



Turning Point

TREATMENT • RESEARCH • EDUCATION

National Surveillance System for Alcohol and Other Drug Misuse and Overdose January – December 2019 Data

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Final

July 2020



MONASH University

easternhealth

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

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NSW Ambulance



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Preface

The National Ambulance Surveillance System (NASS-AOD) is a novel surveillance system for alcohol and other drug related ambulance attendances. This system is a collaborative project between National Addiction and Mental Health Surveillance Unit @ Turning Point's Research Program, Monash University, and jurisdictional ambulance services: Ambulance Victoria, Ambulance Tasmania, ACT Ambulance Service, Ambulance Service of New South Wales, St John Ambulance NT, and Queensland Ambulance Service. The project is funded by the Commonwealth Department of Health, and the Victorian Department of Human Services (Victorian data).

Turning Point is a national addiction treatment centre, dedicated to providing high quality, evidence-based treatment to people adversely affected by alcohol, drugs, and gambling, integrated with world-leading research and education. 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.

As an organisation, Turning Point is 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 its establishment 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 National Addiction and Mental Health Surveillance Unit @ Turning Point (NAMHSU) comprises a data-team and a research team, and together are responsible for investigating patterns of alcohol and drug use and related harm using population-based datasets available in at the state level. The staff in the NAMHSU currently include: Clelia Aragona-Murray, Bronwen Brook, Marion Brophy, Samuel Campbell, Ian Cherrell, Sarah Chislett, Madeleine Clere-enoka, Samantha Dax, Anna Earl, Stephanie Everett, Kiki Elms, Agatha Faulkner, Nyssa Ferguson, Cathie Garrard, Gillian Gray, Annie Haines, Cherie Heilbronn, Ellen Holmes-Preston, Isabelle Hum, Lynne Irving, Alisha Johnson, Kate Jones, Jessica Killian, Lily Laskaris, Elizabeth Le, Daniel Leung, Sidney Mandis, Sharon Matthews, Belinda McPherson, Lisa Meyenn, Foruhar Moayeri, Amaya Labiano Munoz, Dhanya Nambiar, Jade Northcott, Mai Nguyen, Rowan Ogeil, Sarah Pascall, Melissa Reed, Alexia Samiotis, Adam Scott, Debbie Scott, Megan Sechtig, Kirra Solterbeck, Rebecca Szabo, Julie Tennant, Tilda Thomson, Kay Van Namen, Kristina Vujcic, Merran Waterfall, Renee Webb, Courtney Wilkinson, James Wilson, and Chloe Wong.

The National Addiction and Mental Health Surveillance Unit examines national patterns of drug use and harm and suicide and self-harm. Current projects include the National Ambulance Surveillance System for Suicidal Behaviours and Overdose, AODstats, AmboAODstats, and the Google Artificial Intelligence for Social Impact Grant to incorporate artificial intelligence into the ambulance surveillance system.

This includes alcohol and drug related ambulance attendance data from four jurisdictions (Victoria, NSW, Tasmania, and ACT) for which data were received and coded prior to this project milestone. Further details on the status of other jurisdictions are provided on page 22 of this report.

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 - Ambulance Tasmania
 - Con Georgakas
 - Mike McDermott
 - Alex Wilson
 - Queensland Ambulance Service
 - Emma Bosley
 - Ambulance Service of New South Wales
 - Rosemary Carney
 - Kevin McLaughlin
 - ACT Ambulance Service
 - Carol Shipp
 - Pat Meere
 - St John Ambulance Northern Territory
 - Andrew Thomas
 - Taleaha Dawson
 - St John Ambulance Western Australia
 - Paul Bailey
 - Scott Higgins
 - Paramedics across all jurisdictions

Acronyms

ACT	Australian Capital Territory
AOD	Alcohol and other drugs
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
TAS	Tasmania

Executive Summary

This report provides an overview of findings for the 2019 calendar year for four jurisdictions – Victoria, New South Wales, Tasmania and Australian Capital Territory. For the 2019 calendar year:

- Victorian data (January to December – 12 months of data) identified:
 - 30,614 alcohol intoxication-related attendances, with rates of 449.8 and 502.6 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
 - 4,913 amphetamine-related attendances, with rates of 76.1 and 69.1 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
 - 3,344 crystal methamphetamine-related attendances, with rates of 51.8 and 47.0 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
 - 4,030 cannabis-related attendances, with rates of 57.5 and 71.9 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
 - 3,636 heroin-related attendances, with rates of 65.2 and 23.7 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
 - 4,793 benzodiazepine-related attendances, with rates of 72.4 and 73.2 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
 - 1,262 opioid analgesic-related attendances, with rates of 16.3 and 27.7 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
 - 456 opioid pharmacotherapy-related attendances, with rates of 7.1 and 6.2 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
 - A total of 16 emerging psychoactive substance-related ambulance attendances
- NSW data (March, June, September and December – four months of data) identified:
 - 11,503 alcohol intoxication-related attendances, with rates of 139.8 and 146.0 per 100,000 population in metropolitan Sydney and regional NSW, respectively
 - 1,572 amphetamine-related attendances, with rates of 18.9.0 and 20.1 per 100,000 population in metropolitan Sydney and regional NSW, respectively
 - 1,247 crystal methamphetamine-related attendances, with rates of 15.1 and 15.9 per 100,000 population in metropolitan Sydney and regional NSW, respectively
 - 1,642 cannabis-related attendances, with rates of 19.2 and 22.4 per 100,000 population in metropolitan Sydney and regional NSW, respectively
 - 685 heroin-related attendances, with rates of 10.1 and 4.8 per 100,000 population in metropolitan Sydney and regional NSW, respectively
 - 1,281 benzodiazepine-related attendances, with rates of 17.4 and 12.1 per 100,000 population in metropolitan Sydney and regional NSW, respectively
 - 455 opioid analgesic-related attendances, with rates of 5.2 and 6.5 per 100,000 population in metropolitan Sydney and regional NSW, respectively
 - 283 opioid pharmacotherapy-related attendances, with rates of 3.9 and 2.6 per 100,000 population in metropolitan Sydney and regional NSW, respectively
 - 9 emerging psychoactive substance-related ambulance attendances

- Tasmania data (March, June, September and December – four months of data) identified:
 - 792 alcohol intoxication-related attendances, with rates of 175.4 and 127.3 per 100,000 population in Greater Hobart and regional Tasmania, respectively
 - 70 amphetamine-related attendances, with rates of 18.5 and 8.9 per 100,000 population in Greater Hobart and regional Tasmania, respectively
 - 40 crystal methamphetamine-related attendances, with rates of 11.2 and 4.6 per 100,000 population in Greater Hobart and regional Tasmania, respectively
 - 150 cannabis-related attendances, with rates of 31.9 and 25.1 per 100,000 population in Greater Hobart and regional Tasmania, respectively
 - 76 benzodiazepine-related attendances, with rates of 19.8 and 9.9 per 100,000 population in Greater Hobart and regional Tasmania, respectively
 - ≥37 opioid analgesic-related attendances, with rates of 9.1 and ≥5.9 per 100,000 population in Greater Hobart and regional Tasmania, respectively
 - 10 opioid pharmacotherapy-related attendances were recorded in Tasmania
 - No emerging psychoactive substance and fewer than five heroin-related ambulance attendances occurred in Tasmania.

- ACT data (March, June, September, and December – four months of data) identified:
 - 759 alcohol intoxication-related attendances, with a rate of 177.9 per 100,000 population
 - 88 amphetamine-related attendances, with a rate of 20.6 per 100,000 population
 - 51 crystal methamphetamine-related attendances, with a rate of 12 per 100,000 population
 - 96 cannabis-related attendances, with a rate of 22.5 per 100,000 population
 - 77 heroin-related attendances, with a rate of 18 per 100,000 population
 - 85 benzodiazepine-related attendances, with a rate of 19.9 per 100,000 population
 - 21 opioid analgesic-related attendances, with a rate of 4.9 per 100,000 population
 - 13 opioid pharmacotherapy-related attendances, with a rate of 3 per 100,000 population
 - No emerging psychoactive substance-related ambulance attendances were recorded in ACT.

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 *National Surveillance System for Alcohol and Drug Misuse and Overdose (NASS-AOD)*, funded by the Commonwealth Department of Health since 2016, provides timely and robust information regarding acute harms associated with AOD misuse and overdose in Australia. This monitoring project utilises 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 was 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. Lubman et al, 2020; 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 *NASS-AOD* 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 AV, 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 now 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 System of AOD Misuse and Overdose

A national surveillance system utilising to examine AOD misuse and overdose the methodological approach established in the Ambo Project was developed in 2011 and has been funded by the Commonwealth Department of Health. AOD misuse and overdose is a major public health issue with 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 at a population level. This is invaluable in identifying emerging patterns in AOD misuse, including differences across hard to reach or identify 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 was to provide a population level AOD misuse and overdose case monitoring system that recorded 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 the only) 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) (e.g. Lubman et al, 2020). 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 the National ICE Action Strategy and National Drug Strategy 2017-2026. The utility of this system can be expanded to mental health-, self-injurious thoughts and behaviours- and interpersonal violence-related attendances 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, Northern Territory or Queensland data. 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 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 2021 reports. Queensland data will not be included in this report as the Queensland Ambulance Service (QAS) implemented a new electronic information system in late 2017, and data was not reliable from late 2017 to December 2018. Queensland data is expected to be available for inclusion in future reports and Turning Point is working with QAS to facilitate this inclusion.

Three reports are provided each calendar year, two six monthly reports (January-June data and July to December data), and an annual report reporting on the full 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, Ogeil, Faulkner, Wilson, Matthews, Lubman, Scott (2020) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-Dec 2019 Data (July 2020) – current report
2. Moayeri, Ogeil, Faulkner, Wilson, Matthews, Lubman, Scott (2020) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jul-Dec 2019 Data (June 2020)
3. Moayeri, Matthews, Nambiar, Heilbronn, Ogeil, Faulkner, Scott, Lubman (2020) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-Jun 2019 Data (January 2020)

4. 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
5. Moayeri, Matthews, Heilbronn, Nambiar, Ogeil, Scott, Lubman (2019) National Surveillance System for Alcohol and other Drug Misuse and Overdose: July-Dec 2018 Data (Draft submission June 2019, Final submission September 2019)
6. Moayeri, Matthews, Heilbronn, Scott, Lubman (2019) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-June 2018 Data (March 2019)
7. Moayeri, Matthews, Killian, Heilbronn, Scott, Lubman (2018) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-Dec 2017 Data (August 2018)
8. Moayeri, Matthews, Scott, Lubman (2018) National Surveillance System for Alcohol and other Drug Misuse and Overdose: July-December 2017 data (June 2018)
9. Moayeri, Matthews, Scott (2017) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-June 2017 Data (Dec 2017)
10. Faulkner, Scott, Heilbronn, Killian, Lloyd (2017) National Surveillance System for Alcohol and other Drug Misuse and Overdose: Jan-Dec 2016 Data (Sept 2017)
11. Faulkner, Killian, Hoffman, Lloyd (2017) National Surveillance System for Alcohol and other Drug Misuse and Overdose: July-December 2016 Data (April 2017)
12. Lloyd, Faulkner, 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 are 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 Queensland designed system in late 2017. During this implementation phase, data provision has not been possible and therefore Queensland data are not included in this report. In March 2019 Turning Point were advised that the data patches to remedy reporting issues would be available for Queensland data from December 2018, and so data to that point are unreliable and will not be included. We have negotiated a new data extract for January – December 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. A full 12 months of data are reported for Victoria, while four ‘snapshot’ months of data are reported for other jurisdictions (March, June, September, and December 2019).

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, however, 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 un-coded ambulance data are stored securely at Turning Point. Electronic data are password protected and stored on secure servers with restricted access. Staff 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 is only available to 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 attendances 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.

Trained project coding staff 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 of coding processes 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 attendances are 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 the 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 are engaged with each of the ambulance services on a regular basis in order to facilitate data access, data integrity, interpretation of analysis results, and to communicate on project progress.

Definition of drug involvement and poisoning

An attendance 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 attendances are a subset of alcohol involved attendances, 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 attendances where alcohol quantity cannot be determined. This category is helpful in identifying attendances 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, attendances of acute, physical alcohol withdrawal are included in this category.

Alcohol intoxication-related attendances

Alcohol intoxication indicates attendances where alcohol intoxication, with or without other drug involvement, contributed to the reason for the ambulance attendances. These 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 attendances are defined as those 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 attendances often relate to alcohol intoxication and poisoning but may include alcohol-related injuries.

All amphetamine-related attendances

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

Crystal methamphetamine-related attendances

These attendances 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 attendances and includes attendances with or without naloxone administration.

Benzodiazepine-related attendances

This category includes attendances involving 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

Attendances in this category include 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 attendances 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 attendances 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 times the prescribed dose.

Intent of AOD poisoning attendances

Intent of AOD poisoning attendances 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 for the twelve-month period from 1 January to 31 December 2019 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 (Map 1 and 2).

- Alcohol intoxication-related attendances peaked in December 2019 (Table 1).
- Characteristics of alcohol intoxication-related attendances over the 12-month period are presented in Table 2 and include:
 - 30,614 alcohol intoxication-related attendances were recorded in Victoria
 - the majority of alcohol intoxication-related attendances were male (62%), with similar proportions found across regional and metropolitan areas
 - in Victoria, the median age of attendances with alcohol intoxication was 41 years
 - a similar proportion of alcohol intoxication-related attendances in metropolitan (79%) and regional areas (80%) were transported to hospital
- As presented in Figure 2, alcohol intoxication-related attendance numbers peaked in the evening during the 6-8pm in metropolitan Melbourne and between 6pm and midnight in regional Victoria (Table 2).
- In metropolitan Melbourne, Thursdays represented the peak day for alcohol intoxication-related attendances while in regional Victoria, Saturdays represented the peak day in 2019 (Figure 3).

Table 1: Alcohol intoxication-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	1,921 (38.4)	758 (47.5)	2,692 (40.8)
February attendances (per 100,000 population)	1,676 (33.5)	614 (38.5)	2,295 (34.8)
March attendances (per 100,000 population)	2,003 (40.1)	696 (43.6)	2,707 (41.0)
April attendances (per 100,000 population)	1,750 (35.0)	603 (37.8)	2,359 (35.8)
May attendances (per 100,000 population)	1,715 (34.3)	585 (36.6)	2,309 (35.0)
June attendances (per 100,000 population)	1,776 (35.5)	558 (34.9)	2,340 (35.5)
July attendances (per 100,000 population)	1,735 (34.7)	606 (37.9)	2,350 (35.6)
August attendances (per 100,000 population)	1,804 (36.1)	649 (40.6)	2,460 (37.3)
September attendances (per 100,000 population)	1,884 (37.7)	741 (46.4)	2,633 (39.9)
October attendances (per 100,000 population)	1,951 (39.0)	635 (39.8)	2,595 (39.3)
November attendances (per 100,000 population)	2,005 (40.1)	688 (43.1)	2,707 (41.0)
December attendances (per 100,000 population)	2,267 (45.3)	892 (55.9)	3,167 (48.0)

Table 2: Characteristics of alcohol intoxication-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	22,487 (449.8)	8,025 (502.6)	30,614 (464.1)
Mean attendances per day	83.1	89.0	83.9
Daily range	43-173	40-250	44-160
Age- median (interquartile range)	43 (28-54)	40 (27-53)	41 (27-54)
Male	14,092 (63%)	4,861 (61%)	19,026 (62%)
Police co-attendance	7,256 (32%)	2,528 (32%)	9,804 (32%)
Transport to hospital	17,774 (79%)	6,448 (80%)	24,305 (79%)
Multiple drugs involved	974 (4%)	386 (5%)	1,361 (5%)

Note: all proportions are based on present information

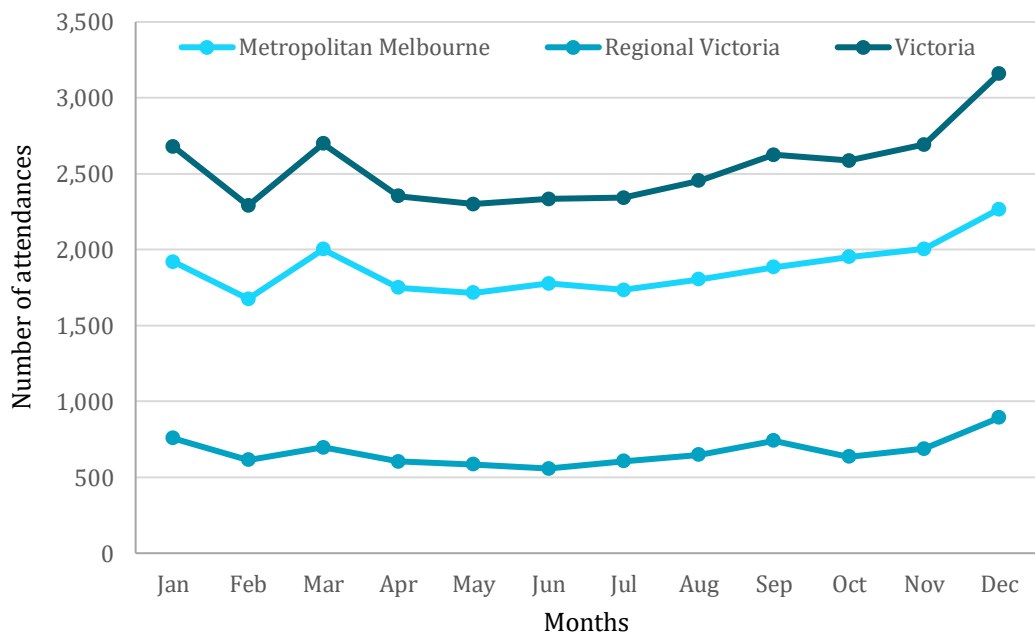


Figure 1: Number of alcohol intoxication-related attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

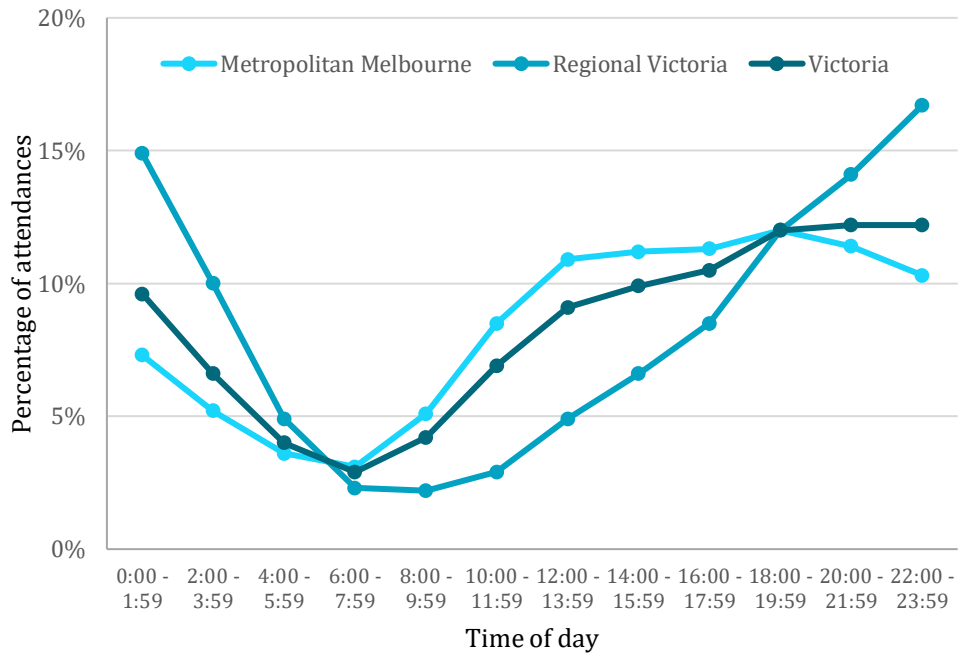


Figure 2: Percentage of alcohol intoxication-related attendances by time of day in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

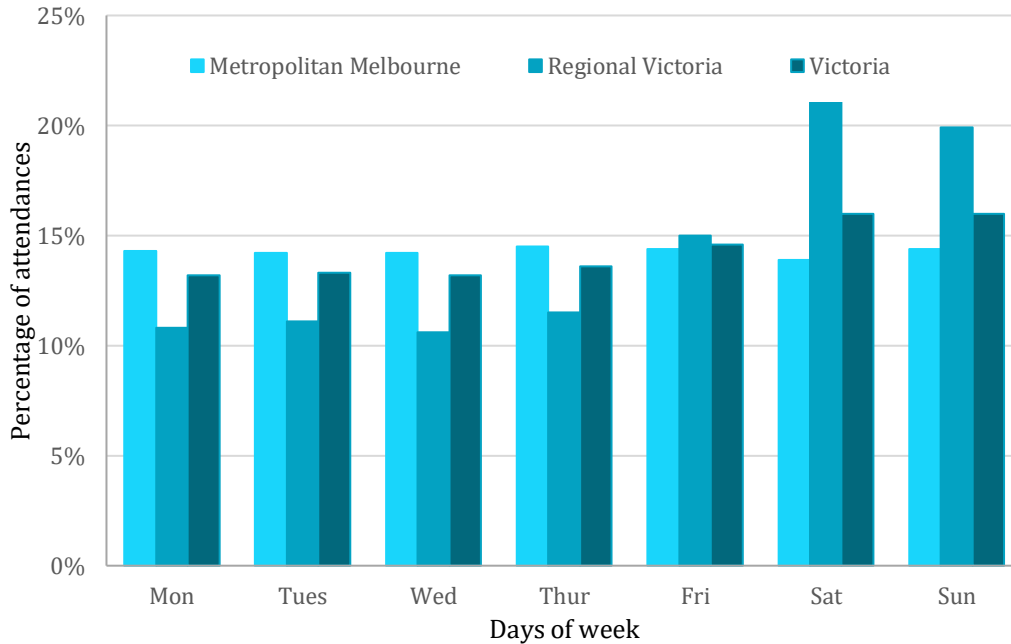
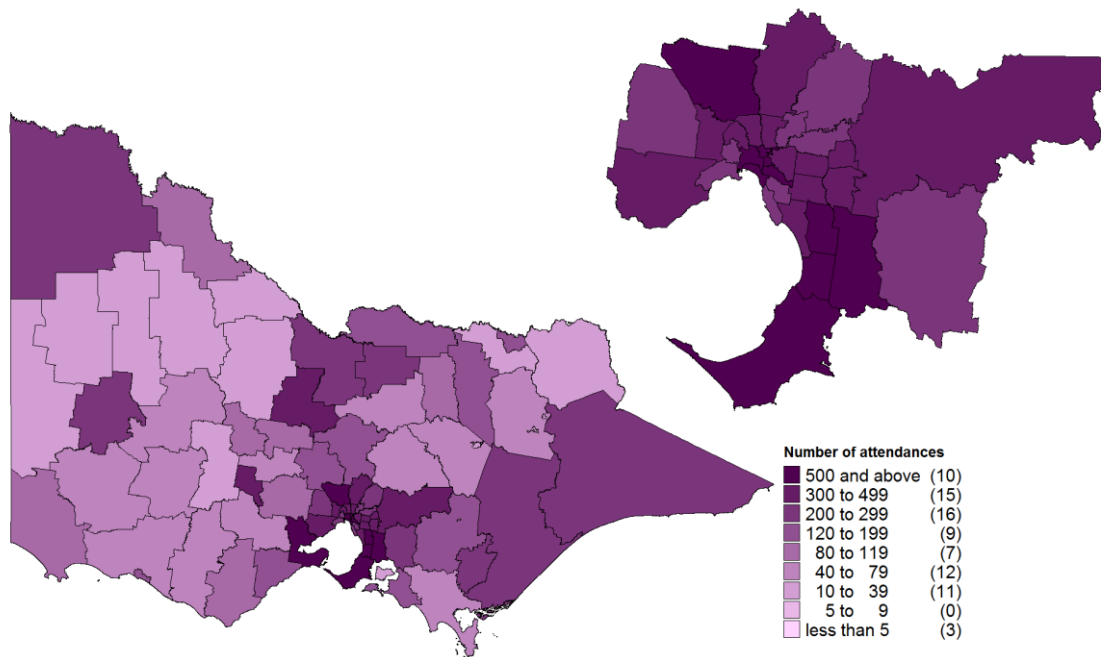
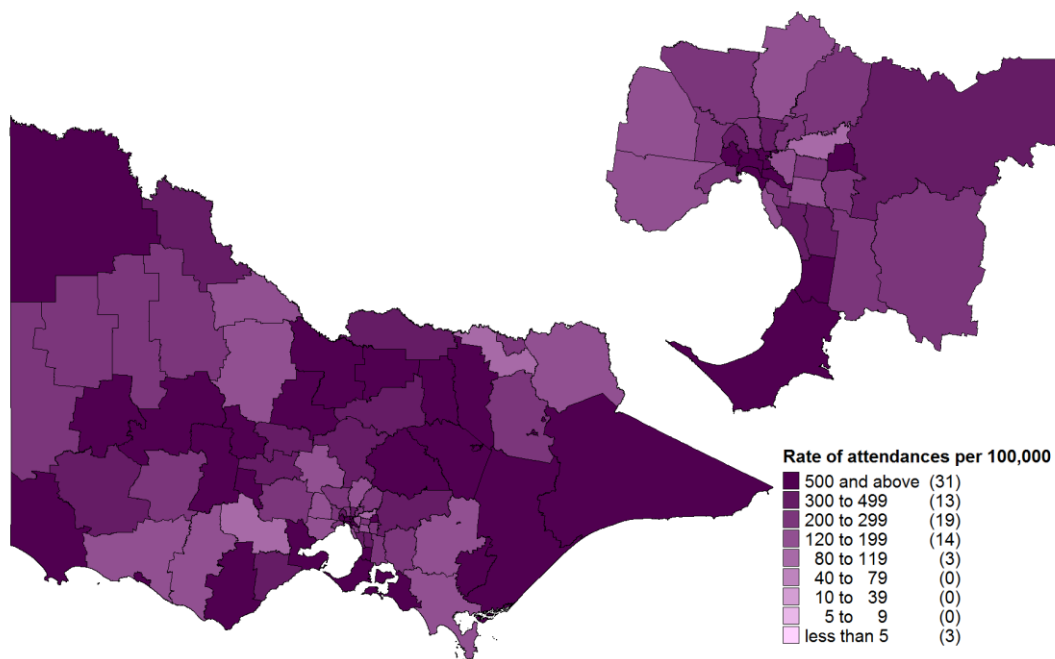


Figure 3: Percentage of alcohol intoxication-related attendances by day of week in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019



Map 1: Number of alcohol intoxication-related attendances by Victorian LGA, 1 January to 31 December 2019



Map 2: Rate of alcohol intoxication-related attendances per 100,000 resident population by Victorian LGA, 1 January to 31 December 2019

All amphetamine-related attendances in Victoria

Results are presented for the twelve-month period from 1 January to 31 December 2019 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 1 January to 31 December 2019 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 (Map 3 and 4).

- In 2019, 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:
 - 4,913 amphetamine-related attendances were recorded across Victoria
 - the median age of amphetamine-related attendances was 31 years
 - police co-attended 47% of amphetamine-related attendances in Victoria
 - a similar proportion of amphetamine-related attendances were transported to hospital in metropolitan Melbourne (84%) and regional Victoria (83%)
- As presented in Figure 5, amphetamine-related attendance numbers peaked between 6pm to midnight in metropolitan Melbourne and the peak times in regional areas were at 12pm and 6-8pm.
- Saturdays represented the peak day for amphetamine-related attendances in metropolitan Melbourne and Sundays were the peak days in regional Victoria in 2019 (Figure 6).

Table 3: Amphetamine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	333 (6.7)	96 (6.0)	430 (6.5)
February attendances (per 100,000 population)	282 (5.6)	59 (3.7)	341 (5.2)
March attendances (per 100,000 population)	302 (6.0)	92 (5.8)	395 (6.0)
April attendances (per 100,000 population)	291 (5.8)	81 (5.1)	372 (5.6)
May attendances (per 100,000 population)	287 (5.7)	82 (5.1)	370 (5.6)
June attendances (per 100,000 population)	245 (4.9)	90 (5.6)	335 (5.1)
July attendances (per 100,000 population)	315 (6.3)	82 (5.1)	399 (6.0)
August attendances (per 100,000 population)	323 (6.5)	92 (5.8)	416 (6.3)
September attendances (per 100,000 population)	332 (6.6)	102 (6.4)	435 (6.6)
October attendances (per 100,000 population)	341 (6.8)	107 (6.7)	449 (6.8)
November attendances (per 100,000 population)	327 (6.5)	105 (6.6)	432 (6.5)
December attendances (per 100,000 population)	424 (8.5)	115 (7.2)	539 (8.2)

Table 4: Characteristics of amphetamine-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	3,802 (76.1)	1,103 (69.1)	4,913 (74.5)
Mean attendances per day	13.4	13.7	13.5
Daily range	N<5-25	N<5-29	N<5-25
Age- median (interquartile range)	32 (25-40)	30 (25-39)	31 (25-40)
Male	2,580 (68%)	722 (66%)	3,307 (67%)
Police co-attendance	1,765 (46%)	531 (48%)	2,301 (47%)
Transport to hospital	3,186 (84%)	921 (83%)	4,114 (84%)
Alcohol involved	648 (17%)	226 (21%)	874 (18%)
Alcohol intoxication	299 (8%)	114 (10%)	413 (8%)
Multiple drugs involved (excluding alcohol)	1,437 (38%)	393 (36%)	1,832 (37%)

Note: all proportions are based on present information

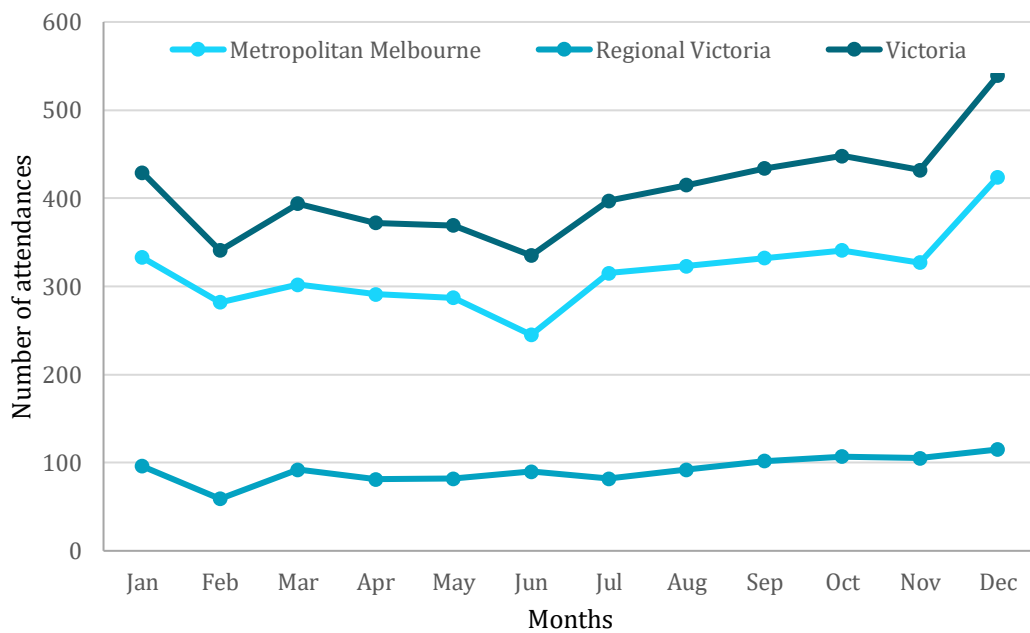


Figure 4: Number of amphetamine-related attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

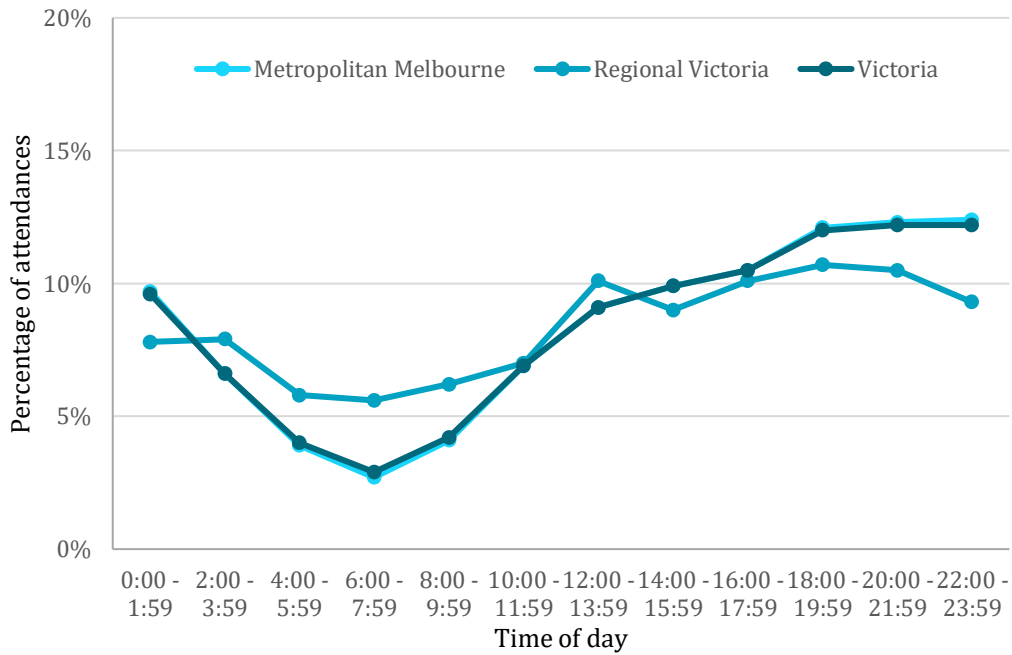


Figure 5: Percentage of amphetamine-related attendances by time of day in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

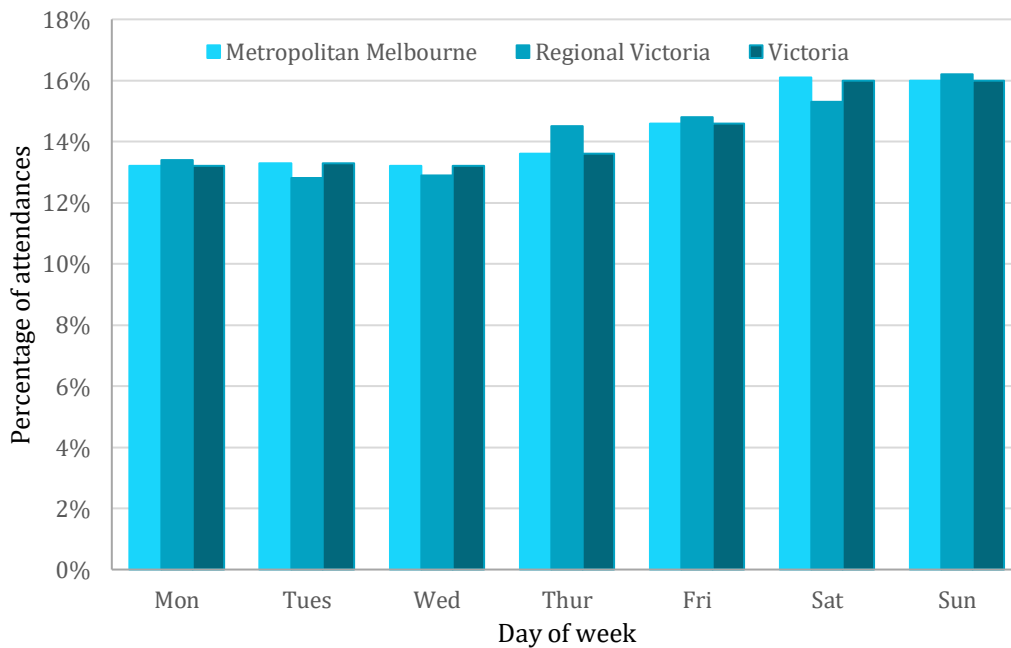
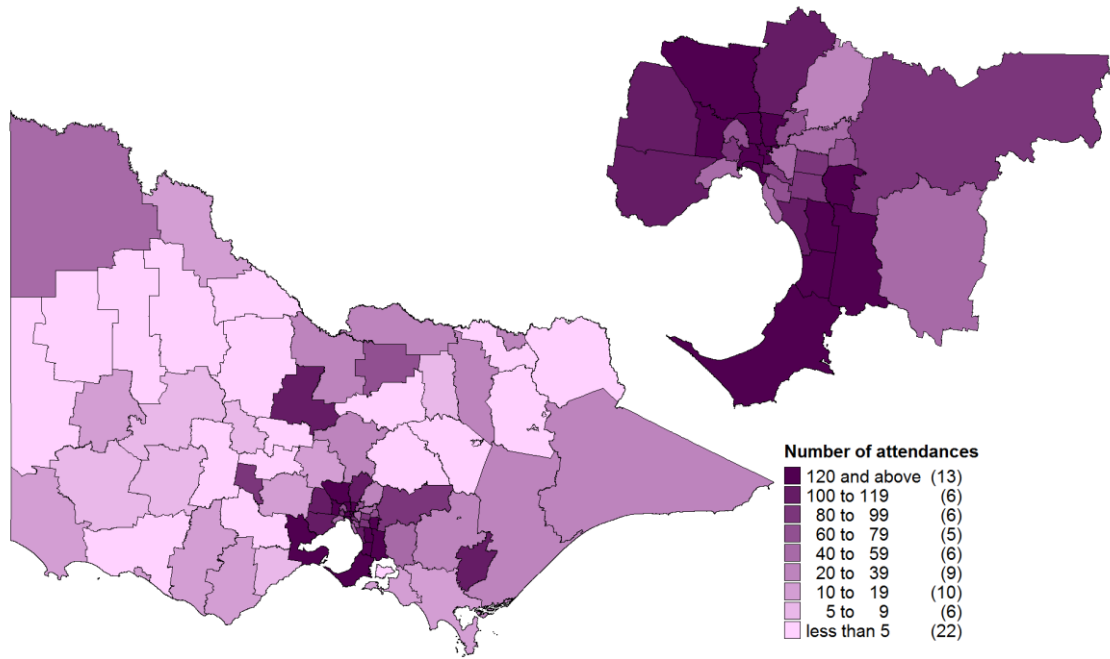
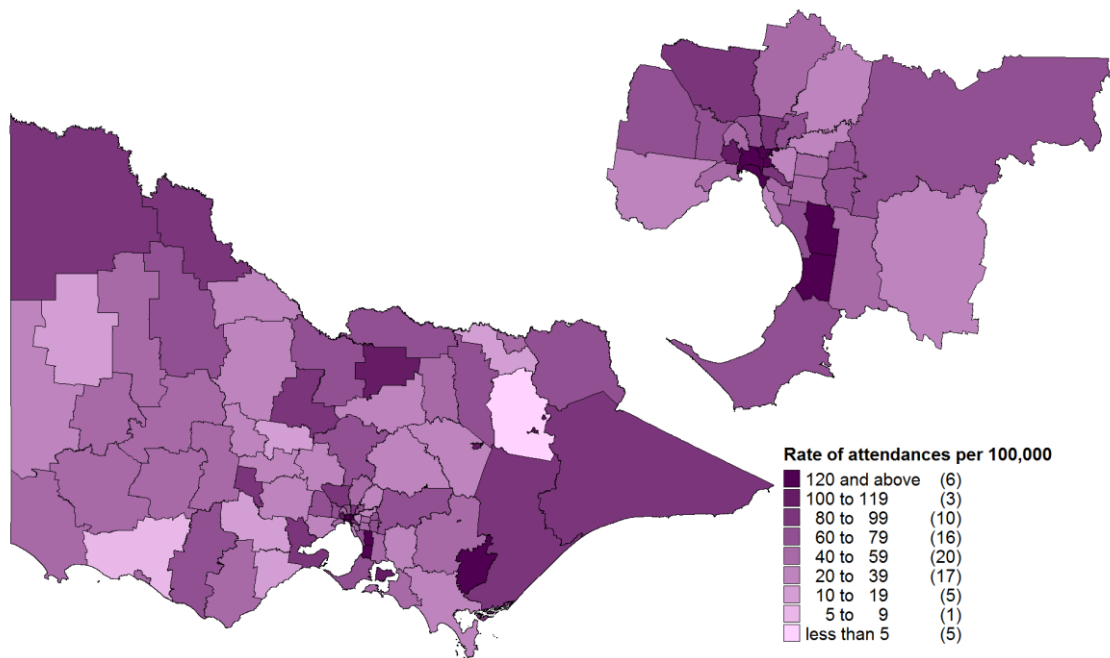


Figure 6: Percentage of amphetamine-related attendances by day of week in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019



Map 3: Number of amphetamine-related attendances by Victorian LGA, 1 January to 31 December 2019



Map 4: Rate of amphetamine-related attendances per 100,000 resident population by Victorian LGA, 1 January to 31 December 2019

Crystal methamphetamine-related attendances in Victoria

Results are presented for the twelve-month period from 1 January to 31 December 2019 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 1 January to 31 December 2019 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 (Map 5 and 6).

