-Dec 2018 Data (June 2019)

3. Moayeri, Matthews, Heilbronn, Scott, Lubman (2019) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-June 2018 Data (March 2019)

4. Moayeri, Matthews, Killian, Heilbronn, Scott, Lubman (2018) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-Dec 2017 Data (August 2018)

5. Moayeri, Matthews, Scott, Lubman (2018) National Surveillance System for Alcohol and other Drug Misuse and Overdose: July-December 2017 data (June 2018)

6. Moayeri, Matthews, Scott (2017) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-June 2017 Data (Dec 2017)

7. Fawkner, Scott, Heilbronn, Killian, Lloyd (2017) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-Dec 2016 Data (Sept 2017)

8. Fawkner, Killian, Hoffman, Lloyd (2017) National Surveillance System for Alcohol and other Drug Misuse and Overdose: July-December 2016 Data (April 2017)

9. Lloyd, Fawkner, Matthews, Killian, Hoffmann (2016) National Surveillance System for Alcohol and other Drug Misuse and Overdose: 2016 Annual Technical Report (May 2016)

Chapter 2: Methods

Data generated from ambulance services

The data utilised for this project is generated from electronic data extracted from data obtained through the VACIS® and Siren data collection systems. VACIS® is used by paramedics in the ACT, NSW, Tasmania and Victoria to record the details of all emergency cases they attend, while St John Ambulance NT uses Siren. Queensland also used VACIS®, however it was replaced with a similar system in late 2017. During this implementation phase, data provision has not been possible and therefore Queensland data is not included in this report. In March 2019 Turning Point were advised that the data patches to remedy reporting issues would be available for QAS data from December 2018, and so data to that point are unreliable and will not be included. We have potentially negotiated a new data extract for 2019 data and are hopeful that the code can be written to extract these data in a timely manner to enable inclusion of Queensland in future reports. NSW Ambulance approvals for data release were reviewed in early 2019, and the new data release process was approved by NSW Ministry of Health in June 2019. Turning Point received NSW July to December 2018 data in late June 2019, and therefore the September and December NSW data was not included in the initial submission of this report (July 2019). This revised report includes March, June, September and December NSW data. A full 12 months of data are reported for Victoria, while four months of data are reported for other jurisdictions (March, June, September and December 2018). In Tasmania, due to industrial action in June 2018 the number of patient care records completed by paramedics were reduced, and do not reflect full paramedic caseload for that monthly period. Please use caution when interpreting Tasmanian results.

This report contains information on:

- alcohol and other drug related attendances, including:
    - alcohol intoxication
    - all amphetamines
        - crystal methamphetamine
    - cannabis
    - heroin
    - benzodiazepines
    - opioid analgesics
    - opioid pharmacotherapy
    - emerging psychoactive substances

- geographic location – local government areas (LGA) are reported as well as metropolitan and regional aggregations. Metropolitan Melbourne does not include Geelong. Metropolitan Brisbane does not include the Gold Coast area. Metropolitan Sydney does include the Illawarra region.

- time of day, day of week

- demographic details of patient (sex, approximate age)

- whether naloxone had been administered (yes/no) and response to naloxone administration (effective/not effective)

- outcome (e.g., taken to hospital/not transported)
- whether police co-attended
- other relevant clinical data (e.g., cyanosis, pupil size, respiratory rate)

Data security

The information is stored securely at Turning Point. Electronic data are password protected and stored on secure servers with restricted access. Researchers on the project are the only people with access to these data.

Electronic data are stored on a dedicated secure server. This server has restricted access through firewalls and login to only those working on the current project at Turning Point. The current project researchers have also signed the Ethics Statement for Research Workers. It should be noted that these protocols satisfy access requirements for a number of highly confidential data sets collected by organisations such as the Victorian Department of Health and Human Services, Victoria Police and the Australian Bureau of Statistics. In accordance with NHMRC guidelines, the data will be retained for seven years following completion of the project, and will be irretrievably deleted at the end of this time.

Findings are presented in aggregate form, with no fewer than five cases reported for any variable at any time. Individuals are not identifiable from publication of these findings.

Data coding and quality control

The data are internally validated when parsed for import and conversion from the VACIS® and Siren transfer files provided by ambulance services to Turning Point. Variables and coding used in the Siren and VACIS® data are compared to the Turning Point database model and any discrepancies are flagged for investigation by project staff. When the VACIS® data have been parsed, converted and appended to the Turning Point database, the electronic extract from the electronic patient care records (ePCR) are collated and ready to be coded.

Specifically trained project coding staff manually read each individual ePCR to identify and code the drugs involved in the attendances. Project coding staff undertake inter-rater reliability auditing on a routine basis, with individual feedback provided by senior staff to ensure coding accuracy. Monthly project meetings are held in order to enable ongoing review and feedback and to identify issues and emerging trends.

After the set of ePCR extracts are manually coded, the dataset is reviewed by senior project staff and extracted for cleaning prior to analysis. Multiple ePCR extracts for the same patient are aggregated and a random selection of cases is reviewed to ensure the manual coding was accurate and consistent. Data are then converted to a format suitable for analysis and are merged with the Turning Point master project dataset. Preliminary analyses are performed to identify any anomalous trends in the data. Any unusual or unexpected results are then re-reviewed to ensure that data accurately reflect the case details. In addition to these formal quality control methods, throughout these processes, all project staff involved – the data entry personnel, the Research Systems Analyst and the Research Fellow responsible for analysis – communicate to identify trends, anomalies or interesting patterns noticed in the current dataset. In addition, the project team engaged with each of the ambulance services on a regular basis in order to facilitate data access, data integrity and to communicate on project progress.

Definition of drug involvement and poisoning

A case is determined to be AOD-related if the immediate or recent over or inappropriate use of a substance or medication is assessed as significant to the reason for paramedic attendances. Chronic use of a substance alone is not sufficient for inclusion in the analysis. Drug involvement in the attendances is ascertained from the paramedic clinical assessment, patient self-report, information provided by third parties at the scene, such as family, friends or associates, and other information available at the scene. The drug categories reported indicate the involvement of these drugs however other drugs and alcohol may have also been ingested.

The core criterion project staff use in determining the involvement of a drug or substance is: “Is it reasonable to attribute the immediate or recent (not merely chronic) over or inappropriate ingestion of the substance or medication as contributing to the reason for the ambulance attendances?"

Data are reported for selected drugs and drug categories as detailed below:

Alcohol

The presence of alcohol is categorised in three ways: alcohol involvement in attendances, alcohol intoxication-related attendances, and alcohol intoxication only-related attendances. Alcohol intoxication case area a subset of alcohol involved cases, and alcohol intoxication only-related attendances are a subset of alcohol intoxication attendances.

Alcohol involvement

The determination of alcohol involvement is based on ambulance paramedic report of alcohol consumption, established through patient self-report or information provided by third parties at the scene, such as family, friends or associates. This category includes any consumption of alcohol, ranging from small quantities (e.g. < 1 standard drink) to alcohol intoxication, as well as cases where alcohol quantity cannot be determined. This category is helpful in identifying cases where a small quantity of alcohol may have contributed to the ambulance attendance (e.g., where consumption has occurred in conjunction with other substances). In addition, cases of acute, physical alcohol withdrawal are included in this category.

Alcohol intoxication-related attendances

Alcohol intoxication indicates cases where alcohol intoxication, with or without other drug involvement, contributed to the reason for the ambulance attendances. These cases may include alcohol-related injuries and other conditions in addition to alcohol intoxication. Intoxication is determined through mention of intoxication or large quantity of alcohol consumed, in addition to clinical assessment of the patient.

Alcohol intoxication only-related attendances

Alcohol intoxication only-related cases are defined as those cases attended by ambulance where only alcohol intoxication (and no other drugs), as far as could be ascertained, contributed to the reason for the ambulance attendance. These cases often relate to alcohol intoxication and poisoning, but may include alcohol-related injuries.

All amphetamine-related attendances

This category is an aggregation of the cases classified as either crystal methamphetamine- or other amphetamine-related events.

Crystal methamphetamine-related attendances

These cases are selected on the basis of ambulance paramedic mention of the involvement of crystal methamphetamine (also known as 'crystal' and 'ice').

Cannabis-related attendances

In this category attendances are selected on the basis of ambulance paramedic mention of the involvement of cannabis.

Heroin-related attendances

This category identifies all heroin-related cases, and includes cases with or without naloxone administration.

Benzodiazepine-related attendances

This category includes drugs such as alprazolam, bromazepam, clobazam, clonazepam, diazepam, flunitrazepam, lorazepam, midazolam, nitrazepam, oxazepam, temazepam and triazolam. This category also includes the sedatives zolpidem and zopiclone.

Opioid analgesic-related attendances

This category includes drugs such as dextropropoxyphene (with or without paracetamol), fentanyl, hydromorphone, morphine, oxycodone, pethidine and tramadol, but excludes methadone and buprenorphine.

Opioid pharmacotherapy-related attendances

These cases are selected on the basis of ambulance paramedic mention of the involvement of substances prescribed for the provision of pharmacotherapy, including methadone, buprenorphine and buprenorphine with naloxone and naltrexone.

Emerging psychoactive substance-related attendances

In this category attendances are selected on the basis of ambulance paramedic mention of the involvement of a new or emerging psychoactive substance. This category includes a range of new or emerging substances that are designed to mimic the effects of other licit and illicit substances, and are also often referred to as research chemicals. Synthetic cannabinoids are not included in reporting of this category, as they are captured in a separate drug category that only includes synthetic cannabinoids (not included in this report).

AOD poisoning attendances

In this project, the AOD poisoning cases are identified and coded when an overdose threshold is met:

- for alcohol and illicit preparations: a life-threatening event, identified by clinical features including low respiratory rate, intubation or GCS < 9; and/or
- for pharmaceutical preparations: meets the criteria for alcohol and illicit preparation, or 10 or more time the prescribed dose

Intent of AOD poisoning attendances

Intent of AOD poisoning cases is coded to delineate suicide attempts from AOD consumption for other purposes, with three intent categories defined as:

- intentional AOD poisoning: purposeful AOD consumption with suicidal intent
- unintentional AOD poisoning: purposeful AOD consumption without suicidal intent

- undetermined intent AOD poisoning: purposeful AOD consumption with unknown suicidal intent (when determination of intentional or unintentional AOD poisoning cannot be made)

Chapter 3: Results – Victoria

Alcohol intoxication-related attendances in Victoria

Results are presented covering the twelve-month period from January to December 2018 for Victoria.

Numbers and rates of alcohol intoxication-related ambulance attendances are shown in Table 1. Characteristics of alcohol intoxication-related ambulance attendances are shown in Table 2. Data regarding month, time of day and day of week of attendances are displayed in Figure 1 to Figure 3. Mapped numbers and rates of presentations are presented at the end of this section.

- Alcohol intoxication-related attendances peaked in December 2018 (Table 1).
- Characteristics of alcohol intoxication-related cases over the 12 month period are presented in Table 2 and include:
    - 27,223 alcohol intoxication-related cases were recorded in Victoria
    - the majority of patients who were attended for alcohol intoxication-related cases were male (62%), with similar proportions found across regional and metropolitan areas
    - in Victoria, the median age of patients with alcohol intoxication-related attendances was 41 years
    - a similar proportion of patients involved in alcohol intoxication-related attendances in metropolitan (79%) and regional areas (77%) were transported to hospital
- As presented in Figure 2, alcohol intoxication-related attendance numbers peaked in the evening and early morning between 10pm and midnight across all of Victoria.
- In metropolitan Melbourne and regional Victoria, Saturdays represented the peak day for alcohol intoxication-related attendances in 2018 (Figure 3).

Table 1: Alcohol intoxication-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	1,819 (37.7)	619 (39.4)	2,438 (37.7)
February attendances (per 100,000 population)	1,407 (29.2)	488 (31.0)	1,895 (29.3)
March attendances (per 100,000 population)	1,776 (36.8)	628 (39.9)	2,404 (37.2)
April attendances (per 100,000 population)	1,606 (33.3)	556 (35.3)	2,162 (33.5)
May attendances (per 100,000 population)	1,475 (30.6)	491 (31.2)	1,966 (30.4)
June attendances (per 100,000 population)	1,460 (30.3)	479 (30.5)	1,939 (30.0)
July attendances (per 100,000 population)	1,530 (31.7)	554 (35.2)	2,084 (32.3)
August attendances (per 100,000 population)	1,602 (33.2)	504 (32.0)	2,106 (32.6)
September attendances (per 100,000 population)	1,708 (35.4)	589 (37.4)	2,297 (35.6)
October attendances (per 100,000 population)	1,716 (35.6)	609 (38.7)	2,325 (36.0)
November attendances (per 100,000 population)	1,910 (39.6)	648 (41.2)	2,558 (39.6)
December attendances (per 100,000 population)	2,225 (46.1)	824 (52.4)	3,049 (47.2)

Table 2: Characteristics of alcohol intoxication-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	20,234 (419.6)	6,989 (444.3)	27,223 (421.4)
Mean attendances per day	73.4	78.5	74.8
Daily range	28-195	31-163	28-195
Age- median (interquartile range)	41 (27-53)	42 (28-54)	41 (27-53)
Male	12,580 (62%)	4,401 (63%)	17,023 (62%)
Police co-attendance	6,191 (31%)	2,122 (30%)	8,327 (31%)
Transport to hospital	15,456 (79%)	5,427 (77%)	20,934 (77%)
Multiple drugs involved	892 (4%)	329 (5%)	1,221 (5%)

Note: all proportions are based on present information

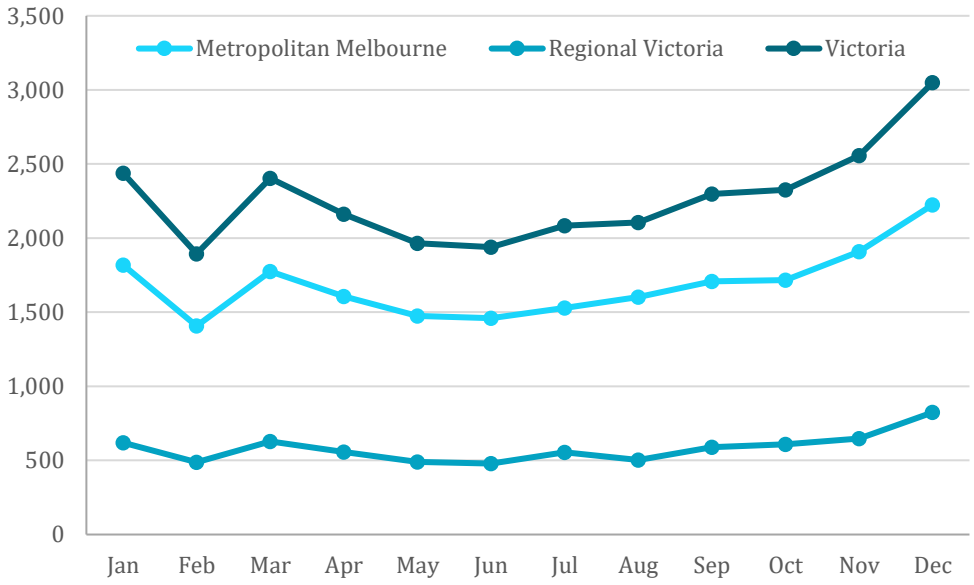


Figure 1: Number of alcohol intoxication-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

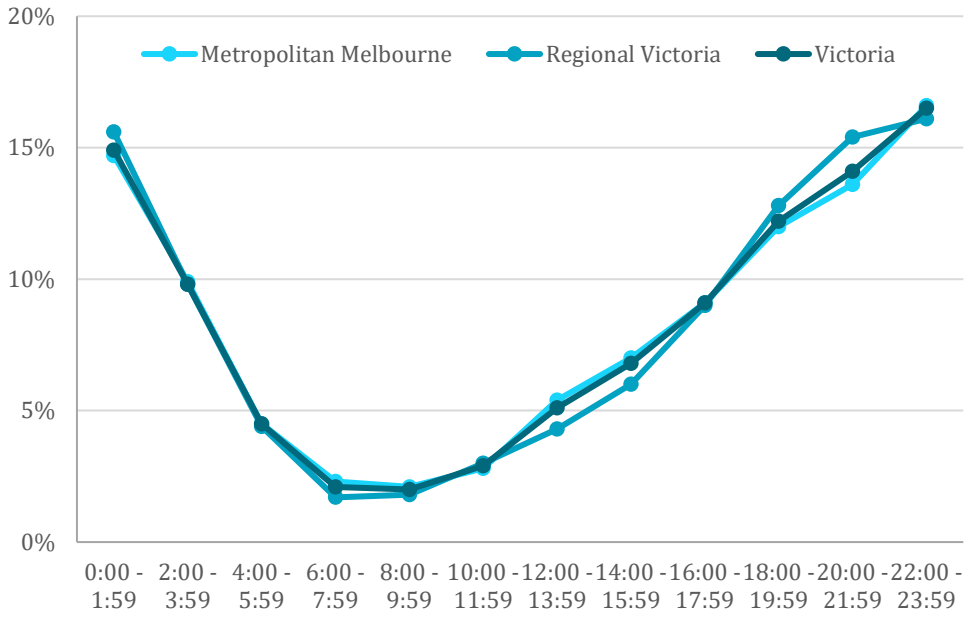


Figure 2: Percentage of alcohol intoxication-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2018

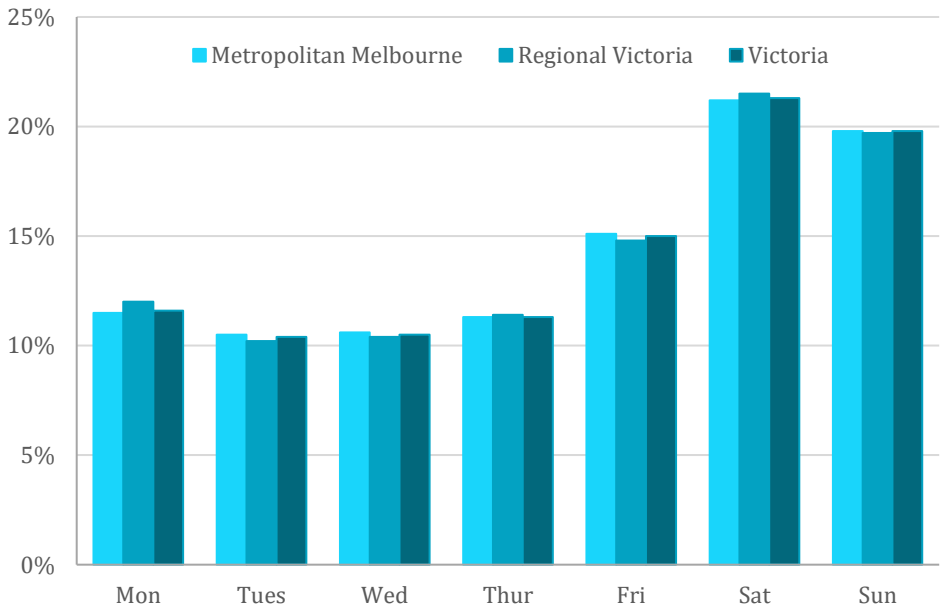
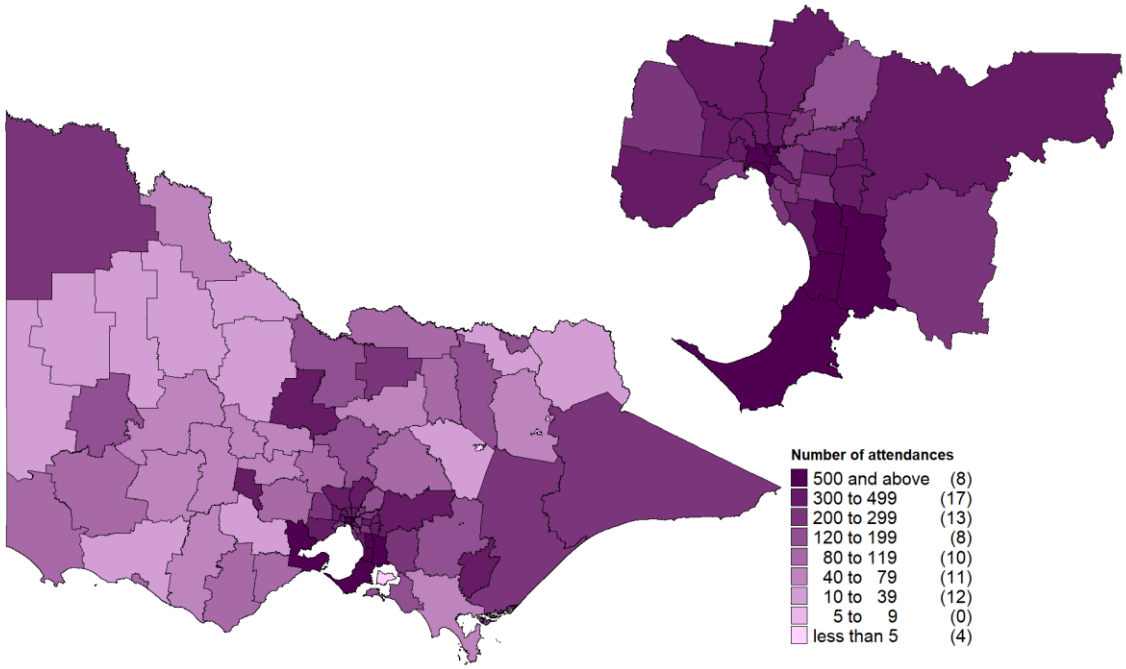
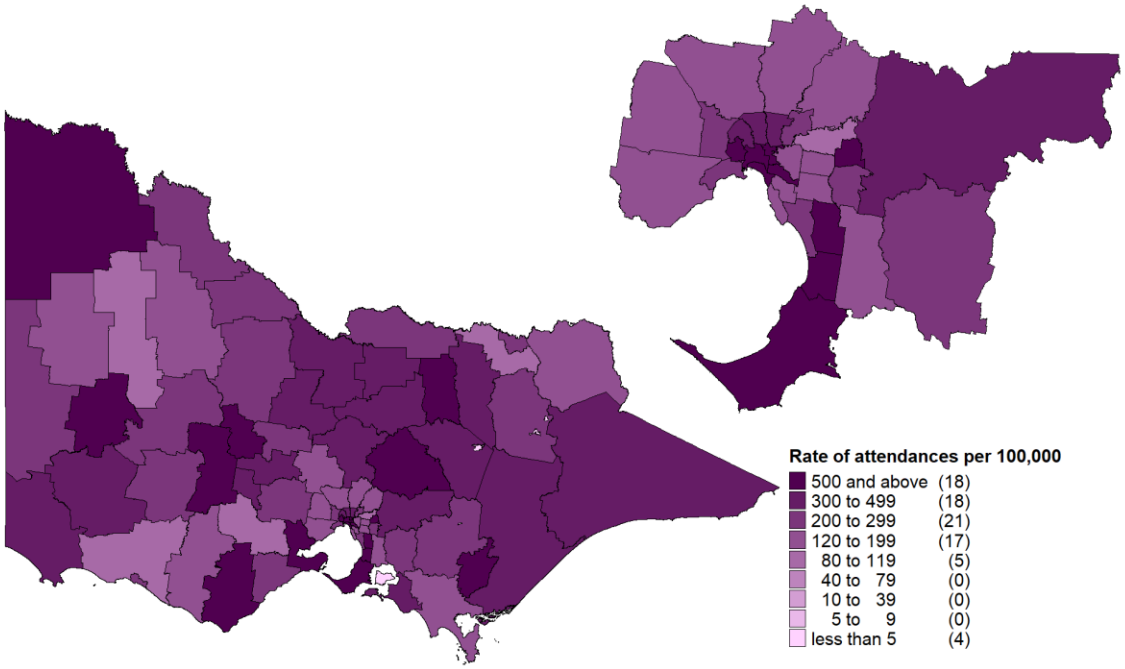


Figure 3: Percentage of alcohol intoxication-related attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2018



Map 1: Number of alcohol intoxication-related attendances by Victorian LGA, January to December 2018



Map 2: Rate of alcohol intoxication-related attendances per 100,000 resident population by Victorian LGA, January to December 2018

All amphetamine-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria.

Numbers and rates of amphetamine-related ambulance attendances are shown in Table 3. Characteristics of amphetamine-related ambulance attendances in Victoria for the 12 months from January to December 2018 are shown in Table 4. Data regarding month, time of day and day of week of attendances are displayed in Figure 4 to Figure 6. Mapped numbers and rates of presentations are presented at the end of this section.

- In 2018, amphetamine-related attendances peaked during December in regional and metropolitan areas (Table 3).

- Characteristics from the 12 month period are presented in Table 4 and include:

    - 4,228 amphetamine-related cases were recorded across Victoria
    - the median age of patients with amphetamine-related attendances was 33 years
    - police co-attended 46% of amphetamine-related attendances in Victoria
    - a similar proportion of patients with amphetamine-related attendances were transported to hospital in metropolitan Melbourne (81%) and regional Victoria (83%)

- As presented in Figure 5, amphetamine-related attendance numbers peaked from 6pm to 8pm in metropolitan Melbourne while the peak times in regional areas were from 10pm to midnight.

- Fridays represented the peak day for amphetamine-related attendances in metropolitan Melbourne while Mondays were the peak days in regional Victoria in 2018 (Figure 6).

Table 3: Amphetamine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	305 (6.3)	86 (5.5)	391 (6.1)
February attendances (per 100,000 population)	259 (5.4)	59 (3.8)	318 (4.9)
March attendances (per 100,000 population)	280 (5.8)	63 (4.0)	343 (5.3)
April attendances (per 100,000 population)	253 (5.2)	77 (4.9)	330 (5.1)
May attendances (per 100,000 population)	297 (6.2)	59 (3.8)	356 (5.5)
June attendances (per 100,000 population)	269 (5.6)	74 (4.7)	343 (5.3)
July attendances (per 100,000 population)	267 (5.5)	95 (6.0)	362 (5.6)
August attendances (per 100,000 population)	254 (5.3)	84 (5.3)	338 (5.2)
September attendances (per 100,000 population)	234 (4.9)	78 (5.0)	312 (4.8)
October attendances (per 100,000 population)	267 (5.5)	91 (5.8)	358 (5.5)
November attendances (per 100,000 population)	283 (5.9)	57 (3.6)	340 (5.3)
December attendances (per 100,000 population)	327 (6.8)	110 (7.0)	437 (6.8)

Table 4: Characteristics of amphetamine-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	3,295 (68.3)	933 (59.3)	4,228 (65.4)
Mean attendances per day	11.7	11.4	11.6
Daily range	<5-27	<5-19	<5-27
Age- median (interquartile range)	32 (24-39)	33 (25-40)	33 (25-40)
Male	2,165 (66%)	633 (68%)	2,803 (66%)
Police co-attendance	1,501 (46%)	419 (45%)	1,924 (46%)
Transport to hospital	2,680 (81%)	770 (83%)	3,451 (82%)
Alcohol involved	555 (17%)	215 (23%)	771 (18%)
Alcohol intoxication	229 (7%)	107 (12%)	336 (8%)
Multiple drugs involved (excluding alcohol)	1,280 (39%)	295 (32%)	1,577 (37%)

Note: all proportions are based on present information

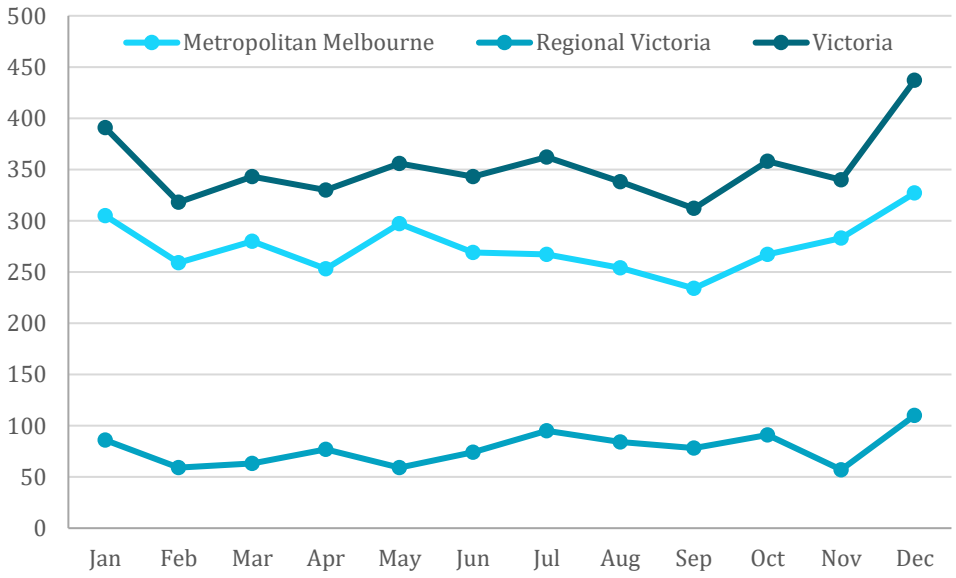


Figure 4: Number of amphetamine-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

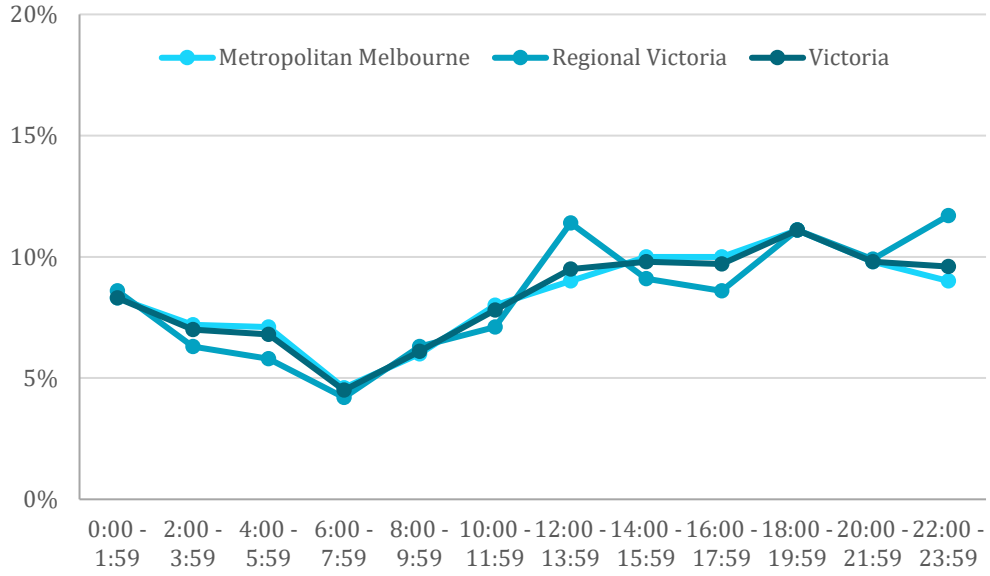


Figure 5: Percentage of amphetamine-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2018

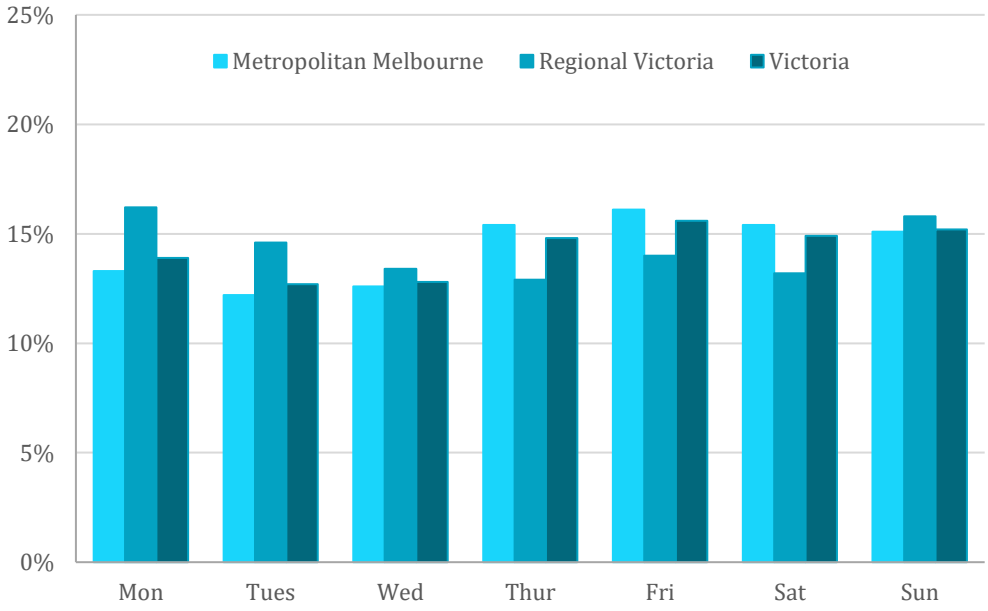
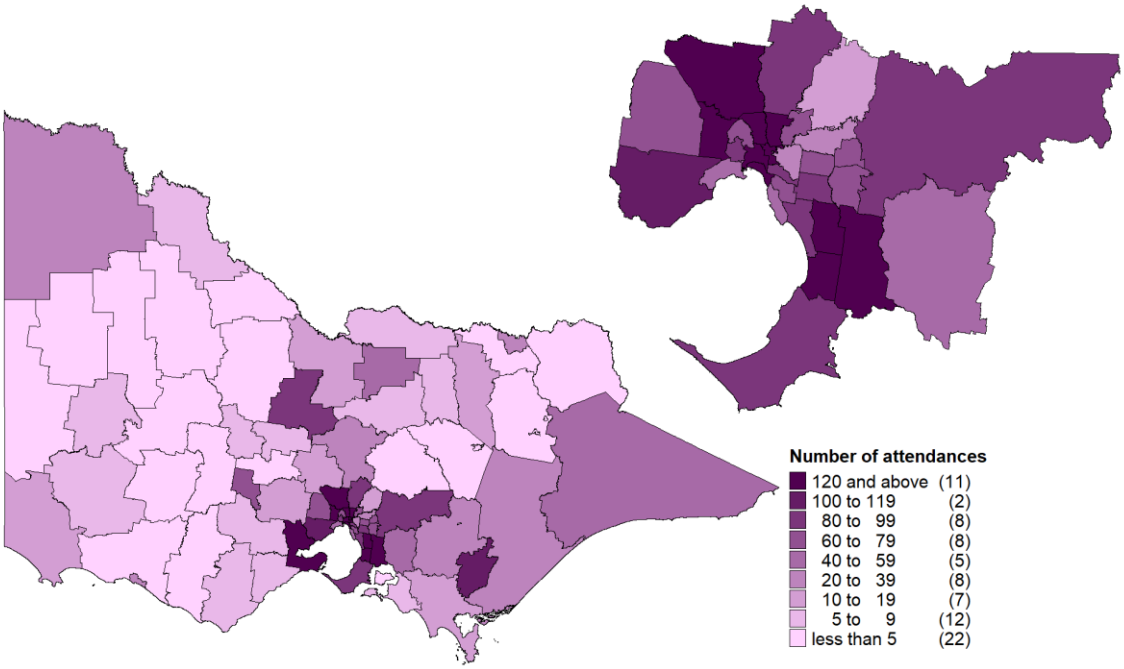
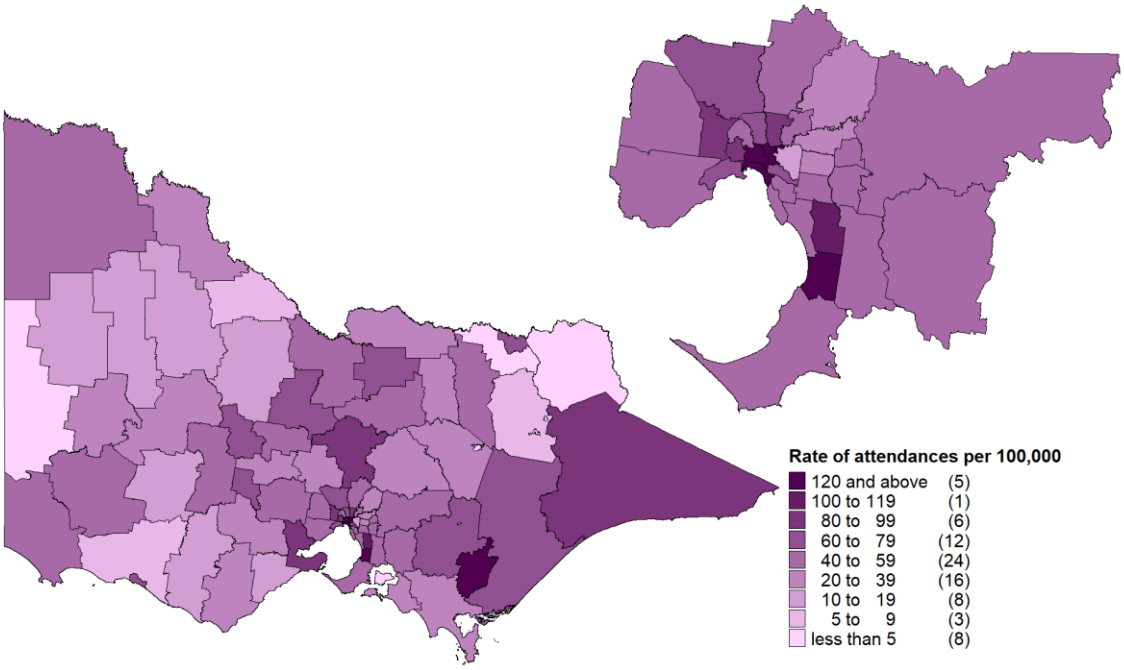


Figure 6: Percentage of amphetamine-related attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2018



Map 3: Number of amphetamine-related attendances by Victorian LGA, January to December 2018



Map 4: Rate of amphetamine-related attendances per 100,000 resident population by Victorian LGA, January to December 2018

Crystal methamphetamine-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 5. Characteristics of crystal methamphetamine-related ambulance attendances in Victoria for the 12 months from January to December 2018 are shown in Table 6. Data regarding month, time of day and day of week of attendances are displayed in Figure 7 to Figure 9. Mapped numbers and rates of presentations are presented at the end of this section.

- In metropolitan Melbourne and regional Victoria, crystal methamphetamine-related attendances peaked in December 2018 (Table 5).
- Characteristics from the 12 month period are presented in Table 6 and include:
    - 2,937 crystal methamphetamine-related cases recorded across Victoria
    - the majority of patients attended for crystal methamphetamine-related cases were male (66%), with similar proportions recorded in metropolitan and regional areas
    - in Victoria, the median age of patients with crystal methamphetamine-related attendances was 33 years
    - a similar proportion of crystal methamphetamine-related attendances were transported to hospital in metropolitan Melbourne (83%) and regional Victoria (84%)
- As presented in Figure 8, crystal methamphetamine-related attendance numbers peaked from 2pm to 4pm and 6pm to 8pm in metropolitan Melbourne and the peak times in regional areas were from 6pm to 8pm.
- In Victoria, Fridays represented the peak day for crystal methamphetamine-related attendances in metropolitan Melbourne while Mondays were the peak days in regional Victoria in 2018 (Figure 9).

