



**Turning Point**

TREATMENT · RESEARCH · EDUCATION

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

January-December 2017 data

Foruhar Moayeri  
Sharon Matthews  
Jessica Killian  
Cherie Heilbronn  
Debbie Scott  
Dan Lubman

Draft

August 2018



**MONASH**  
University

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**NSW Ambulance**



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## Preface

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

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

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

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

To achieve this, we are continually:

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

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

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

Programs operate in the areas of research, treatment and support (incorporating state-wide and local outpatient and residential services, as well as state and national telephone-based and online services), and state-wide and national education and training. The Turning Point Population Health Research team is responsible for investigating patterns of alcohol and drug use and related harm using population-based datasets available in Victoria. The staff in the Population Health Research team currently include: Debbie Scott (Strategic Lead), Sharon Matthews (Manager), Cherie Heilbronn, Jessica Killian, Rowan Ogeil, Katrina Witt and Foruhar Moayeri (Research Fellows), Rukhsana Tajin, Rose Crossin (Research Officers), Cass Connor, Nyssa Ferguson, Cathie Garrard, Annie Haines, Isabelle Hum, Kate Jones, Stephanie La'rive, Liliana Laskaris, Heather Laurie, Elizabeth Le, Daniel Leung, Lisa Meyenn, Melissa Reed, Adam Scott, Julie Tennant, Merran Waterfall and James Wilson. (Research Assistants). The Population Health Research team examines patterns of drug use and harm in Victoria and provides information to policy makers, alcohol and drug workers, as well as other interested groups and individuals. Current projects include AODstats, The Ambo Project and Beyond the Emergency.



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## Acronyms

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

## Executive Summary

This report provides an overview of findings for the 2017 calendar year for six jurisdictions – Victoria, New South Wales, Queensland, Tasmania, Australian Capital Territory and Northern Territory. For the 2017 calendar year:

- Victorian data (January to December – 12 months of data) identified:
  - 24,491 alcohol intoxication-related attendances, with rates of 396.7 and 391.2 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
  - 3,245 amphetamine-related attendances, with rates of 55.9 and 41.9 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
  - 2,339 crystal methamphetamine-related attendances, with rates of 40.2 and 30.5 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
  - 3,039 cannabis-related attendances, with rates of 46.1 and 57.6 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
  - 2,951 heroin-related attendances, with rates of 58.9 and 13.6 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
  - 4,238 benzodiazepine-related attendances, with rates of 69.4 and 65.8 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
  - 1,142 opioid analgesic-related attendances, with rates of 16.9 and 22.9 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
  - 499 opioid pharmacotherapy-related attendances, with rates of 8.5 and 6.7 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively
  - 11 emerging psychoactive substance-related ambulance attendances
- NSW data (March and June– two months of data) identified:
  - 3,566 alcohol intoxication-related attendances, with rates of 37.8 and 73.5 per 100,000 population in metropolitan Sydney and regional NSW, respectively
  - 429 amphetamine-related attendances, with rates of 4.7 and 8.3 per 100,000 population in metropolitan Sydney and regional NSW, respectively
    - 361 crystal methamphetamine-related attendances, with rates of 4.0 and 7.0 per 100,000 population in metropolitan Sydney and regional NSW, respectively
  - 504 cannabis-related attendances, with rates of 4.9 and 12.0 per 100,000 population in metropolitan Sydney and regional NSW, respectively

- 219 heroin-related attendances, with rates of 3.2 and 1.7 per 100,000 population in metropolitan Sydney and regional NSW, respectively
- 486 benzodiazepine-related attendances, with rates of 5.8 and 7.9 per 100,000 population in metropolitan Sydney and regional NSW, respectively
- 204 opioid analgesic-related attendances, with rates of 1.9 and 5.2 per 100,000 population in metropolitan Sydney and regional NSW, respectively
- 92 opioid pharmacotherapy-related attendances, with rates of 1.2 and 1.5 per 100,000 population in metropolitan Sydney and regional NSW, respectively
- fewer than five cases of emerging psychoactive substance-related ambulance attendances
- Queensland data was not available for 2017
- Tasmania data (March, June, September and December – four months of data\*) identified:
  - 879 alcohol intoxication-related attendances, with rates of 199.5 and 146.8 per 100,000 population in metropolitan and regional Tasmania, respectively
  - 56 amphetamine-related attendances, with rates of 14.1 and 8.4 per 100,000 population in metropolitan and regional Tasmania, respectively
    - 34 crystal methamphetamine-related attendances, with rates of 9.5 and 4.4 per 100,000 population in metropolitan and regional Tasmania, respectively
  - 167 cannabis-related attendances, with rates of 37.2 and 28.6 per 100,000 population in metropolitan and regional Tasmania, respectively
  - 111 benzodiazepine-related attendances, with rates of 25.4 and 18.5 per 100,000 population in metropolitan and regional Tasmania, respectively
  - 47 opioid analgesic-related attendances, with rates of 8.6 and 9.1 per 100,000 population in metropolitan and regional Tasmania, respectively
  - 10 opioid pharmacotherapy-related attendances were recorded in Tasmania
  - No heroin or emerging psychoactive substance-related ambulance attendances.
- ACT data (March, June, September and December – four months of data) identified:
  - 537 alcohol intoxication-related attendances
  - 51 amphetamine-related attendances
    - 35 crystal methamphetamine-related attendances
  - 51 cannabis-related attendances

- 70 heroin-related attendances
- 56 benzodiazepine-related attendances
- 22 opioid analgesic-related attendances
- Less than five cases of opioid pharmacotherapy-related attendances
- No emerging psychoactive substance-related ambulance attendances
- Northern Territory data (March, June, September and December – four months of data) identified:
  - 1,422 alcohol intoxication-related attendances
  - ≥25 amphetamine-related attendances
    - 21 crystal methamphetamine-related attendances
  - 134 cannabis-related attendances
  - ≥10 benzodiazepine-related attendances
  - 13 opioid analgesic-related attendances
  - No emerging psychoactive substance-, heroin- or opioid pharmacotherapy- related attendances

## Chapter 1: Introduction

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

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

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

### Background

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

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

1993). Moreover, in contrast to one-off surveys, ambulance records are routinely collected and are thus sensitive to potential changes in heroin market characteristics such as changes in drug purity, policing practices and user behaviour.

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

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

## **National surveillance of AOD misuse and overdose**

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

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

The aim of this project is to provide a population level AOD misuse and overdose case monitoring system that records presentations for acute AOD harms.

In order to develop a robust surveillance system for identification and monitoring of AOD misuse and overdose, the methodology and expertise developed in the Victorian Ambo Project has been 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 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.

While ambulance services are often the first (and frequently primary) contact with health services in the event of an acute substance related presentation, little is known about populations at elevated risk of harm, or trends in harms at a population level. In order to effectively utilise accurate, robust data regarding these presentations, additional review and coding is required to validate patient data. Our experience with alcohol and drug related ambulance attendance monitoring in Victoria has demonstrated the effectiveness of developing and maintaining a timely and robust monitoring system that builds on information provided in ambulance patient care records to identify acute aetiology and correlates of presentations.

Through enhanced coding and analysis of AOD-related ambulance service records, data 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 expanded to broader substance use and mental health related cases in response to identified areas of need in policy and service delivery contexts at a national level.

Until recently five jurisdictions used the clinical information system from which data are extracted – Victoria (system developer), Queensland, New South Wales (NSW), Australian Capital Territory (ACT) and Tasmania. This currently 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. Northern Territory use a different clinical system (Siren), and more recently Queensland have implemented their own system.

The report does not include South Australia or Western Australia. The South Australia Ambulance Service have not yet implemented an electronic patient care record system. Western Australia St John Ambulance Service has in principle agreed to participate in the project by providing data. We are currently at the stage of negotiating access, terms and definitions. We are optimistic that we will have access to some data by the end of 2018.

The remaining states and territories are participating in the project. However please note there are some data exclusions from this report. An updated report will be provided once the data has been provided, prepared, coded and analysed. The largest omission is Queensland. There have been substantial delays in receiving these data. This has been compounded by the Queensland Ambulance Service implementing a new records system. Discussions have indicated we should receive data by the end of the year. However as yet we are unaware if all data will be provided as there may be a



disconnect between the old and new system i.e. a break in the comparability of data. September and December 2017 data for NSW is also not included. This is due to the data having to be reissued resulting in a delay in coding the data. Unlike the other states, a full 12 months of data are included for Victoria as part of a state project. Consequently more information can be reported for Victoria as there is more volume and less likelihood of a small numbers issue.

## Chapter 2: Methods

### Data generated from VACIS®

The data utilised for this project is generated from an analysis of electronic data extracted from data obtained through the VACIS® data collection system. This system is used by Ambulance Victoria paramedics, as well as paramedics in Queensland, NSW, the ACT and Tasmania, to record the details of all emergency cases they attend. The project team have developed a method for parsing the received VACIS® electronic data to correctly identify relevant AOD related cases and extract the required information. However, due to the structure of the data model in VACIS®, extracting AOD related attendance information requires additional programming, manual data entry and clerical validation so as to accurately extract the specific drugs or substances involved in the cases attended by ambulance. As a consequence, separate databases were developed for the current project that integrates and standardises information extracted from VACIS® data supplied with the existing Turning Point project database. More recently Queensland have ceased using the VACIS system implementing their own system, To date we have received data from this system. The Northern Territory St.Johns Ambulance use a system known as Siren.

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 Tasmania refers to the greater Hobart area. Metropolitan Brisbane does not include the Gold Coast area. Metropolitan Sydney does include the Illawarra region.
- type of location (e.g., indoors/outdoors, public building/private residence). Please note in Victoria, Northern Territory and NSW this variable is unreliable and where reported should be treated with caution. In Victoria and NSW this is due to changing to a new VACIS

system and the default location was 'other'. In Northern Territory it is a free text field. It is anticipated this variable will be omitted from our reporting in the future.

- time of day, day of week
- demographic details of patient (sex, approximate age)
- whether naloxone had been administered (yes/no) and response to naloxone administration (effective/not effective)
- outcome (e.g., taken to hospital/not transported)
- whether police co-attended
- other relevant clinical data (e.g., cyanosis, pupil size, respiratory rate)

## **Data security**

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

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

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

## **Data auditing 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 ePCR records are collated for review by project staff in order to manually code the various project-specific data required for reporting, including correctly coding the drugs and substances involved in the overdose or event.

After the set of electronic PCR record extracts is manually coded, the dataset is reviewed by senior project staff and extracted for cleaning prior to analysis. Multiple electronic PCR extracts for the same patient are aggregated and a random selection of cases is reviewed to ensure the manual coding was accurate and consistent. Data are then converted to a format suitable for analysis and are merged with the Turning Point master project dataset. Preliminary analyses are performed to identify any

anomalous trends in the data. Any unusual or unexpected results are then re-reviewed to ensure that data accurately reflect the case details.

Monthly project meetings were held in order to enable ongoing review and feedback, and to identify issues and emerging trends. In addition, the project team engaged with each of the ambulance services on a regular basis in order to facilitate data access, data integrity and to communicate on project progress.

In addition to these formal quality control methods, throughout these processes, all project staff involved – the data entry personnel, the Research Systems Analyst and the Research Fellow responsible for analysis – communicate to identify trends, anomalies or interesting patterns noticed in the current dataset.

A case is determined to be AOD-related if the immediate or recent over or inappropriate use of a substance or medication is assessed as significant to the reason for paramedic attendance. Chronic use of a substance alone is not sufficient for inclusion in the analysis. Drug involvement in the attendance is ascertained from the paramedic clinical assessment, patient self-report and reports from associate's present, or other information available at the scene.

## **Definition of drug involvement/overdose**

The attribution of a drug or substance as being involved in the event is formed on the basis of ambulance paramedic mention of the involvement of these substances, established through paramedic clinical assessment, patient self-report or information provided by someone else at the scene, such as family, friends or associates. 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 significantly contributing to the reason for the ambulance attendance?"

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 only-related attendances. Alcohol only-related attendances represent a subset of alcohol intoxication-related attendances, and alcohol intoxication-related cases represent a subset of attendances where alcohol involvement has been identified.

### **Alcohol involvement**

The determination of alcohol involvement is based on the basis of ambulance paramedic mention of the involvement of alcohol, established through patient self-report or information provided by someone else at the scene, such as family, friends or associates. This category includes all cases of alcohol intoxication, as well as cases where quantity of alcohol cannot be determined based on paramedic report. Cases are also included where smaller quantities of alcohol are consumed, but the effect has significantly contributed to the ambulance attendances (for example, where consumption

has occurred in conjunction with other substances). In addition, cases of acute, physical alcohol withdrawal are included in this category.

### **Alcohol intoxication-related attendances**

Alcohol intoxication-related attendances are selected on the basis of ambulance paramedic mention of the involvement of alcohol, established through patient self-report or information provided by someone else at the scene, such as family, friends or associates. As noted above, cases are included if it is reasonable to attribute the immediate or recent (not merely chronic) over- or inappropriate ingestion of alcohol as significantly contributing to the reason for the paramedic attendance. Intoxication is determined through mention of intoxication or large quantity of alcohol consumed, and also details of clinical assessment of the patient. Other drugs and may also have been ingested.

### **Alcohol only-related attendances**

Alcohol only-related cases are defined as those cases attended by ambulance where assessment of causality is that only alcohol, as far as could be ascertained, was involved in causing the attendance. These cases usually relate to alcohol intoxication and poisoning, but may include alcohol-related injuries.

### **All amphetamine-related attendances**

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

### **Crystal methamphetamine-related attendances**

These cases are selected on the basis of ambulance paramedic mention of the involvement of crystal methamphetamine (also known as 'crystal' and 'ice') established through patient self-report or information provided by someone else at the scene, such as family, friends or associates.

### **Cannabis-related attendances**

In this category attendances are selected on the basis of ambulance paramedic mention of the involvement of cannabis, established through patient self-report or information provided by someone else at the scene, such as family, friends or associates. As noted above, cases are included if it is reasonable to attribute the immediate or recent (not merely chronic) over- or inappropriate ingestion of the substance or medication as significantly contributing to the reason for the paramedic attendance.

### **All heroin-related attendances**

This category is an aggregation of the cases classified as either heroin overdose or other heroin-related events.

### **Heroin overdose (responding to naloxone) attendances**

It is difficult to define heroin overdose. For the data presented in this report, heroin overdose refers to a positive response to the administration of naloxone (an opioid antagonist) for those people attended by an ambulance and where there was no indication that the overdose resulted from another opioid such as morphine or methadone. Other drugs and alcohol may also have been ingested.

### **Benzodiazepine-related attendances**

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

### **Opioid analgesic-related attendances**

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

### **Opioid pharmacotherapy-related attendances**

These cases are selected on the basis of ambulance paramedic mention of the involvement of substances prescribed for the provision of pharmacotherapy, including methadone, buprenorphine and buprenorphine with naloxone and naltrexone. The involvement of these substances is established through patient self-report or information provided by someone else at the scene, such as family, friends or associates. As noted above, cases are included if it is reasonable to attribute the immediate or recent (not merely chronic) over- or inappropriate ingestion of the medication as significantly contributing to the reason for the ambulance attendance.

### **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, established through patient self-report or information provided by someone else at the scene, such as family, friends or associates. As noted above, cases are included if it is reasonable to attribute the immediate or recent (not merely chronic) over- or inappropriate ingestion of the substance as significantly contributing to the reason for the paramedic attendance. This category includes a range of new or emerging substances that are designed to mimic the effects of other 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.

### **Overdose-related attendances**

For coding purposes, overdose is defined as:

- 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: the criteria used above, or 10 x prescribed dose

## Chapter 3: Results – Victoria

### Alcohol intoxication-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Mapped numbers and rates of presentations are presented at the end of this section.

Numbers and rates of alcohol intoxication-related ambulance attendances are shown in Table 1. Characteristics of alcohol intoxication-related ambulance attendances in Victoria for the 12 months from January to December 2017 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.

Alcohol intoxication-related attendances peaked in December 2017 (Table 1).

- Characteristics of alcohol intoxication-related cases over the 12 month period are presented in Table 2 and include:
  - 24,491 alcohol intoxication-related cases were recorded in Victoria
  - the majority of patients who were attended for alcohol intoxication-related cases were male (62%), with similar proportions found across regional and metropolitan areas
  - in Victoria, the median age of patients with alcohol intoxication-related attendances was 41 years
  - a similar proportion of patients involved in alcohol intoxication-related attendances in metropolitan (75%) and regional areas (74%) were transported to hospital
- As presented in Figure 2, alcohol intoxication-related attendance numbers peaked in the evening and early morning between 10pm and midnight across all of Victoria.
- In metropolitan Melbourne, Sunday represented the peak day for alcohol intoxication-related attendances in 2017, while attendances were highest on Saturdays in regional Victoria (Figure 3).

**Table 1: Alcohol intoxication-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	1,756 (37.7)	570 (37.4)	2,334 (37.8)
February attendances (per 100,000 population)	1,469 (31.6)	446 (29.2)	1,918 (31.0)
March attendances (per 100,000 population)	1,530 (32.9)	507 (33.2)	2,045 (33.1)
April attendances (per 100,000 population)	1,459 (31.4)	512 (33.6)	1,978 (32.0)
May attendances (per 100,000 population)	1,359 (29.2)	440 (28.8)	1,806 (29.2)
June attendances (per 100,000 population)	1,380 (29.7)	412 (27.0)	1,794 (29.0)
July attendances (per 100,000 population)	1,429 (30.7)	464 (30.4)	1,900 (30.8)
August attendances (per 100,000 population)	1,400 (30.1)	385 (25.2)	1,788 (28.9)
September attendances (per 100,000 population)	1,454 (31.2)	508 (33.3)	1,967 (31.8)
October attendances (per 100,000 population)	1,650 (35.5)	517 (33.9)	2,175 (35.2)
November attendances (per 100,000 population)	1,691 (36.3)	577 (37.8)	2,271 (36.8)
December attendances (per 100,000 population)	1,881 (40.4)	629 (41.2)	2,515 (40.7)

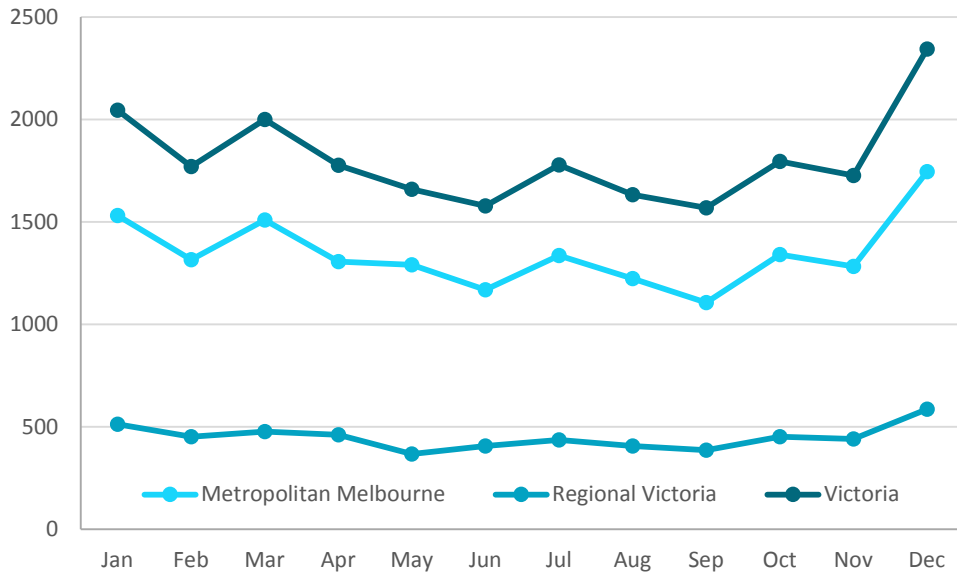
**Table 2: Characteristics of alcohol intoxication-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	18,458 (396.7)	5,967 (391.2)	24,491 (396.4)
Mean attendances per day	57.6	14.7	57.5
Daily range	<5-223	<5136	<5-223
Age- median (quartiles)	42 (27-54)	40 (26-53)	41 (26-53)
Male	11,426 (62%)	3,751 (63%)	15,219 (62%)
Public outdoor space*	5,329 (40%)	1,271 (29%)	6,620 (37%)
Police co-attendance	5,720 (31%)	1,929 (32%)	7,662 (31%)
Transport to hospital	13,577 (74%)	4,489 (75%)	18,113 (74%)
Multiple drugs involved	798 (4%)	364 (4%)	1,063 (4%)

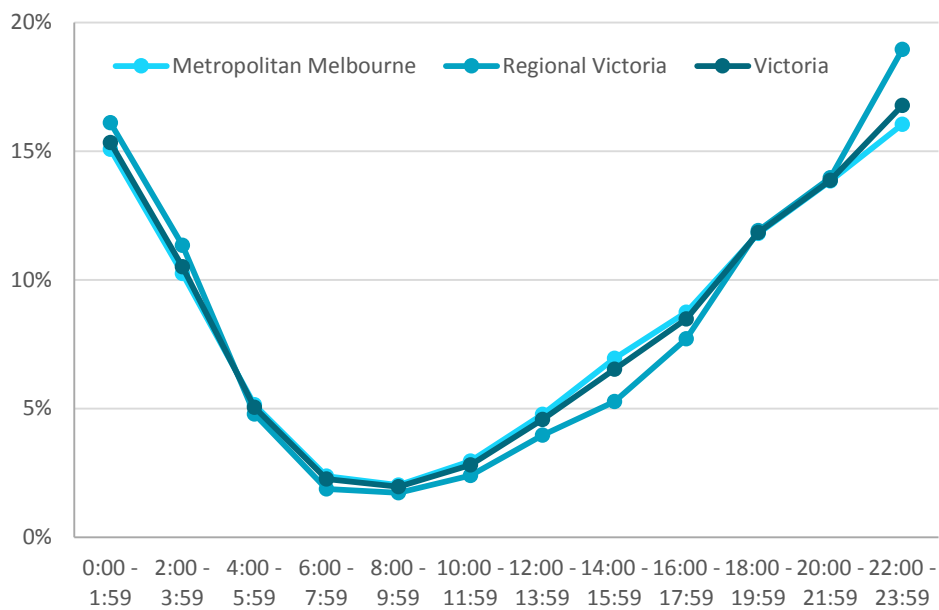
Note: all proportions are based on non-missing information

\* The location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.