- In metropolitan Melbourne and regional Victoria, crystal methamphetamine-related attendances peaked in December 2019 (Table 5).
- Characteristics from the 12-month period are presented in Table 6 and include:
 - 3,344 crystal methamphetamine-related attendances recorded across Victoria
 - the majority of crystal methamphetamine-related attendances were male (68%), with similar proportions recorded in metropolitan and regional areas
 - in Victoria, the median age of crystal methamphetamine-related attendances was 32 years
 - a similar proportion of crystal methamphetamine-related attendances were transported to hospital in metropolitan Melbourne (84%) and regional Victoria (83%)
- As presented in Figure 8, crystal methamphetamine-related attendance numbers peaked from 4pm to 8pm in metropolitan Melbourne and in regional Victoria.
- In Victoria, Saturdays and Sundays represented the peak days for crystal methamphetamine-related attendances in metropolitan Melbourne while Thursdays were the peak days in regional Victoria in 2019 (Figure 9).

Table 5: Crystal methamphetamine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	226 (4.5)	69 (4.3)	296 (4.5)
February attendances (per 100,000 population)	202 (4.0)	48 (3.0)	250 (3.8)
March attendances (per 100,000 population)	215 (4.3)	62 (3.9)	278 (4.2)
April attendances (per 100,000 population)	200 (4.0)	52 (3.3)	252 (3.8)
May attendances (per 100,000 population)	200 (4.0)	49 (3.1)	249 (3.8)
June attendances (per 100,000 population)	163 (3.3)	63 (3.9)	226 (3.4)
July attendances (per 100,000 population)	197 (3.9)	57 (3.6)	256 (3.9)
August attendances (per 100,000 population)	210 (4.2)	67 (4.2)	278 (4.2)
September attendances (per 100,000 population)	224 (4.5)	71 (4.4)	296 (4.5)
October attendances (per 100,000 population)	239 (4.8)	71 (4.4)	310 (4.7)
November attendances (per 100,000 population)	225 (4.5)	68 (4.3)	293 (4.4)
December attendances (per 100,000 population)	287 (5.7)	73 (4.6)	360 (5.5)

Table 6: Characteristics of crystal methamphetamine-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	2,588 (51.8)	750 (47.0)	3,344 (50.7)
Mean attendances per day	9.1	9.3	9.2
Daily range	N<5-18	N<5-23	N<5-19
Age- median (interquartile range)	33 (25-40)	31 (25-40)	32 (25-40)
Male	1,769 (68%)	487 (65%)	2,259 (68%)
Police co-attendance	1,235 (48%)	374 (50%)	1,612 (48%)
Transport to hospital	2,164 (84%)	621 (83%)	2,790 (83%)
Alcohol involved	387 (15%)	130 (17%)	517 (16%)
Alcohol intoxication	183 (7%)	64 (9%)	247 (7%)
Multiple drugs involved (excluding alcohol)	956 (37%)	249 (33%)	1,206 (36%)

Note: all proportions are based on present information

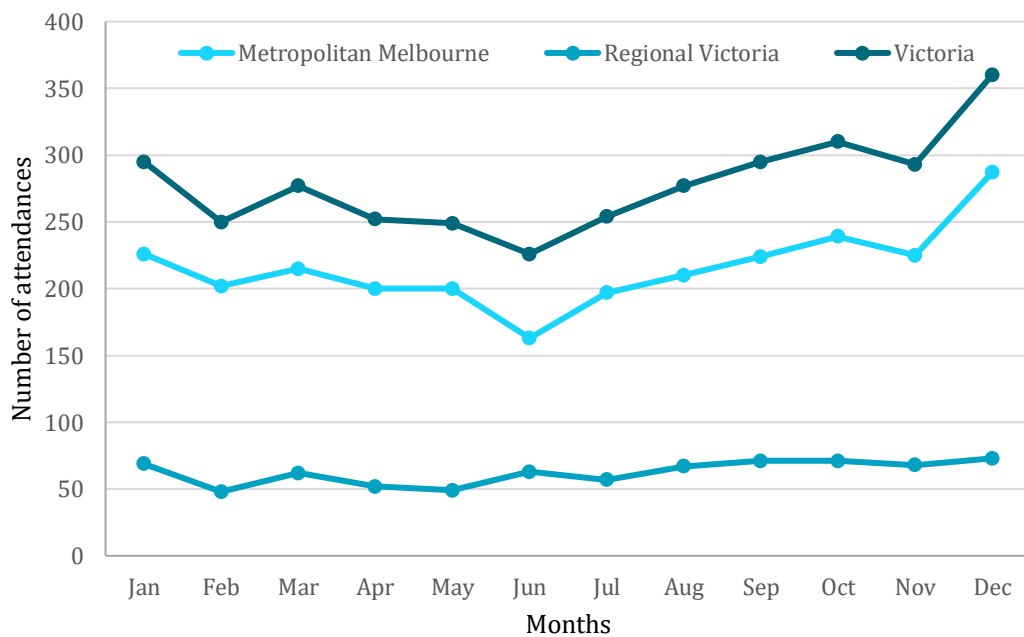


Figure 7: Number of crystal methamphetamine-related attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

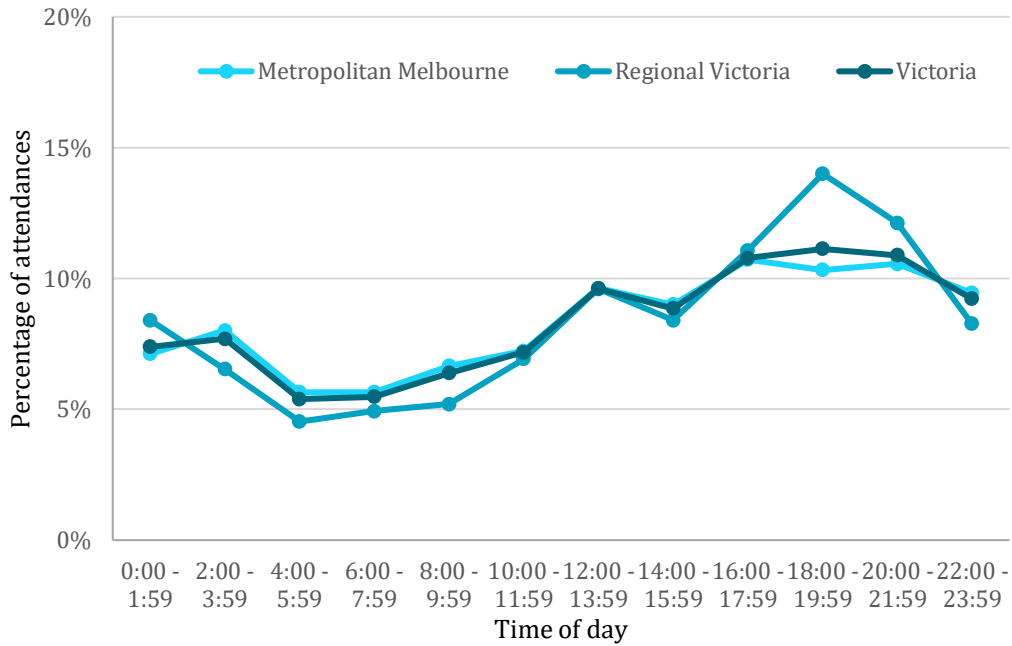


Figure 8: Percentage of crystal methamphetamine-related attendances by time of day in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

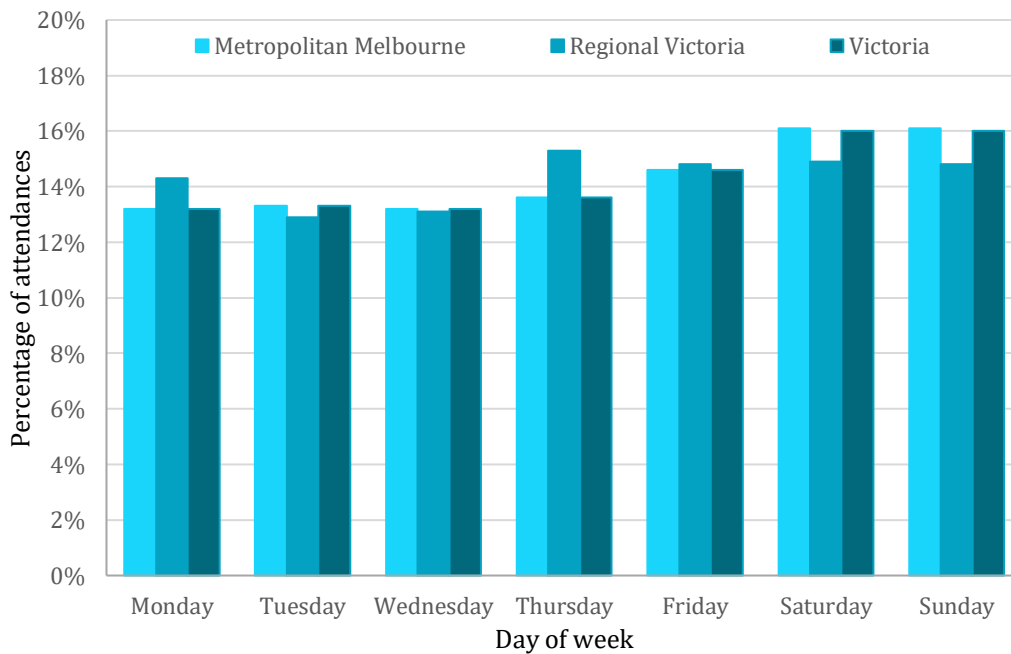
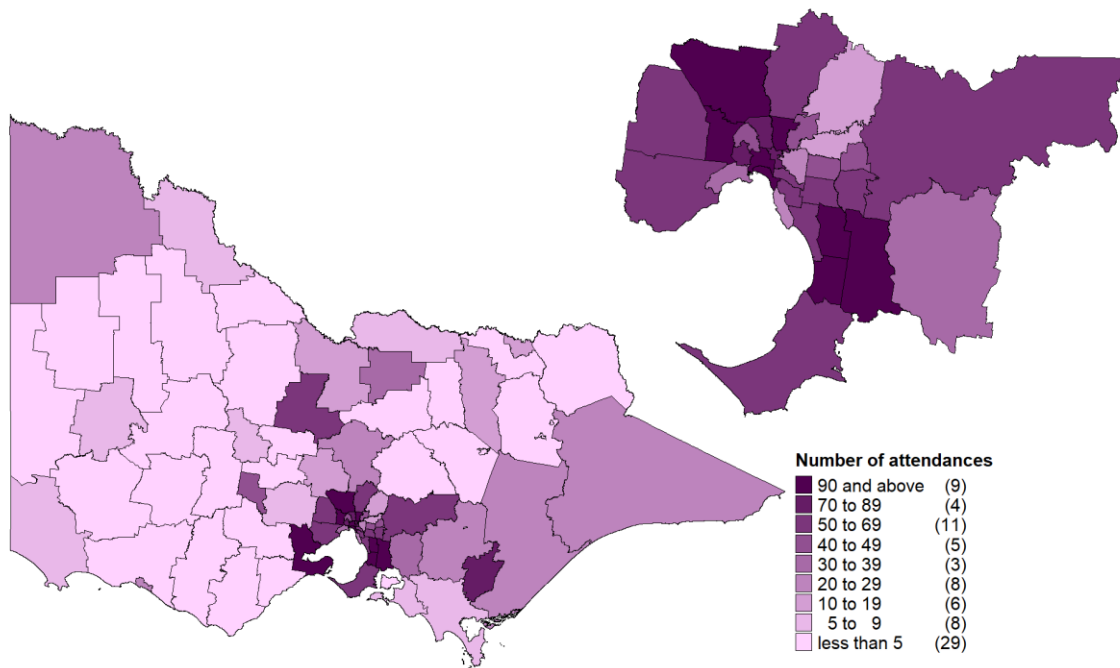
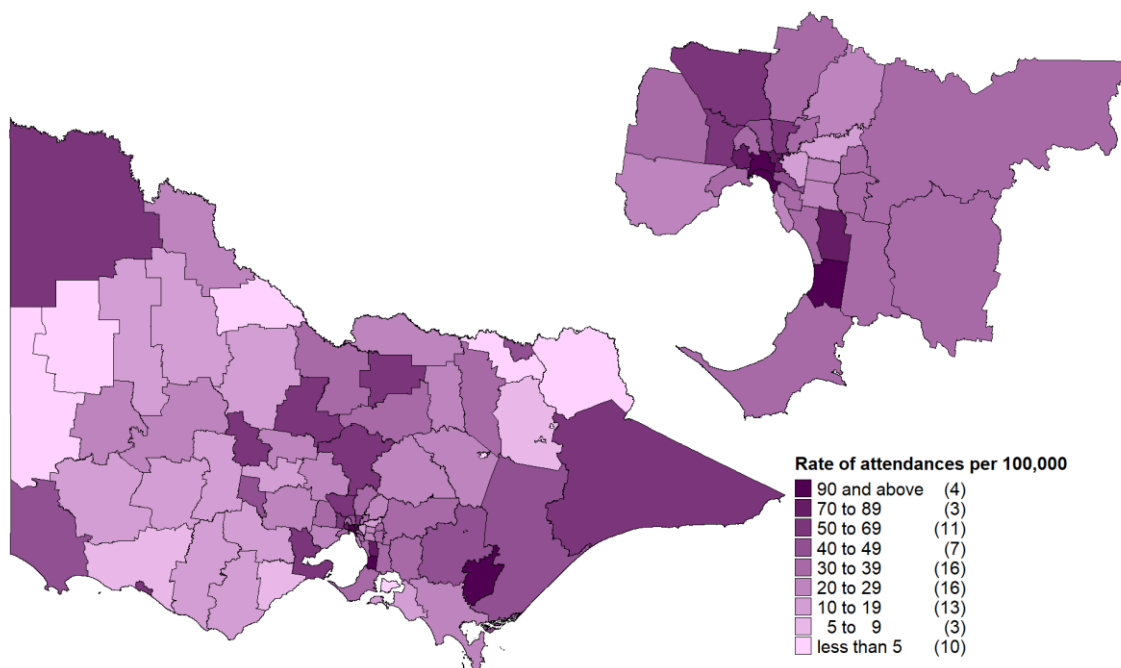


Figure 9: Percentage of crystal methamphetamine-related attendances by day of week in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019



Map 5: Number of crystal methamphetamine-related attendances by Victorian LGA, 1 January to 31 December 2019



Map 6: Rate of crystal methamphetamine-related attendances per 100,000 resident population by Victorian LGA, 1 January to 31 December 2019

Cannabis-related attendances in Victoria

Results are presented for the twelve-month period from 1 January to 31 December 2019 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 1 January to 31 December 2019 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 (Map 7 and 8).

- In 2019, cannabis-related attendances peaked during December in metropolitan and regional areas (Table 7).
- Characteristics over the 12-month period are presented in Table 8:
 - 4,030 cannabis-related attendances were recorded across Victoria
 - the majority of cannabis-related attendances were male (63%), with similar proportions reported in metropolitan and regional areas
 - the median age of cannabis-related attendances was 28 years in Victoria
 - a slightly lower proportion of cannabis-related attendances in metropolitan areas (80%) were transported to hospital than in regional areas (82%).
- As presented in Figure 11, cannabis-related attendance numbers peaked between 8pm and 12am in metropolitan Melbourne and in regional areas.
- In 2019, Saturday and Sunday represented the peak day for cannabis-related attendances in metropolitan Melbourne, while the peak in regional areas was limited to Saturdays (Figure 12).

Table 7: Cannabis-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	228 (4.6)	97 (6.1)	326 (4.9)
February attendances (per 100,000 population)	193 (3.9)	61 (3.8)	254 (3.9)
March attendances (per 100,000 population)	229 (4.6)	87 (5.4)	317 (4.8)
April attendances (per 100,000 population)	207 (4.1)	88 (5.5)	297 (4.5)
May attendances (per 100,000 population)	265 (5.3)	89 (5.6)	354 (5.4)
June attendances (per 100,000 population)	241 (4.8)	94 (5.9)	335 (5.1)
July attendances (per 100,000 population)	224 (4.5)	104 (6.5)	328 (5.0)
August attendances (per 100,000 population)	249 (5.0)	104 (6.5)	353 (5.4)
September attendances (per 100,000 population)	281 (5.6)	97 (6.1)	379 (5.7)
October attendances (per 100,000 population)	243 (4.9)	105 (6.6)	348 (5.3)
November attendances (per 100,000 population)	232 (4.6)	92 (5.8)	324 (4.9)
December attendances (per 100,000 population)	285 (5.7)	130 (8.1)	415 (6.3)

Table 8: Characteristics of cannabis-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	2,877 (57.5)	1,148 (71.9)	4,030 (61.1)
Mean attendances per day	9.7	9.8	9.7
Daily range	N<5-22	N<5-17	N<5-22
Age- median (interquartile range)	28 (21-40)	28 (21-41)	28 (21-41)
Male	1,850 (64%)	703 (61%)	2,555 (63%)
Police co-attendance	984 (34%)	400 (35%)	1,385 (34%)
Transport to hospital	2,300 (80%)	943 (82%)	3,247 (81%)
Alcohol involved	1,095 (38%)	414 (36%)	1,510 (38%)
Alcohol intoxication	663 (23%)	252 (22%)	916 (23%)
Multiple drugs involved (excluding alcohol)	939 (33%)	357 (31%)	1,298 (32%)

Note: all proportions are based on present information

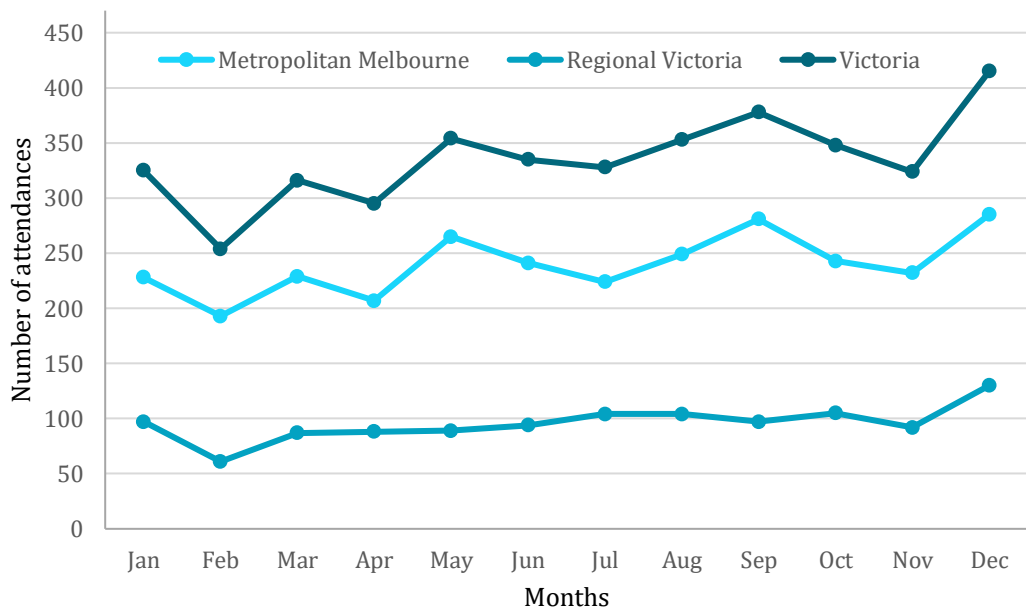


Figure 10: Number of cannabis-related attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

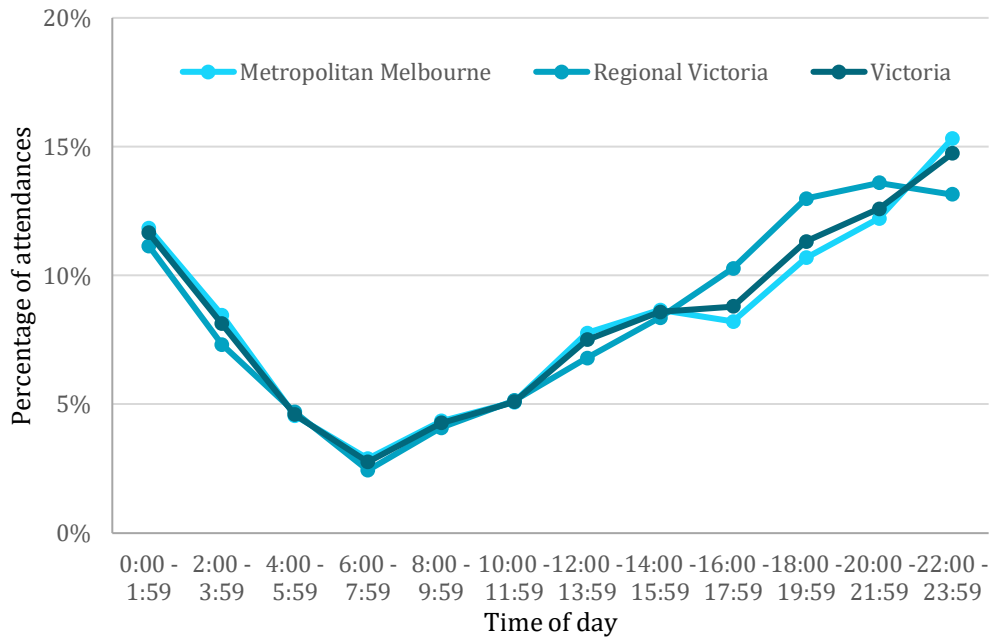


Figure 11: Percentage of cannabis-related attendances by time of day in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

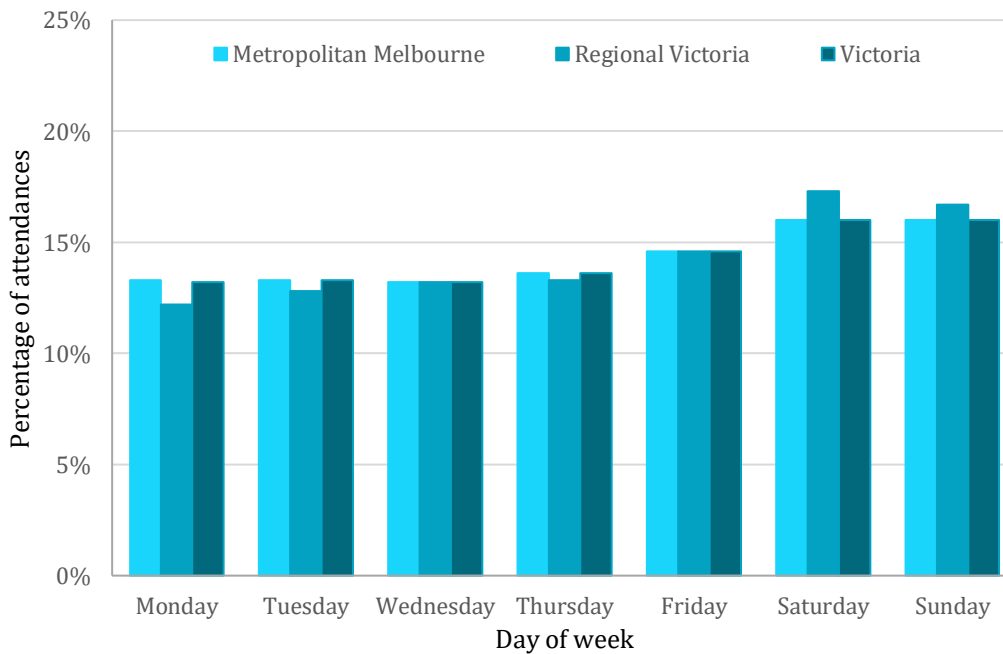
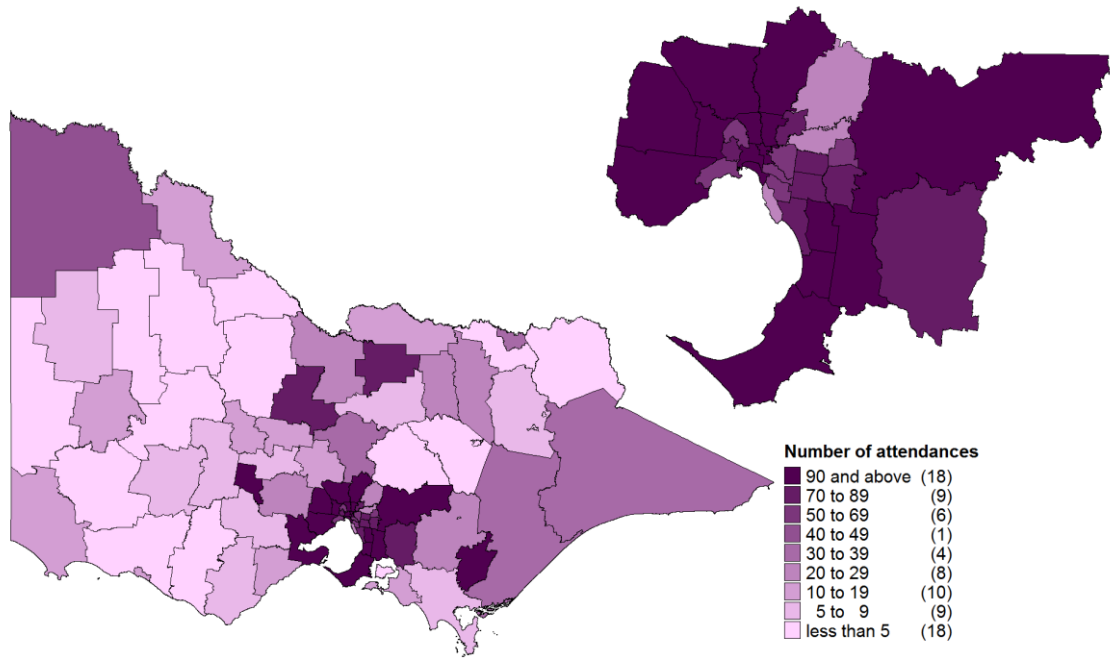
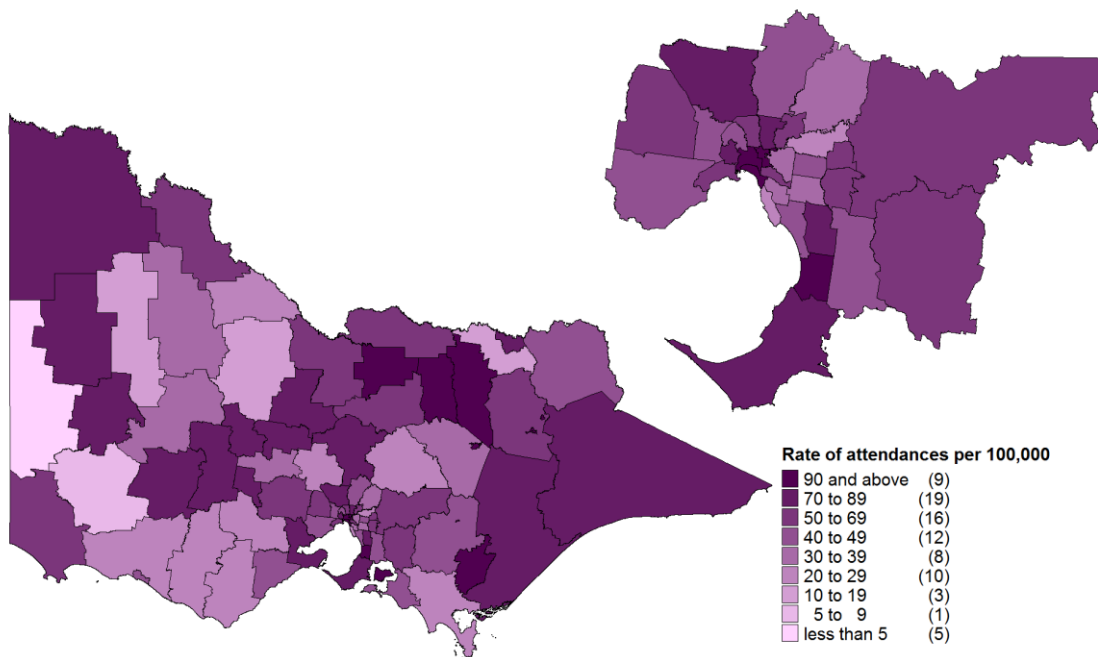


Figure 12: Percentage of cannabis-related attendances by day of week in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019



Map 7: Number of cannabis-related attendances by Victorian LGA, 1 January to 31 December 2019



Map 8: Rate of cannabis-related attendances per 100,000 resident population by Victorian LGA, 1 January to 31 December 2019

Heroin-related attendances in Victoria

Results are presented for the twelve-month period from 1 January to 31 December 2019 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 1 January to 31 December 2019 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 (Map 9 and 10).

- Heroin-related attendances peaked in December and January 2019 in metropolitan Melbourne and in October in regional Victoria (Table 9).
- Characteristics over the 12-month period are presented in Table 10:
 - 3,636 heroin-related attendances were recorded, with the majority of these attendances occurring in metropolitan areas (90%)
 - the majority of heroin-related attendances were for males (72%) with similar proportions in metropolitan and regional areas
 - the median age of heroin-related attendances was 40 years in Victoria
 - a lower proportion of heroin-related attendances in metropolitan Melbourne (50%) 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 4pm in metropolitan areas and in regional areas.
- In 2019, Saturdays and Sundays represented the peak days for heroin-related attendances in metropolitan areas and Fridays in regional Victoria (Figure 15).

Table 9: Heroin-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	323 (6.5)	28 (1.8)	351 (5.3)
February attendances (per 100,000 population)	285 (5.7)	28 (1.8)	313 (4.7)
March attendances (per 100,000 population)	288 (5.8)	34 (2.1)	322 (4.9)
April attendances (per 100,000 population)	236 (4.7)	27 (1.7)	263 (4.0)
May attendances (per 100,000 population)	277 (5.5)	34 (2.1)	311 (4.7)
June attendances (per 100,000 population)	237 (4.7)	31 (1.9)	268 (4.1)
July attendances (per 100,000 population)	241 (4.8)	33 (2.1)	274 (4.2)
August attendances (per 100,000 population)	275 (5.5)	29 (1.8)	304 (4.6)
September attendances (per 100,000 population)	234 (4.7)	33 (2.1)	267 (4.0)
October attendances (per 100,000 population)	277 (5.5)	37 (2.3)	314 (4.8)
November attendances (per 100,000 population)	277 (5.5)	33 (2.1)	310 (4.7)
December attendances (per 100,000 population)	308 (6.2)	31 (1.9)	339 (5.1)

Table 10: Characteristics of heroin-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	3,258 (65.2)	378 (23.7)	3,636 (55.1)
Mean attendances per day	10.0	9.8	10.0
Daily range	N<5-18	N<5-14	N<5-20
Age- median (interquartile range)	40 (33-47)	41 (33-49)	40 (33-47)
Male	2,324 (71%)	280 (74%)	2,604 (72%)
Police co-attendance	812 (25%)	83 (22%)	895 (25%)
Transport to hospital	1,626 (50%)	231 (62%)	1,857 (51%)
Alcohol involved	426 (13%)	81 (21%)	507 (14%)
Alcohol intoxication	200 (6%)	49 (13%)	249 (7%)
Multiple drugs involved (excluding alcohol)	749 (23%)	108 (29%)	857 (24%)
Responded to naloxone	1,238 (38%)	141 (37%)	1,379 (38%)

Note: all proportions are based on present information

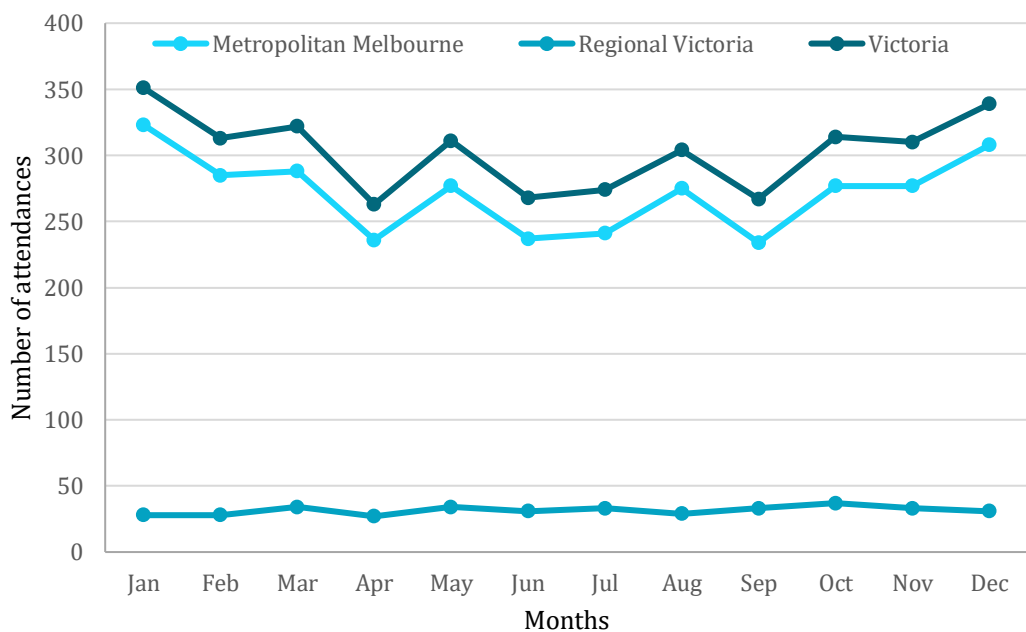


Figure 13: Number of heroin-related attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

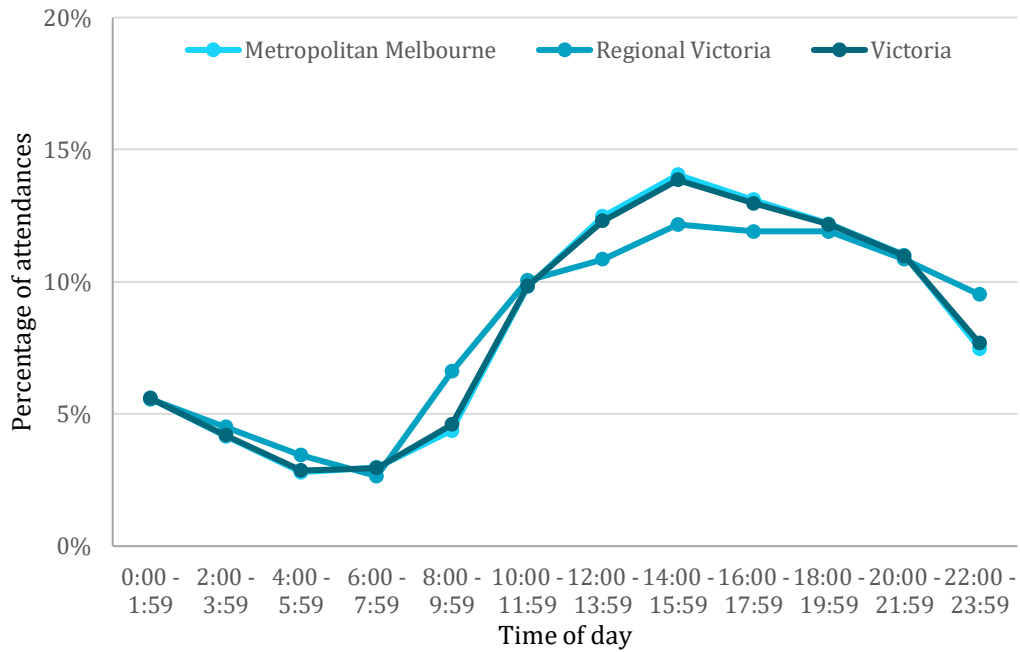


Figure 14: Percentage of heroin-related attendances by time of day in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

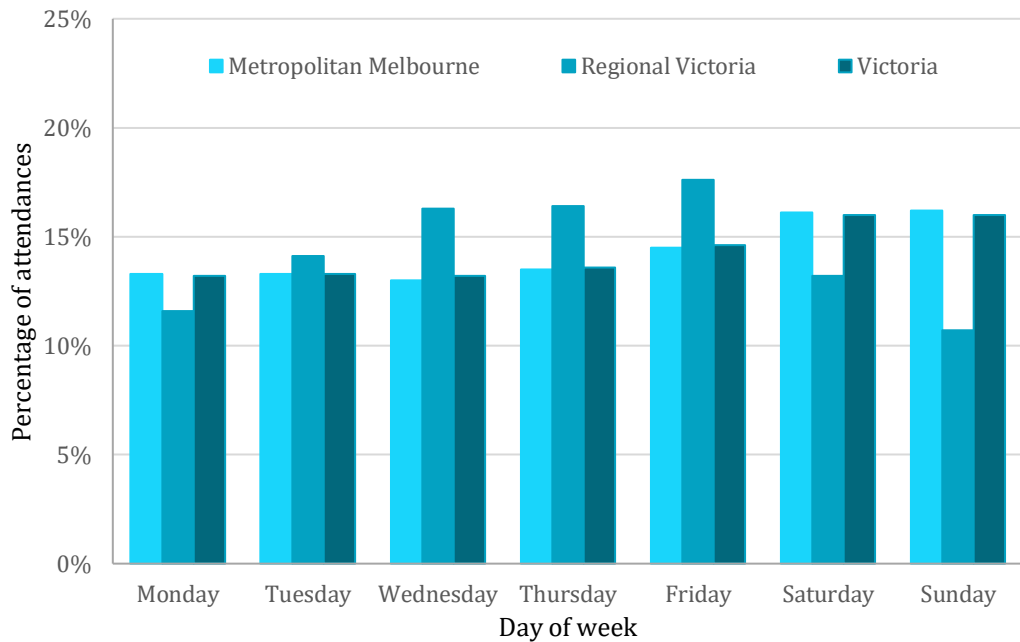
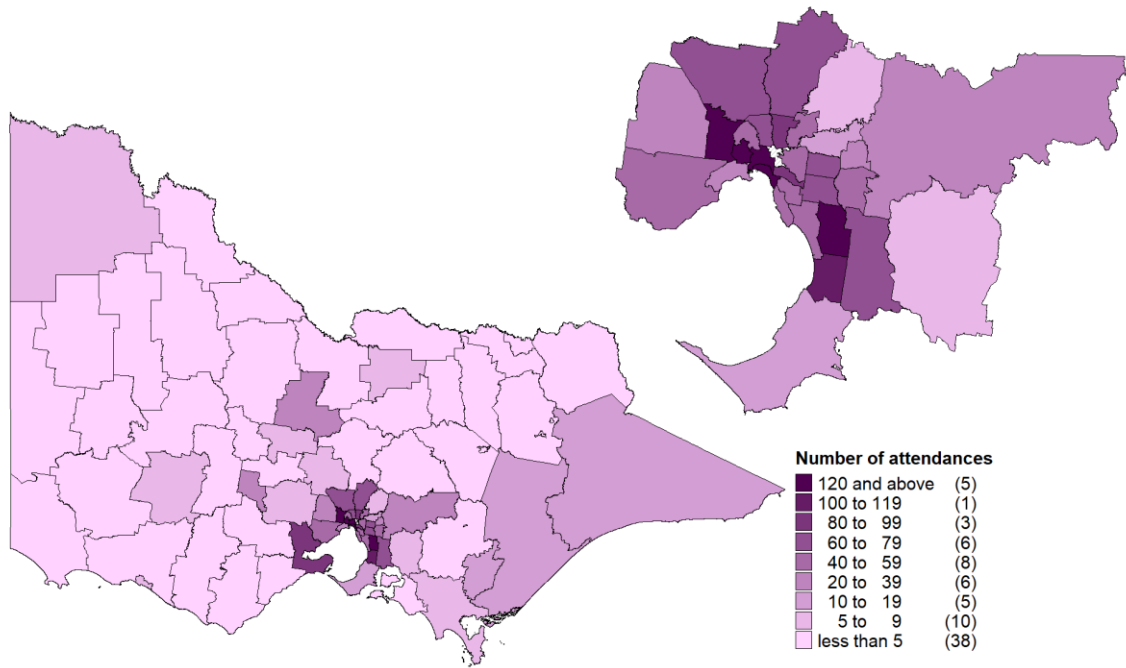
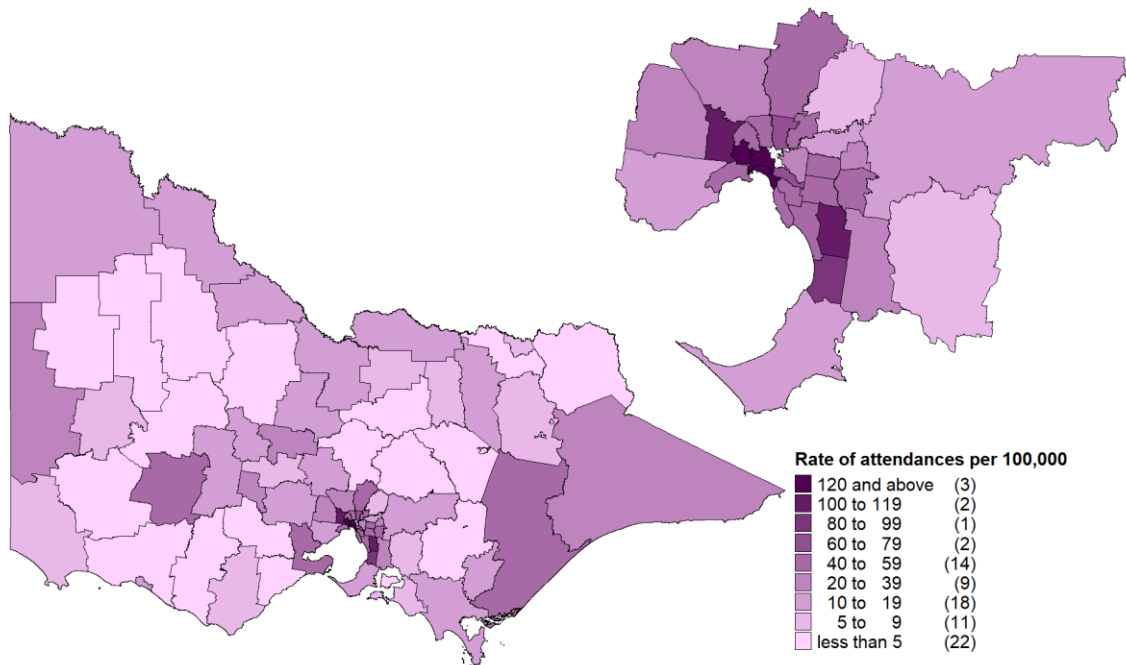


Figure 15: Percentage of heroin-related attendances by day of week in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019



Map 9: Number of heroin-related attendances by Victorian LGA, 1 January to 31 December 2019



Map 10: Rate of heroin-related attendances per 100,000 resident population by Victorian LGA, 1 January to 31 December 2019

Emerging psychoactive substance-related attendances in Victoria

Characteristics of emerging psychoactive substance-related ambulance attendances in Victoria for the 12 months from 1 January to 31 December 2019 are shown in Table 11. Graphed and mapped data are not presented due to low numbers of attendances.