Table 5: Crystal methamphetamine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	220 (4.6)	60 (3.8)	280 (4.3)
February attendances (per 100,000 population)	178 (3.7)	41 (2.6)	219 (3.4)
March attendances (per 100,000 population)	183 (3.8)	44 (2.8)	227 (3.5)
April attendances (per 100,000 population)	173 (3.6)	55 (3.5)	228 (3.5)
May attendances (per 100,000 population)	203 (4.2)	40 (2.5)	243 (3.8)
June attendances (per 100,000 population)	183 (3.8)	52 (3.3)	235 (3.6)
July attendances (per 100,000 population)	171 (3.5)	74 (4.7)	245 (3.8)
August attendances (per 100,000 population)	181 (3.8)	64 (4.1)	245 (3.8)
September attendances (per 100,000 population)	167 (3.5)	53 (3.4)	220 (3.4)
October attendances (per 100,000 population)	179 (3.7)	59 (3.8)	238 (3.7)
November attendances (per 100,000 population)	208 (4.3)	43 (2.7)	251 (3.9)
December attendances (per 100,000 population)	229 (4.7)	77 (4.9)	306 (4.7)

Table 6: Characteristics of crystal methamphetamine-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	2,275 (47.2)	662 (42.1)	2,937 (45.5)
Mean attendances per day	8.0	8.1	8.1
Daily range	<5-18	0-17	0-18
Age- median (interquartile range)	33 (25-40)	33 (25-40)	33 (25-40)
Male	1,498 (66%)	449 (68%)	1,951 (66%)
Police co-attendance	1,049 (46%)	310 (47%)	1,363 (46%)
Transport to hospital	1,878 (83%)	554 (84%)	2,433 (83%)
Alcohol involved	360 (16%)	135 (20%)	495 (17%)
Alcohol intoxication	151 (7%)	70 (11%)	221 (8%)
Multiple drugs involved (excluding alcohol)	855 (37%)	200 (30%)	1,036 (35%)

Note: all proportions are based on present information

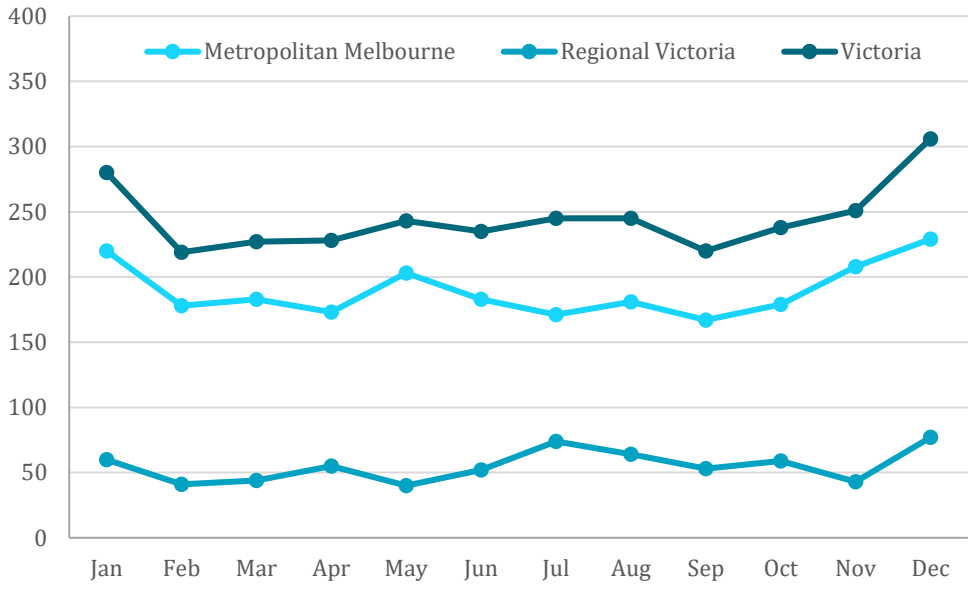


Figure 7: Number of crystal methamphetamine-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

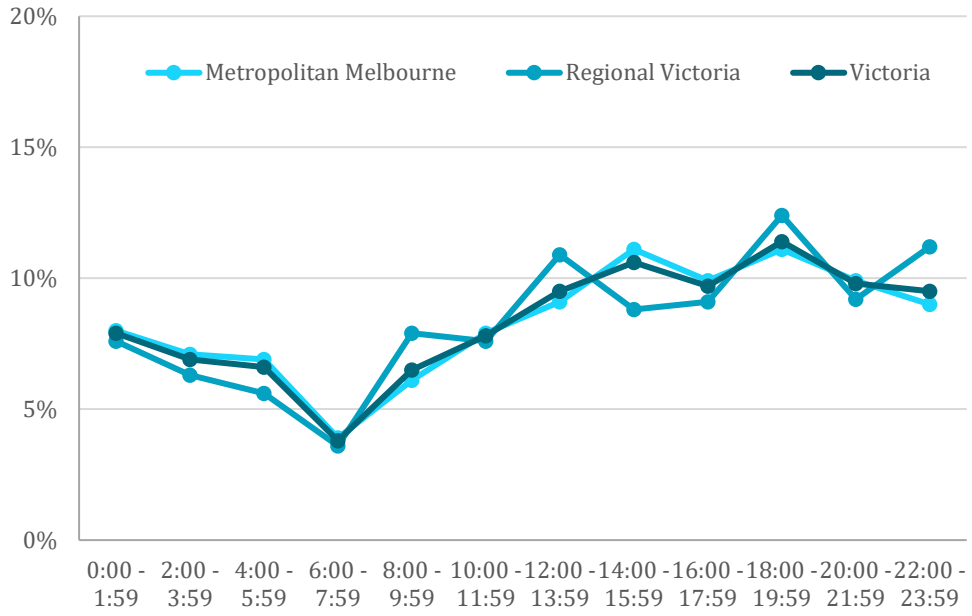


Figure 8: Percentage of crystal methamphetamine-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2018

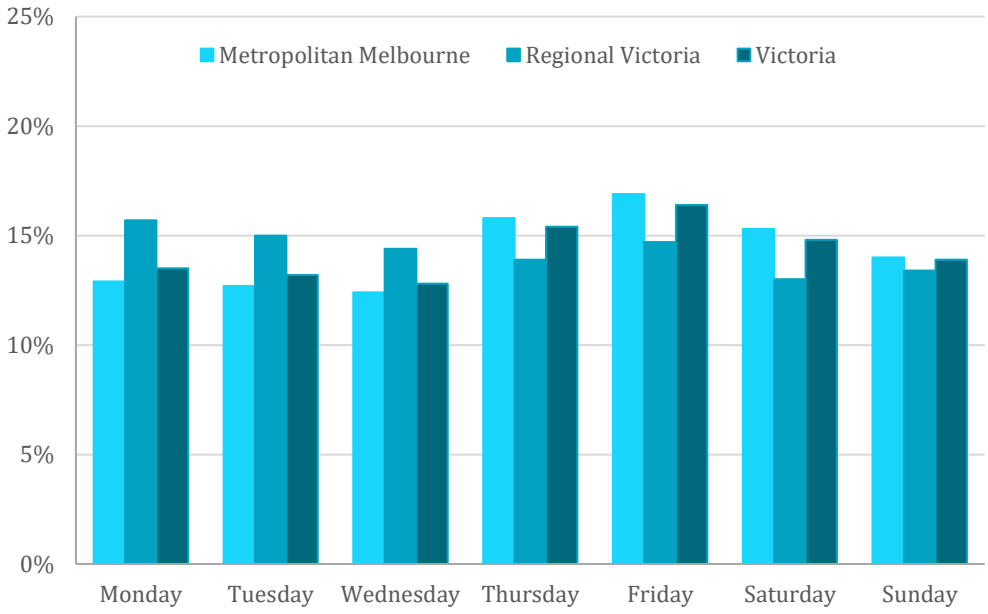
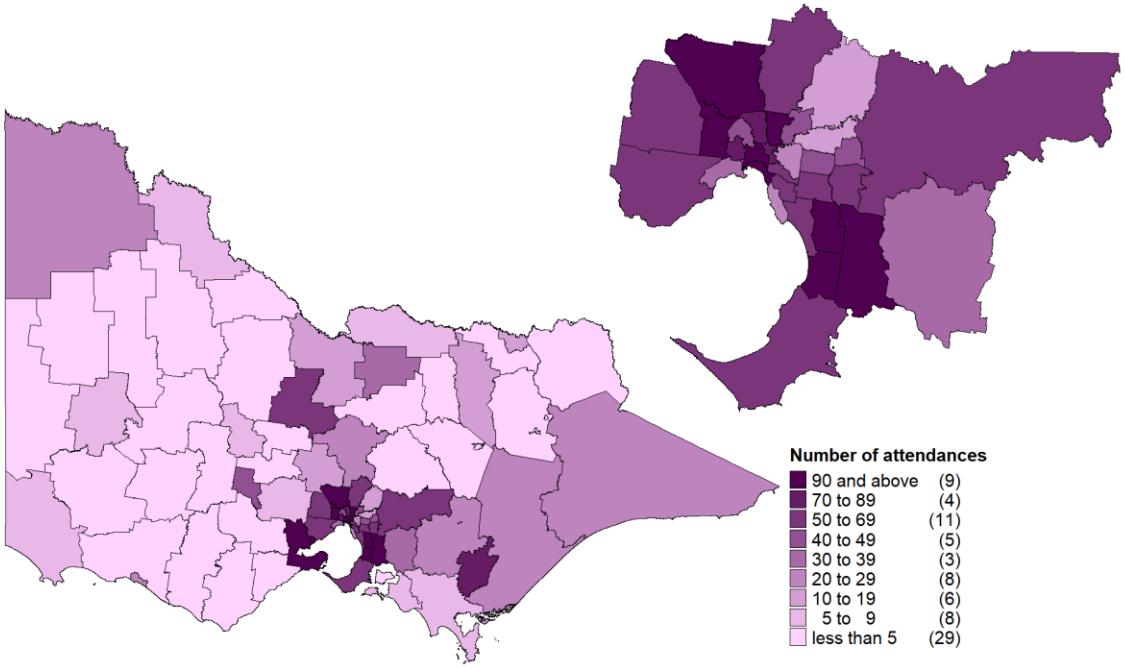
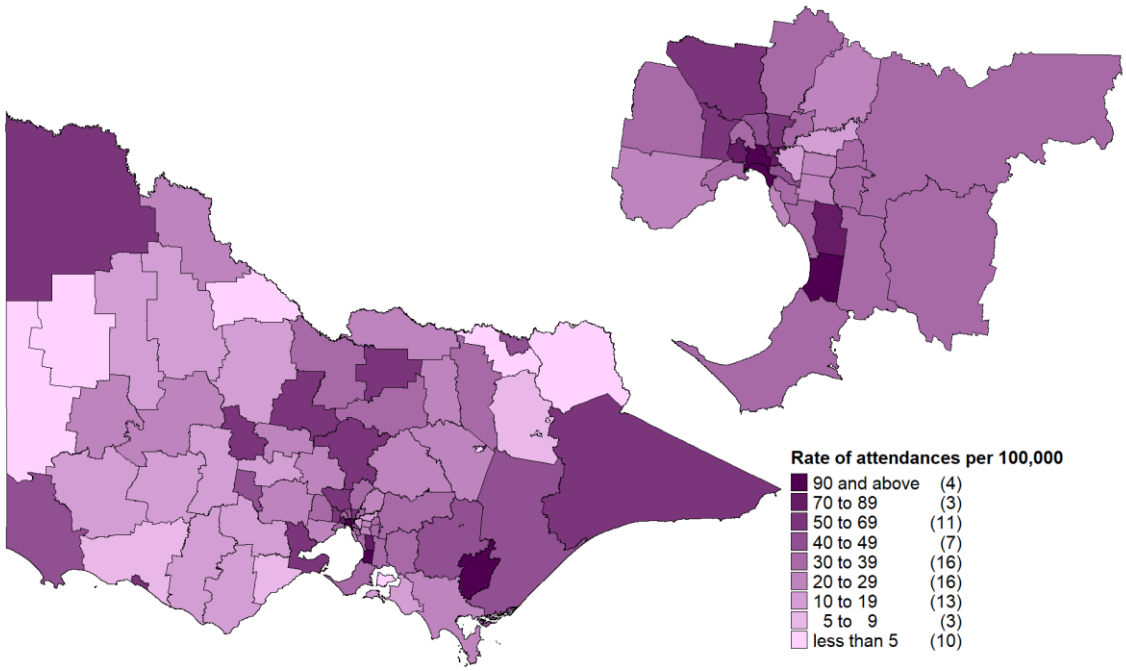


Figure 9: Percentage of crystal methamphetamine-related attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2018



Map 5: Number of crystal methamphetamine-related attendances by Victorian LGA, January to December 2018



Map 6: Rate of crystal methamphetamine-related attendances per 100,000 resident population by Victorian LGA, January to December 2018

Cannabis-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 7. Characteristics of cannabis-related ambulance attendances in Victoria for the 12 months from January to December 2018 are shown in Table 8. Data regarding month, time of day and day of week of attendances are displayed in Figure 10 to Figure 12. Mapped numbers and rates of presentations are presented at the end of this section.

- In 2018, cannabis-related attendances peaked during December in metropolitan and regional areas (Table 7).
- Characteristics over the 12 month period are presented in Table 8:
    - 3,545 cannabis-related cas7es were recorded across Victoria
    - the majority of patients who were attended for cannabis-related cases were male (65%), with similar proportions reported in metropolitan and regional areas
    - the median age of patients with cannabis-related attendances was 28 years in Victoria
    - a slightly lower proportion of cannabis-related attendances in metropolitan areas (78%) were transported to hospital than in regional areas (81%).
- As presented in Figure 11, cannabis-related attendance numbers peaked between 10pm and 12am in metropolitan Melbourne areas and from 8pm to 10pm in regional areas.
- In 2018, Saturday and Sunday represented the peak day for cannabis-related attendances in metropolitan Melbourne, while the peak regional areas was limited to Saturdays (Figure 12).

Table 7: Cannabis-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	210 (4.4)	105 (6.7)	315 (4.9)
February attendances (per 100,000 population)	180 (3.7)	69 (4.4)	249 (3.9)
March attendances (per 100,000 population)	187 (3.9)	95 (6.0)	282 (4.4)
April attendances (per 100,000 population)	170 (3.5)	76 (4.8)	246 (3.8)
May attendances (per 100,000 population)	209 (4.3)	87 (5.5)	296 (4.6)
June attendances (per 100,000 population)	230 (4.8)	94 (6.0)	324 (5.0)
July attendances (per 100,000 population)	200 (4.1)	91 (5.8)	291 (4.5)
August attendances (per 100,000 population)	209 (4.3)	83 (5.3)	292 (4.5)
September attendances (per 100,000 population)	223 (4.6)	70 (4.5)	293 (4.5)
October attendances (per 100,000 population)	208 (4.3)	98 (6.2)	306 (4.7)
November attendances (per 100,000 population)	228 (4.7)	80 (5.1)	308 (4.8)
December attendances (per 100,000 population)	233 (4.8)	110 (7.0)	343 (5.3)

Table 8: Characteristics of cannabis-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	2,487 (51.6)	1,058 (67.3)	3,545 (54.9)
Mean attendances per day	9.7	9.8	9.7
Daily range	<5-33	<5-21	<5-33
Age- median (interquartile range)	28 (21-41)	29 (21-43)	28 (21-41)
Male	1,636 (66%)	682 (65%)	2,321 (65%)
Police co-attendance	794 (32%)	318 (30%)	1,114 (31%)
Transport to hospital	1,935 (78%)	858 (81%)	2,795 (79%)
Alcohol involved	996 (40%)	440 (42%)	1,438 (41%)
Alcohol intoxication	569 (23%)	262 (25%)	831 (23%)
Multiple drugs involved (excluding alcohol)	824 (33%)	286 (27%)	1,112 (31%)

Note: all proportions are based on present information

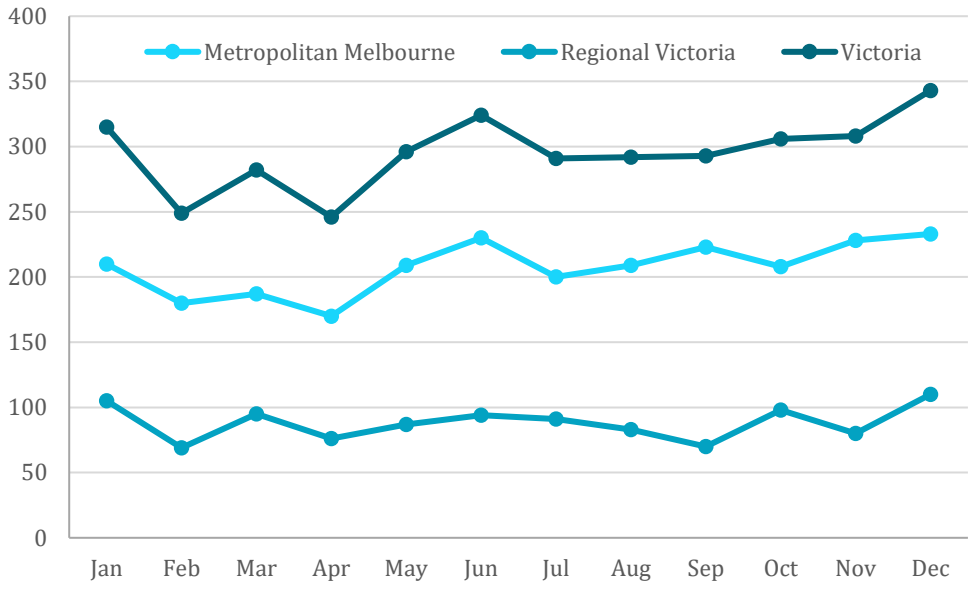


Figure 10: Number of cannabis-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

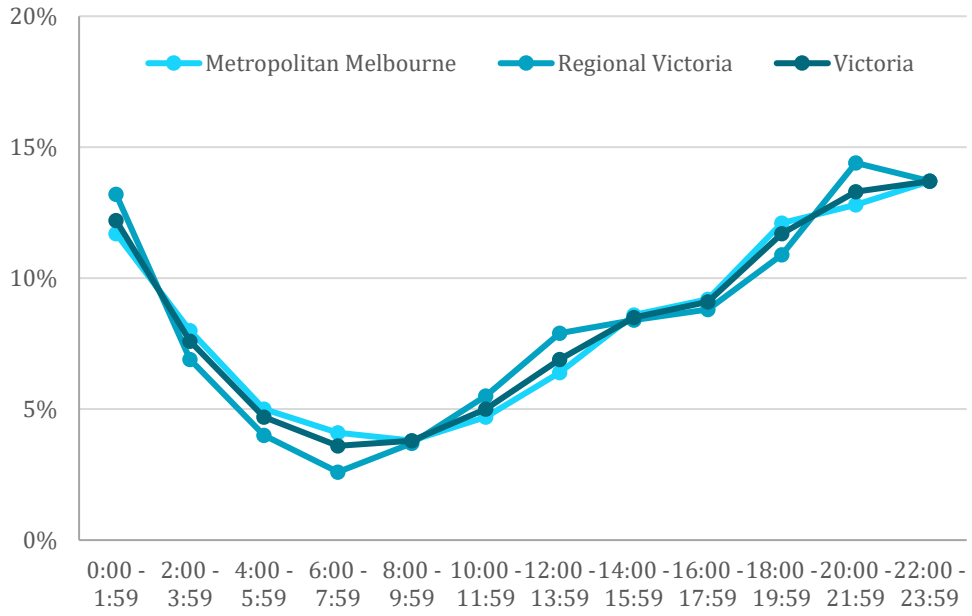


Figure 11: Percentage of cannabis-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2018

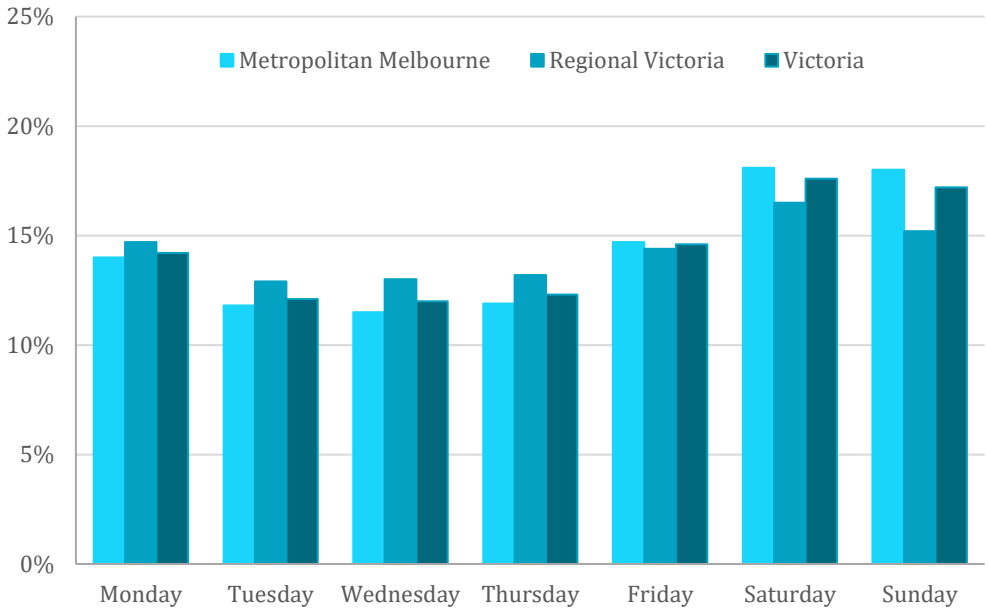
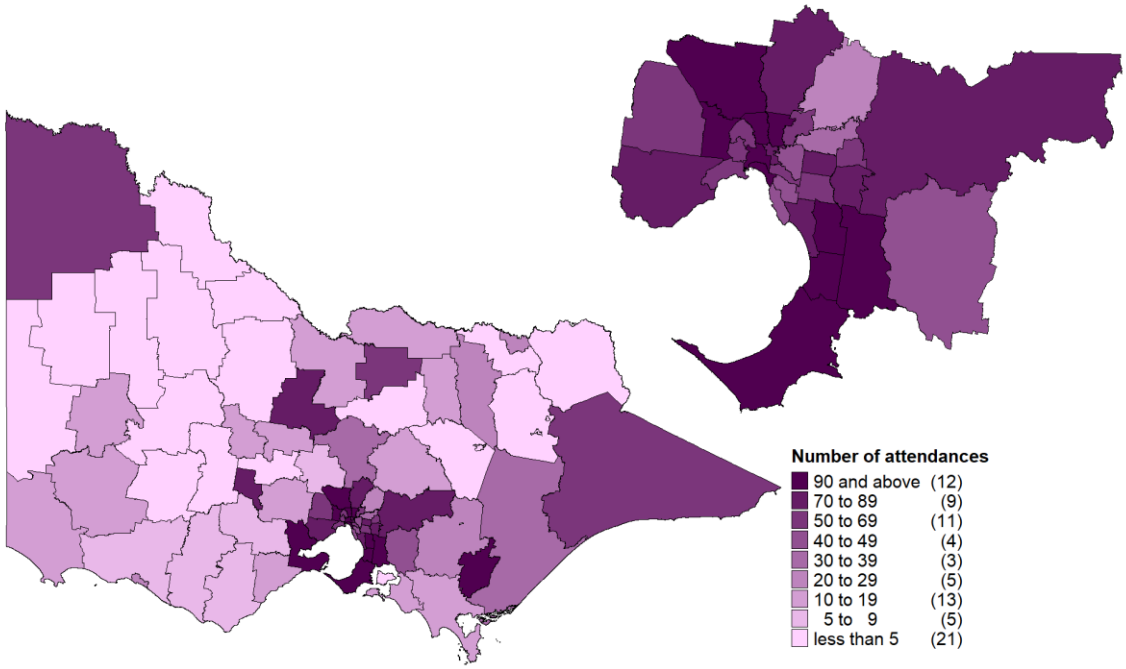
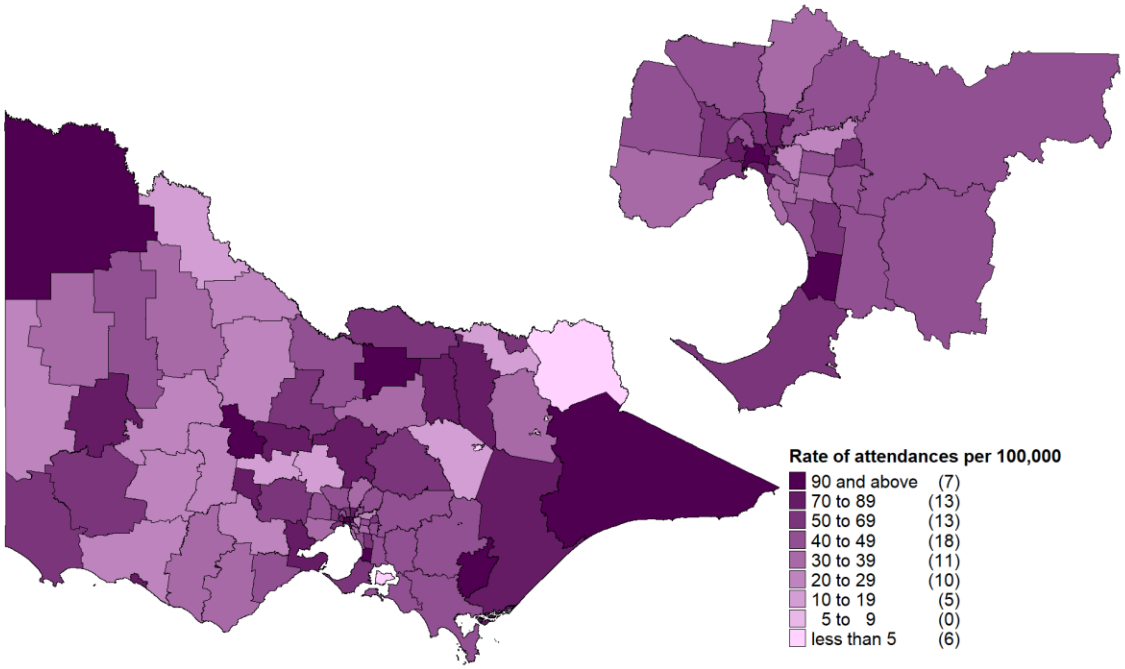


Figure 12: Percentage of cannabis-related attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2018



Map 7: Number of cannabis-related attendances by Victorian LGA, January to December 2018



Map 8: Rate of cannabis-related attendances per 100,000 resident population by Victorian LGA, January to December 2018

Heroin-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria.

Numbers and rates of heroin-related ambulance attendances are shown in Table 9. Characteristics of heroin-related ambulance attendances in Victoria for the 12 months from January to December 2018 are shown in Table 10. Data regarding month, time of day and day of week of attendances are displayed in Figure 13 to Figure 15. Mapped numbers and rates of presentations are presented at the end of this section.

- Heroin-related attendances peaked in December and July 2018 in metropolitan Melbourne and regional Victoria, respectively (Table 9).

- Characteristics over the 12 month period are presented in Table 10:

    - 3,262 heroin-related cases were recorded, with the majority of these attendances occurring in metropolitan areas (92%)
    - the majority of patients attended for heroin-related cases were male (73%) with similar proportions in metropolitan and regional areas
    - the median age of patients with heroin-related attendances was 39 years in Victoria
    - a lower proportion of patients with heroin-related attendances in metropolitan Melbourne (44%) were transported to hospital than in regional Victoria (62%)

- As presented in Figure 14, heroin-related attendance numbers peaked in the evening between 12pm and 8pm in metropolitan areas and between 12pm and 2pm in regional areas.

- In 2018, Fridays and Tuesdays represented the peak day for heroin-related attendances in metropolitan and regional Victoria, respectively (Figure 15).

Table 9: Heroin-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	270 (5.6)	23 (1.5)	293 (4.5)
February attendances (per 100,000 population)	259 (5.4)	20 (1.3)	279 (4.3)
March attendances (per 100,000 population)	218 (4.5)	9 (0.6)	227 (3.5)
April attendances (per 100,000 population)	244 (5.1)	12 (0.8)	256 (4.0)
May attendances (per 100,000 population)	244 (5.1)	19 (1.2)	263 (4.1)
June attendances (per 100,000 population)	190 (3.9)	15 (1.0)	205 (3.2)
July attendances (per 100,000 population)	249 (5.2)	45 (2.9)	294 (4.6)
August attendances (per 100,000 population)	231 (4.8)	20 (1.3)	251 (3.9)
September attendances (per 100,000 population)	228 (4.7)	31 (2.0)	259 (4.0)
October attendances (per 100,000 population)	271 (5.6)	20 (1.3)	291 (4.5)
November attendances (per 100,000 population)	289 (6.0)	23 (1.5)	312 (4.8)
December attendances (per 100,000 population)	307 (6.4)	25 (1.6)	332 (5.1)

Table 10: Characteristics of heroin-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	3,000 (62.2)	262 (16.7)	3,262 (50.5)
Mean attendances per day	8.5	9.1	9.0
Daily range	<5-16	<5-24	<5-24
Age- median (interquartile range)	39 (33-46)	39 (30-46)	39 (33-46)
Male	2,173 (72%)	194 (74%)	2,368 (73%)
Police co-attendance	730 (24%)	62 (24%)	792 (24%)
Transport to hospital	1,307 (44%)	162 (62%)	1,471 (45%)
Alcohol involved	424 (14%)	48 (18%)	472 (15%)
Alcohol intoxication	186 (6%)	25 (10%)	211 (7%)
Multiple drugs involved (excluding alcohol)	662 (22%)	90 (34%)	753 (23%)
Responded to naloxone	1,234 (41%)	104 (40%)	1,340 (41%)

Note: all proportions are based on present information

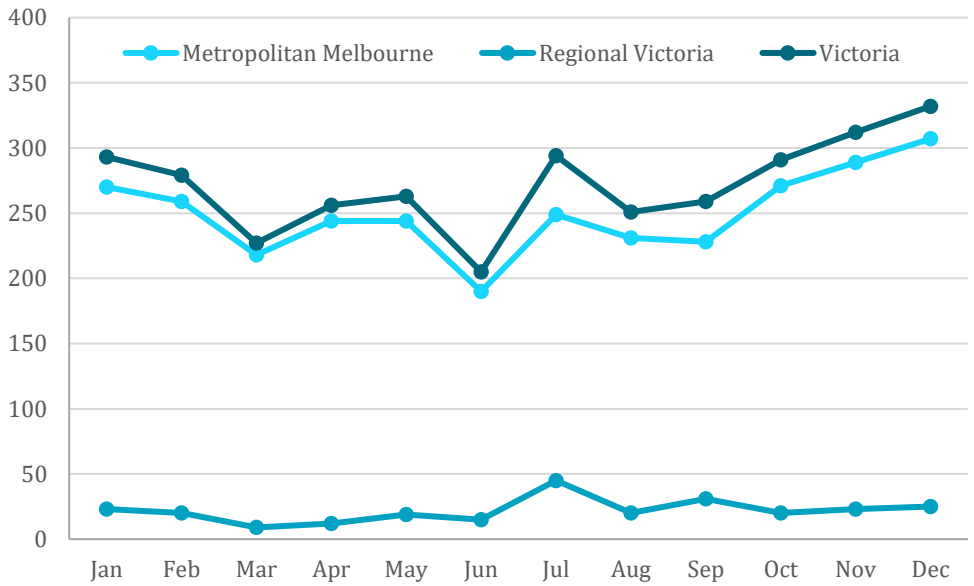


Figure 13: Number of heroin-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

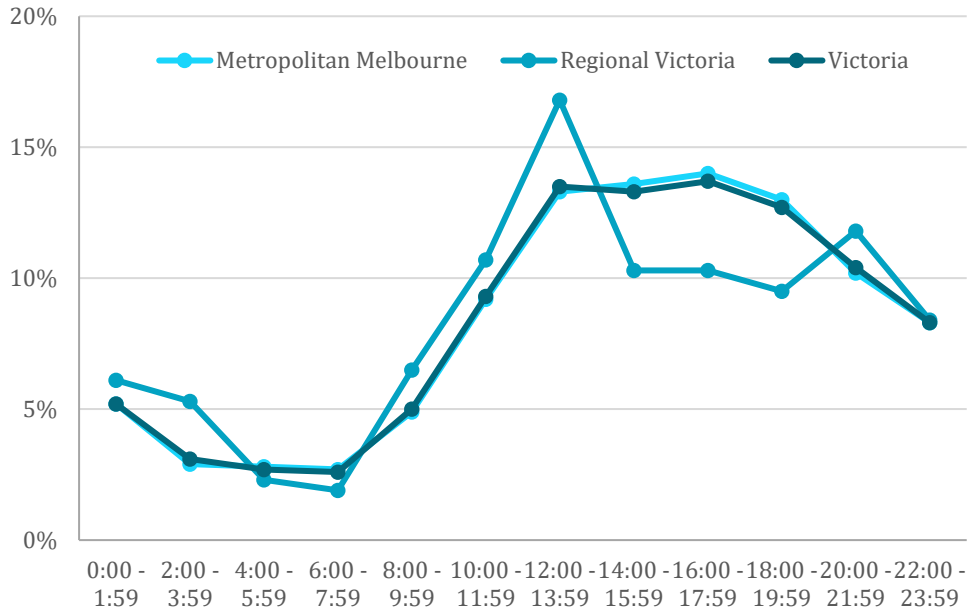


Figure 14: Percentage of heroin-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2018

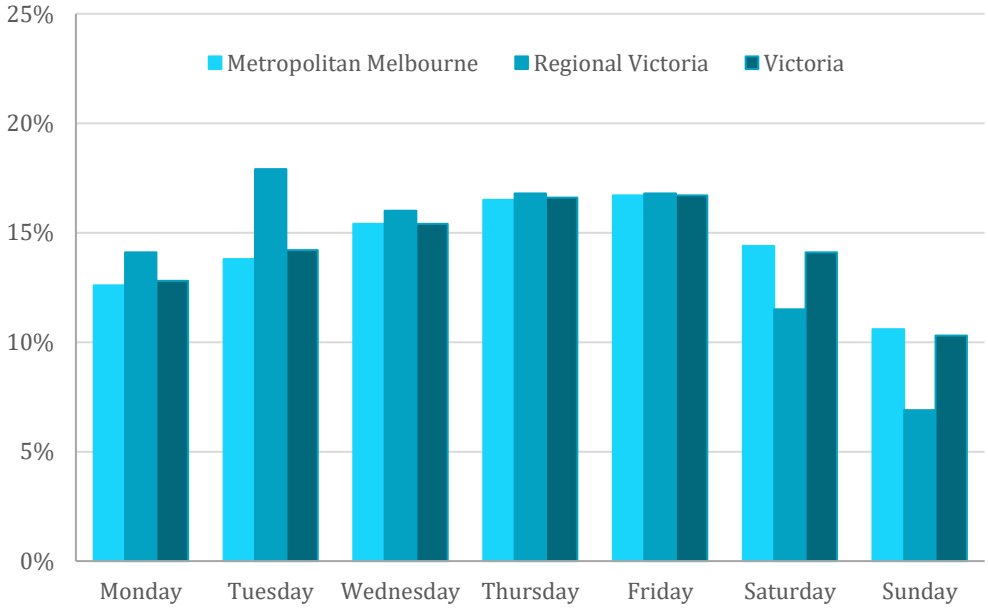
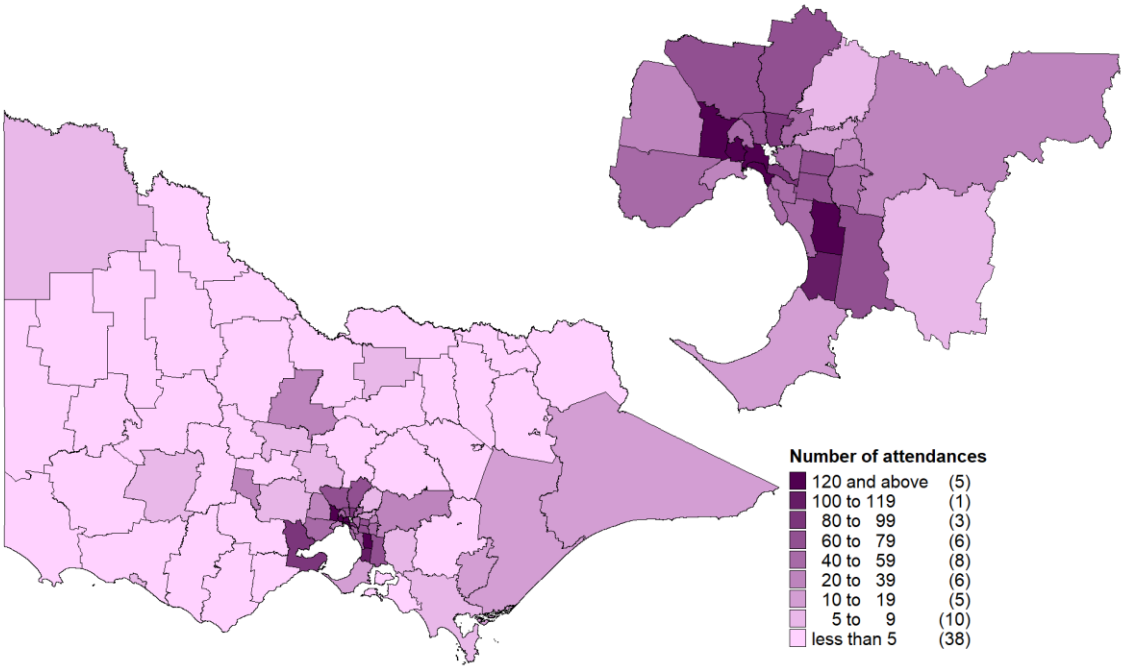
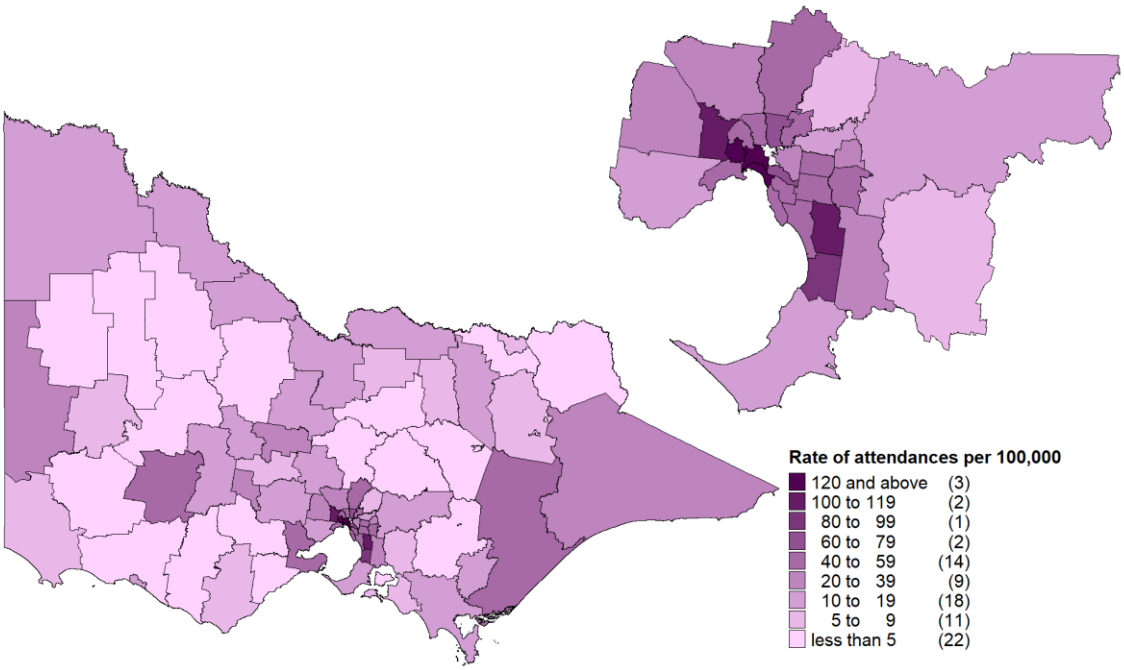


Figure 15: Percentage of heroin-related attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2018



Map 9: Number of heroin-related attendances by Victorian LGA, January to December 2018



Map 10: Rate of heroin-related attendances per 100,000 resident population by Victorian LGA, January to December 2018

Emerging psychoactive substance-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria.

Numbers and rates of emerging psychoactive substance-related ambulance attendances are shown in Table 11. Characteristics of emerging psychoactive substance-related ambulance attendances in Victoria for the 12 months from January to December 2018 are shown in Table 12. Graphed and mapped data are not presented due to low numbers of cases.

- Emerging psychoactive substance-related attendances were very low across all months in 2018 (Table 11).

- Characteristics over the 12 month period are presented in Table 12:

    - 15 emerging psychoactive substance-related cases recorded in Victoria
    - the median age of patients with emerging psychoactive substance-related attendances was 28 years
    - ≥67% of patients with emerging psychoactive substance-related attendances were transported to hospital

Table 11: Emerging psychoactive substance-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	N<5	N<5	N<5
February attendances (per 100,000 population)	N<5	N<5	N<5
March attendances (per 100,000 population)	0	0	0
April attendances (per 100,000 population)	N<5	0	N<5
May attendances (per 100,000 population)	N<5	0	N<5
June attendances (per 100,000 population)	N<5	0	N<5
July attendances (per 100,000 population)	N<5	0	N<5
August attendances (per 100,000 population)	N<5	0	N<5
September attendances (per 100,000 population)	N<5	0	N<5
October attendances (per 100,000 population)	0	0	0
November attendances (per 100,000 population)	N<5	0	N<5
December attendances (per 100,000 population)	N<5	0	N<5

Table 12: Characteristics of emerging psychoactive substance-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	≥10 (0.3)	N<5	15 (0.2)
Mean attendances per day	-	-	-
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	29 (15-54)	22 (18-25)	28 (15-54)
Male	N<5	N<5	7 (47%)
Police co-attendance	N<5	0	N<5
Transport to hospital	>5	N<5	≥10 (≥67%)
Alcohol involved	N<5	N<5	N<5
Alcohol intoxication	N<5	N<5	N<5
Multiple drugs involved (excluding alcohol)	8 (62%)	0	8 (53%)

Note: all proportions are based on present information

Benzodiazepine-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 13. Characteristics of benzodiazepine-related ambulance attendances in Victoria for the 12 months from January to December 2018 are shown in Table 14. Data regarding month, time of day and day of week of attendances are displayed in Figures 16 to 18. Mapped numbers and rates of presentations are presented at the end of this section.

- Benzodiazepine-related attendances peaked in December 2018 (Table 13).
- Characteristics over the 12 month period are presented in Table 14:
    - 4,730 benzodiazepine-related cases were recorded
    - less than half of Victorian patients attended for benzodiazepine-related cases were male (43%)
    - the median age of patients with benzodiazepine-related attendances was 39 years, with similar age distribution in regional and metropolitan areas
    - a similar proportion of patients with benzodiazepine-related attendances in metropolitan (89%) and regional areas (92%) were transported to hospital
    - more than half of all benzodiazepine-related attendances (53%) involved multiple drugs
- As presented in Figure 17, benzodiazepine-related attendance numbers peaked between 10pm and 12am in metropolitan Melbourne and 6pm and 8pm in regional areas.
- Sundays and Fridays represented the peak days for benzodiazepine-related attendances in metropolitan Melbourne, and Mondays represented the peak day in regional Victoria (Figure 18).

Table 13: Benzodiazepine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	305 (6.3)	106 (6.7)	411 (6.4)
February attendances (per 100,000 population)	273 (5.7)	92 (5.8)	365 (5.6)
March attendances (per 100,000 population)	317 (6.6)	106 (6.7)	423 (6.5)
April attendances (per 100,000 population)	248 (5.1)	61 (3.9)	309 (4.8)
May attendances (per 100,000 population)	295 (6.1)	86 (5.5)	381 (5.9)
June attendances (per 100,000 population)	282 (5.8)	102 (6.5)	384 (5.9)
July attendances (per 100,000 population)	282 (5.8)	99 (6.3)	381 (5.9)
August attendances (per 100,000 population)	310 (6.4)	108 (6.9)	418 (6.5)
September attendances (per 100,000 population)	292 (6.1)	95 (6.0)	387 (6.0)
October attendances (per 100,000 population)	281 (5.8)	93 (5.9)	374 (5.8)
November attendances (per 100,000 population)	318 (6.6)	117 (7.4)	435 (6.7)
December attendances (per 100,000 population)	344 (7.1)	118 (7.5)	462 (7.2)

Table 14: Characteristics of benzodiazepine-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	3,547 (73.6)	1,183 (75.2)	4,730 (73.2)
Mean attendances per day	13.0	13.0	13.0
Daily range	<5-26	<5-23	<5-26
Age- median (interquartile range)	39 (26-49)	40 (28-50)	39 (27-49)
Male	1,540 (43%)	477 (40%)	2,019 (43%)
Police co-attendance	1,053 (30%)	391 (33%)	1,445 (31%)
Transport to hospital	3,166 (89%)	1,092 (92%)	4,264 (90%)
Alcohol involved	1,556 (44%)	503 (43%)	2,063 (44%)
Alcohol intoxication	1,042 (29%)	343 (30%)	1,388 (29%)
Multiple drugs involved (excluding alcohol)	1,885 (53%)	644 (54%)	2,531 (53%)

Note: all proportions are based on present information

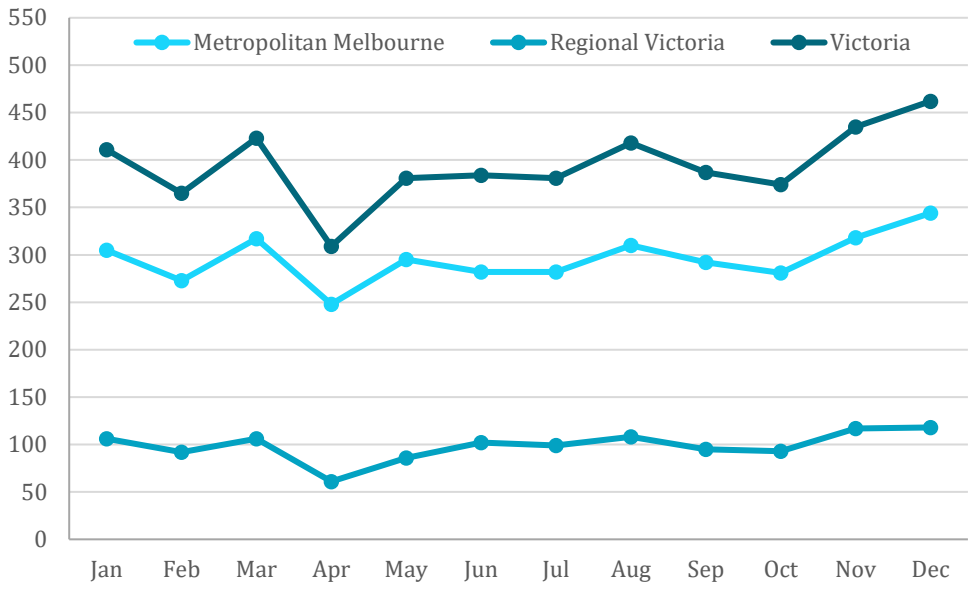


Figure 16: Number of benzodiazepine-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

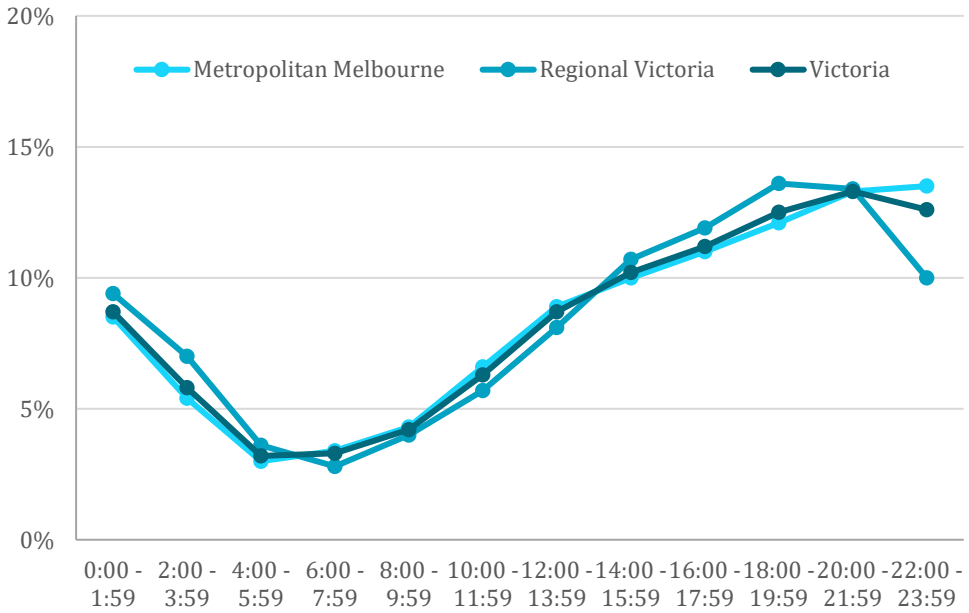


Figure 17: Percentage of benzodiazepine-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2018

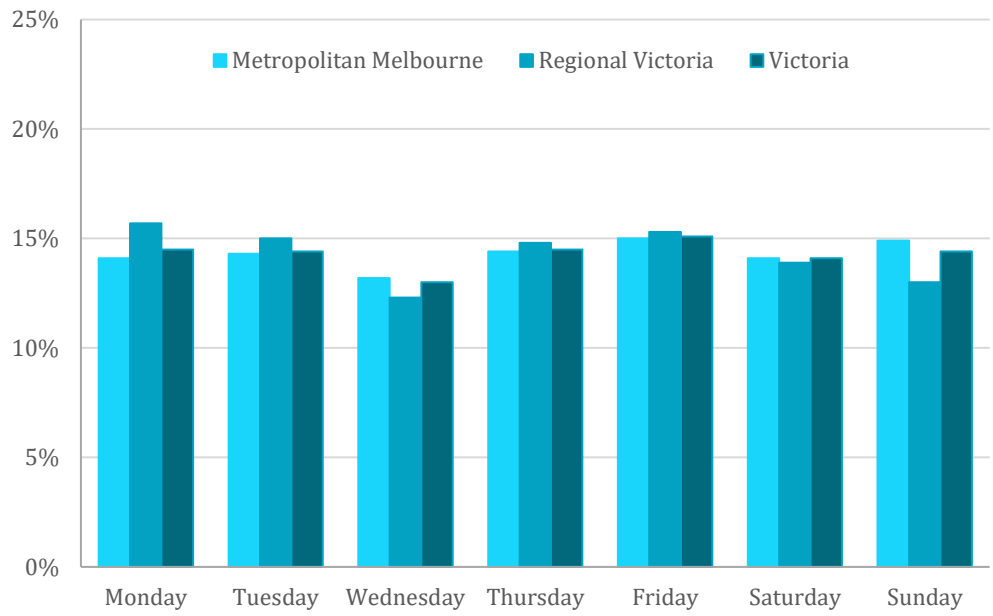
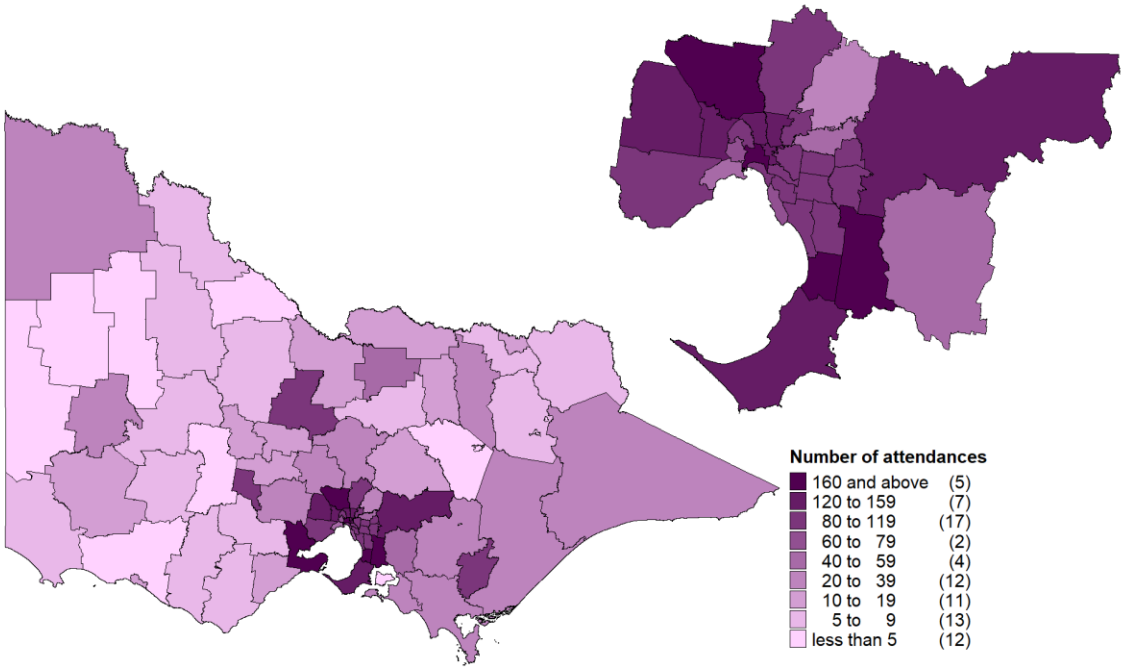
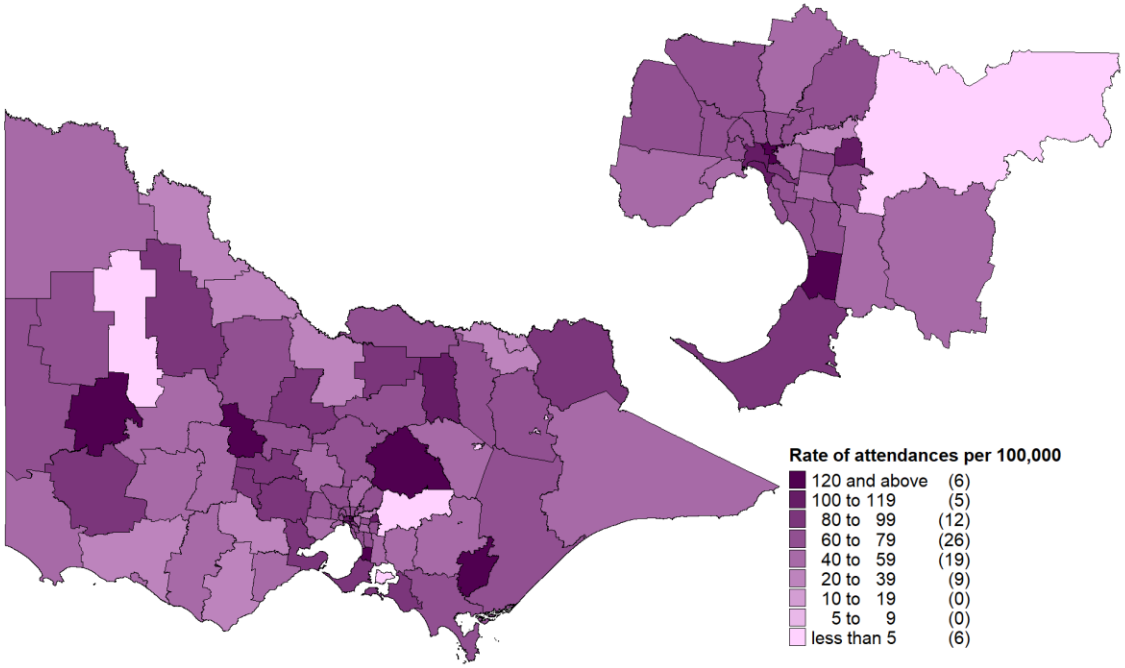


Figure 18: Percentage of benzodiazepine-related attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2018



Map 11: Number of benzodiazepine-related attendances by Victorian LGA, January to December 2018



Map 12: Rate of benzodiazepine-related attendances per 100,000 resident population by Victorian LGA, January to December 2018

Opioid analgesic-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 15. Characteristics of opioid analgesic-related ambulance attendances in Victoria for the 12 months from January to December 2018 are shown in Table 16. Data regarding month, time of day and day of week of attendances are displayed in Figure 19 to Figure 21. Mapped numbers and rates of presentations are presented at the end of this section.