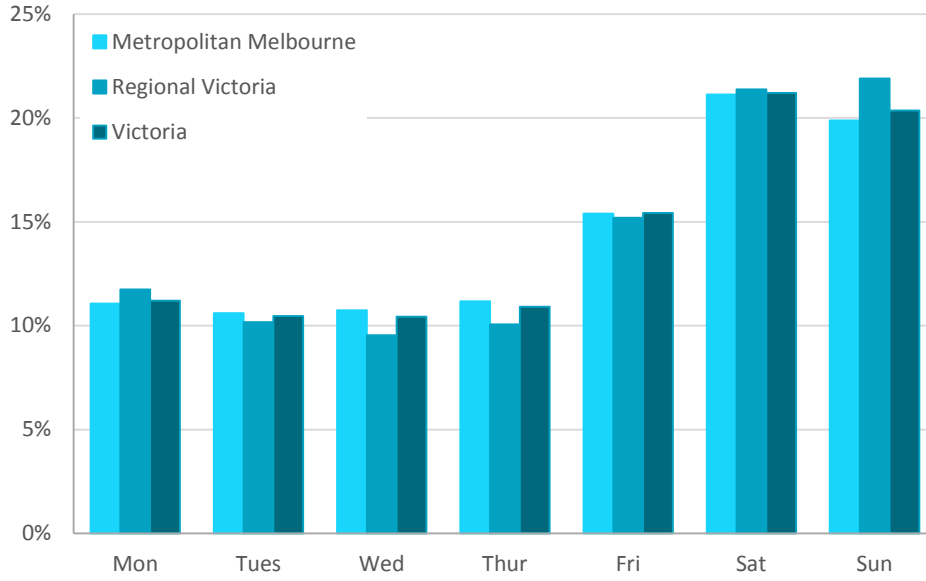




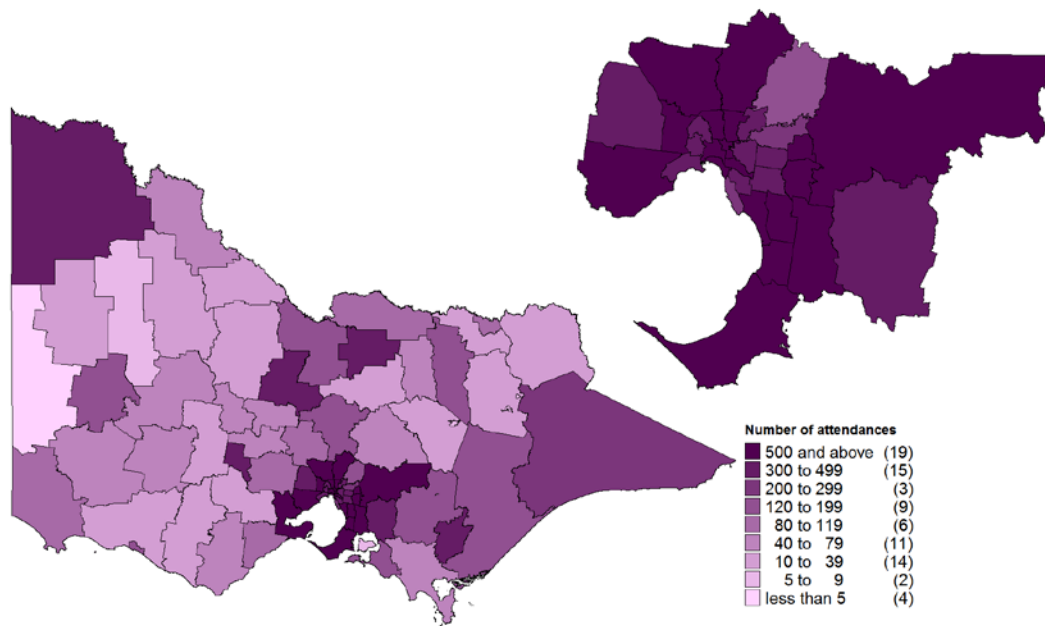
**Figure 1: Alcohol intoxication-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**



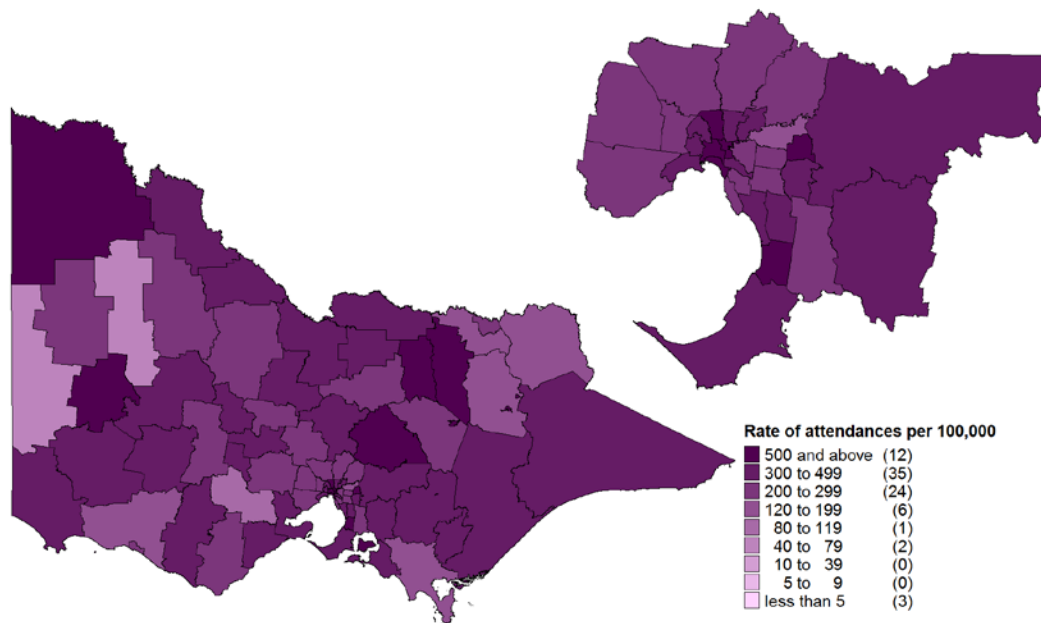
**Figure 2: Alcohol intoxication-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2017**



**Figure 3: Percentage of alcohol intoxication-related attendances over total attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2017**



**Map 1: Number of alcohol intoxication-related attendances by Victorian LGA, January to December 2017**



**Map 2: Rate of alcohol intoxication-related attendances per 100,000 resident population by Victorian LGA, January to December 2017**

## All amphetamine-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Mapped numbers and rates of presentations are presented at the end of this section.

Numbers and rates of amphetamine-related ambulance attendances are shown in Table 3. Characteristics of amphetamine-related ambulance attendances in Victoria for the 12 months from January to December 2017 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.

In 2017, amphetamine-related attendances peaked during October in regional and metropolitan areas (Table 3). Characteristics from the 12 month period are presented in Table 4 and include:

- 3,245 amphetamine-related cases were recorded across Victoria
- the median age of patients with amphetamine-related attendances was 31 years
- police co-attended 44% of amphetamine-related attendances in Victoria
- a similar proportion of patients with amphetamine-related attendances were transported to hospital in metropolitan Melbourne (79%) and regional Victoria (80%)

- As presented in Figure 5, amphetamine-related attendance numbers peaked between 2pm to 4pm and 10pm to midnight in metropolitan Melbourne while the peak times in regional areas were between 6pm and 8pm. Sundays represented the peak day for amphetamine-related attendances in 2017 (Figure 6).

**Table 3: Amphetamine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

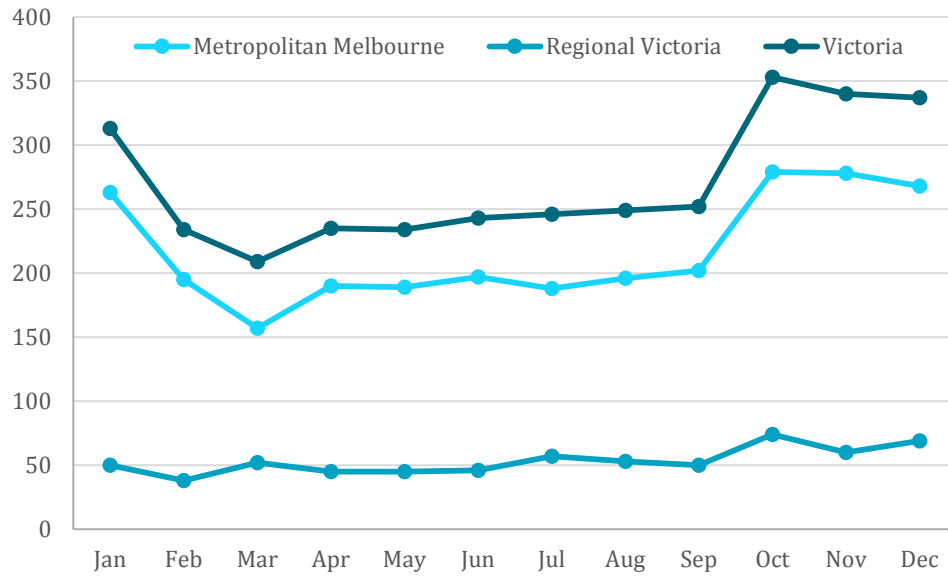
	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	263 (5.7)	50 (3.3)	313 (5.1)
February attendances (per 100,000 population)	195 (4.2)	38 (2.5)	234 (3.8)
March attendances (per 100,000 population)	157 (3.4)	52 (3.4)	209 (3.4)
April attendances (per 100,000 population)	190 (4.1)	45 (3.0)	235 (3.8)
May attendances (per 100,000 population)	189 (4.1)	45 (3.0)	234 (3.8)
June attendances (per 100,000 population)	197 (4.2)	46 (3.0)	243 (3.9)
July attendances (per 100,000 population)	188 (4.0)	57 (3.7)	246 (4.0)
August attendances (per 100,000 population)	196 (4.2)	53 (3.5)	249 (4.0)
September attendances (per 100,000 population)	202 (4.3)	50 (3.3)	252 (4.1)
October attendances (per 100,000 population)	279 (6.0)	74 (4.9)	353 (5.7)
November attendances (per 100,000 population)	278 (6.0)	60 (3.9)	340 (5.5)
December attendances (per 100,000 population)	268 (5.8)	69 (4.5)	337 (5.5)

**Table 4: Characteristics of amphetamine-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

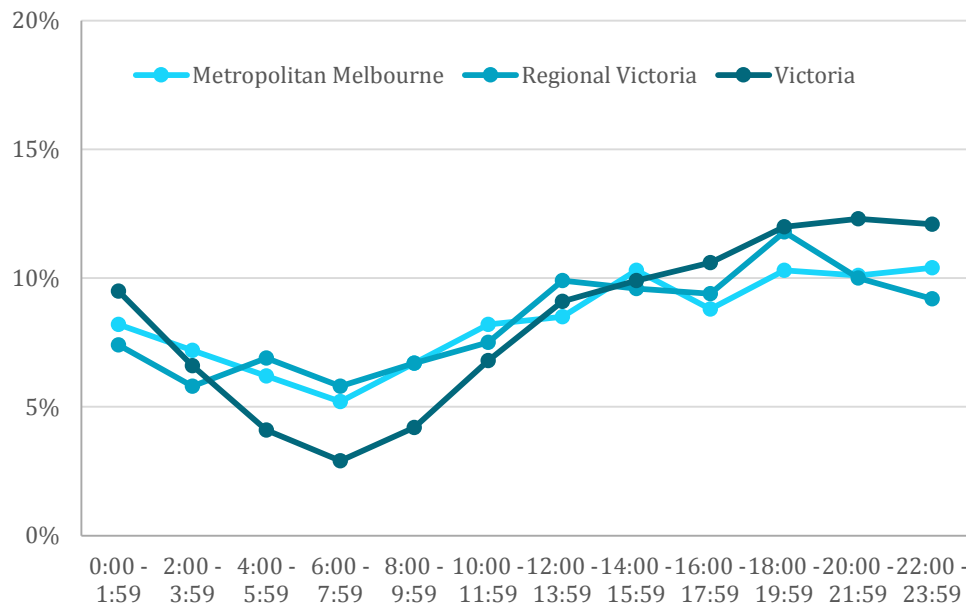
	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	2,602 (55.9)	639 (41.9)	3,245 (52.5)
Mean attendances per day	9.1	8.2	8.9
Daily range	1-27	2-17	1-27
Age- median (quartiles)	31 (25-39)	30 (24-38)	31 (24-39)
Male	1,741 (67%)	439 (69%)	2,181 (67%)
Public outdoor space*	675 (36%)	107 (23%)	782 (34%)
Police co-attendance	1,131 (43%)	297 (46%)	1,430 (44%)
Transport to hospital	2,057 (79%)	509 (80%)	2,568 (79%)
Alcohol involved/mentioned	485 (19%)	122 (19%)	607 (19%)
Alcohol intoxication	198 (8%)	66 (10%)	264 (8%)
Multiple drugs involved (excluding alcohol)	1,099 (42%)	209 (33%)	1,311 (40%)

Note: all proportions are based on non-missing information

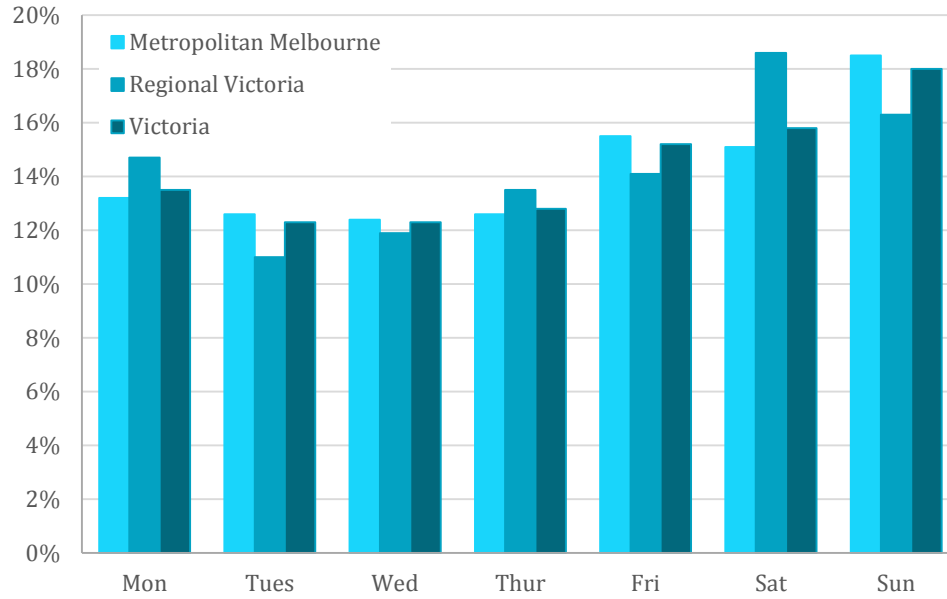
\* the location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.



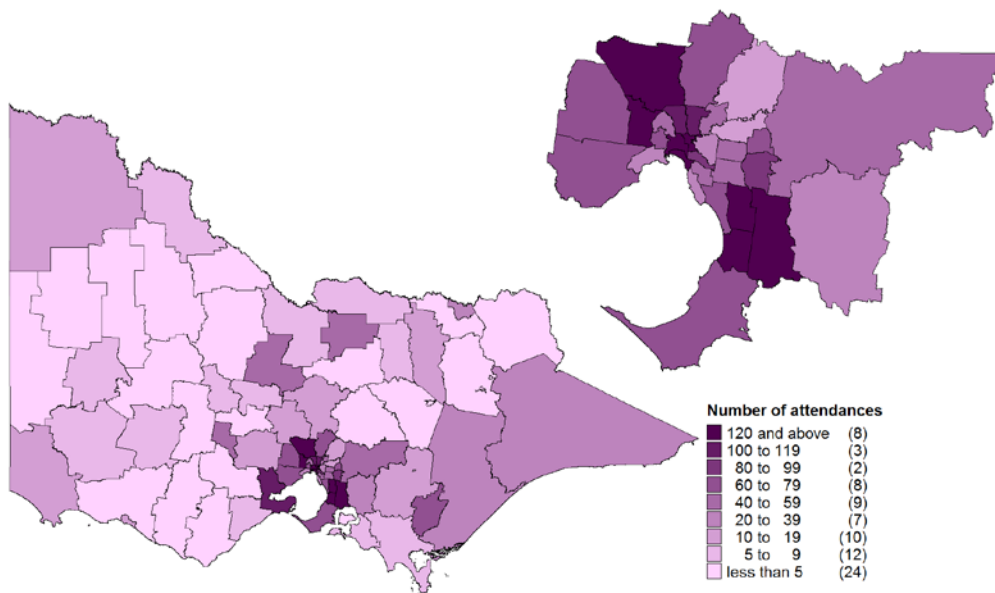
**Figure 4: Amphetamine-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**



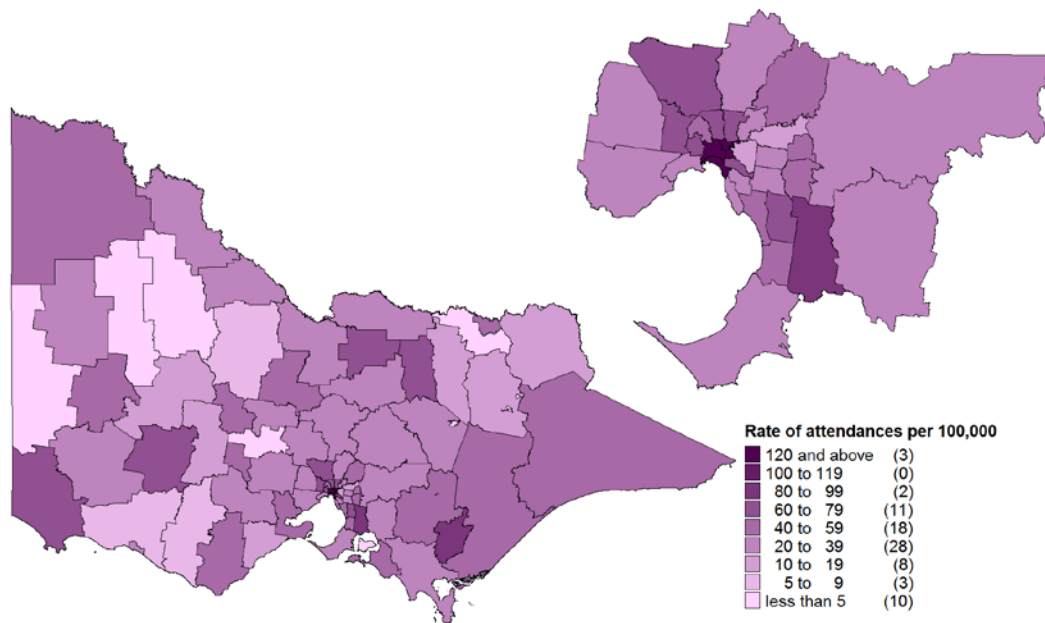
**Figure 5: Amphetamine-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2017**



**Figure 6: Percentage of amphetamine-related attendances over total attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2017**



**Map 3: Number of amphetamine-related attendances by Victorian LGA, January to December 2017**



**Map 4: Rate of amphetamine-related attendances per 100,000 resident population by Victorian LGA, January to December 2017**

## Crystal methamphetamine-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Mapped numbers and rates of presentations are presented at the end of this section.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 5. Characteristics of crystal methamphetamine-related ambulance attendances in Victoria for the 12 months from January to December 2017 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.

- In regional Victoria, crystal methamphetamine-related attendances peaked in December while attendances in metropolitan areas were highest in January 2017 (Table 5).
- Characteristics from the 12 month period are presented in Table 6 and include:
  - 2,339 crystal methamphetamine-related cases recorded across Victoria
  - the majority of patients attended for crystal methamphetamine-related cases were male (67%), with equal proportions recorded in metropolitan and regional areas

- in Victoria, the median age of patients with crystal methamphetamine-related attendances was 32 years
- a similar proportion of crystal methamphetamine-related attendances were transported to hospital in metropolitan Melbourne (79%) and regional Victoria (82%)
- As presented in Figure 8, crystal methamphetamine-related attendance numbers peaked at 2pm and 4pm in metropolitan Melbourne and the peak times in regional areas were between 12pm to 2 pm and 6pm to 8pm. In Victoria, Sundays represented the peak day for crystal methamphetamine-related attendances in 2017 (Figure 9).

**Table 5: Crystal methamphetamine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	212 (3.9)	40 (4.3)	252 (4.0)
February attendances (per 100,000 population)	139 (3.1)	29 (3.9)	168 (3.3)
March attendances (per 100,000 population)	112 (3.7)	37 (4.4)	149 (3.9)
April attendances (per 100,000 population)	131 (3.7)	37 (4.0)	168 (3.8)
May attendances (per 100,000 population)	145 (3.4)	33 (4.9)	178 (3.8)
June attendances (per 100,000 population)	152 (4.4)	32 (5.2)	184 (4.6)
July attendances (per 100,000 population)	146 (3.7)	45 (5.1)	192 (4.1)
August attendances (per 100,000 population)	146 (2.9)	40 (4.1)	186 (3.2)
September attendances (per 100,000 population)	133 (3.9)	33 (5.6)	166 (4.3)
October attendances (per 100,000 population)	187 (4.8)	48 (5.7)	235 (5.1)
November attendances (per 100,000 population)	192 (4.6)	40 (4.5)	233 (4.6)
December attendances (per 100,000 population)	177 (4.0)	51 (6.0)	228 (4.5)

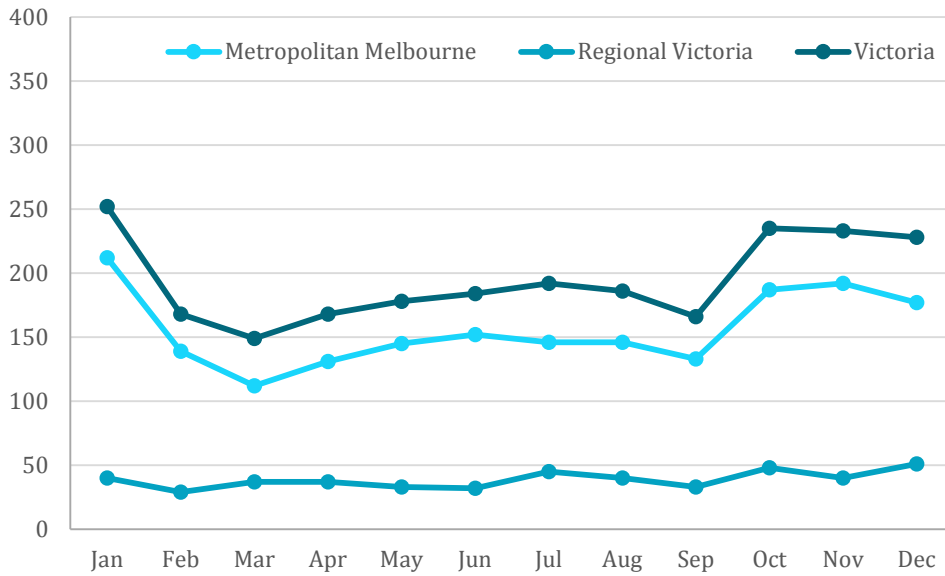
**Table 6: Characteristics of crystal methamphetamine-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	1,872 (40.2)	465 (30.5)	2,339 (37.9)
Mean attendances per day	6.5	6.0	6.4
Daily range	0-16	<5-11	<5-16
Age- median (quartiles)	32 (25-39)	31 (24-38)	32 (25-39)
Male	1,255 (67%)	312 (67%)	1,568 (67%)
Public outdoor space *	480 (35%)	76 (22%)	556 (33%)
Police co-attendance	853 (46%)	224 (48%)	1,079 (46%)
Transport to hospital	1,478 (79%)	379 (82%)	1,858 (79%)
Alcohol involved/mentioned	304 (16%)	71 (15%)	375 (16%)
Alcohol intoxication	121 (6%)	38 (8%)	159 (7%)
Multiple drugs involved (excluding alcohol)	780 (42%)	138 (30%)	919 (39%)

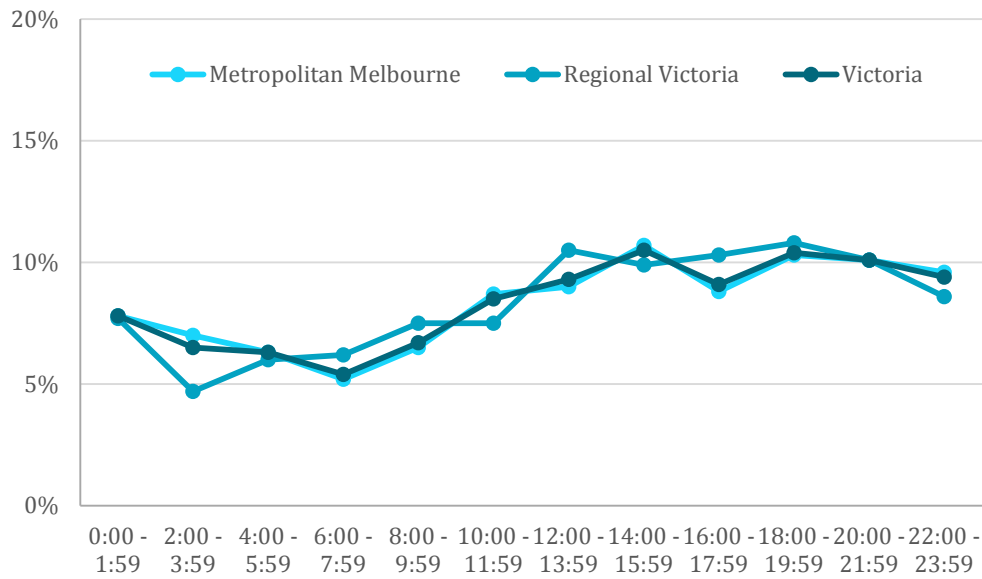
Note: all proportions are based on non-missing information

\* The location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.