- Emerging psychoactive substance-related attendances were very low across all months in 2019 (table not included).
- Characteristics over the 12-month period are presented in Table 11:
 - 16 emerging psychoactive substance-related attendances recorded in Victoria
 - the median age of emerging psychoactive substance-related attendances was 27 years
 - ≥69% of emerging psychoactive substance-related attendances were transported to hospital

Table 11: Characteristics of emerging psychoactive substance-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	≥11 (≥0.2)	N<5	16 (0.2)
Mean attendances per day	<5	-	<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	27 (26-29)	23 (21-37)	27 (23-30)
Male	≥6 (≥55%)	N<5	≥11 (≥69%)
Police co-attendance	N<5	N<5	6 (38%)
Transport to hospital	≥6 (≥55%)	N<5	≥11 (≥69%)
Alcohol involved	N<5	N<5	6 (38%)
Alcohol intoxication	N<5	0	N<5
Multiple drugs involved (excluding alcohol)	N<5	N<5	7 (44%)

Note: all proportions are based on present information

Benzodiazepine-related attendances in Victoria

Results are presented for the twelve-month period from 1 January to 31 December 2019 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 1 January to 31 December 2019 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 (Map 11 and 12).

- In Victoria, benzodiazepine-related attendances peaked in January, March, and August 2019 (Table 13).
- Characteristics over the 12-month period are presented in Table 14:
 - 4,793 benzodiazepine-related attendances were recorded
 - Fewer than half of Victorian benzodiazepine-related attendances were male (44%)
 - the median age of benzodiazepine-related attendances was 38 years, with similar age distribution in regional and metropolitan areas
 - a similar proportion of benzodiazepine-related attendances in metropolitan (91%) and regional areas (92%) were transported to hospital
 - more than half of all benzodiazepine-related attendances (52%) involved multiple drugs
- As presented in Figure 17, benzodiazepine-related attendance numbers peaked between 6pm and 12am in both metropolitan and regional areas.
- Saturdays and Sundays were the peak days for benzodiazepine-related attendances in metropolitan Melbourne, and Fridays in regional Victoria (Figure 18).

Table 12: Benzodiazepine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	320 (6.4)	120 (7.5)	441 (6.7)
February attendances (per 100,000 population)	315 (6.3)	109 (6.8)	424 (6.4)
March attendances (per 100,000 population)	331 (6.6)	105 (6.6)	436 (6.6)
April attendances (per 100,000 population)	286 (5.7)	88 (5.5)	374 (5.7)
May attendances (per 100,000 population)	276 (5.5)	88 (5.5)	364 (5.5)
June attendances (per 100,000 population)	304 (6.1)	85 (5.3)	389 (5.9)
July attendances (per 100,000 population)	286 (5.7)	86 (5.4)	372 (5.6)
August attendances (per 100,000 population)	313 (6.3)	109 (6.8)	422 (6.4)
September attendances (per 100,000 population)	281 (5.6)	86 (5.4)	367 (5.6)
October attendances (per 100,000 population)	309 (6.2)	90 (5.6)	401 (6.1)
November attendances (per 100,000 population)	298 (6.0)	109 (6.8)	409 (6.2)
December attendances (per 100,000 population)	300 (6.0)	94 (5.9)	394 (6.0)

Table 13: Characteristics of benzodiazepine-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	3,619 (72.4)	1,169 (73.2)	4,793 (72.7)
Mean attendances per day	13.1	13.2	13.1
Daily range	N<5-22	6-23	5-22
Age- median (interquartile range)	37 (26-48)	39 (27-50)	38 (26-49)
Male	1,624 (45%)	501 (43%)	2,126 (44%)
Police co-attendance	1,138 (32%)	416 (36%)	1,555 (32%)
Transport to hospital	3,260 (91%)	1,078 (92%)	4,343 (91%)
Alcohol involved	1,562 (43%)	525 (45%)	2,090 (44%)
Alcohol intoxication	1,064 (29%)	386 (33%)	1,452 (31%)
Multiple drugs involved (excluding alcohol)	1,888 (52%)	614 (53%)	2,504 (52%)

Note: all proportions are based on present information

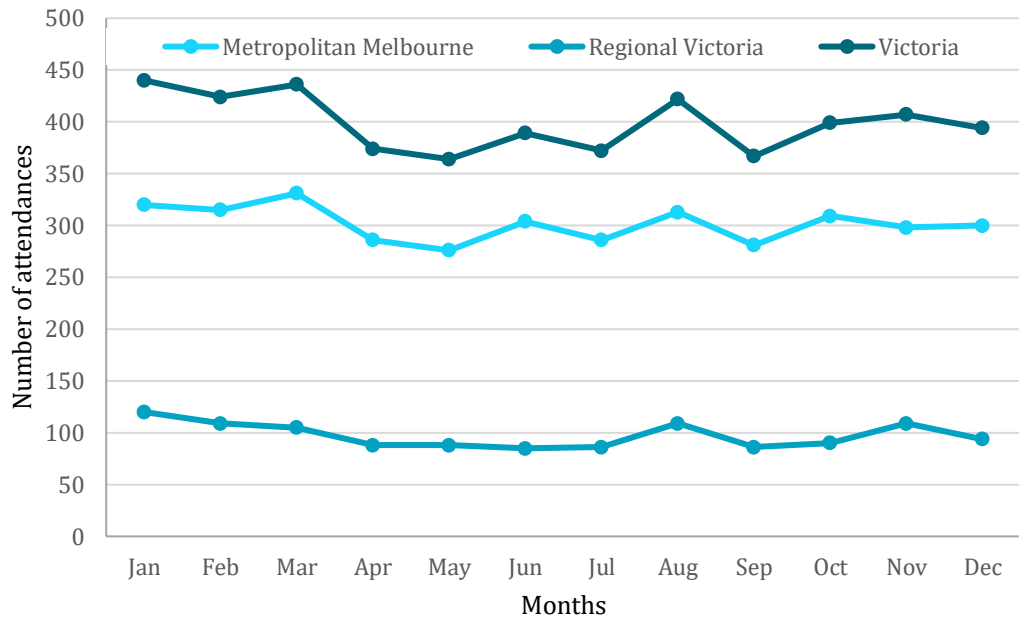


Figure 16: Number of benzodiazepine-related attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

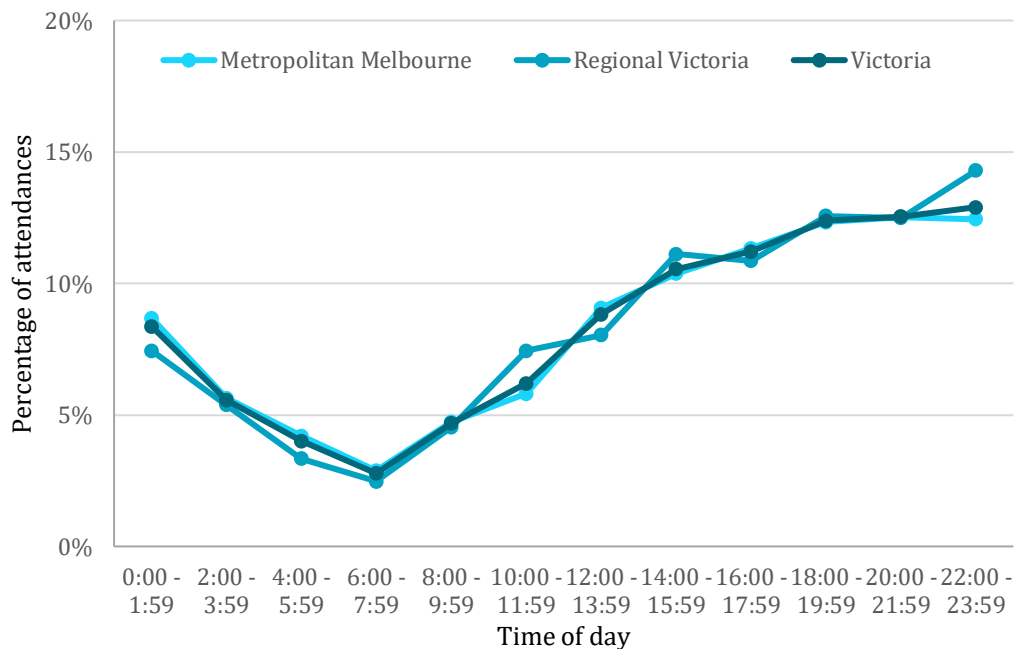


Figure 17: Percentage of benzodiazepine-related attendances by time of day in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

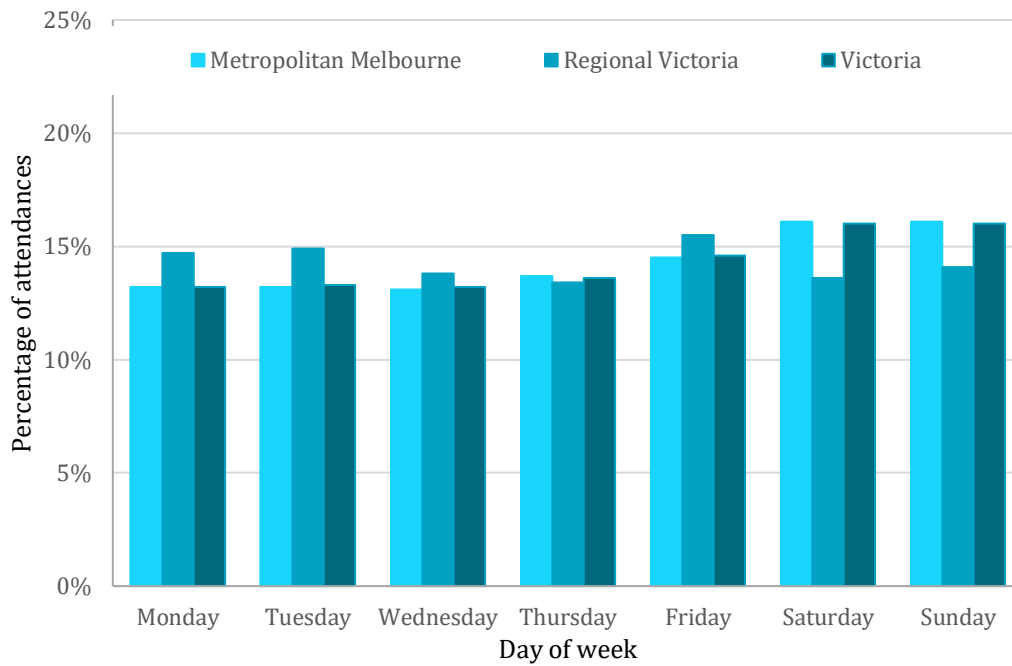
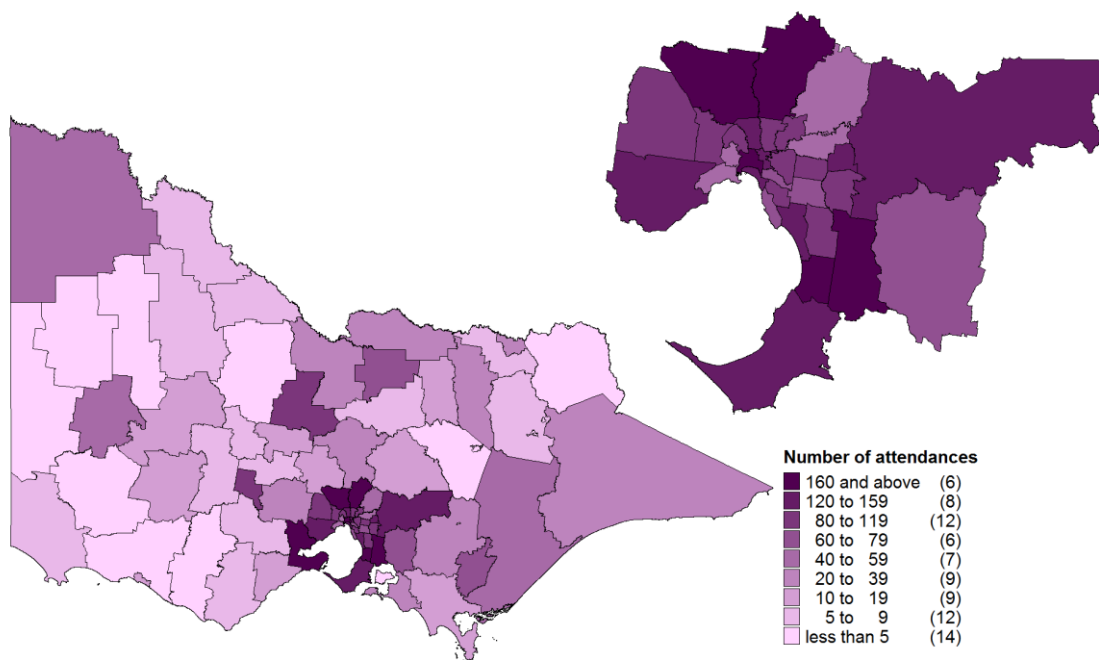
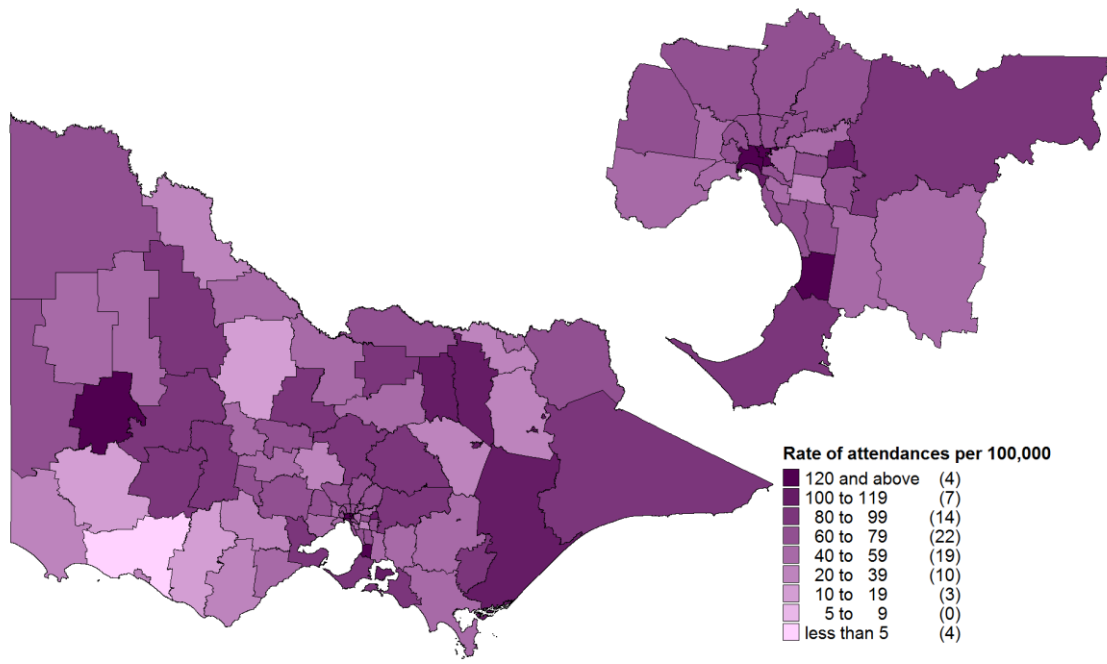


Figure 18: Percentage of benzodiazepine-related attendances by day of week in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019



Map 11: Number of benzodiazepine-related attendances by Victorian LGA, 1 January to 31 December 2019



Map 12: Rate of benzodiazepine-related attendances per 100,000 resident population by Victorian LGA, 1 January to 31 December 2019

Opioid analgesic-related attendances in Victoria

Results are presented for the twelve-month period from 1 January to 31 December 2019 for Victoria.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 14. Characteristics of opioid analgesic-related ambulance attendances in Victoria for the 12 months from 1 January to 31 December 2019 are shown in Table 15. 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 (Map 13 and 14).

- Opioid analgesic-related attendances in metropolitan Melbourne peaked in February, August, and October, and the highest numbers of attendances in regional Victoria were in January and February 2019 (Table 14).
- Characteristics over the 12-month period are presented in Table 16:
 - 1,262 opioid analgesic-related attendances were recorded in Victoria
 - 45% of opioid analgesic-related attendances were for males
 - the median age of opioid analgesic-related attendances was 42 years, with similar age distributions in metropolitan and regional areas
 - an equally high proportion of opioid analgesic-related attendances in metropolitan and regional areas (90% respectively) 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 at 6pm in metropolitan Melbourne and in regional areas.
- Saturdays and Sundays were the peak days for opioid analgesic-related attendances in metropolitan Melbourne, and Mondays days in regional Victoria (Figure 21).

Table 14: Opioid analgesic-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	71 (1.4)	48 (3.0)	119 (1.8)
February attendances (per 100,000 population)	79 (1.6)	47 (2.9)	127 (1.9)
March attendances (per 100,000 population)	72 (1.4)	36 (2.3)	108 (1.6)
April attendances (per 100,000 population)	61 (1.2)	33 (2.1)	94 (1.4)
May attendances (per 100,000 population)	58 (1.2)	30 (1.9)	88 (1.3)
June attendances (per 100,000 population)	57 (1.1)	33 (2.1)	90 (1.4)
July attendances (per 100,000 population)	64 (1.3)	32 (2.0)	97 (1.5)
August attendances (per 100,000 population)	79 (1.6)	27 (1.7)	106 (1.6)
September attendances (per 100,000 population)	71 (1.4)	40 (2.5)	112 (1.7)
October attendances (per 100,000 population)	76 (1.5)	38 (2.4)	114 (1.7)
November attendances (per 100,000 population)	54 (1.1)	40 (2.5)	94 (1.4)
December attendances (per 100,000 population)	73 (1.5)	39 (2.4)	113 (1.7)

Table 15: Characteristics of opioid analgesic-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	815 (16.3)	443 (27.7)	1,262 (19.1)
Mean attendances per day	<5	<5	<5
Daily range	0-8	0-9	0-8
Age- median (interquartile range)	42 (29-55)	42 (28-52)	42 (28-53)
Male	361 (44%)	202 (46%)	564 (45%)
Police co-attendance	192 (24%)	116 (26%)	310 (25%)
Transport to hospital	729 (90%)	400 (90%)	1,133 (90%)
Alcohol involved	278 (34%)	138 (31%)	418 (33%)
Alcohol intoxication	183 (23%)	109 (25%)	294 (23%)
Multiple drugs involved (excluding alcohol)	501 (62%)	253 (57%)	755 (60%)
Morphine	51 (6%)	40 (9%)	92 (7%)
Oxycodone	433 (53%)	224 (51%)	660 (52%)

Note: all proportions are based on present information

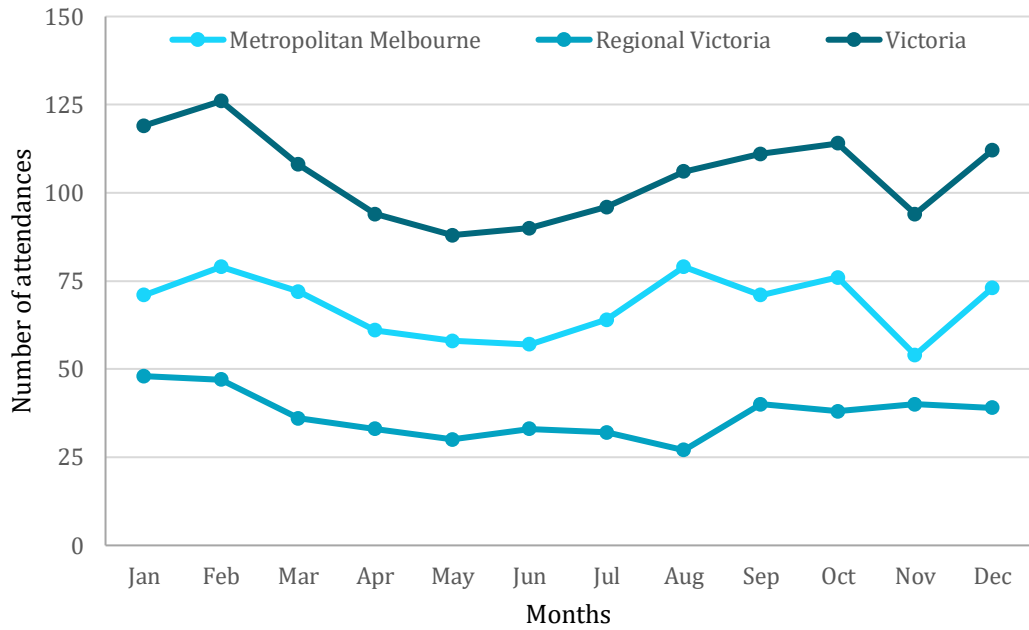


Figure 19: Number of opioid analgesic-related attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

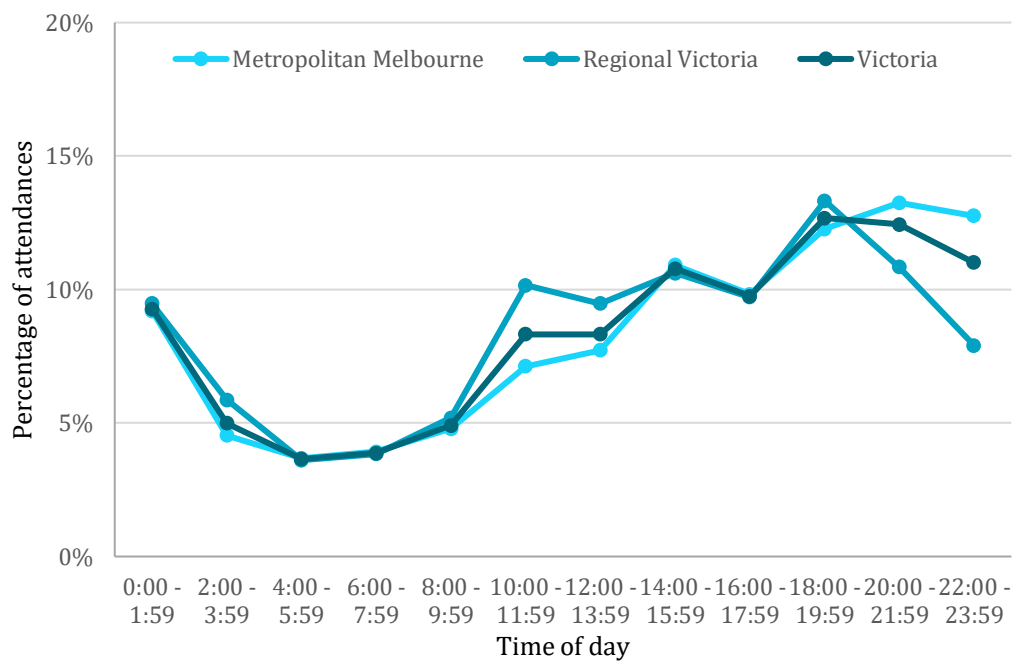


Figure 20: Percentage of opioid analgesic-related attendances by time of day in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

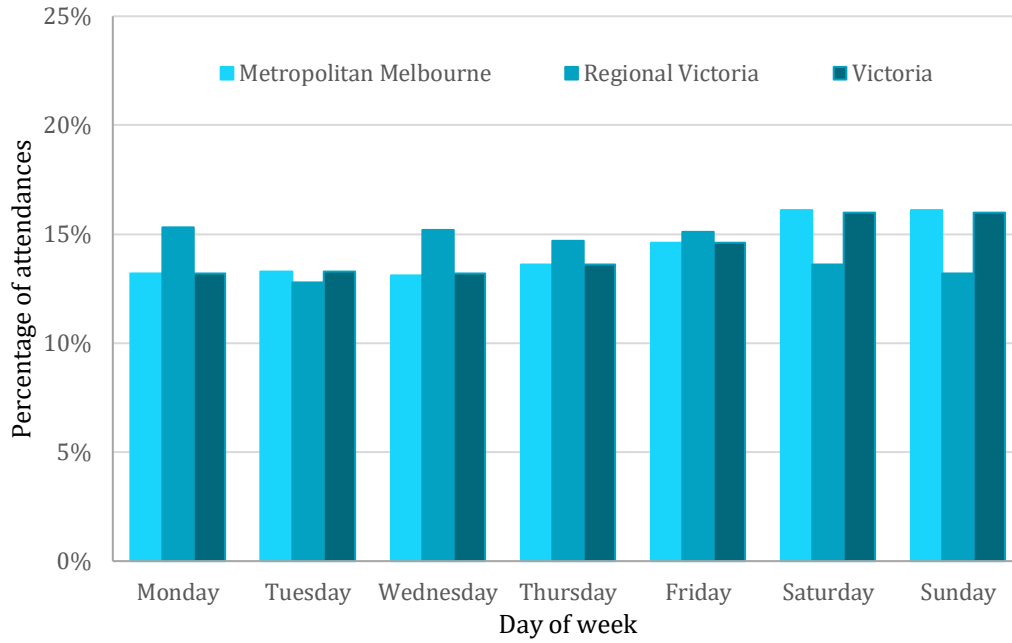
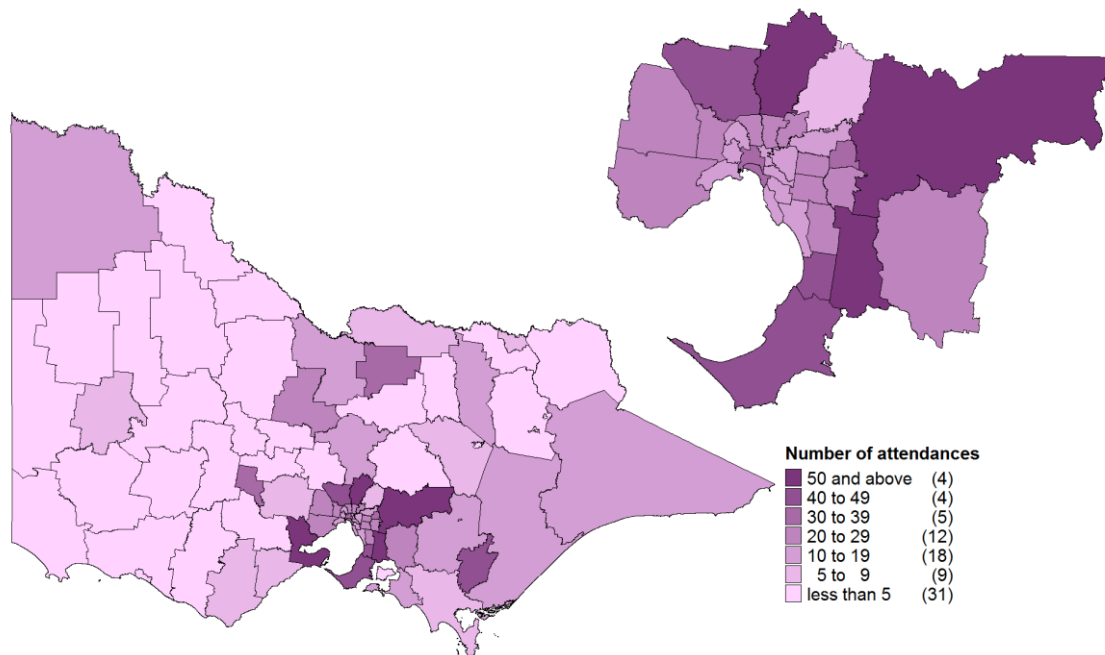
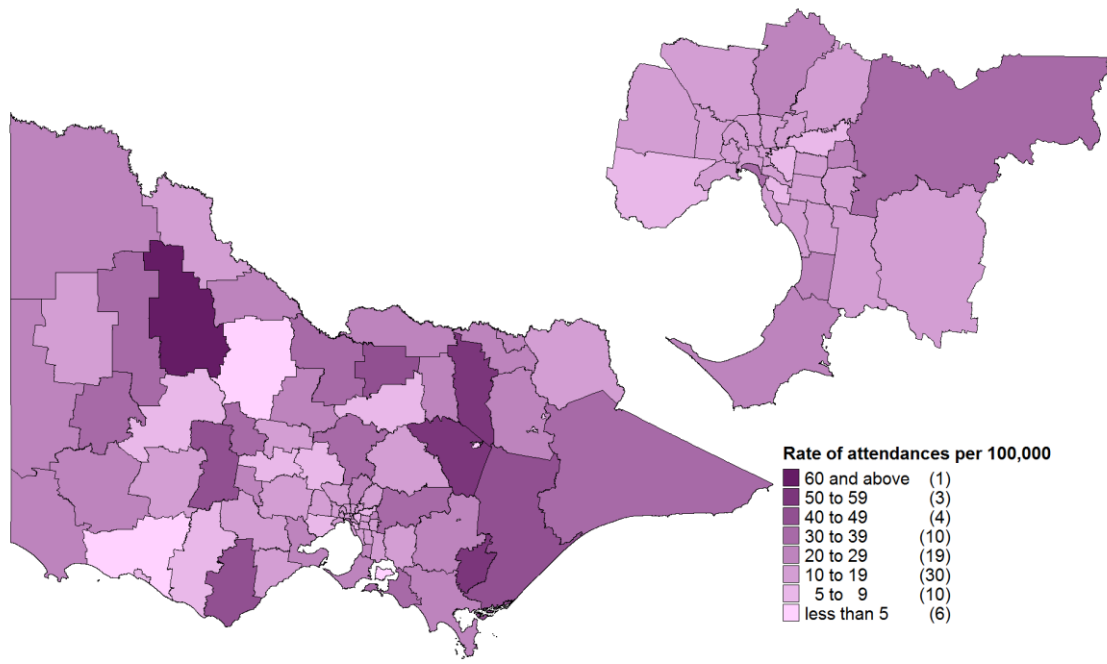


Figure 21: Percentage of opioid analgesic-related attendances by day of week in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019



Map 13: Number of opioid analgesic-related attendances by Victorian LGA, 1 January to 31 December 2019



Map 14: Rate of opioid analgesic-related attendances per 100,000 resident population by Victorian LGA, 1 January to 31 December 2019

Opioid pharmacotherapy-related attendances in Victoria

Results are presented for the twelve-month period from 1 January to 31 December 2019 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 1 January to 31 December 2019 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 (Map 15 and 16).

- In 2019, opioid pharmacotherapy-related attendances peaked in March, May, and November in Metropolitan Melbourne, while regional areas peaked in January, July, October, and December (Table 16).
- Characteristics over the 12-month period are presented in Table 17:
 - 456 opioid pharmacotherapy-related attendances were recorded, with the majority of attendances (78%) occurring in metropolitan Melbourne
 - the majority of opioid pharmacotherapy-related attendances were for males (63%), with higher proportions of males in metropolitan (67%) rather than regional areas (50%)
 - the median age of opioid pharmacotherapy-related attendances was 40 years in Victoria
 - a similar proportion of opioid pharmacotherapy-related attendances in metropolitan areas (76%) compared to regional (77%) were transported to hospital
- As presented in Figure 23, opioid pharmacotherapy-related attendance numbers peaked in the evening between 2pm and 6pm in metropolitan areas and between 10am and 12pm in regional areas.
- Saturdays and Sundays were the peak days for opioid pharmacotherapy-related attendances in metropolitan areas and Fridays in regional areas (Figure 24).

Table 16: Opioid pharmacotherapy-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	30 (0.6)	12 (0.8)	42 (0.6)
February attendances (per 100,000 population)	≥22 (≥0.5)	N<5	27 (0.4)
March attendances (per 100,000 population)	36 (0.7)	6 (0.4)	42 (0.6)
April attendances (per 100,000 population)	31 (0.6)	7 (0.4)	38 (0.6)
May attendances (per 100,000 population)	37 (0.7)	5 (0.3)	42 (0.6)
June attendances (per 100,000 population)	25 (0.5)	5 (0.3)	30 (0.5)
July attendances (per 100,000 population)	26 (0.5)	13 (0.8)	39 (0.6)
August attendances (per 100,000 population)	27 (0.5)	10 (0.6)	37 (0.6)
September attendances (per 100,000 population)	30 (0.6)	7 (0.4)	37 (0.6)
October attendances (per 100,000 population)	29 (0.6)	12 (0.8)	41 (0.6)
November attendances (per 100,000 population)	35 (0.7)	6 (0.4)	42 (0.6)
December attendances (per 100,000 population)	27 (0.5)	12 (0.8)	39 (0.6)

Table 17: Characteristics of opioid pharmacotherapy-related ambulance attendances in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	356 (7.1)	99 (6.2)	456 (6.9)
Mean attendances per day	<5	<5	<5
Daily range	N<5	0-5	N<5
Age- median (interquartile range)	40 (34-46)	39 (31-47)	40 (33-46)
Male	238 (67%)	49 (50%)	287 (63%)
Police co-attendance	88 (25%)	32 (32%)	120 (26%)
Transport to hospital	270 (76%)	76 (77%)	347 (76%)
Alcohol involved	90 (25%)	18 (18%)	108 (25%)
Alcohol intoxication	45 (13%)	13 (13%)	58 (13%)
Multiple drugs involved (excluding alcohol)	209 (59%)	61 (62%)	271 (59%)

Note: all proportions are based on present information

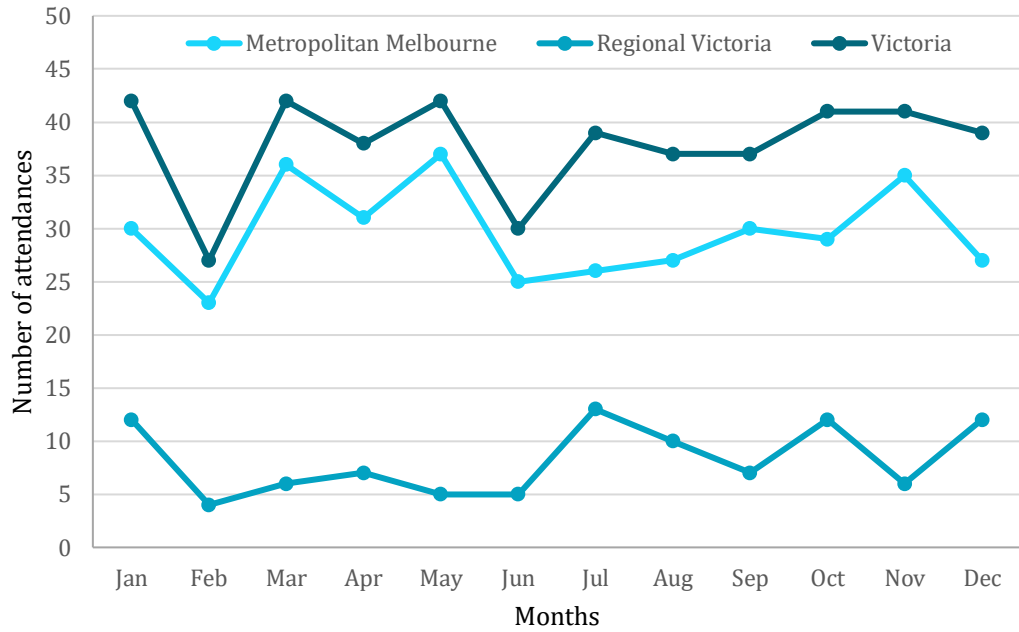


Figure 22: Number of opioid pharmacotherapy-related attendances by month in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

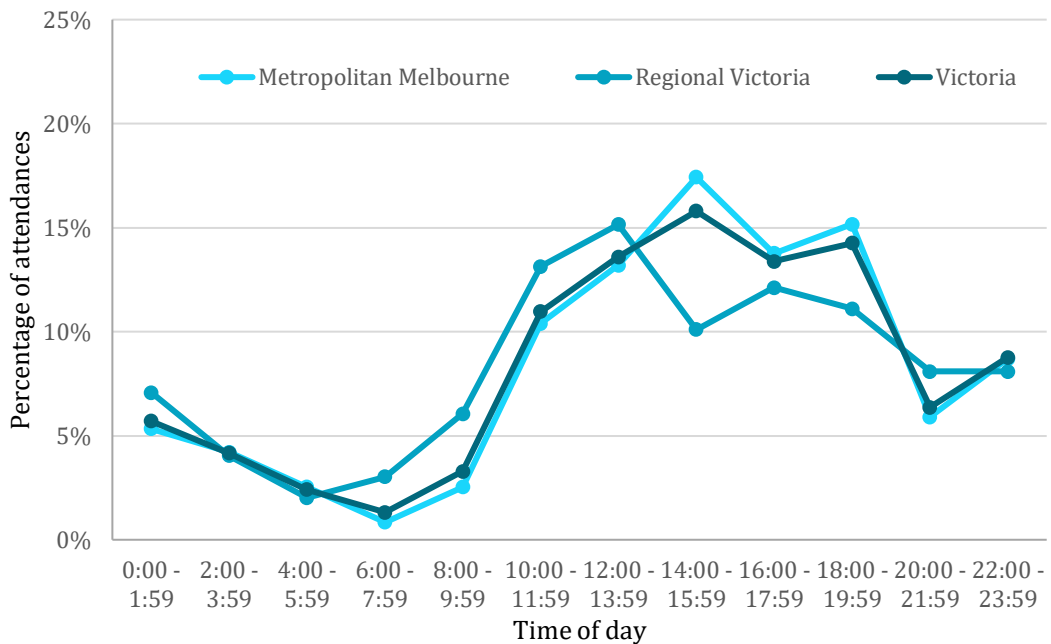


Figure 23: Percentage of opioid pharmacotherapy-related attendances by time of day in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019