- Opioid analgesic-related attendances in metropolitan Melbourne peaked in August, while the highest number of attendances in regional Victoria was in September 2018 (Table 15).

- Characteristics over the 12 month period are presented in Table 16:

    - 1,262 opioid analgesic-related cases were recorded in Victoria
    - the majority of patients attended for opioid analgesic-related cases were female (54%)
    - the median age of patients with opioid analgesic-related attendances was 42 years, with the same age distributions in metropolitan and regional areas
    - a similarly high proportion of patients with opioid analgesic-related attendances in metropolitan (89%) and regional areas (88%) were transported to hospital
    - more than half (60%) of opioid analgesic-related attendances in Victoria involved multiple drugs (excluding alcohol)

- As presented in Figure 20, opioid analgesic-related attendance numbers peaked between 6pm and midnight in metropolitan Melbourne, and peak hours in regional areas were between 6pm to 8pm.

- Sundays represented the peak day for opioid analgesic-related attendances in metropolitan Melbourne, while Mondays and Thursdays were the peak days in regional Victoria (Figure 21).

Table 15: Opioid analgesic-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	79 (1.6)	34 (2.2)	113 (1.7)
February attendances (per 100,000 population)	73 (1.5)	32 (2.0)	105 (1.6)
March attendances (per 100,000 population)	69 (1.4)	33 (2.1)	102 (1.6)
April attendances (per 100,000 population)	72 (1.5)	35 (2.2)	107 (1.7)
May attendances (per 100,000 population)	73 (1.5)	41 (2.6)	114 (1.8)
June attendances (per 100,000 population)	61 (1.3)	25 (1.6)	86 (1.3)
July attendances (per 100,000 population)	52 (1.1)	31 (2.0)	83 (1.3)
August attendances (per 100,000 population)	90 (1.9)	40 (2.5)	130 (2.0)
September attendances (per 100,000 population)	60 (1.2)	44 (2.8)	104 (1.6)
October attendances (per 100,000 population)	66 (1.4)	33 (2.1)	99 (1.5)
November attendances (per 100,000 population)	81 (1.7)	41 (2.6)	122 (1.9)
December attendances (per 100,000 population)	76 (1.6)	21 (1.3)	97 (1.5)

Table 16: Characteristics of opioid analgesic-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	852 (17.7)	410 (26.1)	1,262 (19.5)
Mean attendances per day	N<5	N<5	N<5
Daily range	0-10	0-9	0-10
Age- median (interquartile range)	42 (29-54)	42 (28-53)	42 (28-53)
Male	399 (47%)	176 (43%)	575 (46%)
Police co-attendance	192 (23%)	99 (24%)	291 (23%)
Transport to hospital	755 (89%)	359 (88%)	1,115 (88%)
Alcohol involved	312 (37%)	121 (30%)	433 (34%)
Alcohol intoxication	206 (24%)	71 (17%)	277 (22%)
Multiple drugs involved (excluding alcohol)	507 (60%)	244 (60%)	752 (60%)
Morphine	48 (6%)	42 (10%)	90 (7%)
Oxycodone	486 (57%)	219 (53%)	706 (56%)

Note: all proportions are based on present information

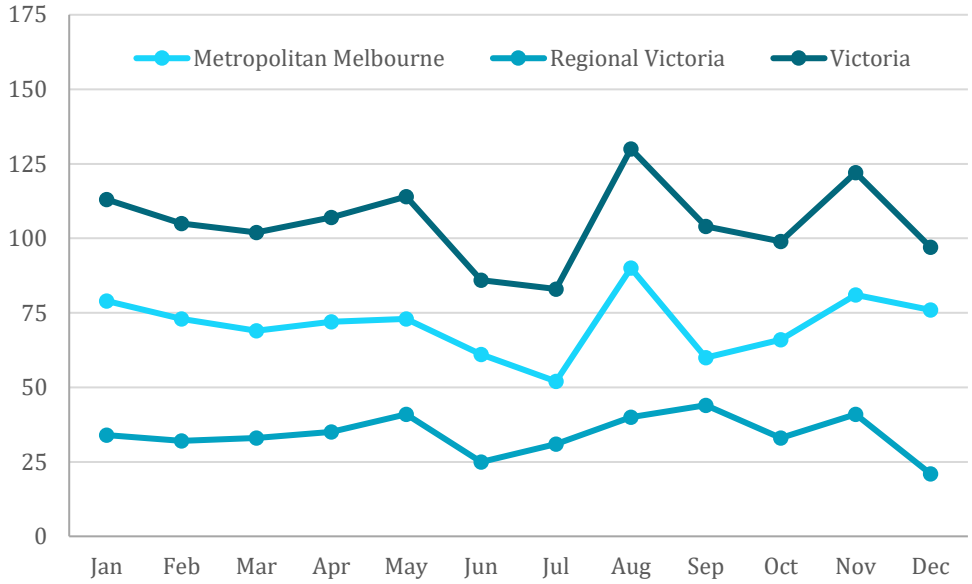


Figure 19: Number of opioid analgesic-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

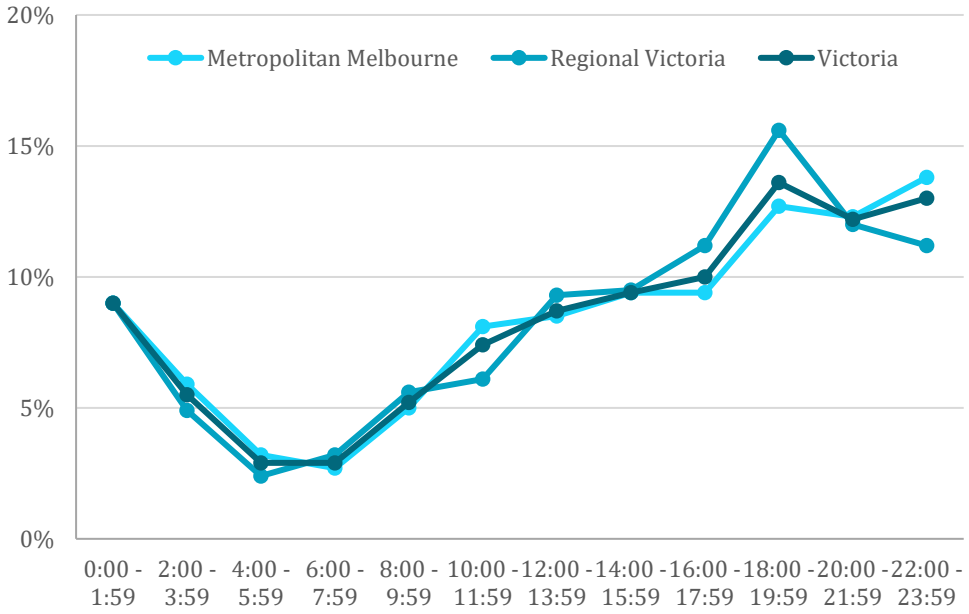


Figure 20: Percentage of opioid analgesic-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2018

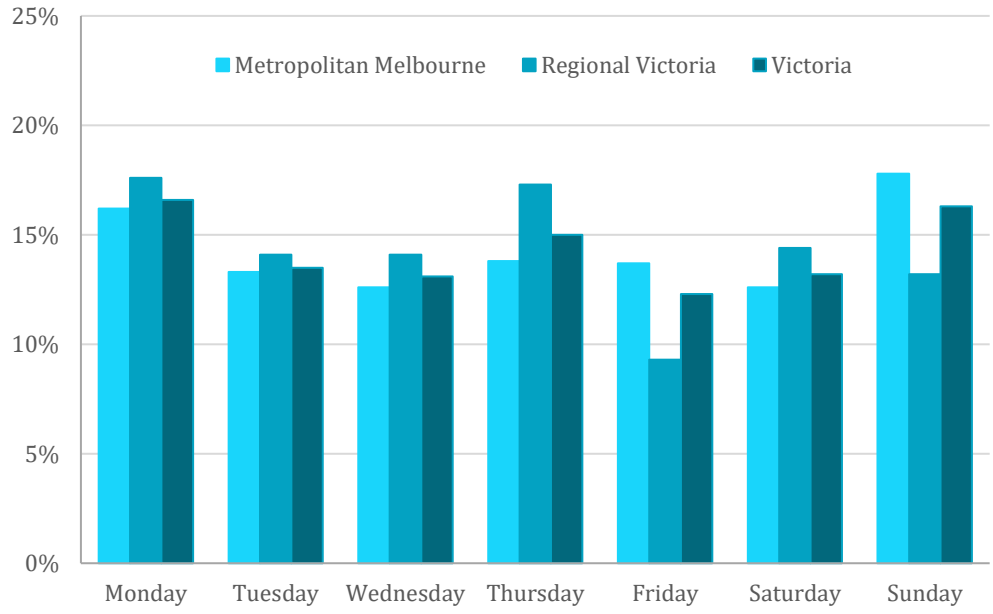
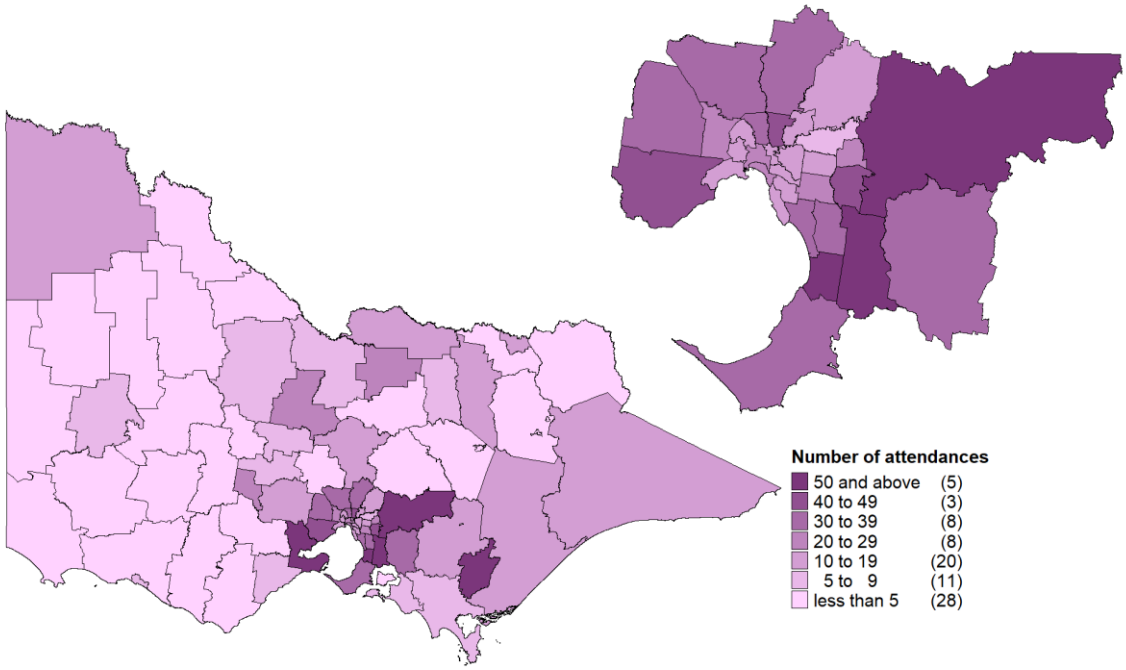
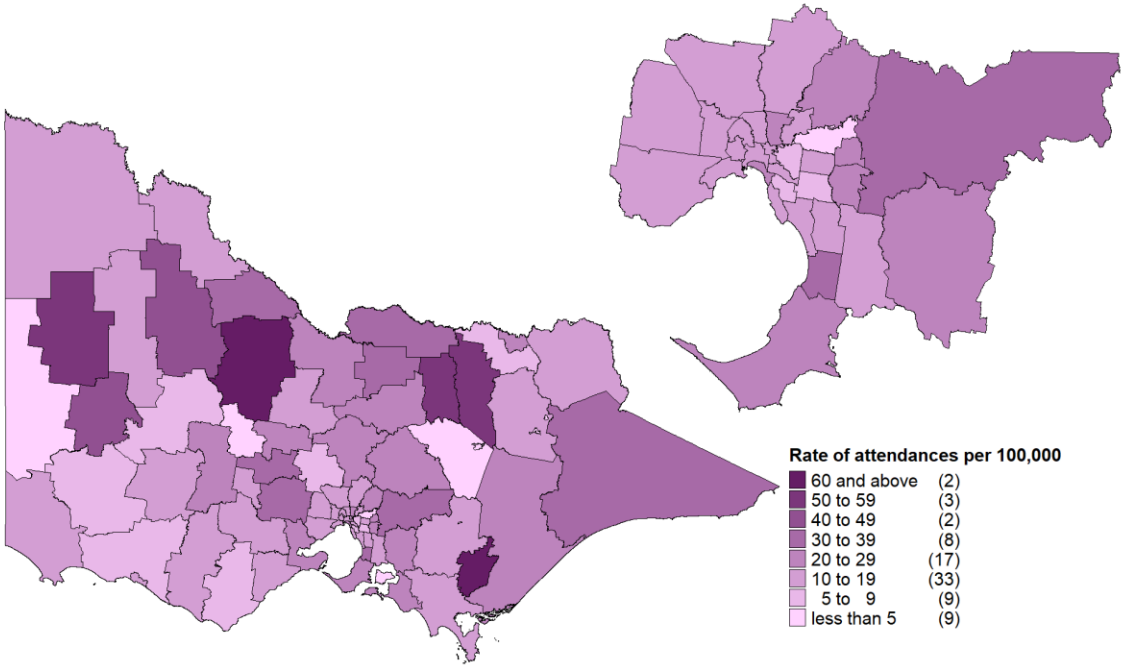


Figure 21: Percentage of opioid analgesic-related attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2018



Map 13: Number of opioid analgesic-related attendances by Victorian LGA, January to December 2018



Map 14: Rate of opioid analgesic-related attendances per 100,000 resident population by Victorian LGA, January to December 2018

Opioid pharmacotherapy-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Figure 17. Characteristics of opioid pharmacotherapy-related ambulance attendances in Victoria for the 12 months from January to December 2018 are shown in Figure 18. Data regarding month, time of day and day of week of attendances are displayed in Figure 22 to Figure 24. Mapped numbers and rates of presentations are presented at the end of this section.

- Victorian opioid pharmacotherapy-related attendances peaked in January 2018 (Table 17).
- Characteristics over the 12 month period are presented in Table 18:
    - 466 opioid pharmacotherapy-related cases were recorded, with the majority of attendances (75%) occurring in metropolitan Melbourne
    - the majority of patients attended for opioid pharmacotherapy-related cases were male (66%), with higher proportions of males in the metropolitan area (69%) than regional area (57%)
    - the median age of patients with opioid pharmacotherapy-related attendances was 40 years in Victoria
    - a higher proportion of patients with opioid pharmacotherapy-related attendances in regional (85%) compared to metropolitan areas (76%) were transported to hospital

- As presented in Figure 23, opioid pharmacotherapy-related attendance numbers peaked in the afternoon between 2pm and 4pm in metropolitan areas and 12pm and 2pm in regional areas.

- Thursdays and Mondays represented the peak day for opioid pharmacotherapy-related attendances in metropolitan and regional areas respectively (Figure 24).

Table 17: Opioid pharmacotherapy-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	44 (0.9)	16 (1.0)	60 (0.9)
February attendances (per 100,000 population)	34 (0.7)	9 (0.6)	43 (0.7)
March attendances (per 100,000 population)	30 (0.6)	8 (0.5)	38 (0.6)
April attendances (per 100,000 population)	21 (0.4)	14 (0.9)	35 (0.5)
May attendances (per 100,000 population)	25 (0.5)	11 (0.7)	36 (0.6)
June attendances (per 100,000 population)	18 (0.4)	7 (0.4)	25 (0.4)
July attendances (per 100,000 population)	30 (0.6)	9 (0.6)	39 (0.6)
August attendances (per 100,000 population)	33 (0.7)	7 (0.4)	40 (0.6)
September attendances (per 100,000 population)	31 (0.6)	9 (0.6)	40 (0.6)
October attendances (per 100,000 population)	21 (0.4)	8 (0.5)	29 (0.4)
November attendances (per 100,000 population)	29 (0.6)	12 (0.8)	41 (0.6)
December attendances (per 100,000 population)	35 (0.7)	5 (0.3)	40 (0.6)

Table 18: Characteristics of opioid pharmacotherapy-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	351 (7.3)	115 (7.3)	466 (7.2)
Mean attendances per day	N<5	N<5	N<5
Daily range	0-5	0-5	0-5
Age- median (interquartile range)	39 (32-46)	40 (34-45)	40 (33-45)
Male	243 (69%)	65 (57%)	308 (66%)
Police co-attendance	88 (25%)	34 (30%)	122 (26%)
Transport to hospital	268 (76%)	98 (85%)	366 (79%)
Alcohol involved	84 (24%)	30 (26%)	114 (25%)
Alcohol intoxication	49 (14%)	15 (13%)	64 (14%)
Multiple drugs involved (excluding alcohol)	192 (55%)	57 (50%)	249 (53%)

Note: all proportions are based on present information

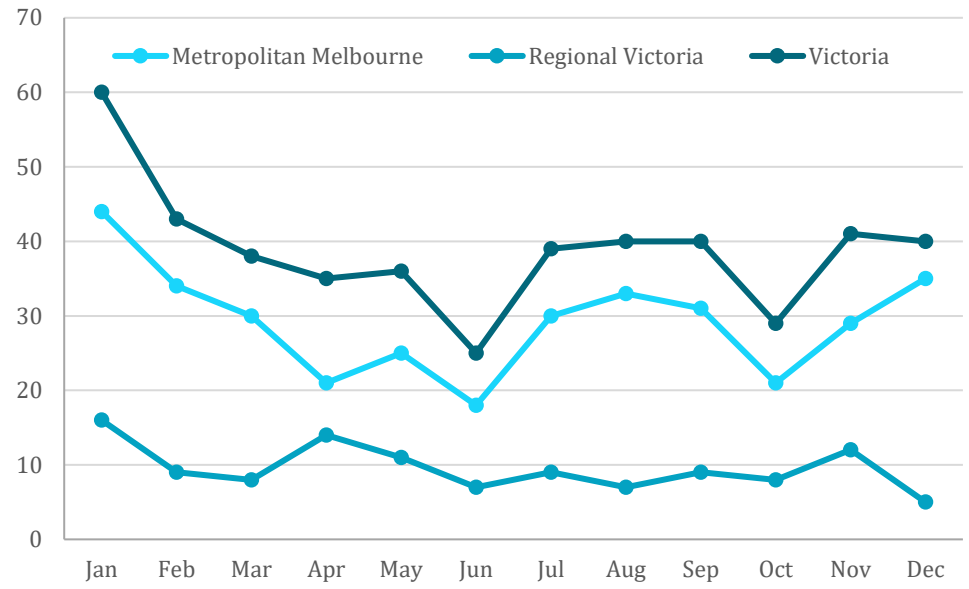


Figure 22: Number of opioid pharmacotherapy-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

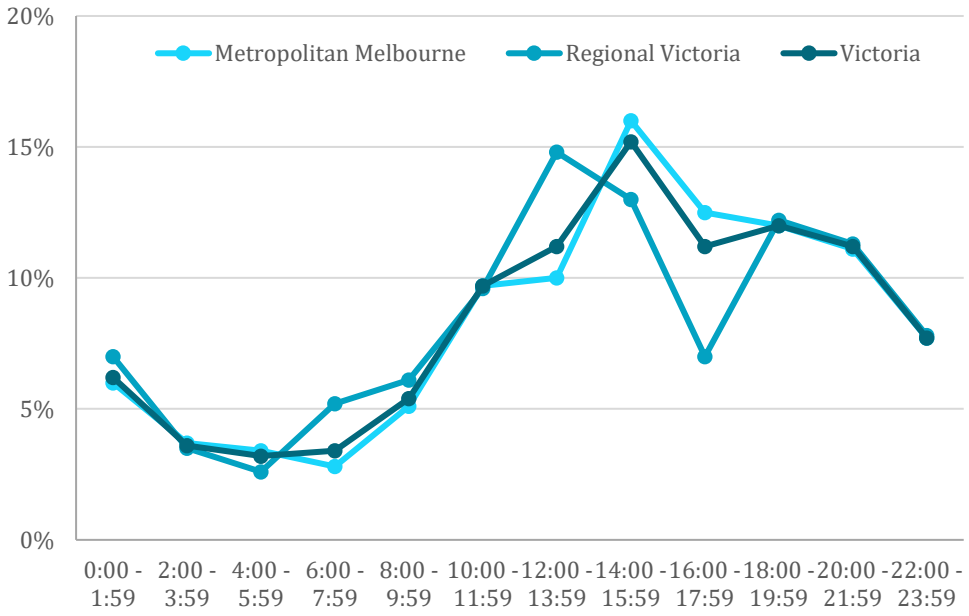


Figure 23: Percentage of opioid pharmacotherapy-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2018

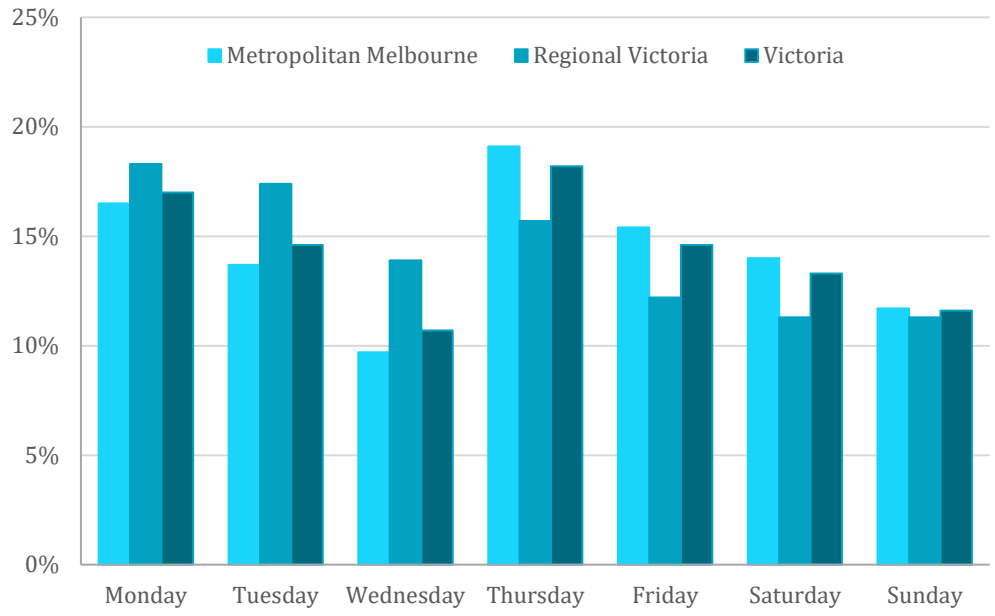
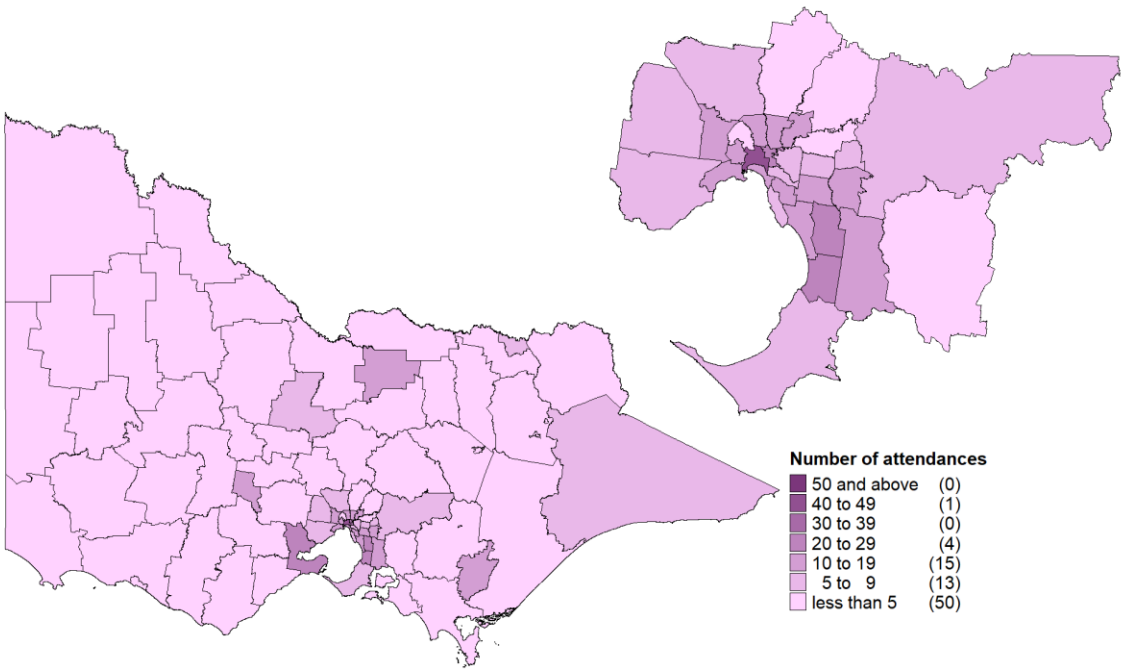
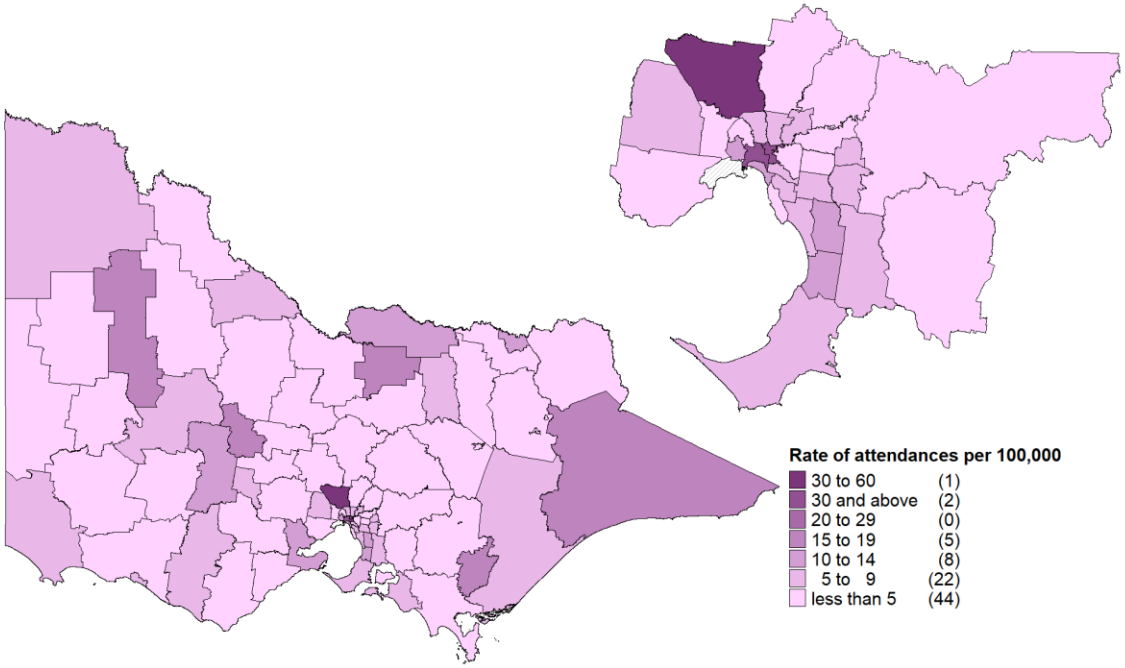


Figure 24: Percentage of opioid pharmacotherapy-related attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2018



Map 15: Number of opioid pharmacotherapy-related attendances by Victorian LGA, January to December 2018



Map 16: Rate of opioid pharmacotherapy-related attendances per 100,000 resident population by Victorian LGA, January to December 2018

Alcohol intoxication and other drug-related attendances: 2017 and 2018

Comparisons of the number of alcohol intoxication and other drug-related ambulance attendances in 2017 and 2018 are shown in Table 19. As presented in Table 19:

- alcohol intoxication-related attendances were statistically significantly higher in 2018 compared to 2017 in metropolitan Melbourne
- amphetamine-related and crystal methamphetamine attendances were statistically significantly higher in 2018 compared to 2017 in metropolitan Melbourne and regional Victoria
- cannabis-related attendances were statistically significantly higher in 2018 than 2017 in metropolitan Melbourne
- opioid pharmacotherapy-related attendances were statistically significantly lower in 2018 than 2017 in metropolitan Victoria

Table 19. Number of alcohol intoxication and other drug-related attendances in 2017 and 2018, by metropolitan Melbourne and Regional Victoria

	Metropolitan Melbourne			Regional Victoria		
N attendances	**Jan-Dec 2017**	**Jan-Dec 2018**	**% Diff**	**Jan-Dec 2017**	**Jan-Dec 2018**	**% Diff**
Alcohol intoxication	18,458	20,234	+9.6%*	5,967	6,989	+17.1%
Amphetamine	2,602	3,295	+26.6%**	639	933	+46.0%**
Crystal methamphetamine	1,872	2,275	+21.5%**	462	662	+43.3%**
Cannabis	2,146	2,487	+15.9%*	879	1,058	+20.4%
Heroin	2,739	3,000	+9.5%	208	262	+26.0%
Emerging psychoactive substance	6	13	+116.7%	5	N<5	-
Benzodiazepine	3,230	3,547	+9.8%	1,003	1,183	+17.9%
Opioid analgesic	786	852	+8.4%	350	410	+17.1%
Opioid pharmacotherapy	397	351	-11.6%*	102	115	+12.7%

Note: *p<0.05 **p<0.001

Alcohol and other drug poisoning-related ambulance attendances in Victoria

AOD poisoning-related ambulance attendances by month are shown in Table 20, and characteristics of AOD poisoning-related ambulance attendances are displayed in Table 21. Drugs involved in AOD poisoning-related ambulance attendances in Victoria are presented in Table 22. It is important to note that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As presented in Table 20 to Table 22:

- unintentional and undetermined intent AOD poisoning-related attendances in Victoria peaked in January, and intentional poisonings peaked in March 2018
- the population rate for unintentional AOD poisoning was higher in metropolitan Melbourne (36.0 attendances per 100,000 population) than regional Victoria (17.9 attendances per 100,000 population), however intentional AOD poisonings were more common in regional Victoria (86.2 attendances per 100,000 population) than metropolitan Melbourne (65.5 attendances per 100,000 population)
- the rate of undetermined intent poisonings was similar in metropolitan (36.5 attendances per 100,000 population) and regional (39.5 attendances per 100,000 population) areas
- in Victoria, the majority of patients attended for unintentional and undetermined intent AOD poisoning attendances were male (67%) and (51%) respectively, and a higher proportion of cases were female in attendances related to intentional AOD poisoning (68%)
- Excluding alcohol involvement, heroin was the most common drug contributing to unintentional poisonings in metropolitan (54%) and regional (28%) areas, while benzodiazepines were the most commonly involved drug in both undetermined intent poisonings (24% in metropolitan and 28% in regional areas) and intentional (38% in metropolitan and 31% in regional areas)

Table 20: AOD poisoning-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2018

Attendances (per 100,000 resident population)	Unintentional AOD poisoning			Undetermined intent AOD poisoning			Intentional AOD poisoning		
	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria
January	176 (3.7)	60 (3.8)	236 (3.7)	176 (3.7)	37 (2.4)	218 (3.4)	265 (5.5)	108 (6.9)	373 (5.8)
February	164 (3.4)	52 (3.3)	216 (3.3)	164 (3.4)	19 (1.2)	178 (2.8)	263 (5.5)	113 (7.2)	376 (5.8)
March	160 (3.3)	64 (4.1)	224 (3.5)	160 (3.3)	18 (1.1)	176 (2.7)	290 (6.0)	121 (7.7)	411 (6.4)
April	124 (2.6)	52 (3.3)	176 (2.7)	124 (2.6)	25 (1.6)	174 (2.7)	252 (5.2)	95 (6.0)	347 (5.4)
May	144 (3.0)	47 (3.0)	191 (3.0)	144 (3.0)	22 (1.4)	176 (2.7)	280 (5.8)	96 (6.1)	376 (5.8)
June	131 (2.7)	41 (2.6)	172 (2.7)	131 (2.7)	20 (1.3)	159 (2.5)	235 (4.9)	115 (7.3)	350 (5.4)
July	132 (2.7)	47 (3.0)	179 (2.8)	132 (2.7)	27 (1.7)	192 (3.0)	233 (4.8)	94 (6.0)	327 (5.1)
August	129 (2.7)	54 (3.4)	183 (2.8)	129 (2.7)	18 (1.1)	129 (2.0)	263 (5.5)	119 (7.6)	382 (5.9)
September	130 (2.7)	57 (3.6)	187 (2.9)	130 (2.7)	31 (2.0)	146 (2.3)	254 (5.3)	112 (7.1)	366 (5.7)
October	152 (3.2)	49 (3.1)	201 (3.1)	152 (3.2)	18 (1.1)	128 (2.0)	266 (5.5)	134 (8.5)	400 (6.2)
November	158 (3.3)	47 (3.0)	205 (3.2)	158 (3.3)	12 (0.8)	139 (2.2)	281 (5.8)	123 (7.8)	404 (6.3)
December	162 (3.4)	52 (3.3)	214 (3.3)	162 (3.4)	34 (2.2)	204 (3.2)	276 (5.7)	126 (8.0)	402 (6.2)

Table 21: Characteristics of AOD poisoning-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Unintentional AOD poisoning			Undetermined intent AOD poisoning			Intentional AOD poisoning		
	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	1,738 (36.0)	281 (17.9)	2,019 (31.3)	1,762 (36.5)	622 (39.5)	2,384 (36.9)	3,158 (65.5)	1,356 (86.2)	4,514 (69.9)
Number of fatal poisonings	24 (1%)	6 (2%)	30 (2%)	47 (3%)	16 (3%)	63 (3%)	26 (1%)	11 (1%)	37 (1%)
Age- median (interquartile range)	36 (26-45)	37 (26-45)	37 (26-45)	37 (26-46)	36 (24-46)	36 (25-46)	35 (22-46)	36 (21-47)	35 (22-47)
Male	1,171 (67%)	197 (70%)	1,344 (67%)	970 (55%)	247 (40%)	1,218 (51%)	1,066 (32%)	417 (31%)	1,459 (32%)
Transport to hospital	984 (57%)	196 (76%)	1,182 (59%)	1,473 (84%)	559 (90%)	2,039 (85%)	3,093 (98%)	1,324 (98%)	4,425 (98%)
Police co-attendance	289 (17%)	50 (18%)	339 (17%)	466 (27%)	173 (28%)	640 (27%)	903 (29%)	451 (33%)	1,357 (30%)

AOD poisoning can involve either single or multiple substances

Table 22: Drugs involved in AOD poisoning-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2018

	Unintentional AOD poisoning			Undetermined intent AOD poisoning			Intentional AOD poisoning		
	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria
Alcohol involved	433 (25%)	99 (35%)	532 (26%)	451 (26%)	173 (28%)	624 (26%)	1,071 (34%)	397 (29%)	1,468 (33%)
Alcohol intoxication only	130 (8%)	41 (15%)	171 (9%)	64 (4%)	14 (2%)	78 (3%)	≥13 (1%)	N<5	21 (1%)
Amphetamines	136 (8%)	18 (7%)	154 (8%)	66 (4%)	22 (4%)	88 (4%)	52 (2%)	19 (1%)	71 (2%)
Crystal methamphetamine	82 (5%)	10 (4%)	92 (5%)	43 (2%)	16 (3%)	59 (3%)	37 (1%)	14 (1%)	51 (1%)
Cannabis	43 (3%)	20 (7%)	63 (3%)	34 (2%)	22 (4%)	56 (2%)	44 (1%)	26 (2%)	70 (2%)
Heroin	941 (54%)	79 (28%)	1,020 (51%)	297 (17%)	39 (6%)	336 (14%)	29 (1%)	7 (1%)	36 (1%)
Emerging psychoactive substances	N<5	0	N<5	0	0	0	N<5	0	N<5
Benzodiazepine	138 (8%)	40 (14%)	178 (9%)	430 (24%)	176 (28%)	606 (25%)	1,204 (38%)	420 (31%)	1,624 (36%)
Opioid analgesics	38 (2%)	34 (12%)	72 (4%)	101 (6%)	56 (9%)	157 (7%)	282 (9%)	135 (10%)	417 (9%)
Opioid pharmacotherapy	20 (1%)	6 (2%)	26 (1%)	27 (2%)	12 (2%)	39 (2%)	19 (1%)	11 (1%)	30 (1%)

Note: Totals may include cases with either missing or unclassified location information

Other than alcohol intoxication only cases, AOD poisoning can involve either single or multiple substances

Chapter 4: Results – New South Wales (NSW)

Alcohol intoxication-related attendances in NSW

Numbers and rates of monthly alcohol intoxication-related ambulance attendances are shown in Table 23. Characteristics of alcohol intoxication-related ambulance attendances in NSW for March, June, September and December 2018 are shown in Table 24. Data regarding month, time of day, and day of week of attendances are displayed in Figure 25 to Figure 27.