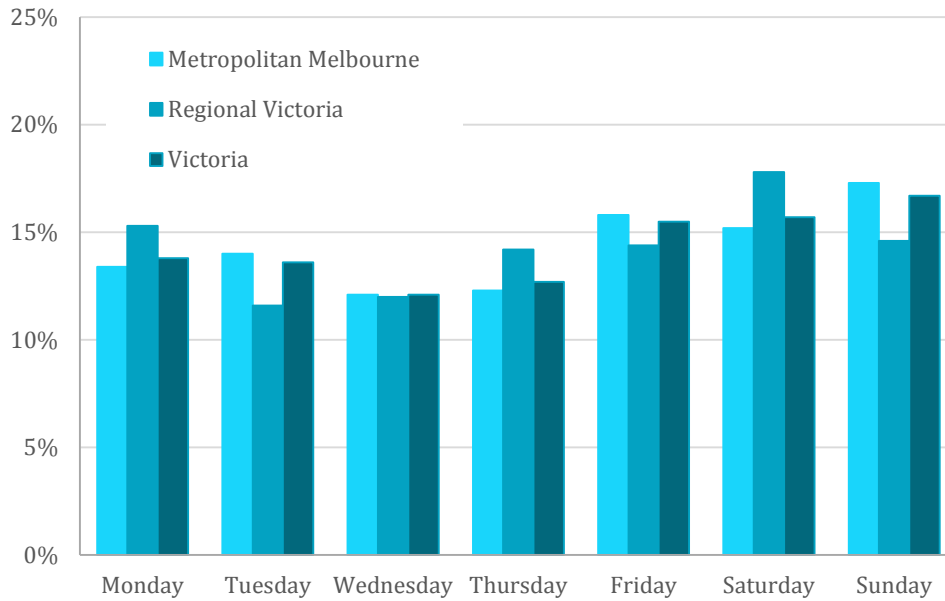




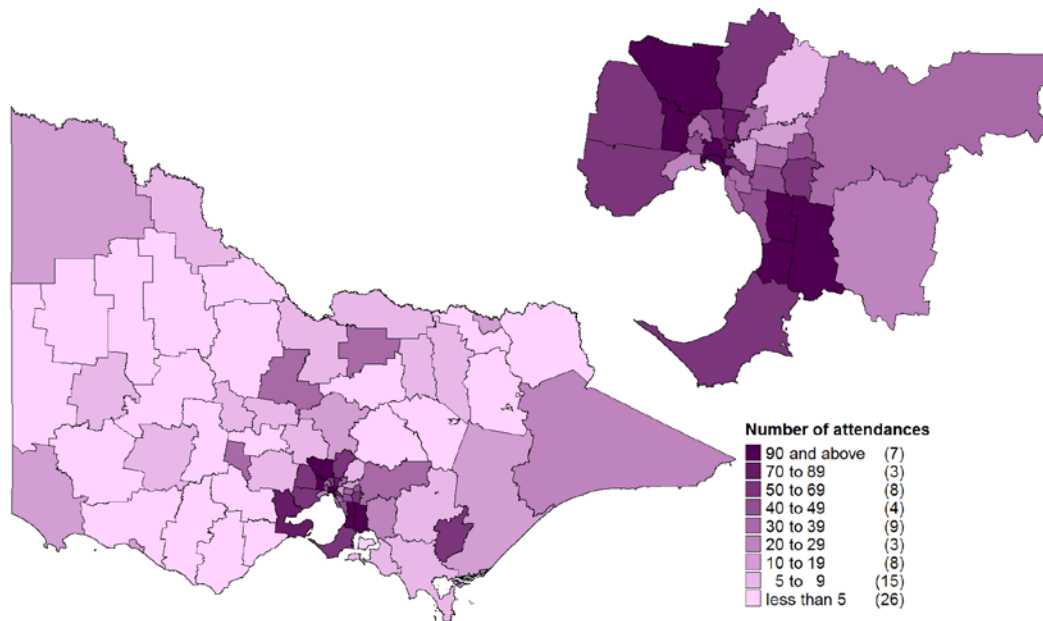
**Figure 7: Crystal methamphetamine-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**



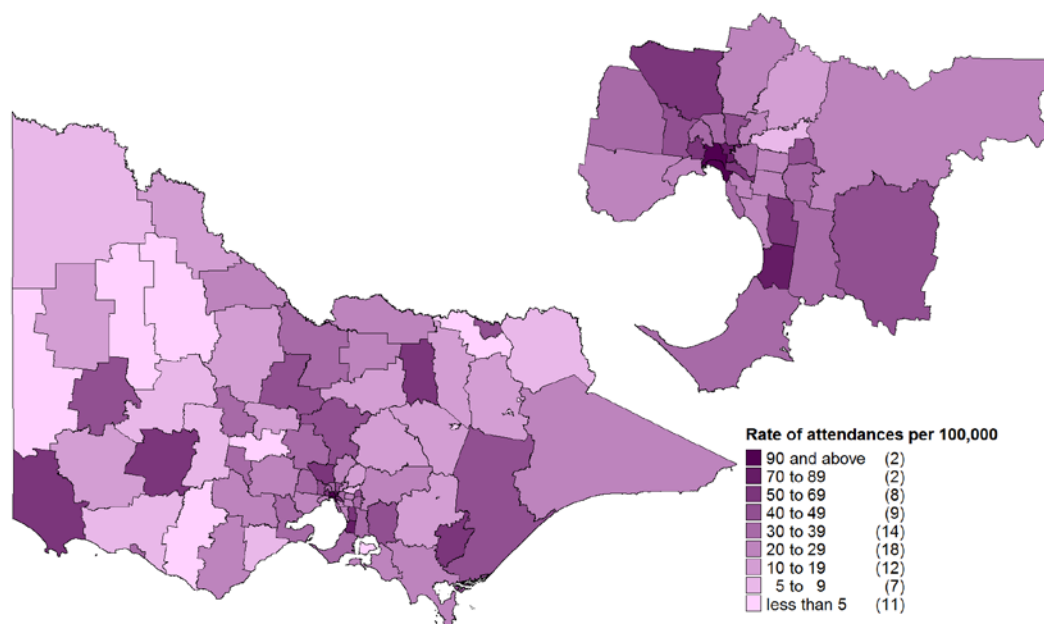
**Figure 8: Crystal methamphetamine-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2017**



**Figure 9: Percentage of crystal methamphetamine-related attendances over total attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2017**



**Map 5: Number of crystal methamphetamine-related attendances by Victorian LGA, January to December 2017**



**Map 6: Rate of crystal methamphetamine-related attendances per 100,000 resident population by Victorian LGA, January to December 2017**

## Cannabis-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Mapped numbers and rates of presentations are presented at the end of this section.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 7. Characteristics of cannabis-related ambulance attendances in Victoria for the 12 months from January to December 2017 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.

In 2017, cannabis-related attendances peaked during January and December in regional and metropolitan areas respectively (Table 7).

- Characteristics over the 12 month period are presented in Table 8:
  - 3,039 cannabis-related cases were recorded across Victoria
  - the majority of patients who were attended for cannabis-related cases were male (65%), with similar proportions reported in metropolitan and regional areas
  - the median age of patients with cannabis-related attendances was 28 years in Victoria
  - a slightly lower proportion of cannabis-related attendances in metropolitan areas (73%) were transported to hospital than in regional areas (76%).

- As presented in Figure 11, cannabis-related attendance numbers peaked between 8pm and midnight across all of Victoria. In 2017, Saturdays represented the peak day for cannabis-related attendances in both metropolitan and regional areas (Figure 12).

**Table 7: Cannabis-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

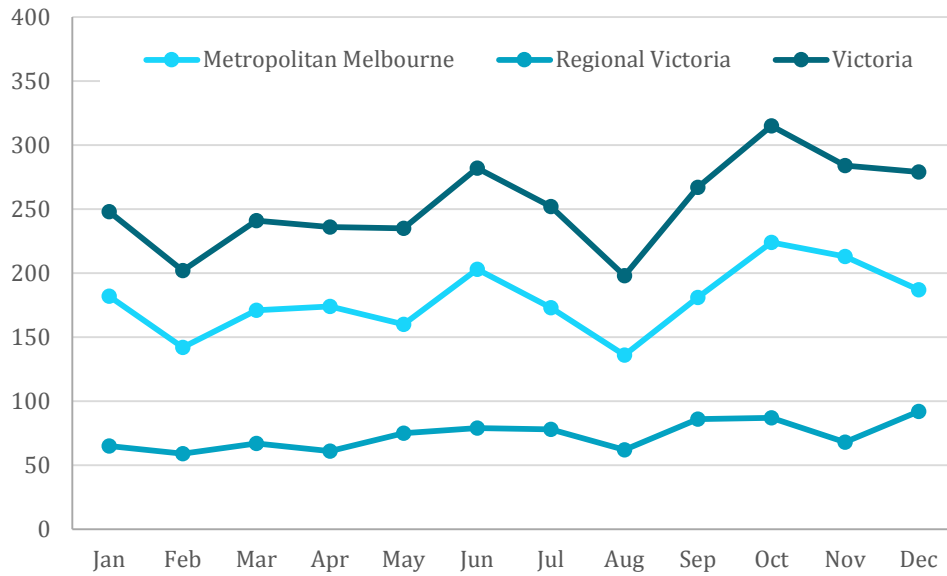
	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	182 (3.9)	65 (4.3)	248 (4.0)
February attendances (per 100,000 population)	142 (3.1)	59 (3.9)	202 (3.3)
March attendances (per 100,000 population)	171 (3.7)	67 (4.4)	241 (3.9)
April attendances (per 100,000 population)	174 (3.7)	61 (4.0)	236 (3.8)
May attendances (per 100,000 population)	160 (3.4)	75 (4.9)	235 (3.8)
June attendances (per 100,000 population)	203 (4.4)	79 (5.2)	282 (4.6)
July attendances (per 100,000 population)	173 (3.7)	78 (5.1)	252 (4.1)
August attendances (per 100,000 population)	136 (2.9)	62 (4.1)	198 (3.2)
September attendances (per 100,000 population)	181 (3.9)	86 (5.6)	267 (4.3)
October attendances (per 100,000 population)	224 (4.8)	87 (5.7)	315 (5.1)
November attendances (per 100,000 population)	213 (4.6)	68 (4.5)	284 (4.6)
December attendances (per 100,000 population)	187 (4.0)	92 (6.0)	279 (4.5)

**Table 8: Characteristics of cannabis-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

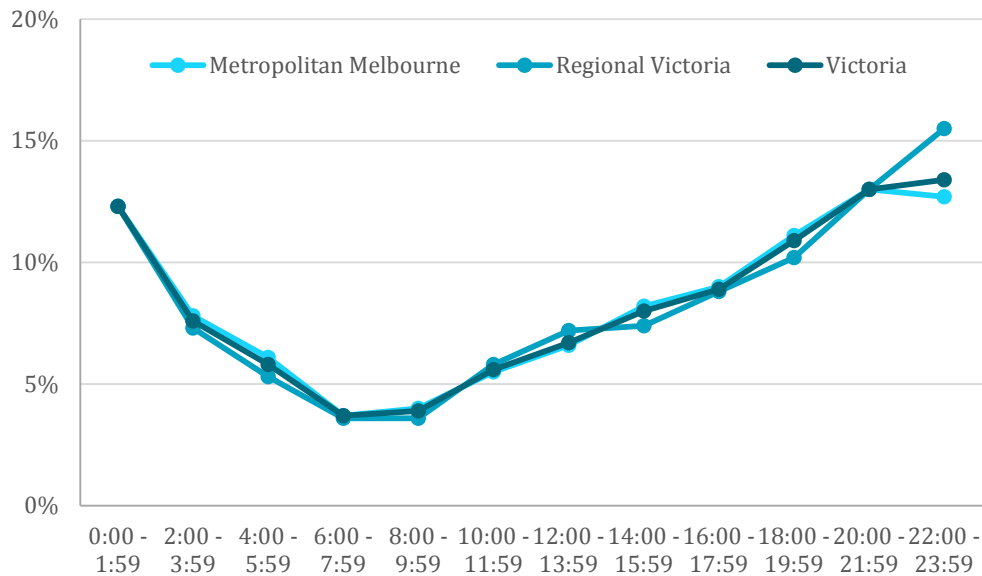
	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	2,146 (46.1)	879 (57.6)	3,039 (49.2)
Mean attendances per day	8.2	8.5	8.3
Daily range	<5-19	<5-18	<5-19
Age- median (quartiles)	28 (21-40)	30 (21-41)	28 (21-40)
Male	1,395 (65%)	569 (65%)	1,969 (65%)
Public outdoor space *	420 (27%)	124 (20%)	546 (25%)
Police co-attendance	673 (31%)	285 (32%)	960 (32%)
Transport to hospital	1,557 (73%)	666 (76%)	2,233 (73%)
Alcohol involved/mentioned	850 (40%)	381 (43%)	1,236 (41%)
Alcohol intoxication	484 (23%)	227 (26%)	714 (24%)
Multiple drugs involved (excluding alcohol)	708 (32%)	247 (28%)	958 (32%)

Note: all proportions are based on non-missing information

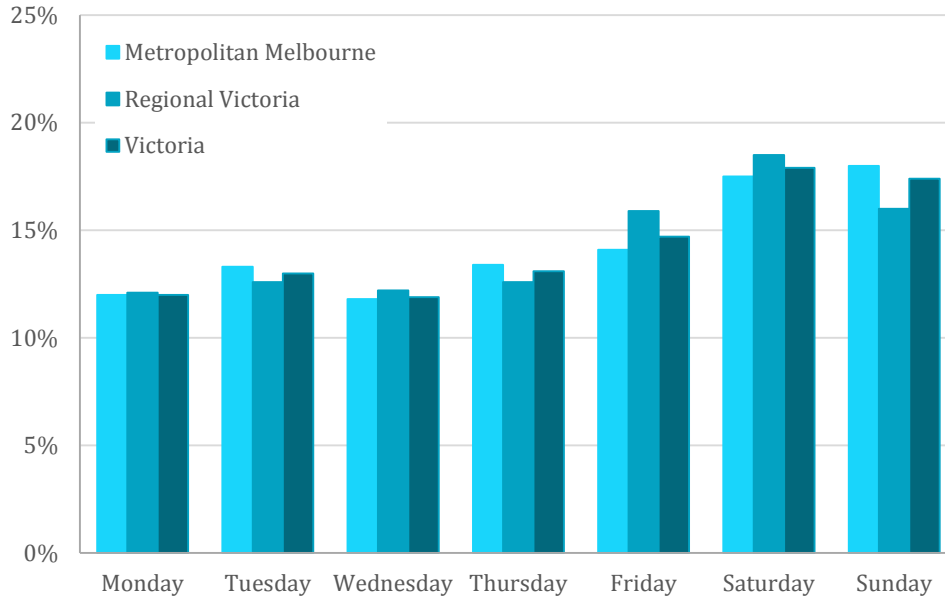
\* The location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.



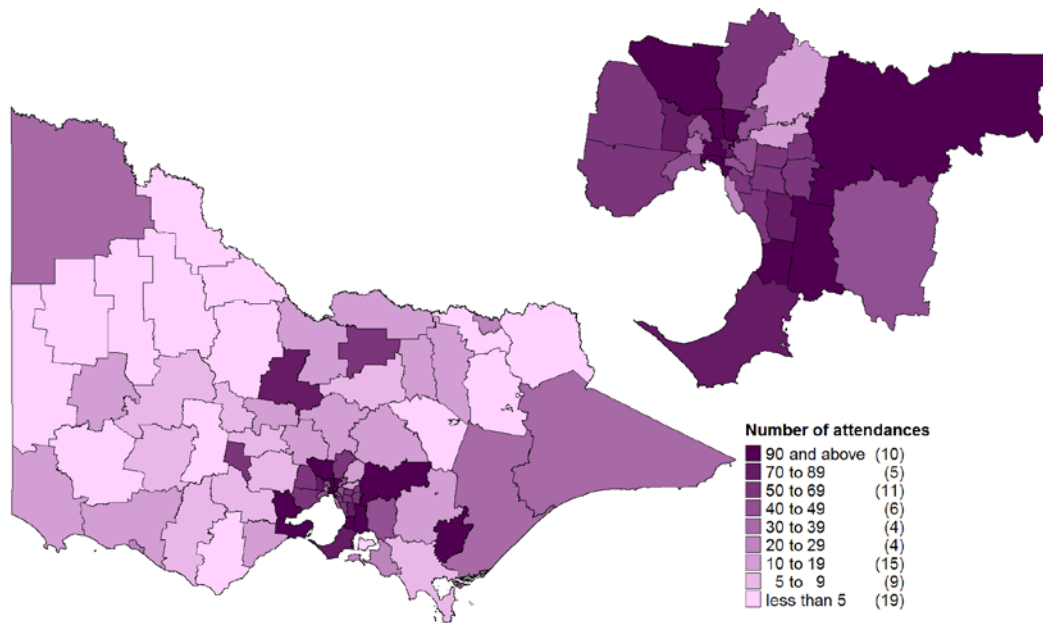
**Figure 10: Cannabis-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**



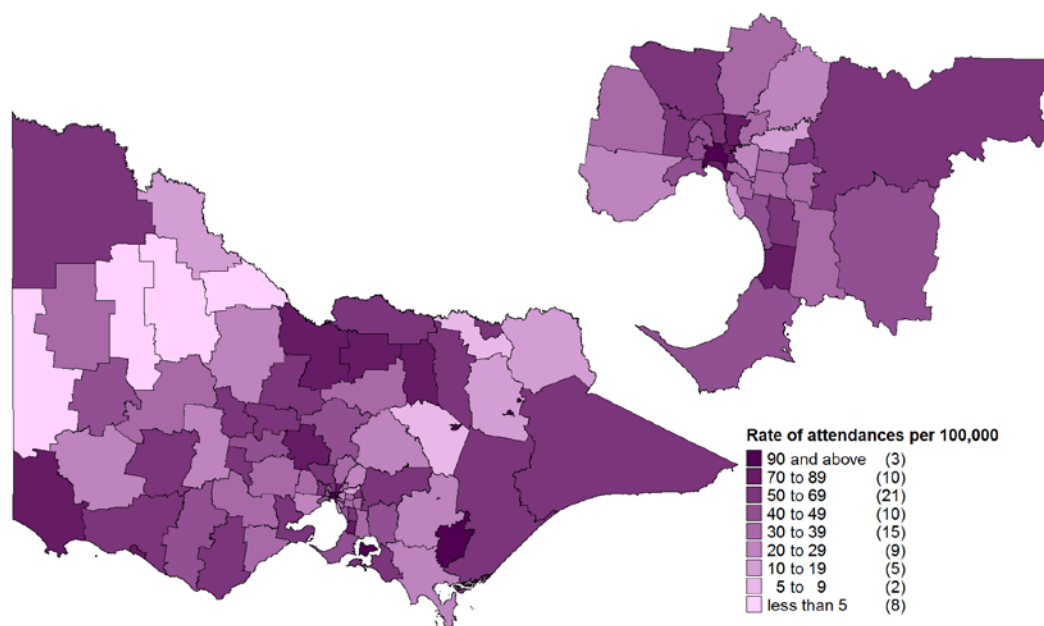
**Figure 11: Cannabis-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2017**



**Figure 12: Percentage of cannabis-related attendances over total attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2017**



**Map 7: Number of cannabis-related attendances by Victorian LGA, January to December 2017**



**Map 8: Rate of cannabis-related attendances per 100,000 resident population by Victorian LGA, January to December 2017**

## Heroin-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Mapped numbers and rates of presentations are presented at the end of this section.

Numbers and rates of heroin-related ambulance attendances are shown in Table 9. Characteristics of heroin-related ambulance attendances in Victoria for the 12 months from January to December 2017 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.

- Heroin-related attendances peaked in December and September 2017 in metropolitan Melbourne and regional Victoria, respectively (Table 9).
- Characteristics over the 12 month period are presented in Table 10:
  - 2,951 heroin-related cases were recorded, with the majority of these attendances occurring in metropolitan areas (93%)
  - the majority of patients attended for heroin-related cases were male (71%) with similar proportions in metropolitan and regional areas
  - the median age of patients with heroin-related attendances was 38 years in Victoria

- a lower proportion of patients with heroin-related attendances in metropolitan Melbourne (40%) were transported to hospital than in regional Victoria (54%)
- As presented in Figure 14, heroin-related attendance numbers peaked in the evening between 2pm and 6pm in metropolitan areas and between 8pm and 10pm in regional areas. In 2017, Thursday and Wednesday represented the peak day for heroin-related attendances in metropolitan and regional Victoria, respectively (Figure 15).

**Table 9: Heroin-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	264 (5.7)	13 (0.9)	277 (4.5)
February attendances (per 100,000 population)	237 (5.1)	18 (1.2)	256 (4.1)
March attendances (per 100,000 population)	237 (5.1)	16 (1.0)	253 (4.1)
April attendances (per 100,000 population)	206 (4.4)	23 (1.5)	229 (3.7)
May attendances (per 100,000 population)	212 (4.6)	11 (0.7)	224 (3.6)
June attendances (per 100,000 population)	191 (4.1)	17 (1.1)	209 (3.4)
July attendances (per 100,000 population)	188 (4.0)	11 (0.7)	199 (3.2)
August attendances (per 100,000 population)	217 (4.7)	17 (1.1)	235 (3.8)
September attendances (per 100,000 population)	190 (4.1)	24 (1.6)	214 (3.5)
October attendances (per 100,000 population)	226 (4.9)	19 (1.2)	245 (4.0)
November attendances (per 100,000 population)	282 (6.1)	21 (1.4)	303 (4.9)
December attendances (per 100,000 population)	289 (6.2)	18 (1.2)	307 (5.0)

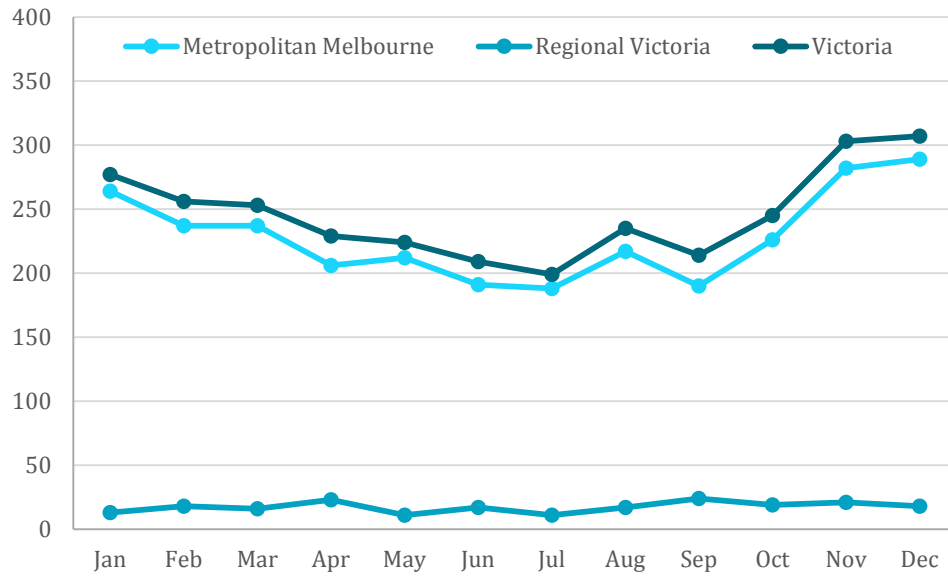
**Table 10: Characteristics of heroin-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	2,739 (58.9)	208 (13.6)	2,951 (47.8)
Mean attendances per day	8.2	7.5	8.1
Daily range	<5-21	<5-22	<5-22
Age- median (quartiles)	39 (33-45)	37 (30-44)	38 (33-45)
Male	1,951 (71%)	141 (68%)	2,094 (71%)
Public outdoor space *	1,035 (51%)	35 (22%)	1,070 (49%)
Police co-attendance	590 (22%)	52 (25%)	642 (22%)
Transport to hospital	1,081 (40%)	112 (54%)	1,194 (41%)
Alcohol involved/mentioned	422 (15%)	38 (18%)	460 (16%)
Alcohol intoxication	155 (6%)	18 (9%)	173 (6%)
Multiple drugs involved (excluding alcohol)	573 (21%)	54 (26%)	628 (21%)
Responded to naloxone	1,242 (45%)	76 (37%)	1,319 (45%)

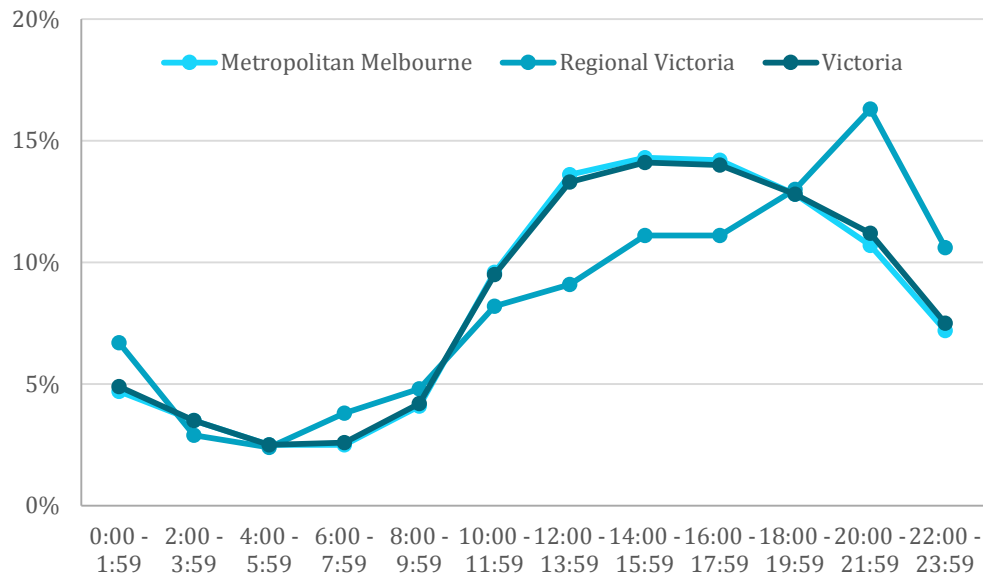
Note: all proportions are based on non-missing information

\* The location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.