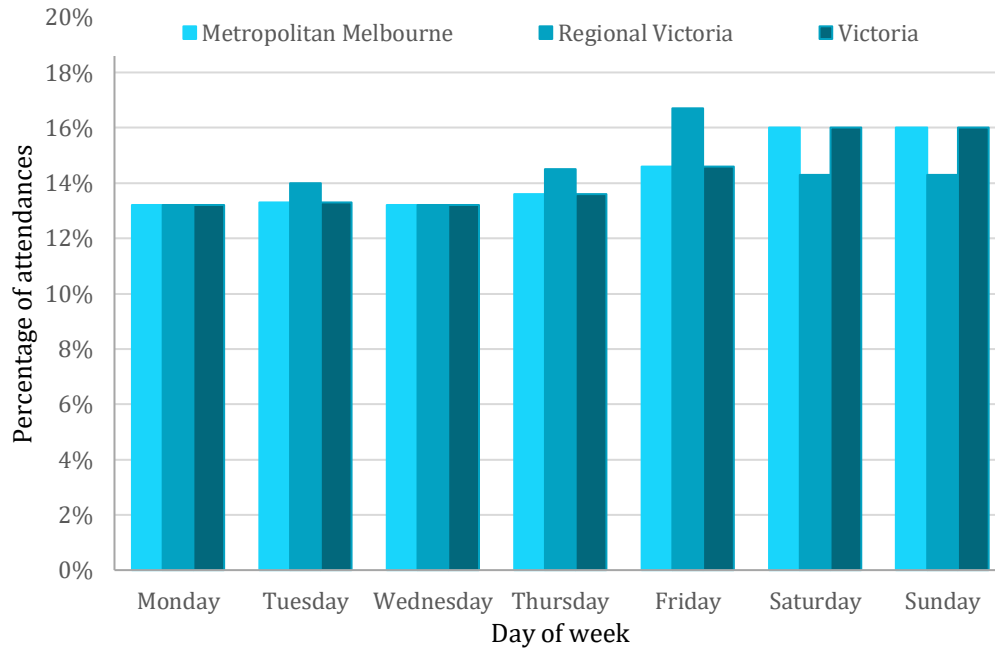
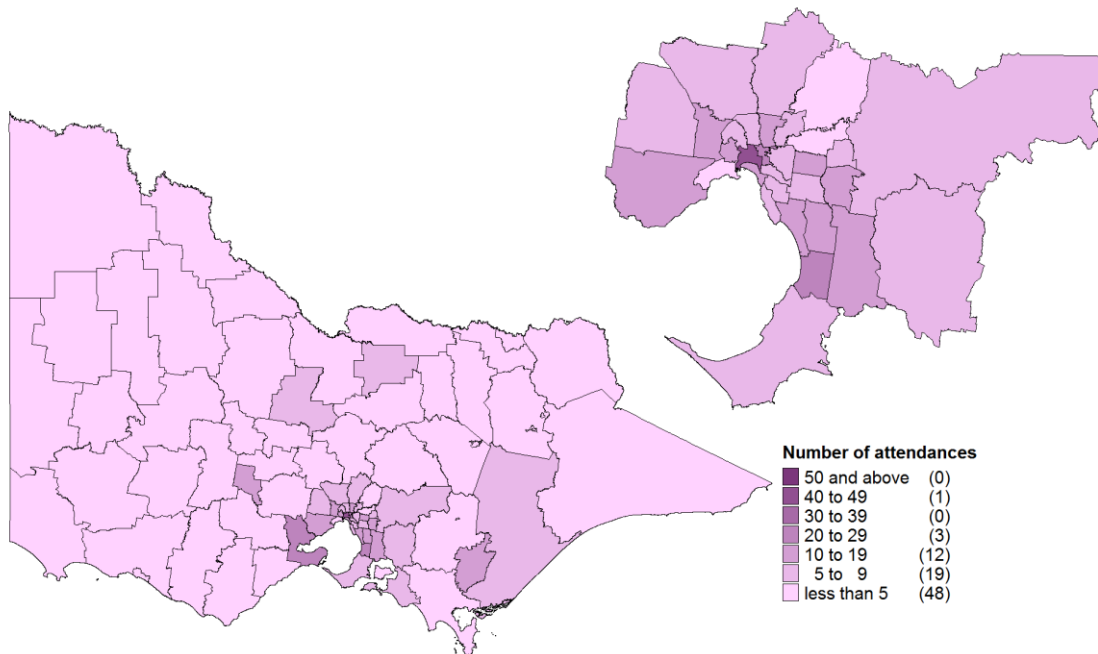
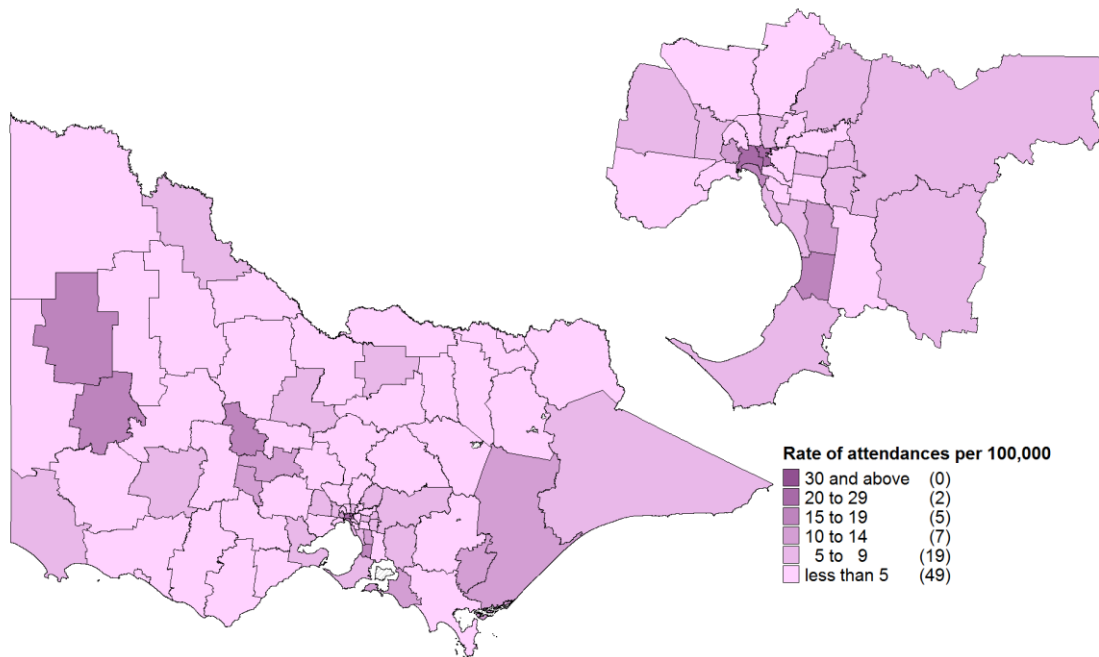


Figure 24: Percentage of opioid pharmacotherapy-related attendances by day of week in metropolitan Melbourne and regional Victoria, 1 January to 31 December 2019



Map 15: Number of opioid pharmacotherapy-related attendances by Victorian LGA, 1 January to 31 December 2019



Map 16: Rate of opioid pharmacotherapy-related attendances per 100,000 resident population by Victorian LGA, 1 January to 31 December 2019

Alcohol intoxication and other drug-related attendances: 2018 and 2019

Comparisons of the number of alcohol intoxication and other drug-related ambulance attendances in 2018 and 2019 are shown in Table 19. As presented in Table 19:

- alcohol intoxication-related attendances were statistically significantly higher in 2019 compared to 2018 in metropolitan Melbourne and regional Victoria
- amphetamine, crystal methamphetamine and benzodiazepine-related attendances in Metropolitan Melbourne were statistically significantly higher in 2019 compared to 2018
- heroin-related attendances in regional Victoria were statistically significantly higher in 2019 than 2018
- opioid pharmacotherapy-related attendances in Metropolitan Melbourne were statistically significantly lower in 2019 than 2018

Table 18. Number and percentage difference of alcohol intoxication and other drug-related attendances in 2018 and 2019, by metropolitan Melbourne and Regional Victoria

N attendances	Metropolitan Melbourne			Regional Victoria		
	Jan-Dec 2018	Jan-Dec 2019	% Diff	Jan-Dec 2018	Jan-Dec 2019	% Diff
Alcohol intoxication	20,234	22,487	+11.1 *	6,989	8,025	+14.8 *
Amphetamine	3,295	3,802	+15.4 *	933	1,103	+18.2
Crystal methamphetamine	2,275	2,588	+13.8 *	662	750	+13.3
Cannabis	2,487	2,877	+15.7	1,058	1,148	+8.5
Heroin	3,000	3,258	+8.6	262	378	+44.3 *
Emerging psychoactive substance	13	13	0.0	N<5	N<5	-
Benzodiazepine	3,547	3,619	+2.0 *	1,183	1,169	-1.2
Opioid analgesic	852	815	-4.3 *	410	443	+8.0
Opioid pharmacotherapy	351	356	+1.4	115	99	-13.9

Note: *p<0.05

Alcohol and other drug poisoning-related ambulance attendances in Victoria

AOD poisoning-related ambulance attendances by month are shown in Table 19, and characteristics of AOD poisoning-related ambulance attendances are displayed in Table 20. Drugs involved in AOD poisoning-related ambulance attendances in Victoria are presented in Table 21. It is important to note that these data represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As presented in Table 19 to Table 21:

- unintentional and undetermined intent AOD poisoning-related attendances in Victoria peaked in December and February respectively, and intentional poisonings peaked in March 2019 (Table 20)
- the population rate for unintentional AOD poisoning was higher in metropolitan Melbourne (40.3 attendances per 100,000 population) than regional Victoria (23.8 attendances per 100,000 population), however, the rate of intentional AOD poisonings was higher in regional Victoria (95.6 attendances per 100,000 population) than metropolitan Melbourne (66.3 attendances per 100,000 population), (Table 21)
- the rate of undetermined intent poisonings was similar in metropolitan (37.2 attendances per 100,000 population) and regional (39.8 attendances per 100,000 population) areas, (Table 21)
- in Victoria, the majority of unintentional and undetermined intent AOD poisoning attendances were male (63% and 51% respectively), while a higher proportion of attendances were female in attendances related to intentional AOD poisoning (67%), (Table 21)
- Excluding alcohol involvement, heroin was the most common drug contributing to unintentional poisonings in metropolitan (48%) and regional (31%) areas, while benzodiazepines were the most commonly involved drug in both undetermined intent poisonings (21% in both metropolitan and regional areas) and intentional poisonings (37% in metropolitan and 30% in regional areas), (Table 22)

Table 19: Monthly AOD poisoning-related ambulance attendances by intent and location, 1 January to 31 December 2019

Number of attendances (per 100,000 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	144 (2.9)	30 (1.9)	174 (2.6)	159 (3.2)	49 (3.1)	208 (3.2)	277 (5.5)	133 (8.3)	411 (6.2)
February	119 (2.4)	19 (1.2)	138 (2.1)	165 (3.3)	73 (4.6)	238 (3.6)	286 (5.7)	131 (8.2)	419 (6.3)
March	160 (3.2)	35 (2.2)	195 (3.0)	157 (3.1)	66 (4.1)	223 (3.4)	320 (6.4)	139 (8.7)	461 (7.0)
April	150 (3.0)	20 (1.3)	170 (2.6)	148 (3.0)	46 (2.9)	194 (2.9)	257 (5.1)	118 (7.4)	375 (5.7)
May	145 (2.9)	33 (2.1)	178 (2.7)	159 (3.2)	46 (2.9)	205 (3.1)	261 (5.2)	104 (6.5)	366 (5.5)
June	153 (3.1)	17 (1.1)	171 (2.6)	156 (3.1)	50 (3.1)	206 (3.1)	275 (5.5)	121 (7.6)	398 (6.0)
July	146 (2.9)	31 (1.9)	177 (2.7)	143 (2.9)	59 (3.7)	202 (3.1)	249 (5.0)	148 (9.3)	397 (6.0)
August	185 (3.7)	34 (2.1)	219 (3.3)	147 (2.9)	49 (3.1)	196 (3.0)	261 (5.2)	115 (7.2)	378 (5.7)
September	188 (3.8)	37 (2.3)	225 (3.4)	127 (2.5)	53 (3.3)	180 (2.7)	255 (5.1)	119 (7.5)	376 (5.7)
October	202 (4.0)	37 (2.3)	239 (3.6)	152 (3.0)	50 (3.1)	202 (3.1)	286 (5.7)	122 (7.6)	409 (6.2)
November	196 (3.9)	37 (2.3)	234 (3.5)	180 (3.6)	52 (3.3)	233 (3.5)	289 (5.8)	149 (9.3)	440 (6.6)
December	225 (4.5)	50 (3.1)	275 (4.2)	167 (3.3)	43 (2.7)	211 (3.2)	298 (6.0)	127 (8.0)	426 (6.4)

Table 20: Characteristics of AOD poisoning-related ambulance attendances by intent and location, 1 January to 31 December 2019

	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)	2,013 (40.3)	380 (23.8)	2,395 (36.3)	1,860 (37.2)	636 (39.8)	2,498 (37.8)	3,314 (66.3)	1,526 (95.6)	4,856 (73.4)
Number of fatal poisonings	51 (3%)	16 (4%)	67 (3%)	15 (1%)	9 (1%)	24 (1%)	23 (1%)	5 (<1%)	28 (1%)
Age- median (interquartile range)	35 (25-45)	33 (22-45)	35 (25-45)	35 (26-46)	33 (23-45)	35 (25-46)	32 (21-46)	33 (22-47)	32 (21-47)
Male	1,271 (63%)	220 (58%)	1,493 (63%)	989 (53%)	286 (45%)	1,276 (51%)	1,087 (33%)	493 (31%)	1,586 (33%)
Transport to hospital	1,270 (63%)	281 (74%)	1,551 (65%)	1,591 (86%)	571 (90%)	2,162 (87%)	3,266 (99%)	1,504 (99%)	4,770 (99%)
Police co-attendance	315 (16%)	74 (20%)	390 (16%)	533 (29%)	194 (31%)	727 (29%)	928 (28%)	501 (33%)	1,435 (30%)

AOD poisoning can involve either single or multiple substances

Table 21: Drugs involved in AOD poisoning-related ambulance attendances by intent and location, 1 January to 31 December 2019

	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	583 (29%)	128 (34%)	712 (30%)	502 (27%)	197 (31%)	700 (28%)	1,070 (32%)	497 (33%)	1,575 (32%)
Alcohol intoxication only	202 (10%)	69 (18%)	271 (11%)	114 (6%)	29 (5%)	143 (6%)	19 (1%)	7 (1%)	27 (1%)
Amphetamines	141 (7%)	27 (7%)	168 (7%)	83 (5%)	20 (3%)	103 (4%)	46 (1%)	25 (2%)	71 (2%)
Crystal methamphetamine	91 (5%)	16 (4%)	107 (5%)	61 (3%)	11 (2%)	72 (3%)	32 (1%)	12 (1%)	44 (1%)
Cannabis	41 (3%)	21 (6%)	62 (3%)	33 (2%)	21 (3%)	54 (2%)	53 (2%)	25 (2%)	79 (2%)
Heroin	965 (48%)	117 (31%)	1,082 (45%)	305 (16%)	49 (8%)	354 (14%)	37 (1%)	11 (1%)	48 (1%)
Emerging psychoactive substances	0	0	0	0	0	0	N<5	0	N<5
Benzodiazepine	163 (8%)	32 (8%)	195 (8%)	397 (21%)	136 (21%)	534 (21%)	1,224 (37%)	454 (30%)	1,680 (35%)
Opioid analgesics	34 (2%)	23 (6%)	57 (2%)	87 (5%)	47 (7%)	134 (5%)	275 (8%)	152 (10%)	429 (9%)
Opioid pharmacotherapy	26 (1%)	N<5	≥24 (1%)	23 (1%)	6 (1%)	30 (1%)	26 (1%)	8 (1%)	34 (1%)

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

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

Chapter 4: Results – New South Wales (NSW)

Alcohol intoxication-related attendances in NSW

Results are presented covering March, June, September and December for NSW in 2019.

Numbers and rates of monthly alcohol intoxication-related ambulance attendances are shown in Table 22. Characteristics of alcohol intoxication-related ambulance attendances in NSW for March, June, September and December 2019 are shown in Table 23. Data regarding month, time of day, and day of week of attendances are displayed in Figure 25 to Figure 27.

- Alcohol intoxication-related attendances peaked during December in metropolitan and regional areas (Table 22).
- Characteristics for March, June, September, and December 2019 are presented in Table 23:
 - 11,503 alcohol intoxication-related attendances were recorded
 - the majority of alcohol intoxication-related attendances were for males (62%)
 - police co-attended nearly a third (30%) of alcohol intoxication-related attendances
 - the median age of alcohol intoxication-related attendances was 40 years
 - a similar proportion of alcohol intoxication-related attendances were transported to hospital in metropolitan Sydney and regional areas (82% and 79% respectively)
- As presented in Figure 26, alcohol intoxication-related attendance numbers peaked in the evening between 10pm and midnight in metropolitan Sydney and regional areas of NSW.
- Peak days for alcohol intoxication-related attendances were Saturdays and Sundays (Figure 27).

Table 22: Alcohol intoxication-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	1,970 (35.4)	948 (37.5)	2,923 (36.1)
June attendances (per 100,000 population)	1,720 (30.9)	753 (29.8)	2,487 (30.7)
September attendances (per 100,000 population)	1,811 (32.6)	818 (32.4)	2,634 (32.6)
December attendances (per 100,000 population)	2,367 (44.8)	1,103 (44.9)	3,459 (42.8)

Table 23: Characteristics of alcohol intoxication-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	7,776 (139.8)	3,687 (146.0)	11,503 (142.2)
Mean attendances per day	95.0	92.4	94.3
Daily range	50-181	37-183	37-183
Age- median (quartiles)	39 (25-53)	44 (28-56)	40 (25-54)
Male	4,840 (62%)	2,241 (61%)	7,107 (62%)
Police co-attendance	2,398 (31%)	1,037 (28%)	3,444 (30%)
Transport to hospital	6,352 (82%)	2,926 (79%)	9,316 (81%)
Multiple drugs involved	251 (3%)	110 (3%)	366 (3%)

Note: all proportions are based on present information

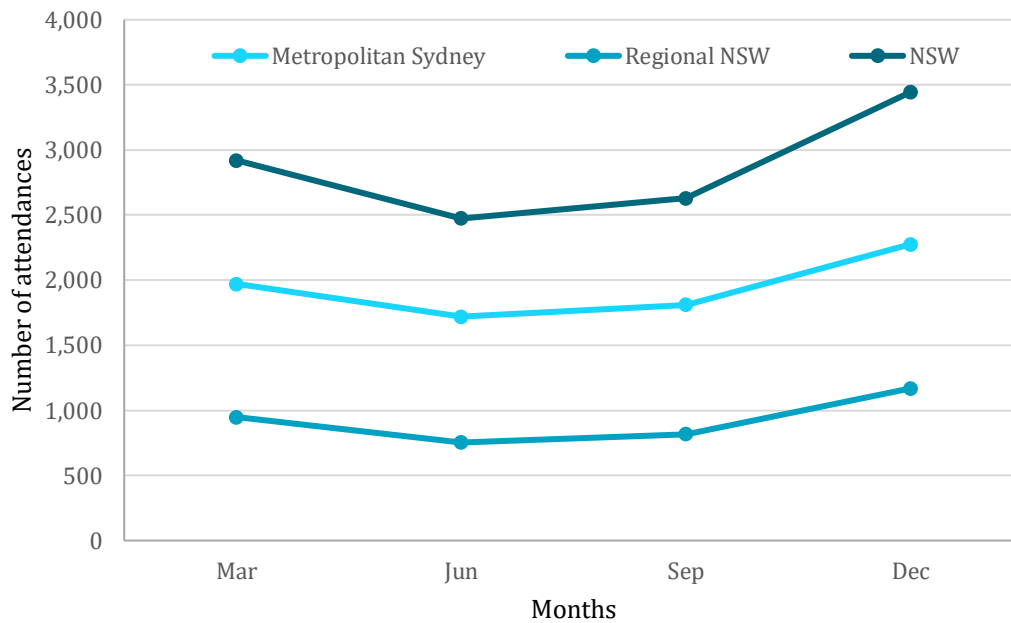


Figure 25: Alcohol intoxication-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

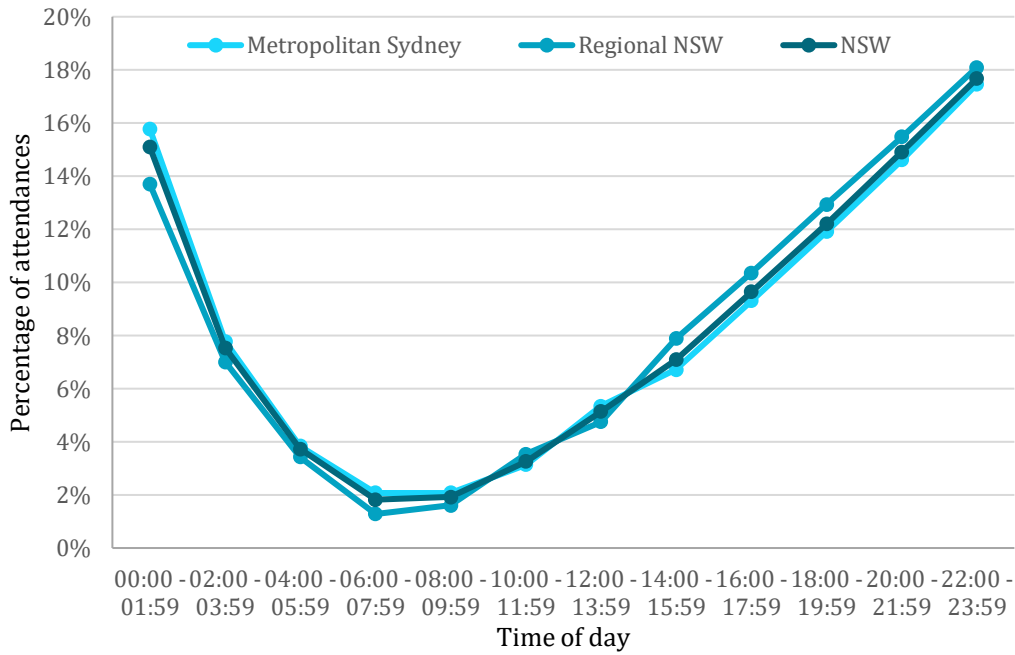


Figure 26: Alcohol intoxication-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2019

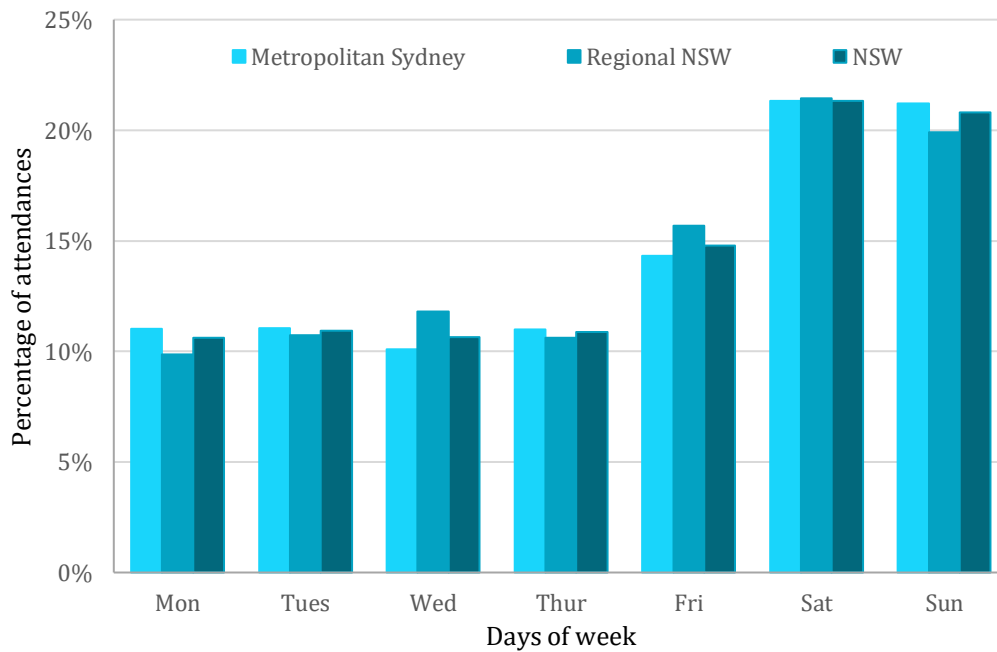


Figure 27: Percentage of alcohol intoxication-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2019

All amphetamine-related attendances in NSW

Results are presented covering March, June, September and December for NSW in 2019.

Numbers and rates of amphetamine-related ambulance attendances are shown in Table 24. Characteristics of amphetamine-related ambulance attendances in NSW for March, June, September and December 2019 are shown in Table 25. Data regarding month, time of day and day of week of attendances are displayed in Figure 28 to Figure 30.

- Amphetamine-related attendances peaked during December in metropolitan Sydney and regional areas (Table 24).
- Characteristics for March, June, September and December 2019 are presented in Table 25 and include:
 - 1,572 amphetamine-related attendances were recorded in NSW
 - the majority of amphetamine-related attendances were male (67%)
 - the median age of amphetamine-related attendances was 34 years
 - a similar proportion of amphetamine-related attendances were transported to hospital in metropolitan Sydney (89%) and in regional areas (79%)
 - multiple drugs were involved in 32% of amphetamine-related attendances across NSW
- As presented in Figure 29, amphetamine-related attendance numbers peaked between 12 and 2pm in NSW.
- Sundays were the peak day for amphetamine-related attendances in Metropolitan Sydney areas and Saturdays and Sundays in regional NSW (Figure 30).

Table 24: Amphetamine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	249 (4.5)	116 (4.6)	366 (4.5)
June attendances (per 100,000 population)	228 (4.1)	109 (4.3)	341 (4.2)
September attendances (per 100,000 population)	253 (4.5)	123 (4.9)	381 (4.6)
December attendances (per 100,000 population)	324 (5.8)	159 (6.3)	484 (6.0)

Table 25: Characteristics of amphetamine-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	1,054 (18.9)	507 (20.1)	1,572 (19.3)
Mean attendances per day	12.4	13.9	12.9
Daily range	5-21	7-29	5-29
Age- median (quartiles)	34 (27-41)	32 (25-42)	34 (26-41)
Male	713 (68%)	328 (65%)	1,049 (67%)
Police co-attendance	447 (42%)	187 (37%)	638 (41%)
Transport to hospital	933 (89%)	401 (79%)	1,343 (85%)
Alcohol involved/mentioned	155 (15%)	77 (15%)	232 (15%)
Alcohol intoxication	65 (6%)	40 (8%)	105 (7%)
Multiple drugs involved (excluding alcohol)	361 (34%)	140 (28%)	503 (32%)

Note: all proportions are based on present information

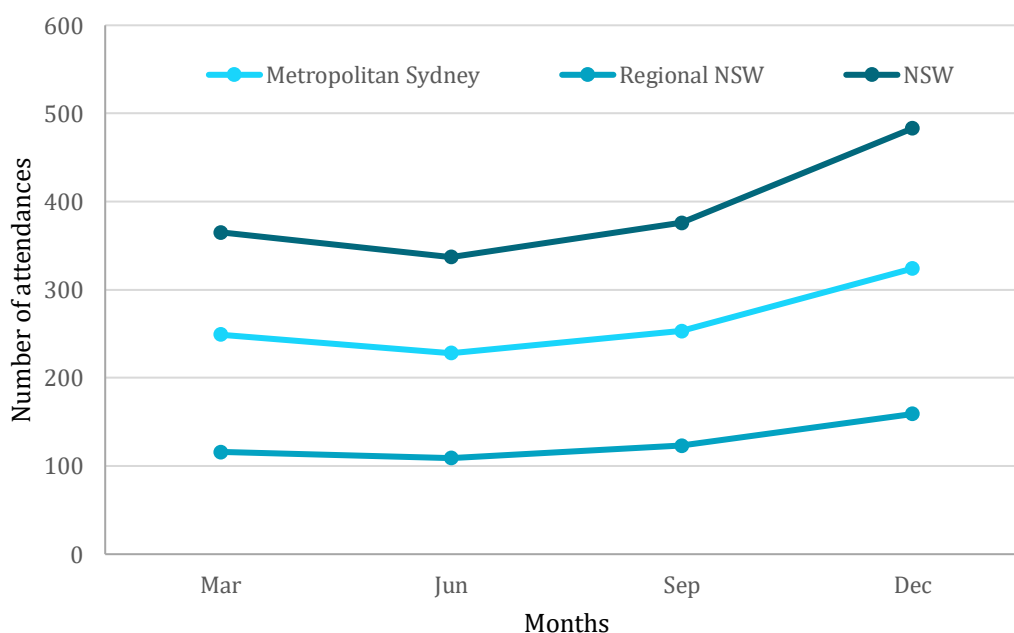


Figure 28: Amphetamine-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December data 2019

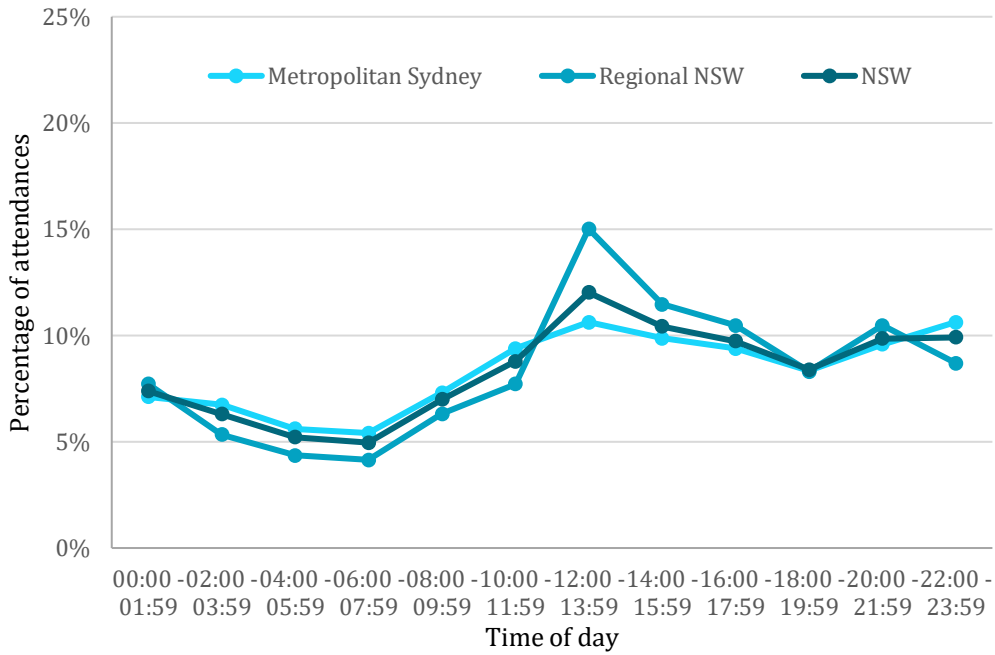


Figure 29: Amphetamine-related attendances by time of day metropolitan Sydney and regional NSW, March, June, September and December 2019

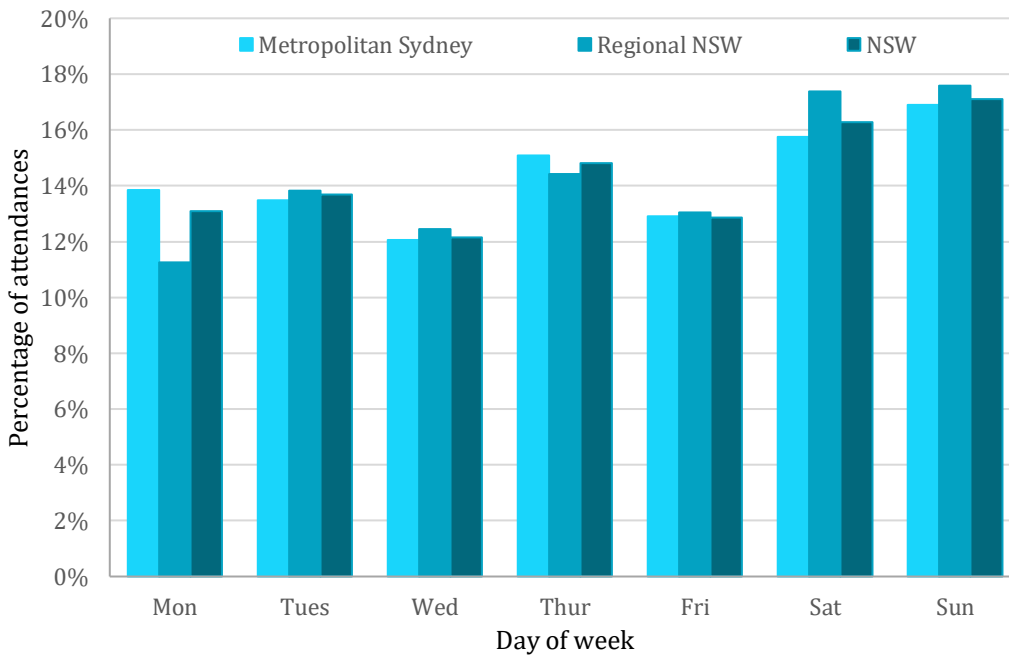


Figure 30: Percentage of amphetamine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December data 2019

Crystal methamphetamine-related attendances in NSW

Results are presented for March, June, September, and December 2019 for NSW.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 26. Characteristics of crystal methamphetamine-related ambulance attendances in NSW for March, June, September, and December 2019 are shown in Table 26. 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 for both metropolitan Sydney and regional areas (Table 26).
- Methamphetamine-related attendance characteristics for March, June, September, and December 2019 are presented in Table 27 and include:
 - 1,247 crystal methamphetamine-related attendances in NSW
 - the majority of crystal methamphetamine-related attendances in NSW were male (66%)
 - the median age of crystal methamphetamine-related attendances in NSW was 34 years
 - a higher proportion of crystal methamphetamine-related attendances were transported to hospital in metropolitan Sydney (88%) than in regional areas (80%)
 - multiple drugs (excluding alcohol) were involved in 32% 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 12 to 2pm.
- The peak days for crystal methamphetamine-related attendances across metropolitan Sydney and regional NSW were Saturday and Saturdays, respectively (Figure 33).

Table 26: Crystal methamphetamine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	203 (3.6)	92 (3.6)	296 (3.6)
June attendances (per 100,000 population)	187 (3.4)	87 (3.4)	276 (3.4)
September attendances (per 100,000 population)	200 (3.6)	95 (3.8)	299 (3.6)
December attendances (per 100,000 population)	248 (4.5)	127 (5.0)	376 (4.6)

Table 27: Characteristics of crystal methamphetamine-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	838 (15.1)	401 (15.9)	1,247 (15.3)
Mean attendances per day	10.5	9.9	10.2
Daily range	5-24	N<5-24	N<5-24
Age- median (quartiles)	34 (27-41)	32 (25-42)	34 (26-41)
Male	560 (67%)	262 (65%)	827 (66%)
Police co-attendance	369 (44%)	152 (38%)	525 (42%)
Transport to hospital	738 (88%)	320 (80%)	1,065 (85%)
Alcohol involved/mentioned	116 (14%)	56 (14%)	172 (14%)
Alcohol intoxication	49 (6%)	28 (7%)	77 (6%)
Multiple drugs involved (excluding alcohol)	287 (34%)	112 (28%)	301 (32%)

Note: all proportions are based on present information

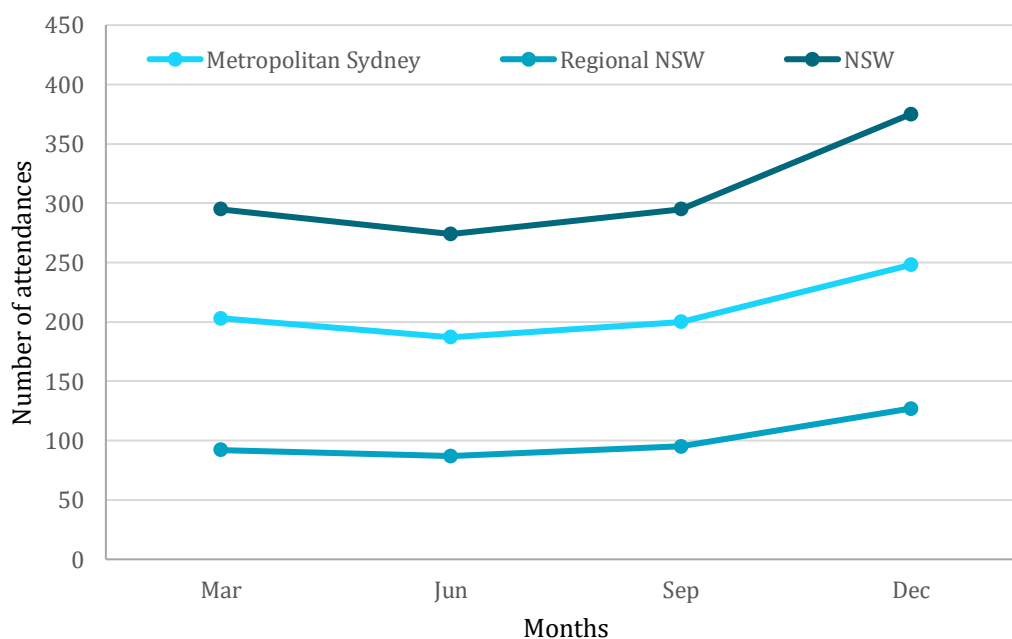


Figure 31: Crystal methamphetamine-related attendances by month metropolitan Sydney and regional NSW, March, June, September and December 2019

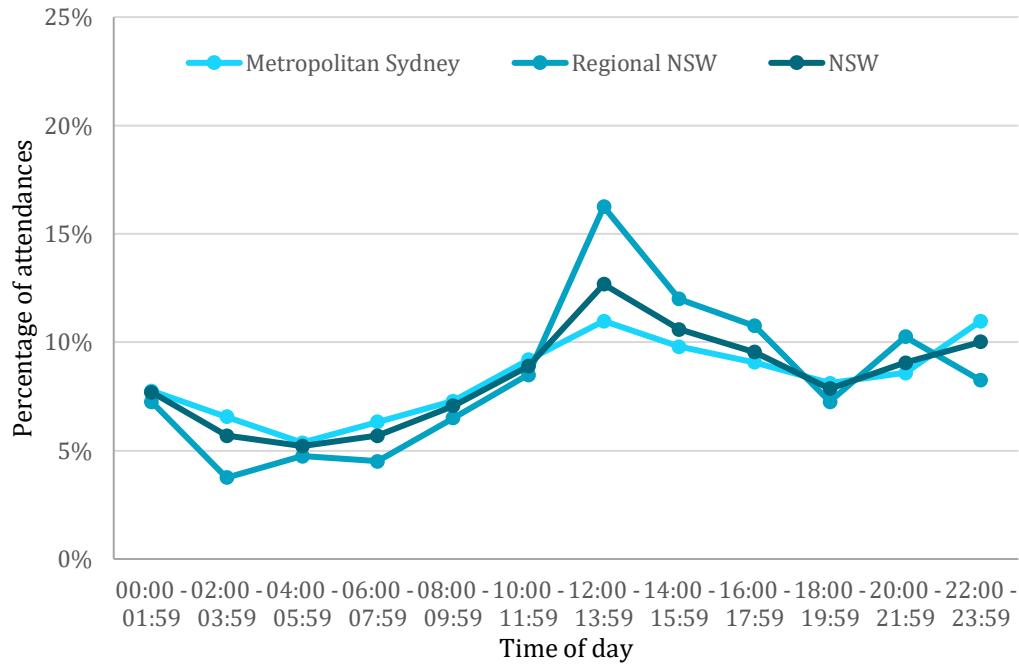


Figure 32: Crystal methamphetamine-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2019

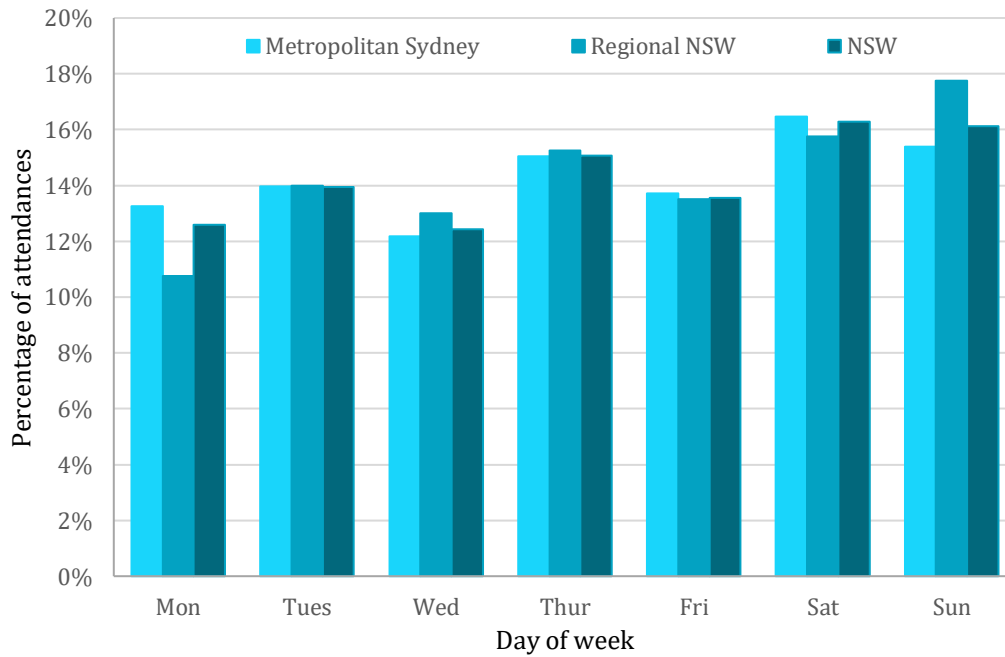


Figure 33: Percentage of crystal methamphetamine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2019

Cannabis-related attendances in NSW

Results are presented covering March, June, September, and December 2019 for NSW.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 28. Characteristics of cannabis-related ambulance attendances in NSW for March, June, September and December 2019 are shown in Table 29. 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 2019 (Table 28).
- As shown in Table 29, in March, June, September, and December 2019:
 - 1,642 cannabis-related attendances were recorded in NSW
 - the majority of cannabis-related attendances were male (66%), with similar proportions in metropolitan Sydney and regional areas
 - the median age of cannabis-related attendances in NSW was 28 years
 - the majority of cannabis-related attendances in NSW were transported to hospital (83%)
 - alcohol was mentioned in fewer than half (38%) of cannabis-related ambulance attendances in NSW
- As presented in Figure 35, cannabis-related attendance numbers peaked from 8pm to midnight in both metropolitan Sydney and regional areas of NSW.
- Saturdays and Mondays represented the peak days for cannabis-related attendances in regional NSW, and Sundays represented the peak day in Metropolitan Sydney (Figure 36).