- Characteristics for March, June, September and December 2018 are presented in Table 24:
    - 10,348 alcohol intoxication-related cases were recorded
    - the majority of patients attended for alcohol intoxication-related cases were male (62%)
    - police co-attended more than a quarter (28%) of alcohol intoxication-related cases
    - the median age of patients with alcohol intoxication-related attendances was 47 years
    - a similar proportion of patients with alcohol intoxication-related attendances were transported to hospital in metropolitan and regional areas (83% and 78% respectively)
- As presented in **Figure 26**, alcohol intoxication-related attendance numbers peaked in the evening between 8pm and midnight in metropolitan and regional areas of NSW
- Saturdays represented the peak day for alcohol intoxication-related attendances (Figure 27)

Table 23: Alcohol intoxication-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	1,598 (30.3)	790 (32.1)	2,388 (30.9)
June attendances (per 100,000 population)	1,256 (23.8)	595 (24.2)	1,851 (23.9)
September attendances (per 100,000 population)	1,779 (33.7)	860 (35.0)	2,639 (34.1)
December attendances (per 100,000 population)	2,367 (44.8)	1,103 (44.9)	3,470 (44.8)

Table 24: Characteristics of alcohol intoxication-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	7,000 (132.6)	3,348 (136.2)	10,348 (133.7)
Mean attendances per day	82.8	88.9	84.9
Daily range	28-195	33-162	33-193
Age- median (quartiles)	40 (25-54)	44 (28-56)	47 (26-55)
Male	4,364 (62%)	2,085 (62%)	6,455 (62%)
Police co-attendance	2,032 (29%)	868 (26%)	2,902 (28%)
Transport to hospital	5,832 (83%)	2,594 (78%)	8,437 (82%)
Multiple drugs involved	225 (3%)	103 (3%)	328 (3%)

Note: all proportions are based on present information

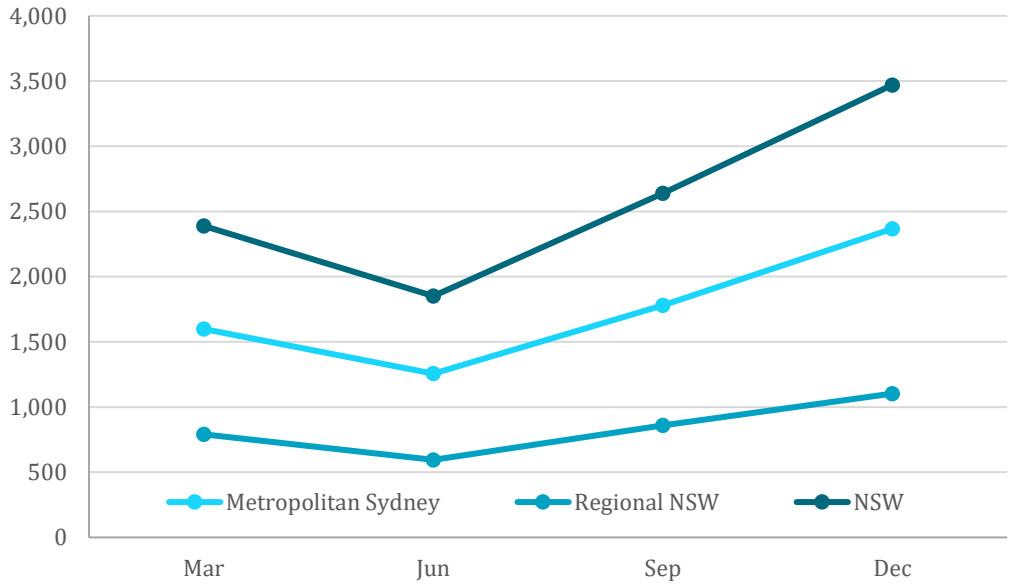


Figure 25: Alcohol intoxication-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

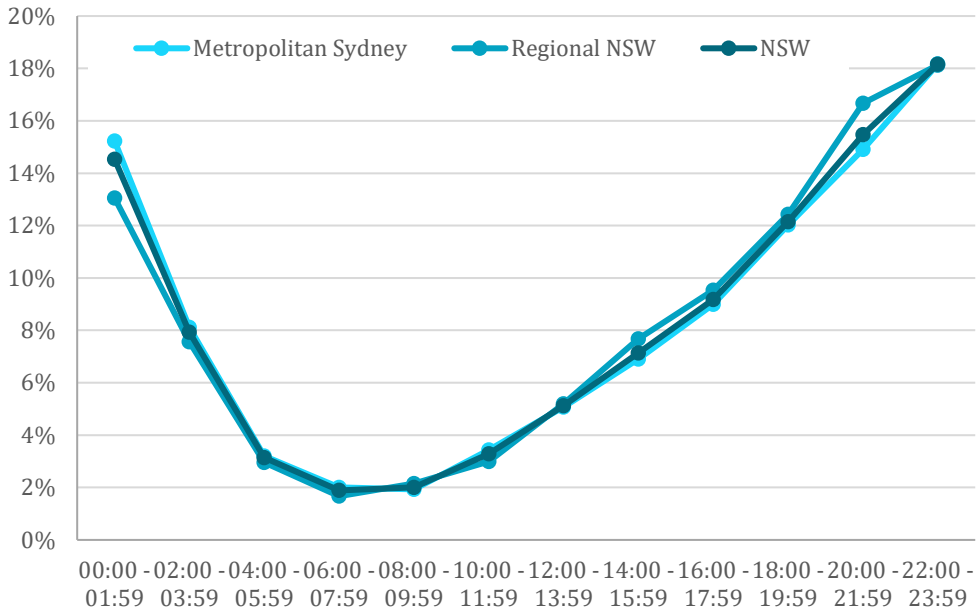


Figure 26: Alcohol intoxication-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2018

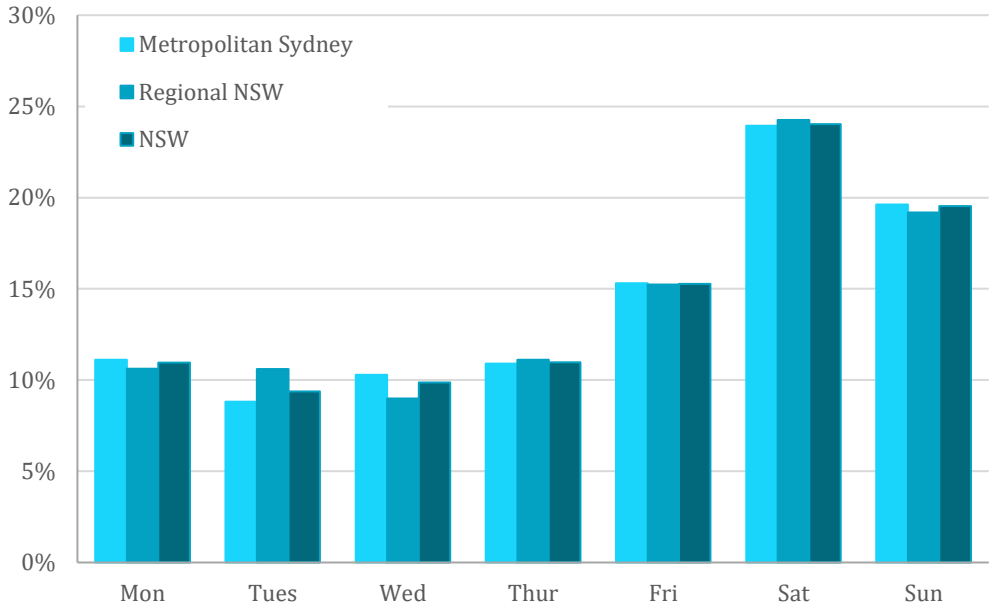


Figure 27: Percentage of alcohol intoxication-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2018

All amphetamine-related attendances in NSW

Results are presented covering March, June, September and December of data collection and coding for NSW in 2018.

Numbers and rates of amphetamine-related ambulance attendances are shown in Table 25. Characteristics of amphetamine-related ambulance attendances in NSW for March, June, September and December 2018 are shown in Table 26. Data regarding month, time of day and day of week of attendances are displayed in Figure 28 to Figure 30.

- Characteristics for March, June, September and December 2018 are presented in Table 26 and include:
    - 1,099 amphetamine-related cases were recorded in NSW
    - the majority of patients attended for amphetamine-related cases were male (68%)
    - the median age of patients with amphetamine-related attendances was 33 years
    - a similar proportion of patients with amphetamine-related attendances were transported to hospital in metropolitan areas (90%) and in regional areas (81%)
    - multiple drugs were involved in 31% of amphetamine-related attendances across NSW
    - As presented in Figure 29, amphetamine-related attendance numbers peaked from 6pm to midnight in NSW.
    - Sundays represented the peak day for amphetamine-related attendances in Metropolitan areas while Sundays and Sundays were the peak days in regional NSW (Figure 30).

Table 25: Amphetamine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	171 (3.2)	79 (3.2)	250 (3.2)
June attendances (per 100,000 population)	123 (2.3)	67 (2.7)	190 (2.5)
September attendances (per 100,000 population)	221 (4.2)	96 (3.9)	317 (4.1)
December attendances (per 100,000 population)	226 (4.3)	116 (4.7)	342 (4.4)

Table 26: Characteristics of amphetamine-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	741 (14.0)	358 (14.6)	1,099 (14.2)
Mean attendances per day	9.7	8.7	9.0
Daily range	<5-18	<5-18	<5-18
Age- median (quartiles)	34 (27-41)	33 (25-40)	33 (26-41)
Male	501 (68%)	243 (68%)	745 (68%)
Police co-attendance	328 (44%)	118 (33%)	447 (41%)
Transport to hospital	661 (90%)	290 (81%)	952 (87%)
Alcohol involved/mentioned	111 (15%)	51 (14%)	162 (15%)
Alcohol intoxication	53 (7%)	23 (6%)	76 (7%)
Multiple drugs involved (excluding alcohol)	253 (34%)	85 (24%)	338 (31%)

Note: all proportions are based on present information

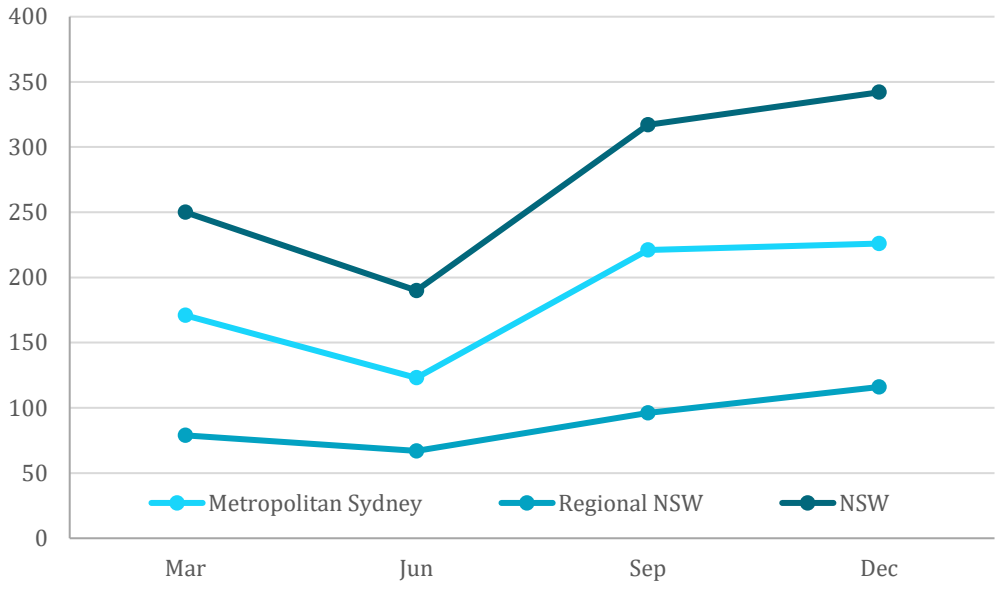


Figure 28: Amphetamine-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December data 2018

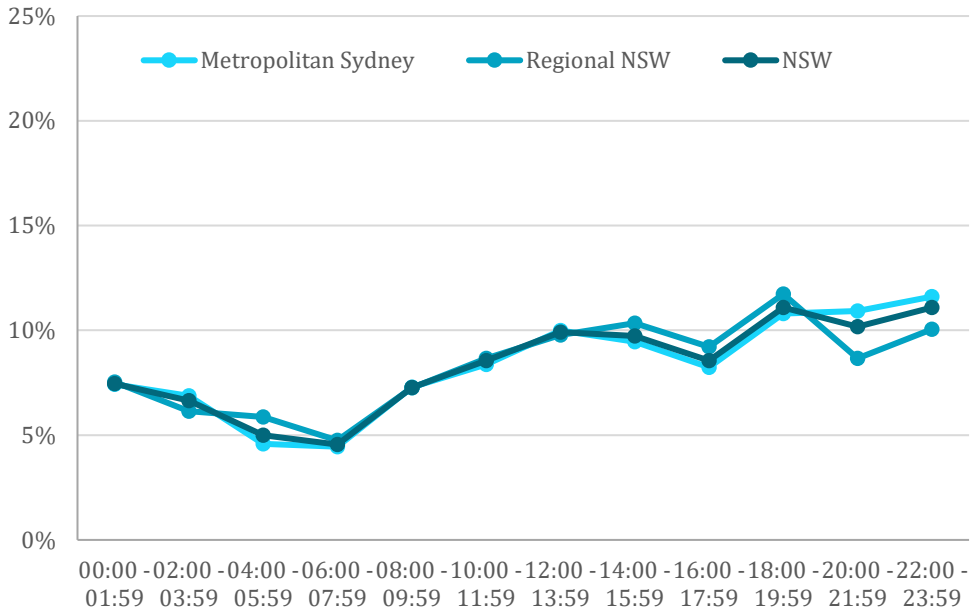


Figure 29: Amphetamine-related attendances by time of day metropolitan Sydney and regional NSW, March, June, September and December 2018

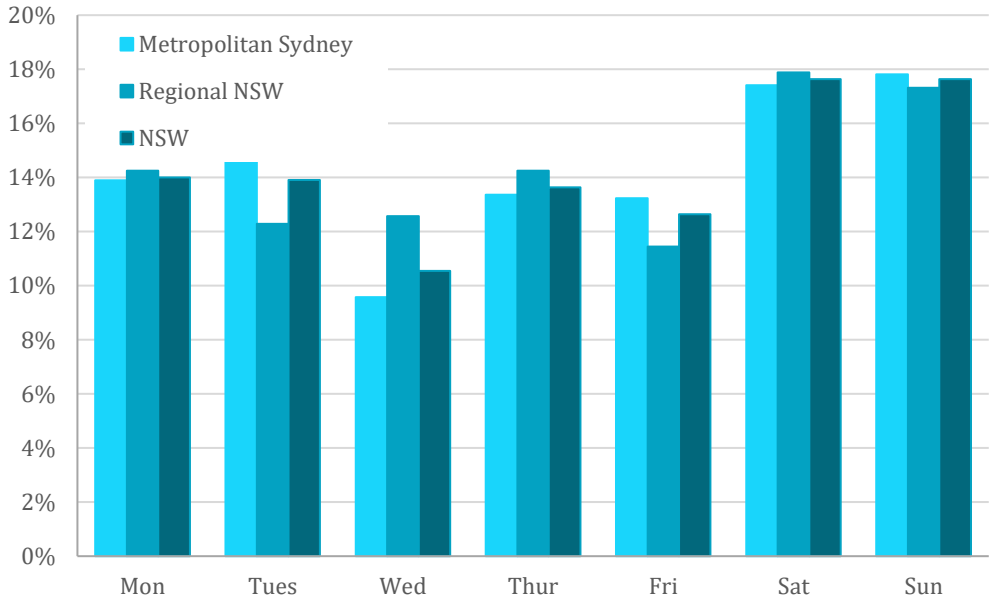


Figure 30: Percentage of amphetamine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December data 2018

Crystal methamphetamine-related attendances in NSW

Results are presented covering March, June, September and December of data collection and coding for NSW in 2018.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 27. Characteristics of crystal methamphetamine-related ambulance attendances in NSW for March, June, September and December 2018 are shown in

Table 28. Data regarding month, time of day and day of week of attendances are displayed in Figure 31 to Figure 33.

- Crystal methamphetamine-related attendances peaked during December in metropolitan and regional areas (Table 27).
- Characteristics for March, June, September and December 2018 are presented in Table 28 and include:
    - there were 911 crystal methamphetamine-related cases in NSW
    - the majority of patients attended for crystal methamphetamine-related cases in NSW were male (68%)
    - the median age of patients with crystal methamphetamine-related attendances in NSW was 33 years
    - a higher proportion of patients with crystal methamphetamine-related attendances were transported to hospital in metropolitan (90%) than in regional areas (79%)
    - multiple drugs (excluding alcohol) were involved in 31% of crystal methamphetamine-related attendances across NSW
- As presented in Figure 32, crystal methamphetamine-related attendance numbers in metropolitan Sydney and regional NSW peaked from 6pm to midnight.
- Saturday represented the peak day for crystal methamphetamine-related attendances across metropolitan Sydney and regional NSW (Figure 33).

Table 27: Crystal methamphetamine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	152 (2.9)	64 (2.6)	216 (2.8)
June attendances (per 100,000 population)	105 (2.0)	51 (2.1)	156 (2.0)
September attendances (per 100,000 population)	180 (3.4)	77 (3.1)	257 (3.3)
December attendances (per 100,000 population)	179 (3.4)	103 (4.2)	282 (3.6)

Table 28: Characteristics of crystal methamphetamine-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	616 (11.7)	295 (12.0)	911 (11.8)
Mean attendances per day	7.3	7.7	7.4
Daily range	>5-16	>5-16	0-16
Age- median (quartiles)	34 (27-41)	33 (25-41)	33 (26-41)
Male	412 (67%)	205 (70%)	618 (68%)
Police co-attendance	281 (46%)	103 (35%)	385 (42%)
Transport to hospital	552 (90%)	233 (79%)	786 (86%)
Alcohol involved/mentioned	82 (13%)	39 (13%)	121 (13%)
Alcohol intoxication	40 (7%)	17 (6%)	57 (6%)
Multiple drugs involved (excluding alcohol)	209 (34%)	69 (23%)	278 (31%)

Note: all proportions are based on present information

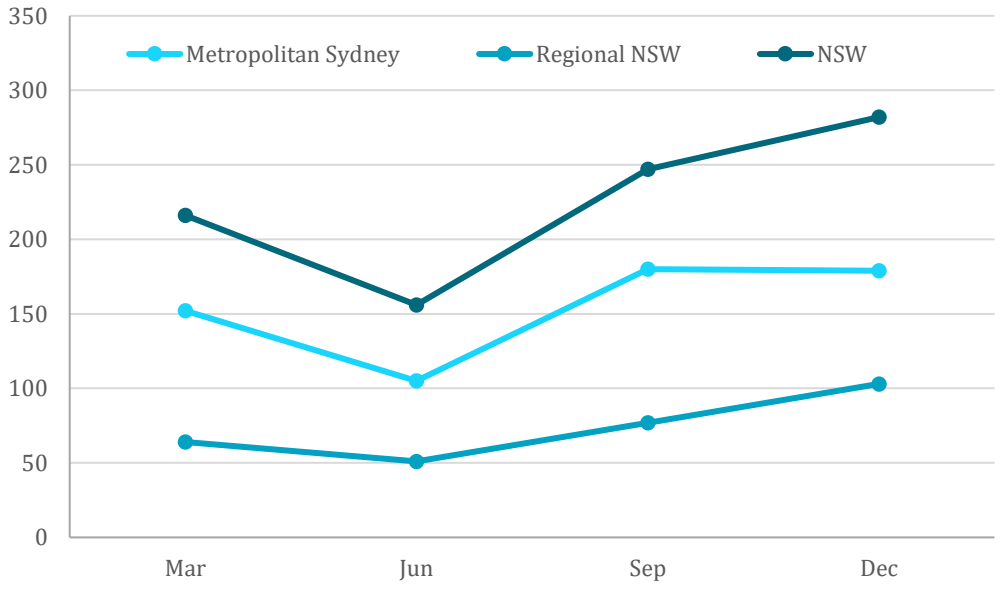


Figure 31: Crystal methamphetamine-related attendances by month metropolitan Sydney and regional NSW, March, June, September and December 2018

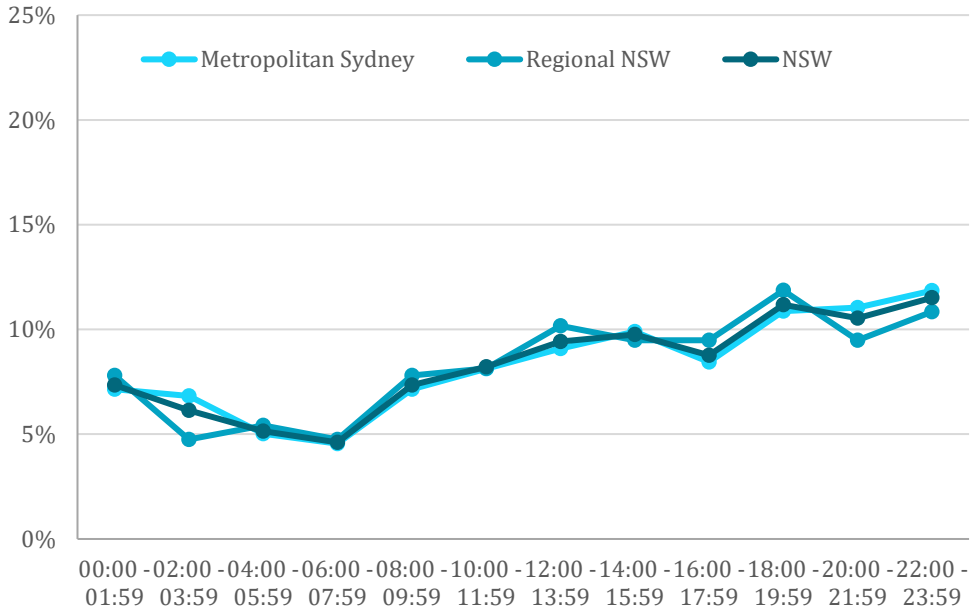


Figure 32: Crystal methamphetamine-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2018

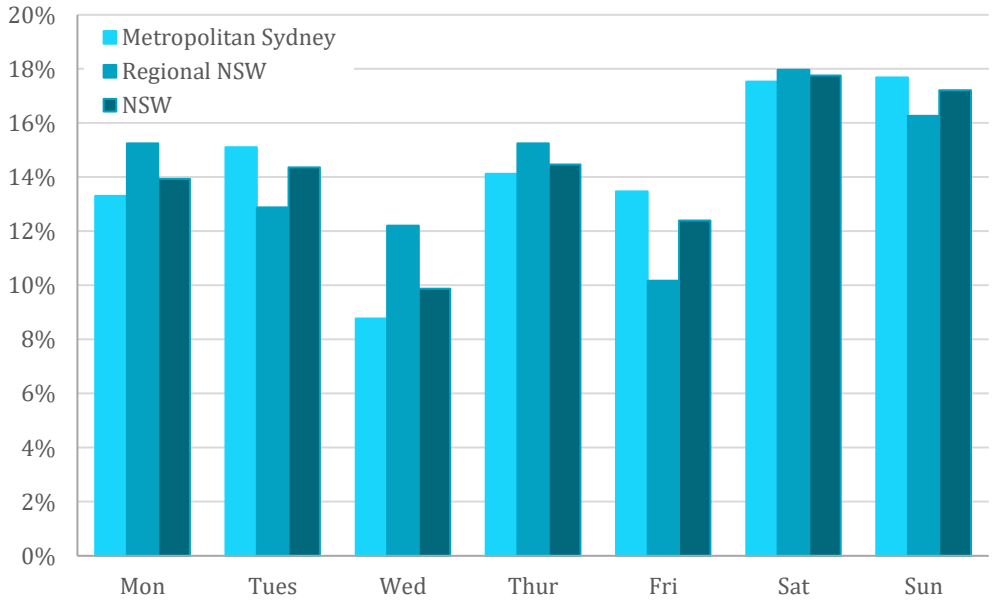


Figure 33: Percentage of crystal methamphetamine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2018

Cannabis-related attendances in NSW

Results are presented covering March, June, September and December of data collection and coding for NSW in 2018.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 29. Characteristics of cannabis-related ambulance attendances in NSW for March, June, September and December 2018 are shown in Table 30. Data regarding month, time of day and day of week of attendances are displayed in Figure 34 to Figure 36.

- Cannabis-related attendances peaked in December 2018 (Table 29).
- As shown in Table 30, in March, June, September and December 2018:
    - there were 1,258 cannabis-related cases were recorded in NSW
    - the majority of patients attended for cannabis-related cases were male (65%), with similar proportions in metropolitan and regional areas
    - the median age of patients with cannabis-related attendances in NSW was 29 years
    - the majority of patients with cannabis-related attendances in NSW were transported to hospital (83%)
    - alcohol was mentioned in less than half (43%) of cannabis-related ambulance attendances in NSW
- As presented in Figure 35, cannabis-related attendance numbers peaked from 8pm to midnight in regional areas.
- Sundays and Saturdays represented the peak days for cannabis-related attendances in metropolitan Sydney and regional NSW, respectively (Figure 36).

Table 29: Cannabis-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	157 (3.0)	91 (3.7)	248 (3.2)
June attendances (per 100,000 population)	152 (2.9)	87 (3.5)	239 (3.1)
September attendances (per 100,000 population)	232 (4.4)	128 (5.2)	360 (4.7)
December attendances (per 100,000 population)	266 (5.0)	145 (5.9)	411 (5.3)

Table 30: Characteristics of cannabis-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	807 (15.3)	451 (18.3)	1,258 (16.3)
Mean attendances per day	10.3	10.4	10.3
Daily range	<5-21	<5-18	<5-20
Age- median (quartiles)	28 (21-40)	31 (22-44)	29 (21-41)
Male	537 (67%)	274 (61%)	812 (65%)
Police co-attendance	246 (31%)	120 (27%)	367 (29%)
Transport to hospital	677 (84%)	372 (83%)	1,051 (83%)
Alcohol involved/mentioned	330 (41%)	211 (47%)	541 (43%)
Alcohol intoxication	180 (22%)	114 (25%)	294 (23%)
Multiple drugs involved (excluding alcohol)	236 (29%)	100 (22%)	337 (27%)

Note: all proportions are based on present information

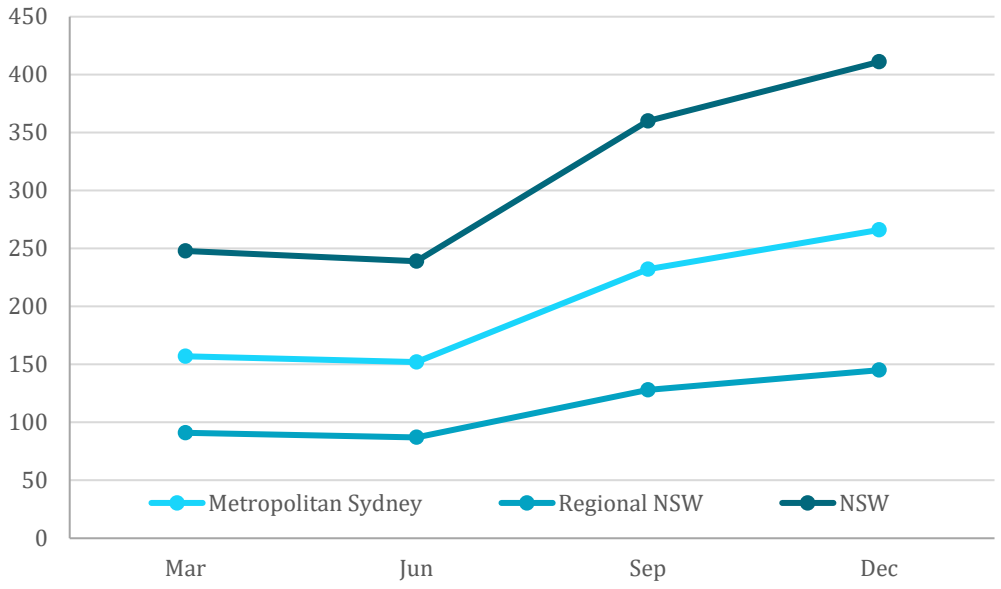


Figure 34: Cannabis-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

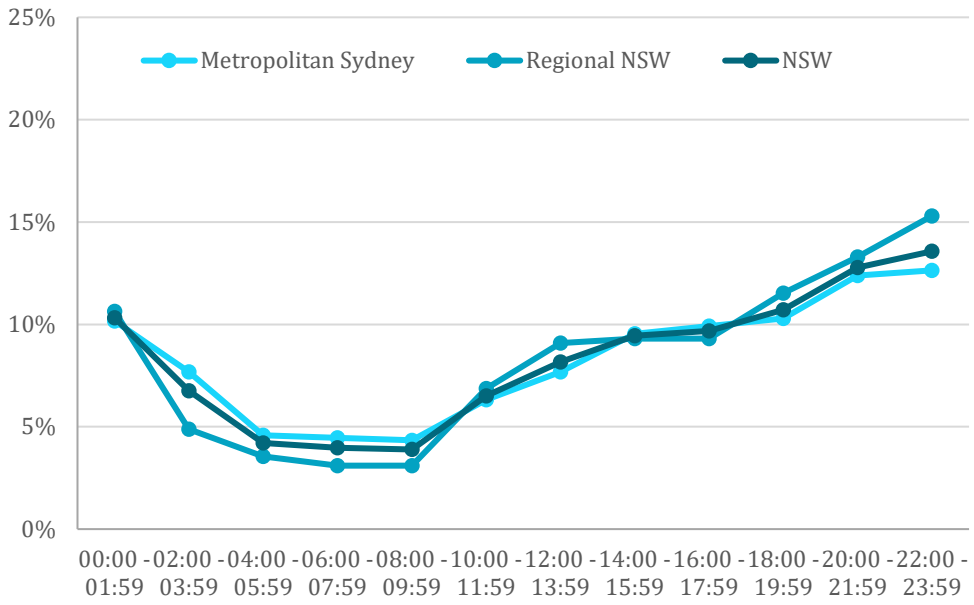


Figure 35: Cannabis-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2018

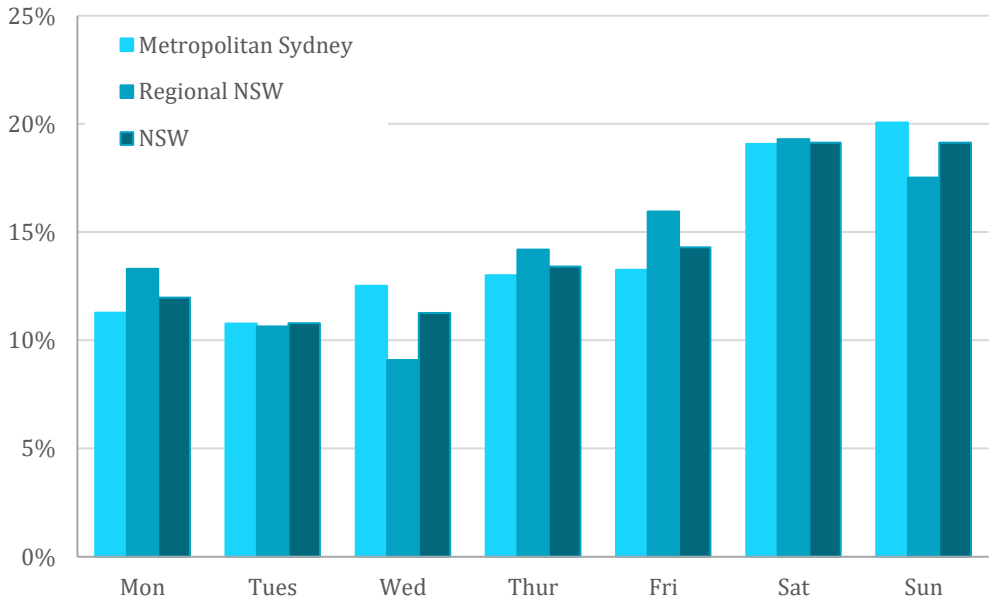


Figure 36: Percentage of cannabis-related attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2018

Heroin-related attendances in NSW

Results are presented covering March, June, September and December of data collection and coding for NSW in 2018.

Numbers and rates of heroin-related ambulance attendances are shown in Table 31. Characteristics of heroin-related ambulance attendances in NSW for March, June, September and December 2018 are shown in Table 32. Data regarding month, time of day and day of week of attendances are displayed in Figure 37 to Figure 39.

- Heroin-related attendances in NSW peaked in December 2018 (Table 31)
- Characteristics for March, June, September and December 2018 are presented in Table 32:
    - 492 heroin-related cases were recorded in NSW
    - the population rate for heroin-related attendances was higher in metropolitan Sydney (8.1 per 100,000 population) than regional NSW (2.6 per 100,000 population)
    - the majority of patients attended for heroin-related cases in NSW were male (72%)
    - the median age of patients with heroin-related attendances was 40 years
    - police co-attended almost one-quarter of heroin-related ambulance attendances (26%)
- As presented in Figure 38, heroin-related attendance numbers peaked between 12pm and 4 pm in NSW.
- Saturdays represented the peak days for heroin-related attendances in metropolitan and regional areas (Figure 39).

Table 31: Heroin-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	88 (1.7)	19 (0.8)	107 (1.4)
June attendances (per 100,000 population)	66 (1.3)	9 (0.4)	75 (1.0)
September attendances (per 100,000 population)	124 (2.3)	18 (0.7)	142 (1.8)
December attendances (per 100,000 population)	150 (2.8)	18 (0.7)	168 (2.2)

Table 32: Characteristics of heroin-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	428 (8.1)	64 (2.6)	492 (6.4)
Mean attendances per day	4.1	4.0	4.0
Daily range	0-12	0-9	0-10
Age- median (quartiles)	41 (32-47)	39 (27-49)	40 (31-47)
Male	308 (72%)	44 (69%)	352 (72%)
Police co-attendance	111 (30%)	15 (23%)	126 (26%)
Transport to hospital	251 (59%)	36 (56%)	287 (58%)
Alcohol involved/mentioned	42 (10%)	6 (9%)	48 (10%)
Alcohol intoxication	11 (3%)	N<5	≥6 (≥1%)
Multiple drugs involved (excluding alcohol)	105 (25%)	17 (27%)	122 (25%)
Responded to naloxone	181 (42%)	32 (50%)	213 (43%)

Note: all proportions are based on present information

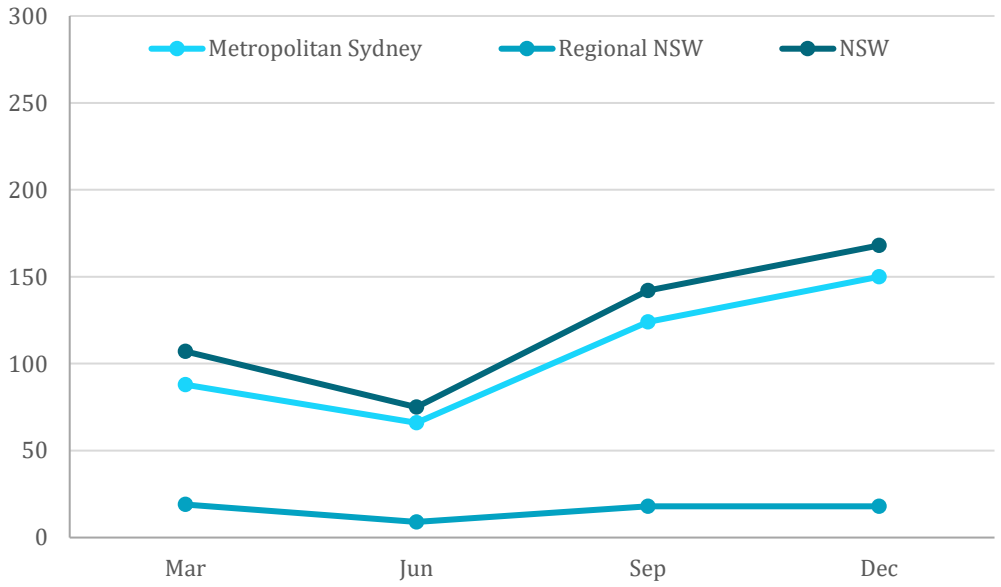


Figure 37: Heroin-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

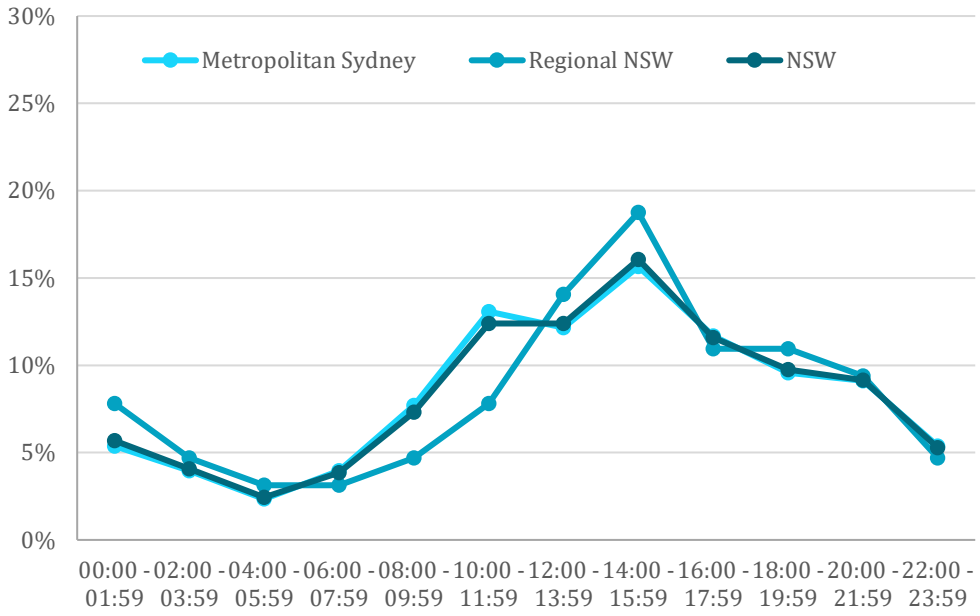


Figure 38: Heroin-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2018

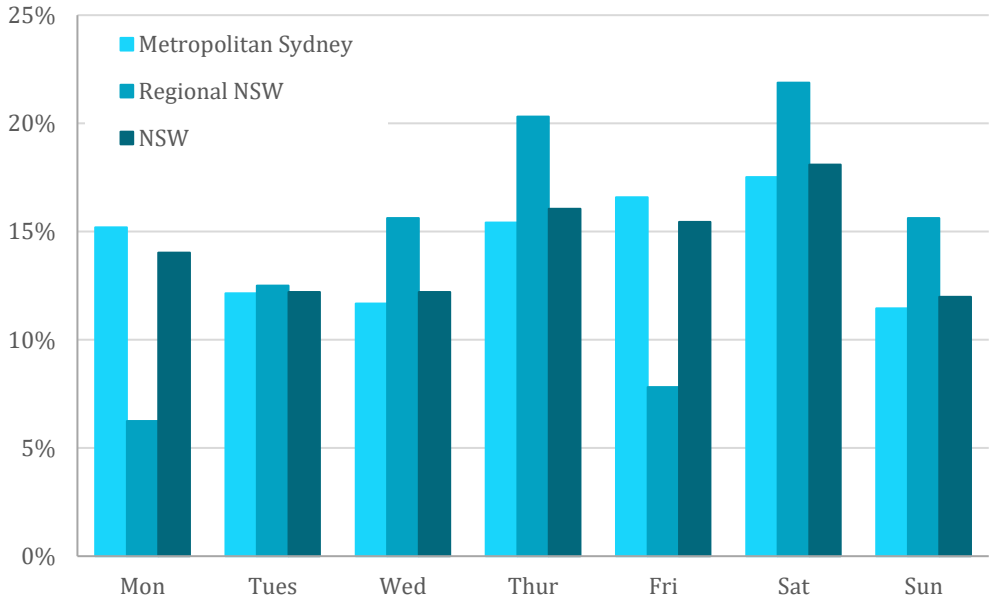


Figure 39: Percentage of heroin-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2018

Emerging psychoactive substance-related attendances in NSW

Results are presented covering March, June, September and December of data collection and coding for NSW in 2018. Graphed data are not presented due to low numbers of cases.

Numbers and rates of emerging psychoactive substance-related ambulance attendances are shown in Table 33. Characteristics of emerging psychoactive substance-related ambulance attendances in NSW for March, June, September and December 2018 are shown in Table 34. As presented in Table 33 and Table 34, numbers for emerging psychoactive substance-related ambulance attendances were very low for all months of reporting in 2018.

Table 33: Emerging psychoactive substance-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	N<5	N<5	N<5
June attendances (per 100,000 population)	0	N<5	N<5
September attendances (per 100,000 population)	0	N<5	N<5
December attendances (per 100,000 population)	0	0	0

Table 34: Characteristics of emerging psychoactive substance-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	N<5	0	N<5
Mean attendances per day	-	-	-
Daily range	-	-	-
Age- median (quartiles)	-	-	27 (19-32)
Male	N<5	N<5	N<5
Police co-attendance	N<5	N<5	N<5
Transport to hospital	N<5	N<5	N<5
Alcohol involved/mentioned	0	N<5	N<5
Alcohol intoxication	0	0	0
Multiple drugs involved (excluding alcohol)	N<5	N<5	N<5

Benzodiazepine-related attendances in NSW

Results presented include March, June, September and December 2018 data collection and coding for NSW.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 35. Characteristics of benzodiazepine-related ambulance attendances in NSW for March, June, September and December 2018 are shown in Table 36. Data regarding month, time of day and day of week of attendances are displayed in Figure 40 to Figure 42.

- Benzodiazepine-related attendances peaked in December 2018 (Table 35).
- As shown in Table 36, for March, June, September and December 2018:
    - 1,120 benzodiazepine-related cases were recorded in NSW
    - the majority of benzodiazepine-related ambulance attendances occurred in males (52%)
    - the median age of patients with benzodiazepine-related attendances was 36 years in NSW
    - patients with benzodiazepine-related attendances were transported to hospital in 91% of metropolitan and regional cases
    - multiple drugs (excluding alcohol) were involved in almost half (43%) of all benzodiazepine-related attendances across NSW
- As presented in Figure 41, metropolitan Sydney and regional NSW benzodiazepine-related attendance numbers had peaks from 6pm to 12am.
- Saturdays represented the peak day for benzodiazepine-related attendances in metropolitan Sydney and regional NSW (Figure 42).

Table 35: Benzodiazepine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	199 (3.8)	72 (2.9)	271 (3.5)
June attendances (per 100,000 population)	165 (3.1)	49 (2.0)	214 (2.8)
September attendances (per 100,000 population)	223 (4.2)	84 (3.4)	307 (4.0)
December attendances (per 100,000 population)	246 (4.7)	82 (3.3)	328 (4.2)

Table 36: Characteristics of benzodiazepine-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	833 (15.8)	287 (11.7)	1,120 (14.5)
Mean attendances per day	9.1	9.3	9.2
Daily range	5-16	<5-21	<5-18
Age- median (quartiles)	35 (24-47)	35 (25-47)	36 (25-48)
Male	443 (53%)	142 (50%)	585 (52%)
Police co-attendance	268 (32%)	83 (29%)	351 (31%)
Transport to hospital	761 (91%)	257 (90%)	1,018 (91%)
Alcohol involved/mentioned	365 (44%)	116 (40%)	481 (43%)
Alcohol intoxication	251 (30%)	81 (28%)	332 (30%)
Multiple drugs involved (excluding alcohol)	418 (50%)	144 (50%)	562 (50%)

Note: all proportions are based on present information

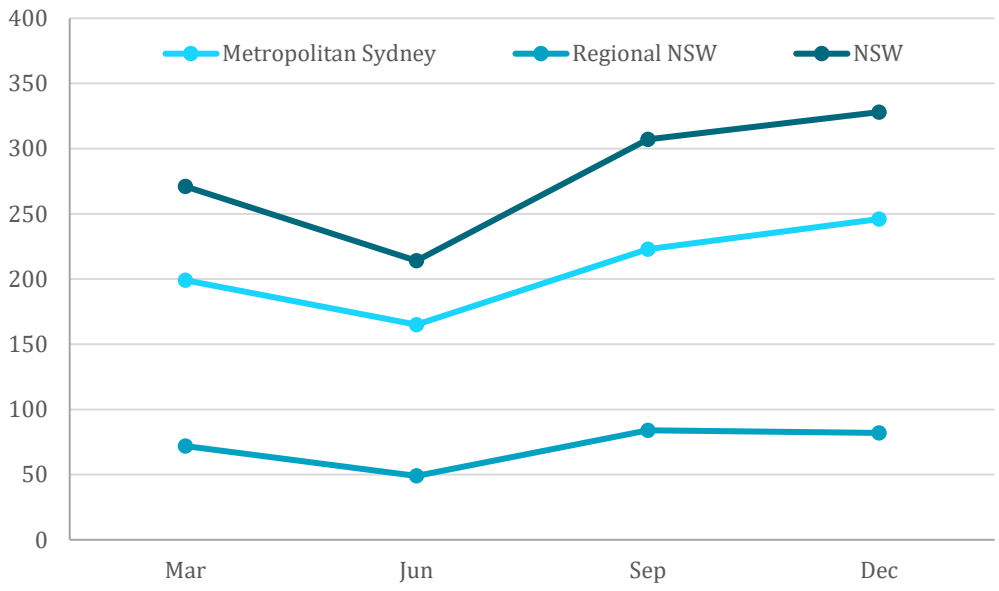


Figure 40: Benzodiazepine-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

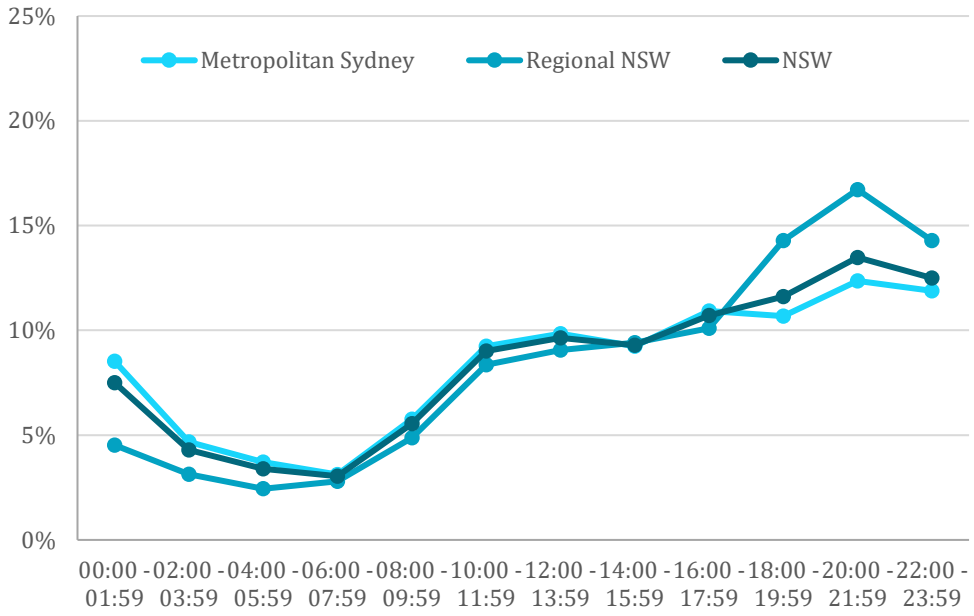


Figure 41: Benzodiazepine-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2018

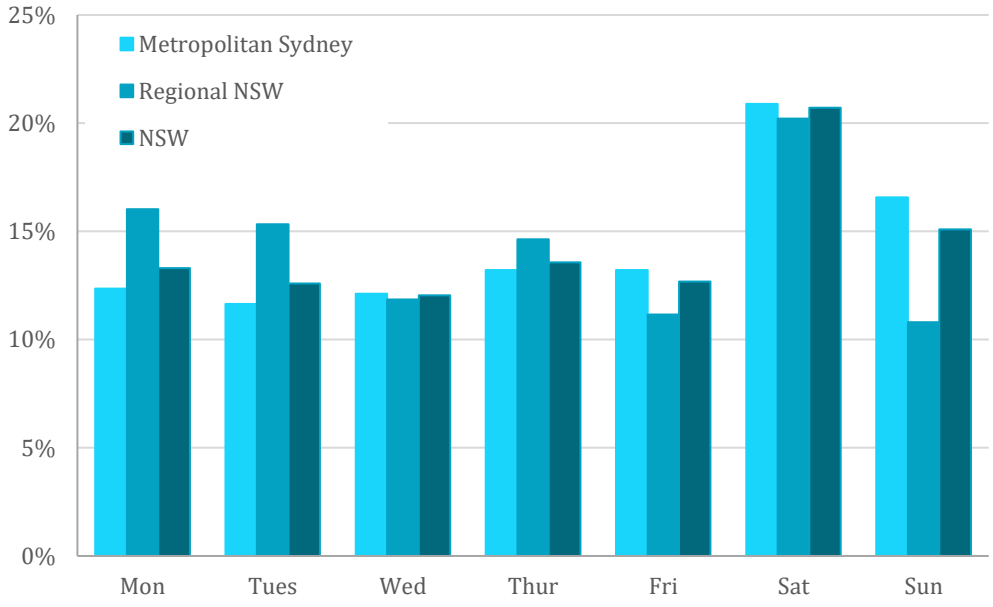


Figure 42: Percentage of benzodiazepine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2018

Opioid analgesic-related attendances in NSW

Results are presented covering March, June, September and December data collection and coding for NSW in 2018.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 37. Characteristics of opioid analgesic-related ambulance attendances in NSW for March, June, September and December 2018 are shown in Table 38. Data regarding month, time of day and day of week of attendances are displayed in Figure 43 to Figure 45.