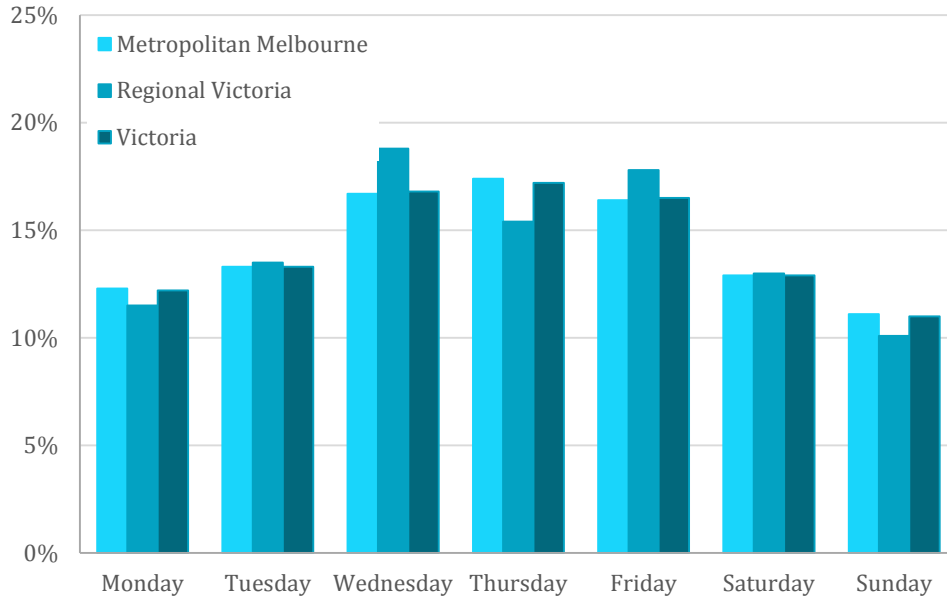




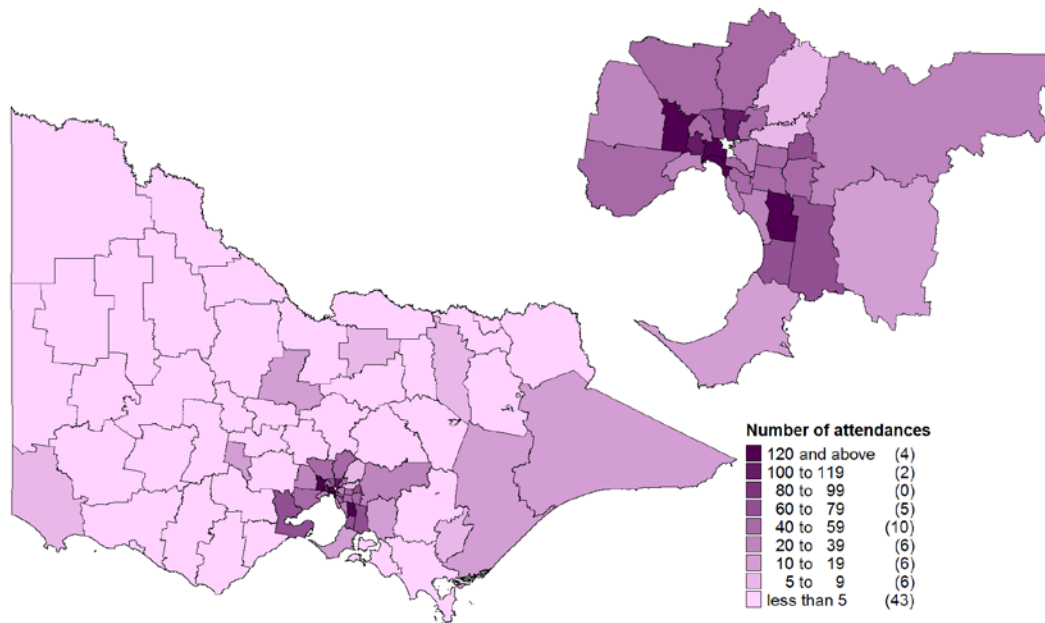
**Figure 13: Heroin-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**



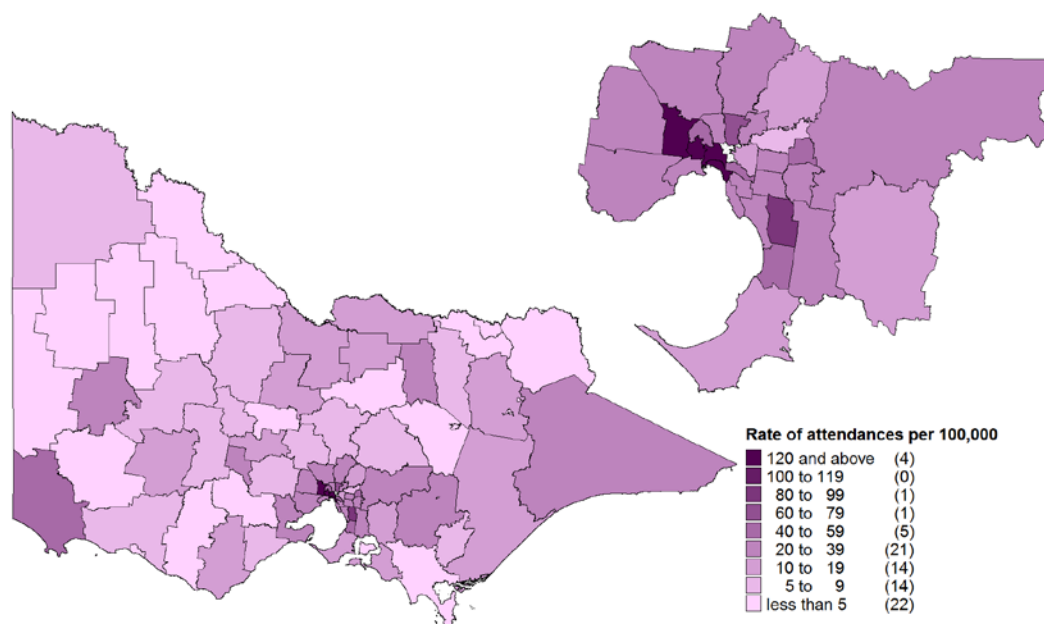
**Figure 14: Heroin-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2017**



**Figure 15: Percentage of heroin-related attendances over total attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2017**



**Map 9: Number of heroin-related attendances by Victorian LGA, January to December 2017**



**Map 10: Rate of heroin-related attendances per 100,000 resident population by Victorian LGA, January to December 2017**

## Emerging psychoactive substance-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Graphed and mapped data are not presented due to low numbers of cases.

Numbers and rates of emerging psychoactive substance-related ambulance attendances are shown in Table 11. Characteristics of emerging psychoactive substance-related ambulance attendances in Victoria for the 12 months from January to December 2017 are shown in Table 12.

- Emerging psychoactive substance-related attendances were very low across all months in 2017 (Table 11).

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

- 11 emerging psychoactive substance-related cases recorded in Victoria
- the median age of patients with emerging psychoactive substance-related attendances was 26 years
- All of patients with emerging psychoactive substance-related attendances were transported to hospital

**Table 11: Emerging psychoactive substance-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

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

**Table 12: Characteristics of emerging psychoactive substance-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	6	5	11 (0.2)
Mean attendances per day	0.04	-	0.05
Daily range	<5	-	<5
Age- median (quartiles)	20 (19-31)	37 (28-50)	26 (20-35)
Male	N<5	N<5	N>4
Public outdoor space *	N<5	0	5 (50%)
Police co-attendance	N<5	N<5	N<5
Transport to hospital	6 (100%)	5 (100)	11 (100%)
Alcohol involved/mentioned	N<5	0	N<5
Alcohol intoxication	N<5	0	N<5
Multiple drugs involved (excluding alcohol)	N<5	N<5	7 (63%)

Note: all proportions are based on non-missing information

\* The location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.

## Benzodiazepine-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Mapped numbers and rates of presentations are presented at the end of this section.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 13. Characteristics of benzodiazepine-related ambulance attendances in Victoria for the 12 months from January to December 2017 are shown in Table 14. Data regarding month, time of day and day of week of attendances are displayed in Figures 16 to 18.

- Benzodiazepine-related attendances peaked in January 2017 (Table 13).

Characteristics over the 12 month period are presented in Table 14:

- 4,238 benzodiazepine-related cases were recorded
- less than half of Victorian patients attended for benzodiazepine-related cases were male (45%)
- the median age of patients with benzodiazepine-related attendances was 38 years, with similar age distribution in regional and metropolitan areas
- an equal proportion of patients with benzodiazepine-related attendances in metropolitan and regional areas (89%) were transported to hospital
- more than half of all benzodiazepine-related attendances (54%) involved multiple drugs
- As presented in Figure 17, benzodiazepine-related attendance numbers peaked between 6pm and midnight in metropolitan and regional areas.
- Sundays and Saturdays represented the peak days for benzodiazepine-related attendances in metropolitan and regional Victoria, respectively, in 2017 (Figure 18).

**Table 13: Benzodiazepine-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

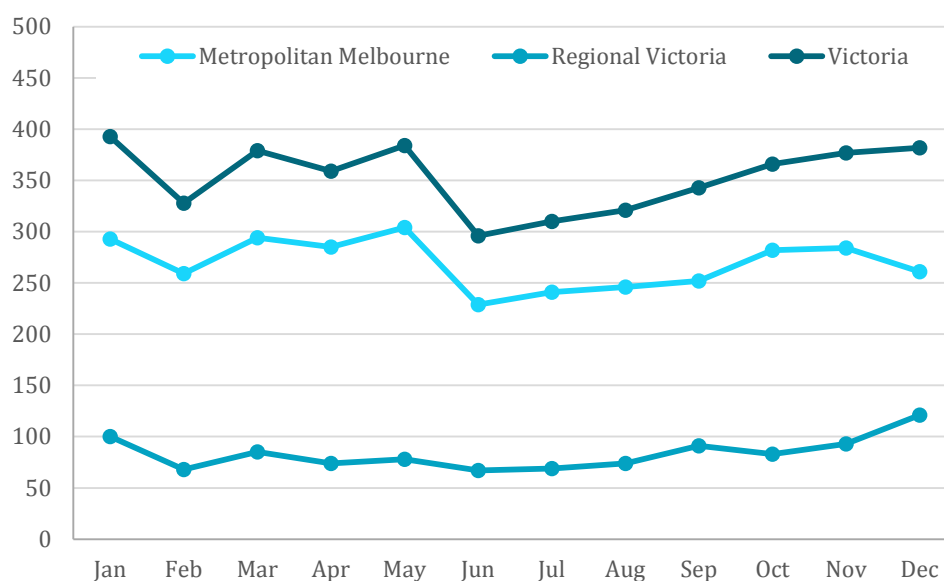
	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	293 (6.3)	100 (6.6)	393 (6.4)
February attendances (per 100,000 population)	259 (5.6)	68 (4.5)	328 (5.3)
March attendances (per 100,000 population)	294 (6.3)	85 (5.6)	379 (6.1)
April attendances (per 100,000 population)	285 (6.1)	74 (4.9)	359 (5.8)
May attendances (per 100,000 population)	304 (6.5)	78 (5.1)	384 (6.2)
June attendances (per 100,000 population)	229 (4.9)	67 (4.4)	296 (4.8)
July attendances (per 100,000 population)	241 (5.2)	69 (4.5)	310 (5.0)
August attendances (per 100,000 population)	246 (5.3)	74 (4.9)	321 (5.2)
September attendances (per 100,000 population)	252 (5.4)	91 (6.0)	343 (5.6)
October attendances (per 100,000 population)	282 (6.1)	83 (5.4)	366 (5.9)
November attendances (per 100,000 population)	284 (6.1)	93 (6.1)	377 (6.1)
December attendances (per 100,000 population)	261 (5.6)	121 (7.9)	382 (6.2)

**Table 14: Characteristics of benzodiazepine-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

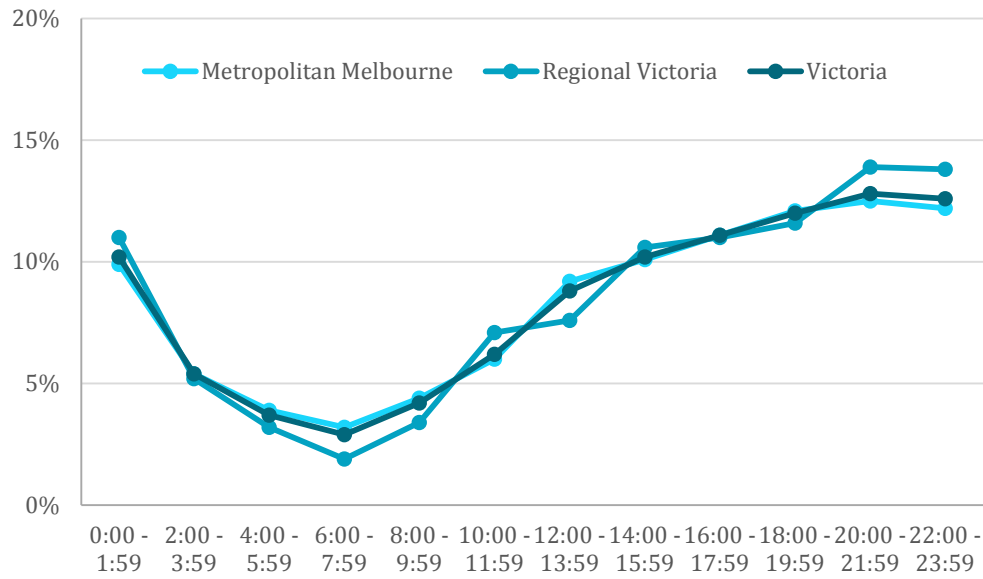
	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	3,230 (69.4)	1,003 (65.8)	4,238 (68.6)
Mean attendances per day	11.8	11.1	11.6
Daily range	<5-24	<5-22	<5-24
Age- median (quartiles)	40 (27-50)	37 (27-48)	38 (27-49)
Male	1,456 (45%)	438 (44%)	1,897 (45%)
Public outdoor space *	404 (17%)	85 (12%)	491 (16%)
Police co-attendance	938 (29%)	344 (34%)	1,283 (30%)
Transport to hospital	2,886 (89%)	895 (89%)	3,786 (89%)
Alcohol involved/mentioned	1,369 (42%)	422 (42%)	1,794 (42%)
Alcohol intoxication	909 (28%)	286 (29%)	1,198 (28%)
Multiple drugs involved (excluding alcohol)	1,724 (53%)	544 (54%)	2,271 (54%)

Note: all proportions are based on non-missing information

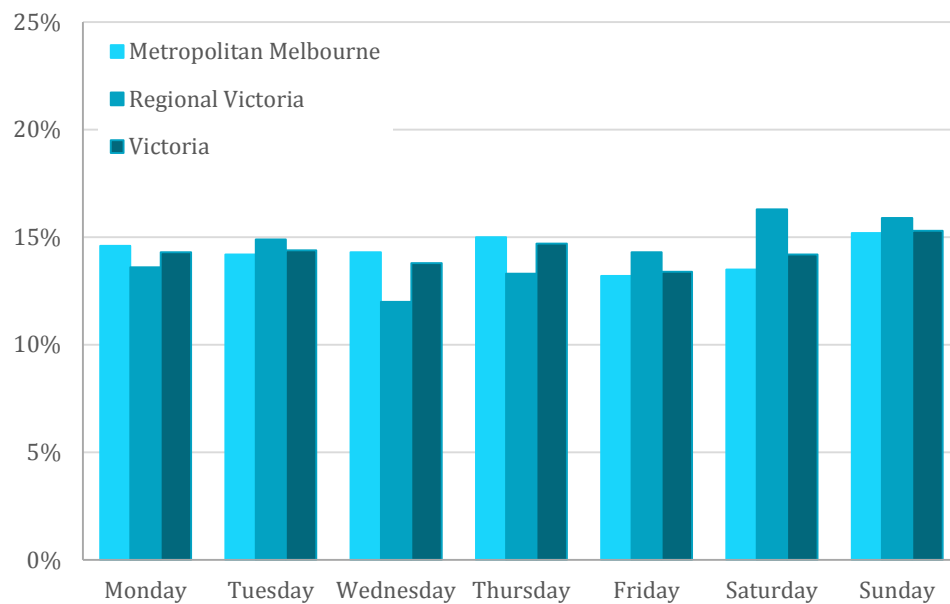
\* The location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.



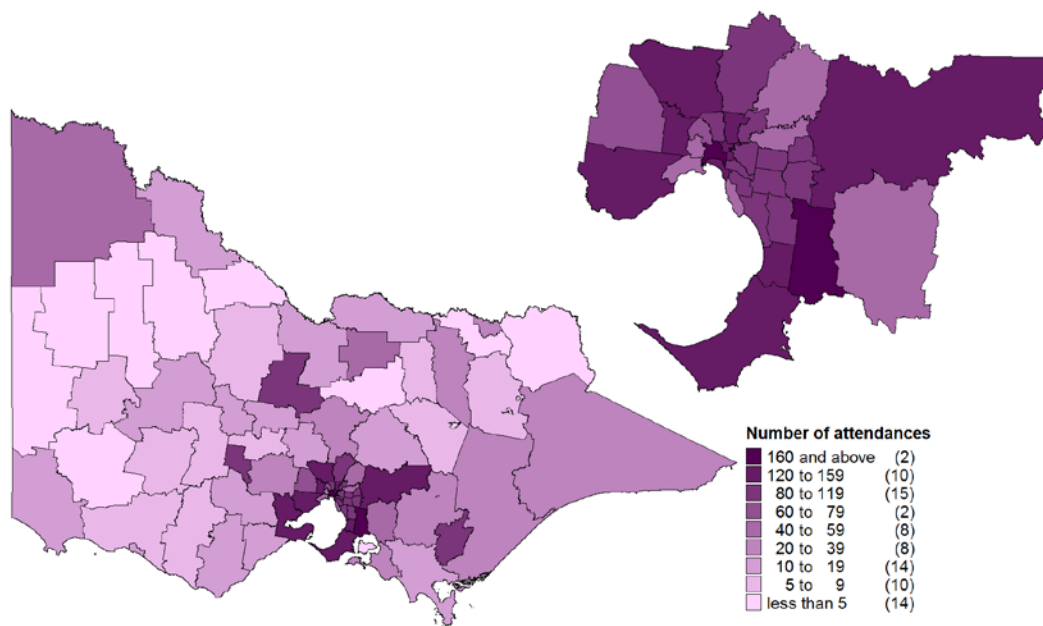
**Figure 16: Benzodiazepine-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**



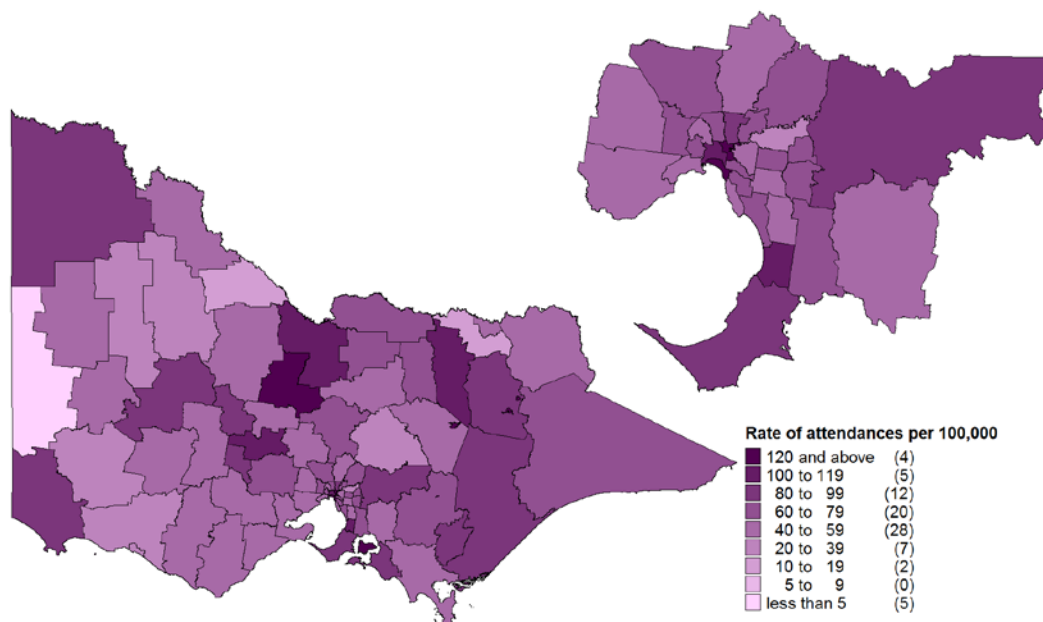
**Figure 17: Benzodiazepine-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2017**



**Figure 18: Percentage of benzodiazepine-related attendances over total attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2017**



**Map 11: Number of benzodiazepine-related attendances by Victorian LGA, January to December 2017**



**Map 12: Rate of benzodiazepine-related attendances per 100,000 resident population by Victorian LGA, January to December 2017**



## Opioid analgesic-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Mapped numbers and rates of presentations are presented at the end of this section.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 15. Characteristics of opioid analgesic-related ambulance attendances in Victoria for the 12 months from January to December 2017 are shown in Table 16. Data regarding month, time of day and day of week of attendances are displayed in Figure 19 to Figure 21.

- Opioid analgesic-related attendances in metropolitan Melbourne peaked in March, while the highest number of attendances in regional Victoria was in April and September 2017 (Table 15).
- Characteristics over the 12 month period are presented in Table 16:
  - 1,142 opioid analgesic-related cases were recorded in Victoria
  - the majority of patients attended for opioid analgesic-related cases were female (56%), with similar proportions in metropolitan and regional locations
  - the median age of patients with opioid analgesic-related attendances was 41 years, with the same age distributions in metropolitan and regional areas
  - a similarly high proportion of patients with opioid analgesic-related attendances in metropolitan (89%) and regional areas (85%) were transported to hospital
  - more than half (60%) of opioid analgesic-related attendances in Victoria involved multiple drugs (excluding alcohol)
  - As presented in Figure 20, opioid analgesic-related attendance numbers peaked between 8pm and 10pm in metropolitan Melbourne, and peak hours in regional areas were between 2pm and 4pm.
  - Sundays represented the peak day for opioid analgesic-related attendances in metropolitan Melbourne, while Fridays were the peak day in regional Victoria (Figure 21).