Table 28: Cannabis-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	224 (4.0)	129 (5.1)	353 (4.4)
June attendances (per 100,000 population)	249 (4.5)	119 (4.7)	374 (4.5)
September attendances (per 100,000 population)	277 (5.0)	131 (5.2)	410 (5.0)
December attendances (per 100,000 population)	316 (5.7)	186 (7.4)	505 (6.2)

Table 29: Characteristics of cannabis-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	1,066 (19.2)	565 (22.4)	1,642 (20.2)
Mean attendances per day	13.0	10.4	13.5
Daily range	N<5-23	8-23	N<5-23
Age- median (quartiles)	28 (20-40)	30 (20-43)	28 (20-41)
Male	718 (67%)	357 (63%)	1,085 (66%)
Police co-attendance	346 (33%)	160 (28%)	508 (31%)
Transport to hospital	900 (84%)	457 (81%)	1,368 (83%)
Alcohol involved/mentioned	388 (36%)	231 (41%)	627 (38%)
Alcohol intoxication	225 (21%)	121 (21%)	350 (21%)
Multiple drugs involved (excluding alcohol)	338 (32%)	149 (26%)	490 (30%)

Note: all proportions are based on present information

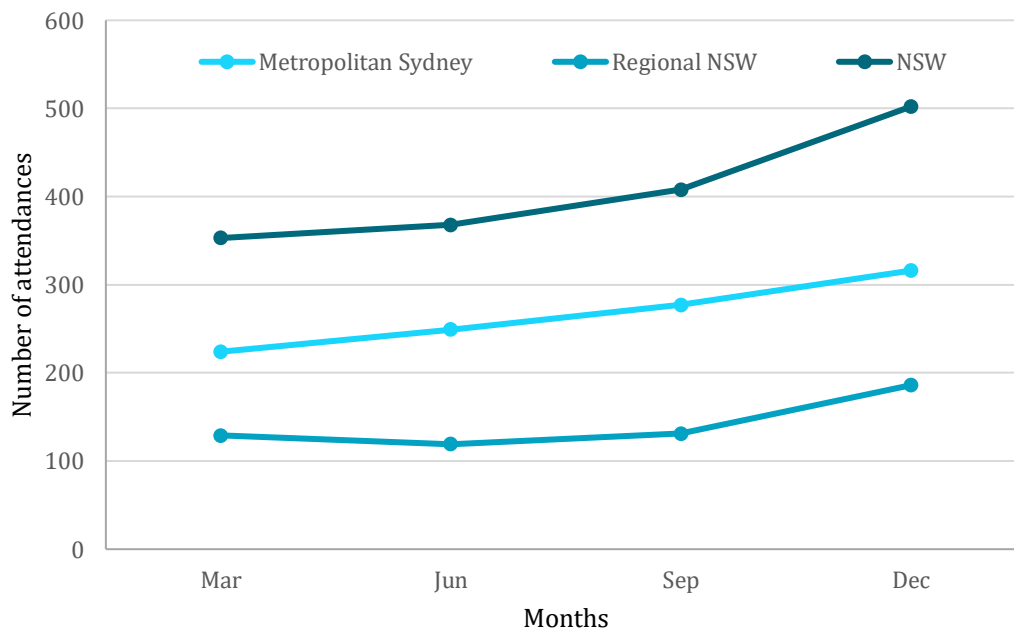


Figure 34: Cannabis-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

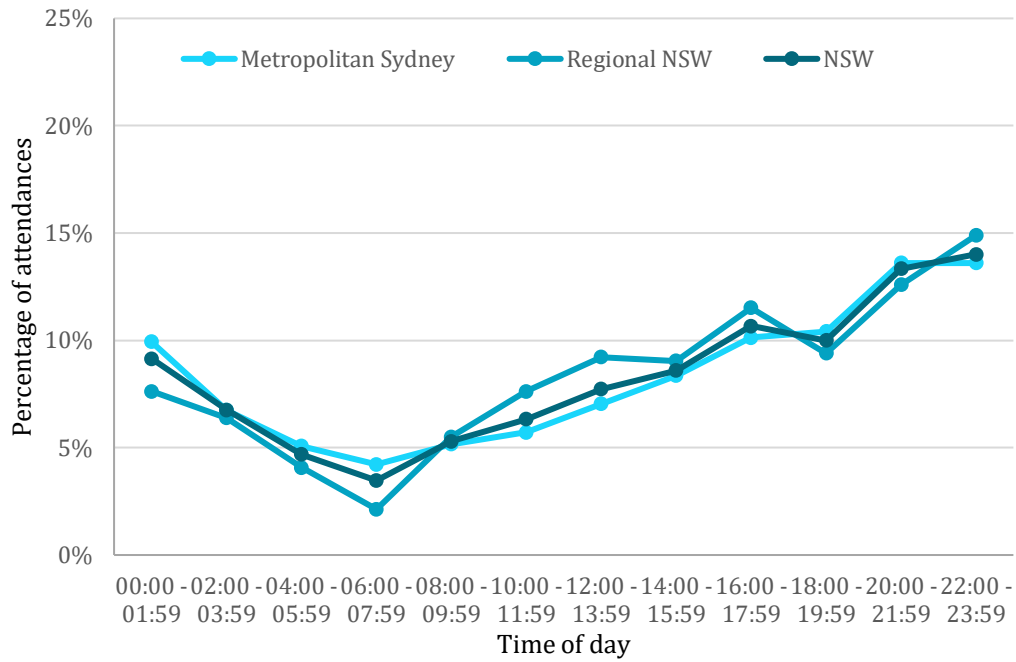


Figure 35: Cannabis-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2019

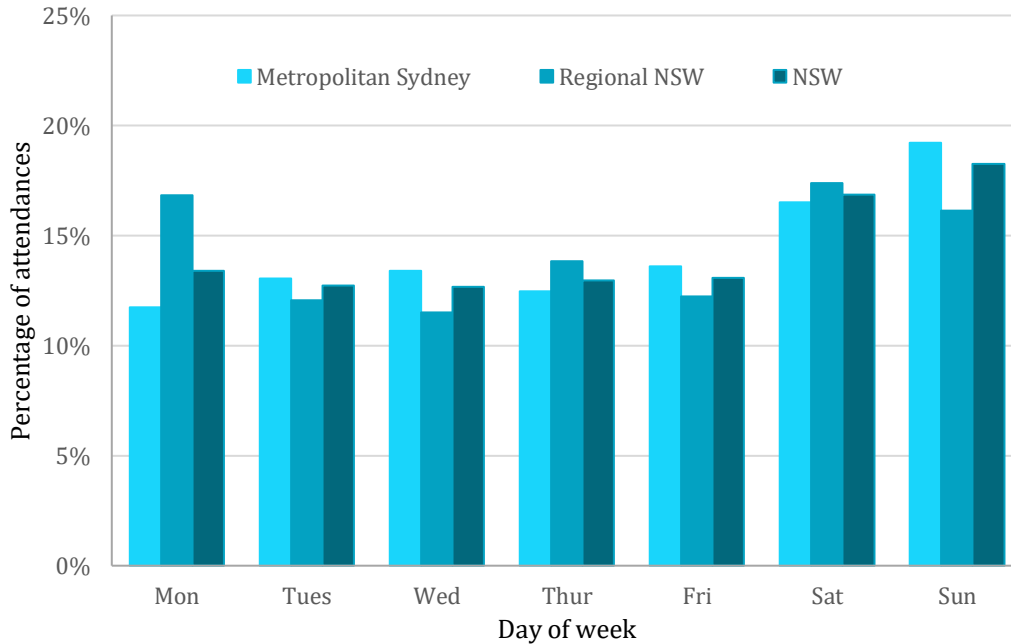


Figure 36: Percentage of cannabis-related attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2019

Heroin-related attendances in NSW

Results are presented covering March, June, September, and December 2019 for NSW.

Numbers and rates of heroin-related ambulance attendances are shown in Table 30. Characteristics of heroin-related ambulance attendances in NSW for March, June, September, and December 2019 are shown in Table 31. 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 2019 (Table 30).
- Characteristics for March, June, September, and December 2019 are presented in Table 31:
 - 685 heroin-related attendances were recorded in NSW
 - the population rate for heroin-related attendances was higher in metropolitan Sydney (10.1 per 100,000 population) than regional NSW (4.8 per 100,000 population)
 - the majority of heroin-related attendances in NSW were male (69%)
 - the median age of heroin-related attendances was 40 years
 - police co-attended over one-quarter of heroin-related ambulance attendances (29%)
- As presented in Figure 38, heroin-related attendance numbers peaked between 2pm and 4pm in NSW.
- Sundays and Mondays represented the peak days for heroin-related attendances in Metropolitan Sydney, while Thursdays represented the peak day in regional areas (Figure 39).

Table 30: Heroin-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	149 (2.7)	25 (1.0)	177 (2.2)
June attendances (per 100,000 population)	111 (2.0)	21 (0.8)	132 (1.6)
September attendances (per 100,000 population)	138 (2.5)	37 (1.5)	175 (2.2)
December attendances (per 100,000 population)	162 (2.9)	39 (1.5)	201 (2.5)

Table 31: Characteristics of heroin-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	560 (10.1)	122 (4.8)	685 (8.4)
Mean attendances per day	5.7	5.4	5.6
Daily range	N<5-12	N<5-15	N<5-15
Age- median (quartiles)	40 (33-46)	39 (31-47)	40 (33-46)
Male	384 (69%)	88 (72%)	473 (69%)
Police co-attendance	163 (29%)	31 (25%)	196 (29%)
Transport to hospital	376 (67%)	73 (60%)	452 (66%)
Alcohol involved/mentioned	67 (12%)	13 (11%)	80 (12%)
Alcohol intoxication	25 (5%)	7 (6%)	32 (5%)
Multiple drugs involved (excluding alcohol)	161 (29%)	31 (25%)	193 (28%)
Responded to naloxone	219 (39%)	45 (37%)	265 (39%)

Note: all proportions are based on present information

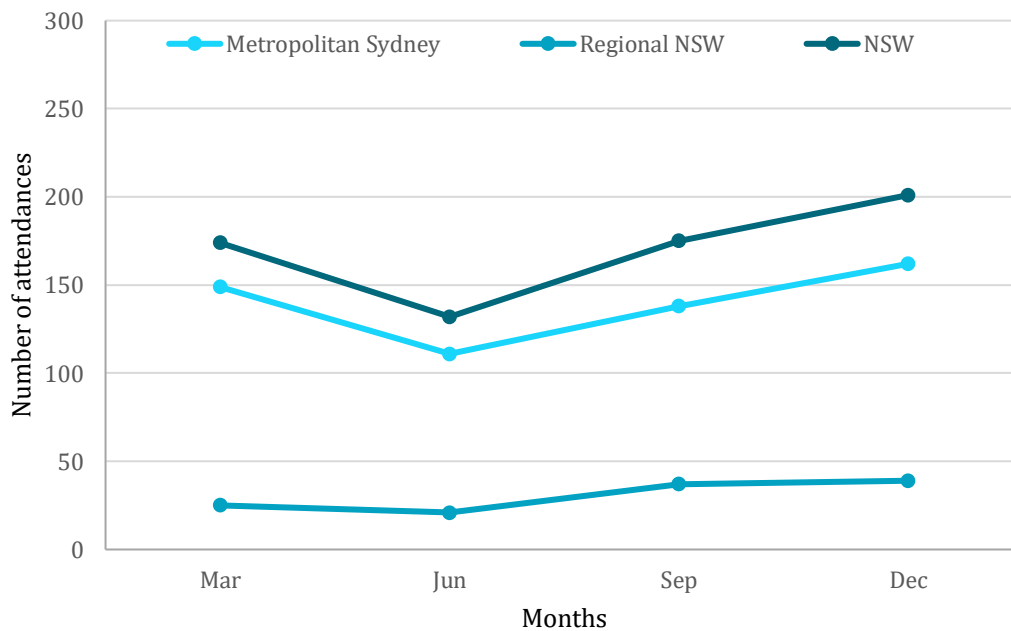


Figure 37: Heroin-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

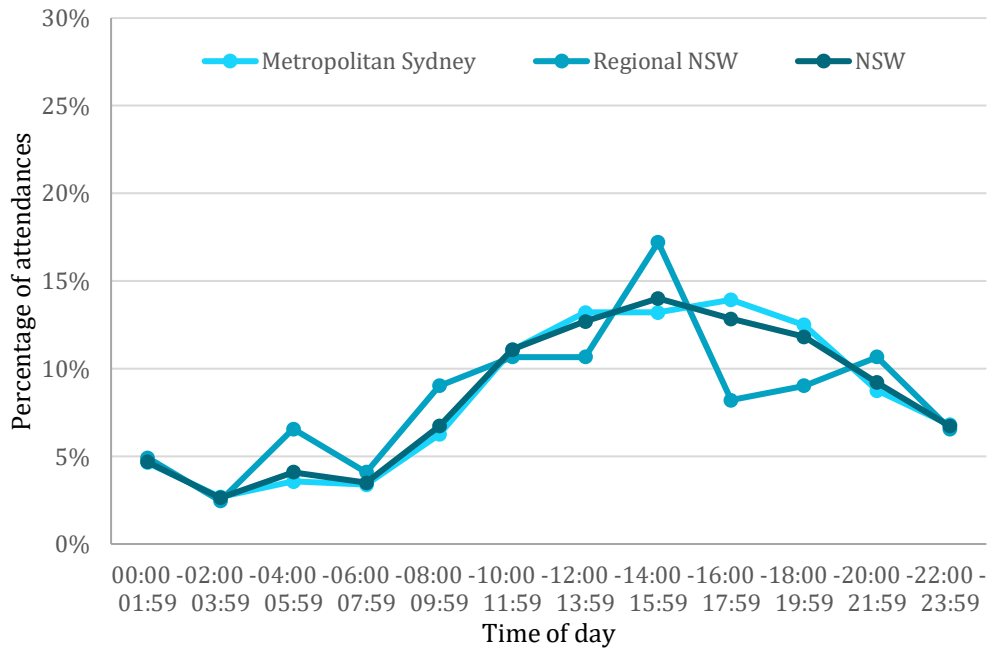


Figure 38: Heroin-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2019

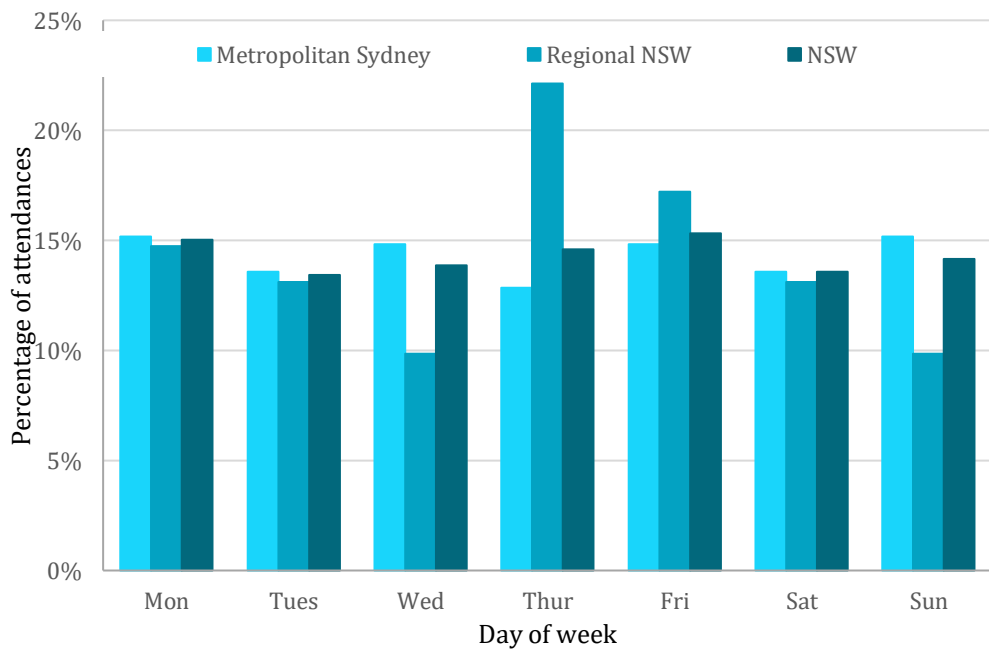


Figure 39: Percentage of heroin-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2019

Emerging psychoactive substance-related attendances in NSW

Data are not presented for emerging psychoactive substance -related attendances in NSW due to low numbers of attendances in March, June, September, and December 2019.

Benzodiazepine-related attendances in NSW

Results presented include March, June, September, and December 2019 for NSW.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 32. Characteristics of benzodiazepine-related ambulance attendances in NSW for March, June, September and December 2019 are shown in Table 33. 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 September 2019 (Table 32).
- As shown in Table 36, for March, June, September and December 2019:
 - 1,281 benzodiazepine-related attendances were recorded in NSW
 - A significant proportion of benzodiazepine-related ambulance attendances were male (50%)
 - the median age of benzodiazepine-related attendances was 36 years in NSW
 - 91% of benzodiazepine-related attendances were transported to hospital, with similar proportions in metropolitan Sydney and regional areas
 - multiple drugs (excluding alcohol) were involved in approximately half (49%) of all benzodiazepine-related attendances across NSW
- As presented in Figure 41, metropolitan Sydney and regional NSW benzodiazepine-related attendance numbers peaked between the hours of 8pm and 10pm.
- Saturdays represented the peak day for benzodiazepine-related attendances in metropolitan Sydney and regional NSW (Figure 42).

Table 32: Benzodiazepine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	241 (4.3)	76 (3.0)	320 (3.9)
June attendances (per 100,000 population)	230 (4.1)	61 (2.4)	292 (3.6)
September attendances (per 100,000 population)	253 (4.5)	81 (3.2)	335 (4.1)
December attendances (per 100,000 population)	243 (4.4)	87 (3.4)	334 (4.1)

Table 33: Characteristics of benzodiazepine-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	967 (17.4)	305 (12.1)	1,281 (15.7)
Mean attendances per day	10.5	10.5	10.5
Daily range	N<5-16	N<5-17	N<5-19
Age- median (quartiles)	36 (24-47)	39 (27-50)	36 (25-48)
Male	493 (51%)	145 (48%)	643 (50%)
Police co-attendance	298 (31%)	92 (30%)	393 (31%)
Transport to hospital	871 (90%)	277 (91%)	1,157 (90%)
Alcohol involved/mentioned	411 (43%)	127 (42%)	541 (42%)
Alcohol intoxication	275 (28%)	91 (30%)	369 (29%)
Multiple drugs involved (excluding alcohol)	471 (49%)	149 (49%)	624 (49%)

Note: all proportions are based on present information

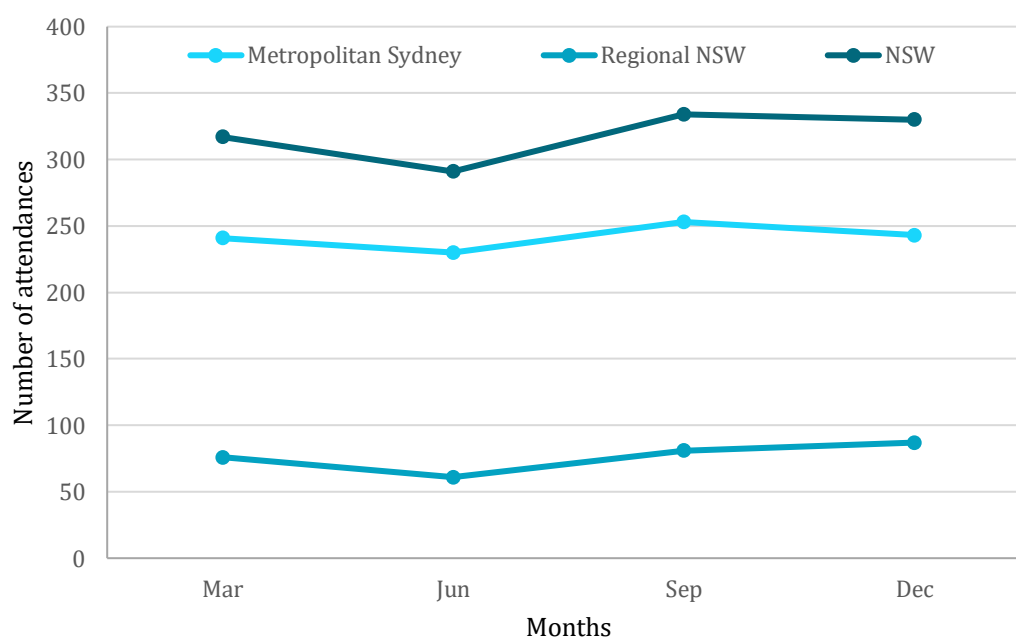


Figure 40: Benzodiazepine-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

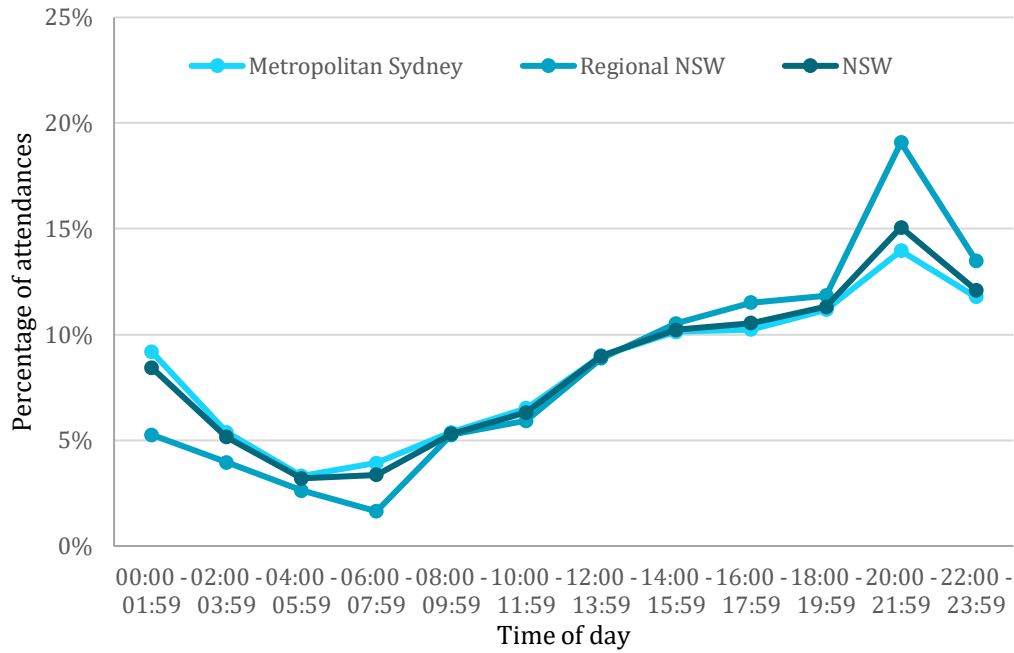


Figure 41: Benzodiazepine-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2019

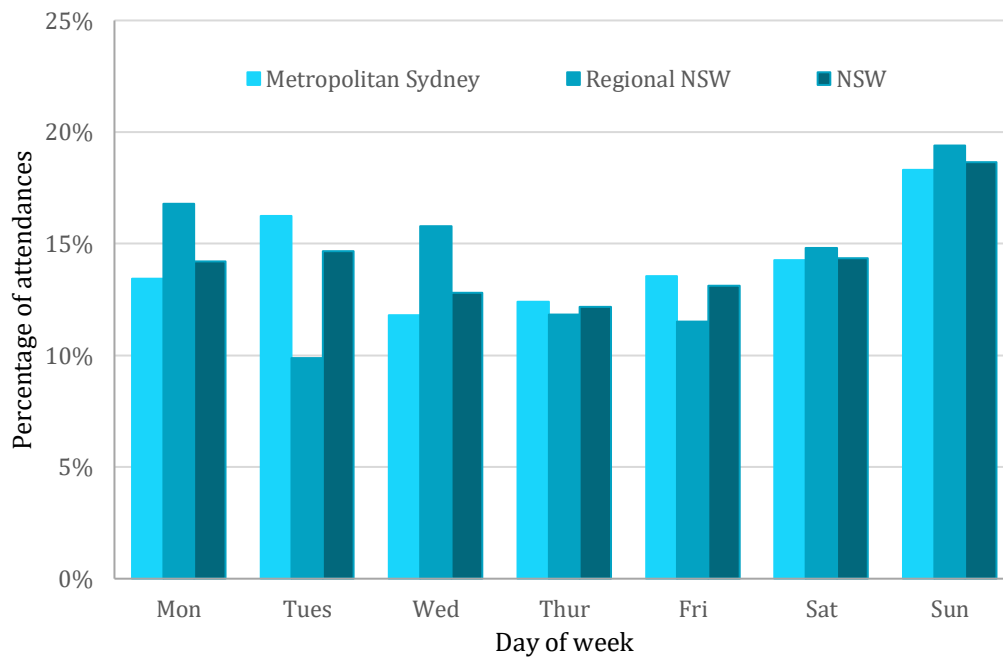


Figure 42: Percentage of benzodiazepine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2019

Opioid analgesic-related attendances in NSW

Results are presented covering March, June, September, and December 2019 for NSW.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 34. Characteristics of opioid analgesic-related ambulance attendances in NSW for March, June, September, and December 2019 are shown in Table 35. 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 September in Metropolitan Sydney and during March and December in regional NSW (Table 34).
- As shown in Table 35, in March, June, September and December 2019:
 - 455 opioid analgesic-related attendances were recorded in NSW
 - the population rate for opioid analgesic-related attendances was higher in regional NSW (6.5 per 100,000 population) than in metropolitan Sydney (5.2 per 100,000 population)
 - Approximately half (53%) of all opioid analgesic-related ambulance attendances involved males
 - median age of opioid analgesic-related attendances was 42 years in NSW
 - a similar proportion of opioid analgesic-related attendances involved multiple drugs (excluding alcohol) in metropolitan Sydney (52%) and regional NSW (50%)
- As presented in Figure 44, opioid analgesic-related attendance numbers peaked between 12pm to 2pm in regional NSW and 8pm to 10pm in metropolitan Sydney.
- Tuesdays and Fridays were the peak days for opioid analgesic-related attendances in metropolitan Sydney and regional areas, respectively (Figure 45).

Table 34: Opioid analgesic-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	79 (1.4)	43 (1.7)	123 (1.5)
June attendances (per 100,000 population)	58 (1.0)	39 (1.5)	98 (1.2)
September attendances (per 100,000 population)	86 (1.5)	38 (1.5)	124 (1.5)
December attendances (per 100,000 population)	67 (1.2)	43 (1.7)	110 (1.4)

Table 35: Characteristics of opioid analgesic-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	290 (5.2)	163 (6.5)	455 (5.6)
Mean attendances per day	3.8	3.7	3.8
Daily range	0-11	0-10	0-11
Age- median (quartiles)	39 (28-52)	46 (34-61)	42 (29-54)
Male	154 (53%)	84 (51%)	238 (53%)
Police co-attendance	79 (27%)	34 (21%)	113 (25%)
Transport to hospital	243 (84%)	138 (85%)	383 (84%)
Alcohol involved/mentioned	79 (27%)	44 (27%)	123 (27%)
Alcohol intoxication	51 (18%)	30 (19%)	81 (18%)
Multiple drugs involved (excluding alcohol)	152 (52%)	81 (50%)	234 (51%)
Morphine	19 (7%)	21 (13%)	40 (9%)
Oxycodone	164 (60%)	77 (47%)	242 (53%)

Note: all proportions are based on present information

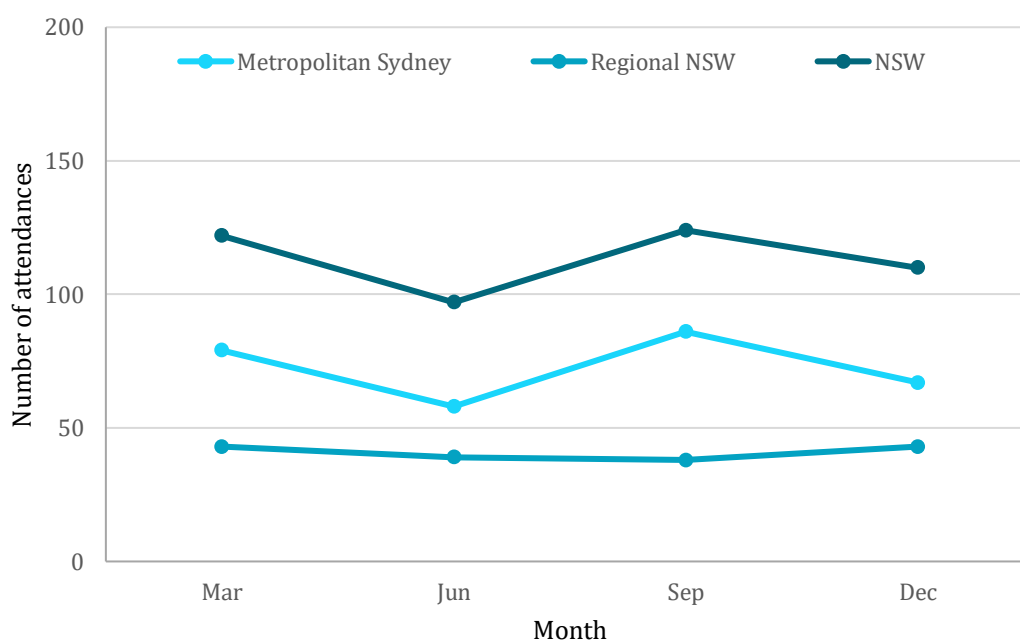


Figure 43: Opioid analgesic-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

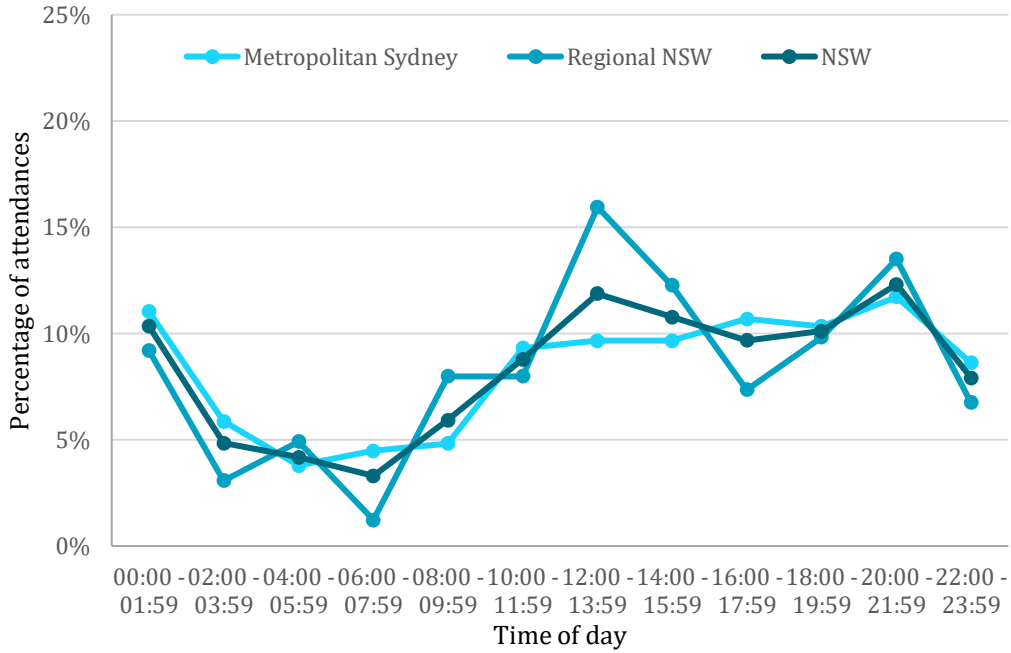


Figure 44: Opioid analgesic-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2019

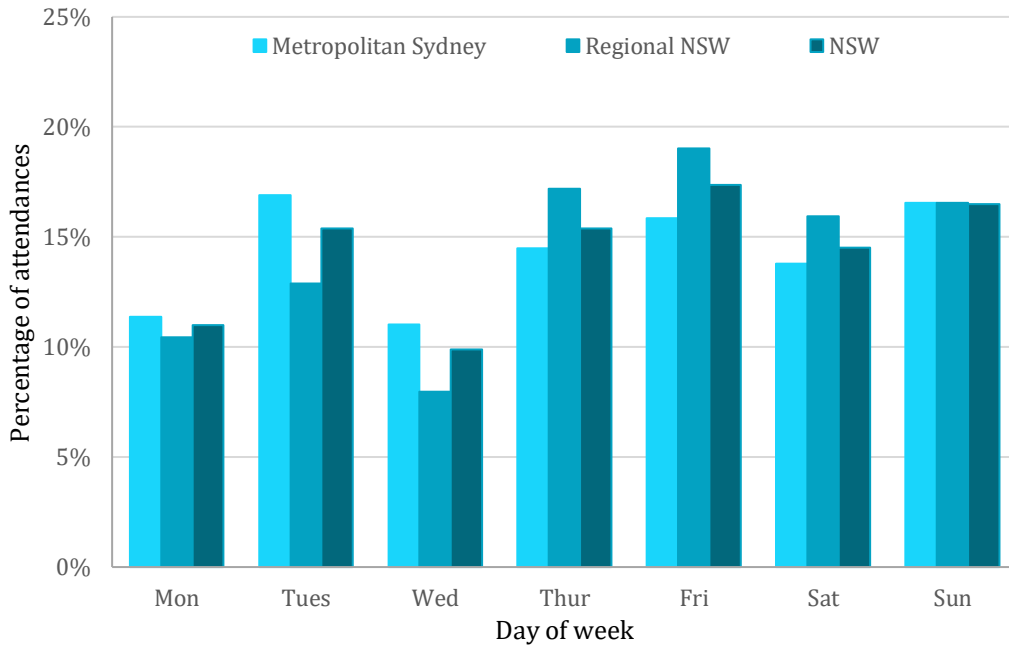


Figure 45: Percentage of opioid analgesic-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2019

Opioid pharmacotherapy-related attendances in NSW

Results are presented for March, June, September, and December 2019 for NSW.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Table 36. Characteristics of opioid pharmacotherapy-related ambulance attendances in NSW for March, June, September, and December 2019 are shown in Table 37. 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 March 2019 (Table 36).
- As shown in Table 37, in March, June, September and December 2019:
 - 283 opioid pharmacotherapy-related attendances recorded in NSW
 - the majority of opioid pharmacotherapy-related attendances were for males (63%)
 - the median age of opioid pharmacotherapy-related attendances was 40 years
 - a similar proportion of attendances related to opioid pharmacotherapy were transported to hospital within metropolitan Sydney (83%) and regional areas (77%) of NSW
 - multiple drugs were involved in nearly half (48%) of all opioid pharmacotherapy-related attendances in NSW
- As presented in Figure 47, opioid pharmacotherapy-related attendance numbers peaked from 12pm to 4pm in metropolitan Sydney and 10am to 2pm regional areas of NSW.
- Fridays and Saturdays were the peak days for opioid pharmacotherapy-related attendances in metropolitan Sydney, and Wednesdays and Saturdays were peak days in regional NSW (Figure 48).

Table 36: Opioid pharmacotherapy-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	68 (1.2)	21 (0.8)	90 (1.1)
June attendances (per 100,000 population)	49 (0.9)	15 (0.6)	64 (0.8)
September attendances (per 100,000 population)	41 (0.7)	13 (0.5)	54 (0.7)
December attendances (per 100,000 population)	57 (1.0)	17 (0.7)	75 (0.9)

Table 37: Characteristics of opioid pharmacotherapy-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	215 (3.9)	66 (2.6)	283 (3.5)
Mean attendances per day	2.1	12.7	2.3
Daily range	0-7	0-7	0-7
Age- median (quartiles)	40 (33-48)	40 (33-51)	40 (33-49)
Male	137 (64%)	40 (61%)	179 (63%)
Police co-attendance	54 (25%)	13 (20%)	67 (24%)
Transport to hospital	178 (83%)	51 (77%)	231 (82%)
Alcohol involved/mentioned	26 (12%)	10 (15%)	37 (13%)
Alcohol intoxication	13 (6%)	6 (10%)	20 (7%)
Multiple drugs involved (excluding alcohol)	108 (50%)	26 (39%)	134 (48%)

Note: all proportions are based on present information

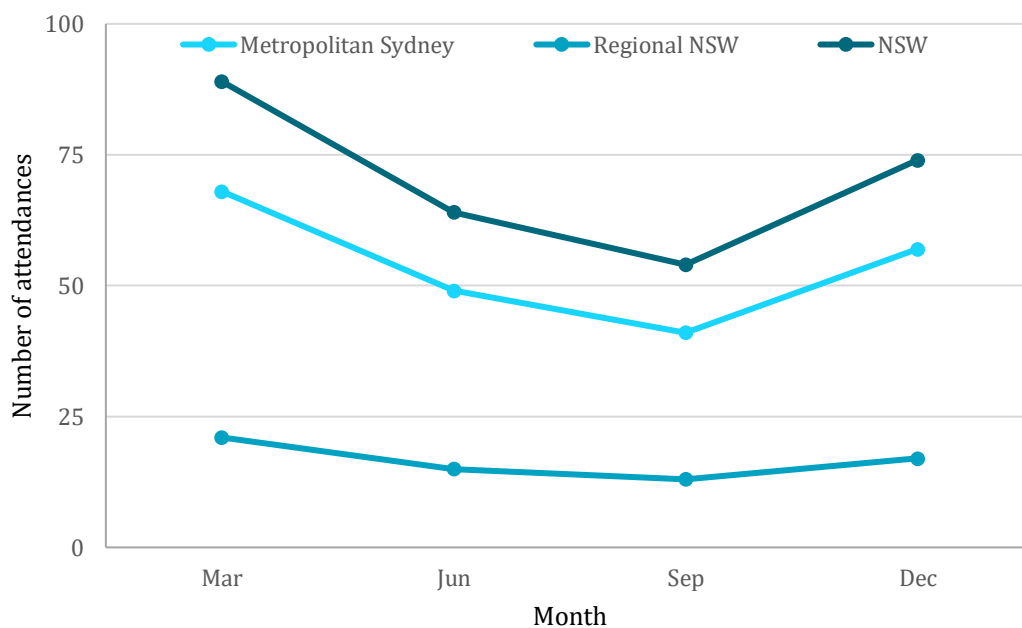


Figure 46: Opioid pharmacotherapy-related attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

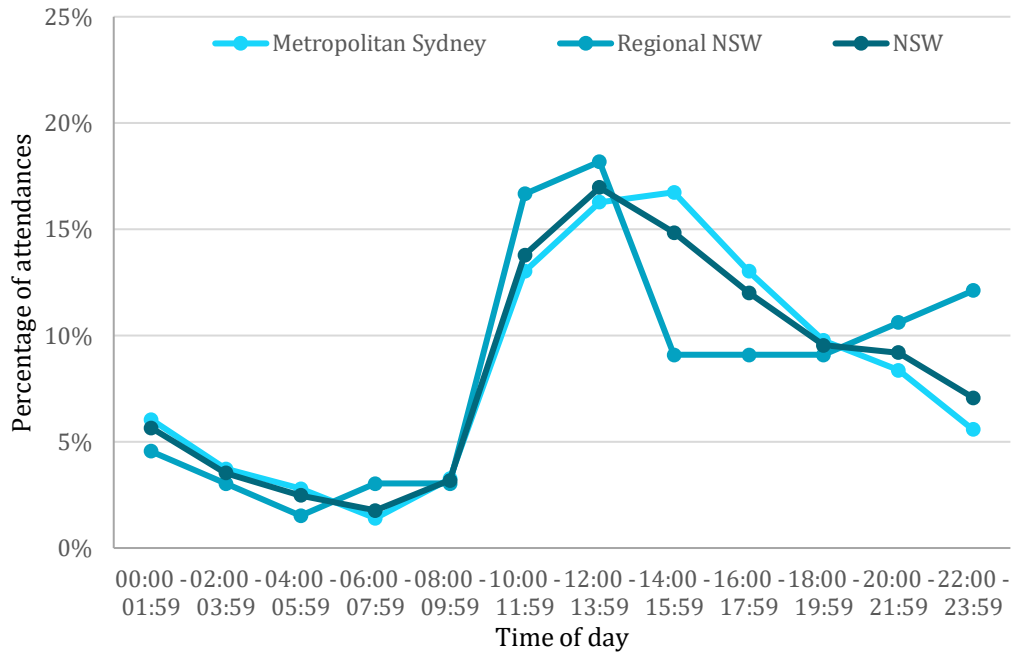


Figure 47: Opioid pharmacotherapy-related attendances by time of day in metropolitan Sydney and regional NSW, March, June, September and December 2019

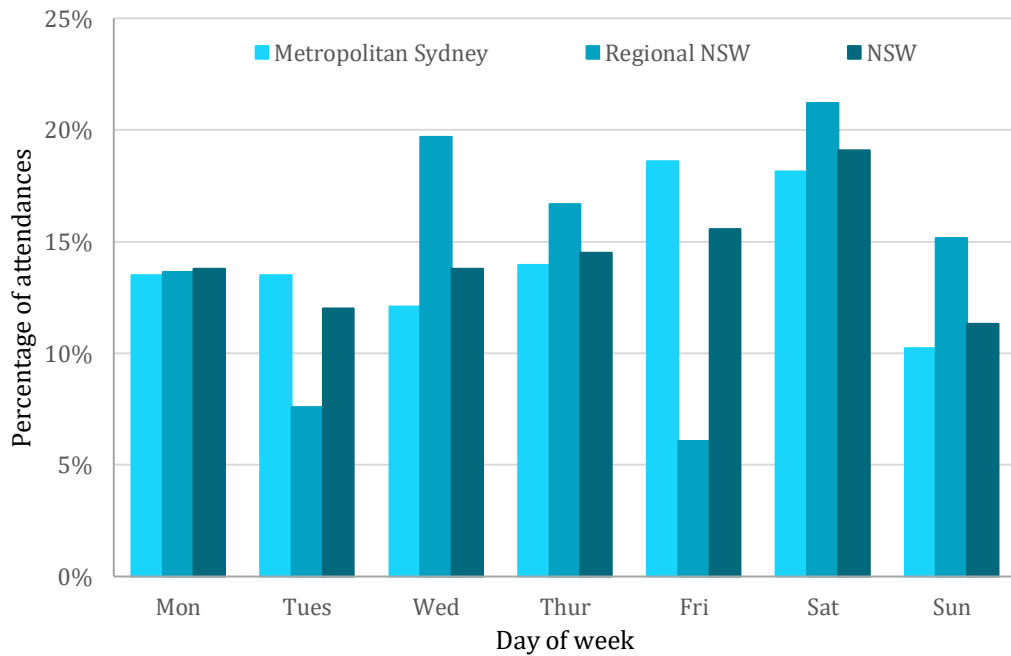


Figure 48: Percentage of opioid pharmacotherapy-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March, June, September and December 2019

Alcohol intoxication and other drug-related attendances: 2018 and 2019

Alcohol intoxication and other drug-related ambulance attendance numbers in March, June, September, and December 2018 and 2019 are shown in Table 40.