- Opioid analgesic-related attendances peaked during March in both metropolitan and regional areas of NSW (Table 37).
- As shown in Table 38, in March, June, September and December 2018:
    - there were 438 opioid analgesic-related cases in NSW
    - the population rate for opioid analgesic-related attendances was higher in regional NSW (7.3 per 100,000 population) than in metropolitan Sydney (4.9 per 100,000 population)
    - the majority of opioid analgesic-related ambulance attendances occurred in males (57%) in NSW
    - median age of patients with opioid analgesic-related attendances was 42 years in NSW
    - a higher proportion of opioid analgesic-related attendances involved multiple drugs (excluding alcohol) in metropolitan Sydney (52%) than in regional NSW (45%)
- As presented in Figure 44, opioid analgesic-related attendance numbers peaked between 11am and 2 pm in regional and metropolitan Sydney.
- Sundays and Mondays represented the peak days for opioid analgesic-related attendances in regional and metropolitan areas, respectively (Figure 45).

Table 37: Opioid analgesic-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	65 (1.2)	53 (2.2)	118 (1.5)
June attendances (per 100,000 population)	59 (1.1)	39 (1.6)	98 (1.3)
September attendances (per 100,000 population)	63 (1.2)	36 (1.5)	99 (1.3)
December attendances (per 100,000 population)	71 (1.3)	52 (2.1)	123 (1.6)

Table 38: Characteristics of opioid analgesic-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	258 (4.9)	180 (7.3)	438 (5.7)
Mean attendances per day	3.6	3.6	3.6
Daily range	0-9	0-7	0-8
Age- median (quartiles)	40 (29-52)	44 (33-54)	42 (30-53)
Male	155 (60%)	95 (53%)	250 (57%)
Police co-attendance	61 (24%)	43 (24%)	104 (24%)
Transport to hospital	233 (90%)	153 (85%)	386 (88%)
Alcohol involved/mentioned	73 (28%)	42 (23%)	115 (26%)
Alcohol intoxication	42 (16%)	28 (16%)	70 (16%)
Multiple drugs involved (excluding alcohol)	134 (52%)	80 (45%)	214 (49%)
Morphine	12 (5%)	12 (7%)	24 (6%)
Oxycodone	146 (57%)	87 (48%)	233 (53%)

Note: all proportions are based on present information

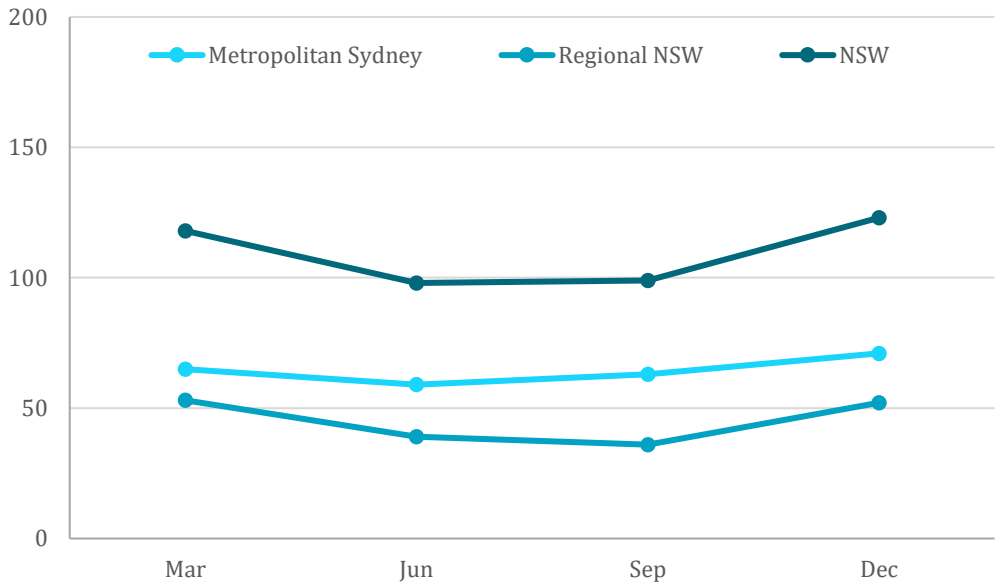


Figure 43: Opioid analgesic-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

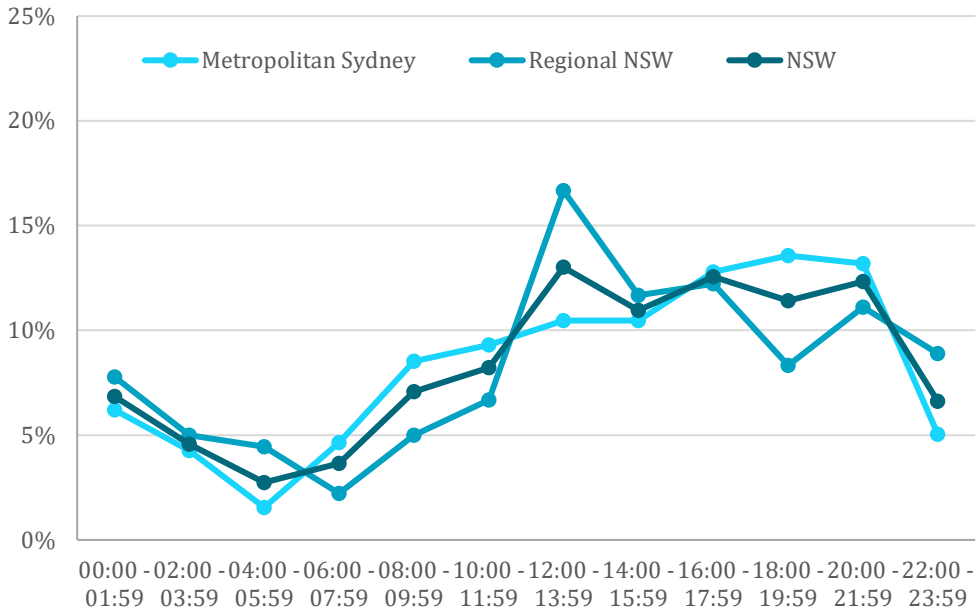


Figure 44: Opioid analgesic-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2018

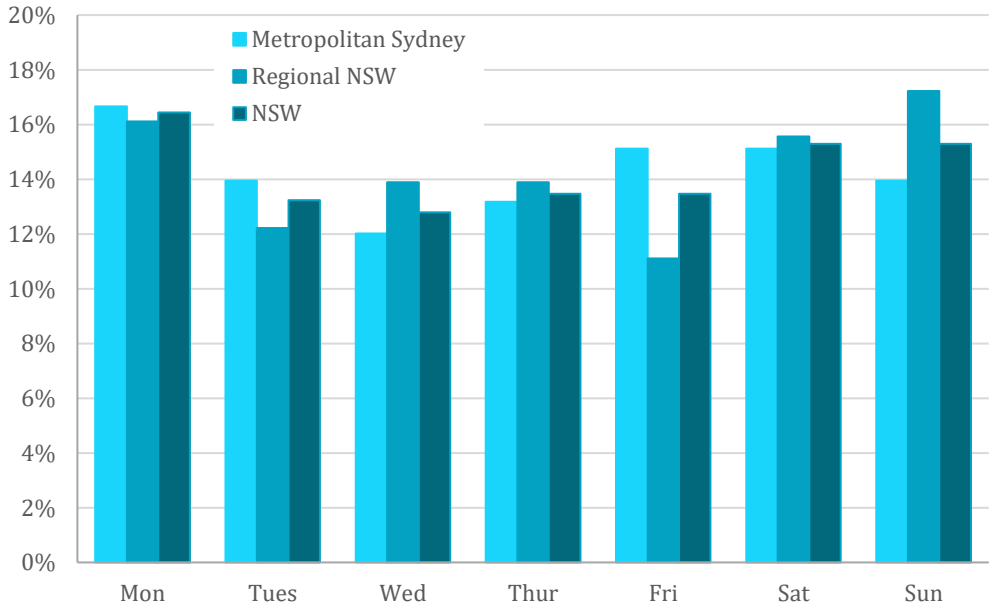


Figure 45: Percentage of opioid analgesic-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2018

Opioid pharmacotherapy-related attendances in NSW

Results are presented covering March, June, September and December 2018 data collection and coding for NSW.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Table 39. Characteristics of opioid pharmacotherapy-related ambulance attendances in NSW for March, June, September and December 2018 are shown in Table 40. Data regarding time of day and day of week of misuse or overdose-related attendances are displayed in Figure 46 to Figure 48.

- Opioid pharmacotherapy-related attendances in NSW peaked in December 2018 (Table 39).
- As shown in Table 40, in March, June, September and December 2018:
    - there were 216 opioid pharmacotherapy-related cases recorded in NSW
    - the majority of patients attended for opioid pharmacotherapy-related cases were male (68%)
    - the median age of patients with opioid pharmacotherapy-related attendances was 42 years
    - a similar proportion of patients with opioid pharmacotherapy-related attendances within metropolitan and regional areas (79%) were transported to hospital
    - multiple drugs were involved in less than half (49%) of opioid pharmacotherapy-related attendances in metropolitan Sydney and (37%) regional attendances
- As presented in Figure 47, opioid pharmacotherapy-related attendance numbers peaked from 12pm to 4pm in and metropolitan areas of NSW.
- Tuesdays and Saturdays represented the peak days for opioid pharmacotherapy-related attendances in regional NSW and metropolitan Sydney, respectively (Figure 48).

Table 39: Opioid pharmacotherapy-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	39 (0.7)	16 (0.7)	55 (0.7)
June attendances (per 100,000 population)	19 (0.4)	5 (0.2)	24 (0.3)
September attendances (per 100,000 population)	46 (0.9)	14 (0.6)	60 (0.8)
December attendances (per 100,000 population)	66 (1.3)	11 (0.4)	77 (1.0)

Table 40: Characteristics of opioid pharmacotherapy-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	170 (3.2)	46 (1.9)	216 (2.8)
Mean attendances per day	1.7	1.6	1.8
Daily range	0-6	0-<5	0-6
Age- median (quartiles)	42 (34-50)	41 (34-47)	42 (34-48)
Male	109 (64%)	38 (82%)	147 (68%)
Police co-attendance	41 (24%)	11 (24%)	52 (24%)
Transport to hospital	136 (80%)	35 (76%)	171 (79%)
Alcohol involved/mentioned	29 (17%)	6 (13%)	35 (16%)
Alcohol intoxication	14 (8%)	5 (11%)	19 (9%)
Multiple drugs involved (excluding alcohol)	84 (49%)	17 (37%)	101 (47%)

Note: all proportions are based on present information

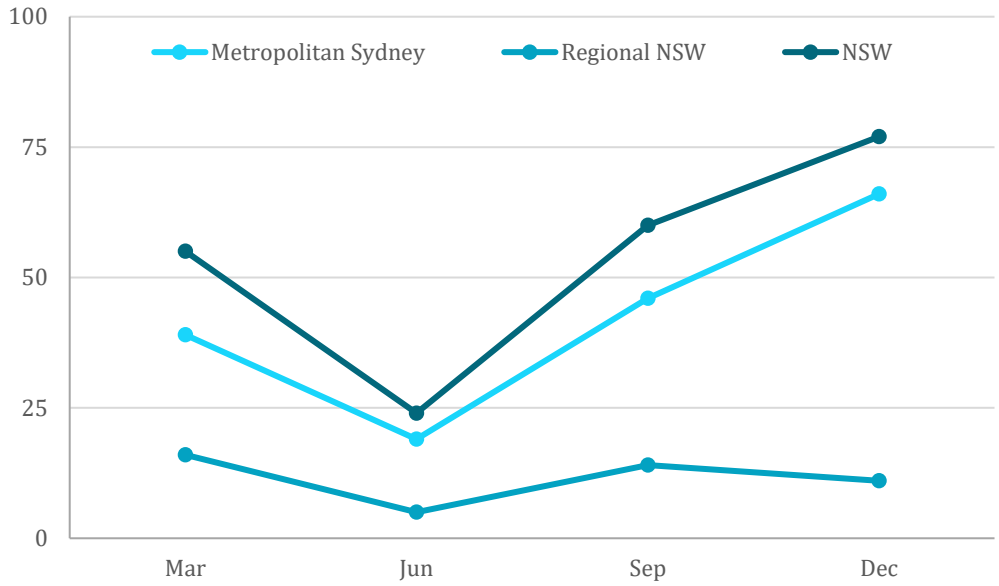


Figure 46: Opioid pharmacotherapy-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

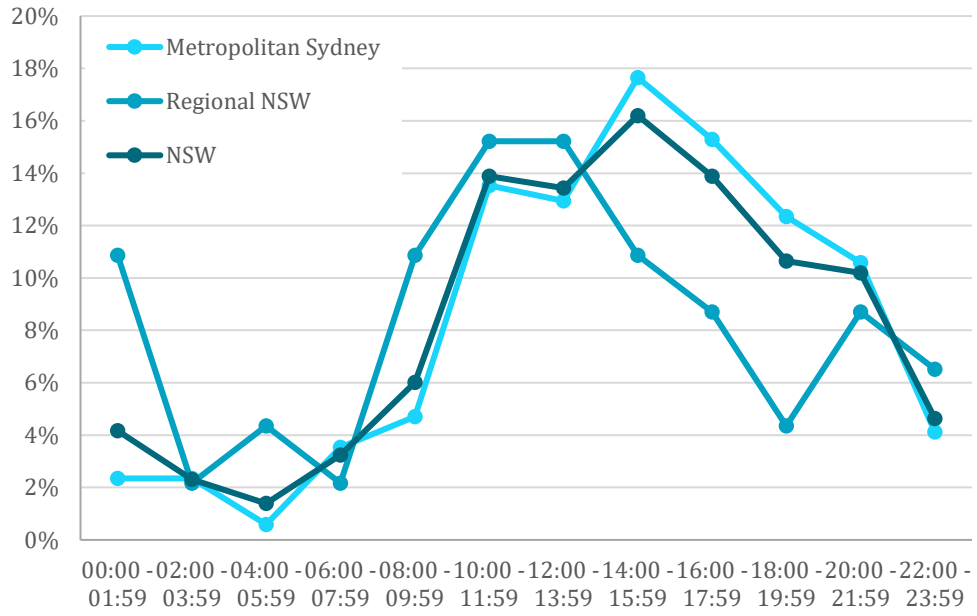


Figure 47: Opioid pharmacotherapy-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2018

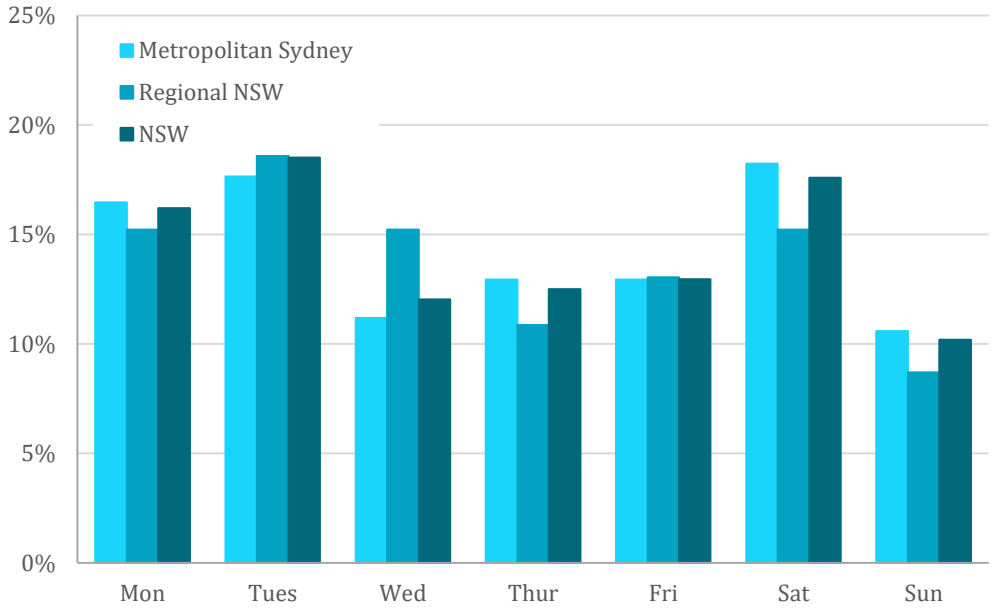


Figure 48: Percentage of opioid pharmacotherapy-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2018

Alcohol and other drug overdose-related ambulance attendances in NSW

AOD overdose-related ambulance attendances by month are shown in Table 41 while characteristics of AOD overdose-related ambulance attendances are displayed in Table 42. Drugs involved in AOD overdose-related ambulance attendances in NSW are presented in Table 43. It is important to note that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As shown in Table 41 to Table 43:

- in NSW, accidental, unknown intent and intentional AOD overdose-related attendances peaked in December 2018
- the population rate for intentional AOD overdose was higher in regional NSW than metropolitan Sydney, however, rates were almost similar by location for overdose with unknown intent attendances and higher in metropolitan Sydney for accidental overdose.
- in NSW the majority of patients attended for accidental AOD overdose cases were male (65%), and a higher proportion of patients were female in attendances related to intentional AOD overdose (66%)
- approximately one-third of all AOD overdose attendances, regardless of intention, involved alcohol
- heroin was contributed to the second greatest proportion of AOD accidental overdoses (33%) second to alcohol, while benzodiazepines contributed to the greatest proportion of intentional overdoses (25%) and unknown intent overdoses (11%)

Table 41: AOD overdose-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
Attendances (per 100,000 resident population)	**Metropolitan Sydney**	**Regional NSW**	**NSW**	**Metropolitan Sydney**	**Regional NSW**	**NSW**	**Metropolitan Sydney**	**Regional NSW**	**NSW**
March	80 (1.5)	21 (0.9)	101 (1.3)	100 (1.9)	48 (2.0)	148 (1.9)	185 (3.5)	102 (4.1)	287 (3.7)
June	56 (1.1)	19 (0.8)	75 (1.0)	87 (1.6)	33 (1.3)	120 (1.6)	143 (2.7)	84 (3.4)	227 (2.9)
September	100 (1.9)	21 (0.9)	121 (1.6)	121 (2.3)	74 (3.0)	195 (2.5)	193 (3.7)	120 (4.9)	313 (4.0)
December	113 (2.1)	25 (1.0)	138 (1.8)	157 (3.0)	66 (2.7)	223 (2.9)	223 (4.2)	106 (4.3)	329 (4.3)

AOD overdose can involve either single or multiple substances

Table 42: Characteristics of AOD overdose-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Metropolitan Sydney	**Regional NSW**	**NSW**	**Metropolitan Sydney**	**Regional NSW**	**NSW**	**Metropolitan Sydney**	**Regional NSW**	**NSW**
Number of attendances (per 100,000 pop)	349 (6.6)	86 (3.5)	435 (5.6)	465 (8.8)	221 (9.0)	686 (8.9)	744 (14.1)	412 (16.8)	1,156 (14.9)
Number of fatal overdoses	N<5	0	N<5	≥8 (≥2%)	N<5	17 (3%)	N<5	N<5	7 (1%)
Age- median (quartiles)	35 (23-44)	38 (24-49)	35 (23-46)	36 (24-45)	37 (24-50)	36 (24-46)	29 (20-46)	32 (19-48)	30 (20-47)
Male	231 (66%)	53 (62%)	284 (65%)	263 (57%)	91 (41%)	354 (51%)	261 (35%)	134 (33%)	395 (34%)
Transport to hospital	269 (77%)	69 (80%)	338 (78%)	415 (89%)	204 (92%)	619 (90%)	≥737 (≥97)	≥406 (≥97)	≥1,143 (≥97)
Police co-attendance	55 (16%)	12 (14%)	67 (15%)	120 (26%)	46 (21%)	166 (24%)	229 (31%)	106 (26%)	335 (29%)

Note: all proportions are based on present information
AOD overdose can involve either single or multiple substances

Table 43: Drugs involved in overdose-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2018

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Metropolitan Sydney	Regional NSW	NSW	Metropolitan Sydney	Regional NSW	NSW	Metropolitan Sydney	Regional NSW	NSW
Alcohol involved/ mentioned	120 (34%)	29 (34%)	149 (34%)	132 (28%)	67 (30%)	199 (29%)	226 (30%)	121 (29%)	347 (30%)
Alcohol intoxication only	57 (16%)	15 (17%)	72 (17%)	30 (6%)	6 (3%)	36 (5%)	N<5	N<5	5 (0.4%)
Amphetamine	≥15 (≥4%)	N<5	20 (5%)	≥8 (2%)	0	13 (2%)	≥9 (≥1%)	N<5	14 (1%)
Crystal methamphetamine	≥11 (≥3%)	N<5	19 (4%)	≥7 (2%)	N<5	12 (2%)	≥6 (≥1%)	N<5	11 (1%)
Cannabis	≥3 (≥1%)	N<5	11 (3%)	≥8 (2%)	N<5	13 (2%)	11 (2%)	8 (2%)	20 (2%)
Heroin	126 (36%)	17 (20%)	143 (33%)	44 (10%)	8 (4%)	52 (8%)	N<5	0	N<5
Emerging psychoactive substances	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Benzodiazepines	28 (≥8%)	8 (9%)	36 (8%)	40 (9%)	33 (15%)	54 (11%)	203 (27%)	91 (22%)	294 (25%)
Opioid analgesics	18 (5%)	16 (19%)	34 (8%)	33 (7%)	19 (9%)	52 (8%)	46 (6%)	39 (10%)	85 (7%)
Opioid pharmacotherapy	≥9 (3%)	N<5	14 (3%)	13 (3%)	5 (2%)	18 (3%)	N<5	0	N<5

Note: Totals may include cases with either missing or unclassified location information

Chapter 5: Results – Tasmania

Due to industrial action in June 2018, the number of patient care records completed by paramedics were reduced, and do not reflect full paramedic caseload for that monthly period. Please use caution when interpreting these results.

Alcohol intoxication-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of alcohol intoxication-related ambulance attendances are shown in Table 44. Characteristics of alcohol intoxication-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in

Table 45. Data regarding month, time of day and day of week of attendances are displayed in Figure 49 to Figure 51.

- Alcohol intoxication-related attendances peaked in December 2018 (Table 44).
- As shown in Table 45, in March, June, September and December 2018:
    - there were a total of 866 alcohol intoxication-related cases
    - the majority of patients attended for alcohol intoxication-related cases were male (60%)
    - median age of patients with alcohol intoxication-related attendances was 41 years in metropolitan and regional areas
    - a lower proportion of patients with alcohol intoxication-related attendances were transported to hospital in metropolitan (70%) compared to regional (72%) areas
- As presented in Figure 50, alcohol intoxication-related attendance numbers peaked between 10pm and 2am in metropolitan and regional areas.
- Saturdays represented the peak day for alcohol intoxication-related attendances in both metropolitan and regional areas of Tasmania (Figure 51).

Table 44: Alcohol intoxication-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

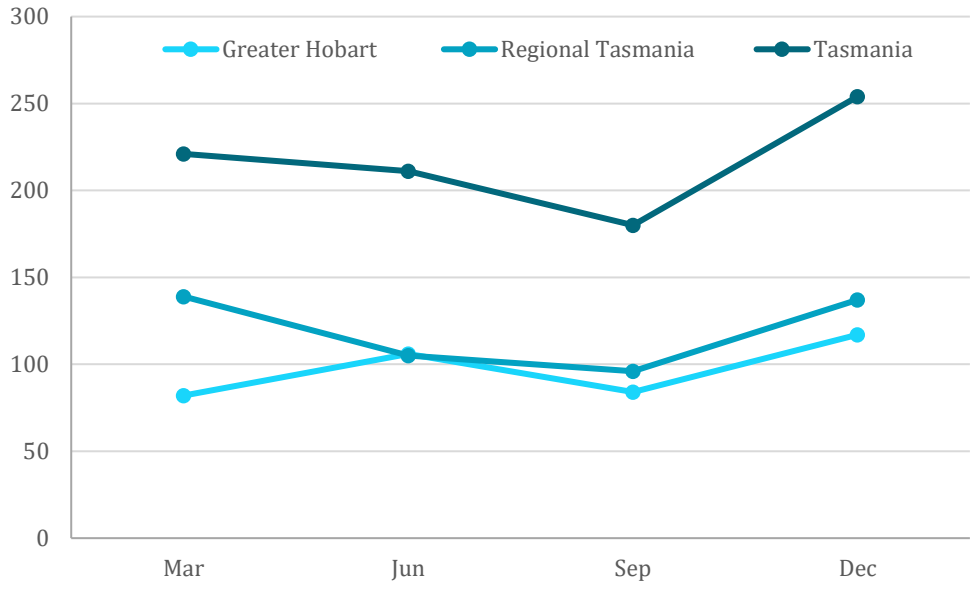
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	82 (35.9)	139 (46.4)	221 (41.8)
June attendances (per 100,000 population)	106 (46.4)	105 (35.0)	211 (39.9)
September attendances (per 100,000 population)	84 (36.8)	96 (32.0)	180 (34.1)
December attendances (per 100,000 population)	117 (51.2)	137 (45.7)	254 (48.1)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 45: Characteristics of alcohol intoxication-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

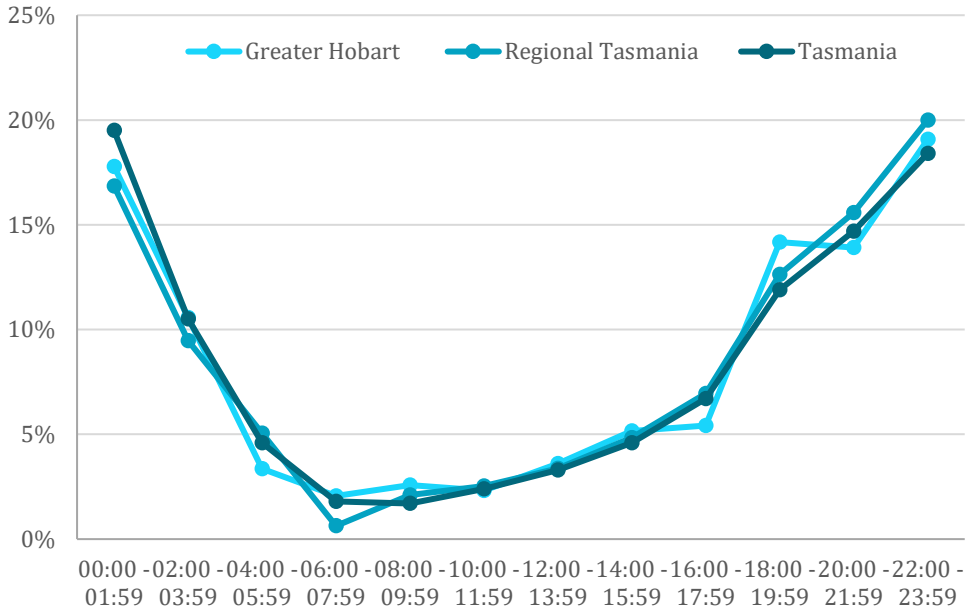
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	389 (170.2)	477 (159.2)	866 (164.0)
Mean attendances per day	7.1	7.2	7.1
Daily range	0-19	0-21	0-21
Age- median (interquartile range)	41 (26-55)	41 (25-54)	41 (25-55)
Male	221 (57%)	299 (63%)	540 (60%)
Police co-attendance	71 (18%)	95 (20%)	166 (19%)
Transport to hospital	273 (70%)	341 (72%)	614 (71%)
Multiple drugs involved	20 (5%)	16 (3%)	36 (4%)

All proportions are based on present information
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action



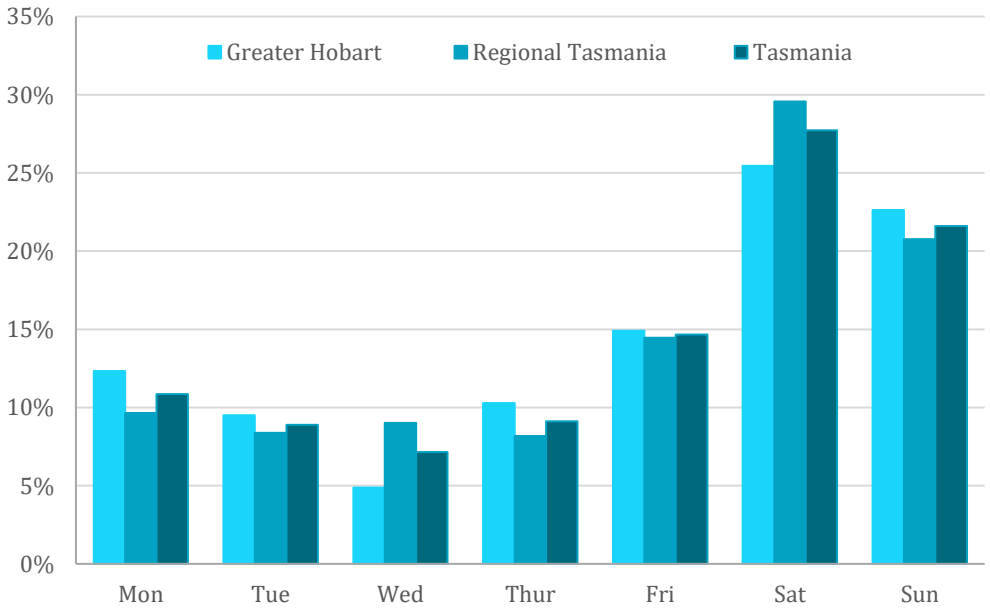
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 49: Number of alcohol intoxication-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 50: Percentage of alcohol intoxication-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 51: Percentage of alcohol intoxication-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2018

All amphetamine-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of amphetamine-related ambulance attendances are shown in Table 46. Characteristics of amphetamine-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in Table 47. Data regarding month of year, time of day and day of week of attendances are displayed in Figure 52 to Figure 54.

- Amphetamine-related attendance numbers were highest in December 2018 (Table 46).
- As shown in Table 47, in March, June, September and December 2018:
    - there were 74 amphetamine-related cases in Tasmania
    - the majority of patients attended for amphetamine-related cases were male (60%)
    - median age of patients with amphetamine-related attendances in Tasmania was 33 years
    - the majority of patients with amphetamine-related attendances were transported to hospital (78%)
- As presented in Figure 53, amphetamine-related attendance numbers in metropolitan Tasmania peaked from 2pm to 4pm, while regional attendances peaked from 8pm to 10pm.
- Tuesdays represented the peak days for amphetamine-related attendances in metropolitan area while Saturdays represented the peak days in regional Tasmania (Figure 54).

Table 46: Amphetamine-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

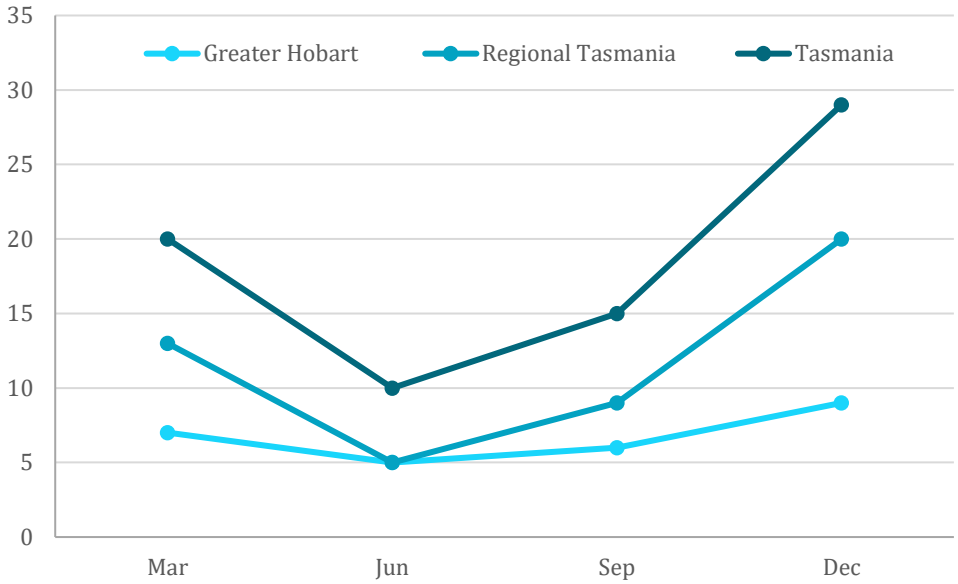
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	7 (3.1)	13 (4.3)	20 (3.8)
June attendances (per 100,000 population)	5 (2.2)	5 (1.7)	10 (1.9)
September attendances (per 100,000 population)	6 (2.6)	9 (3.0)	15 (2.8)
December attendances (per 100,000 population)	9 (3.9)	20 (6.7)	29 (5.5)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 47: Characteristics of amphetamine-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

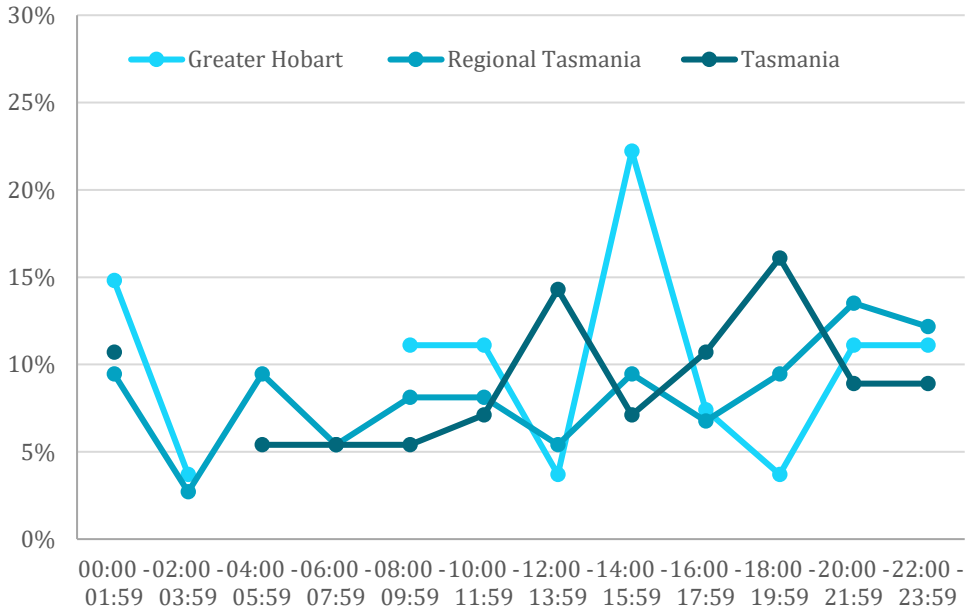
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	27 (11.8)	47 (15.7)	74 (14.0)
Mean attendances per day	N<5	N<5	N<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	33 (20-42)	33 (25-36)	33 (24-39)
Male	11 (41%)	33 (70%)	44 (60%)
Police co-attendance	N<5	≥10 (≥20)	15 (20%)
Transport to hospital	20 (74%)	38 (81%)	58 (78%)
Alcohol involved	7 (26%)	13 (28%)	20 (27%)
Alcohol intoxication	N<5	≥6 (≥13%)	11 (15%)
Multiple drugs involved (excluding alcohol)	11 (41%)	15 (32%)	26 (35%)

All proportions are based on present information
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action



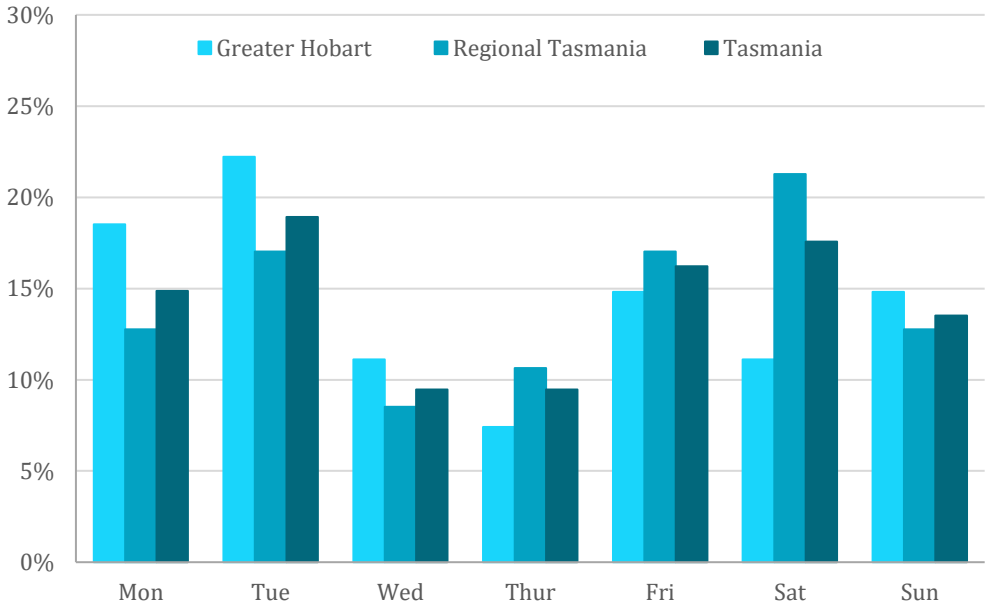
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 52: Number of amphetamine-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 53: Amphetamine-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 54: Percentage of amphetamine-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2018

Crystal methamphetamine-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 48. Characteristics of crystal methamphetamine-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in Table 49. Data regarding month of year, time of day and day of week of attendances are displayed in Figure 55 to Figure 57.

- Crystal methamphetamine attendances peaked in December 2018 (Table 48).
- As shown in Table 49, in March, June, September and December 2018:
    - there were 42 crystal methamphetamine-related cases were recorded in Tasmania
    - the majority of crystal methamphetamine-related attendances in regional areas were male patients (77%), but the majority in greater Hobart were female (70%)
    - median age of patients with crystal methamphetamine-related attendances was 33 years
    - the majority of patients with crystal methamphetamine-related attendances were transported to hospital, across both metropolitan (75%) and regional areas (82%)
- As presented in Figure 56, attendance numbers peaked in metropolitan Tasmania from 2pm to 4pm and in regional areas from 6pm to 8pm.
- Fridays represented the peak day for crystal methamphetamine-related attendances in metropolitan, and Mondays and Tuesdays were the peak days in regional Tasmania (Figure 81).

Table 48: Crystal methamphetamine-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

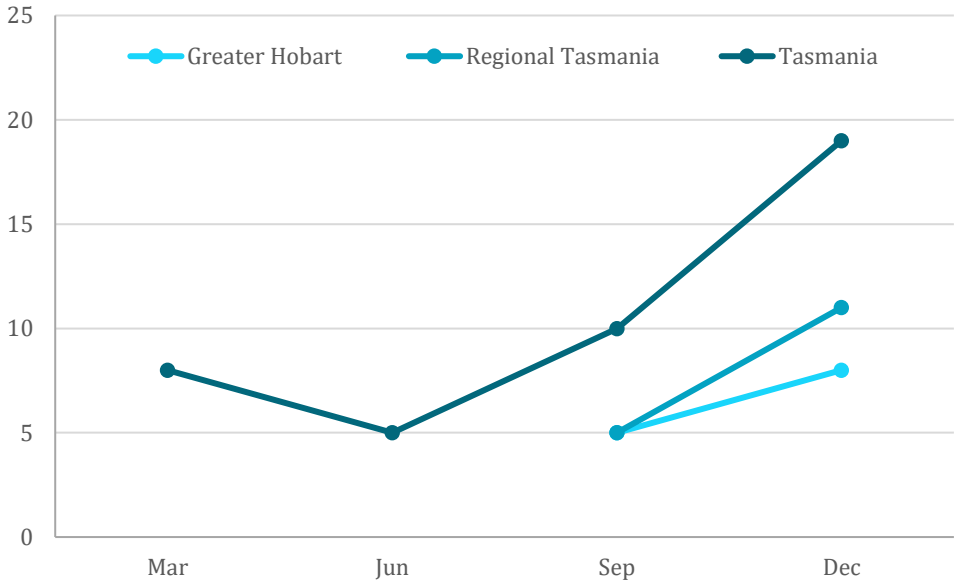
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	N<5	N<5	8 (1.5)
June attendances (per 100,000 population)	N<5	N<5	5 (0.9)
September attendances (per 100,000 population)	5 (2.2)	5 (1.7)	10 (1.9)
December attendances (per 100,000 population)	8 (3.5)	11 (3.7)	19 (3.6)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 49: Characteristics of crystal methamphetamine-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

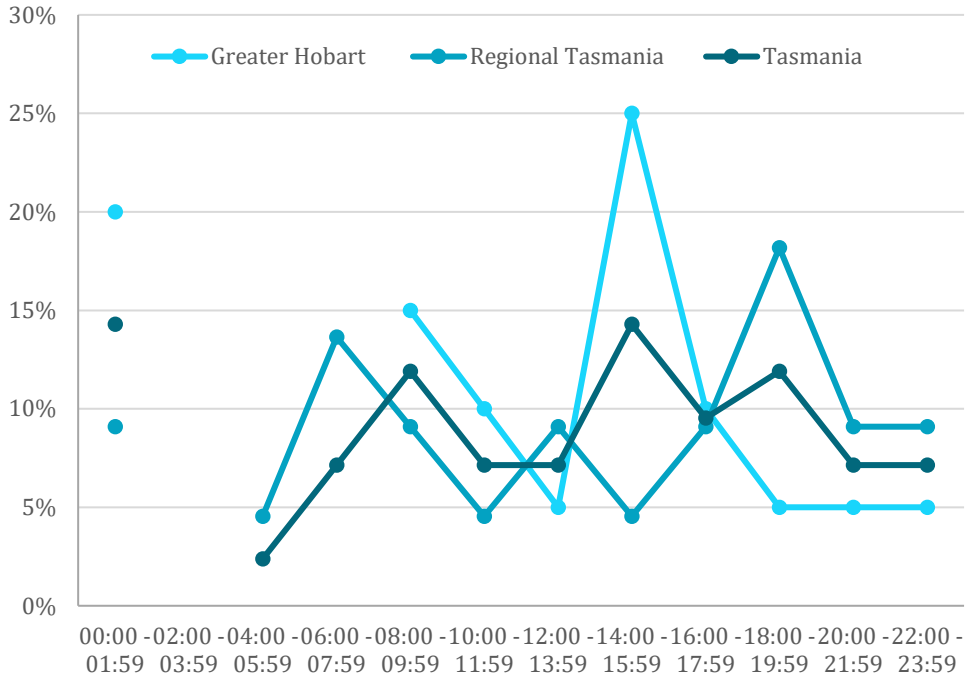
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	20 (8.8)	22 (7.3)	42 (8.0)
Mean attendances per day	N<5	N<5	N<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	39 (23-43)	28 (32-36)	33 (26-39)
Male	6 (30%)	17 (77%)	23 (55%)
Police co-attendance	N<5	≥5 (≥25)	9 (21%)
Transport to hospital	15 (75%)	18 (82%)	33 (79%)
Alcohol involved	7 (35%)	5 (23%)	12 (29%)
Alcohol intoxication	N<5	N<5	5 (12%)
Multiple drugs involved (excluding alcohol)	9 (45%)	9 (41%)	18 (43%)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
All proportions are based on present information



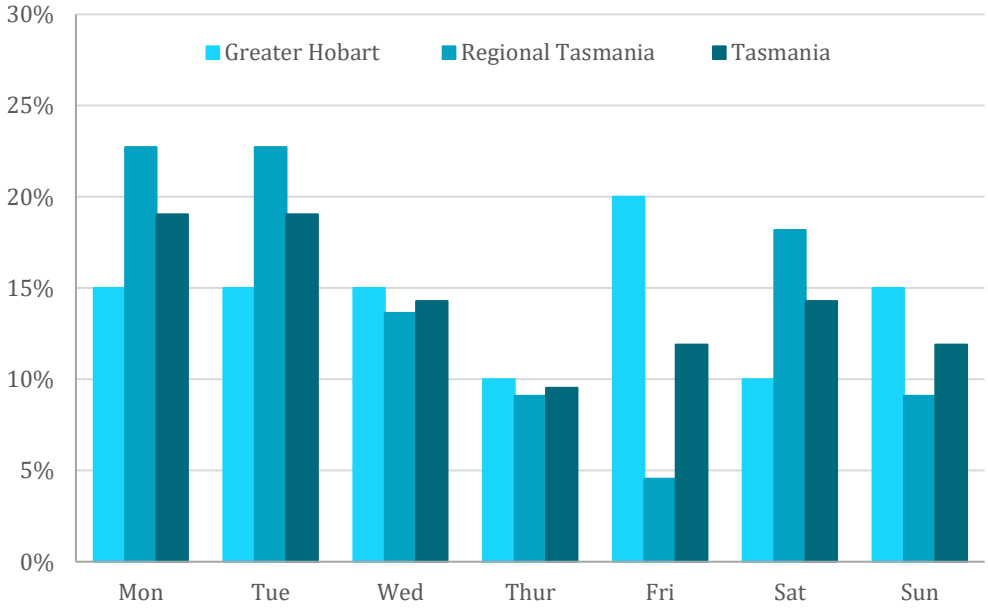
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 55: Number of crystal amphetamine-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 56: Percentage of crystal methamphetamine-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 57: Percentage of crystal methamphetamine-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2018

Cannabis-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 50. Characteristics of cannabis-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in Table 51. Data regarding month, time of day and day of week of attendances are displayed in Figure 58 to Figure 60.