**Table 15: Opioid analgesic-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

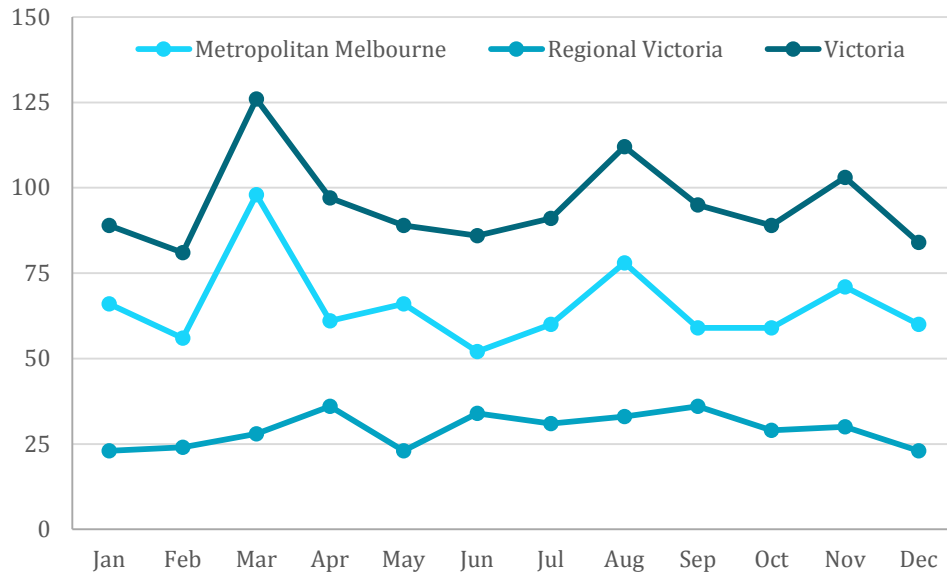
	<b>Metropolitan Melbourne</b>	<b>Regional Victoria</b>	<b>Victoria</b>
January attendances (per 100,000 population)	66 (1.4)	23 (1.5)	89 (1.4)
February attendances (per 100,000 population)	56 (1.2)	24 (1.6)	81 (1.3)
March attendances (per 100,000 population)	98 (2.1)	28 (1.8)	126 (2.0)
April attendances (per 100,000 population)	61 (1.3)	36 (2.4)	97 (1.6)
May attendances (per 100,000 population)	66 (1.4)	23 (1.5)	89 (1.4)
June attendances (per 100,000 population)	52 (1.1)	34 (2.2)	86 (1.4)
July attendances (per 100,000 population)	60 (1.3)	31 (2.0)	91 (1.5)
August attendances (per 100,000 population)	78 (1.7)	33 (2.2)	112 (1.8)
September attendances (per 100,000 population)	59 (1.3)	36 (2.4)	95 (1.5)
October attendances (per 100,000 population)	59 (1.3)	29 (1.9)	89 (1.4)
November attendances (per 100,000 population)	71 (1.5)	30 (2.0)	103 (1.7)
December attendances (per 100,000 population)	60 (1.3)	23 (1.5)	84 (1.4)

**Table 16: Characteristics of opioid analgesic-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

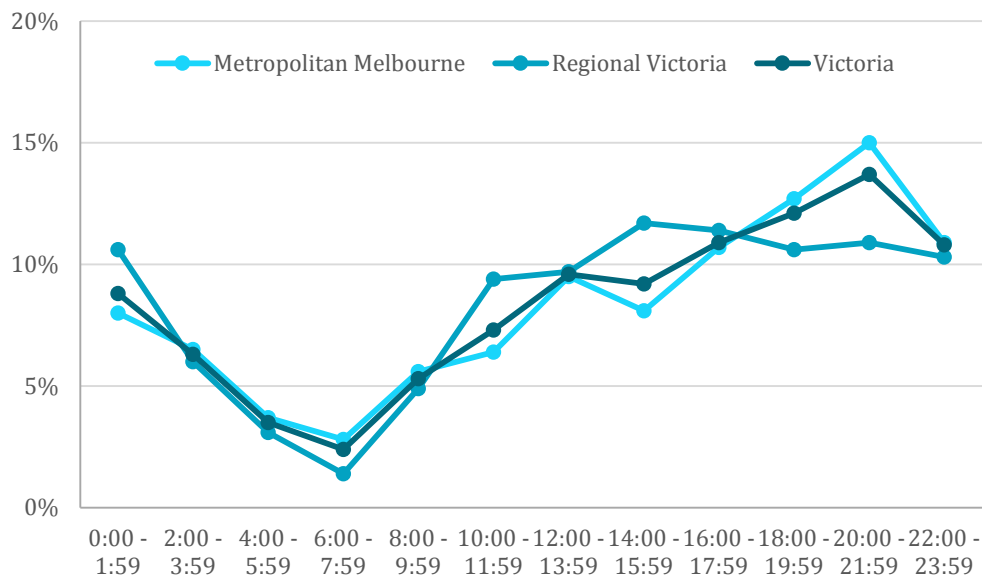
	<b>Metropolitan Melbourne</b>	<b>Regional Victoria</b>	<b>Victoria</b>
Number of attendances (per 100,000 population)	786 (16.9)	350 (22.9)	1,142 (18.5)
Mean attendances per day	3.1	3.2	3.1
Daily range	<5-9	<5-9	<5-9
Age- median (quartiles)	41 (28-51)	41 (27-52)	41 (28-52)
Male	336 (43%)	168 (48%)	507 (44%)
Public outdoor space *	67 (11%)	29 (11%)	97 (11%)
Police co-attendance	158 (20%)	81 (23%)	240 (21%)
Transport to hospital	703 (89%)	296 (85%)	1,004 (88%)
Alcohol involved/mentioned	247 (31%)	98 (28%)	346 (30%)
Alcohol intoxication	144 (18%)	66 (19%)	211 (18%)
Multiple drugs involved (excluding alcohol)	486 (62%)	194 (55%)	684 (60%)
Morphine	57 (7%)	46 (13%)	103 (9%)
Oxycodone	430 (55%)	208 (59%)	641 (56%)

Note: all proportions are based on non-missing information

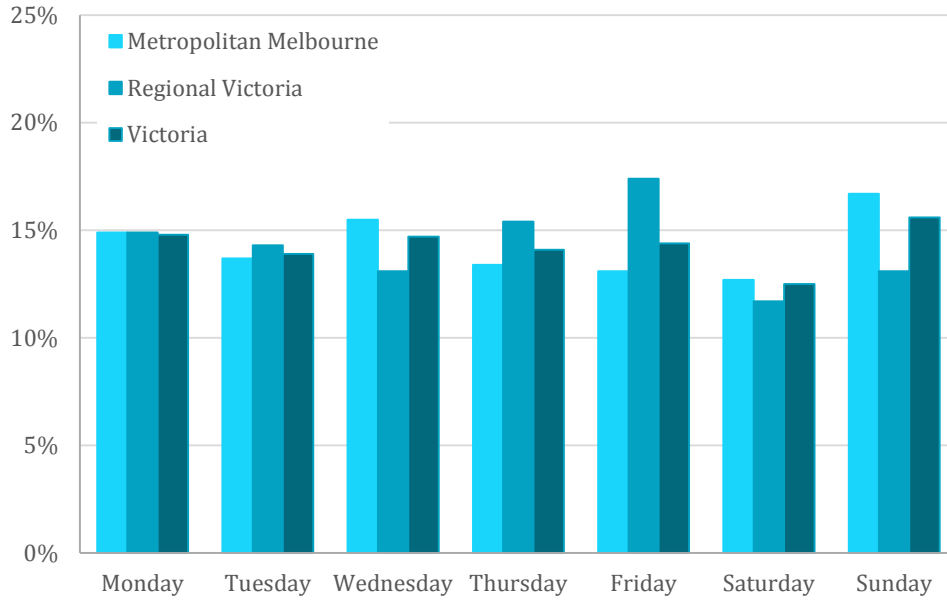
\* The location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.



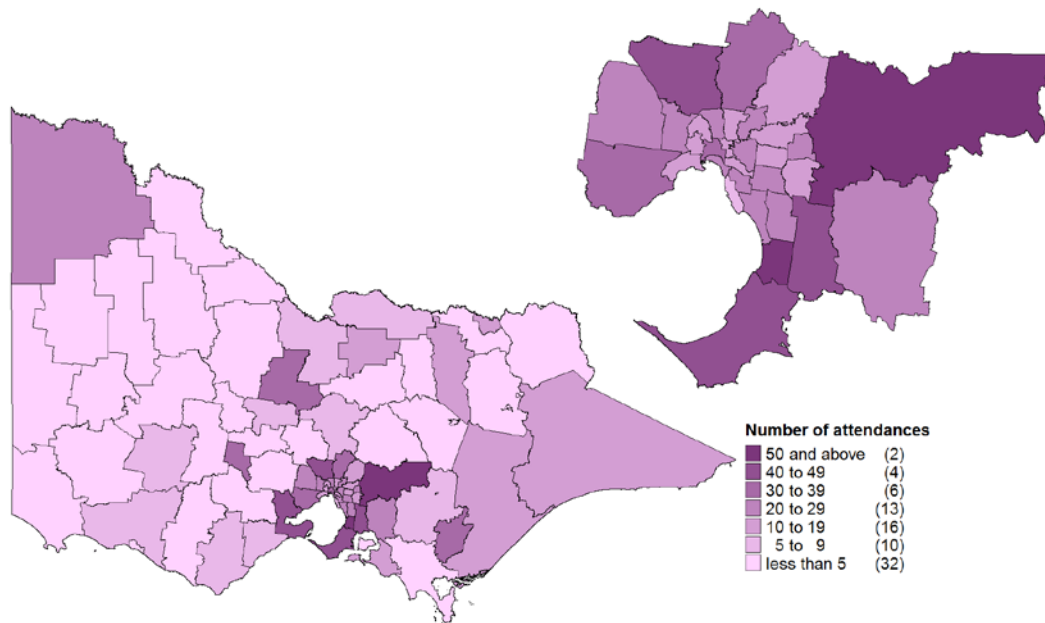
**Figure 19: Opioid analgesic-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**



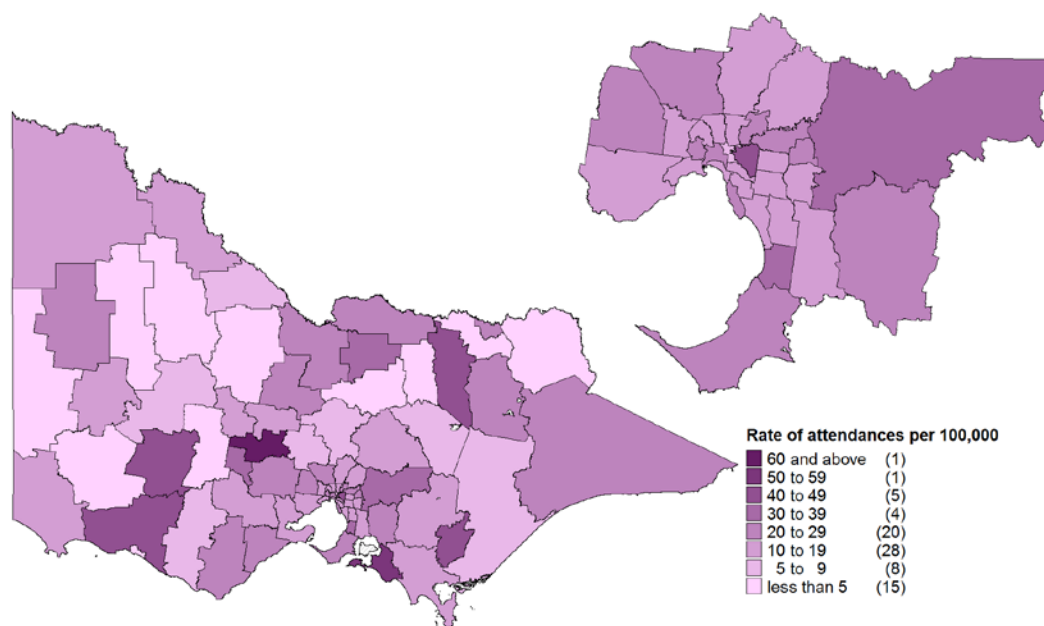
**Figure 20: Opioid analgesic-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2017**



**Figure 21: Percentage of opioid analgesic-related attendances over total attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2017**



**Map 13: Number of opioid analgesic-related attendances by Victorian LGA, January to December 2017**



**Map 14: Rate of opioid analgesic-related attendances per 100,000 resident population by Victorian LGA, January to December 2017**

## Opioid pharmacotherapy-related attendances in Victoria

Results are presented covering a twelve-month period of data for Victoria. Mapped numbers and rates of presentations are presented at the end of this section.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Figure 17. Characteristics of opioid pharmacotherapy-related ambulance attendances in Victoria for the 12 months from January to December 2017 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.

- Victorian opioid pharmacotherapy-related attendances peaked in January 2017 (Table 17).
- Characteristics over the 12 month period are presented in Table 18:
  - 499 opioid pharmacotherapy-related cases were recorded, with the majority of attendances (80%) occurring in metropolitan Melbourne
  - the majority of patients attended for opioid pharmacotherapy-related cases were male (60%), with similar proportions in metropolitan and regional areas
  - the median age of patients with opioid pharmacotherapy-related attendances was 39 years in Victoria

- a higher proportion of patients with opioid pharmacotherapy-related attendances in regional (84%) compared to metropolitan areas (77%) were transported to hospital
- As presented in Figure 23, opioid pharmacotherapy-related attendance numbers peaked in the afternoon between 2pm and 4pm in metropolitan areas and 4pm and 6pm in regional areas.
- Wednesdays represented the peak day for opioid pharmacotherapy-related attendances in both metropolitan and regional areas (Figure 24).

**Table 17: Opioid pharmacotherapy-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

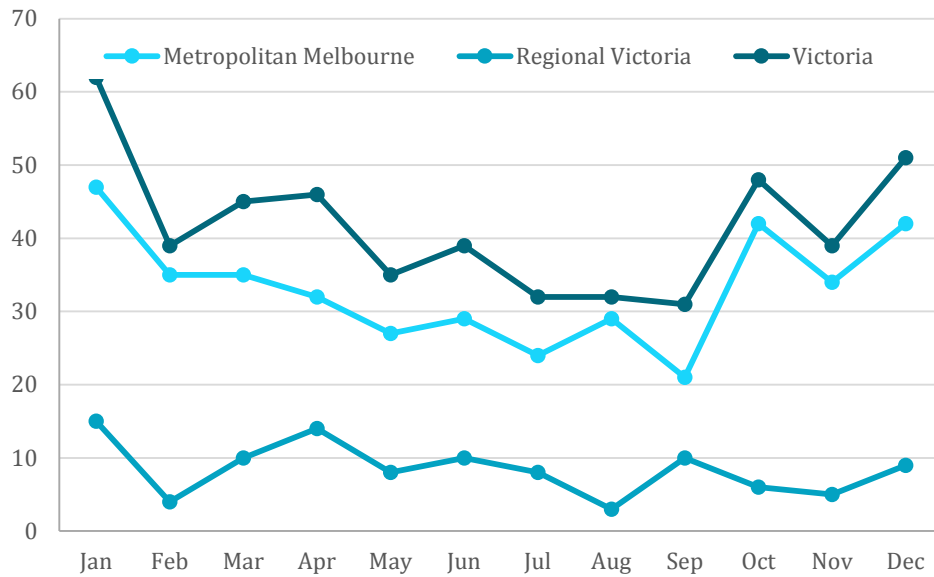
	Metropolitan Melbourne	Regional Victoria	Victoria
January attendances (per 100,000 population)	47 (1.0)	15 (1.0)	62 (1.0)
February attendances (per 100,000 population)	≥30 (≥0.5)	N<5	39 (0.6)
March attendances (per 100,000 population)	35 (0.8)	10 (0.7)	45 (0.7)
April attendances (per 100,000 population)	32 (0.7)	14 (0.9)	46 (0.7)
May attendances (per 100,000 population)	27 (0.6)	8 (0.5)	35 (0.6)
June attendances (per 100,000 population)	29 (0.6)	10 (0.7)	39 (0.6)
July attendances (per 100,000 population)	24 (0.5)	8 (0.5)	32 (0.5)
August attendances (per 100,000 population)	≥25 (≥0.5)	N<5	32 (0.5)
September attendances (per 100,000 population)	21 (0.5)	10 (0.7)	31 (0.5)
October attendances (per 100,000 population)	42 (0.9)	6 (0.4)	48 (0.8)
November attendances (per 100,000 population)	34 (0.7)	5 (0.3)	39 (0.6)
December attendances (per 100,000 population)	42 (0.9)	9 (0.6)	51 (0.8)

**Table 18: Characteristics of opioid pharmacotherapy-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

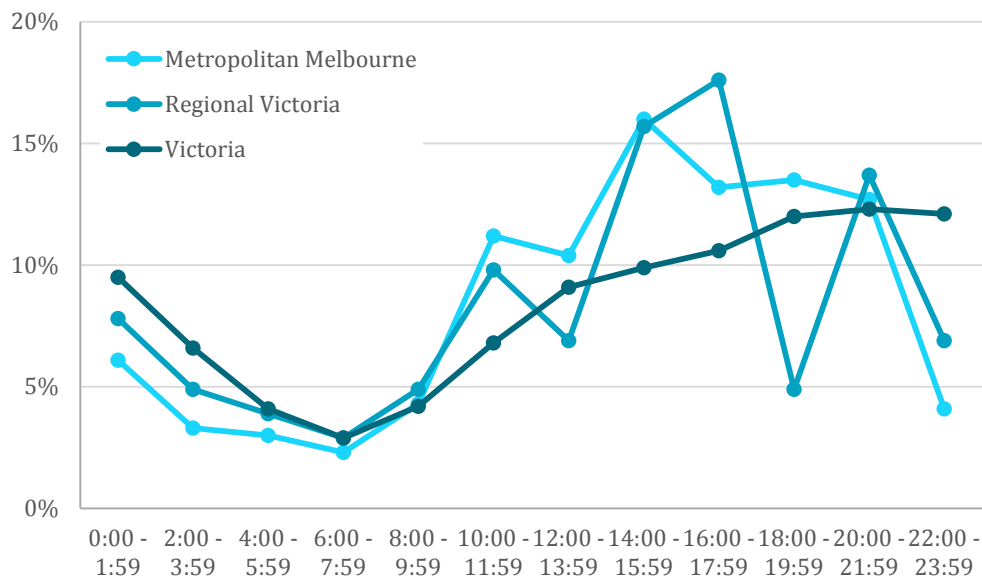
	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 population)	397 (8.5)	102 (6.7)	499 (8.1)
Mean attendances per day	1.4	1.3	1.4
Daily range	<5-7	<5-5	<5-7
Age- median (quartiles)	39 (34-46)	38 (31-48)	39 (33-47)
Male	242 (61%)	58 (57%)	300 (60%)
Public outdoor space *	123 (41%)	16 (21%)	139 (37%)
Police co-attendance	98 (25%)	27 (27%)	125 (25%)
Transport to hospital	305 (77%)	86 (84%)	391(78%)
Alcohol involved/mentioned	118 (29%)	21 (21%)	139 (28%)
Alcohol intoxication	61 (15%)	10 (10%)	71 (14%)
Multiple drugs involved (excluding alcohol)	228 (57%)	50 (49%)	278 (56%)

Note: all proportions are based on non-missing information

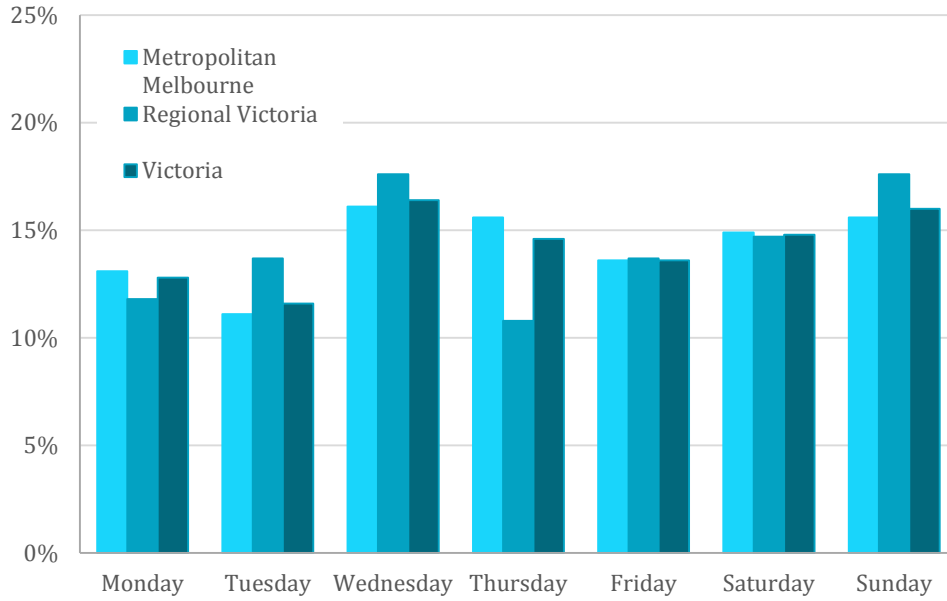
\* The location type of ambulance attendances (outdoor / indoor) is no longer reliable, and this statistics will be excluded from the next report.



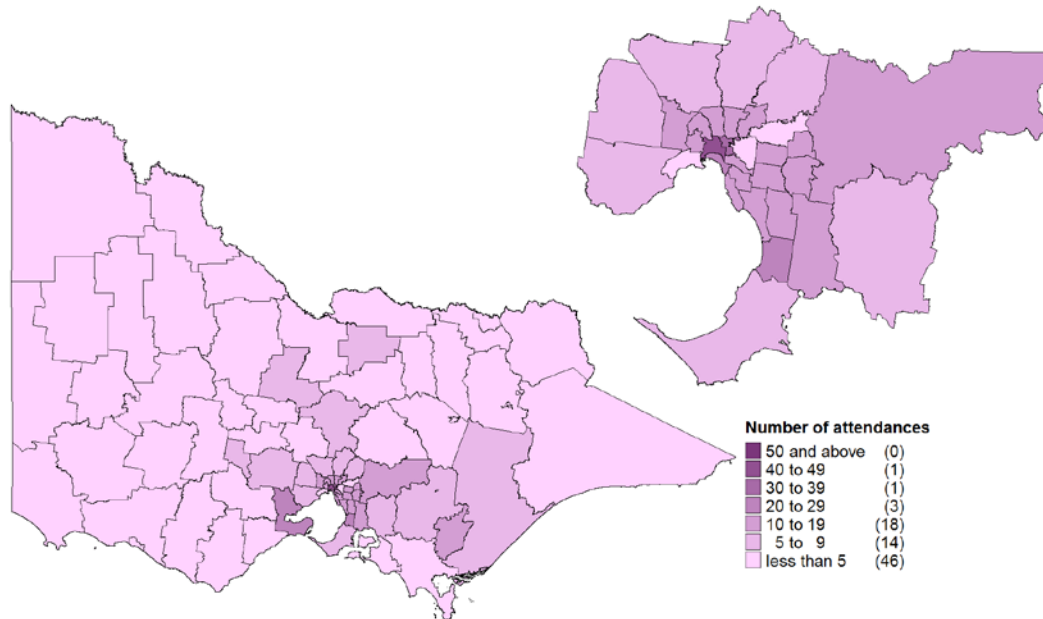
**Figure 22: Opioid pharmacotherapy-related attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**



**Figure 23: Opioid pharmacotherapy-related attendances by time of day in metropolitan Melbourne and regional Victoria, January to December 2017**

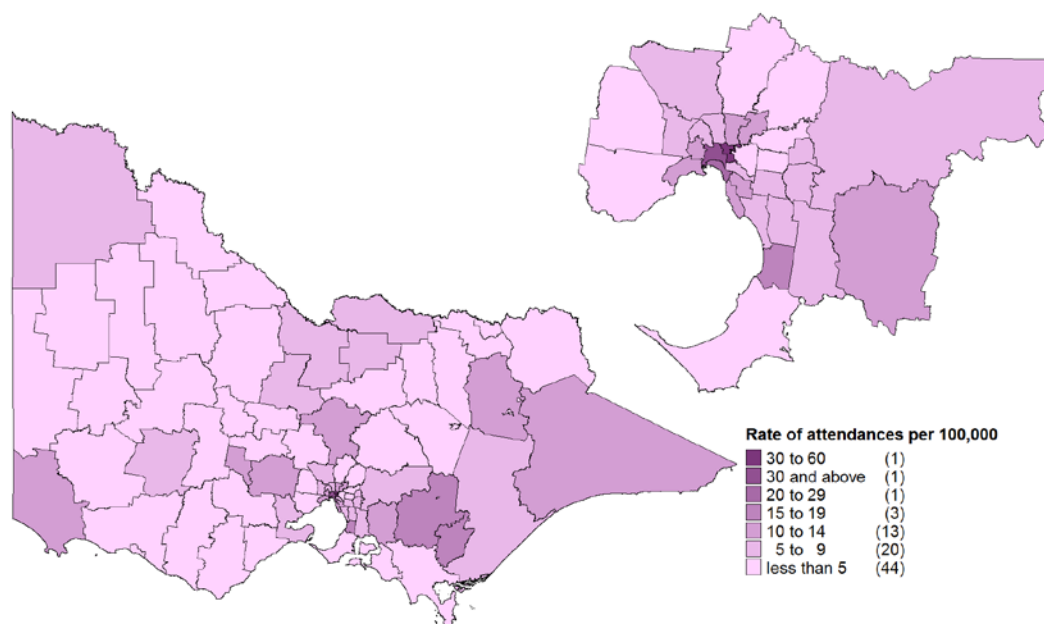


**Figure 24: Percentage of opioid pharmacotherapy-related attendances over total attendances by day of week in metropolitan Melbourne and regional Victoria, January to December 2017**



**Map 15: Number of opioid pharmacotherapy-related attendances by Victorian LGA, January to December 2017**





**Map 16: Rate of opioid pharmacotherapy-related attendances per 100,000 resident population by Victorian LGA, January to December 2017**

## Alcohol intoxication and other drug-related attendances: 2016 and 2017

Comparisons of the number of alcohol intoxication and other drug-related ambulance attendances in 2016 and 2017 are shown in Table 19.