Alcohol intoxication, amphetamine and benzodiazepine-related attendances were statistically significantly higher in 2019 compared to 2018.

Table 38. Number of alcohol intoxication and other drug-related attendances in 2018 and 2019 (March, June, September and December), NSW

Attendances	2018*	2019*	% Diff
Alcohol intoxication	10,348	11,503	+11% *
Amphetamine	1,099	1,572	+43% *
Crystal methamphetamine	911	1,247	+37%
Cannabis	1,258	1,642	+31%
Heroin	492	685	+39%
Emerging psychoactive substance	N<5	9	-
Benzodiazepine	1,120	1,281	+14% *
Opioid analgesic	438	455	+4%
Opioid pharmacotherapy	216	283	+31%

*2018 and 2019 numbers include March, June, September, and December data

Alcohol and other drug overdose-related ambulance attendances in NSW

AOD overdose-related ambulance attendances by month are shown in Table 39 while characteristics of AOD overdose-related ambulance attendances are displayed in Table 40. Drugs involved in AOD overdose-related ambulance attendances in NSW are presented in Table 41. It is important to note that these data represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As shown in Table 39 to Table 41:

- in NSW, accidental and unknown intent AOD overdose-related attendances peaked in December 2019, while numbers of intentional AOD overdose-related attendances peaked in March 2019
- the population rate for intentional AOD overdose was higher in regional NSW than metropolitan Sydney, however, rates were similar by location for overdose with unknown intent attendances and higher in metropolitan Sydney for accidental overdose
- in NSW the majority of accidental AOD overdose-related attendances were male (60%)
- approximately one-third of all AOD overdose attendances, regardless of intent, involved alcohol.

- second to alcohol, heroin was the largest contributor to the proportion of AOD accidental overdoses (28%), and benzodiazepines contributed to the greatest proportion of intentional overdoses (14%) and unknown intent overdoses (18%)

Table 39: AOD overdose-related ambulance attendances by month in metropolitan Sydney and regional NSW, March, June, September and December 2019

Attendances (per 100,000 resident population)	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Metropolitan Sydney	Regional NSW	NSW	Metropolitan Sydney	Regional NSW	NSW	Metropolitan Sydney	Regional NSW	NSW
March	140 (2.5)	35 (1.4)	176 (2.2)	124 (2.2)	51 (2.0)	177 (2.2)	223 (4.0)	129 (5.1)	354 (4.4)
June	103 (1.9)	29 (1.1)	134 (1.6)	103 (1.9)	38 (1.5)	141 (1.7)	202 (3.6)	98 (3.9)	306 (3.7)
September	142 (2.6)	43 (1.7)	186 (2.3)	128 (2.3)	49 (1.9)	177 (2.2)	227 (4.1)	103 (4.1)	335 (4.1)
December	149 (2.7)	53 (2.1)	204 (2.5)	136 (2.4)	57 (2.3)	194 (2.4)	200 (3.6)	126 (5.0)	331 (4.0)

AOD overdose can involve either single or multiple substances

Table 40: Characteristics of AOD overdose-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	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)	534 (9.6)	160 (6.3)	700 (8.6)	491 (8.8)	195 (7.7)	689 (8.5)	852 (15.3)	456 (18.1)	1,328 (16.2)
Number of fatal overdoses	≥9 (≥2%)	N<5	14 (2%)	14 (3%)	7 (4%)	21 (3%)	N<5	N<5	6 (<1%)
Age- median (quartiles)	32 (24-43)	34 (24-46)	33 (24-44)	34 (25-44)	35 (23-50)	35 (24-45)	30 (21-46)	30 (20-46)	30 (20-46)
Male	323 (61%)	96 (60%)	421 (60%)	278 (57%)	77 (40%)	356 (52%)	286 (34%)	179 (33%)	440 (33%)
Transport to hospital	434 (81%)	126 (79%)	566 (81%)	459 (94%)	179 (92%)	641 (93%)	845 (99%)	≥451 (≥98%)	≥1,223 (≥99%)
Police co-attendance	114 (21%)	38 (24%)	153 (21%)	153 (31%)	34 (18%)	188 (27%)	244 (29%)	152 (33%)	399 (30%)

Note: all proportions are based on present information

AOD overdose can involve either single or multiple substances

Table 41: Drugs involved in overdose-related ambulance attendances in metropolitan Sydney and regional NSW, March, June, September and December 2019

	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	205 (38%)	56 (35%)	263 (38%)	128 (26%)	54 (28%)	184 (27%)	260 (31%)	140 (31%)	401 (30%)
Alcohol intoxication only	88 (16%)	27 (17%)	116 (17%)	25 (5%)	12 (6%)	37 (5%)	N<5	N<5	6 (<1%)
Amphetamine	42 (8%)	10 (6%)	52 (8%)	≥18 (≥4%)	N<5	23 (3%)	14 (2%)	N<5	19 (1%)
Crystal methamphetamine	30 (6%)	6 (4%)	36 (5%)	≥7 (1%)	N<5	18 (2%)	≥11 (≥1%)	N<5	16 (1%)
Cannabis	21 (4%)	6 (4%)	27 (4%)	≥11 (2%)	N<5	16 (2%)	21 (3%)	8 (2%)	29 (2%)
Heroin	152 (28%)	42 (26%)	195 (28%)	38 (8%)	10 (5%)	49 (7%)	N<5	N<5	N<5
Emerging psychoactive substances	N<5	0 (0%)	N<5	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Benzodiazepines	50 (9%)	19 (12%)	69 (10%)	98 (20%)	28 (14%)	126 (18%)	249 (29%)	100 (22%)	352 (27%)
Opioid analgesics	24 (5%)	16 (10%)	40 (6%)	35 (7%)	15 (8%)	50 (7%)	63 (7%)	40 (9%)	105 (8%)
Opioid pharmacotherapy	18 (3%)	5 (3%)	23 (3%)	≥17 (≥3%)	N<5	22 (3%)	≥7 (≥1%)	N<5	12 (1%)

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

Chapter 5: Results – Tasmania

Due to ongoing industrial action since July 2019, the overall number of patient care records completed by paramedics were reduced, and do not reflect full paramedic caseload for September and December 2019. Please use caution when interpreting these results.

Alcohol intoxication-related attendances in Tasmania

Results are presented covering March, June, September, and December for Tasmania in 2019.

Numbers and rates of alcohol intoxication-related ambulance attendances are shown in Table 42. Characteristics of alcohol intoxication-related ambulance attendances in Tasmania for March, June, September and December 2019 are shown in Table 43. 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 2019 (Table 42).
- As shown in Table 43, in March, June, September and December 2019:
 - there were a total of 792 alcohol intoxication-related attendances
 - the majority of alcohol intoxication-related attendances were male (61%)
 - median age of alcohol intoxication-related attendances was 38 and 40 years in greater Hobart and regional areas, respectively
 - similar proportion of alcohol intoxication-related attendances were transported to hospital in greater Hobart (75%) and regional (74%) areas
- As presented in Figure 50, alcohol intoxication-related attendance numbers peaked between midnight-2am in greater Hobart and regional areas.
- Sundays were the peak day for alcohol intoxication-related attendances in both greater Hobart and regional areas of Tasmania (Figure 51).

Table 42: Alcohol intoxication-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	85 (36.6)	111 (36.7)	196 (36.7)
June attendances (per 100,000 population)	70 (30.2)	94 (31.1)	164 (30.7)
September attendances (per 100,000 population)	107 (46.1)	90 (29.8)	197 (36.9)
December attendances (per 100,000 population)	145 (62.5)	90 (29.8)	235 (44.0)

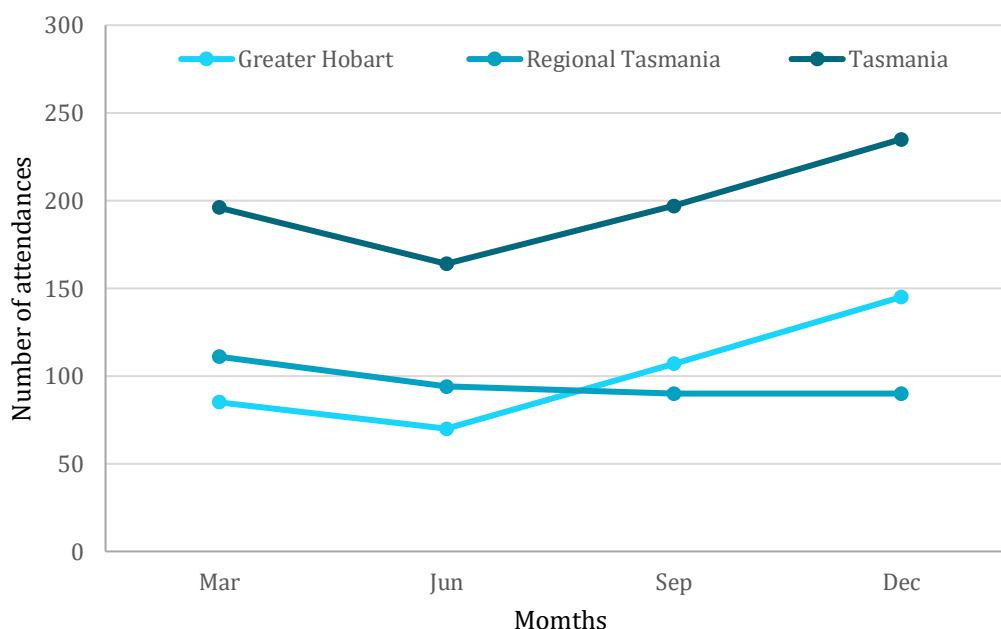
Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

Table 43: Characteristics of alcohol intoxication-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2019

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	407 (175.4)	385 (127.3)	792 (148.2)
Mean attendances per day	6.7	6.3	6.5
Daily range	0-18	0-20	0-20
Age- median (interquartile range)	38 (24-52)	40 (26-54)	39 (25-53)
Male	237 (58%)	243 (63%)	480 (61%)
Police co-attendance	81 (20%)	79 (21%)	160 (20%)
Transport to hospital	306 (75%)	284 (74%)	590 (75%)
Multiple drugs involved	19 (5%)	17 (4%)	36 (5%)

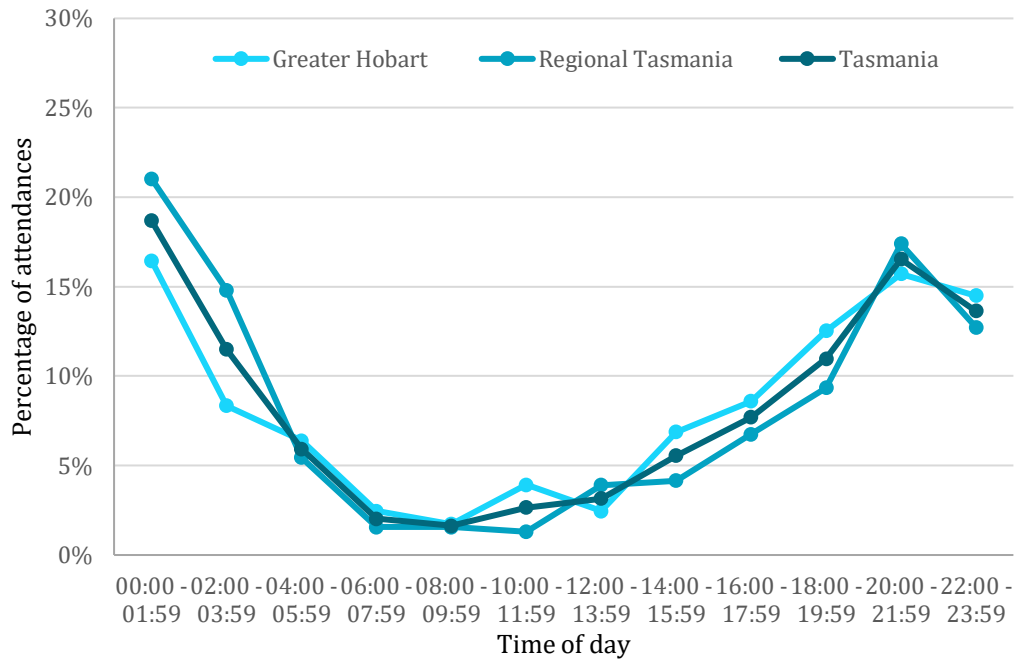
All proportions are based on present information

Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.



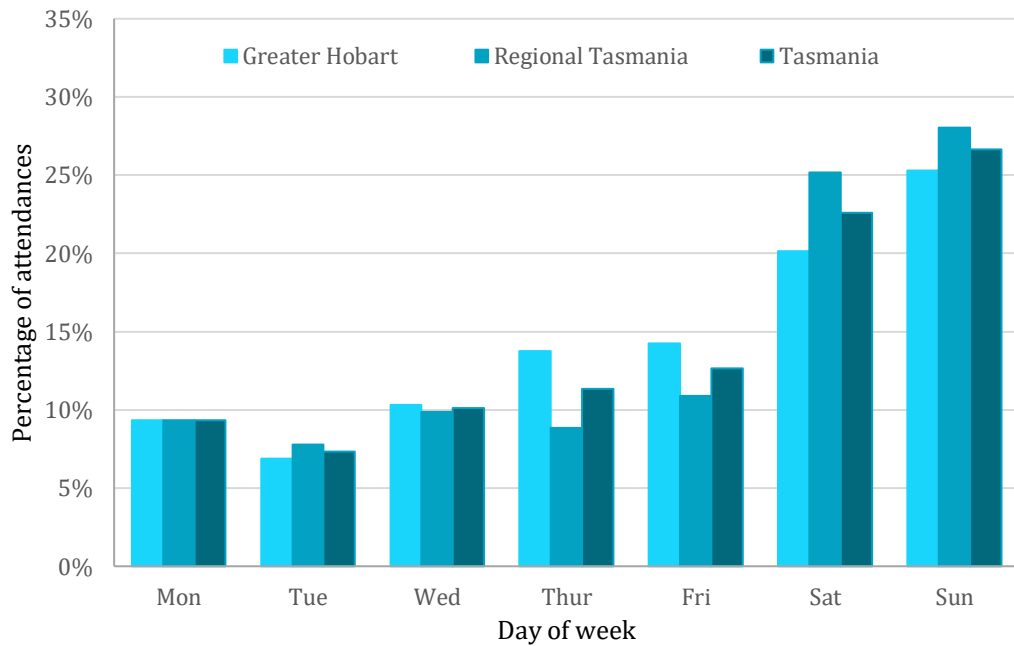
Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

Figure 49: Number of alcohol intoxication-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Figure 50: Percentage of alcohol intoxication-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Figure 51: Percentage of alcohol intoxication-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2019

All amphetamine-related attendances in Tasmania

Results are presented covering March, June, September, and December for Tasmania in 2019.

Numbers and rates of amphetamine-related ambulance attendances are shown in Table 44. Characteristics of amphetamine-related ambulance attendances in Tasmania for March, June, September and December 2019 are shown in Table 45. 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 March and December 2019 (Table 44).

- As shown in Table 45, in March, June, September and December 2019:
 - there were 70 amphetamine-related attendances in Tasmania
 - the majority of amphetamine-related attendances were male (57%)
 - median age of amphetamine-related attendances in Tasmania was 35 years
 - the majority of amphetamine-related attendances were transported to hospital (81%)
- Saturdays were the peak days for amphetamine-related attendances in greater Hobart area and Sundays and Mondays in regional Tasmania (Figure 54).

Table 44: Amphetamine-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	11 (4.7)	12 (4.0)	23 (4.3)
June attendances (per 100,000 population)	8 (3.4)	6 (2.0)	14 (2.6)
September attendances (per 100,000 population)	7 (3.0)	5 (1.7)	12 (2.2)
December attendances (per 100,000 population)	≥16 (≥6.9)	N<5	21 (3.9)

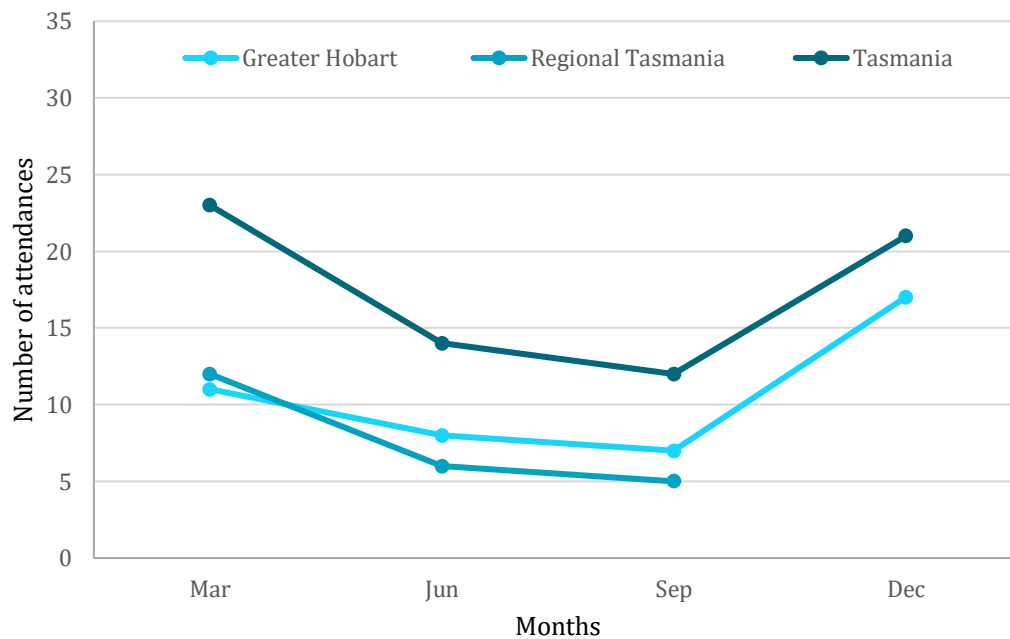
Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

Table 45: Characteristics of amphetamine-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2019

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	≥42 (18.1)	≥22 (8.9)	70 (13.1)
Mean attendances per day	<5	<5	<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	36 (27-42)	32 (23-42)	35 (25-42)
Male	26 (≤62%)	14 (≤64%)	40 (57%)
Police co-attendance	13 (≤31%)	5 (≤23%)	18 (26%)
Transport to hospital	32 (≤76%)	≥17 (≤77%)	57 (81%)
Alcohol involved	6 (≤14%)	5 (≤23%)	11 (16%)
Alcohol intoxication	N<5	N<5	N<5
Multiple drugs involved (excluding alcohol)	16 (≤38%)	10 (≤46%)	26 (37%)

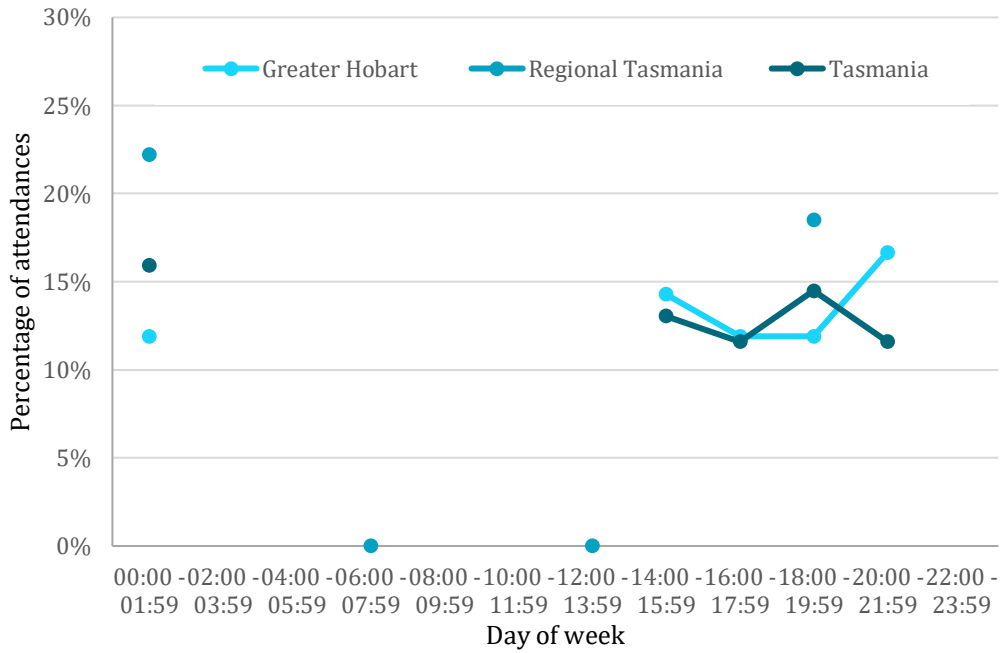
All proportions are based on present information

Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.



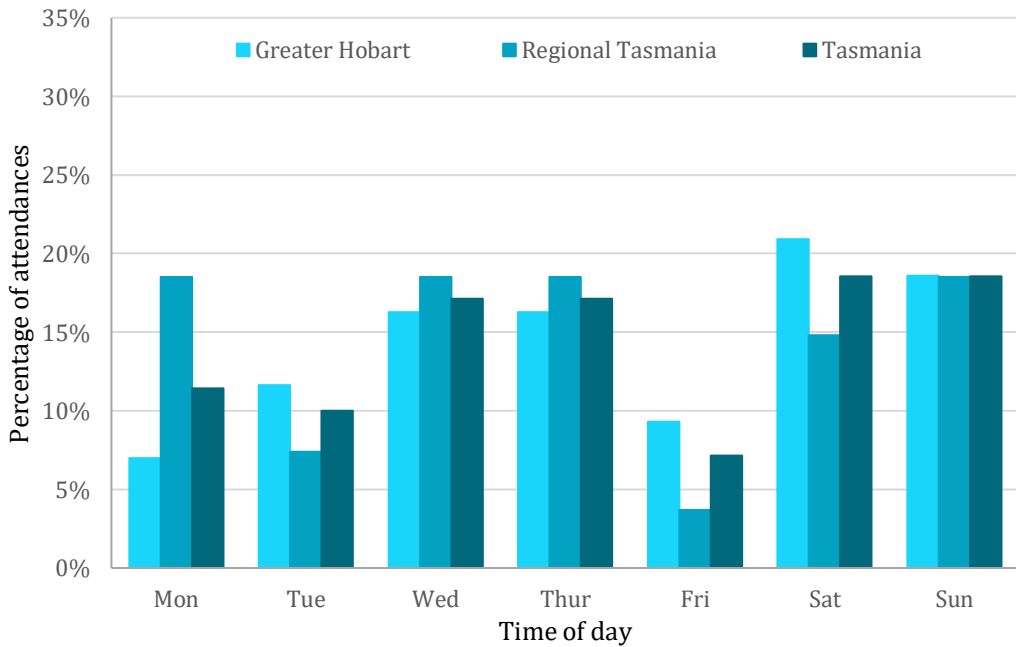
Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

Figure 52: Number of amphetamine-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.
 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 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Figure 54: Percentage of amphetamine-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2019

Crystal methamphetamine-related attendances in Tasmania

Results are presented covering March, June, September, and December for Tasmania in 2019.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 46. Characteristics of crystal methamphetamine-related ambulance attendances in Tasmania for March, June, September, and December 2019 are shown in Table 47. Data regarding month of year, time of day and day of week of attendances are displayed in Figure 55 to Figure 56.

- Crystal methamphetamine attendances peaked in March and December 2019 (Table 46).
- As shown in Table 47, in March, June, September, and December 2019:
 - there were 40 crystal methamphetamine-related attendances in Tasmania
 - the majority of crystal methamphetamine-related attendances were for male patients (60%)
 - median age of crystal methamphetamine-related attendances was 36 years
 - the majority of crystal methamphetamine-related attendances were transported to hospital, across both greater Hobart (65%) and regional areas (86%)
- Due to the low number of attendances, attendances per time of day is not provided.
- Saturdays represented the peak day for crystal methamphetamine-related attendances in greater Hobart and regional Tasmania (Figure 56).

Table 46: Crystal methamphetamine-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019

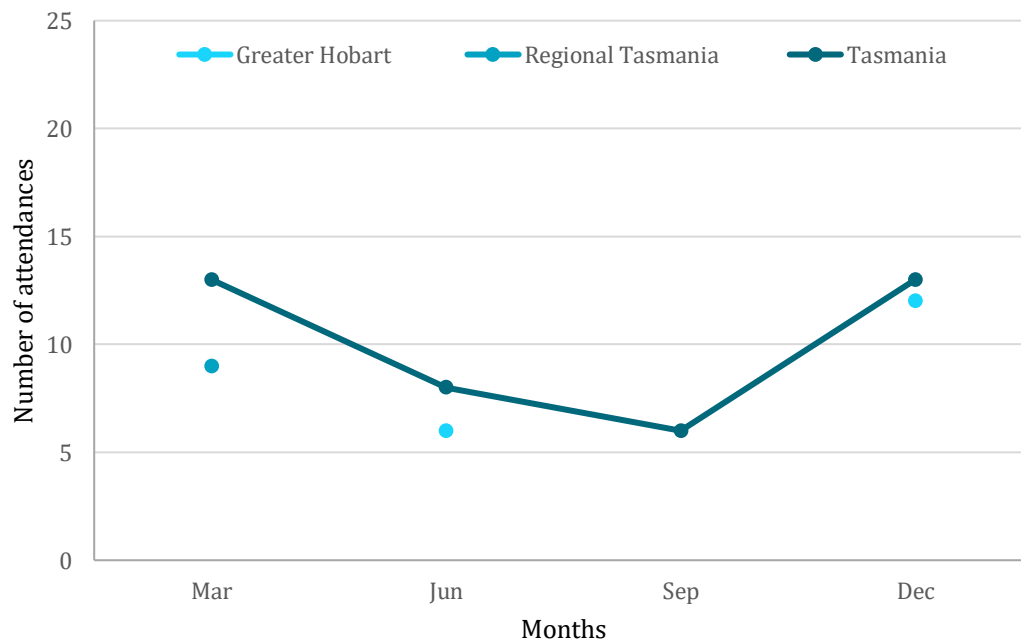
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	N<5	≥8 (3.0)	13 (2.4)
June attendances (per 100,000 population)	N<5	N<5	8 (1.5)
September attendances (per 100,000 population)	N<5	N<5	6 (1.1)
December attendances (per 100,000 population)	≥8 (5.2)	N<5	13 (2.4)

Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

Table 47: Characteristics of crystal methamphetamine-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2019

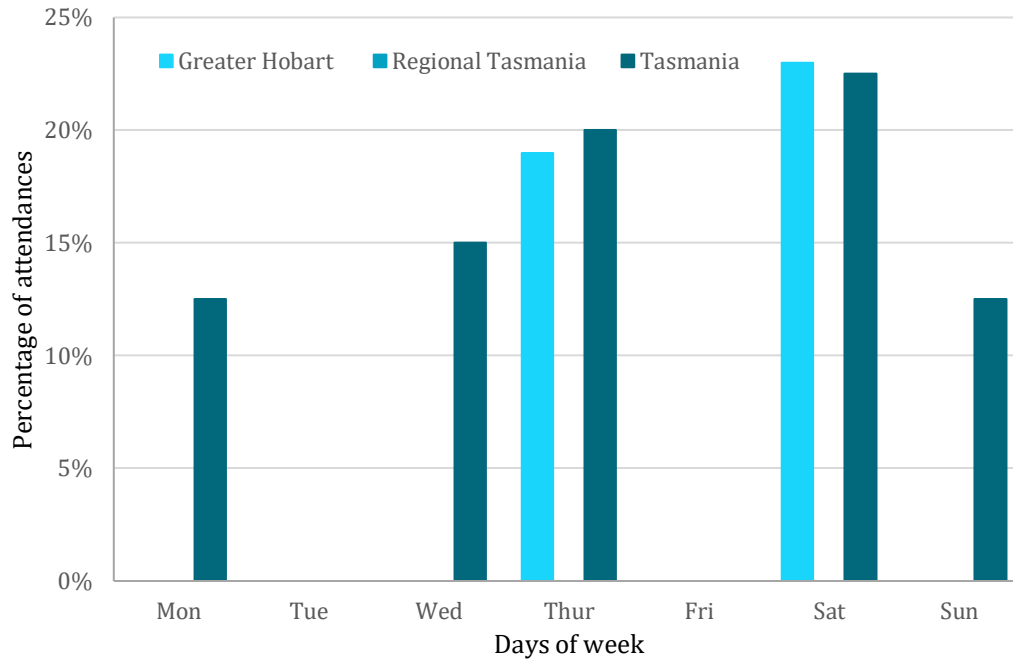
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	26 (11.2)	14 (4.6)	40 (7.5)
Mean attendances per day	<5	<5	<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	36 (31-44)	36 (28-44)	36 (31-42)
Male	16 (62%)	8 (57%)	24 (60%)
Police co-attendance	≥6 (≥23%)	N<5	11 (28%)
Transport to hospital	17 (65%)	12 (86%)	29 (73%)
Alcohol involved	N<5	N<5	6 (15%)
Alcohol intoxication	N<5	0	N<5
Multiple drugs involved (excluding alcohol)	≥7 (≥30%)	N<5	12 (30%)

Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution. All proportions are based on present information



Note: Attendances in September and December 2019 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 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Figure 56: Percentage of crystal methamphetamine-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2019

Cannabis-related attendances in Tasmania

Results are presented covering March, June, September, and December for Tasmania in 2019.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 48. Characteristics of cannabis-related ambulance attendances in Tasmania for March, June, September, and December 2019 are shown in Table 49. Data regarding month, time of day and day of week of attendances are displayed in Figure 57 to Figure 59.

- Cannabis-related attendances peaked during June and March 2019 (Table 48).
- As shown in Table 49, in March, June, September and December 2019:
 - there were 150 cannabis-related attendances in Tasmania
 - cannabis-related attendances involved a similar proportion of male in greater Hobart Tasmania (58%) and in regional areas (63%)
 - the median age of cannabis-related attendances was 30 years
 - the majority of cannabis-related attendances in Tasmania were transported to hospital (75%)
 - a higher proportion of cannabis-related attendances involved alcohol in regional (43%) compared with greater Hobart areas (32%)
- As presented in Figure 83, cannabis-related attendance numbers peaked at 8pm.
- Tuesdays and Saturdays were the peak day for cannabis-related attendances in both greater Hobart and regional Tasmania, respectively (Figure 59).

Table 48: Cannabis-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	19 (8.2)	26 (8.6)	45 (8.4)
June attendances (per 100,000 population)	13 (5.6)	32 (10.6)	45 (8.4)
September attendances (per 100,000 population)	19 (8.2)	8 (2.6)	27 (5.1)
December attendances (per 100,000 population)	23 (9.9)	10 (3.3)	33 (6.2)

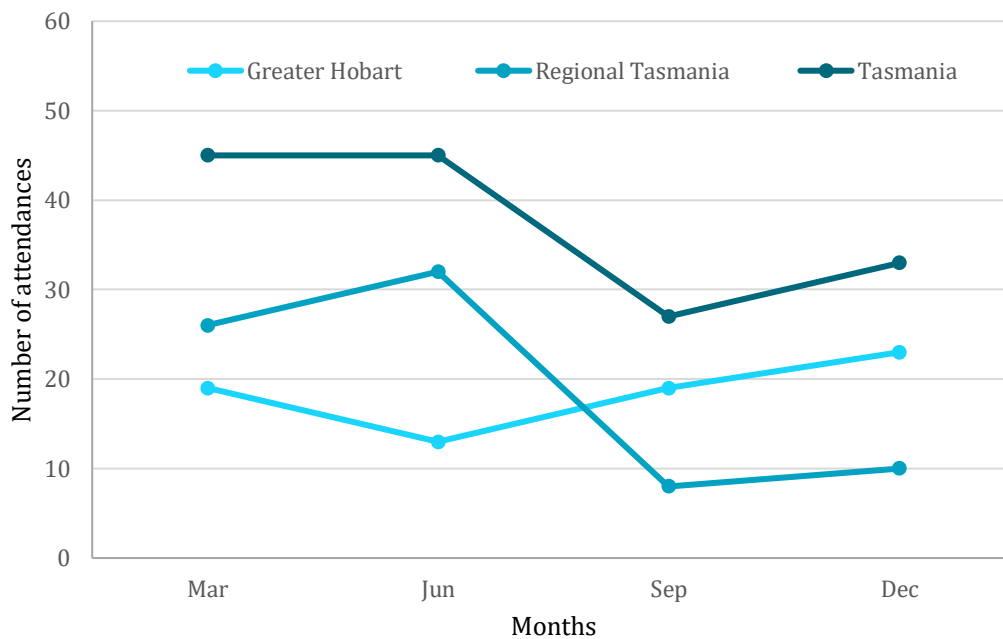
Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

Table 49: Characteristics of cannabis-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2019

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	74 (31.9)	76 (25.1)	150 (28.1)
Mean attendances per day	<5	<5	<5
Daily range	N<5	0-7	0-7
Age- median (interquartile range)	30 (22-43)	31 (23-45)	30 (23-43)
Male	43 (58%)	48 (63%)	91 (61%)
Police co-attendance	14 (19%)	11 (15%)	25 (17%)
Transport to hospital	57 (77%)	56 (74%)	113 (75%)
Alcohol involved	24 (32%)	33 (43%)	57 (38%)
Alcohol intoxication	18 (24%)	21 (28%)	39 (26%)
Multiple drugs involved (excluding alcohol)	21 (28%)	11 (15%)	32 (21%)

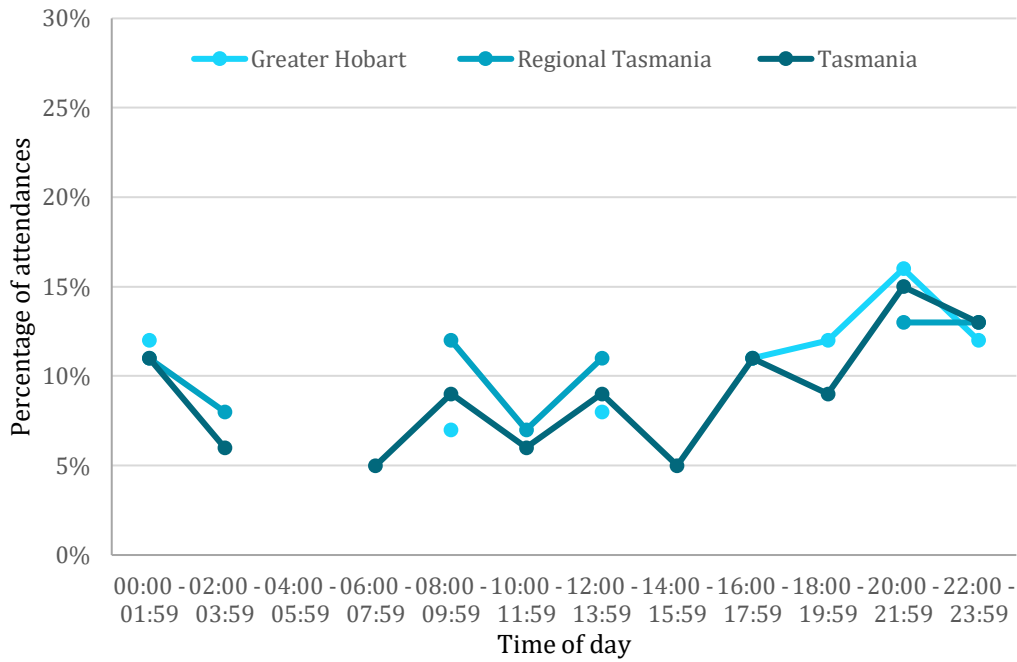
All proportions are based on present information

Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.



Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

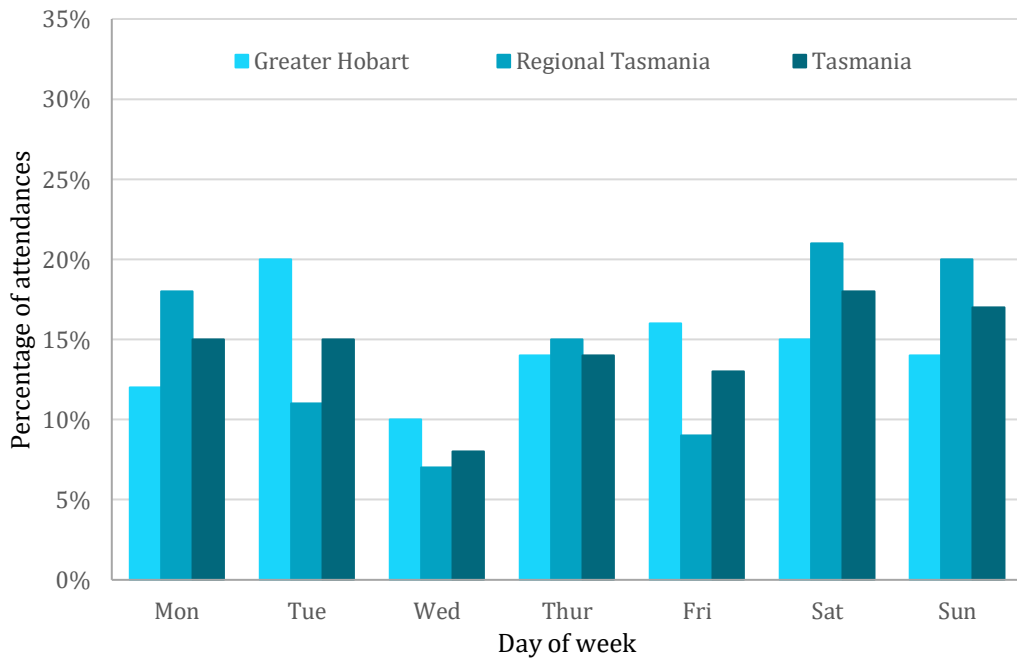
Figure 57: Number of cannabis-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Broken lines are due to N<5

Figure 58: Percentage of cannabis-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Figure 59: Percentage of cannabis-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2019

Heroin-related attendances in Tasmania

Data are not presented for heroin-related attendances in Tasmania due to low numbers of attendances in March, June, September, and December 2019.