- Cannabis-related attendances peaked during December 2018 (Table 50).
- As shown in Table 51, in March, June, September and December 2018:
    - there were 161 cannabis-related cases in Tasmania
    - cannabis-related attendances involved a similar proportion of male patients in regional Tasmania (60%) and in metropolitan areas (61%)
    - the median age of patients with cannabis-related attendances was 31 years
    - the majority of patients with cannabis-related attendances in Tasmania were transported to hospital (69%)
    - a higher proportion of cannabis-related attendances involved alcohol in regional (47%) compared to metropolitan areas (38%)
- As presented in Figure 83, cannabis-related attendance numbers peaked from 10pm to 2am in metropolitan areas, and from 6pm to 8pm and from 10pm to 2am in regional Tasmania.
- Saturdays represented the peak day for cannabis-related attendances in both metropolitan and regional Tasmania (Figure 60).

Table 50: Cannabis-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

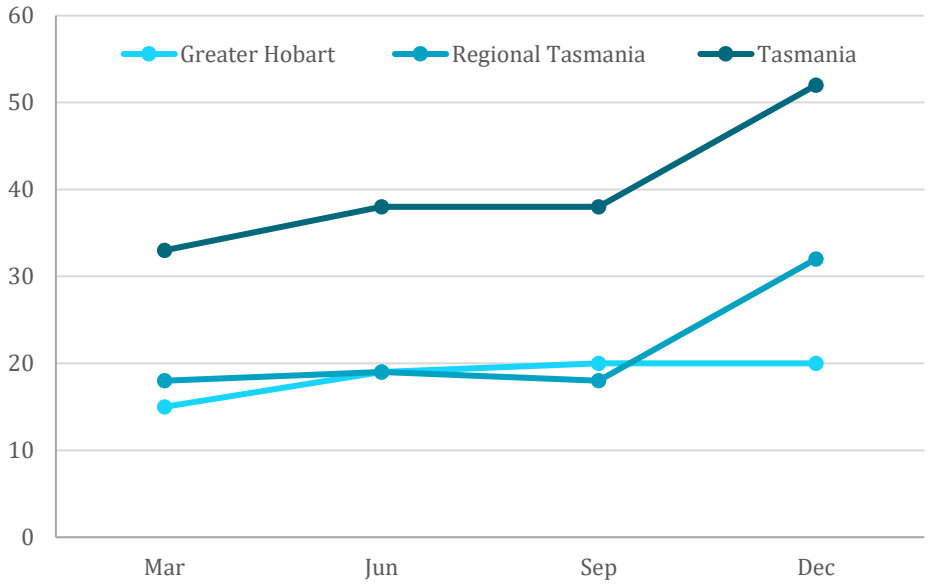
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	15 (6.6)	18 (6.0)	33 (6.2)
June attendances (per 100,000 population)	19 (8.3)	19 (6.3)	38 (7.2)
September attendances (per 100,000 population)	20 (8.8)	18 (6.0)	38 (7.2)
December attendances (per 100,000 population)	20 (8.8)	32 (10.7)	52 (9.8)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 51: Characteristics of cannabis-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

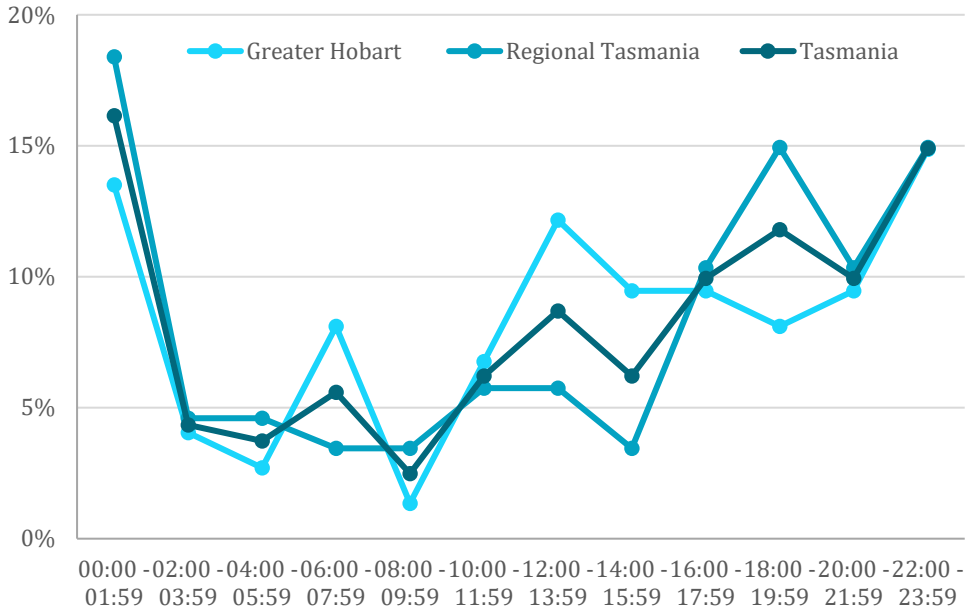
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	74 (32.4)	87 (29.0)	161 (30.5)
Mean attendances per day	N<5	N<5	N<5
Daily range	0-<5	0-7	0-7
Age- median (interquartile range)	31 (21-41)	34 (22-52)	31 (21-48)
Male	45 (61%)	52 (60%)	97 (60%)
Police co-attendance	8 (10%)	16 (18%)	24 (15%)
Transport to hospital	49 (66%)	62 (71%)	111 (69%)
Alcohol involved	28 (38%)	41 (47%)	69 (43%)
Alcohol intoxication	19 (26%)	30 (35%)	49 (30%)
Multiple drugs involved (excluding alcohol)	22 (30%)	12 (14%)	34 (21%)

All proportions are based on present information
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action



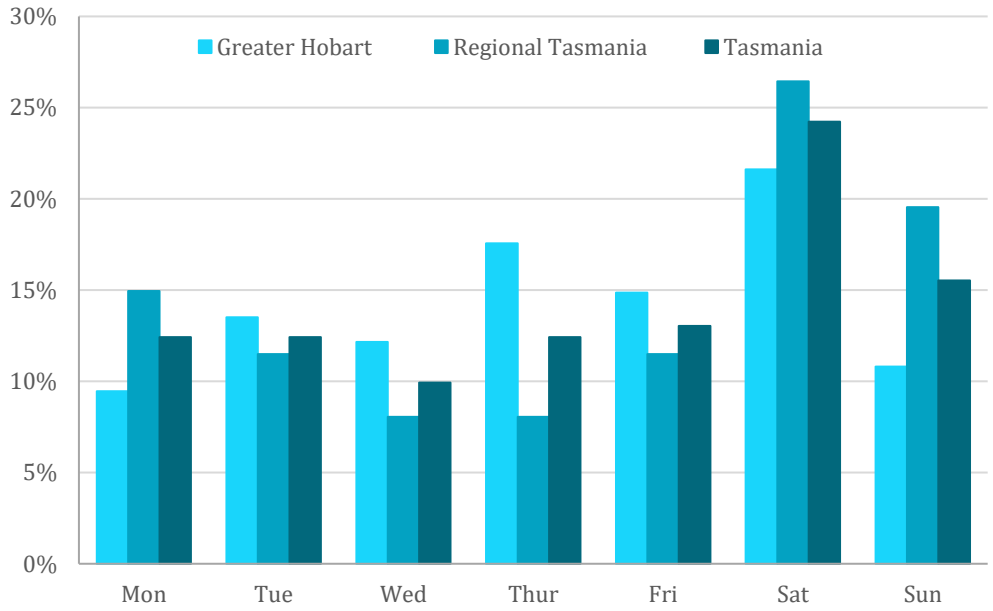
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 58: Number of cannabis-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<%

Figure 59: Percentage of cannabis-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 60: Percentage of cannabis-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2018

Heroin-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of heroin-related ambulance attendances are shown in Table 52. Characteristics of heroin-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in Table 53.

As shown, there were a few heroin-related attendances in Tasmania over the period presented.

Table 52: Heroin-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	0	N<5	N<5
June attendances (per 100,000 population)	N<5	0	N<5
September attendances (per 100,000 population)	0	0	0
December attendances (per 100,000 population)	0	N<5	N<5

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 53: Characteristics of heroin-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	N<5	N<5	N<5
Mean attendances per day	-	-	-
Daily range	-	-	-
Age- median (interquartile range)	N<5	N<5	38 (37-48)
Male	-	-	-
Public outdoor space	-	-	-
Police co-attendance	-	-	-
Transport to hospital	-	-	-
Alcohol involved	-	-	-
Alcohol intoxication	-	-	-
Multiple drugs involved (excluding alcohol)	-	-	-
Responded to naloxone	-	N<5	N<5

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Emerging psychoactive substance-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of emerging psychoactive substance-related ambulance attendances are shown in Table 54. Characteristics of emerging psychoactive substance-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in Table 55.

As shown, there were very few emerging psychoactive substance-related attendances in Tasmania over the period presented.

Table 54: Emerging psychoactive substance-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	0	0	0
June attendances (per 100,000 population)	0	0	0
September attendances (per 100,000 population)	0	0	0
December attendances (per 100,000 population)	0	N<5	N<5

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 55: Characteristics of emerging psychoactive substance-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	0	N<5	N<5
Mean attendances per day	-	-	-
Daily range	-	-	-
Age- median (interquartile range)	-	-	-
Male	-	-	-
Public outdoor space	-	-	-
Police co-attendance	-	-	-
Transport to hospital	-	-	-
Alcohol involved	-	-	-
Alcohol intoxication	-	-	-
Multiple drugs involved (excluding alcohol)	-	-	-

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Benzodiazepine-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 56. Characteristics of benzodiazepine-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in Table 57. Data regarding time of day and day of week of attendances are displayed in Figure 62 and Figure 63.

- Benzodiazepine-related attendances peaked in December 2018 (Table 56).
- As shown in Table 57, in March, June, September and December 2018:
    - there were 101 benzodiazepine-related cases in Tasmania
    - the majority of patients attended for benzodiazepine-related cases were male (51%), with lower proportions of males in regional areas (44%) than in metropolitan areas (55%)
    - the median age of patients with benzodiazepine-related attendances was higher in regional (45 years) compared to metropolitan areas (39 years)
    - a similar proportion of patients with benzodiazepine-related attendances were transported to hospital in metropolitan (90%) and regional areas (87%)

- multiple drugs (excluding alcohol) were involved in more than half (60%) of all benzodiazepine-related attendances
- As presented in Figure 62, benzodiazepine-related attendance numbers peaked from midday to 2pm and from 6pm to midnight in metropolitan Tasmania and from midday to 2pm and from 8pm to 2am in regional Tasmania

- Sundays represented the peak day for benzodiazepine-related attendances in metropolitan Tasmania and Saturdays in regional Tasmania (Figure 63).

Table 56: Benzodiazepine-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

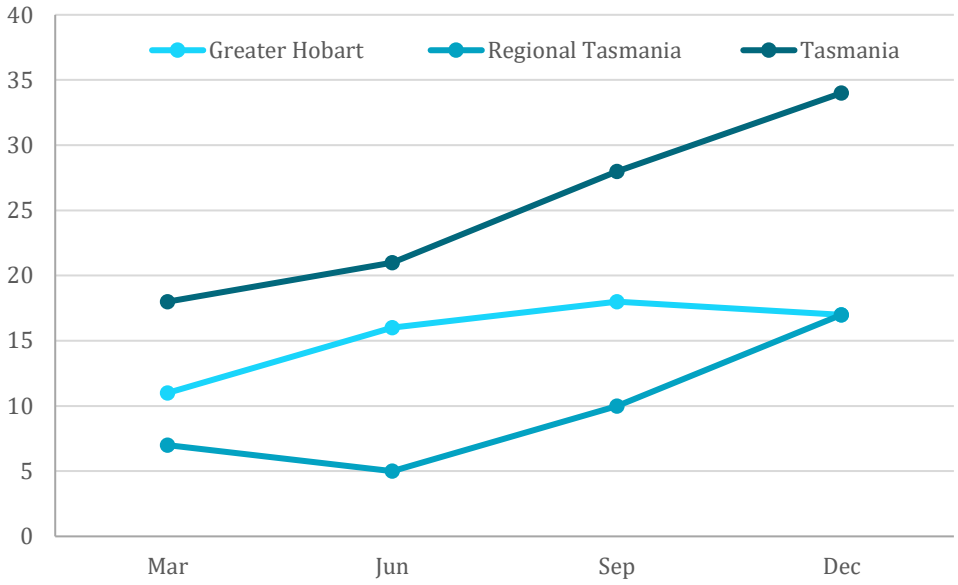
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	11 (4.8)	7 (2.3)	18 (3.4)
June attendances (per 100,000 population)	16 (7.0)	5 (1.7)	21 (4.0)
September attendances (per 100,000 population)	18 (7.9)	10 (3.3)	28 (5.3)
December attendances (per 100,000 population)	17 (7.4)	17 (5.7)	34 (6.4)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 57: Characteristics of benzodiazepine-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

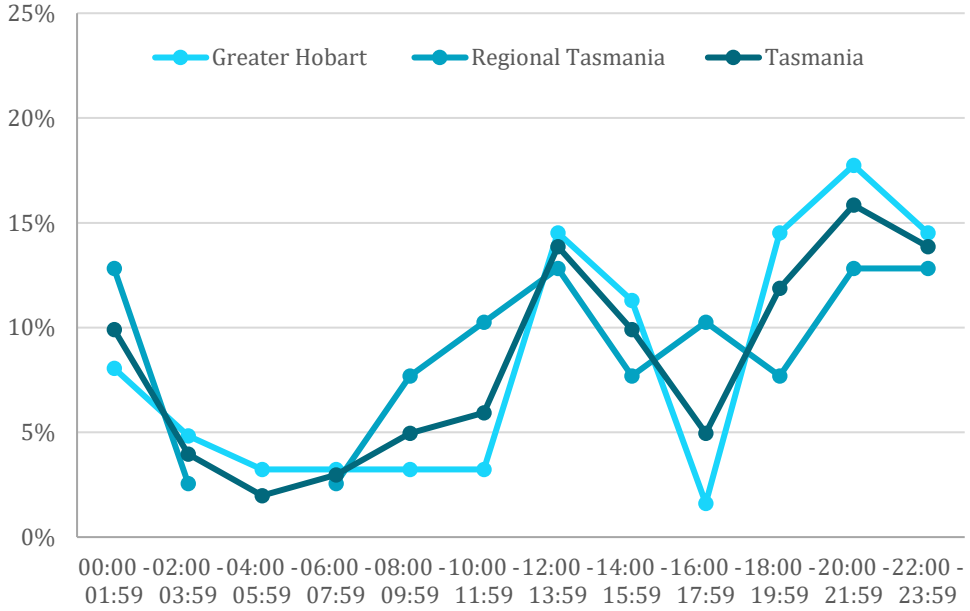
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	62 (27.1)	39 (13.0)	101 (19.1)
Mean attendances per day	N<5	N<5	N<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	39 (29-53)	45 (28-56)	40 (29-53)
Male	34 (55%)	17 (44%)	51 (51%)
Police co-attendance	9 (15%)	7 (18%)	16 (16%)
Transport to hospital	56 (90%)	34 (87%)	90 (89%)
Alcohol involved	26 (42%)	16 (41%)	42 (42%)
Alcohol intoxication	14 (23%)	11 (28%)	25 (25%)
Multiple drugs involved (excluding alcohol)	37 (60%)	24 (62%)	61 (60%)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
All proportions are based on present information



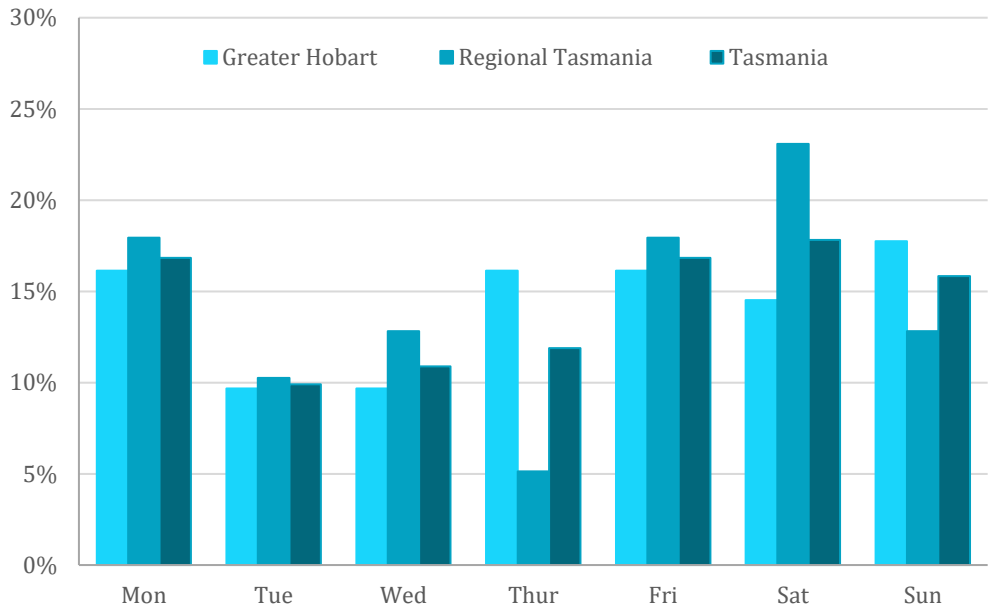
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 61: Number of benzodiazepine-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 62: Percentage of benzodiazepine-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 63: Percentage of benzodiazepine-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2018

Opioid analgesic-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 58. Characteristics of opioid analgesic-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in Table 59. Data regarding month of year, time of day and day of week of attendances are displayed in Figure 64 to Figure 66.

- Opioid analgesic-related attendances were highest in December 2018 (Table 58).
- As shown in Table 59, in March, June, September and December 2018:
    - there were 42 opioid analgesic-related cases in Tasmania
    - more than half of all opioid analgesic-related attendances were male patients (52%)
    - the median age of patients with opioid analgesic-related attendances were lower in metropolitan areas (44 years) than in regional areas (54 years)
    - the majority of patients with opioid analgesic-related attendances across Tasmania were transported to hospital (≥90%).
- As presented in Figure 65, metropolitan opioid analgesic-related attendance numbers peaked at 8pm to 10pm, and regional attendances peaked from 4pm to 6pm.

- Saturdays represented the peak day for opioid analgesic-related attendances in metropolitan areas, whereas attendances were highest on Fridays in regional areas (Figure 66).

Table 58: Opioid analgesic-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

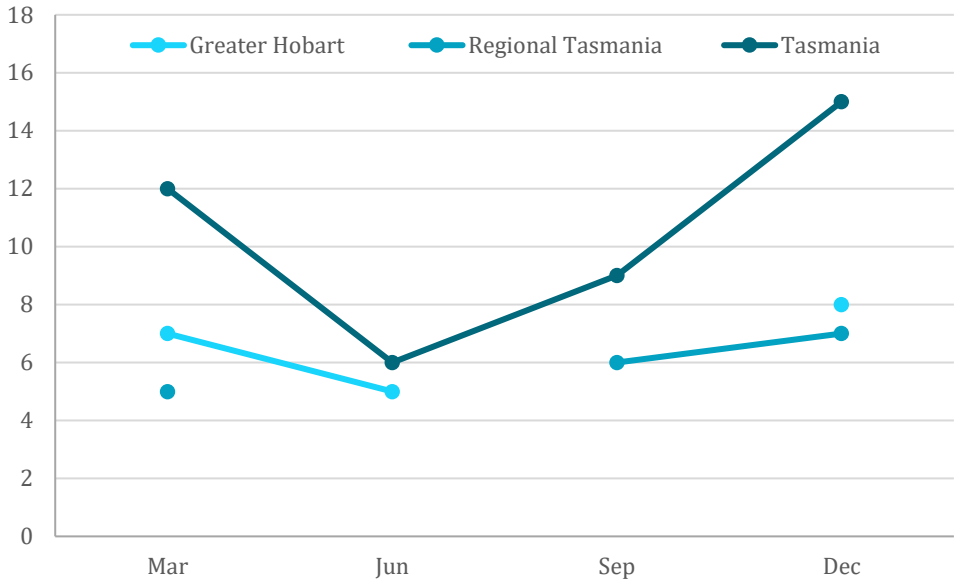
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	7 (3.1)	5 (1.7)	12 (2.3)
June attendances (per 100,000 population)	5 (2.2)	N<5	6 (1.1)
September attendances (per 100,000 population)	N<5	6 (2.0)	9 (1.7)
December attendances (per 100,000 population)	8 (3.5)	7 (2.3)	15 (2.8)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 59: Characteristics of opioid analgesic-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

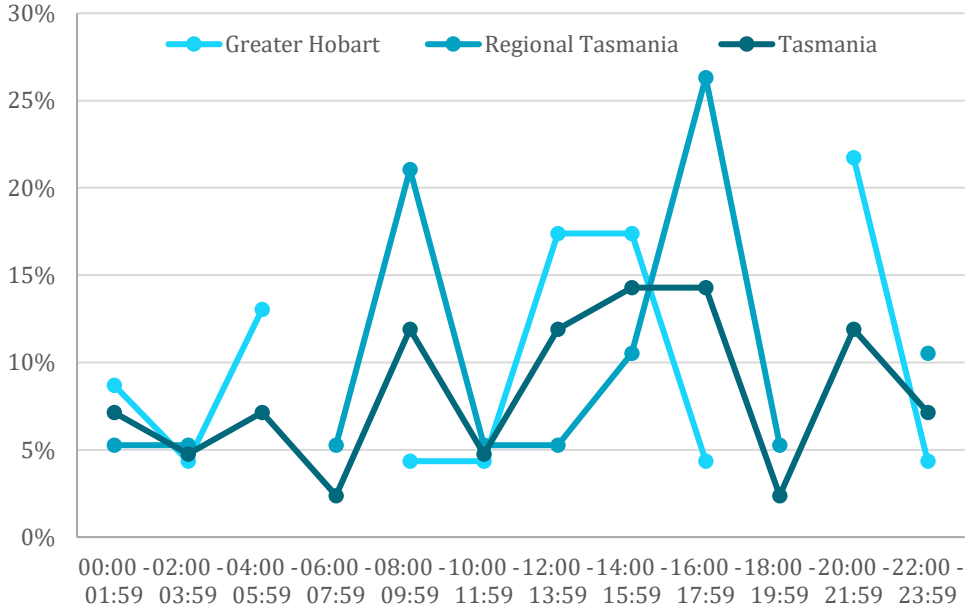
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	≥20 (≥8.1)	≥15 (≥4.3)	42 (8.0)
Mean attendances per day	N<5	N<5	N<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	44 (33-59)	54 (31-70)	46 (33-59)
Male	13 (57%)	9 (47%)	22 (52%)
Police co-attendance	N<5	N<5	6 (14%)
Transport to hospital	≥16 (≥80%)	≤19 (≥90%)	≥36 (≥90%)
Alcohol involved	8 (30%)	6 (32%)	13 (31%)
Alcohol intoxication	N<5	N<5	8 (20%)
Multiple drugs involved (excluding alcohol)	13 (57%)	9 (47%)	22 (52%)
Morphine	N<5	N<5	N<5
Oxycodone	5 (22%)	12 (63%)	17 (41%)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
All proportions are based on present information



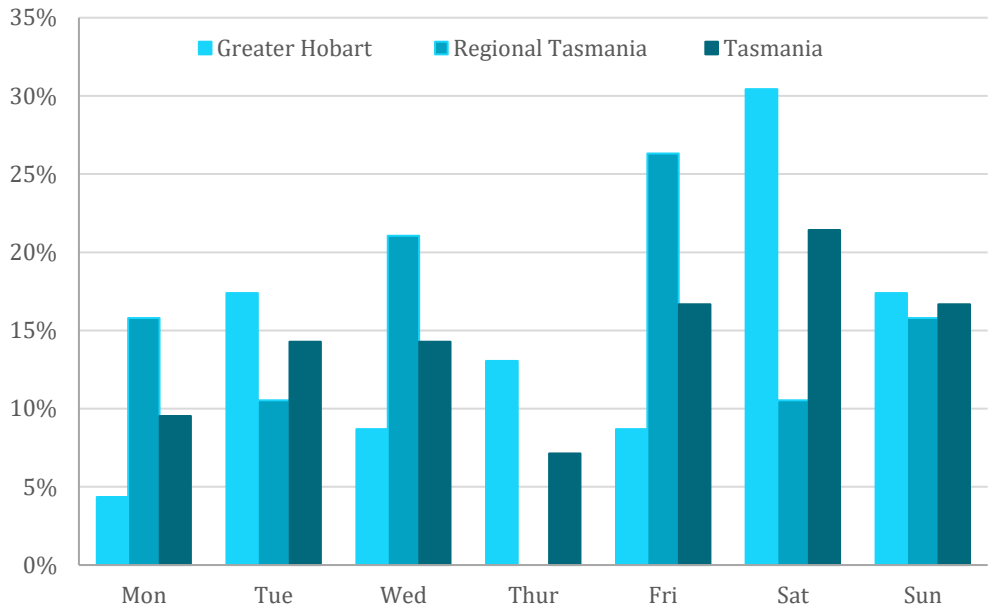
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 64: Number of opioid analgesic-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 65: Percentage of opioid analgesic-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2018



Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Figure 66: Percentage of opioid analgesic-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2018

Opioid pharmacotherapy-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2018.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Table 60. Characteristics of opioid pharmacotherapy-related ambulance attendances in Tasmania for March, June, September and December 2018 are shown in Table 61.

Opioid pharmacotherapy-related attendances were low in all months in 2018 (Table 60).

Table 60: Opioid pharmacotherapy-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	0	N<5	N<5
June attendances (per 100,000 population)	N<5	0	N<5
September attendances (per 100,000 population)	N<5	N<5	N<5
December attendances (per 100,000 population)	N<5	N<5	N<5

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 61: Characteristics of opioid pharmacotherapy-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	≥6	N<5	11 (2.1)
Mean attendances per day	-	-	0.09
Daily range	-	-	N<5
Age- median (interquartile range)	-	-	42 (32-45)
Male	N<5	N<5	N<5
Police co-attendance	0	0	0
Transport to hospital	N<5	N<5	N<5
Alcohol involved	N<5	0	N<5
Alcohol intoxication	N<5	0	N<5
Multiple drugs involved (excluding alcohol)	N<5	N<5	6 (55%)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Alcohol intoxication and other drug-related attendances: 2017 and 2018

Alcohol intoxication and other drug-related ambulance attendance numbers in March, June, September and December 2017 and 2018 are shown in Table 62.

As presented in Table 63, in Tasmania there were no statistically significant increases or decreases in alcohol intoxication or other drug-related ambulances attendances between 2017 and 2018.

Table 62. Number of alcohol intoxication and other drug-related attendances in 2017 and 2018 (March, June, September and December), Tasmania

Attendances	2017*	2018*	% Diff
Alcohol intoxication	879	870	-1%
Amphetamine	56	74	+24%
Crystal methamphetamine	34	42	+19%
Cannabis	167	164	-2%
Heroin	N<5	N<5	-
Emerging psychoactive substance	N<5	0	-
Benzodiazepine	111	101	-10%
Opioid analgesic	47	42	-12%
Opioid pharmacotherapy	10	11	+9%

*2017 and 2018 numbers include March, June, September and December data
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Alcohol and other drug poisoning-related ambulance attendances in Tasmania

AOD poisoning-related ambulance attendances by month are shown in Table 63, and characteristics of AOD poisoning-related ambulance attendances are displayed in Table 64. Drugs involved in AOD poisoning-related ambulance attendances in Tasmania are presented in Table 87. It is important to note that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As shown in Table 63 to Table 87:

- in Tasmania, poisonings with undetermined intent peaked during March and intentional poisoning-related attendances in September in 2018
- the majority of patients attended to for poisoning with undetermined intent and intentional AOD poisoning in Tasmania were female (65% and 69% respectively), but the majority were male (68%) for unintentional poisoning related attendances
- alcohol was involved in 23% of unintentional poisoning-related attendances across Tasmania, 29% of poisonings with undetermined intent and 32% of intentional poisonings
- following alcohol involvement, benzodiazepines contributed to the greatest proportion of AOD poisoning-related attendances with undetermined intent (18%) and intentional poisonings (29%)

Table 63: AOD poisoning-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Unintentional AOD poisoning			Undetermined intent AOD poisoning			Intentional AOD poisoning		
Attendances (per 100,000 population)	**Greater Hobart**	**Regional Tasmania**	**Tasmania**	**Greater Hobart**	**Regional Tasmania**	**Tasmania**	**Greater Hobart**	**Regional Tasmania**	**Tasmania**
March	N<5	N<5	6 (1.1)	6 (2.6)	16 (5.3)	22 (4.2)	14 (6.1)	21 (7.0)	35 (6.6)
June	N<5	6 (2.0)	7 (1.3)	7 (3.1)	6 (2.0)	13 (2.5)	29 (12.7)	10 (3.3)	39 (7.4)
September	N<5	N<5	N<5	6 (2.6)	7 (2.3)	13 (2.5)	30 (13.1)	20 (6.7)	50 (9.5)
December	N<5	N<5	5 (0.9)	5 (2.2)	10 (3.3)	15 (2.8)	23 (10.1)	20 (6.7)	43 (8.1)

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Numbers of AOD poisoning-related attendances were too low to report by month for some categories

Table 64: Characteristics of AOD poisoning-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Unintentional AOD poisoning			Undetermined intent AOD poisoning			Intentional AOD poisoning		
	Greater Hobart	**Regional Tasmania**	**Tasmania**	**Greater Hobart**	**Regional Tasmania**	**Tasmania**	**Greater Hobart**	**Regional Tasmania**	**Tasmania**
Attendances (per 100,000 pop)	6 (2.6)	16 (5.3)	22 (4.2)	24 (10.5)	39 (13.0)	63 (11.9)	96 (42.0)	71 (23.7)	167 (31.6)
Age- median (interquartile range)	31 (22-36)	37 (22-46)	36 (22-38)	33 (24-49)	27 (17-47)	33 (18-47)	35 (23-49)	28 (19-43)	31 (20-47)
Male	N<5	≥5 (≥60%)	15 (68%)	11 (46%)	11 (28%)	22 (35%)	31 (32%)	21 (30%)	52 (31%)
Transport to hospital	N<5	≥9 (≥75%)	18 (82%)	22 (92%)	38 (97%)	60 (95%)	96 (100%)	67 (94%)	163 (98%)
Police co-attendance	N<5	N<5	N<5	N<5	N<5	9 (14%)	14 (17%)	14 (20%)	27 (16%)

All proportions are based on present information
Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action

Table 65: Drugs involved in poisoning-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2018

	Unintentional AOD poisoning			Undetermined intent AOD poisoning			Intentional AOD poisoning		
	Greater Hobart	Regional Tasmania	Tasmania	Greater Hobart	Regional Tasmania	Tasmania	Greater Hobart	Regional Tasmania	Tasmania
Alcohol involved	N<5	N<5	5 (23%)	8 (33%)	10 (26%)	18 (29%)	29 (30%)	24 (34%)	53 (32%)
Alcohol intoxication only	0	N<5	N<5	N<5	0	N<5	0	0	0
Amphetamine	N<5	N<5	N<5	0	0	0	N<5	N<5	N<5
Crystal methamphetamine	0	N<5	N<5	0	0	0	N<5	N<5	N<5
Cannabis	N<5	0	N<5	N<5	0	N<5	N<5	0	N<5
Heroin	N<5	N<5	N<5	0	0	0	0	0	0
Emerging psychoactive substance	0	0	0	0	0	0	0	0	0
Benzodiazepines	0	N<5	N<5	6 (25%)	5 (13%)	11 (18%)	33 (34%)	15 (21%)	48 (29%)
Opioid analgesics	0	N<5	N<5	6 (25%)	0	6 (10%)	7 (7%)	7 (10%)	14 (8%)
Opioid pharmacotherapy	0	0	0	0	0	0	N<5	0	N<5

Note: Cases in June 2018 are likely to be underreported due to paramedic industrial action
Note: Totals may include cases with either missing or unclassified location information
Other than alcohol intoxication only cases, AOD poisoning can involve either single or multiple substances

.

Chapter 6: Results – Australian Capital Territory

Alcohol intoxication-related attendances in ACT

Results are presented covering one month from each quarterly period of data for ACT in 2018.

Numbers and rates of monthly alcohol intoxication-related ambulance attendances are shown in Table 66. Characteristics of alcohol intoxication-related ambulance attendances in ACT are shown in Table 67, including March, June, September and December data for 2018. Data regarding month, time of day and day of week of attendances are displayed in Figure 67 to Figure 69.

- Alcohol intoxication-related attendances peaked in December 2018 (Table 66).
- As shown in Table 67, in March, June, September and December 2018:
    - there were 640 alcohol intoxication-related cases in the ACT
    - the majority of patients attended for alcohol intoxication-related cases were male (58%)
    - median age of patients with alcohol intoxication-related attendances was 37 years
    - the majority of patients with alcohol intoxication-related attendances (73%) were transported to hospital
    - more than one-in-five alcohol intoxication-related attendances involved police co-attendance (21%)

  As presented in Figure 68, alcohol intoxication-related attendance numbers peaked from midnight to 2am in ACT.

- Sundays represented the peak day for alcohol intoxication-related attendances (Figure 69).

Table 66: Alcohol intoxication-related ambulance attendances in ACT, March, June, September and December 2018

	ACT
March attendances (per 100,000 population)	150 (35.6)
June attendances (per 100,000 population)	131 (31.1)
September attendances (per 100,000 population)	130 (30.9)
December attendances (per 100,000 population)	229 (54.4)

Table 67: Characteristics of alcohol intoxication-related ambulance attendances in ACT, March, June, September and December 2018

	ACT
Number of attendances (per 100,000 population)	640 (152.0)
Mean attendances per day	5.3
Daily range	0-13
Age- median (interquartile range)	37 (24-49)
Male	371 (58%)
Police co-attendance	131 (21%)
Transport to hospital	646 (73%)
Multiple drugs involved	19 (3%)

Note: all proportions are based on present information

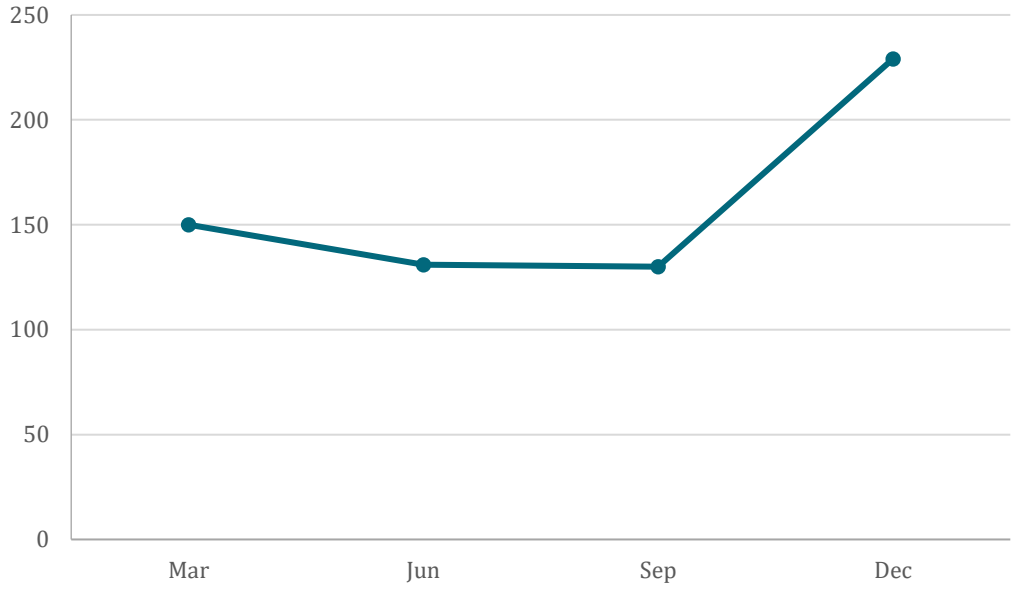


Figure 67: Number of alcohol intoxication-related attendances by month in ACT, March, June, September and December 2018

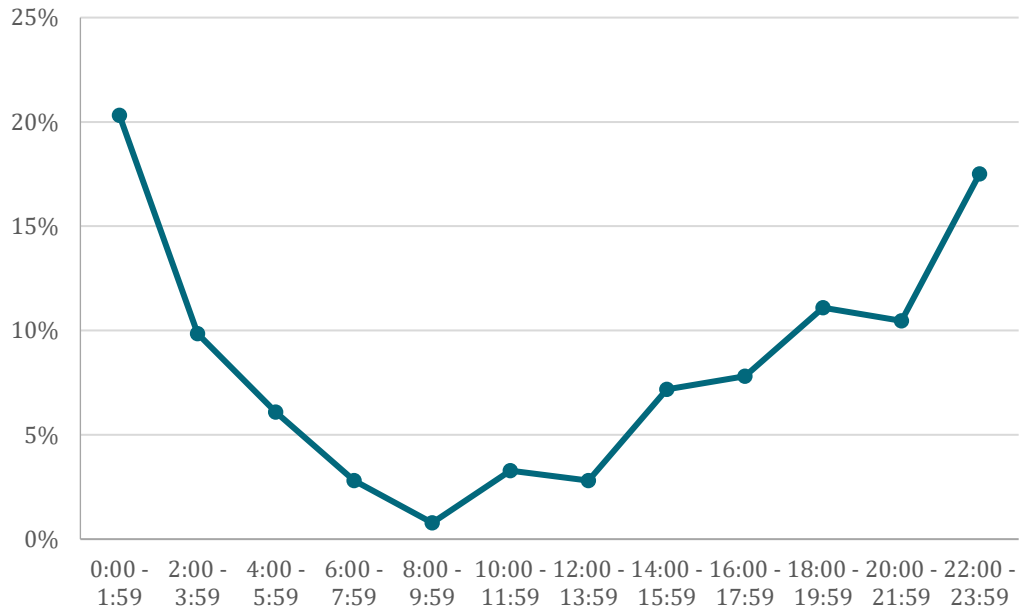


Figure 68: Percentage of alcohol intoxication-related attendances by time of day in ACT, March, June, September and December 2018

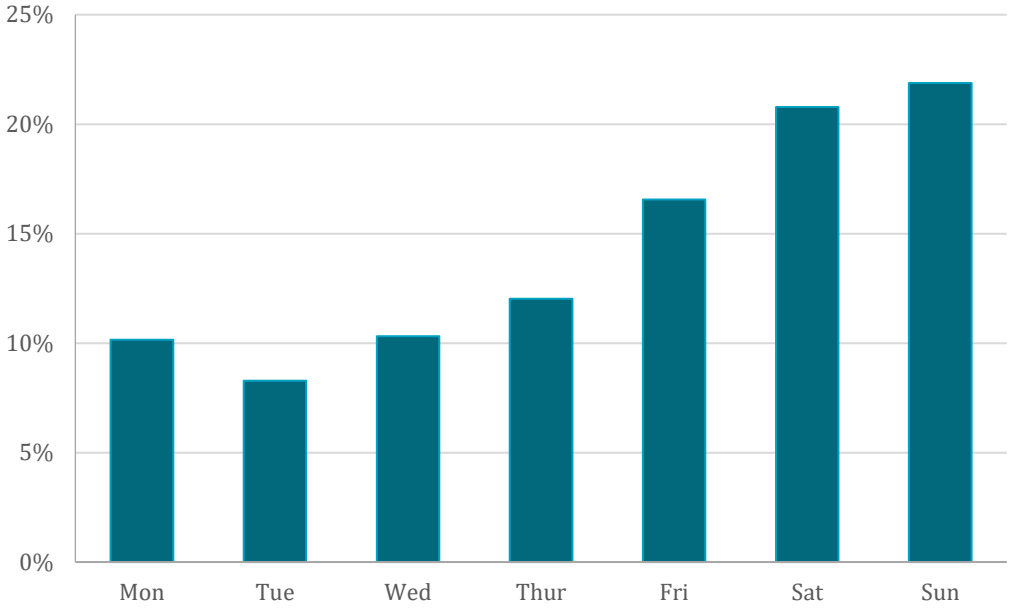


Figure 69: Percentage of alcohol intoxication-related attendances by day of week in ACT, March, June, September and December data 2018

All amphetamine-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2018.

Numbers and rates of monthly amphetamine-related ambulance attendances are shown in Table 68. Characteristics of amphetamine-related ambulance attendances in ACT for March, June, September and December in 2018 are shown in Table 69. Data regarding month, time of day and day of week of attendances are displayed in Figure 70 to Figure 72.

- Amphetamine-related attendances peaked in December 2018 (Table 68).
- As shown in Table 69, in March, June, September and December 2018:
    - there were 44 amphetamine-related cases in the ACT
    - the majority of patients attended for amphetamine-related cases were male (75%)
    - median age of patients with amphetamine-related attendances was 33 years
    - the majority of patients with amphetamine-related attendances (80%) were transported to hospital
- As presented in Figure 71, amphetamine-related attendance numbers peaked from 10pm to midnight in ACT.
- Wednesdays represented the peak day for amphetamine-related attendances (Figure 72).