As presented in Table 19:

- alcohol intoxication-related attendances were statistically significantly higher in 2017 compared to 2016 in metropolitan Melbourne and regional Victoria
- amphetamine-related and crystal methamphetamine attendances were statistically significantly lower in 2017 compared to 2016 in metropolitan Melbourne and regional Victoria
- heroin-related attendances were statistically significantly higher in 2017 than 2016 in regional Victoria
- opioid analgesic attendances were statistically significantly lower in 2017 than 2016 in regional Victoria
- opioid pharmacotherapy-related attendances were statistically significantly higher in 2017 than 2016 in metropolitan Victoria

**Table 19. Number of alcohol intoxication and other drug-related attendances in 2016 and 2017, by metropolitan Melbourne and Regional Victoria**

N attendances	Metropolitan Melbourne			Regional Victoria		
	Jan-Dec 2016	Jan-Dec 2017	% Diff	Jan-Dec 2016	Jan-Dec 2017	% Diff
Alcohol intoxication	16,157	18,458	+14.2%**	5,384	5,967	+10.8%*
Amphetamine	3,020	2,602	-13.8%**	744	639	-14.1%**
Crystal methamphetamine	2,379	1,872	-21.3%**	584	462	-20.9%**
Cannabis	1,913	2,146	+12.2%	840	879	+4.6%
Heroin	2,496	2,739	+9.7%	141	208	+47.5%*
Emerging psychoactive substance	14	6	-57.1%	N<5	5	-
Benzodiazepine	3,116	3,230	+3.7%	976	1,003	+2.8%
Opioid analgesic	713	786	+10.2%	385	350	-9.1%*
Opioid pharmacotherapy	318	397	+24.8%*	74	102	+37.8%

Note: \*p<0.05 \*\*p<0.001

## Alcohol and other drug overdose-related ambulance attendances in Victoria

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

As presented in Table 20 to Table 22:

- accidental and unknown intent AOD overdose-related attendances in Victoria peaked in January and November respectively, and intentional overdoses peaked in January 2017
- the population rate for accidental AOD overdose was higher in metropolitan Melbourne (46.0 attendances per 100,000 population) than regional Victoria (19.9 attendances per 100,000 population), however intentional AOD overdoses were more common in regional Victoria (80.6 attendances per 100,000 population) than metropolitan Melbourne (69.3 attendances per 100,000 population)
- the population rate for AOD overdoses with unknown intent was almost similar in metropolitan (38.1 attendances per 100,000 population) and regional (37.1 attendances per 100,000 population) areas
- in Victoria, the majority of patients attended for accidental and unknown intent AOD overdose attendances were male (66%) and (51%) respectively, and a higher proportion of cases were female in attendances related to intentional AOD overdose (67%)
- heroin contributed to the greatest proportion of AOD accidental overdoses (44%) in Victoria, and alcohol involved was commonly involved in overdoses with unknown intent (30%) and benzodiazepine was commonly involved in overdoses with intentional overdoses (36%)

**Table 20: AOD overdose-related ambulance attendances by month in metropolitan Melbourne and regional Victoria, January to December 2017**

Attendances (per 100,000 resident population.)	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria
January	230 (4.9)	23 (1.5)	253 (4.1)	142 (3.1)	50 (3.3)	194 (3.1)	303 (6.5)	124 (8.1)	428 (6.9)
February	199 (4.3)	20 (1.3)	219 (3.5)	165 (3.5)	43 (2.8)	208 (3.4)	255 (5.5)	74 (4.9)	330 (5.3)
March	187 (4.0)	25 (1.6)	212 (3.4)	174 (3.7)	57 (3.7)	232 (3.8)	308 (6.6)	104 (6.8)	413 (6.7)
April	168 (3.6)	28 (1.8)	196 (3.2)	145 (3.1)	40 (2.6)	185 (3.0)	288 (6.2)	101 (6.6)	389 (6.3)
May	163 (3.5)	21 (1.4)	184 (3.0)	146 (3.1)	42 (2.8)	190 (3.1)	315 (6.8)	92 (6.0)	410 (6.6)
June	184 (4.0)	34 (2.2)	218 (3.5)	115 (2.5)	25 (1.6)	140 (2.3)	257 (5.5)	104 (6.8)	361 (5.8)
July	183 (3.9)	27 (1.8)	210 (3.4)	126 (2.7)	46 (3.0)	172 (2.8)	236 (5.1)	109 (7.1)	345 (5.6)
August	152 (3.3)	19 (1.2)	171 (2.8)	145 (3.1)	39 (2.6)	186 (3.0)	261 (5.6)	96 (6.3)	358 (5.8)
September	144 (3.1)	28 (1.8)	172 (2.8)	126 (2.9)	29 (1.9)	155 (2.5)	226 (4.9)	106 (6.9)	334 (5.4)
October	185 (4.0)	27 (1.8)	214 (3.5)	136 (2.9)	43 (2.8)	179 (2.9)	284 (6.1)	101 (6.6)	385 (6.2)
November	161 (3.5)	26 (1.7)	188 (3.0)	195 (4.2)	42 (2.8)	238 (3.9)	263 (5.7)	122 (8.0)	385 (6.2)
December	185 (4.0)	25 (1.6)	210 (3.4)	159 (3.4)	61 (4.0)	220 (3.6)	229 (4.9)	97 (6.4)	326 (5.3)

**Table 21: Characteristics of AOD overdose-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria
Number of attendances (per 100,000 pop.)	2,141 (46.0)	303 (19.9)	2,447 (39.6)	1,774 (38.1)	517 (33.9)	2,299 (37.2)	3,225 (69.3)	1,230 (80.6)	4,464 (72.3)
Number of fatal overdoses	29 (1.4%)	6 (2%)	35 (1%)	49 (3%)	18 (3%)	67 (3%)	≥17	N<5	23 (1%)
Age- median (quartiles)	34 (24-44)	34 (23-45)	34 (24-44)	35 (25-45)	36 (24-44)	35 (25-45)	32 (22-46)	32 (21-46)	32 (22-46)
Male	1,404 (66%)	217 (72%)	1,603 (66%)	1,510 (85%)	461 (89%)	1,161 (51%)	1,066 (34%)	393 (33%)	1,459 (33%)
Transport to hospital	1,281 (60%)	196 (76%)	1,501 (61%)	1548 (87%)	570 (94%)	1,978 (86%)	3,176 (98%)	1,191 (97%)	4,375 (98%)
Police co-attendance	335 (16%)	55 (18%)	390 (16%)	432 (24%)	125 (25%)	558 (24%)	872 (27%)	373 (30%)	1,245 (28%)

AOD overdose can involve either single or multiple substances

**Table 22: Drugs involved in AOD overdose-related ambulance attendances in metropolitan Melbourne and regional Victoria, January to December 2017**

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria	Metropolitan Melbourne	Regional Victoria	Victoria
Alcohol involved/ mentioned	605 (28%)	122 (40%)	729 (30%)	513 (29%)	158 (31%)	673 (30%)	1,082 (34%)	394 (32%)	1,479 (33%)
Alcohol intoxication only	191 (9%)	58 (19%)	249 (10%)	93 (5%)	21 (4%)	114 (5%)	>4	<5	18 (0.4%)
Amphetamines	141 (7%)	16 (5%)	157 (6%)	88 (5%)	18 (3%)	106 (5%)	33 (1%)	14 (1%)	47 (1%)
Crystal methamphetamine	92 (4%)	10 (3%)	102 (4%)	64 (4%)	13 (3%)	77 (3%)	22 (1%)	8 (1%)	30 (1%)
Cannabis	39 (2%)	11 (4%)	51 (2%)	32 (2%)	18 (4%)	50 (2%)	50 (2%)	20 (2%)	70 (2%)
Heroin	990 (46%)	77 (25%)	1,067 (44%)	250 (14%)	23 (5%)	275 (12%)	≥19 (≥1%)	N<5	24 (1%)
Emerging psychoactive substances	0	0	0	0	0	0	0	0	0
Benzodiazepine	166 (8%)	27 (9%)	194 (8%)	408 (23%)	129 (25%)	539 (23%)	1,207 (37%)	393 (32%)	1,602 (36%)
Opioid analgesics	48 (2%)	30 (10%)	79 (3%)	89 (5%)	48 (9%)	138 (6%)	261 (8%)	114 (9%)	376 (8%)
Opioid pharmacotherapy	27 (1%)	6 (2%)	33 (1%)	35 (2%)	14 (3%)	49 (2%)	30 (1%)	6 (1%)	36 (1%)

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

## Chapter 4: Results – New South Wales (NSW)

Ordinarily results are presented covering four snap shot months of data for NSW. However at the time of writing due to a delayed data reissue September and December data are not included. When these data have been coded and available for analyses this chapter will be updated to include the four months.

### Alcohol intoxication-related attendances in NSW

Numbers and rates of alcohol intoxication-related ambulance attendances are shown in Table 23. Characteristics of alcohol intoxication-related ambulance attendances in NSW for March and June 2017 are shown in Table 24. Data regarding month, time of day and day of week of attendances are displayed in Figure 25 to Figure 27.

Characteristics for March and June 2017 are presented in Table 24:

- 3,566 alcohol intoxication-related cases were recorded
  - the majority of patients attended for alcohol intoxication-related cases were male (59%)
  - police co-attended more than a quarter (26%) of alcohol intoxication-related cases
  - the median age of patients with alcohol intoxication-related attendances was 41 years
  - a similar proportion of patients with alcohol intoxication-related attendances were transported to hospital in metropolitan and regional areas (82% and 78% respectively)
- As presented in Figure 26, alcohol intoxication-related attendance numbers peaked in the evening between 10pm and midnight in metropolitan and regional areas of NSW.
- Saturdays represented the peak day for alcohol intoxication-related attendances (Figure 27).

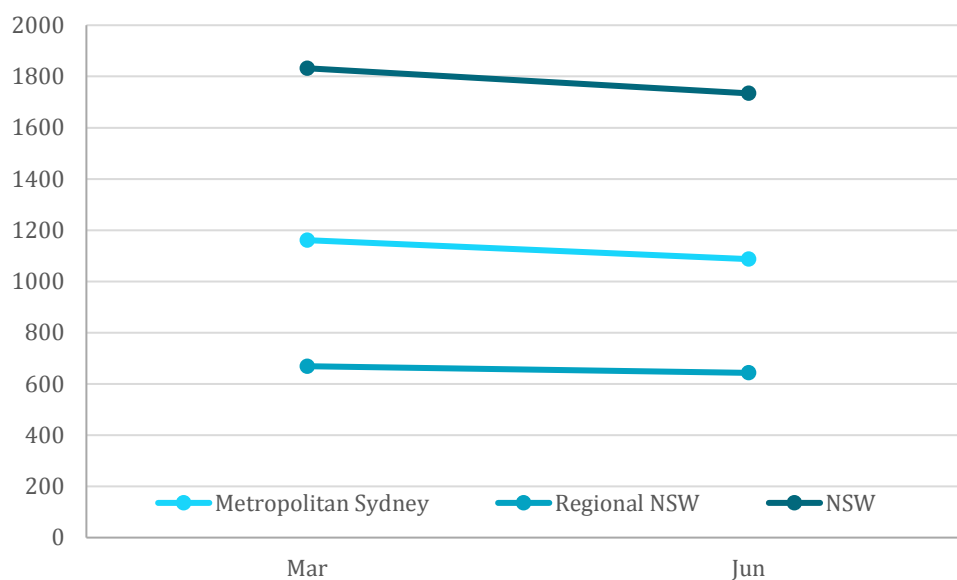
**Table 23: Alcohol intoxication-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	1,161 (19.5)	669 (37.5)	1,832 (23.7)
June attendances (per 100,000 population)	1,087 (18.3)	643 (36.0)	1,734 (22.4)
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

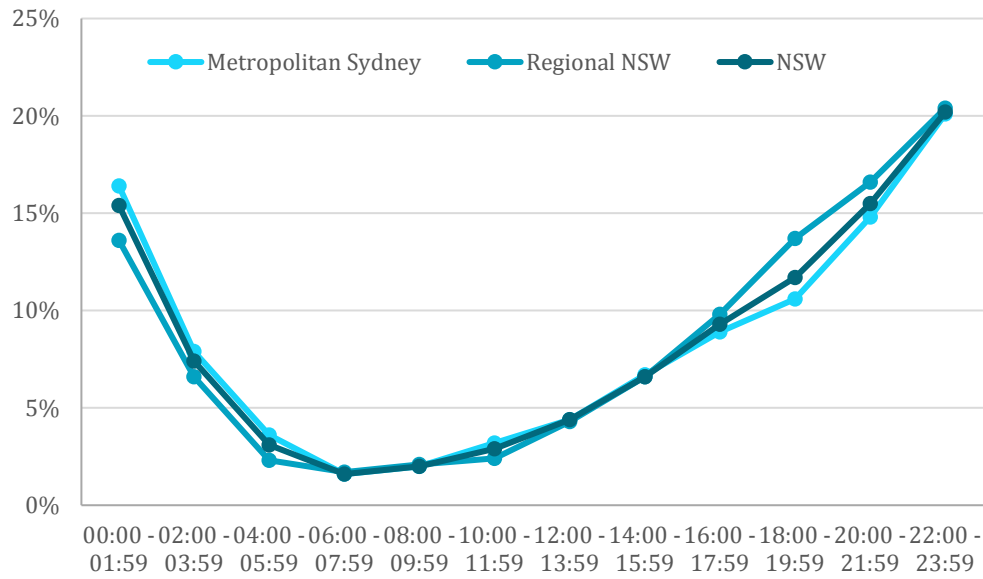
**Table 24: Characteristics of alcohol intoxication-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	2,248 (37.8)	1,312 (73.5)	3,566 (46.1)
Mean attendances per day	58.9	59.3	58.5
Daily range	25-112	34-125	25-125
Age- median (quartiles)	44 (28-55)	39 (24-52)	41 (26-53)
Male	1,354 (60%)	760 (58%)	2,115 (59%)
Police co-attendance	630 (28%)	294 (22%)	925 (26%)
Transport to hospital	1,848 (82%)	1,022 (78%)	2,875 (81%)
Multiple drugs involved	73 (3%)	52 (4%)	125 (4%)

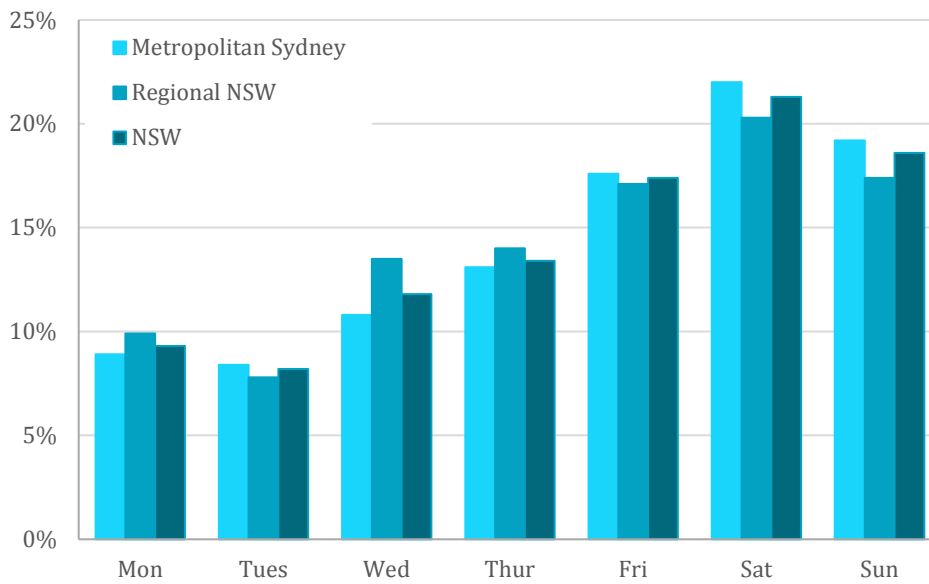
All proportions are based on non-missing information



**Figure 25: Alcohol intoxication-related attendances by month in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 26: Alcohol intoxication-related attendances by time of day in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 27: Percentage of alcohol intoxication-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March and June 2017**



## All amphetamine-related attendances in NSW

Results are presented covering March and June of data collection and coding for NSW in 2017.

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

- Characteristics for March and June 2017 are presented in Table 26 and include:
  - 429 amphetamine-related cases were recorded in NSW
  - the majority of patients attended for amphetamine-related cases were male (73%)
  - the median age of patients with amphetamine-related attendances was 34 years
  - a higher proportion of patients with amphetamine-related attendances in metropolitan areas (87%) were transported to hospital than in regional areas (77%)
  - multiple drugs were involved in 32% of amphetamine-related attendances across NSW
  - As presented in Figure 29, amphetamine-related attendance numbers peaked from 8pm to 10pm in metropolitan Sydney and 6pm to 8pm in regional NSW.
  - Thursdays represented the peak day for amphetamine-related attendances across all of NSW (Figure 30).

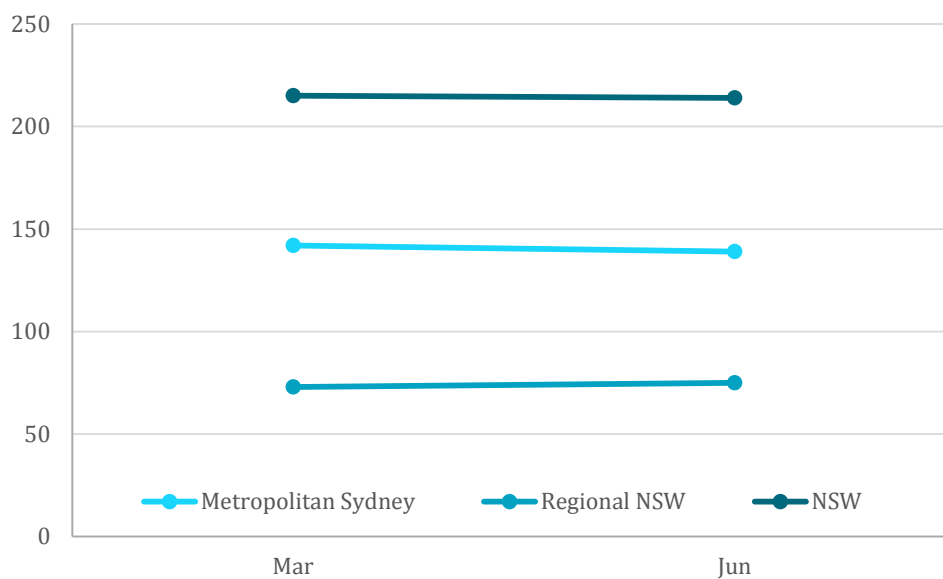
**Table 25: Amphetamine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	142 (2.4)	73 (4.1)	215 (2.8)
June attendances (per 100,000 population)	139 (2.3)	75 (4.2)	214 (2.8)
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

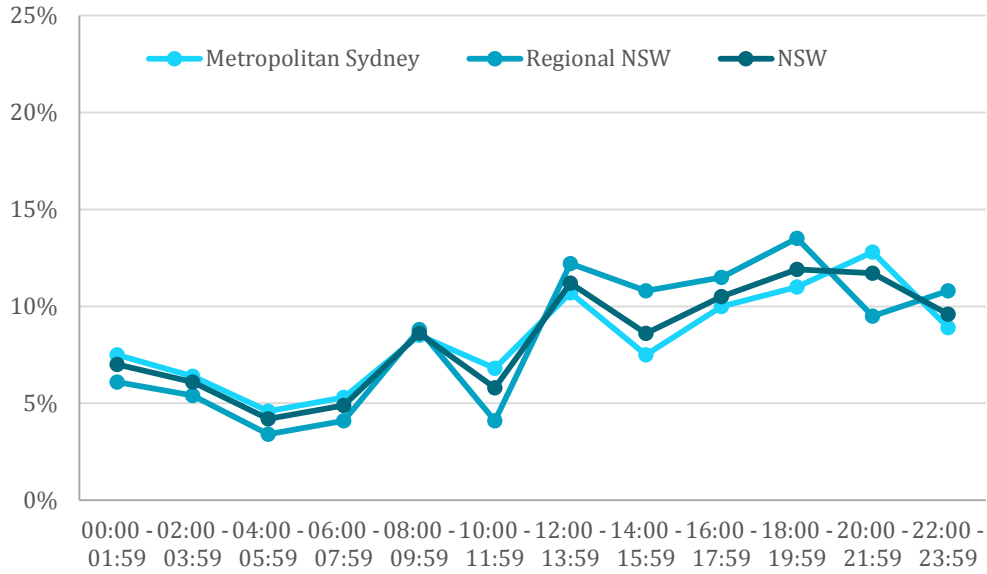
**Table 26: Characteristics of amphetamine-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	281 (4.7)	148 (8.3)	429 (5.5)
Mean attendances per day	7.4	6.5	7.0
Daily range	<5-13	<5-13	<5-13
Age- median (quartiles)	34 (25-41)	34 (26-42)	34 (24-41)
Male	200 (71%)	112 (76%)	312 (73%)
Police co-attendance	117 (42%)	56 (38%)	173 (40%)
Transport to hospital	245 (87%)	114 (77%)	359 (84%)
Alcohol involved/mentioned	52 (19%)	22 (20%)	74 (17%)
Alcohol intoxication	14 (5%)	12 (8%)	26 (6%)
Multiple drugs involved (excluding alcohol)	101 (36%)	35 (24%)	136 (32%)

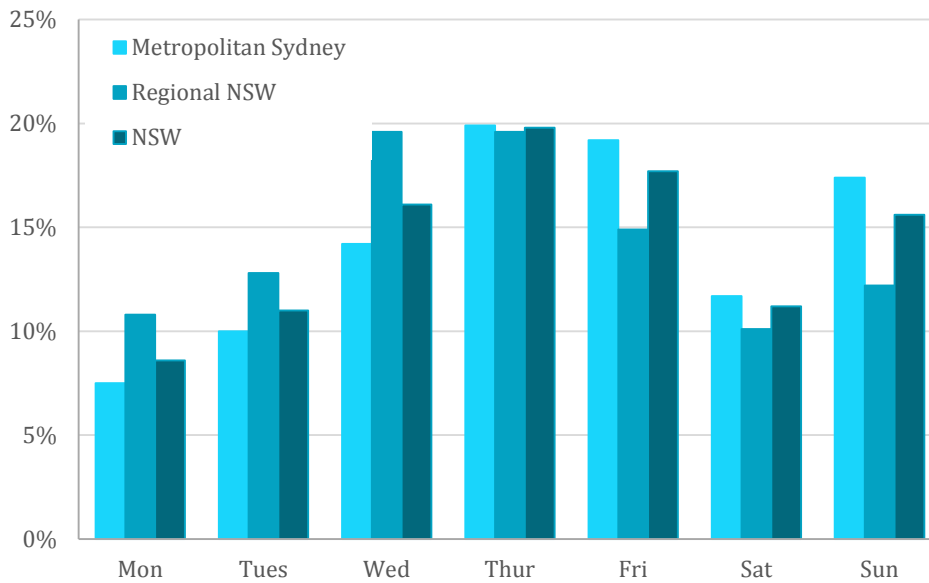
All proportions are based on non-missing information



**Figure 28: Amphetamine-related attendances by month in metropolitan Sydney and regional NSW, March, and June data 2017**



**Figure 29: Amphetamine-related attendances by time of day metropolitan Sydney and regional NSW, March and June 2017**



**Figure 30: Percentage of amphetamine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March and, June data 2017**

## Crystal methamphetamine-related attendances in NSW

Results are presented covering March and June of data collection and coding for NSW in 2017.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 27. Characteristics of crystal methamphetamine-related ambulance attendances in NSW for March and June 2017 are shown in

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

Crystal methamphetamine-related attendances peaked during March in metropolitan and regional areas (Table 27).