Emerging psychoactive substance-related attendances in Tasmania

There were no emerging psychoactive substance-related attendances in Tasmania over the period presented.

Benzodiazepine-related attendances in Tasmania

Results are presented covering March, June, September, and December for Tasmania in 2019.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 50. Characteristics of benzodiazepine-related ambulance attendances in Tasmania for March, June, September, and December 2019 are shown in Table 51. Data regarding time of day and day of week of attendances are displayed in Figure 61 and Figure 62.

- Benzodiazepine-related attendances peaked in September 2019 (Table 50).
- As shown in Table 51, in March, June, September and December 2019:
 - there were 76 benzodiazepine-related attendances in Tasmania
 - the majority of benzodiazepine-related attendances were for females (57%), with higher proportions of males in regional areas (60%) than in greater Hobart areas (33%)
 - the median age of benzodiazepine-related attendances was higher in regional (41 years) compared to Greater Hobart (38 years)
 - a similar proportion of benzodiazepine-related attendances were transported to hospital in greater Hobart and regional areas (91%)
 - multiple drugs (excluding alcohol) were involved in more than half (67%) of all benzodiazepine-related attendances
 - As presented in Figure 61, benzodiazepine-related attendance numbers peaked from 8pm to midnight
- Sundays were the peak day for benzodiazepine-related attendances in greater Hobart Tasmania and Wednesdays and Saturdays in regional Tasmania (Figure 62).

Table 50: Benzodiazepine-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019

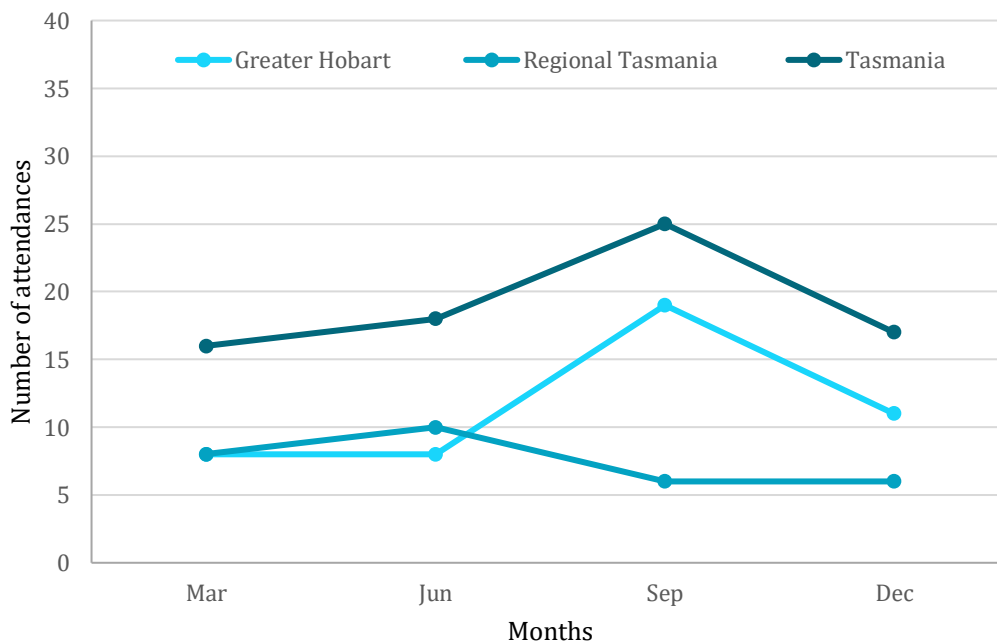
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	8 (3.4)	8 (2.6)	16 (3.0)
June attendances (per 100,000 population)	8 (3.4)	10 (3.3)	18 (3.4)
September attendances (per 100,000 population)	19 (8.2)	6 (2.0)	25 (4.7)
December attendances (per 100,000 population)	11 (4.7)	6 (2.0)	17 (3.2)

Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

Table 51: Characteristics of benzodiazepine-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2019

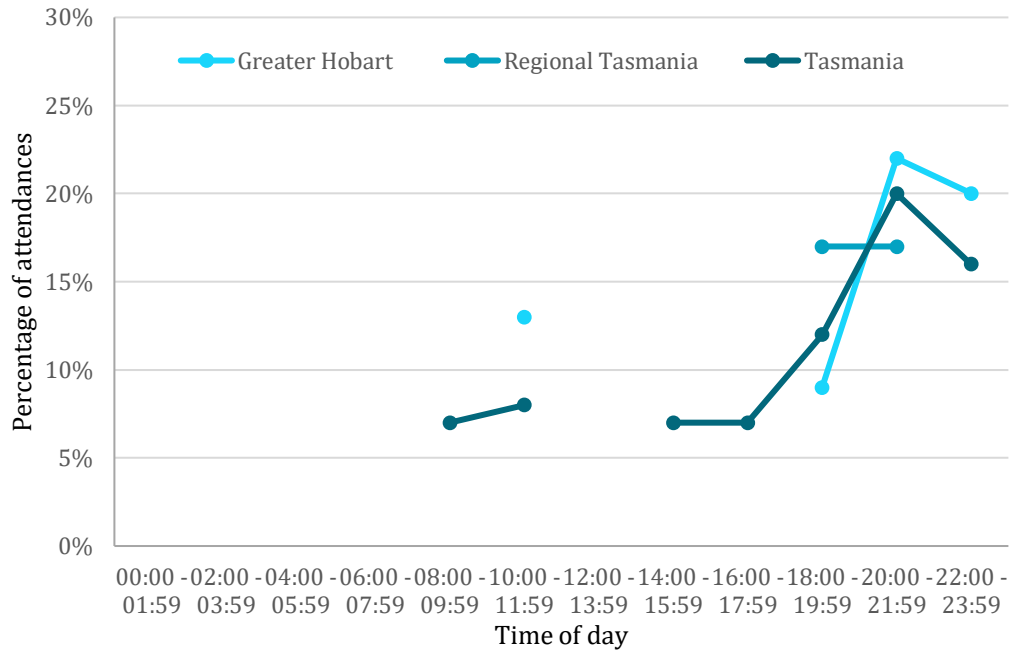
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	46 (19.8)	30 (9.9)	76 (14.2)
Mean attendances per day	<5	<5	<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	38 (29-48)	41 (27-48)	38 (27-48)
Male	15 (33%)	18 (60%)	33 (43%)
Police co-attendance	9 (20%)	7 (23%)	16 (21%)
Transport to hospital	≥41 (≥89%)	≥25 (83%)	69 (91%)
Alcohol involved	19 (41%)	18 (60%)	37 (49%)
Alcohol intoxication	13 (28%)	13 (43%)	26 (34%)
Multiple drugs involved (excluding alcohol)	30 (65%)	21 (70%)	51 (67%)

Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution. All proportions are based on present information



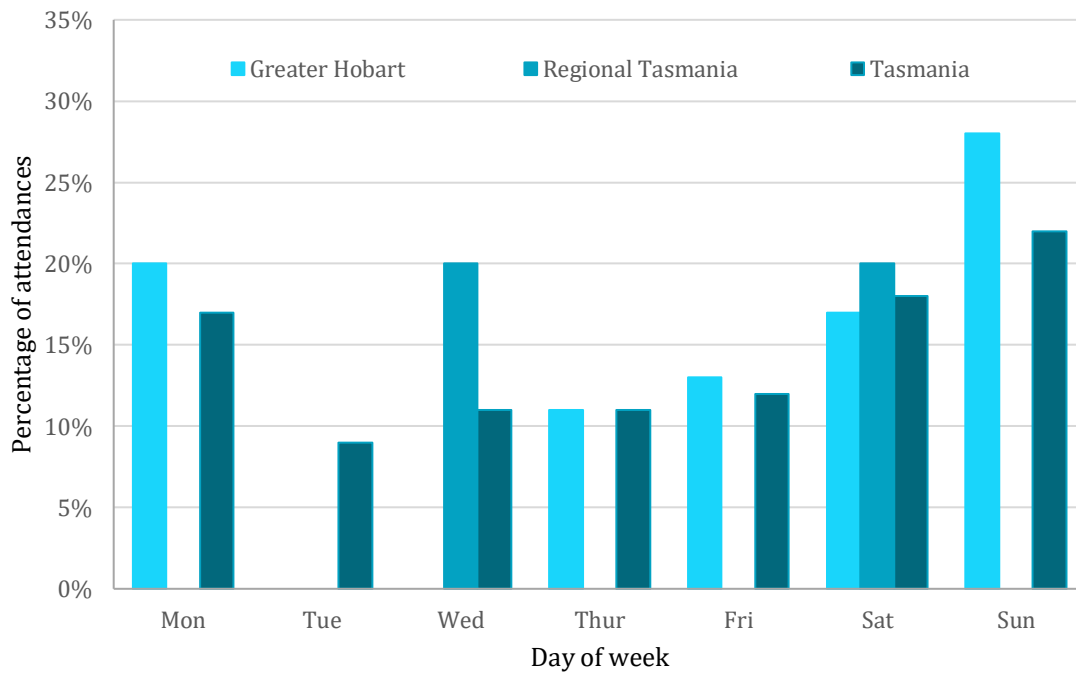
Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 60: Number of benzodiazepine-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.
Broken lines are due to N<5

Figure 61: Percentage of benzodiazepine-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Figure 62: Percentage of benzodiazepine-related attendances by day of week in Greater Hobart and regional Tasmania, March, June, September and December 2019

Opioid analgesic-related attendances in Tasmania

Results are presented covering March, June, September, and December for Tasmania in 2019.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 52. Characteristics of opioid analgesic-related ambulance attendances in Tasmania for March, June, September, and December 2019 are shown in Table 53. Data regarding month of year, time of day and day of week of attendances are displayed in Figure 63 to Figure 64.

- Opioid analgesic-related attendances were highest in December 2019 (Table 52).
- As shown in Table 53, in March, June, September, and December 2019:
 - there were ≥ 37 opioid analgesic-related attendances in Tasmania
 - approximately half of all opioid analgesic-related attendances involved males ($\leq 54\%$)
 - the median age of opioid analgesic-related attendances was lower in greater Hobart areas (44 years) than in regional areas (47 years)
 - the majority of opioid analgesic-related attendances across Tasmania were transported to hospital ($\leq 95\%$).
- Due to the low number of attendances, a figure for time of day is not provided.
- Sundays represented the peak day for opioid analgesic-related attendances in greater Hobart areas, whereas attendances were highest on Thursdays in regional areas (Figure 64).

Table 52: Opioid analgesic-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019

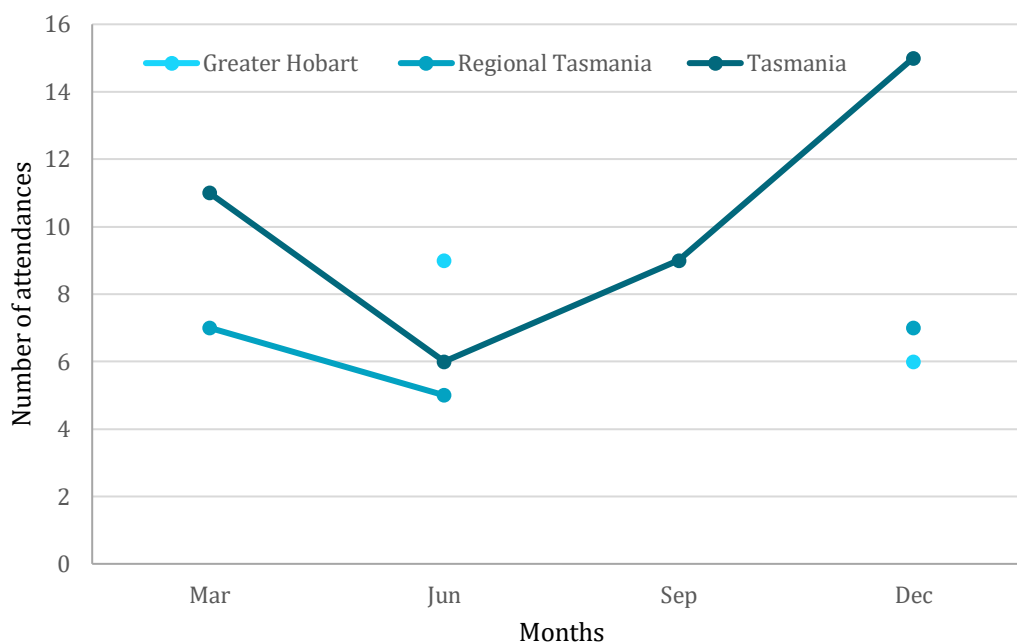
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	N<5	7 (2.3)	11 (2.1)
June attendances (per 100,000 population)	9 (3.9)	5 (1.7)	14 (2.6)
September attendances (per 100,000 population)	N<5	N<5	N<5
December attendances (per 100,000 population)	6 (2.6)	7 (2.3)	13 (2.4)

Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action

Table 53: Characteristics of opioid analgesic-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2019

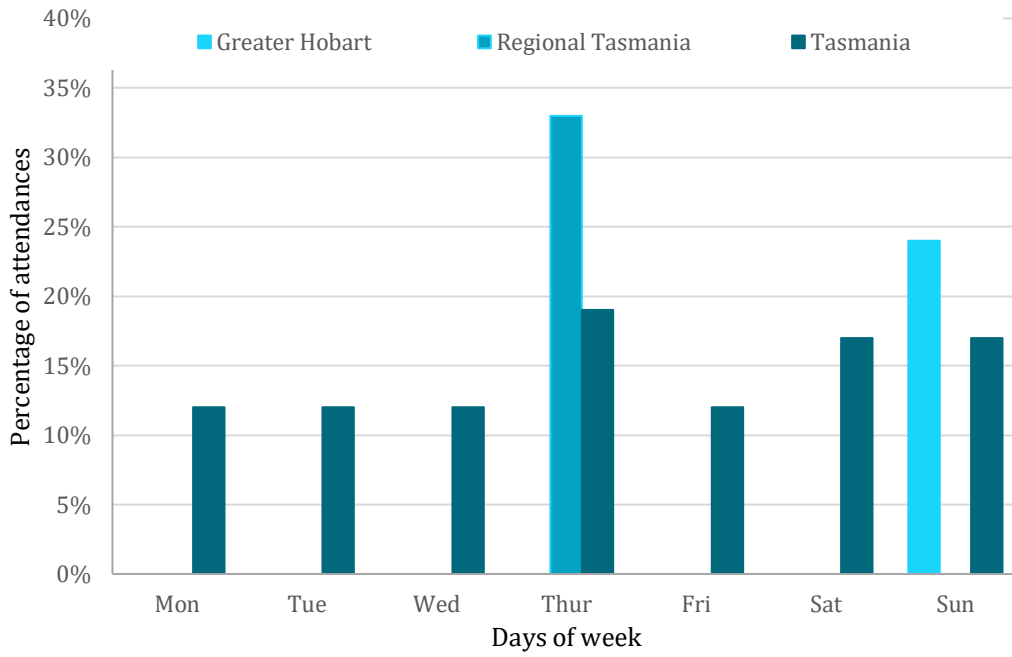
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	21 (9.1)	≥16 (≥5.9)	≥37 (≥6.9)
Mean attendances per day	<5	<5	<5
Daily range	N<5	N<5	N<5
Age- median (interquartile range)	44 (30-51)	47 (33-54)	46 (30-54)
Male	11 (52%)	9 (≤53%)	20 (≤54%)
Police co-attendance	N<5	N<5	5 (≤14%)
Transport to hospital	≥16 (≥76%)	≥11 (≥69%)	35 (≤95%)
Alcohol involved	N<5	N<5	9 (≤24%)
Alcohol intoxication	N<5	N<5	6 (≤16%)
Multiple drugs involved (excluding alcohol)	15 (71%)	8 (≤49%)	23 (≤62%)
Morphine	N<5	N<5	9 (≤24%)
Oxycodone	5 (24%)	8 (≤49%)	13 (≤35%)

Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution. All proportions are based on present information



Note: Attendances in September and December 2019 are likely to be underreported due to paramedic industrial action
Broken lines are due to N<5

Figure 63: Number of opioid analgesic-related attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019



Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Figure 64: Percentage of opioid analgesic-related attendances by time of day in Greater Hobart and regional Tasmania, March, June, September and December 2019

Opioid pharmacotherapy-related attendances in Tasmania

Data are not presented for opioid pharmacotherapy -related attendances in Tasmania due to low numbers of attendances in March, June, September, and December 2019. Graphed data are not presented due to low numbers of attendances.

Alcohol intoxication and other drug-related attendances: 2018 and 2019

Alcohol intoxication and other drug-related ambulance attendance numbers in March, June, September, and December 2018 and 2019 are shown in Table 54.

As presented in Table 54, in Tasmania there were statistically significant decreases in alcohol intoxication and benzodiazepine-related ambulance attendances between 2018 and 2019.

Table 54. Number of alcohol intoxication and other drug-related attendances in 2018 and 2019 (March, June, September and December), Tasmania

Attendances	2018*	2019*	% Diff
Alcohol intoxication	870	792	-10% *
Amphetamine	74	70	-6%
Crystal methamphetamine	42	40	-5%
Cannabis	164	150	-9%
Heroin	N<5	N<5	-
Emerging psychoactive substance	0	0	-
Benzodiazepine	101	76	-33% *
Opioid analgesic	42	42	0%
Opioid pharmacotherapy	11	10	-10%

*2018 and 2019 numbers include March, June, September and December data

Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Alcohol and other drug poisoning-related ambulance attendances in Tasmania

AOD poisoning-related ambulance attendances by month are shown in Table 55, and characteristics of AOD poisoning-related ambulance attendances are displayed in Table 56. Drugs involved in AOD poisoning-related ambulance attendances in Tasmania are presented in Table 57. It is important to note that these data represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As shown in Table 55 to Table 57:

- in Tasmania, poisonings with undetermined intent peaked during March and intentional poisoning-related attendances in September in 2019
- the majority of poisoning with unintentional, undetermined intent and intentional AOD poisoning in Tasmania were female (63%, 59% and 68% respectively)

- alcohol was involved in 64% of unintentional poisoning-related attendances across Tasmania, 43% of poisonings with undetermined intent and 33% of intentional poisonings
- following alcohol involvement, benzodiazepines contributed to the greatest proportion of AOD poisoning-related attendances with intentional poisonings (34%)

Table 55: AOD poisoning-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2019

Attendances (per 100,000 population)	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
March	N<5	N<5	5 (0.9)	9 (3.9)	8 (2.6)	17 (3.2)	15 (6.5)	15 (5.0)	30 (5.6)
June	N<5	N<5	N<5	N<5	N<5	5 (0.9)	11 (4.7)	12 (4.0)	23 (4.3)
September	N<5	N<5	5 (0.9)	≥6 (≥3.0)	N<5	11 (2.1)	25 (10.8)	11 (3.6)	36 (6.7)
December	5 (2.2)	5 (1.7)	10 (1.9)	≥4 (≥20)	N<5	9 (1.7)	10 (4.3)	12 (4.0)	22 (4.1)

Note: Attendances in June 2019 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 56: Characteristics of AOD poisoning-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2019

	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)	11 (4.7)	11 (3.6)	≥17 (4.1)	27 (11.6)	15 (5.0)	42 (7.9)	61 (26.3)	50 (16.5)	111 (20.8)
Age- median (interquartile range)	24 (21-38)	27 (16-38)	25 (21-38)	32 (26-40)	41 (18-45)	33 (23-44)	34 (22-46)	30 (21-47)	32 (21-47)
Male	N<5	N<5	8 (37%)	10 (37%)	7 (47%)	17 (41%)	18 (30%)	17 (34%)	42 (32%)
Transport to hospital	≥6 (≥60%)	11 (100%)	≥17 (≥77%)	≥22 (≥81%)	≥10 (≥67%)	≥37 (≥88%)	≥56 (≥92%)	≥45 (≥90%)	≥106 (≥96%)
Police co-attendance	N<5	0	N<5	5 (2%)	5 (2%)	10 (2%)	15 (25%)	8 (16%)	23 (21%)

All proportions are based on present information. Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

Table 57: Drugs involved in poisoning-related ambulance attendances in Greater Hobart and regional Tasmania, March, June, September and December 2019

	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	7 (64%)	7 (64%)	14 (64%)	≥13 (≥48%)	N<5	18 (43%)	21 (34%)	16 (32%)	37 (33%)
Alcohol intoxication only	N<5	N<5	10 (46%)	N<5	N<5	6 (14%)	N<5	0	N<5
Amphetamine	N<5	0	N<5	N<5	0	N<5	0	0	0
Crystal methamphetamine	N<5	0	N<5	N<5	0	N<5	0	0	0
Cannabis	0	0	0	N<5	0	N<5	N<5	N<5	6 (5%)
Heroin	0	N<5	N<5	0	0	0	0	0	0
Emerging psychoactive substance	0	0	0	0	0	0	0	0	0
Benzodiazepines	N<5	N<5	N<5	N<5	N<5	N<5	24 (39%)	14 (28%)	38 (34%)
Opioid analgesics	N<5	N<5	N<5	0	0	0	5 (8%)	6 (12%)	11 (10%)
Opioid pharmacotherapy	0	0	0	0	0	0	N<5	N<5	N<5

Note: Due to paramedic industrial action, overall attendance records are likely to be underreported. Interpret data with caution.

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

Other than alcohol intoxication only attendances, 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 March, June, September, and December for ACT in 2019.

Numbers and rates of monthly alcohol intoxication-related ambulance attendances are shown in Table 58. Characteristics of alcohol intoxication-related ambulance attendances in the ACT are shown in Table 59, including March, June, September and December data for 2019. Data regarding month, time of day and day of week of attendances are displayed in Figure 65 to Figure 67.

- Alcohol intoxication-related attendances peaked in December 2019 (Table 58).
- As shown in Table 59, in March, June, September, and December 2019:
 - there were 759 alcohol intoxication-related attendances in the ACT
 - the majority of alcohol intoxication-related attendances were for males (57%)
 - median age of alcohol intoxication-related attendances was 36 years
 - the majority of alcohol intoxication-related attendances (74%) were transported to hospital
 - one-in-five alcohol intoxication-related attendances involved police co-attendance (20%)
- As presented in Figure 66, alcohol intoxication-related attendance numbers peaked between midnight and 2am in ACT.
- Saturdays and Sundays were the peak days for alcohol intoxication-related attendances (Figure 67).

Table 58: Alcohol intoxication-related ambulance attendances in ACT, March, June, September and December 2019

	ACT
March attendances (per 100,000 population)	183 (42.9)
June attendances (per 100,000 population)	160 (37.5)
September attendances (per 100,000 population)	181 (42.4)
December attendances (per 100,000 population)	235 (55.1)

Table 59: Characteristics of alcohol intoxication-related ambulance attendances in ACT, March, June, September and December 2019

	ACT
Number of attendances (per 100,000 population)	759 (177.9)
Mean attendances per day	6.2
Daily range	0-16
Age- median (interquartile range)	36 (23-51)
Male	430 (57%)
Police co-attendance	150 (20%)
Transport to hospital	561 (74%)
Multiple drugs involved	29 (4%)

Note: all proportions are based on present information

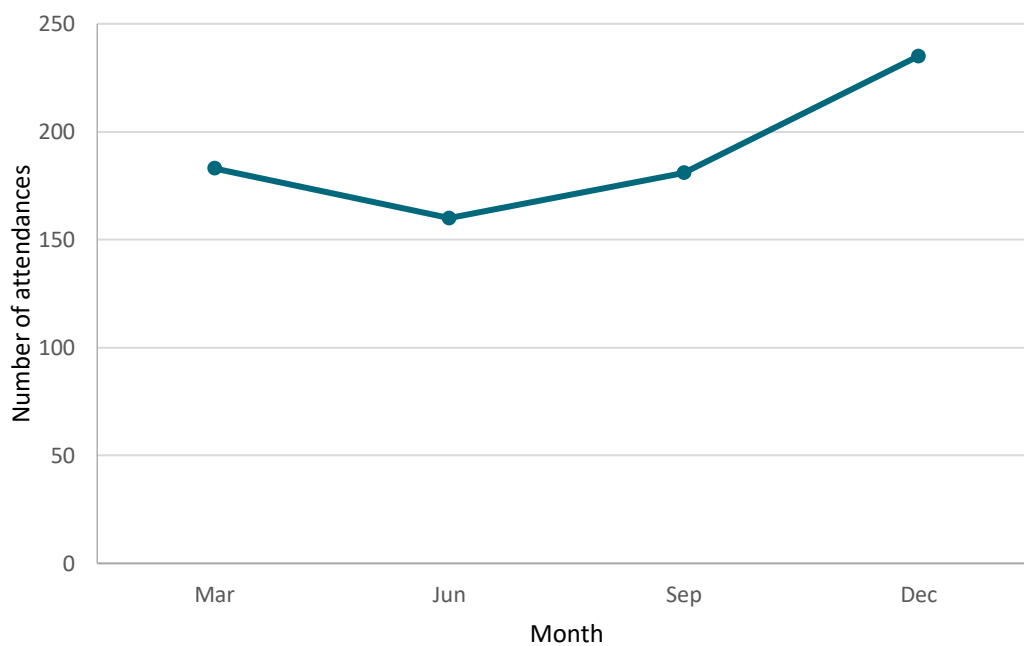


Figure 65: Number of alcohol intoxication-related attendances by month in ACT, March, June, September and December 2019

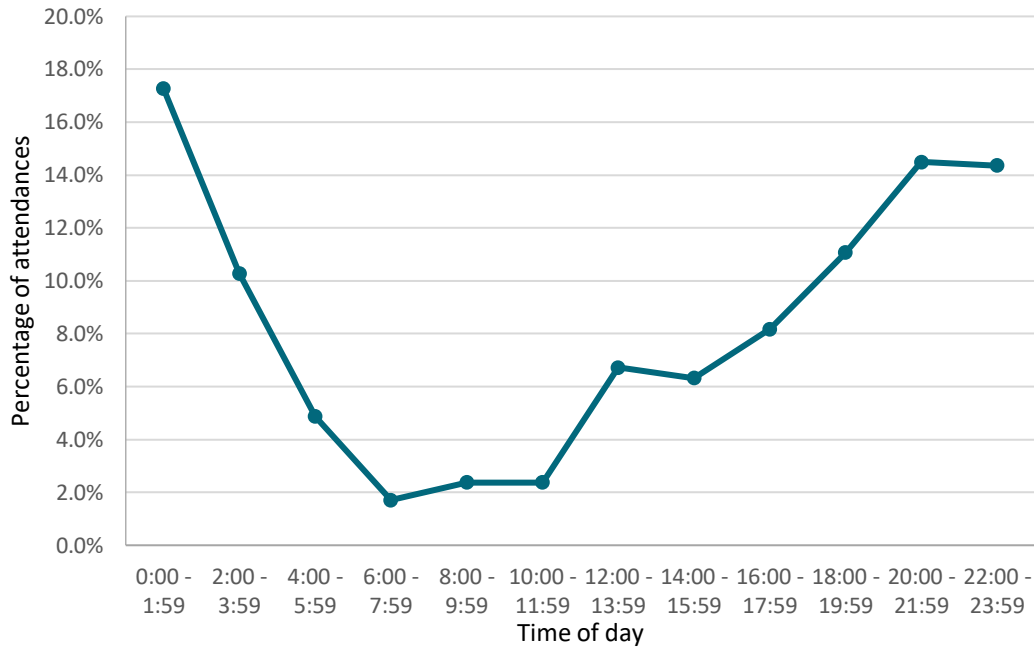


Figure 66: Percentage of alcohol intoxication-related attendances by time of day in ACT, March, June, September and December 2019

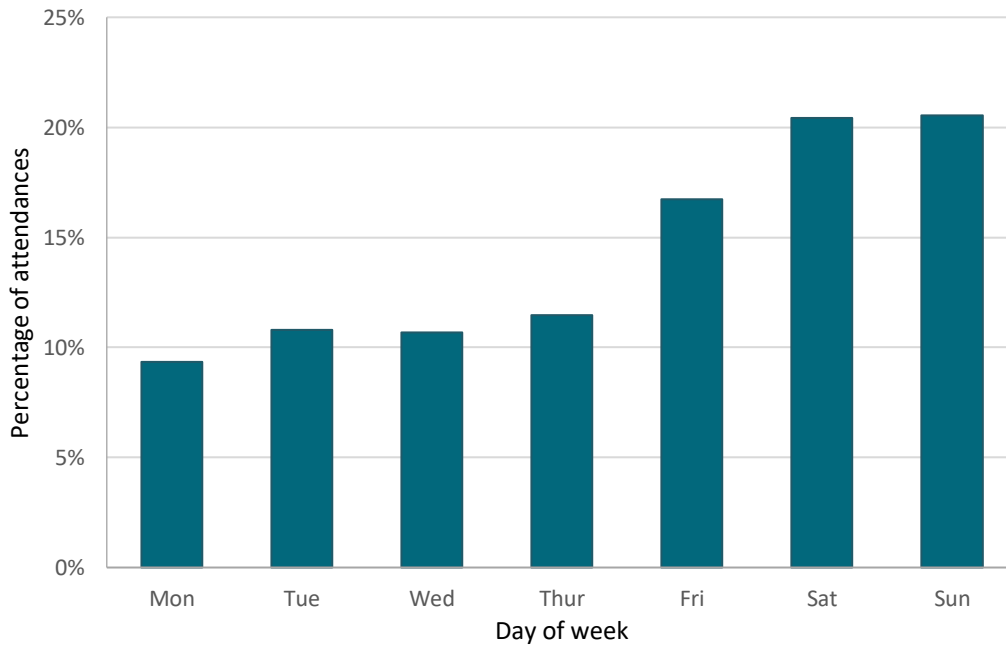


Figure 67: Percentage of alcohol intoxication-related attendances by day of week in ACT, March, June, September and December data 2019

All amphetamine-related attendances in ACT

Results are presented covering March, June, September, and December for ACT in 2019.

Numbers and rates of monthly amphetamine-related ambulance attendances are shown in Table 60. Characteristics of amphetamine-related ambulance attendances in the ACT for March, June, September, and December in 2019 are shown in Table 61. Data regarding month, time of day and day of week of attendances are displayed in Figure 68 to Figure 70.

- Amphetamine-related attendances peaked in December 2019 (Table 60).
- As shown in Table 61, in March, June, September and December 2019:
 - there were 88 amphetamine-related attendances in the ACT
 - the majority of amphetamine-related attendances were male (69%)
 - median age of amphetamine-related attendances was 31 years
 - the majority of amphetamine-related attendances (82%) were transported to hospital
- As presented in Figure 69, amphetamine-related attendance numbers peaked between midnight and 2am in the ACT.
- Sundays represented the peak day for amphetamine-related attendances (Figure 70).

Table 60: Amphetamine-related ambulance attendances by month in ACT, March, June, September and December 2019

	ACT
March attendances (per 100,000 population)	19 (4.5)
June attendances (per 100,000 population)	16 (3.7)
September attendances (per 100,000 population)	26 (6.1)
December attendances (per 100,000 population)	27 (6.3)

Table 61: Characteristics of amphetamine-related ambulance attendances in ACT, March, June, September and December 2019

	ACT
Number of attendances (per 100,000 population)	88 (20.6)
Mean attendances per day	<5
Daily range	N<5
Age- median (interquartile range)	31 (27-39)
Male	61 (69%)
Police co-attendance	24 (27%)
Transport to hospital	72 (82%)
Alcohol involved	17 (19%)
Alcohol intoxication	9 (10%)
Multiple drugs involved (excluding alcohol)	34 (39%)

Note: all proportions are based on present information

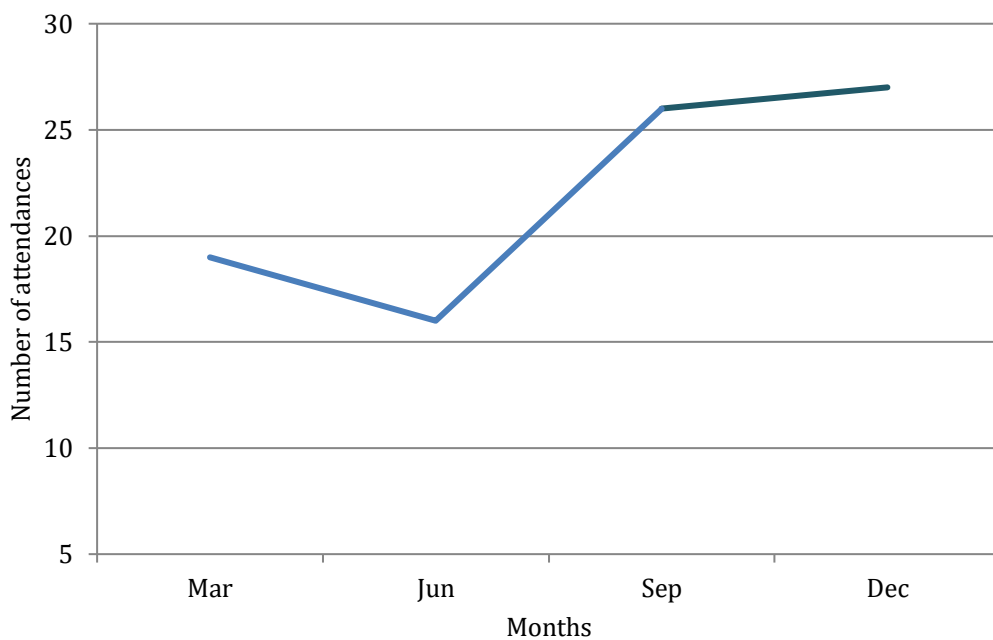
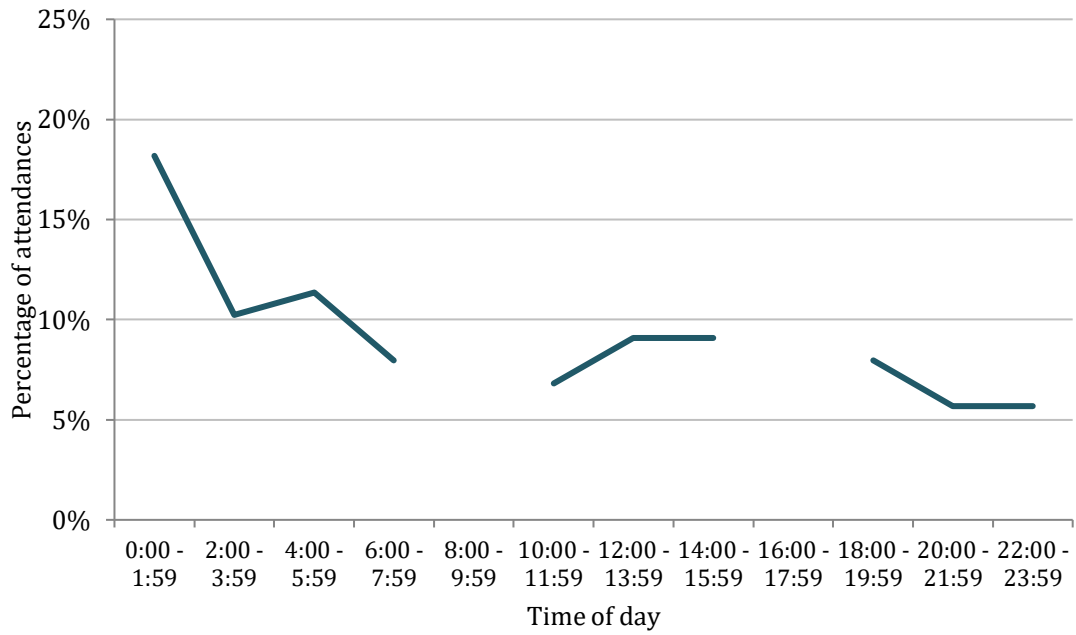


Figure 68: Number of amphetamine-related attendances by month ACT, March, June, September and December 2019



Note: Data not shown where N<5

Figure 69: Percentage of amphetamine-related attendances by time of day in ACT, March, June, September and December 2019

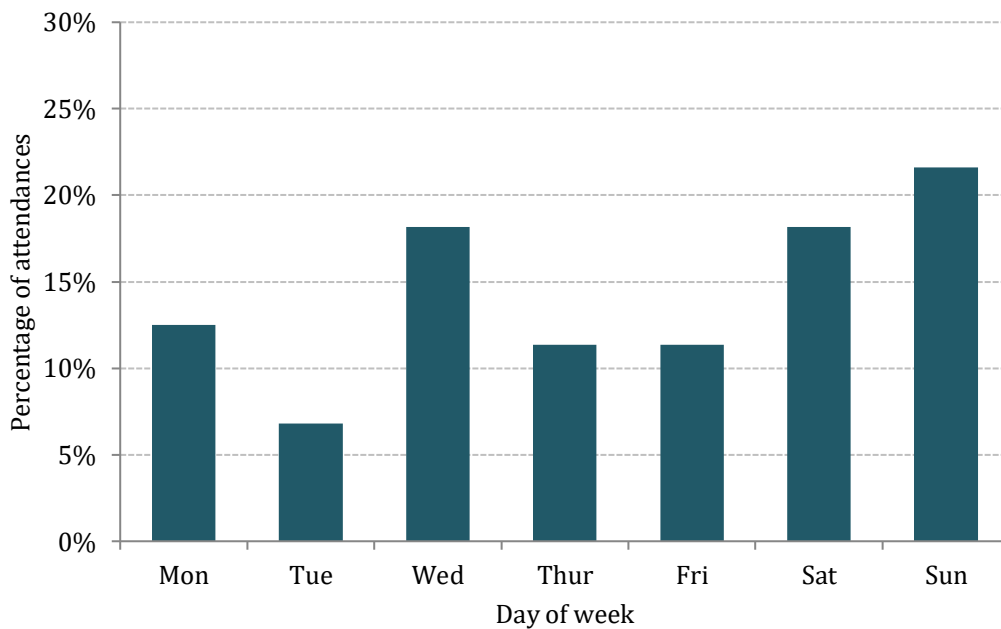


Figure 70: Percentage of amphetamine-related attendances by day of week in ACT, March, June, September and December 2019

Crystal methamphetamine-related attendances in ACT

Results are presented covering March, June, September, and December for ACT in 2019.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 62. Characteristics of crystal methamphetamine-related ambulance attendances in the ACT for March, June, September and December 2019 are shown in Table 63. Data regarding numbers of attendances occurring in each month is displayed in Figure 71.

- Crystal methamphetamine-related attendances peaked during March 2019 (Table 62).
- As shown in Table 63, in March, June, September, and December 2019:
 - there were 51 crystal methamphetamine-related attendances in the ACT
 - the majority of crystal methamphetamine-related attendances were male (67%)
 - median age of crystal methamphetamine-related attendances was 31 years
 - the majority of crystal methamphetamine-related attendances (84%) were transported to hospital
- Graphed data on time of day and day of week are not presented due to low numbers of attendances.

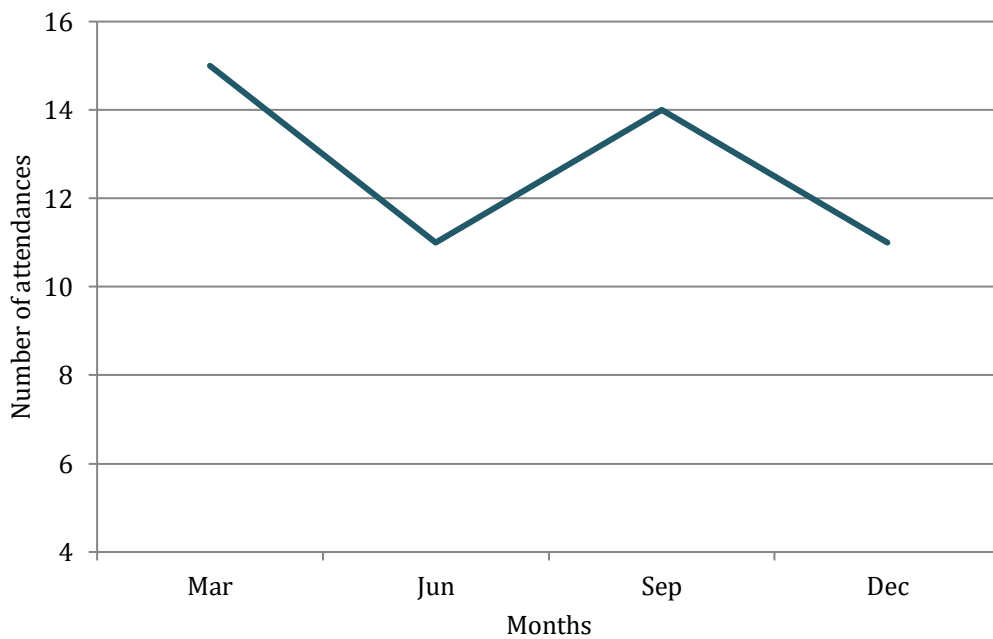
Table 62: Crystal methamphetamine-related ambulance attendances by month in ACT, March, June, September and December 2019

	ACT
March attendances (per 100,000 population)	15 (3.5)
June attendances (per 100,000 population)	11 (2.6)
September attendances (per 100,000 population)	14 (3.3)
December attendances (per 100,000 population)	11 (2.6)

Table 63: Characteristics of crystal methamphetamine-related ambulance attendances in ACT, March, June, September and December 2019

	ACT
Number of attendances (per 100,000 population)	51 (12.0)
Mean attendances per day	<5
Daily range	N<5
Age- median (interquartile range)	31 (27-38)
Male	34 (67%)
Police co-attendance	14 (28%)
Transport to hospital	43 (84%)
Alcohol involved	5 (10%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	23 (45%)

Note: all proportions are based on present information



Note: March data not shown due to N<5

Figure 71: Number of crystal amphetamine-related attendances by ACT, March, June, September and December 2019

Cannabis-related attendances in ACT

Results are presented covering March, June, September, and December for ACT in 2019.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 64. Characteristics of cannabis-related ambulance attendances in ACT for March, June, September, and December 2019 are shown in Table 65. Data regarding month, time of day and day of week of attendances are displayed in Figure 72 to Figure 74.