Table 68: Amphetamine-related ambulance attendances by month in ACT, March, June, September and December 2018

	ACT
March attendances (per 100,000 population)	8 (1.9)
June attendances (per 100,000 population)	8 (1.9)
September attendances (per 100,000 population)	12 (2.9)
December attendances (per 100,000 population)	16 (3.8)

Table 69: Characteristics of amphetamine-related ambulance attendances in ACT, March, June, September and December 2018

	ACT
Number of attendances (per 100,000 population)	44 (10.5)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	33 (29-40)
Male	33 (75%)
Police co-attendance	11 (25%)
Transport to hospital	35 (80%)
Alcohol involved	11 (25%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	16 (36%)

Note: all proportions are based on present information

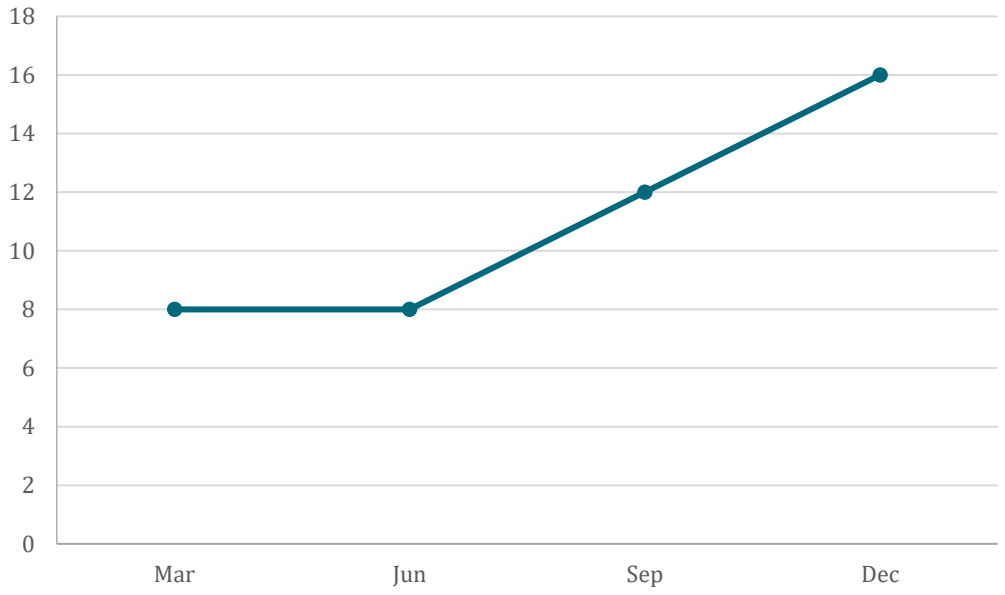
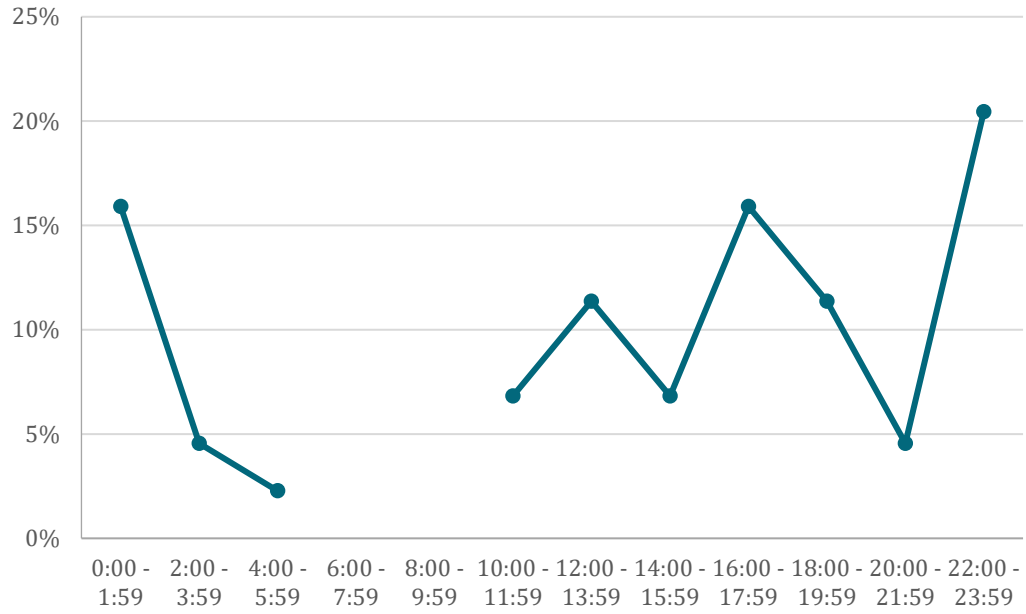


Figure 70: Number of amphetamine-related attendances by month ACT, March, June, September and December 2018



Note: Data not shown where N<5

Figure 71: Percentage of amphetamine-related attendances by time of day in ACT, March, June, September and December 2018

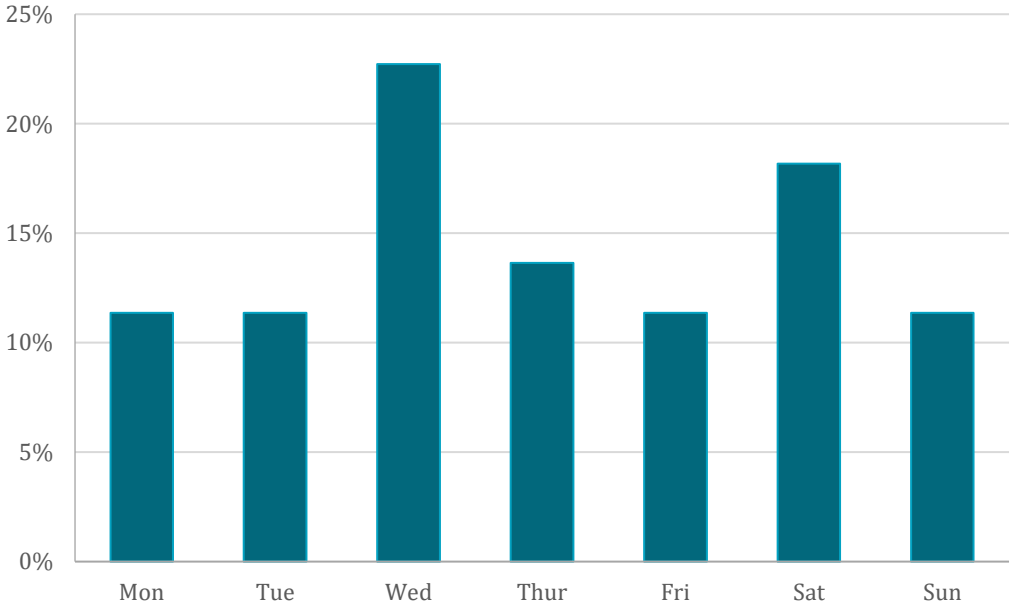


Figure 72: Percentage of amphetamine-related attendances by day of week in ACT, March, June, September and December 2018

Crystal methamphetamine-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2018.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 70. Characteristics of crystal methamphetamine-related ambulance attendances in ACT for March, June, September and December 2018 are shown in

Table 71. Data regarding numbers of attendances occurring in each month, time of day and day of week of attendances are displayed in Figure 73 to Figure 75.

- Crystal methamphetamine-related attendances peaked during December 2018 (Table 70).
- As shown in Table 71, in March, June, September and December 2018:
    - there were 31 crystal methamphetamine-related cases in the ACT
    - the majority of patients attended for crystal methamphetamine-related cases were male (74%)
    - median age of patients with crystal methamphetamine-related attendances was 33 years
    - the majority of patients with crystal methamphetamine-related attendances (87%) were transported to hospital
- As presented in Figure 74, crystal methamphetamine-related attendance numbers peaked numbers peaked between 10pm to midnight in ACT.
- Wednesdays and Saturdays represented the peak day for crystal methamphetamine-related attendances in 2018 (Figure 69).

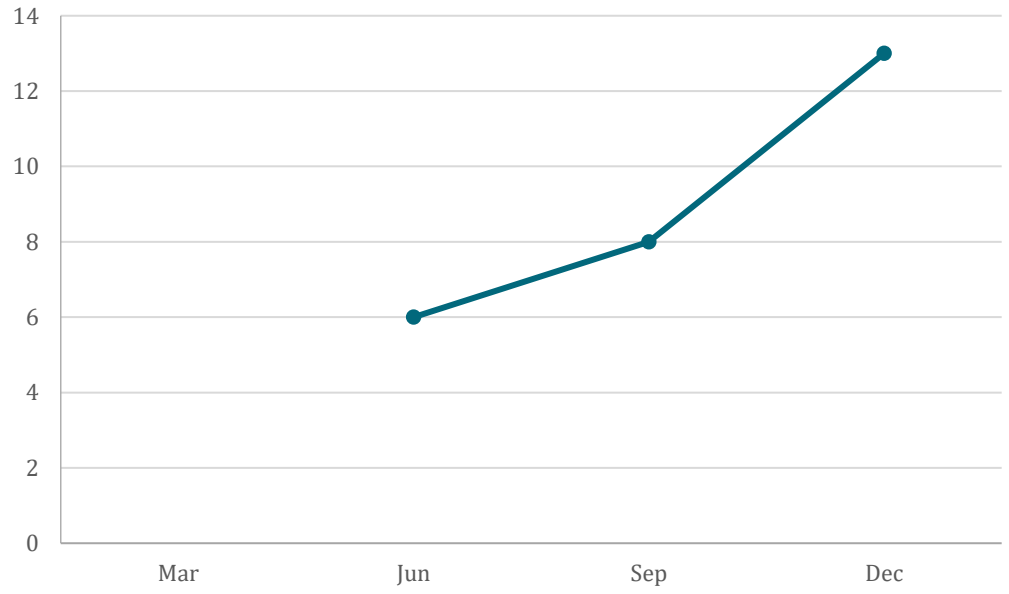
Table 70: Crystal methamphetamine-related ambulance attendances by month in ACT, March, June, September and December 2018

	ACT
March attendances (per 100,000 population)	N<5
June attendances (per 100,000 population)	6 (1.4)
September attendances (per 100,000 population)	8 (1.9)
December attendances (per 100,000 population)	13 (3.1)

Table 71: Characteristics of crystal methamphetamine-related ambulance attendances in ACT, March, June, September and December 2018

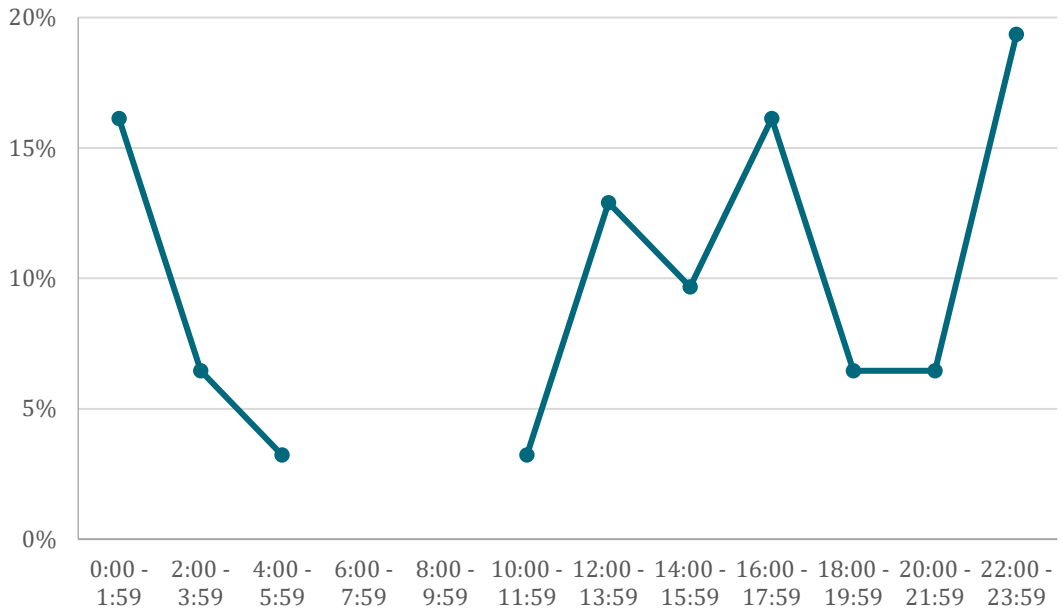
	ACT
Number of attendances (per 100,000 population)	31 (7.4)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	33 (29-39)
Male	23 (74%)
Police co-attendance	9 (29%)
Transport to hospital	27 (87%)
Alcohol involved	7 (23%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	13 (42%)

Note: all proportions are based on present information



Note: March data not shown due to N<5

Figure 73: Number of crystal amphetamine-related attendances by ACT, March, June, September and December 2018



Note: Data not shown where N<5

Figure 74: Percentage of crystal methamphetamine-related attendances by time of day in ACT, March, June, September and December 2018

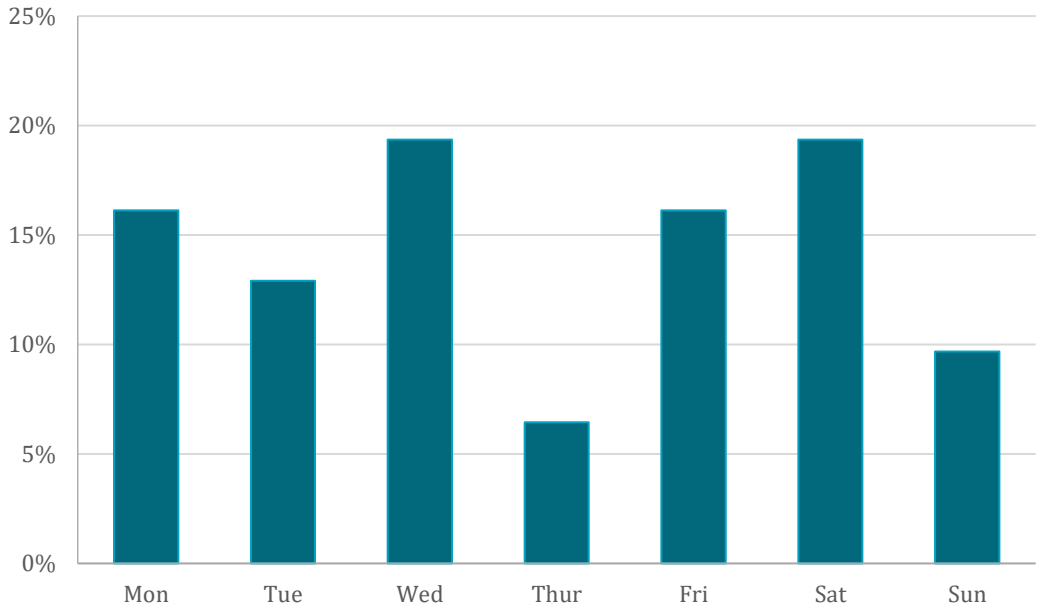


Figure 75: Percentage of crystal methamphetamine-related attendances by day of week in ACT, March, June, September and December 2018

Cannabis-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2018.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 72. Characteristics of cannabis-related ambulance attendances in ACT for March, June, September and December 2018 are shown in Table 73. Data regarding month, time of day and day of week of attendances are displayed in Figure 76 to Figure 78.

- Cannabis attendances peaked in December 2018.
- As shown in Table 72, in March, June, September and December 2018:
    - there were 62 cannabis-related cases in the ACT
    - the majority of patients attended for cannabis-related cases were male (66%)
    - median age of patients with cannabis-related attendances was 29 years
    - more than three-quarters of patients with cannabis-related attendances were transported to hospital (87%)
- As presented in Figure 73, cannabis-related attendance numbers in ACT peaked between 10pm and 2am.
- Saturdays represented the peak day for cannabis-related attendances in 2018 (Figure 78).

Table 72: Cannabis-related ambulance attendances by month in ACT, March, June, September and December 2018

	ACT
March attendances (per 100,000 population)	10 (2.4)
June attendances (per 100,000 population)	11 (2.6)
September attendances (per 100,000 population)	14 (3.3)
December attendances (per 100,000 population)	27 (6.4)

Table 73: Characteristics of cannabis-related ambulance attendances in ACT, March, June, September and December 2018

	ACT
Number of attendances (per 100,000 population)	62 (14.7)
Mean attendances per day	0.5
Daily range	N<5
Age- median (interquartile range)	29 (20-43)
Male	41 (66%)
Police co-attendance	9 (15%)
Transport to hospital	54 (87%)
Alcohol involved	30 (48%)
Alcohol intoxication	16 (26%)
Multiple drugs involved (excluding alcohol)	11 (18%)

Note: all proportions are based on present information

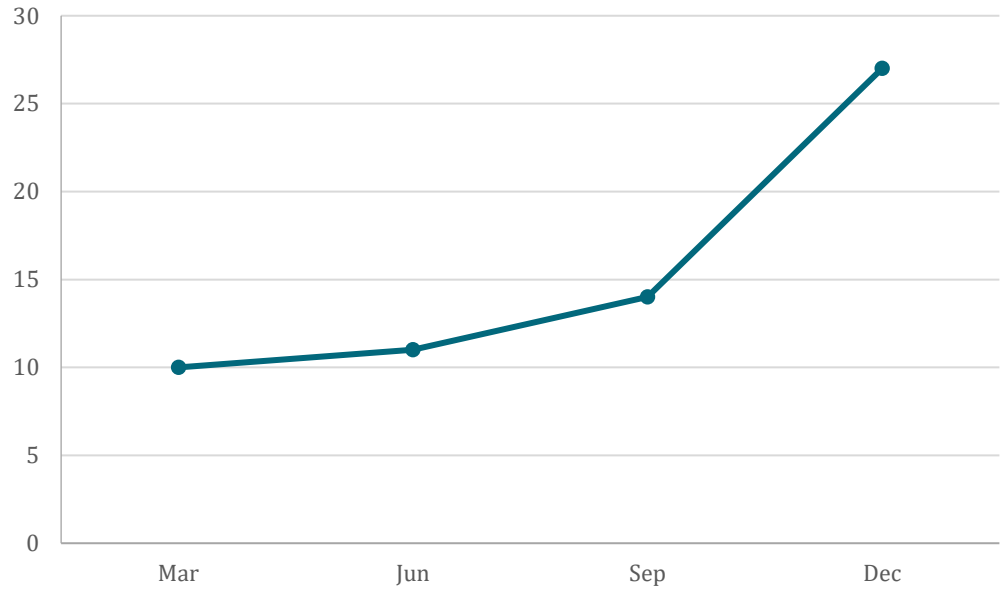
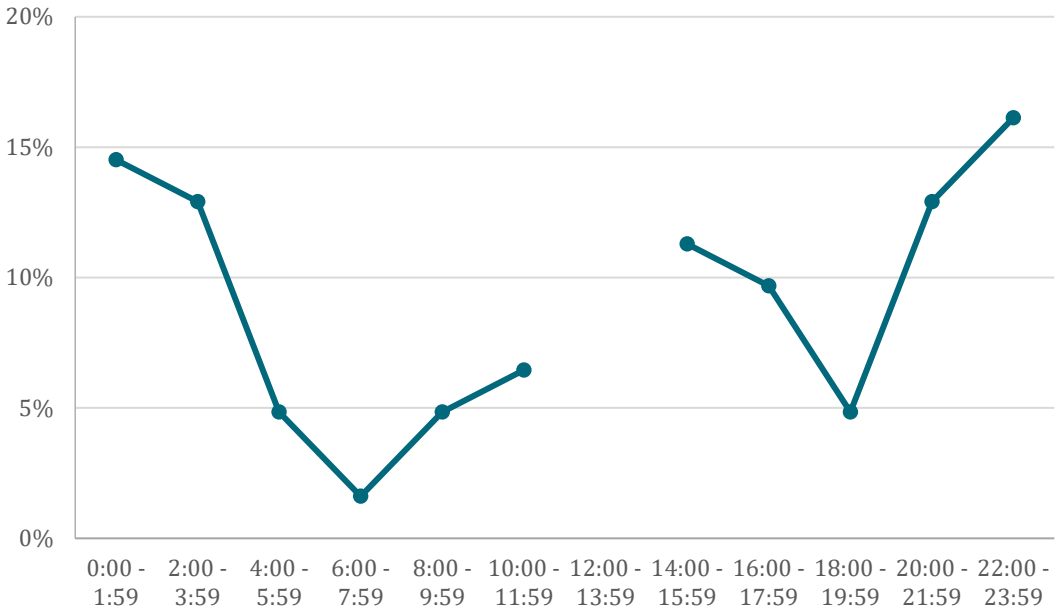


Figure 76: Number of cannabis-related attendances by month in ACT, March, June, September and December 2018



Note: Data not shown where N<5

Figure 77: Percentage of cannabis-related attendances by time of day in ACT, March, June, September and December 2018

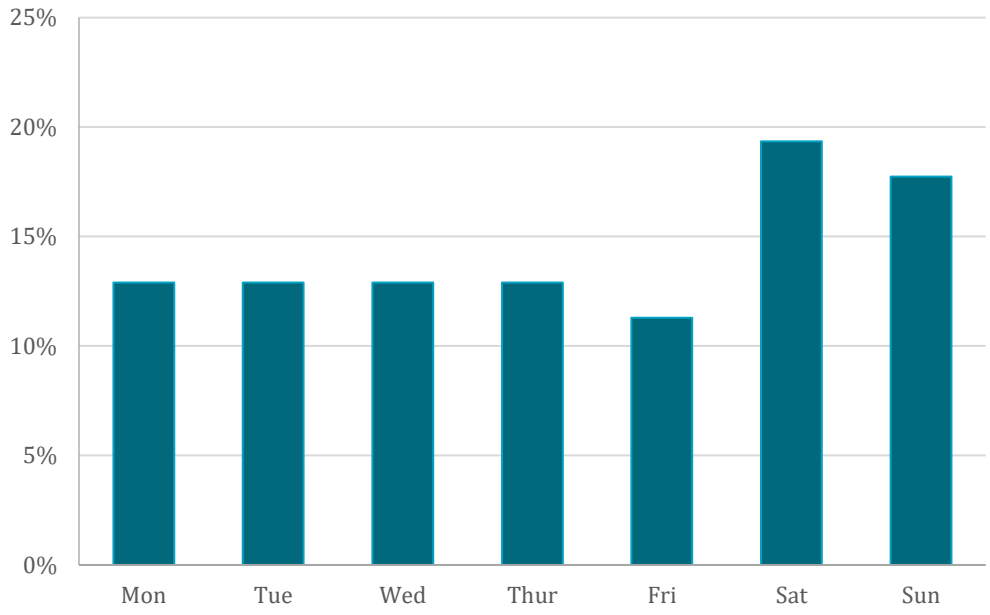


Figure 78: Percentage of cannabis-related attendances by day of week in ACT, March, June, September and December 2018

Heroin-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2018.

Numbers and rates of heroin-related ambulance attendances are shown in Table 74. Characteristics of heroin-related ambulance attendances in ACT for March, June, September and December 2018 are shown in Table 75. Data regarding month, time of day and day of week of attendances are displayed in Figure 79 to Figure 81.

- Heroin attendances peaked in December 2018 (Table 74).
- As shown in Table 75, in March, June, September and December 2018:
    - there were 105 heroin-related cases in the ACT
    - the majority of patients attended for heroin-related cases were male (69%)
    - median age of patients with heroin-related attendances was 41 years
    - almost two-fifths of patients with heroin-related attendances were transported to hospital (38%)
- As presented in Figure 80, heroin-related attendance numbers peaked from 6pm to 8pm.
- Thursdays represented the peak day for heroin-related attendances in 2018 (Figure 81).

Table 74: Heroin-related ambulance attendances by month in ACT, March, June, September and December 2018

	ACT
March attendances (per 100,000 population)	18 (4.3)
June attendances (per 100,000 population)	19 (4.5)
September attendances (per 100,000 population)	33 (7.8)
December attendances (per 100,000 population)	35 (8.3)

Table 75: Characteristics of heroin-related ambulance attendances in ACT, March, June, September and December 2018

	ACT
Number of attendances (per 100,000 population)	105 (24.9)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	41 (33-46)
Male	72 (69%)
Police co-attendance	13 (12%)
Transport to hospital	40 (38%)
Alcohol involved	12 (11%)
Alcohol intoxication	5 (5%)
Multiple drugs involved (excluding alcohol)	18 (17%)
Responded to naloxone	52 (50%)

Note: all proportions are based on present information

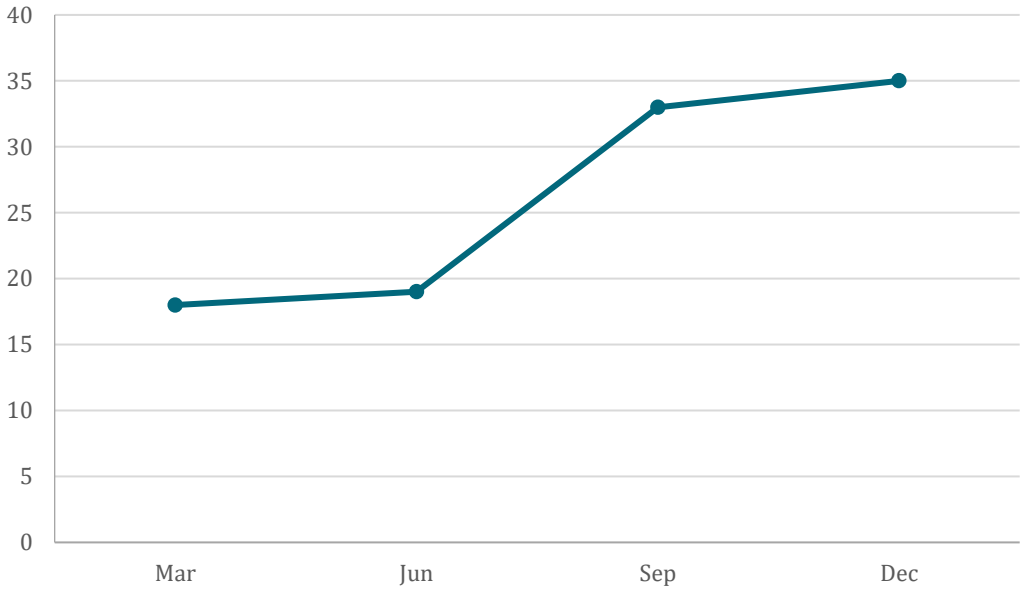


Figure 79: Number of heroin-related attendances by month in ACT, March, June, September and December 2018

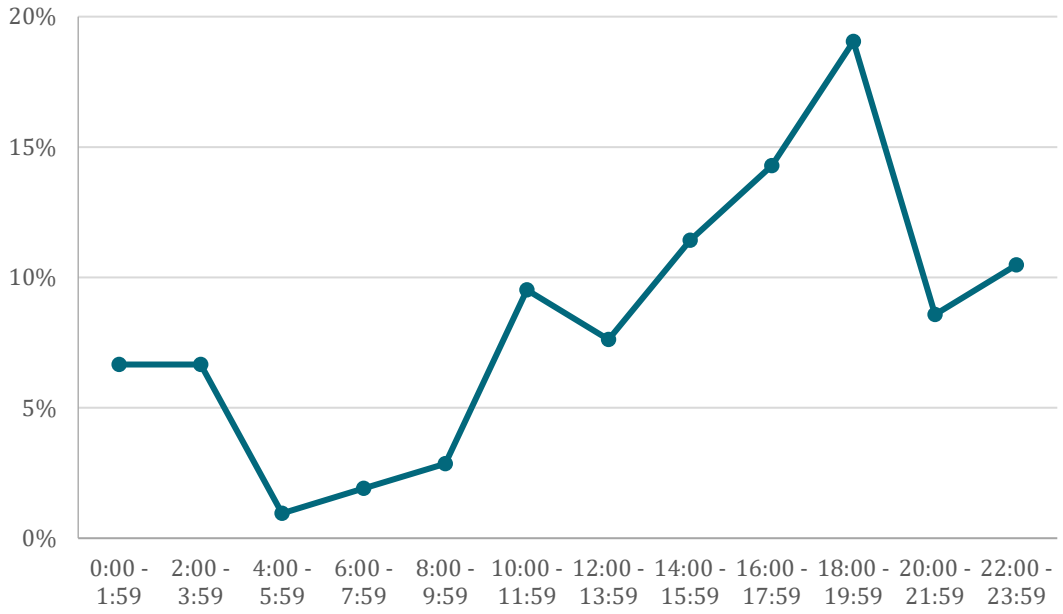


Figure 80: Percentage of heroin-related attendances by time of day in ACT, March, June, September and December 2018

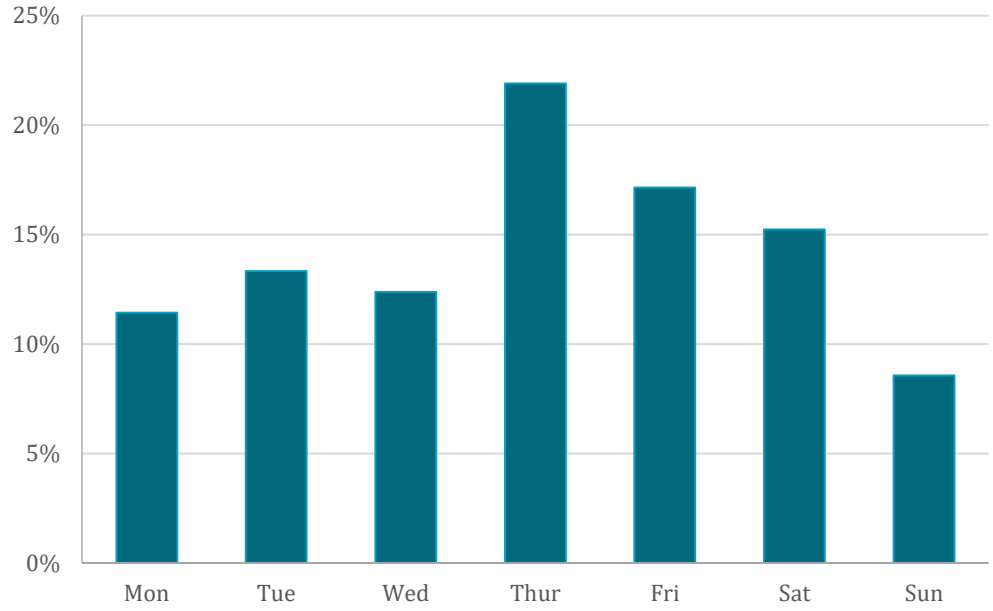


Figure 81: Percentage of heroin-related attendances over total attendances by day of week in ACT, March, June, September and December 2018

Emerging psychoactive substance-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2018.

There were no cases involving emerging psychoactive substances in the ACT in 2018.

Benzodiazepine-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2018.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 76. Characteristics of benzodiazepine-related ambulance attendances in ACT for March, June, September and December 2018 are shown in Table 77. Data regarding month, time of day and day of week of attendances are displayed in Figure 82 to Figure 84.

- Benzodiazepine-related attendances numbers peaked in June 2018 (Table 76).
- As shown in Table 76, in March, June, September and December 2018:
    - there were 65 benzodiazepine-related cases in the ACT
    - the majority of patients attended for benzodiazepine-related cases were male (51%)
    - median age of patients with benzodiazepine-related attendances was 39 years
    - multiple drugs (excluding alcohol) were involved in over half (66%) of all benzodiazepine-related attendances
- As presented in Figure 83, benzodiazepine-related attendance numbers peaked at the hours of 4pm and 10pm.
- Saturdays represented the peak day for benzodiazepine-related attendances (Figure 84).

Table 76: Benzodiazepine-related ambulance attendances by month in ACT, March, June, September and December 2018

	ACT
March attendances (per 100,000 population)	15 (3.6)
June attendances (per 100,000 population)	23 (5.5)
September attendances (per 100,000 population)	12 (2.9)
December attendances (per 100,000 population)	15 (3.6)

Table 77: Characteristics of benzodiazepine-related ambulance attendances in ACT, March, June, September and December 2018

	ACT
Number of attendances (per 100,000 population)	65 (15.4)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	39 (30-47)
Male	33 (51%)
Police co-attendance	9 (14%)
Transport to hospital	56 (87%)
Alcohol involved	25 (39%)
Alcohol intoxication	15 (23%)
Multiple drugs involved (excluding alcohol)	43 (66%)

Note: all proportions are based on present information

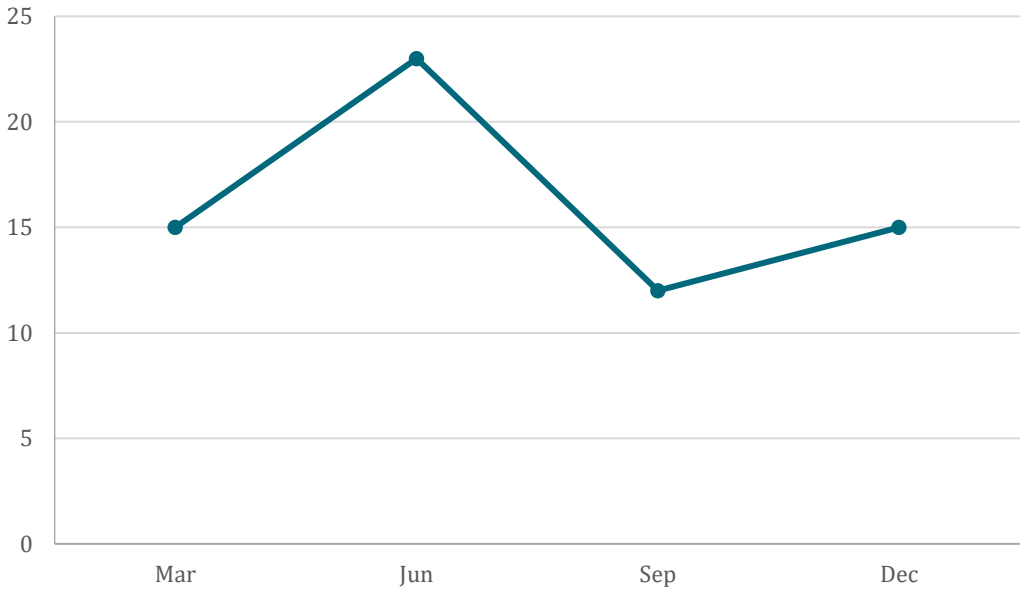


Figure 82: Number of benzodiazepine-related attendances by month in ACT, March, June, September and December 2018

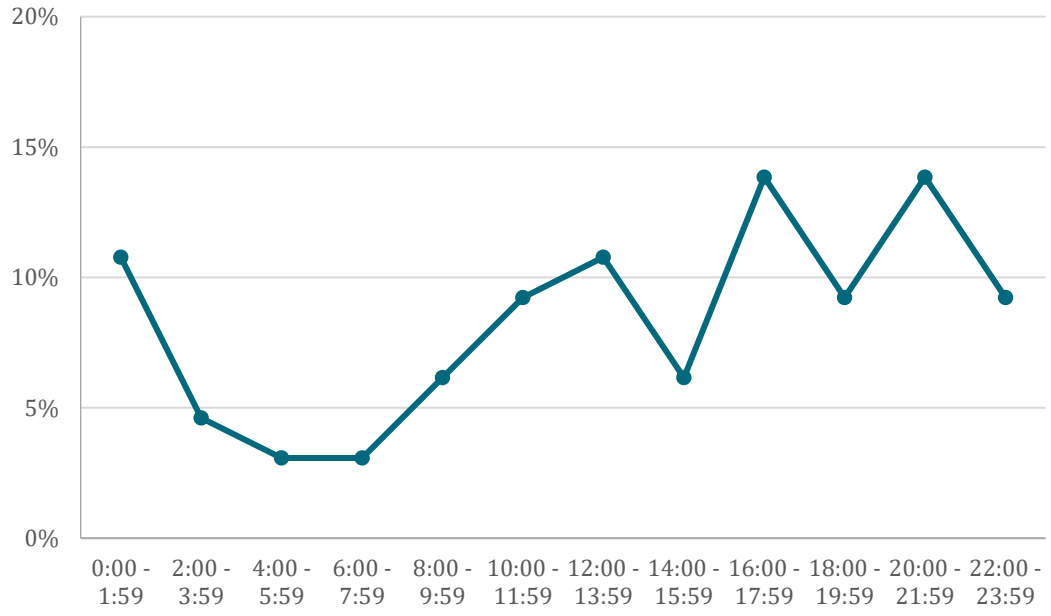


Figure 83: Percentage of benzodiazepine-related attendances by time of day in ACT, March, June, September and December 2018

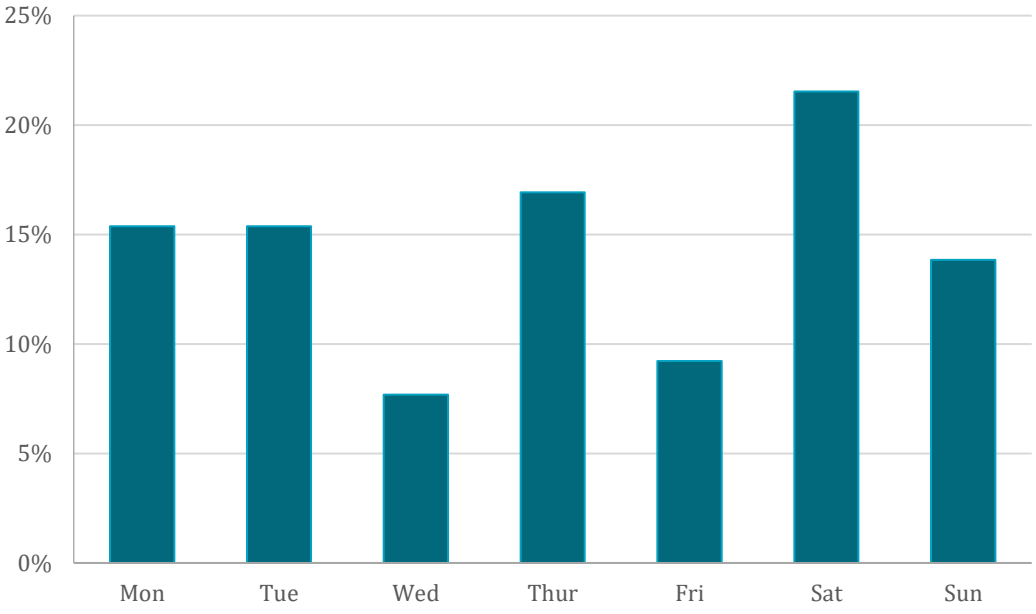


Figure 84: Percentage of benzodiazepine-related attendances by day of week in ACT, March, June, September and December 2018

Opioid analgesic-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2018.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 78. Characteristics of opioid analgesic-related ambulance attendances in ACT for March, June, September and December 2018 are shown in Table 79. Data regarding time of day and day of week of attendances are not shown here owing to small numbers in each category.

- Opioid analgesic-related attendances peaked in June and September 2018 (Table 78).
- As shown in Table 79, in March, June, September and December 2018:
    - there were 31 opioid analgesic-related cases in the ACT
    - the half of opioid analgesic-related attendances involved male patients (55%)
    - median age of patients with opioid analgesic-related attendances was 36 years
    - the majority of patients with opioid analgesic-related attendances were transported to hospital (84%)
    - almost three-quarters of all opioid analgesic-related attendances involved multiple drugs (excluding alcohol) (74%)

Table 78: Opioid analgesic-related ambulance attendances by month in ACT, March, June, September and December 2018

	ACT
March attendances (per 100,000 population)	5 (1.2)
June attendances (per 100,000 population)	10 (2.4)
September attendances (per 100,000 population)	10 (2.4)
December attendances (per 100,000 population)	6 (1.4)

Table 79: Characteristics of opioid analgesic-related ambulance attendances in ACT, March, June, September and December 2018

	ACT
Number of attendances (per 100,000 population)	31 (7.4)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	36 (27-46)
Male	17 (55%)
Police co-attendance	N<5
Transport to hospital	26 (84%)
Alcohol involved	10 (32%)
Alcohol intoxication	7 (23%)
Multiple drugs involved (excluding alcohol)	23 (74%)
Morphine	N<5
Oxycodone	18 (58%)

Note: all proportions are based on present information

Opioid pharmacotherapy-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2018.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Table 80. Characteristics of opioid pharmacotherapy-related ambulance attendances in ACT for March, June, September and December 2018 are shown in Table 81. Numbers are less than five therefore no further detail can be reported.

Table 80: Opioid pharmacotherapy-related ambulance attendances by month in ACT, March, June, September and December 2018

	ACT
March attendances (per 100,000 population)	N<5
June attendances (per 100,000 population)	N<5
September attendances (per 100,000 population)	N<5
December attendances (per 100,000 population)	N<5

Table 81: Characteristics of opioid pharmacotherapy-related ambulance attendances in ACT, March, June, September and December 2018

	ACT
Number of attendances (per 100,000 population)	N<5
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	N<5
Male	N<5
Public outdoor space	N<5
Police co-attendance	0
Transport to hospital	N<5
Alcohol involved	0
Alcohol intoxication	0
Multiple drugs involved (excluding alcohol)	N<5

Alcohol intoxication and other drug-related attendances: 2017 and 2018

Alcohol intoxication and other drug-related ambulance attendance numbers in March, June, September and December 2017 and 2018 are shown in Table 82. There were no statistically significant increases or decreases in alcohol intoxication or other drug-related ambulances attendances between 2017 and 2018.

Table 82. Number of alcohol intoxication and other drug-related attendances in 2017 and 2018 (March, June, September and December), ACT

N attendances	2017*	2018*	% Diff
Alcohol intoxication	537	640	19.2%
Amphetamine	51	44	-13.7%
Crystal methamphetamine	35	31	-11.4%
Cannabis	51	62	21.6%
Heroin	70	105	50.0%
Emerging psychoactive substance	0	0	
Benzodiazepine	56	65	16.1%
Opioid analgesic	22	22	0.0%
Opioid pharmacotherapy	N<5	N<5	-

*2017 and 2018 numbers include March, June, September and December data

Alcohol and other drug poisoning-related ambulance attendances in ACT

AOD poisoning-related ambulance attendances by month are shown in Table 83, and characteristics of AOD poisoning-related ambulance attendances are displayed in Table 84. Drugs involved in AOD poisoning-related ambulance attendances in ACT are presented in Table 85. It is important to note that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

- As shown in Table 83 to Table 85:
    - unintentional AOD poisoning attendances peaked in March while poisonings with undetermined intent and intentional-related attendances were highest in September 2018
    - the majority of patients attended for unintentional AOD poisoning cases were male (62%), while the majority of patients attended for intentional AOD poisoning (75%) and poisoning with undetermined intent (52%) were female
    - alcohol was involved in 9% of unintentional poisoning-, 28% of poisoning with undetermined intent- and 30% of intentional poisoning–related attendances
    - heroin contributed to the greatest proportion of AOD unintentional poisonings (83%) in ACT
    - excluding alcohol involvement, benzodiazepines contributed to the greatest proportion of intentional poisonings (18%)

Table 83: AOD poisoning-related ambulance attendances by month in ACT, March, June, September and December 2018

Attendances (per 100,000 population)	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
March	15 (3.6)	12 (2.9)	27 (6.4)
June	13 (3.1)	10 (2.4)	23 (5.5)
September	10 (2.4)	17 (4.0)	30 (7.1)
December	8 (1.9)	14 (3.3)	18 (4.5)

Table 84: Characteristics of AOD poisoning-related ambulance attendances in ACT, March, June, September and December 2018

	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
Number of attendances (per 100,000 population)	46 (10.9)	53 (12.6)	104 (24.7)
Number of fatal poisonings	0	N<5	N<5
Age- median (interquartile range)	41 (35-48)	35 (20-40)	29 (20-41)
Male	33 (62%)	22 (48%)	26 (25%)
Transport to hospital	16 (30%)	38 (83%)	101 (97%)
Police co-attendance	6 (11%)	6 (13%)	16 (15%)

Note: all proportions are based on present information

Table 85: Drugs involved in poisoning-related ambulance attendances in ACT, March, June, September and December 2018

	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
Alcohol involved	5 (9%)	13 (28%)	31 (30%)
Alcohol intoxication only	0	N<5	0
Amphetamine	0	N<5	0
Crystal methamphetamine	0	N<5	0
Cannabis	0	0	N<5
Heroin	44 (83%)	7 (15%)	N<5
Emerging psychoactive substance	0	0	0
Benzodiazepine	N<5	6 (13%)	19 (18%)
Opioid analgesic	N<5	N<5	8 (8%)
Opioid pharmacotherapy	0	0	N<5

Note: Totals may include cases with either missing or unclassified location information

Other than alcohol intoxication only cases, AOD poisoning can involve either single or multiple substances

Chapter 7: Results – Northern Territory

Alcohol intoxication-related attendances in NT

Results are presented covering one month from each quarterly period of data collection and coding for the Northern Territory in 2018.

Numbers and rates of alcohol intoxication-related ambulance attendances in the Northern Territory are shown in Table 86. Characteristics of alcohol intoxication-related ambulance attendances for March, June, September and December 2018 are shown in Table 87. Data regarding time of day and day of week of attendances are displayed in Figure 85 to Figure 87.

- Alcohol intoxication-related attendances peaked in March 2018 (Table 86).
- As shown in Table 87 in March, June, September and December 2018:
    - there were 1,436 alcohol intoxication-related cases in the Northern Territory
    - more than half of patients attended for alcohol intoxication-related cases were female (51%)
    - median age of patients with alcohol intoxication-related attendances was 41 years
    - the majority of patients with alcohol intoxication-related attendances were transported to hospital (88%)
    - less than one percent (0.7%) of alcohol intoxication-related attendances involved multiple drugs
- As presented in Figure 86, alcohol intoxication-related attendance numbers in the Northern Territory peaked in the evening between 8pm and midnight.
- Fridays represented the peak day for alcohol intoxication-related attendances (Figure 87).