- Characteristics for March and June 2017 are presented in Table 28 and include:
  - there were 361 crystal methamphetamine-related cases in NSW
  - the majority of patients attended for crystal methamphetamine-related cases in NSW were male (71%)
  - the median age of patients with crystal methamphetamine-related attendances in NSW was 34 years
  - a higher proportion of patients with crystal methamphetamine-related attendances were transported to hospital in metropolitan (87%) than in regional areas (74%)
  - 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 peaked from 8pm to 10pm, while regional areas peaked in the afternoon between 12pm and 2pm.
- Thursday and Wednesday represented the peak day for crystal methamphetamine-related attendances across metropolitan Sydney and regional NSW, respectively (Figure 33).

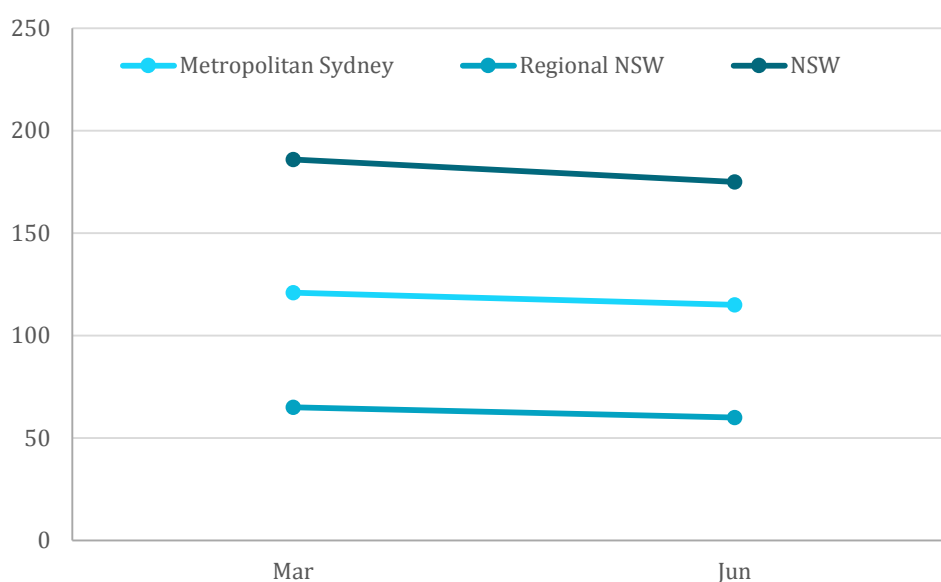
**Table 27: Crystal methamphetamine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	121 (2.0)	65 (3.6)	186 (2.4)
June attendances (per 100,000 population)	115 (1.9)	60 (3.4)	175 (2.3)
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

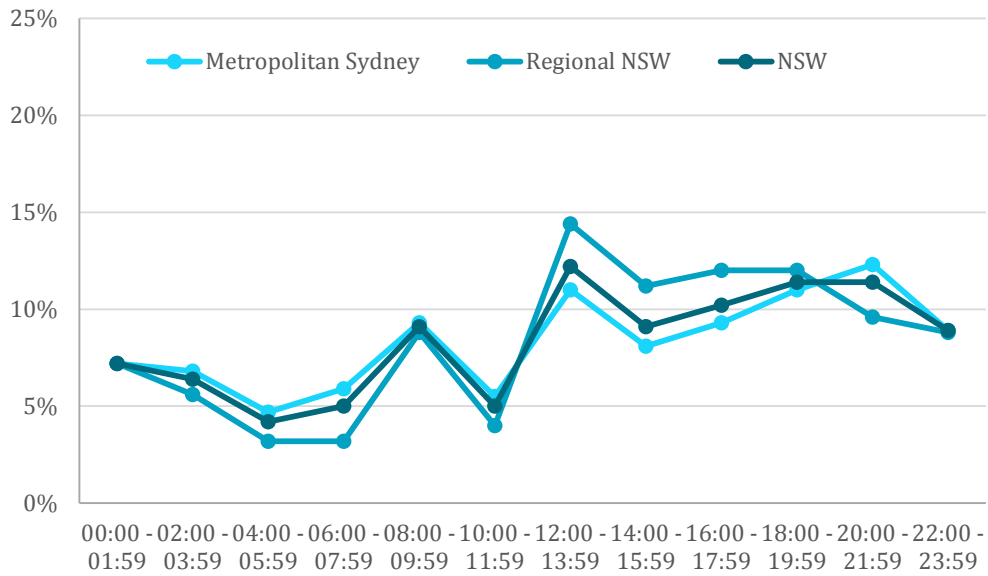
**Table 28: Characteristics of crystal methamphetamine-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	236 (4.0)	125 (7.0)	361 (4.7)
Mean attendances per day	5.5	6.4	5.9
Daily range	<5-13	<5-12	<5-13
Age- median (quartiles)	33 (25-41)	34 (27-42)	34 (26-42)
Male	162 (69%)	94 (75%)	256 (71%)
Police co-attendance	105 (45%)	49 (39%)	154 (43%)
Transport to hospital	206 (87%)	93 (74%)	299 (83%)
Alcohol involved/mentioned	41 (17%)	19 (15%)	60 (17%)
Alcohol intoxication	9 (4%)	11 (9%)	20 (6%)
Multiple drugs involved (excluding alcohol)	85 (36%)	29 (23%)	114 (32%)

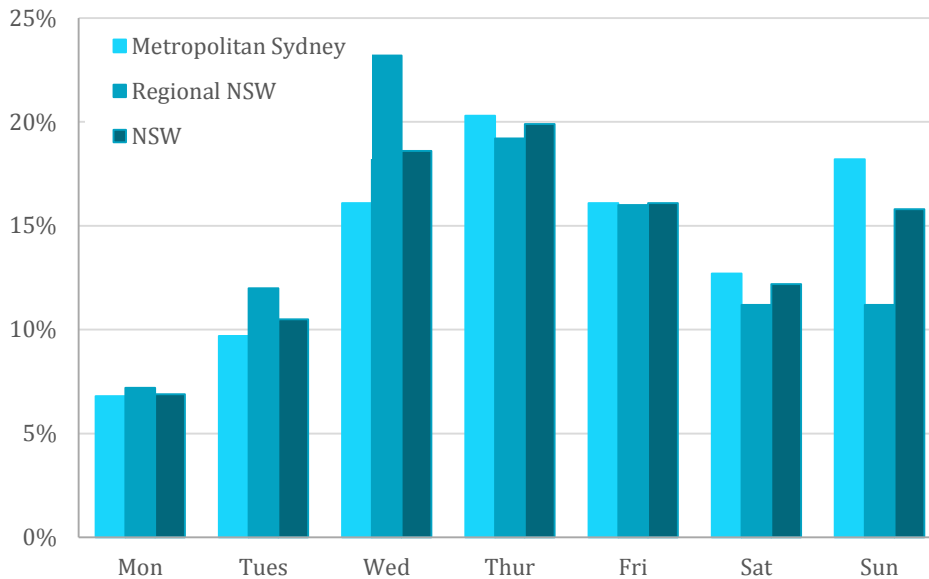
All proportions are based on non-missing information



**Figure 31: Crystal methamphetamine-related attendances by month metropolitan Sydney and regional NSW, March and June 2017**



**Figure 32: Crystal methamphetamine-related attendances by time of day in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 33: Percentage of crystal methamphetamine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March and June 2017**

## Cannabis-related attendances in NSW

Results are presented covering March and June of data collection and coding for NSW in 2017.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 29. Characteristics of cannabis-related ambulance attendances in NSW for March and June 2017 are shown in Table 30. Data regarding month, time of day and day of week of attendances are displayed in Figure 34 to Figure 36.

- Cannabis-related attendances peaked in March 2017 (Table 29).
- As shown in Table 30, in March and June 2017:
  - there were 504 cannabis-related cases were recorded in NSW
  - the majority of patients attended for cannabis-related cases were male (69%), with similar proportions in metropolitan and regional areas
  - the median age of patients with cannabis-related attendances in NSW was 30 years
  - the majority of patients with cannabis-related attendances in NSW were transported to hospital (84%)
  - alcohol was mentioned in almost half (44%) of cannabis-related ambulance attendances in NSW
- As presented in Figure 35, cannabis-related attendance numbers in metropolitan Sydney peaked from 10pm to 12am, while the peak was from 6pm to 8pm.
- Saturdays and Wednesdays represented the peak days for cannabis-related attendances in metropolitan and regional areas respectively (Figure 36).

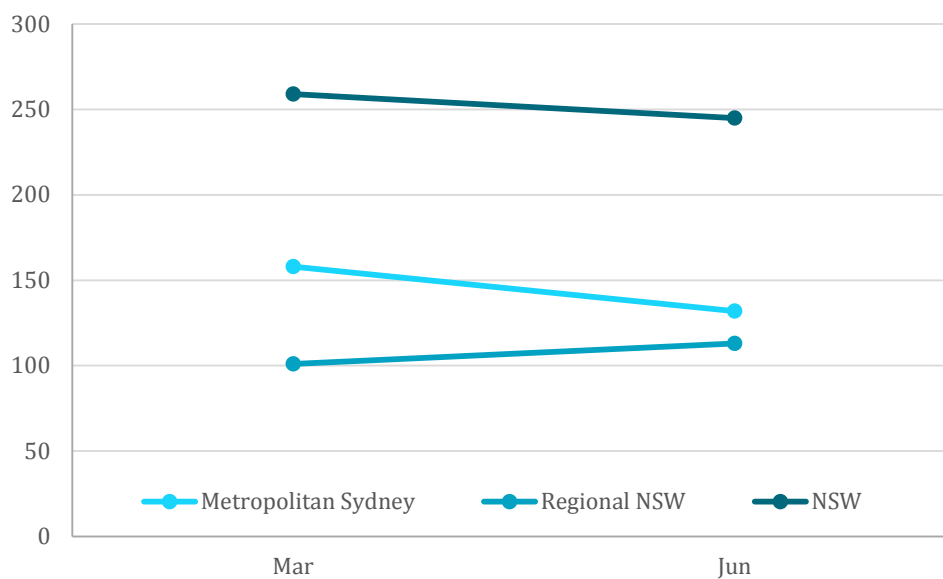
**Table 29: Cannabis-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	158 (2.7)	101 (5.7)	259 (3.3)
June attendances (per 100,000 population)	132 (2.2)	113 (6.3)	245 (3.2)
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 30: Characteristics of cannabis-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

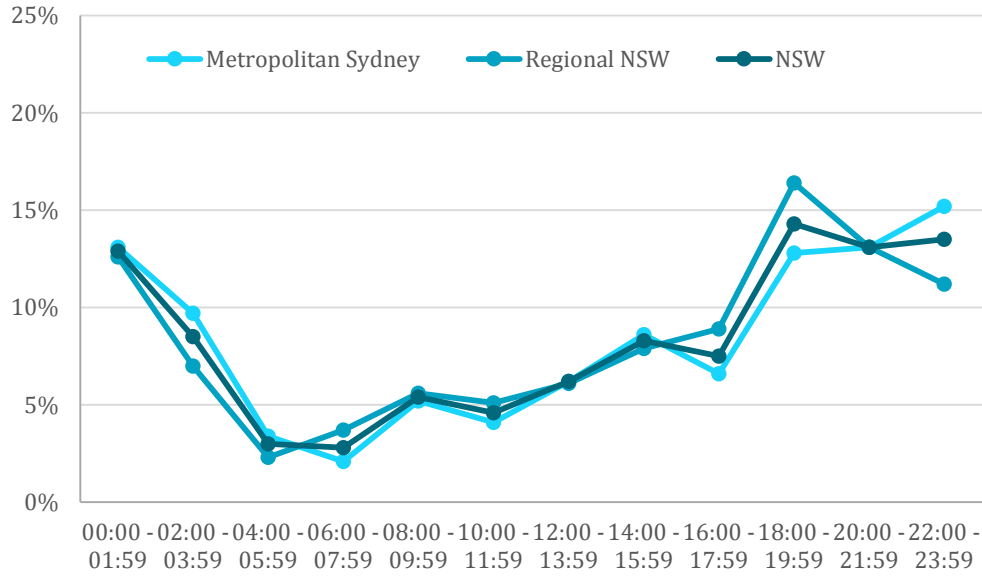
	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	290 (4.9)	214 (12.0)	504 (6.5)
Mean attendances per day	8.4	7.9	8.3
Daily range	<5-14	<5-14	<5-14
Age- median (quartiles)	29.5 (21-44)	30 (22-43)	30 (22-43)
Male	197 (68%)	151 (65%)	348 (69%)
Police co-attendance	102 (35%)	65 (30%)	167 (33%)
Transport to hospital	250 (86%)	173 (81%)	423 (84%)
Alcohol involved/mentioned	122 (42%)	99 (46%)	221 (44%)
Alcohol intoxication	54 (19%)	53 (25%)	107 (21%)
Multiple drugs involved (excluding alcohol)	84 (29%)	51 (24%)	135 (27%)

All proportions are based on non-missing information

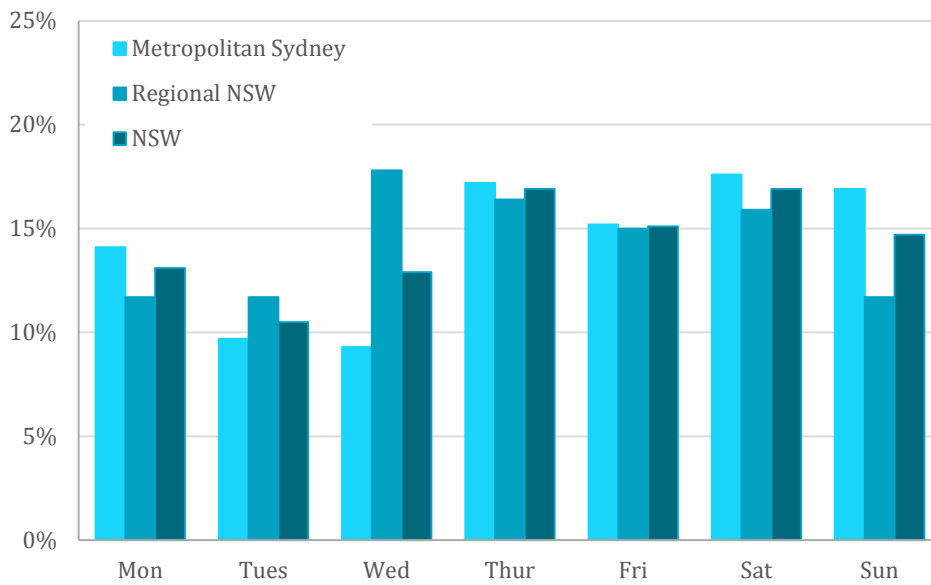


**Figure 34: Cannabis-related attendances by month in metropolitan Sydney and regional NSW, March and June 2017**





**Figure 35: Cannabis-related attendances by time of day in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 36: Percentage of cannabis-related attendances by day of week in metropolitan Sydney and regional NSW, March and June 2017**

## Heroin-related attendances in NSW

Results are presented covering March and June of data collection and coding for NSW in 2017.

Numbers and rates of heroin-related ambulance attendances are shown in Table 31. Characteristics of heroin-related ambulance attendances in NSW for March and June 2017 are shown in Table 32. Data regarding month, time of day and day of week of attendances are displayed in Figure 37 to Figure 39.

- Heroin-related attendances in NSW peaked in March 2017 (Table 31)
- Characteristics for March and June 2017 are presented in Table 32:
  - 219 heroin-related cases were recorded in NSW
  - the population rate for heroin-related attendances was higher in metropolitan Sydney (3.2 per 100,000 population) than regional NSW (1.7 per 100,000 population)
  - the majority of patients attended for heroin-related cases in NSW were male (72%)
  - the median age of patients with heroin-related attendances was 39 years
  - police co-attended almost one-quarter of heroin-related ambulance attendances (22%)
- As presented in Figure 38, heroin-related attendance numbers peaked between 10am and 12pm in metropolitan Sydney and 8am and 10am in regional NSW.
- Thursdays and Wednesdays represented the peak days for heroin-related attendances in metropolitan and regional areas, respectively (Figure 39).

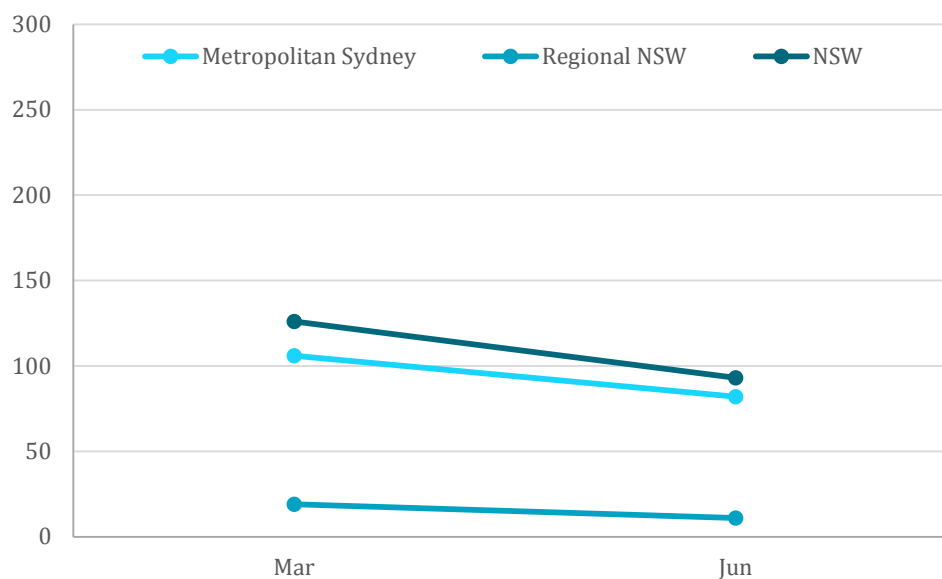
**Table 31: Heroin-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	106 (1.8)	19 (1.1)	126 (1.6)
June attendances (per 100,000 population)	82 (1.4)	11 (0.6)	93 (1.2)
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

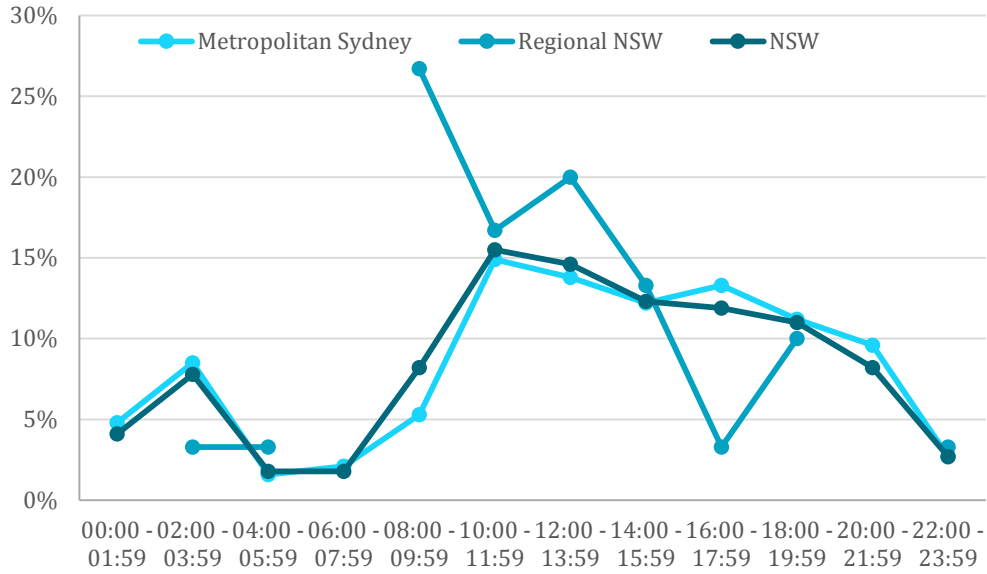
**Table 32: Characteristics of heroin-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	188 (3.2)	30 (1.7)	219 (2.8)
Mean attendances per day	3.6	3.6	3.6
Daily range	<5-7	<5-9	<5-9
Age- median (quartiles)	39 (32-46)	33.5 (33-49)	39 (32-46)
Male	143 (76%)	15 (50%)	158 (72%)
Police co-attendance	41 (22%)	7 (23%)	48 (22%)
Transport to hospital	102 (54%)	12 (40%)	115 (53%)
Alcohol involved/mentioned	≥25 (≥11%)	N<5	31 (14%)
Alcohol intoxication	≥8 (≥4%)	N<5	12 (6%)
Multiple drugs involved (excluding alcohol)	≥50 (≥24%)	N<5	55 (25%)
Responded to naloxone	92 (49%)	15 (50%)	108 (49%)

All proportions are based on non-missing information

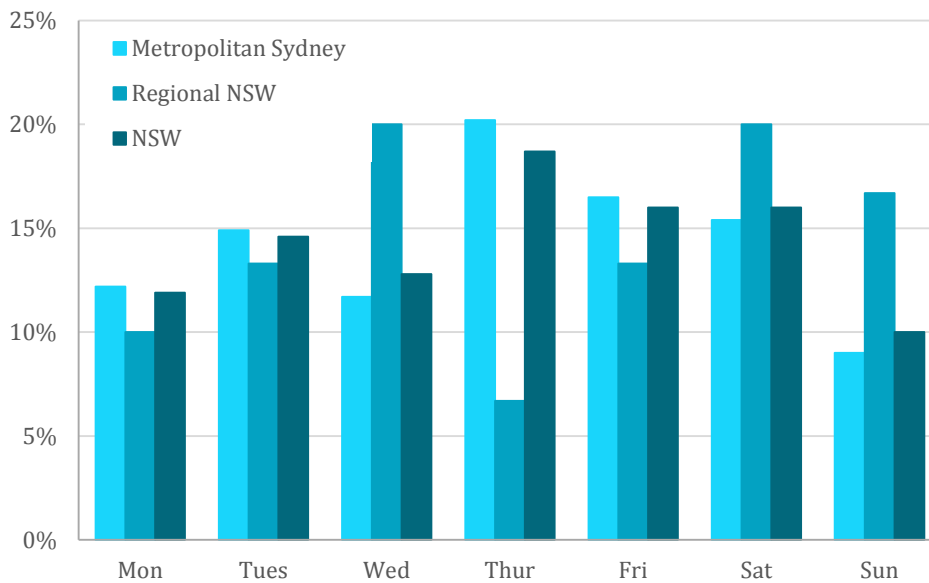


**Figure 37: Heroin-related attendances by month in metropolitan Sydney and regional NSW, March and June 2017**



Note: the broken line is due to N<5

**Figure 38: Heroin-related attendances by time of day in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 39: Percentage of heroin-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March and June 2017**

## Emerging psychoactive substance-related attendances in NSW

Results are presented covering March and June of data collection and coding for NSW in 2017. Graphed data are not presented due to low numbers of cases.

Numbers and rates of emerging psychoactive substance-related ambulance attendances are shown in Table 33. Characteristics of emerging psychoactive substance-related ambulance attendances in NSW for March and June 2017 are shown in Table 34.

As presented in Table 33 and Table 34, numbers for emerging psychoactive substance-related ambulance attendances were very low for all months of reporting in 2017.

**Table 33: Emerging psychoactive substance-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

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

**Table 34: Characteristics of emerging psychoactive substance-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	N<5	0	N<5
Mean attendances per day	-	-	-
Daily range	-	-	-
Age- median (quartiles)	-	-	24 (19-36)
Male	N<5	0	N<5
Police co-attendance	N<5	0	N<5
Transport to hospital	N<5	0	N<5
Alcohol involved/mentioned	N<5	0	N<5
Alcohol intoxication	N<5	0	N<5
Multiple drugs involved (excluding alcohol)	N<5	0	N<5

## Benzodiazepine-related attendances in NSW

Results presented include March and June 2017 data collection and coding for NSW.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 35. Characteristics of benzodiazepine-related ambulance attendances in NSW for March and June 2017 are shown in Table 36. Data regarding month, time of day and day of week of attendances are displayed in Figure 40 to Figure 42.