- Cannabis-related attendances peaked in September 2019 (Table 64).
- As shown in Table 65, in March, June, September and December 2019:
 - there were 96 cannabis-related attendances in the ACT
 - the majority of cannabis-related attendances were male (58%)
 - median age of cannabis-related attendances was 31 years
 - three-quarters of cannabis-related attendances were transported to hospital (76%)
- As presented in Figure 73, cannabis-related attendance numbers in ACT peaked between 10pm and midnight.
- Fridays and Sundays represented the peak days for cannabis-related attendances in 2019 (Figure 74).

Table 64: Cannabis-related ambulance attendances by month in ACT, March, June, September and December 2019

	ACT
March attendances (per 100,000 population)	20 (4.7)
June attendances (per 100,000 population)	15 (3.5)
September attendances (per 100,000 population)	40 (9.4)
December attendances (per 100,000 population)	21 (4.9)

Table 65: Characteristics of cannabis-related ambulance attendances in ACT, March, June, September and December 2019

	ACT
Number of attendances (per 100,000 population)	96 (22.5)
Mean attendances per day	<5
Daily range	N<5
Age- median (interquartile range)	31 (22-44)
Male	56 (58%)
Police co-attendance	31 (32%)
Transport to hospital	73 (76%)
Alcohol involved	31 (32%)
Alcohol intoxication	17 (18%)
Multiple drugs involved (excluding alcohol)	30 (31%)

Note: all proportions are based on present information

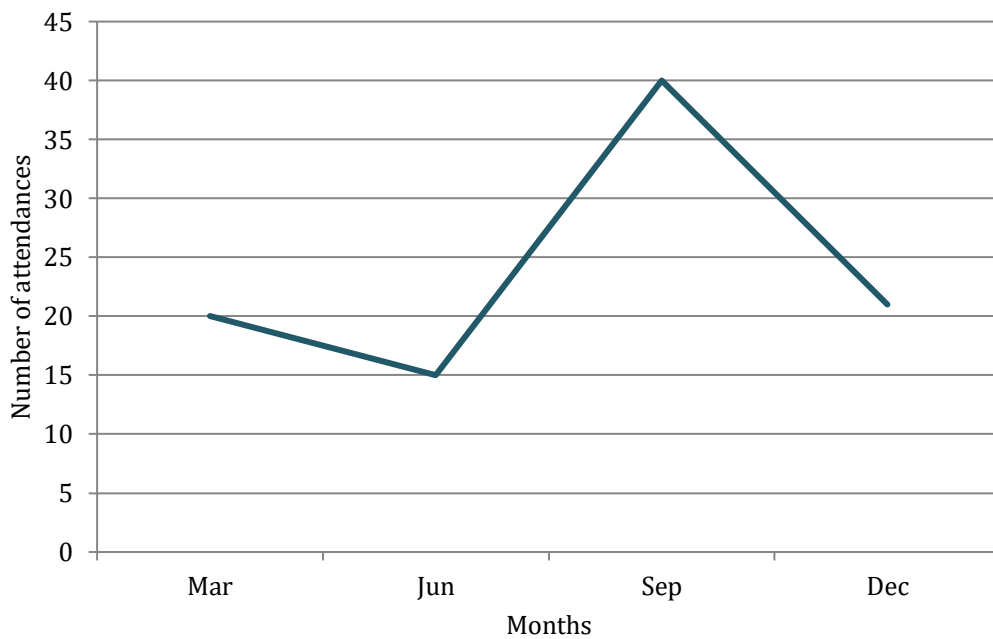
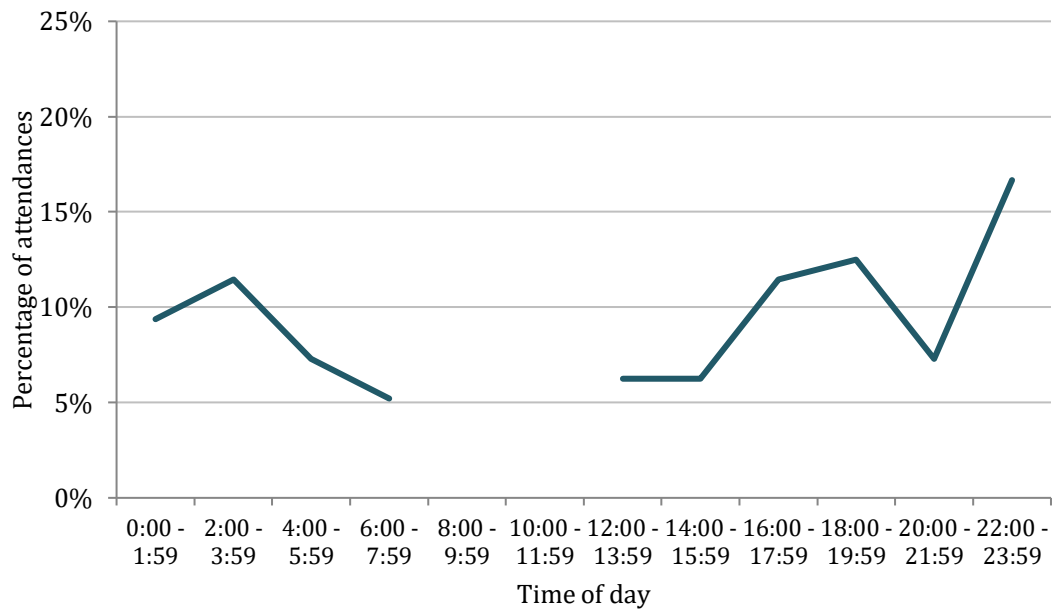


Figure 72: Number of cannabis-related attendances by month in ACT, March, June, September and December 2019



Note: Data not shown where N<5

Figure 73: Percentage of cannabis-related attendances by time of day in ACT, March, June, September and December 2019

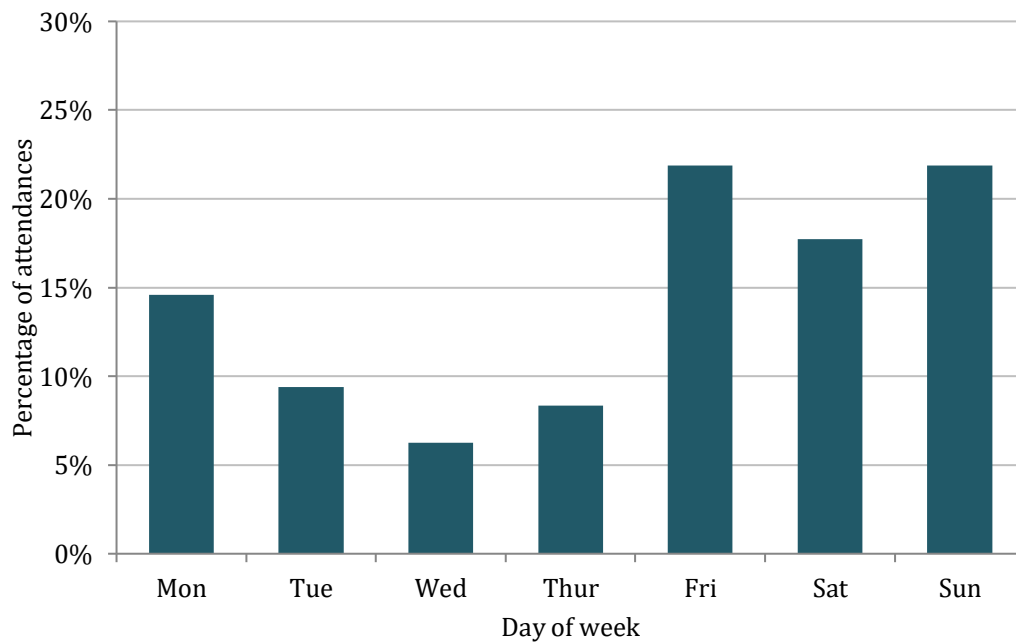


Figure 74: Percentage of cannabis-related attendances by day of week in ACT, March, June, September and December 2019

Heroin-related attendances in ACT

Results are presented covering March, June, September, and December for ACT in 2019.

Numbers and rates of heroin-related ambulance attendances are shown in Table 66. Characteristics of heroin-related ambulance attendances in ACT for March, June, September, and December 2019 are shown in Table 67. Data regarding month, time of day and day of week of attendances are displayed in Figure 75 to Figure 77.

- Heroin-related attendances peaked in March 2019 (Table 66).
- As shown in Table 67, in March, June, September, and December 2019:
 - there were 77 heroin-related attendances in the ACT
 - the majority of heroin-related attendances were male (69%)
 - median age of heroin-related attendances was 39 years
 - almost two-fifths of heroin-related attendances were transported to hospital (38%)
- As presented in Figure 76, heroin-related attendance numbers peaked from 2pm to 4pm.
- Saturdays were the peak day for heroin-related attendances in 2019 (Figure 77).

Table 66: Heroin-related ambulance attendances by month in ACT, March, June, September and December 2019

	ACT
March attendances (per 100,000 population)	24 (5.6)
June attendances (per 100,000 population)	14 (3.3)
September attendances (per 100,000 population)	19 (4.5)
December attendances (per 100,000 population)	20 (4.7)

Table 67: Characteristics of heroin-related ambulance attendances in ACT, March, June, September and December 2019

	ACT
Number of attendances (per 100,000 population)	77 (18.0)
Mean attendances per day	<5
Daily range	N<5
Age- median (interquartile range)	39 (35-49)
Male	53 (69%)
Police co-attendance	9 (12%)
Transport to hospital	29 (38%)
Alcohol involved	13 (17%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	22 (29%)
Responded to naloxone	37 (48%)

Note: all proportions are based on present information

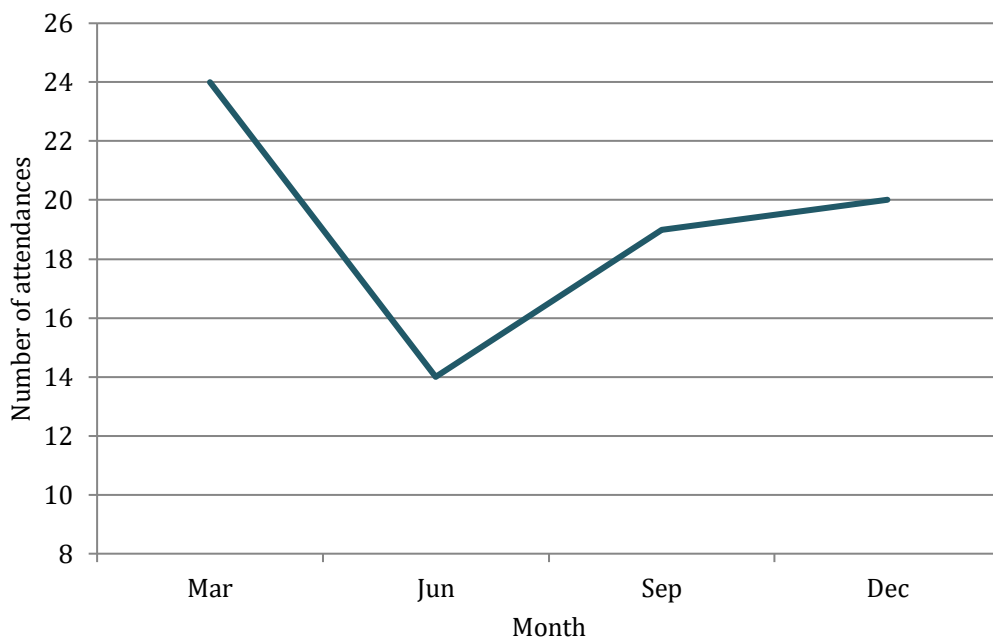


Figure 75: Number of heroin-related attendances by month in ACT, March, June, September and December 2019

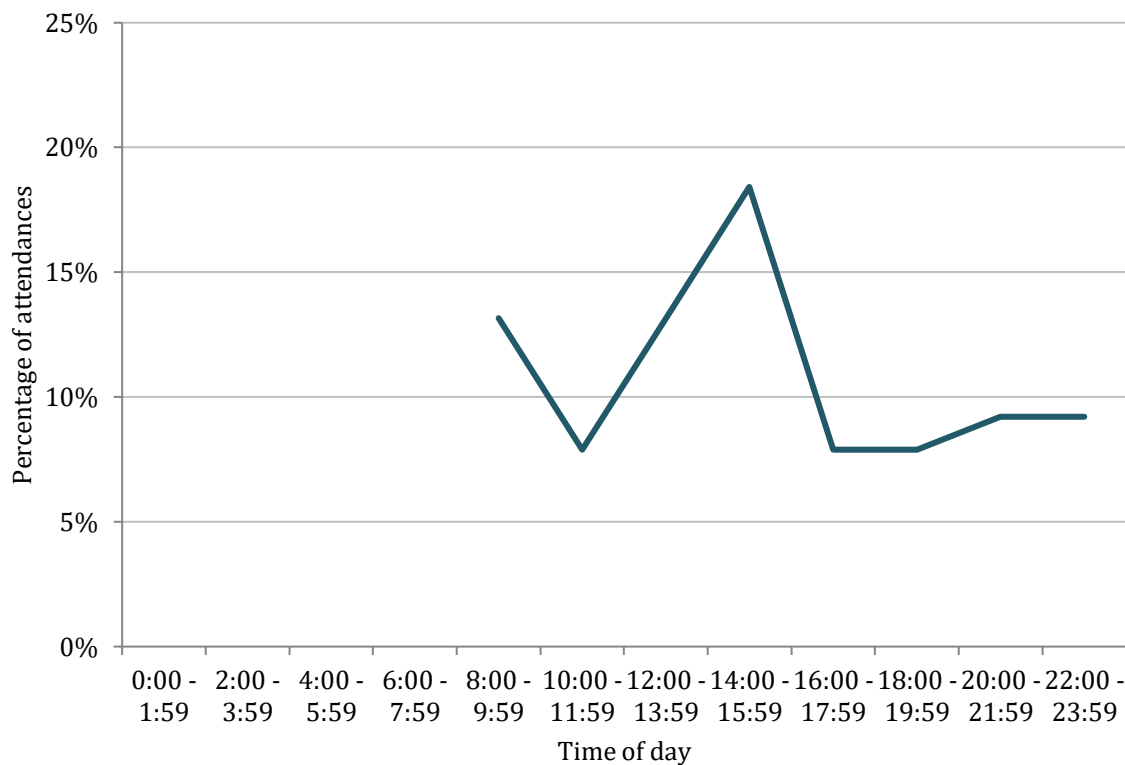


Figure 76: Percentage of heroin-related attendances by time of day in ACT, March, June, September and December 2019

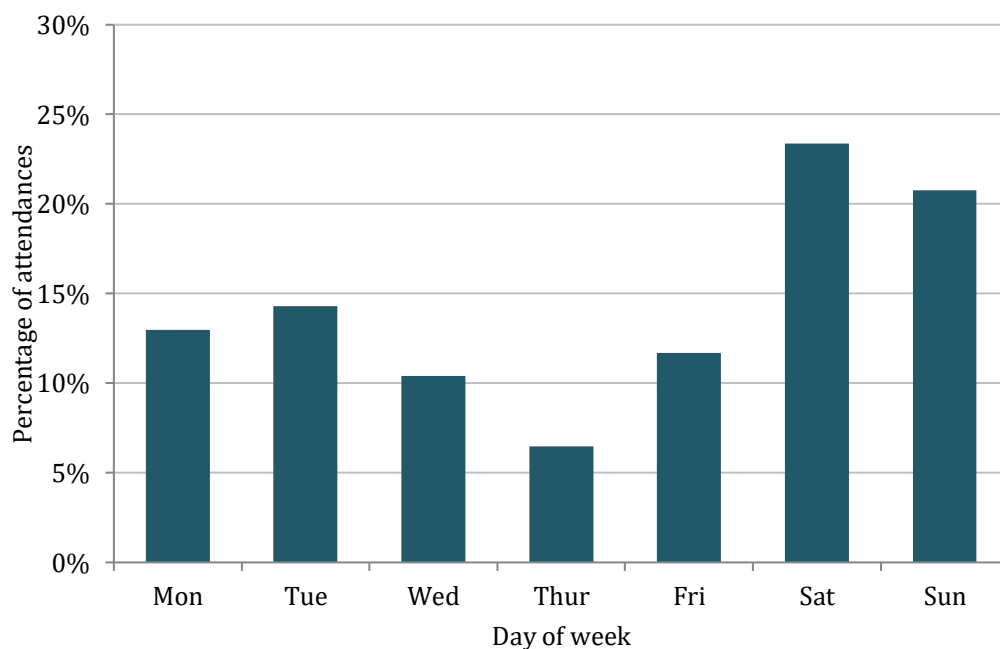


Figure 77: Percentage of heroin-related attendances over total attendances by day of week in ACT, March, June, September and December 2019

Emerging psychoactive substance-related attendances in ACT

There were no attendances involving emerging psychoactive substances in the ACT in 2019.

Benzodiazepine-related attendances in ACT

Results are presented covering March, June, September, and December for ACT in 2019.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 68. Characteristics of benzodiazepine-related ambulance attendances in ACT for March, June, September and December 2019 are shown in Table 69. Data regarding month, time of day and day of week of attendances are displayed in Figure 78 to Figure 80.

- Benzodiazepine-related attendances numbers peaked in September 2019 (Table 68).
- As shown in Table 69, in March, June, September, and December 2019:
 - there were 85 benzodiazepine-related attendances in the ACT
 - fewer than half benzodiazepine-related attendances were male (40%)
 - median age of benzodiazepine-related attendances was 35 years
 - multiple drugs (excluding alcohol) were involved in over half (63%) of all benzodiazepine-related attendances
- As presented in Figure 79, benzodiazepine-related attendance numbers peaked between the hours of 6pm and 8pm.
- Sundays were the peak day for benzodiazepine-related attendances (Figure 80).

Table 68: Benzodiazepine-related ambulance attendances by month in ACT, March, June, September and December 2019

	ACT
March attendances (per 100,000 population)	18 (4.2)
June attendances (per 100,000 population)	22 (5.2)
September attendances (per 100,000 population)	25 (5.9)
December attendances (per 100,000 population)	20 (4.7)

Table 69: Characteristics of benzodiazepine-related ambulance attendances in ACT, March, June, September and December 2019

	ACT
Number of attendances (per 100,000 population)	85 (19.9)
Mean attendances per day	<5
Daily range	N<5
Age- median (interquartile range)	35 (27-44)
Male	34 (40%)
Police co-attendance	20 (24%)
Transport to hospital	77 (91%)
Alcohol involved	39 (46%)
Alcohol intoxication	29 (24%)
Multiple drugs involved (excluding alcohol)	54 (63%)

Note: all proportions are based on present information

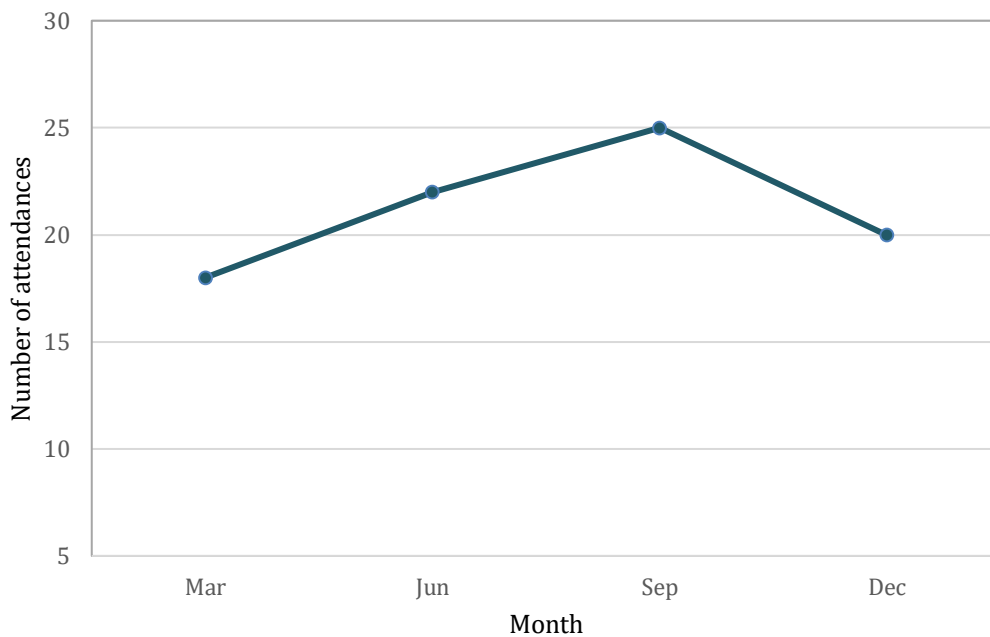


Figure 78: Number of benzodiazepine-related attendances by month in ACT, March, June, September and December 2019

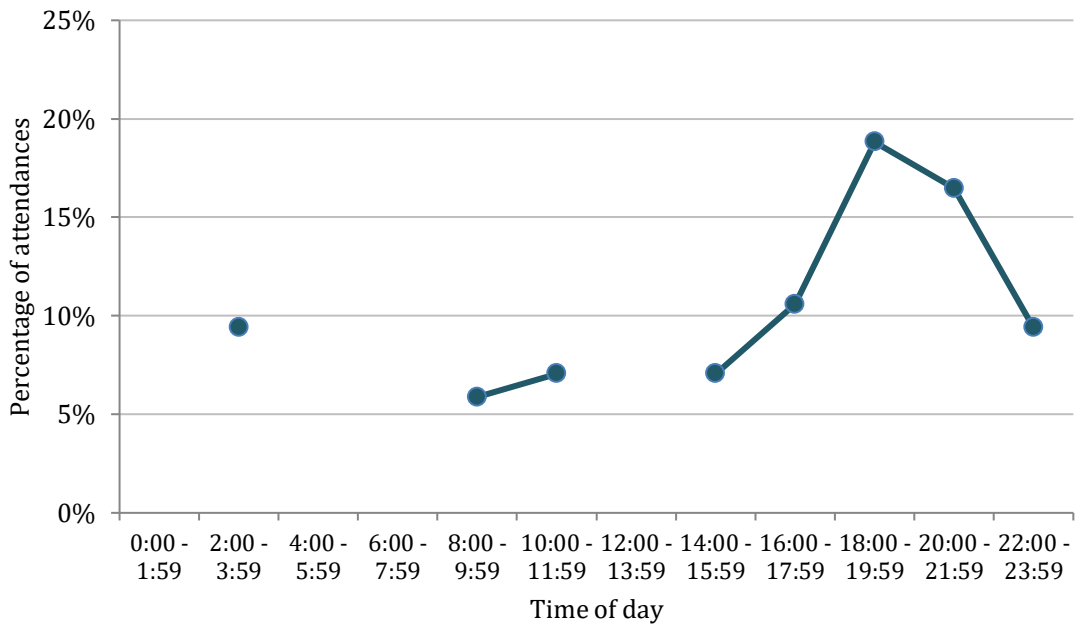


Figure 79: Percentage of benzodiazepine-related attendances by time of day in ACT, March, June, September and December 2019

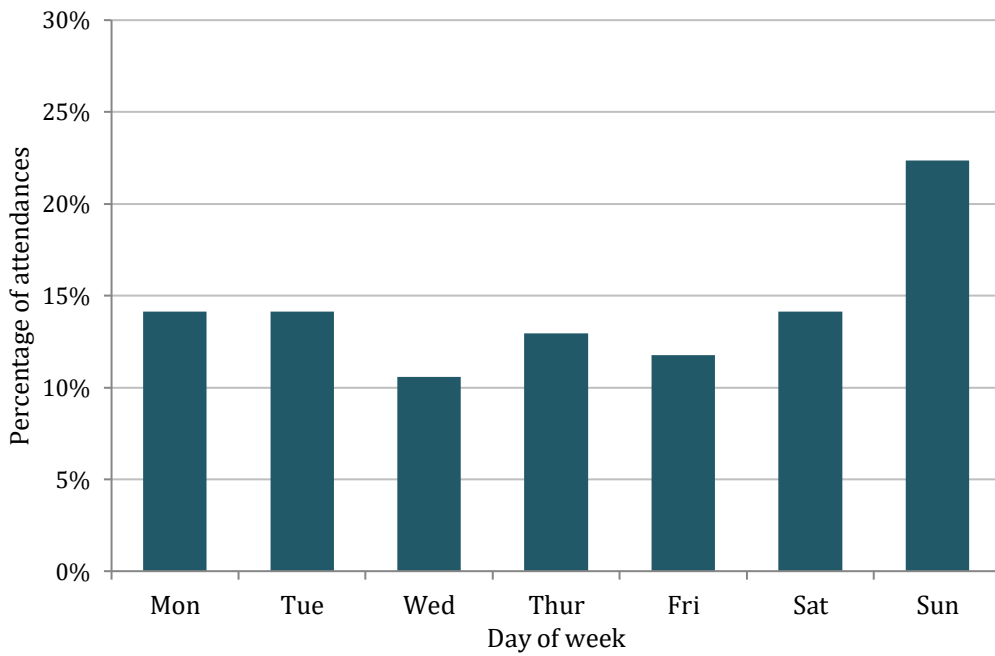


Figure 80: Percentage of benzodiazepine-related attendances by day of week in ACT, March, June, September and December 2019

Opioid analgesic-related attendances in ACT

Results are presented covering March, June, September, and December for ACT in 2019.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 70. Characteristics of opioid analgesic-related ambulance attendances in ACT for March, June, September and December 2019 are shown in Table 71. 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 December 2019 (Table 70).
- As shown in Table 71, in March, June, September, and December 2019:
 - there were 21 opioid analgesic-related attendances in the ACT
 - a quarter of opioid analgesic-related attendances involved male patients (24%)
 - median age of opioid analgesic-related attendances was 34 years
 - the majority of opioid analgesic-related attendances were transported to hospital ($\geq 76\%$)
 - two-thirds of all opioid analgesic-related attendances involved multiple drugs (excluding alcohol) (67%)

Table 70: Opioid analgesic-related ambulance attendances by month in ACT, March, June, September and December 2019

	ACT
March attendances (per 100,000 population)	N<5
June attendances (per 100,000 population)	N<5
September attendances (per 100,000 population)	6 (1.4)
December attendances (per 100,000 population)	9 (2.1)

Table 71: Characteristics of opioid analgesic-related ambulance attendances in ACT, March, June, September and December 2019

	ACT
Number of attendances (per 100,000 population)	21 (4.9)
Mean attendances per day	<5
Daily range	N<5
Age- median (interquartile range)	34 (27-42)
Male	5 (24%)
Police co-attendance	N<5
Transport to hospital	≥ 16 ($\geq 76\%$)
Alcohol involved	5 (24%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	14 (67%)
Morphine	N<5
Oxycodone	10 (48%)

Note: all proportions are based on present information

Opioid pharmacotherapy-related attendances in ACT

Data are not presented for opioid pharmacotherapy -related attendances in Tasmania due to low numbers of attendances in March, June, September, and December 2019.

Alcohol intoxication and other drug-related attendances: 2018 and 2019

Alcohol intoxication and other drug-related ambulance attendance numbers in March, June, September, and December 2018 and 2019 are shown in Table 72.

There were statistically significant increases in amphetamine-, cannabis- and benzodiazepine-related ambulance attendances between 2018 and 2019, and a significant decrease was observed in heroin-related attendances during the same time period.

Table 72. Number of alcohol intoxication and other drug-related attendances in 2018 and 2019 (March, June, September and December), ACT

N attendances	2018 [^]	2019 [^]	% Diff
Alcohol intoxication	640	759	+18.6%
Amphetamine	44	88	+100.0%*
Crystal methamphetamine	31	51	+64.5%*
Cannabis	62	96	+54.8%*
Heroin	105	77	-26.7%*
Emerging psychoactive substance	0	0	0
Benzodiazepine	65	85	+30.8%*
Opioid analgesic	22	21	-4.5%
Opioid pharmacotherapy	N<5	13	-

[^]2018 and 2019 numbers include March, June, September and December data

*p<0.05

Alcohol and other drug poisoning-related ambulance attendances in ACT

AOD poisoning-related ambulance attendances by month are shown in

Table 73, and characteristics of AOD poisoning-related ambulance attendances are displayed in Table 74. Drugs involved in AOD poisoning-related ambulance attendances in ACT are presented in Table 75. It is important to note that these attendances represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

- As shown in
- Table 73 to Table 75:

- unintentional AOD poisoning attendances peaked in March, poisonings with undetermined intent peaked during September and December while there was no discernible monthly peak for intentional AOD poisonings
- the majority of unintentional AOD poisoning attendances were male (65%), while forming only 26% of attendances for intentional AOD poisoning and 34% of attendances for poisoning with undetermined intent
- alcohol was involved in 48% of unintentional poisoning-, 26% of poisoning with undetermined intent- and 28% of intentional poisoning–related attendances
- heroin contributed to the greatest proportion of AOD unintentional poisonings (55%) in ACT
- excluding alcohol involvement, benzodiazepines contributed to the greatest proportion of intentional (18%) and undetermined intent AOD poisonings (21%)

Table 73: AOD poisoning-related ambulance attendances by month in ACT, March, June, September and December 2019

Attendances (per 100,000 population)	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
March	19 (4.5)	7 (1.6)	37 (8.7)
June	12 (2.8)	7 (1.6)	37 (8.7)
September	14 (3.3)	12 (2.8)	34 (8.0)
December	17 (4.0)	12 (2.8)	37 (8.7)

Table 74: Characteristics of AOD poisoning-related ambulance attendances in ACT, March, June, September and December 2019

	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
Number of attendances (per 100,000 population)	62 (14.5)	38 (8.9)	145 (34.0)
Age- median (interquartile range)	35 (25-42)	31 (24-41)	30 (18-42)
Male	40 (65%)	13 (34%)	37 (26%)
Police co-attendance	N<5	7 (18%)	26 (18%)
Transport to hospital	33 (53%)	≥33 (≥87%)	≥140 (≥97%)

Note: all proportions are based on present information

Table 75: Drugs involved in poisoning-related ambulance attendances in ACT, March, June, September and December 2019

	Unintentional AOD poisoning	Undetermined intent AOD poisoning	Intentional AOD poisoning
Alcohol involved	30 (48%)	10 (26%)	40 (28%)
Alcohol intoxication only	15 (24%)	5 (13%)	N<5
Amphetamine	N<5	N<5	0
Crystal methamphetamine	N<5	N<5	0
Cannabis	N<5	N<5	0
Heroin	34 (55%)	N<5	N<5
Emerging psychoactive substance	0	0	0
Benzodiazepine	5 (8%)	8 (21%)	26 (18%)
Opioid analgesic	0	N<5	11 (8%)
Opioid pharmacotherapy	N<5	0	N<5

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

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

Chapter 7: Summary

This report provides an overview of findings for the 2019 calendar year for four jurisdictions – Victoria, New South Wales, Tasmania and ACT.

Victoria

In Victoria, alcohol intoxication, amphetamines, and benzodiazepines were the most common contributors to ambulance attendances. Indeed, alcohol intoxication-related attendances continued to rise in 2019, with a significantly higher number of attendances in both metropolitan Melbourne and regional Victoria in 2019 than 2018. Similarly, the number of amphetamine and crystal amphetamine-related attendances increased across Victorian from 2018 to 2019. Comparing the locations of attendances of the top three most common drugs, rates of attendances in metropolitan Melbourne and regional Victoria were similar for benzodiazepines and amphetamines, but rates for alcohol intoxication-related attendances diverged by geographical location (449.8 and 502.6 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively).

Consistent with previous years, heroin-related attendances were substantially higher in metropolitan Melbourne (65.2 per 100,000 population) than in regional Victoria (23.7 per 100,000 population) and this was reflected conversely, in the higher rate of opioid analgesic-related attendances in regional Victoria (27.7 per 100,000 population) than metropolitan Melbourne (16.3 per 100,000 population). It is noteworthy that despite the differences in heroin-related attendances by location, there is some evidence of possible convergence, with heroin-related attendance numbers increasing significantly between 2018 and 2019 in regional areas only. In heroin related attendances, transportation to hospital occurred in a greater proportion of attendances in regional Victorian (62%) than metropolitan Melbourne (50%). The reasoning for this may be reflected in the higher proportion of regional Victoria heroin attendances involving both alcohol and multiple other drugs than metropolitan attendances. Yet, in opioid analgesic-related attendances, transportation to hospital occurred in equal proportions of metropolitan and regional attendances (90%, respectively). This may partly be explained by the similar proportions of metropolitan attendances involving alcohol (34%) and drugs other than alcohol (62%) when compared to regional attendances (31% of attendances involved alcohol and 57% involved multiple other drugs). Of note, morphine was involved in a greater proportion of opioid analgesic-related attendances in regional areas (9%) than metropolitan attendances (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, opioid pharmacotherapy and opioid analgesic the median ages occurred in late 30s to early 40s. These findings contrast an often-held community perception that drug and alcohol misuse is a “young person’s” problem. Males represented the majority of attendances for all alcohol and drug types, with the exceptions of opioid analgesics and benzodiazepines. Police co-attended with ambulance attendances in approximately one-third or less of attendances for all substances other than amphetamines (47%) and emerging psychoactive substances (38%), while transportation to hospital occurred in 76 to 91 per cent of attendances in all drug categories with the exception of heroin (51%).

In AOD poisoning, the rate of unintentional poisoning was higher in metropolitan Melbourne (40.3 per 100,000 population) than regional Victoria (23.8 per 100,000 population), while intentional poisonings

were greater in regional Victoria (95.6 per 100,000 population) than metropolitan Melbourne (66.3 per 100,000 population). The median ages were low to mid 30s regardless of the intent of the poisoning and while males accounted for nearly two-thirds of unintentional poisoning attendances, they accounted for only one-third of intentional poisoning attendances. 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 (45%), and benzodiazepines were involved in the greatest proportion of intentional poisonings, in both metropolitan (37%) and regional areas (30%).

New South Wales

In NSW, alcohol intoxication, cannabis and amphetamines were the most common contributors to ambulance attendances. When examining each drug category, attendance rates were generally higher in regional NSW than metropolitan Sydney, with the exception of heroin-, benzodiazepine and opioid pharmacotherapy-related attendances.

For most drug categories, the majority of attendances were male. The median ages for attendances of cannabis, amphetamine and emerging psychoactive-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. As in Victoria, these findings contrast an often-held community perception that drug and alcohol misuse is a “young person’s” problem.

For all drug types attendances concentrated on the weekend (i.e., Sat-Sun); with the exceptions of heroin (Mondays and Thursdays) and opioid analgesics (Tuesdays and Fridays).

For alcohol intoxication-related attendances, there were very few with multiple drugs involved (3%). However, for all other drug categories considerable proportions had multiple drugs (excluding alcohol) involved. The greatest were for opioid analgesic- (51%), benzodiazepine- (49%), opioid pharmacotherapy-related (48%) attendances.

Police co-attended with the ambulance services in fewer than one-third of attendances for all substances other than amphetamines (41%), and transportation to hospital occurred in 81 to 90 per cent of attendances with the exception of heroin (66%).

In AOD overdose, the rate of accidental overdose was higher in metropolitan Sydney (9.6 per 100,000 population) than regional NSW (6.3 per 100,000 population), while intentional overdoses were higher in regional NSW (18.1 per 100,000 population) than metropolitan Sydney (15.3 per 100,000 population). The median age of attendances was low to mid 30s for accidental, unknown intent and intentional overdoses regardless of location. Whilst males accounted for 60% of accidental overdose attendances, they only accounted for 33% of intentional overdose attendances. 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 (28%) and benzodiazepines were involved in the greatest proportion of intentional overdoses, in both metropolitan (16%) and regional (12%) areas.

Tasmania

In Tasmania, alcohol intoxication, cannabis and benzodiazepines were the most common contributors to ambulance attendances. The median ages for alcohol intoxication-, benzodiazepines, opioid pharmacotherapy and opioid analgesic-related attendances occurred in the mid-30s and mid-40s, while for amphetamines, heroin and cannabis the median ages occurred in the mid 20's to mid-30s. These findings contrast an often-held community perception that drug and alcohol misuse is a “young person's” problem. Males accounted for more than half of attendances for all drug types, with the exception of benzodiazepine- (43%) and opioid analgesic-related (48%) attendances. Police co-attended with the ambulance in up to one-third of attendances across all drug categories, while transportation to hospital occurred in at least three-quarter of attendances for opioid analgesics (83%), benzodiazepines (91%), amphetamines (81%), alcohol intoxication (75%), and cannabis (75%).

In AOD poisoning, the Tasmanian rates of unintentional poisoning (4.1 per 100,000 population) and undetermined intent poisoning (7.9 per 100,000 population) were lower than that of intentional poisoning (20.8 per 100,000 population). The median age of unintentional poisoning was 25 years, undetermined intent poisoning was 33 years, and intentional poisoning was 32 years. Females accounted for around two thirds of all AOD poisoning attendances, regardless of intent. Regarding the type of drugs involved in poisoning, alcohol was the highest contributor to attendances for unintentional poisonings (64%) and undermined intent attendances (43%), however, benzodiazepines were the highest contributor to intentional AOD poisoning attendances.

From 2018 to 2019, there were statistically significant decreases in alcohol intoxication and benzodiazepine-related ambulance attendances.

Australian Capital Territory

In ACT, alcohol intoxication, cannabis and amphetamines were the most common contributors to ambulance attendances. From 2018 to 2019, there were statistically significant increases in amphetamine- (including crystal methamphetamine), cannabis- and benzodiazepine-related attendances and a decrease in heroin-related ambulance attendances.

The median ages for attendances of cannabis, opioid analgesic and amphetamine-related attendances occurred in the late 20s to early 30s, while for alcohol intoxication, heroin, opioid pharmacotherapy and benzodiazepines the median ages occurred in the mid-30s to early 40s. These findings contrast an often-held community perception that drug and alcohol misuse is a “young person's” problem. Males represented the majority of attendances for all drug types except benzodiazepine and opioid analgesic-related attendances. Police co-attended with the ambulance in up to one-third of all drug categories, with the lowest proportion occurring in those involving heroin (12%). Transportation to hospital occurred in at least 70 per cent of attendances in all drug categories, with the exception of heroin (38%) and opioid pharmacotherapy (69%). Transportation to hospital occurred in a greater proportion of attendances involving opioid analgesics ($\geq 76\%$) than heroin (38%). The reasoning for this may be reflected by a higher proportion of alcohol involvement and multiple drugs (other than alcohol) in opioid analgesic-related than heroin attendances, and the reluctance of heroin users to be transported to hospital.

In AOD poisoning, the rate of unintentional poisoning (14.5 per 100,000 population) was similar to undetermined intent poisoning (8.9 per 100,000 population), but lower than intentional poisoning (34.0 per 100,000 population). The median ages of unintentional and undetermined intent poisoning were 35 and 31 years, respectively, while the median age for intentional poisoning was 30 years. Although males accounted for almost two-thirds of unintentional poisoning attendances (65%), they accounted for only one-quarter of intentional poisoning attendances (26%) and one-third of undetermined intent poisonings (34%). Regarding the type of drugs contributing to poisoning, alcohol was involved in around 48 per cent, 28 per cent and 26 per cent of unintentional, 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 attendances 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 and NT 2019 data were not available. However, this report will be updated when this 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 and violence 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 attendances in response to identified areas of need in policy and service delivery contexts at a national level.

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