Table 86: Alcohol intoxication-related ambulance attendances by month in Northern Territory, March, June, September and December 2018

	NT
March attendances (per 100,000 population)	439 (177.5)
June attendances (per 100,000 population)	315 (127.4)
September attendances (per 100,000 population)	322 (130.2)
December attendances (per 100,000 population)	360 (145.6)

Table 87: Characteristics of alcohol intoxication-related ambulance attendances in Northern Territory, March, June, September and December 2018

	NT
Number of attendances (per 100,000 population)	1,436 (580.6)
Mean attendances per day	11.8
Daily range	N<5-29
Age- median (interquartile range)	41 (32-49)
Male	699 (49%)
Police co-attendance	433 (30%)
Transport to hospital	1,259 (88%)
Multiple drugs involved	10 (0.7%)

Note: all proportions are based on present information

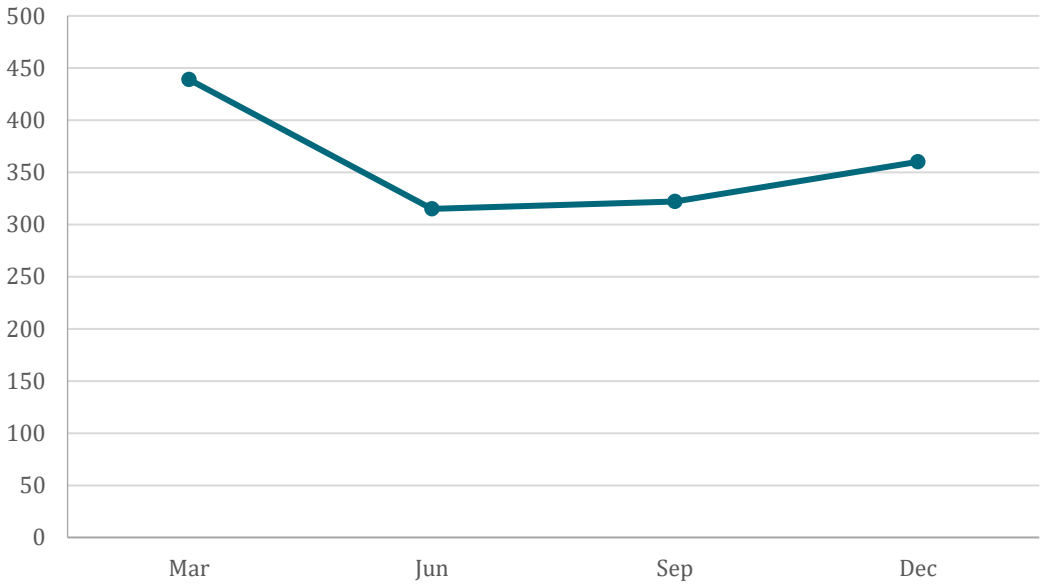


Figure 85: Number of alcohol intoxication-related attendances by month in NT, March, June, September and December 2018

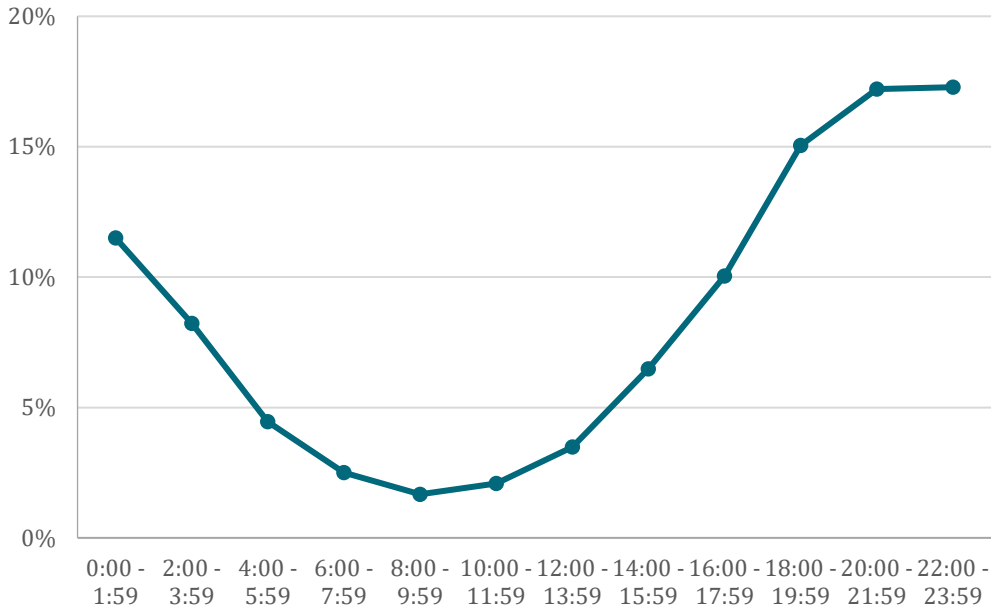


Figure 86: Percentage of alcohol intoxication-related attendances by time of day in NT, March, June, September and December 2018

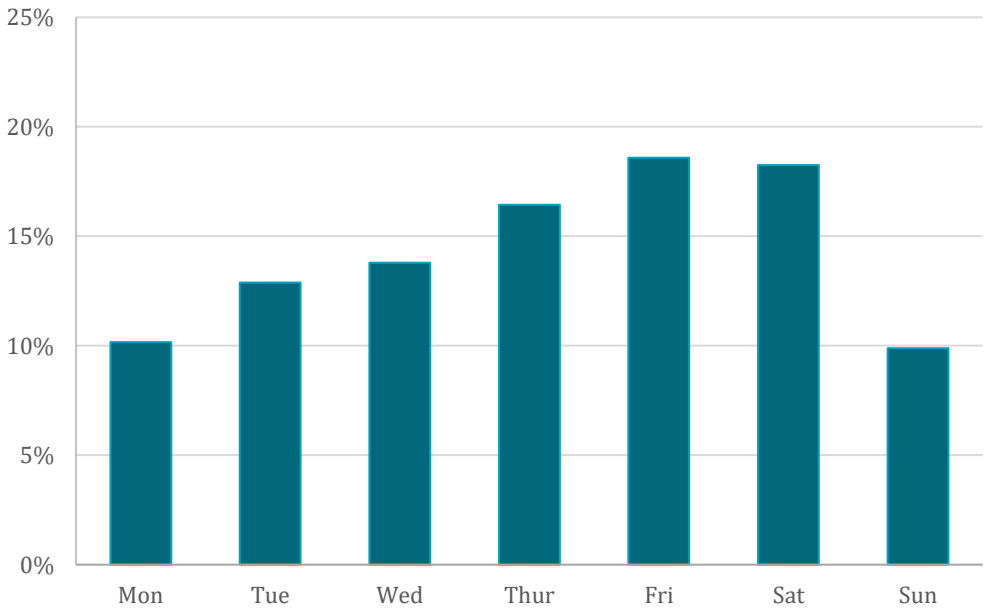


Figure 87: Percentage of alcohol intoxication-related attendances by day of week in NT, March, June, September and December 2018

All amphetamine-related attendances in NT

Results are presented covering one month from each quarterly period of data collection and coding for the NT in 2018.

Numbers and rates of amphetamine-related ambulance attendances in the NT are shown in Table 88. Characteristics of amphetamine-related ambulance attendances for March, June, September and December 2018 are shown in Table 89. Data regarding month, time of day and day of week of attendances are displayed in Figure 88 to Figure 90.

- Amphetamine-related attendances peaked in December 2018 (Table 88).
- Data for March, June, September and December 2018 are presented in Table 89:
    - there were 39 amphetamine-related attendances in the Northern Territory
    - the majority of patients attended for amphetamine-related cases were male (64%)
    - median age of patients with amphetamine-related attendances in the NT was 32 years
    - the majority of patients with amphetamine-related attendances were transported to hospital (≥87%)
- As presented in Figure 113, amphetamine-related attendance numbers peaked from 12pm to 2pm.
- Sundays represented the peak day for amphetamine-related attendances in 2018 (Figure 114).

Table 88: Amphetamine-related ambulance attendances by month in NT, March, June, September and December 2018

	NT
March attendances (per 100,000 population)	6 (2.4)
June attendances (per 100,000 population)	7 (2.8)
September attendances (per 100,000 population)	8 (3.2)
December attendances (per 100,000 population)	18 (7.3)

Numbers of attendances were too low to report by month

Table 89: Characteristics of amphetamine-related ambulance attendances in NT, March, June, September and December 2018

	NT
Number of attendances (per 100,000 population)	39 (15.8)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	32 (24-37)
Male	25 (64%)
Police co-attendance	17 (44%)
Transport to hospital	≥34 (≥87%)
Alcohol involved	12 (31%)
Alcohol intoxication	8 (21%)
Multiple drugs involved (excluding alcohol)	9 (23%)

Note: all proportions are based on present information

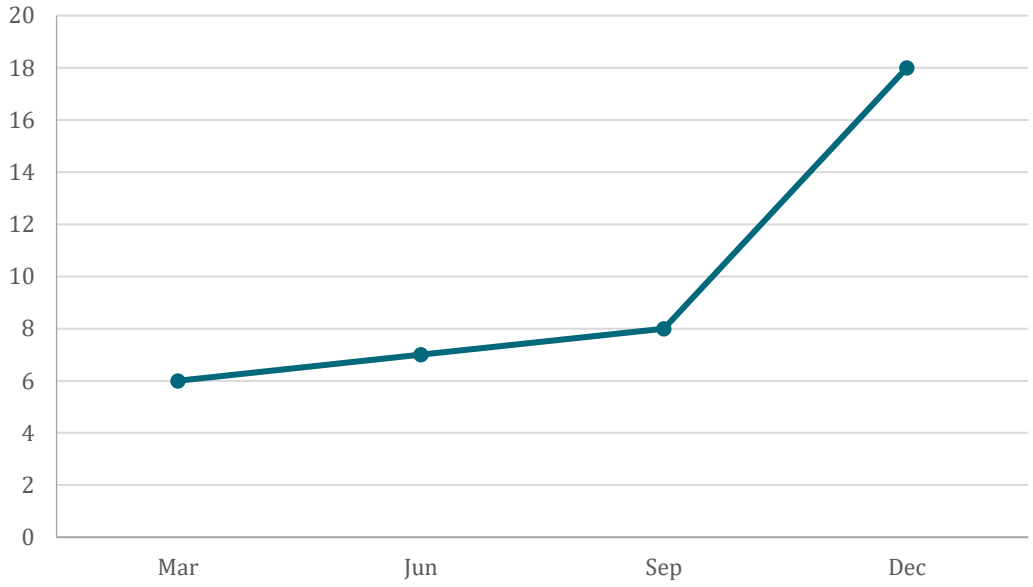


Figure 88: Number of amphetamine-related attendances by month NT, March, June, September and December 2018

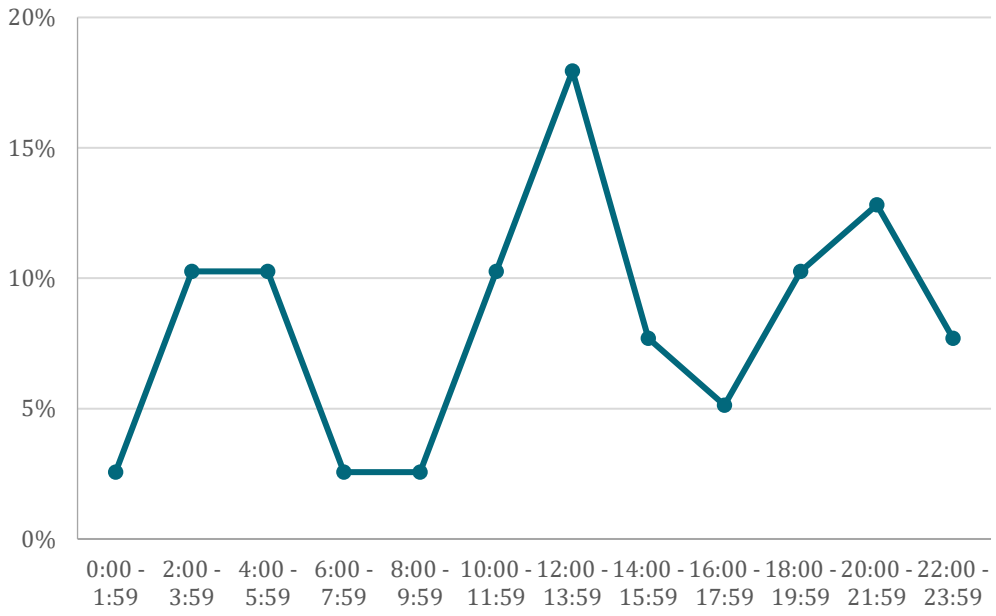
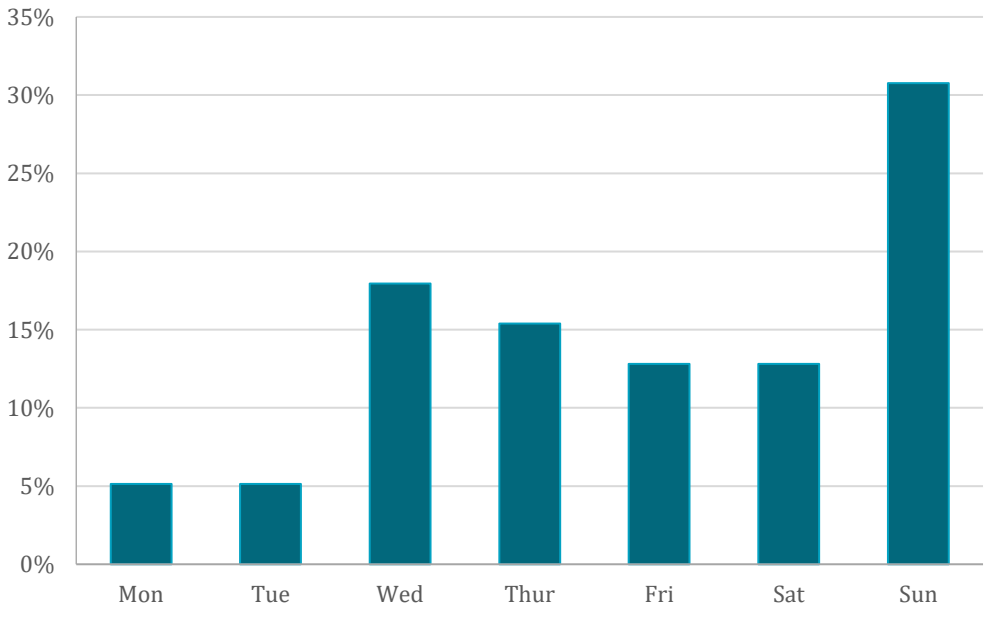


Figure 89: Percentage of amphetamine-related attendances by time of day in NT, March, June, September and December 2018



Note: Data not shown due to N<5

Figure 90: Percentage of amphetamine-related attendances by day of week in NT, March, June, September and December 2018

Crystal methamphetamine-related attendances in NT

Results are presented covering one month from each quarterly period of data collection and coding for the NT in 2018.

Numbers and rates of crystal methamphetamine-related ambulance attendances in the NT are shown in Table 90. Characteristics of crystal methamphetamine-related ambulance attendances for March, June, September and December 2018 are shown in Table 91.

- Crystal methamphetamine attendances peaked in December 2018 (Table 90).
- Data for March, June, September and December 2018 are presented in Table 91:
    - 25 crystal methamphetamine-related cases were recorded in the NT
    - the majority of crystal methamphetamine-related attendances were for male patients (60%)
    - median age of patients with crystal methamphetamine-related attendances was 31 years
    - the majority of patients with crystal methamphetamine-related attendances were transported to hospital (≥88%)

Table 90: Crystal methamphetamine-related ambulance attendances by month in NT, March, June, September and December 2018

	NT
March attendances (per 100,000 population)	N<5
June attendances (per 100,000 population)	5 (2.0)
September attendances (per 100,000 population)	7 (2.8)
December attendances (per 100,000 population)	11 (4.4)

Table 91: Characteristics of crystal methamphetamine-related ambulance attendances in NT, March, June, September and December 2018

	NT
Number of attendances (per 100,000 population)	25 (10.1)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	31 (24-35)
Male	15 (60%)
Police co-attendance	7 (28%)
Transport to hospital	≥20 (≥88%)
Alcohol involved	7 (28%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	5 (20%)

Note: all proportions are based on present information

Cannabis-related attendances in NT

Results are presented covering one month from each quarterly period of data collection and coding for the NT in 2018.

Numbers and rates of cannabis-related ambulance attendances in the NT are shown in Table 92. Characteristics of cannabis-related ambulance attendances for March, June, September and December 2018 are shown in Table 93. Data regarding month, time of day and day of week of attendances are displayed in Figure 91 to Figure 93.

- Cannabis-related attendances peaked in March and December 2018 (Table 92).
- As shown in Table 93, for March, June, September and December 2018:
    - there were 142 cannabis-related cases in the NT
    - the majority of patients attended for cannabis-related cases were male (68%)
    - the median age of patients with cannabis-related attendances was 35 years
    - the majority of patients with cannabis-related attendances were transported to hospital (90%)
    - Alcohol was involved in more than half (59%) of all cannabis-related attendances
- As presented in Figure 92, cannabis-related attendance numbers in the NT peaked between 6pm and midnight.
- Saturdays represented the peak day for cannabis-related attendances in 2018 (Figure 93).

Table 92: Cannabis-related ambulance attendances by month in NT, March, June, September and December 2018

	NT
March attendances (per 100,000 population)	41 (16.6)
June attendances (per 100,000 population)	27 (10.9)
September attendances (per 100,000 population)	33 (13.3)
December attendances (per 100,000 population)	41 (16.6)

Table 93: Characteristics of cannabis-related ambulance attendances in NT, March, June, September and December 2018

	NT
Number of attendances (per 100,000 population)	142 (57.4)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	35 (23-47)
Male	96 (68%)
Police co-attendance	56 (39%)
Transport to hospital	128 (90%)
Alcohol involved	84 (59%)
Alcohol intoxication	39 (28%)
Multiple drugs involved (excluding alcohol)	15 (11%)

Note: all proportions are based on present information

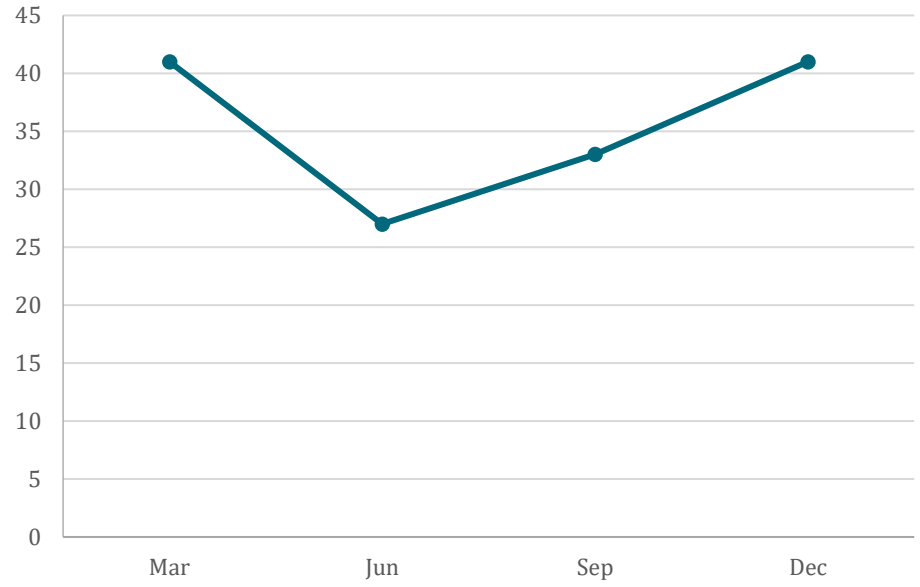


Figure 91: Number of cannabis-related attendances by month in ACT, March, June, September and December 2018

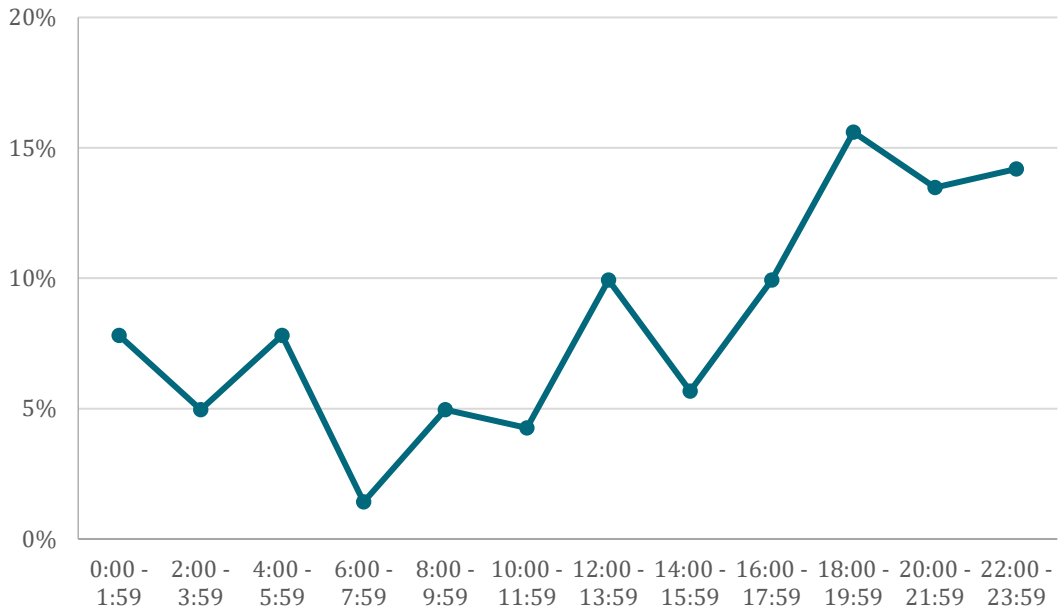


Figure 92: Percentage of cannabis-related attendances by time of day in NT, March, June, September and December 2018

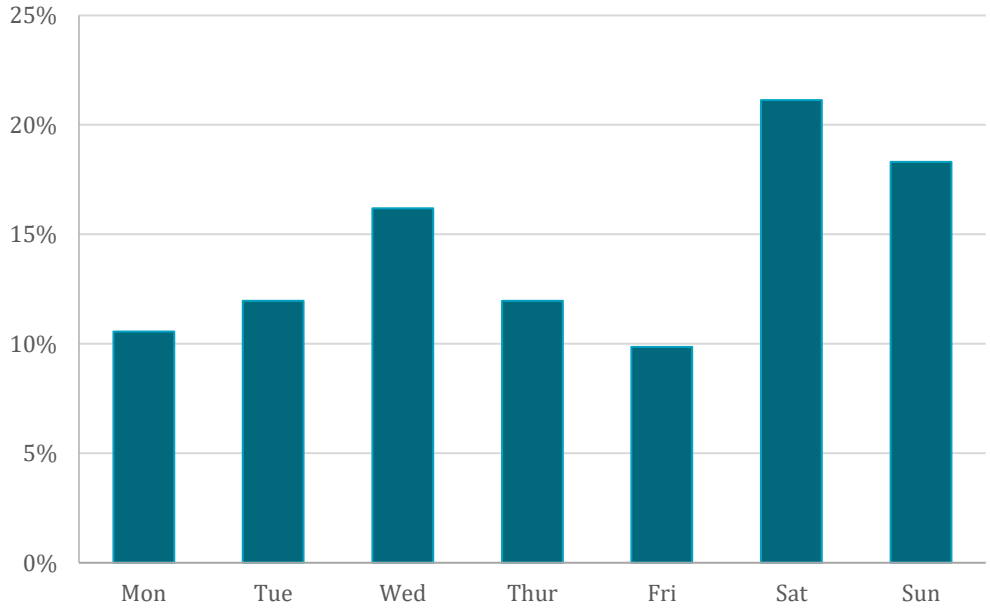


Figure 93: Percentage of cannabis-related attendances by day of week in NT, March, June, September and December 2018

Heroin-related attendances in NT

There were no heroin-related attendances in the NT during March, June, September and December 2018.

Emerging psychoactive substance-related attendances in NT

There were no emerging psychoactive substance-related attendances in the NT during March, June, September and December 2018.

Benzodiazepine-related attendances in NT

Results are presented covering one month from each quarterly period of data for the NT in 2018.

Numbers and rates of benzodiazepine-related ambulance attendances in the NT are shown in Table 94. Characteristics of benzodiazepine-related ambulance attendances for March, June, September and December 2018 are shown in Table 95. Data regarding time of day and day of week of attendances are too small to present.

- Benzodiazepine-related attendances were low across all reported months in 2018 (Table 94).
- Data for March, June, September and December 2018 are presented in Table 95:
    - 22 benzodiazepine-related cases were recorded
    - the median age of patients with benzodiazepine-related attendances was 38 years
    - the majority of benzodiazepine-related attendances were for females ()73%
    - all of patients with benzodiazepine-related attendances were transported to hospital
    - alcohol was involved in half (50%) of all benzodiazepine-related attendances

Table 94: Benzodiazepine-related ambulance attendances by month in NT, March, June, September and December 2018

	NT
March attendances (per 100,000 population)	6 (2.4)
June attendances (per 100,000 population)	N<5
September attendances (per 100,000 population)	9 (3.6)
December attendances (per 100,000 population)	N<5

Table 95: Characteristics of benzodiazepine-related ambulance attendances in NT, March, June, September and December 2018

	NT
Number of attendances (per 100,000 population)	22 (8.9)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	38 (30-45)
Male	6 (27%)
Police co-attendance	7 (32%)
Transport to hospital	22 (100%)
Alcohol involved	11 (50%)
Alcohol intoxication	5 (23%)
Multiple drugs involved (excluding alcohol)	10 (46%)

Note: all proportions are based on present information

Opioid analgesic-related attendances in NT

Results are presented covering one month from each quarterly period of data for the NT in 2018.

Numbers and rates of opioid analgesic-related ambulance attendances in the NT are shown in Table 96. Characteristics of opioid analgesic-related ambulance attendances for March, June, September and December 2018 are shown in Table 97. Data regarding time of day and day of week of attendances are too small to present.

- Opioid analgesic-related attendances were low across all reported months in 2018 (Table 96).

- As shown in Table 97, in March, June, September and December 2018:

    - there were ≥20 opioid analgesic-related cases in the NT
    - the median age of patients with opioid analgesic-related attendances was 48 years
    - the majority of opioid analgesic-related attendances were female (52%)
    - the majority of patients with opioid analgesic-related attendances in the NT were transported to hospital (≥80%)

Table 96: Opioid analgesic-related ambulance attendances by month in NT, March, June, September and December 2018

	NT
March attendances (per 100,000 population)	6 (2.4)
June attendances (per 100,000 population)	N<5
September attendances (per 100,000 population)	8 (3.2)
December attendances (per 100,000 population)	6 (2.4)

Numbers of attendances were too low to report by month

Table 97: Characteristics of opioid analgesic-related ambulance attendances in NT, March, June, September and December 2018

	NT
Number of attendances (per 100,000 population)	≥20(≥8)
Mean attendances per day	N<5
Daily range	N<5
Age- median (interquartile range)	48 (34-68)
Male	11 (48%)
Police co-attendance	6 (26%)
Transport to hospital	≥16 (≥80%)
Alcohol involved	7 (30%)
Alcohol intoxication	5 (22%)
Multiple drugs involved (excluding alcohol)	9 (39%)
Morphine	N<5
Oxycodone	9 (39%)

Note: all proportions are based on present information

Opioid pharmacotherapy-related attendances in NT

There were no opioid pharmacotherapy-related attendances in the NT during March, June, September and December 2018.

Alcohol and other drug poisoning-related ambulance attendances in the NT

AOD poisoning-related ambulance attendances by month are shown in Table 98, while characteristics of AOD poisoning-related ambulance attendances are displayed in Table 99. Drugs involved in AOD poisoning-related ambulance attendances in the NT are presented in Table 100. It is important to note that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As shown in Table 98 to Table 100:

- unintentional AOD poisoning-related attendances were low across all reporting months
- intentional poisoning-related attendances were highest in March and December2018, while poisonings with undetermined intent were highest in December 2018
- the population rates for intentional AOD poisoning-related attendances were higher than attendances for poisoning with undetermined intent and five times higher than unintentional AOD poisoning attendances
- the majority of patients attended to for unintentional AOD poisonings were male (57%), while more females were attended to for intentional AOD poisonings (79%) and poisonings with undetermined intent (62%)
- alcohol was involved in 21% of poisonings with undetermined intent and 24% of intentional poisonings

Table 98: AOD poisoning-related ambulance attendances by month in NT, March, June, September and December 2018

	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
March attendances (per 100,000 population)	N<5	6 (2.4)	12 (4.9)
June attendances (per 100,000 population)	N<5	5 (2.0)	10 (4.0)
September attendances (per 100,000 population)	N<5	7 (2.8)	N<5
December attendances (per 100,000 population)	N<5	10 (4.0)	12 (4.9)

Table 99: Characteristics of AOD poisoning-related ambulance attendances in NT, March, June, September and December 2018

	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
Number of attendances (per 100,000 population)	7 (2.8)	28 (11.3)	≥33 (≥13.0)
Number of fatal poisonings	7 (7%)	27 (27%)	≥33
Age- median (interquartile range)	44 (40-45)	35 (20-44)	34 (24-49)
Male	4 (57%)	10 (38%)	8 (21%)
Transport to hospital	5 (71%)	≥22 (≥85%)	≥33 (≥85%)
Police co-attendance	N<5	10 (36%)	14 (37%)

Note: all proportions are based on present information

Table 100: Drugs involved in poisoning-related ambulance attendances in NT, March, June, September and December 2018

	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
Alcohol involved	N<5	6 (21%)	9 (24%)
Alcohol intoxication only	0	N<5	0
Amphetamines	0	0	0
Crystal methamphetamine	0	0	0
Cannabis	0	0	0
Heroin	0	N<5	0
Emerging psychoactive substances	0	N<5	0
Benzodiazepines	N<5	N<5	7 (18%)
Opioid analgesics	0	0	6 (16%)
Opioid pharmacotherapy	0	0	0

Note: Totals may include cases with either missing or unclassified location information
Other than alcohol intoxication only cases, AOD poisoning can involve either single or multiple substances

Chapter 8: Summary

This report provides an overview of findings for the 2018 calendar year for five jurisdictions – Victoria, New South Wales, Tasmania, ACT and Northern Territory.

Victoria

In Victoria, alcohol intoxication, benzodiazepines and amphetamines were the most common contributors to ambulance attendances. Indeed, alcohol intoxication-related cases continued to rise in 2018, with a significantly higher number of cases in both metropolitan Melbourne and regional Victoria in 2018 than 2017. Similarly, the number of amphetamine and crystal amphetamine-related cases increased across Victorian from 2017 to 2018. Comparing the locations of attendances of the top three most common drugs, rates of attendances in metropolitan Melbourne and regional Victoria were similar for alcohol intoxication and benzodiazepines, while rates for amphetamine-related attendances diverged by geographical location (68.3 and 59.3 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively).

Heroin-related attendances were substantially higher in metropolitan Melbourne (62.2 per 100,000 population) than in regional Victoria (16.7 per 100,000 population) and this was reflected conversely, in the higher rate of opioid analgesic-related attendances in regional Victoria (26.1 per 100,000 population) than metropolitan Melbourne (17.7 per 100,000 population). It is important to keep in mind; however, the shift in the number of attendances in regional Victoria, with heroin and opioid analgesic -related attendances showing high but not statistically significant increases from 2017 to 2018. In heroin related attendances, transportation to hospital occurred in a greater proportion of cases in regional Victorian (62%) than metropolitan Melbourne (44%). The reasoning for this may be reflected in the higher proportion of regional Victoria heroin cases involving both alcohol and multiple other drugs than metropolitan cases. Yet, in opioid analgesic-related attendances, transportation to hospital occurred in similar proportions of metropolitan (89%) and regional cases (88%). This may partly be explained by the similar proportions of metropolitan cases involving alcohol (37%) and drugs other than alcohol (60%) when compared to regional cases (30% of cases involved alcohol and 60% involved multiple other drugs). Of note, morphine was involved in a greater proportion of opioid analgesic-related attendances in regional areas (10%) than metropolitan cases (6%).

The median ages for attendances of cannabis and amphetamine-related attendances occurred in the late 20s to early 30s, while for alcohol intoxication, heroin, benzodiazepines and opioid analgesic the median ages occurred in late 30s to early 40s. These findings contrast to an oft-held community perception of drugs and alcohol as a young person's problem. Males represented the majority of attendances for all drug types, with the exceptions of opioid analgesics and benzodiazepines. Police co-attended with the ambulance in less than one-third of cases for all substances other than amphetamines (46%), while transportation to hospital occurred in 77 to 90 per cent of attendances in all drug categories with the exception of heroin (45%).

In AOD poisoning, the rate of unintentional poisoning was higher in metropolitan Melbourne (36.0 per 100,000 population) than regional Victoria (17.9 per 100,000 population), while intentional poisonings were greater in regional Victoria (86.2 per 100,000 population) than metropolitan Melbourne (65.5 per 100,000 population). The median age was mid 30s regardless of the intent of the poisoning and

while males accounted for two-thirds of unintentional poisoning cases, females accounted for two-thirds of intentional poisoning cases. Regarding the type of drugs contributing to poisoning, alcohol was involved in around one-third of all poisonings regardless of intent, heroin contributed to the greatest proportion of unintentional poisonings, and benzodiazepines were involved in the greatest proportion of intentional poisonings, in both metropolitan and regional areas.

New South Wales

In NSW, alcohol intoxication, cannabis, benzodiazepines and amphetamines were the most common contributors to ambulance attendances. For these drug categories, there were higher rates in regional NSW than metropolitan Sydney for alcohol intoxication, cannabis and amphetamines.

For all drug categories, the majority of attendances were male. The median ages for attendances of cannabis and amphetamine-related attendances occurred in late 20s and early 30s, while for alcohol intoxication, heroin, benzodiazepines, pharmaceutical opioids and pharmacotherapy the median ages occurred in late 30s to mid 40s. These findings contrast to an oft-held community perception of drugs and alcohol as a young person's problem.

For all drug types attendances concentrated on the weekend (i.e., Sat-Sun); with the exceptions of heroin (Thursdays and Saturdays), opioid analgesics (Saturday, Sunday and Monday) and pharmacotherapy (Saturday, Monday and Tuesday).

For alcohol intoxication attendances, there were very few with multiple drugs involved (3%). However, for all drug categories considerable proportions had multiple drugs (excluding alcohol) involved. The greatest were for opioid analgesic- (53%), benzodiazepine- (50%), opioid pharmacotherapy- (47%) related attendances.

Police co-attended with the ambulance in less than one-third of cases for all substances other than amphetamines (41%), and transportation to hospital occurred in 79 to 91 per cent of cases with the exception of heroin (58%).

In AOD overdose, the rate of accidental overdose was higher in metropolitan Sydney (6.6 per 100,000 population) than regional NSW (3.5 per 100,000 population), while intentional overdoses were higher in regional NSW (16.8 per 100,000 population) than metropolitan Sydney (14.1 per 100,000 population). The median age was mid to late 30s for accidental and unknown intent overdoses regardless of location. For intentional overdose, the median age was late 20s in metropolitan Sydney and early 30s in regional NSW. Whilst males accounted for around two-thirds of accidental overdose cases, females accounted for around two-thirds of intentional overdose cases. Regarding the type of drugs contributing to overdose, alcohol was involved in around one-third of all overdoses regardless of intent or location. Heroin contributed to the second greatest proportion of accidental overdoses and benzodiazepines were involved in the greatest proportion of intentional overdoses, in both metropolitan and regional areas.

Tasmania

In Tasmania, alcohol intoxication, cannabis and benzodiazepine were the most common contributors to ambulance attendances. The median ages for alcohol intoxication-, benzodiazepine, and opioid analgesic-related attendances occurred in the early to mid 40s, while for amphetamines and cannabis the median ages occurred in the early 30s. These findings contrast to an oft-held community perception of drugs and alcohol and many other drugs as a young person's problem. Males represented substantially more than half of attendances for all drug types, with the exception of benzodiazepine- (51%) and opioid analgesic-related (52%) attendances. Police co-attended with the ambulance in up to one-fifth cases across all drug categories, while transportation to hospital occurred in at least two-thirds of cases for opioid analgesics (≥90%), benzodiazepines (89%), amphetamines (78%), alcohol intoxication (71%), and cannabis (69%).

In AOD poisoning, the Tasmanian rates of unintentional poisoning (4.2 per 100,000 population) and undetermined intent poisoning (11.9 per 100,000 population) were lower than that of intentional poisoning (31.6 per 100,000 population). The median age of unintentional poisoning was 36 years, undetermined intent poisoning was 33 years, and intentional poisoning was 31 years. While males accounted for almost two-thirds of unintentional poisoning cases, females accounted for around two thirds of intentional and undetermined intent poisoning. Regarding the type of drugs contributing to poisoning, alcohol was involved in around 23 per cent, 32 per cent and 29 per cent of unintentional, intentional and undetermined intent poisoning respectively.

From 2017 to 2018, there were no statistically significant changes in the number of attendances across any of the drug categories.

Australian Capital Territory

In ACT, alcohol intoxication, heroin and benzodiazepines were the most common contributors to ambulance attendances. From 2017 to 2018, there were no statistically significant changes in the number of attendances across any of the drug categories.

The median ages for attendances of cannabis and amphetamine-related attendances occurred in the late 20s to early 30s, while for alcohol intoxication, heroin and benzodiazepines the median ages occurred in the late 30s and early 40s. These findings contrast to an oft-held community perception of drugs and alcohol as a young person's problem. Males represented the majority of attendances for all drug types. Police co-attended with the ambulance in up to one-quarter of all drug categories, while transportation to hospital occurred in at least 80 per cent of cases in all drug categories, with the exception of alcohol intoxication (73%) and heroin (38%). Transportation to hospital occurred in a greater proportion of cases involving opioid analgesics (84%) than heroin (38%). The reasoning for this may be reflected in: higher proportion of alcohol involvement in opioid analgesics-related (32%) than heroin cases (11%), higher proportion of additional drugs (other than alcohol) in opioid analgesics-related (74%) than heroin cases (17%), and the reluctance of heroin users to be transported to hospital.

In AOD poisoning, the rate of unintentional poisoning (10.9 per 100,000 population) was similar to undetermined intent poisoning (12.6 per 100,000 population), but lower than intentional poisoning

(24.7 per 100,000 population). The median ages of unintentional and undetermined intent poisoning was 41 and 36 years, respectively, while the median age for intentional poisoning was 29 years. While males accounted for almost two-thirds of unintentional poisoning cases, females accounted for 75 per cent of intentional poisoning cases and almost half (48%) of undetermined intent poisonings. Regarding the type of drugs contributing to poisoning, alcohol was involved in around 9 per cent, 30 per cent and 28 per cent of unintentional, intentional and undetermined intent poisonings.

Northern Territory

In the Northern Territory, alcohol intoxication, cannabis and amphetamines were the most common contributors to ambulance attendances. The median ages for attendances of cannabis and amphetamine-related attendances occurred in the early to mid 30s, while for alcohol intoxication, benzodiazepines and opioid analgesic-related cases the median ages occurred in the late 30s to late 40s. Once again, these findings contrast to an oft-held community perception of drugs and alcohol as a young person's problem. Males represented the majority of attendances for all drug types with the exception of alcohol intoxication (49%), benzodiazepine (27%) and opioid analgesics (48%). Police co-attended with the ambulance in around one-third of alcohol intoxication (30%), cannabis (39%) and benzodiazepine-related (32%) attendances and 44 per cent of amphetamine cases. For all drug categories presented, at least 80 per cent of ambulance attendances were transported to hospital

The rates of AOD poisoning varied across the intent categories of intentional poisoning (2.8 per 100,000 population), undetermined intent poisoning (11.3 per 100,000 population) and intentional poisoning (more than 13 per 100,000 population). The median age of AOD poisoning regardless of intent was in mid 30s and 40s. While males accounted for more than half of intentional poisoning cases, females accounted for the majority of intentional poisoning (79%) and undetermined intent poisoning (62%) cases. Alcohol was involved in more than one-fifth of intentional and undetermined intent poisonings.

Implications and directions

These figures are striking in terms of the magnitude of burden of AOD misuse and overdose in the population and on health services – a burden that cannot be estimated accurately or in a timely manner through other means. It is important to note that the data presented here represent a summary of a number of key measures in the surveillance system. There is substantial richness to the system, including the capacity to explore subpopulations, specific geographic locations (mapping cases in detail), contextual data, clinical data, outcome data, correlates of harm, and patient histories. Expansion of data coding and reporting to include all months for all jurisdictions would further enhance the utility and robustness of information to inform policy, intervention, service delivery and evaluation. This would be particularly beneficial in relation to drugs with lower prevalence of use, and for smaller populations and subpopulations. Unfortunately, due to the technical issues Queensland 2018 and NSW September and December 2018 data were not available. However, this report will be updated when NSW data is available for inclusion.

There is significant potential to maximise the opportunities that arise from the establishment of a surveillance system for AOD misuse overdose – both in terms of the direct benefits related to the

project outputs, as well as the capacity to use the monitoring data to support and inform related projects and priority areas.

This project forms the basis of an ongoing Australian surveillance system that has multiple applications, and will provide an essential and unique evidence base at a national level. While agencies at a state level are participating in the project, the review, coding and analysis of data to produce consistent and robust data across jurisdictions means that this system delivers outputs that are central to national priorities, policy, evaluation, service delivery and resource allocation. Examples of the utility of this system and the uses of this data include:

- The first system of its kind in Australia – and internationally – that provides detailed and early identification of AOD misuse and overdose at a population level.

- National coronial data regarding fatal overdose is integral to providing detailed information in relation to fatalities, however, by definition coronial data cannot provide evidence regarding non-fatal burden. Timely information detailing characteristics of drug-related non-fatal and fatal events is integral to the development of targeted and effective prevention and intervention.

- Although the need for quality assurance and review means that data cannot be available in a strictly 'real time' sense, this system allows for robust data to be available as an 'early warning' or timely response within two to six months of an event. This represents an unparalleled level of timeliness in data availability.

- The system has significant capacity to provide detailed and timely reporting across an extensive range of drug groups and specific drugs in addition to those summarised in this report. These substances include both illicit drugs and pharmaceutical drugs (prescription and over-the-counter preparations) that are of concern, or of emerging concern, in the community. This expanded information could be used to support, inform and evaluate strategies such as the *National Drug Strategy* and the *National Pharmaceutical Drug Misuse Strategy*.

- Monitoring and reporting of national trends over time and across populations – providing a basis for community awareness of the prevalence of alcohol and other drug misuse and overdose, as well as informing public health planning and responses.

- Mapping of geographic, temporal, demographic and behaviour-related clusters to inform intervention and timely responses.

- Exploration of correlates of harm.

- Informing targeted resource allocation, prevention and intervention initiatives.

- Evidence base to contribute to enhanced planning and referral models for services, including provision of professional development and referral networks.

- Evaluation of national policy and intervention activities.

- Utilisation of data linkage as a means of enhancing knowledge and data quality for alcohol and other drug misuse and overdose across care settings, as well as providing an evidence base for outcome monitoring. Data linkage has been undertaken successfully in related projects in Victoria and NSW – for example, linkage of alcohol and drug-related ambulance attendances to hospital emergency presentations and hospital admissions. A number of services across jurisdictions have expressed interest in exploring the possibility of linkage with health and law enforcement data collections.

- Examination of repeat and frequently presenting patients.

- Capacity for built-in evaluation of policy and intervention activities e.g. changes to codeine scheduling and the establishment of the Medical Supervised Injecting Facility in Melbourne.

- Identification of impact of AOD misuse and overdose across services and sectors such as law enforcement.

Another potential opportunity that is presented with this project is to provide monitoring and reporting of the broader coding of mental health and self-harm-related ambulance attendances as has been previously undertaken by the project team at a national level.

Through enhanced coding and analysis of ambulance service records, data will be available at a whole population level, as well as for specific populations of interest (for example, young people, people with co-occurring conditions, patients who present frequently to services). Also, invaluable data regarding service responses, clinical factors and treatment outcomes will be available.

Importantly, in addition to core ongoing monitoring and reporting, the availability of robust evidence regarding AOD misuse and overdose presentations in the community will support the development of targeted work to enhance service delivery, screening, referral and intervention opportunities. The surveillance system also has the capacity to inform research exploring pathways through care and broader service systems (utilising our expertise in data linkage across health and other population level data). In Victoria, the AOD attendance data are currently being utilised in projects involving data linkage to explore patient pathways through care, and to identify opportunities for targeted referral and intervention opportunities for populations at risk of harms. The utility of this system can be extended to suicide prevention priority areas, and expanded to broader substance use and mental health related cases in response to identified areas of need in policy and service delivery contexts at a national level.

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