- Benzodiazepine-related attendances peaked in March 2017 (Table 35).
- As shown in Table 36, for March and June 2017:
  - 486 benzodiazepine-related cases were recorded in NSW
  - the majority of benzodiazepine-related ambulance attendances occurred in females (51%)
  - the median age of patients with benzodiazepine-related attendances was 40 years in NSW
  - patients with benzodiazepine-related attendances were transported to hospital in 93% of metropolitan and 89% of regional cases
  - multiple drugs (excluding alcohol) were involved in almost half (48%) of all benzodiazepine-related attendances across NSW
- As presented in Figure 41, metropolitan Sydney and regional NSW benzodiazepine-related attendance numbers had bimodal peaks from 2pm to 4pm and from 10pm to 12am.
- Thursdays and Fridays represented the peak day for benzodiazepine-related attendances in metropolitan Sydney and regional NSW, respectively (Figure 42).

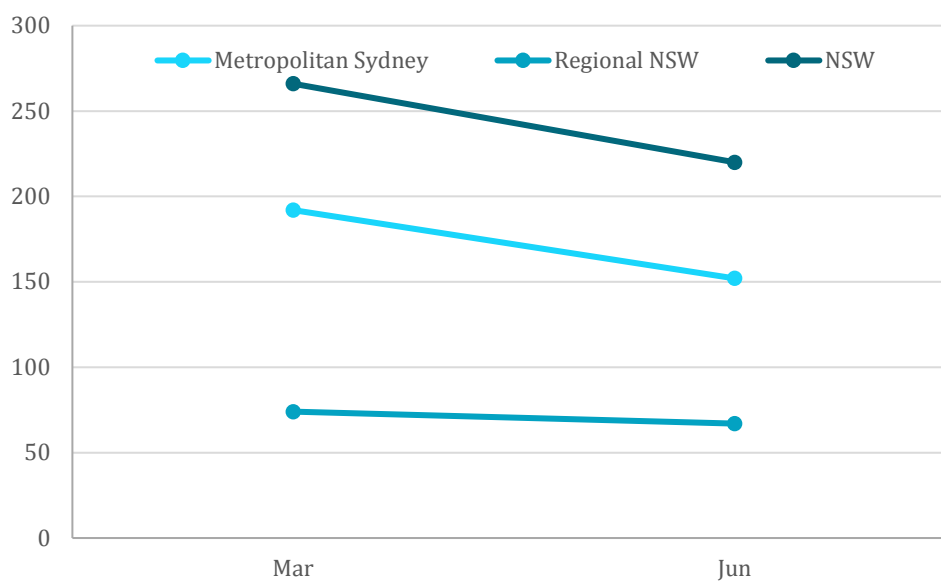
**Table 35: Benzodiazepine-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	192 (3.2)	74 (4.1)	266 (3.4)
June attendances (per 100,000 population)	152 (2.6)	67 (3.8)	220 (2.8)
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

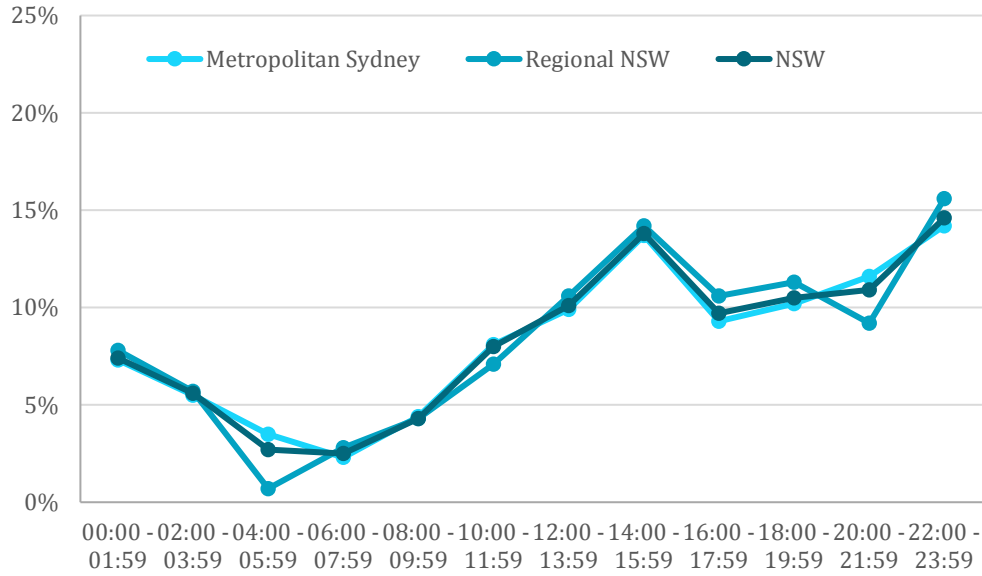
**Table 36: Characteristics of benzodiazepine-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	344 (5.8)	141 (7.9)	486 (6.3)
Mean attendances per day	7.6	8.7	8.0
Daily range	<5-14	<5-18	<5-18
Age- median (quartiles)	44 (33-53)	39 (27-48)	40 (28-50)
Male	171 (50%)	66 (47%)	238 (49%)
Police co-attendance	108 (31%)	23 (16%)	131 (27%)
Transport to hospital	305 (89%)	131 (93%)	437 (90%)
Alcohol involved/mentioned	145 (42%)	56 (40%)	202 (42%)
Alcohol intoxication	82 (24%)	38 (27%)	120 (25%)
Multiple drugs involved (excluding alcohol)	162 (47%)	71 (50%)	233 (48%)

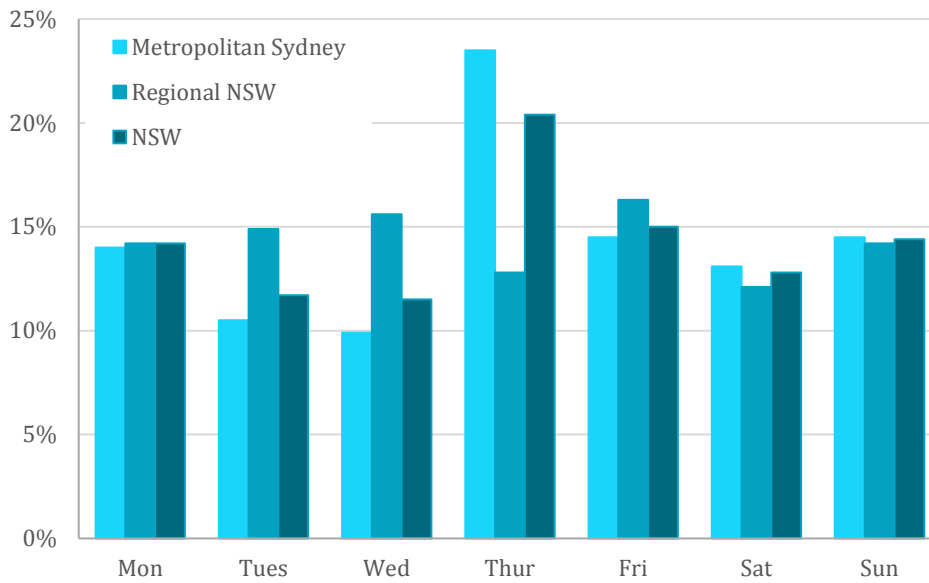
All proportions are based on non-missing information



**Figure 40: Benzodiazepine-related attendances by month in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 41: Benzodiazepine-related attendances by time of day in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 42: Percentage of benzodiazepine-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March and June 2017**

### Opioid analgesic-related attendances in NSW

Results are presented covering March and June data collection and coding for NSW in 2017.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 37. Characteristics of opioid analgesic-related ambulance attendances in NSW for March and June 2017



are shown in Table 38. Data regarding month, time of day and day of week of attendances are displayed in Figure 43 to Figure 45.

- Opioid analgesic-related attendances peaked during March in both metropolitan and regional areas of NSW (Table 37).
- As shown in Table 38, in March and June 2017:
  - there were 204 opioid analgesic-related cases in NSW
  - the population rate for opioid analgesic-related attendances was higher in regional NSW (5.2 per 100,000 population) than in metropolitan Sydney (1.9 per 100,000 population)
  - the majority of opioid analgesic-related ambulance attendances occurred in males (59%) in NSW
  - median age of patients with opioid analgesic-related attendances was 38 years in NSW
  - a higher proportion of opioid analgesic-related attendances involved multiple drugs (excluding alcohol) in metropolitan Sydney (57%) than in regional NSW (47%)
- As presented in Figure 44, opioid analgesic-related attendance numbers peaked between 10pm and midnight in metropolitan Sydney and regional NSW peak.
- Wednesdays and Fridays represented the peak days for opioid analgesic-related attendances in regional and metropolitan areas respectively (Figure 45).

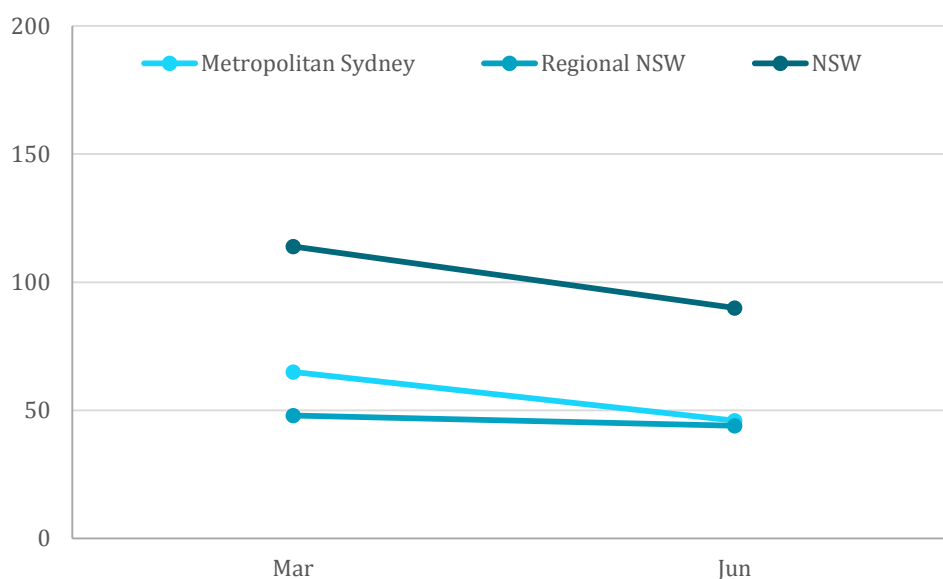
**Table 37: Opioid analgesic-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	65 (1.1)	48 (2.7)	114 (1.5)
June attendances (per 100,000 population)	46 (0.8)	44 (2.5)	90 (1.2)
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

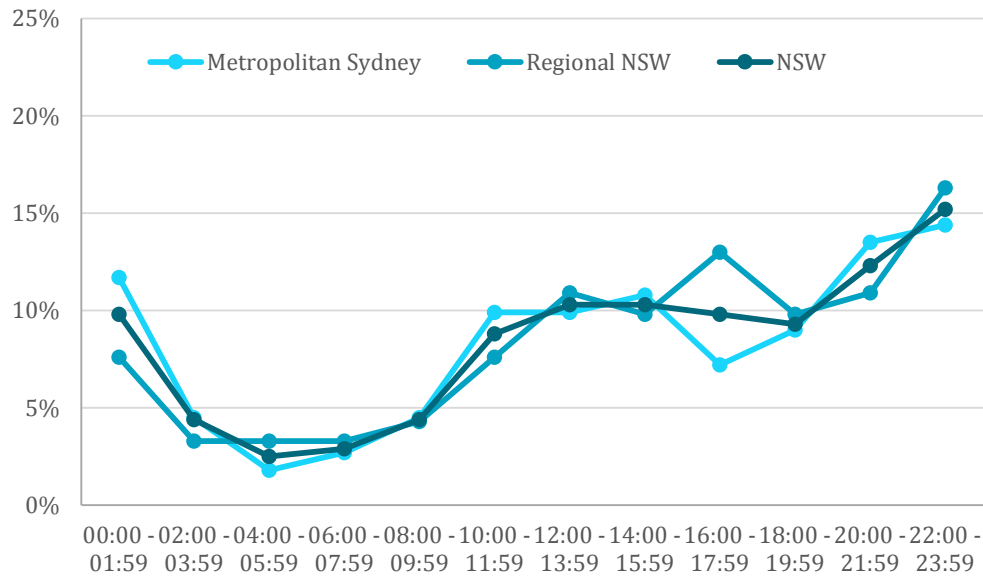
**Table 38: Characteristics of opioid analgesic-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	111 (1.9)	92 (5.2)	204 (2.6)
Mean attendances per day	3.3	3.4	3.3
Daily range	<5-7	<5-7	<5-7
Age- median (quartiles)	42 (29-54)	38 (27-50)	38 (28-53)
Male	67 (60%)	54 (59%)	121 (59%)
Police co-attendance	29 (26%)	15 (16%)	44 (22%)
Transport to hospital	97 (87%)	75 (82%)	173 (85%)
Alcohol involved/mentioned	40 (36%)	27 (29%)	67 (33%)
Alcohol intoxication	21 (19%)	15 (16%)	36 (18%)
Multiple drugs involved (excluding alcohol)	63 (57%)	43 (47%)	106 (52%)
Morphine	N<5	≥8 (≥10%)	14 (7%)
Oxycodone	68 (61%)	45 (49%)	113 (55%)

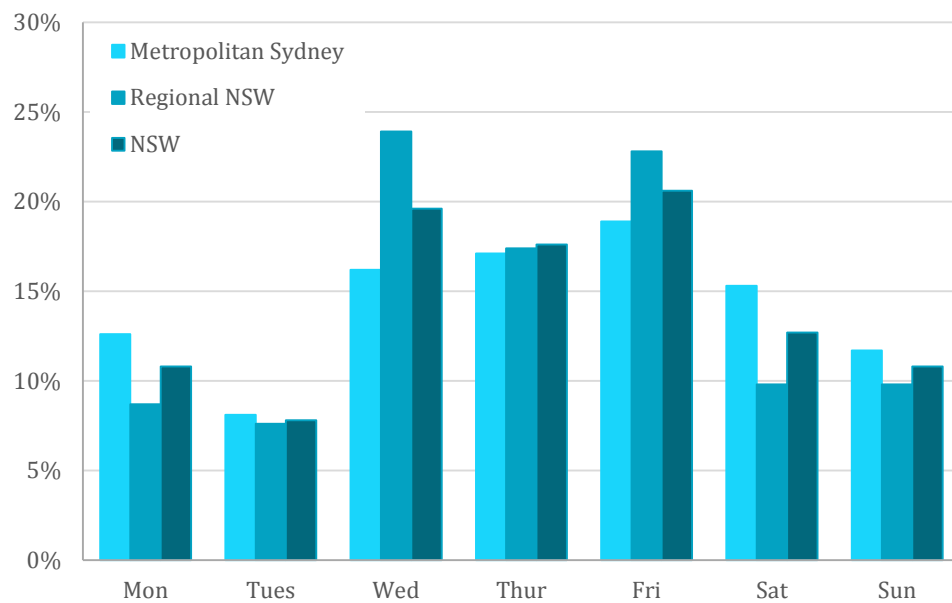
All proportions are based on non-missing information



**Figure 43: Opioid analgesic-related attendances by month in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 44: Opioid analgesic-related attendances by time of day in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 45: Percentage of opioid analgesic-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March and June 2017**

## Opioid pharmacotherapy-related attendances in NSW

Results are presented covering June and March 2017 data collection and coding for NSW.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Table 39. Characteristics of opioid pharmacotherapy-related ambulance attendances in NSW for March and June 2017 are shown in Table 40. Data regarding time of day and day of week of misuse or overdose-related attendances are displayed in Figure 46 to Figure 48.

- Opioid pharmacotherapy-related attendances in NSW peaked in March 2017 (Table 39).
- As shown in Table 40, in March and June 2017:
  - there were 92 opioid pharmacotherapy-related cases recorded in NSW
  - the majority of patients attended for opioid pharmacotherapy-related cases were male (67%)
  - the median age of patients with opioid pharmacotherapy-related attendances was 41 years
  - a similar proportion of patients with opioid pharmacotherapy-related attendances within metropolitan (75%) and regional areas (76%) were transported to hospital
  - multiple drugs were involved in more than half (51%) of opioid pharmacotherapy-related attendances in metropolitan Sydney but just one-third (33%) of regional attendances
- As presented in Figure 47, opioid pharmacotherapy-related attendance numbers peaked from 12pm to 2pm in metropolitan areas, while attendances in regional areas were highest from 2pm to 4pm and from 6pm to 8pm.
- Wednesdays and Thursdays represented the peak days for opioid pharmacotherapy-related attendances in regional NSW and metropolitan Sydney, respectively (Figure 48).

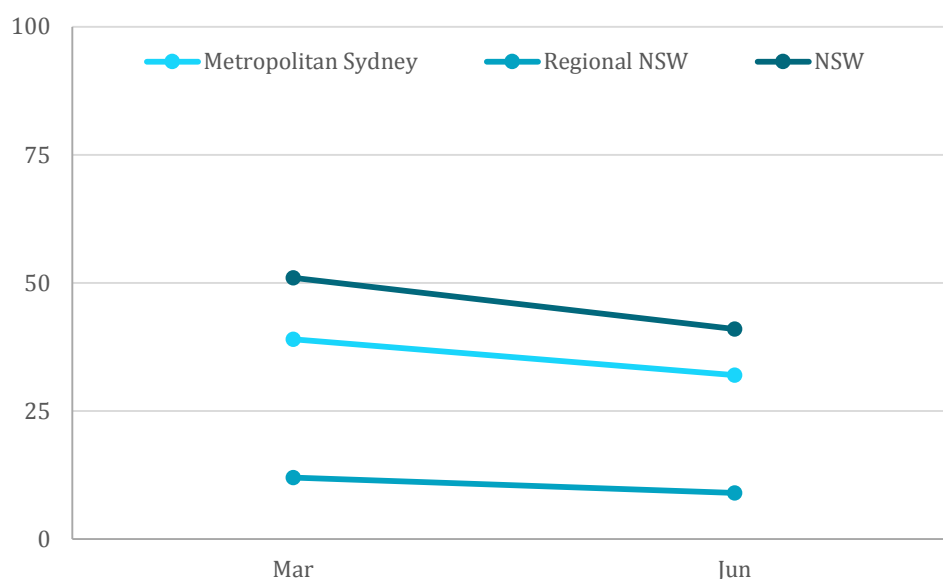
**Table 39: Opioid pharmacotherapy-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
March attendances (per 100,000 population)	39 (0.7)	12 (0.7)	51 (0.7)
June attendances (per 100,000 population)	32 (0.5)	9 (0.5)	41 (0.5)
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

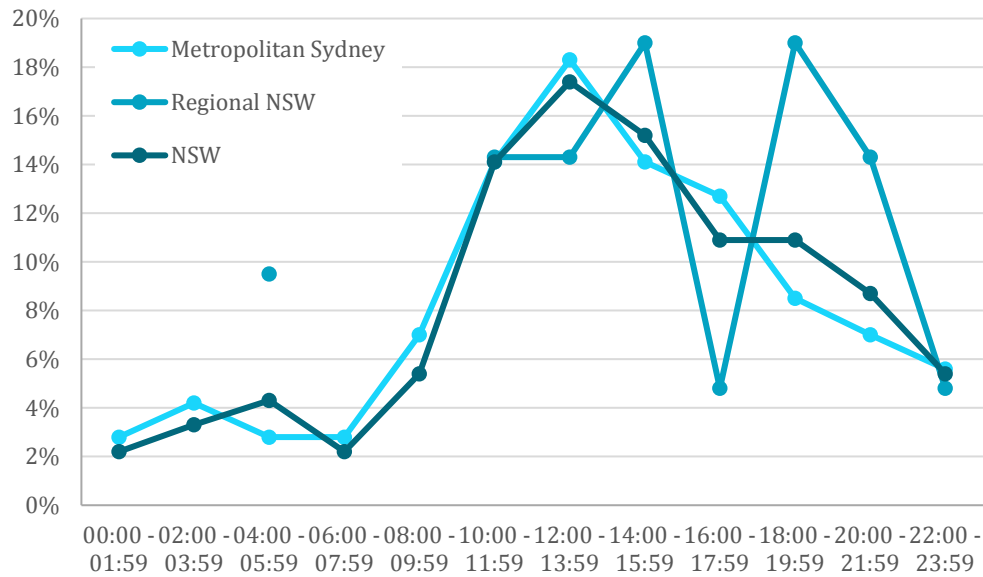
**Table 40: Characteristics of opioid pharmacotherapy-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	Metropolitan Sydney	Regional NSW	NSW
Number of attendances (per 100,000 population)	71 (1.2)	21 (1.5)	92 (1.2)
Mean attendances per day	1.5	1.5	1.5
Daily range	<5-6	<5-6	<5-6
Age- median (quartiles)	47 (36-52)	41 (35-49)	41 (35-49)
Male	48 (68%)	14 (67%)	62 (67%)
Police co-attendance	≥10 (≥15%)	N<5	16 (17%)
Transport to hospital	53 (75%)	16 (76%)	69 (75%)
Alcohol involved/mentioned	11 (16%)	5 (24%)	16 (17%)
Alcohol intoxication	N<5	N<5	N<5
Multiple drugs involved (excluding alcohol)	36 (51%)	7 (33%)	43 (47%)

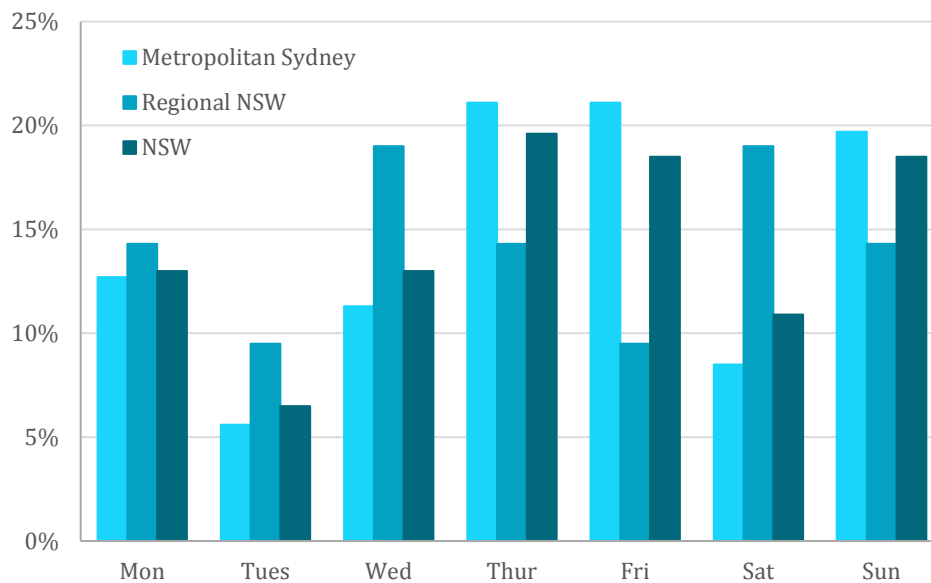
All proportions are based on non-missing information



**Figure 46: Opioid pharmacotherapy-related attendances by month in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 47: Opioid pharmacotherapy-related attendances by time of day in metropolitan Sydney and regional NSW, March and June 2017**



**Figure 48: Percentage of opioid pharmacotherapy-related attendances over total attendances by day of week in metropolitan Sydney and regional NSW, March and June 2017**

## Alcohol and other drug overdose-related ambulance attendances in NSW

AOD overdose-related ambulance attendances by month are shown in Table 41 while characteristics of AOD overdose-related ambulance attendances are displayed in Table 42. Drugs involved in AOD overdose-related ambulance attendances in NSW are presented in Table 43. It is important to note

that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As shown in Table 41 to Table 43:

- in NSW, accidental, unknown intent and intentional AOD overdose-related attendances peaked in march 2017
- the population rate for intentional AOD overdose and overdose with unknown intent were higher in regional NSW than metropolitan Sydney, however, rates were similar by location for accidental AOD overdose attendances
- in NSW the majority of patients attended for accidental AOD overdose cases were male (65%), and a higher proportion of patients were female in attendances related to intentional AOD overdose (65%)
- approximately one-third of all AOD overdose attendances, regardless of intention, involved alcohol
- heroin was contributed to the greatest proportion of AOD accidental overdoses (29%) second to alcohol, while benzodiazepines contributed to the greatest proportion of intentional overdoses (27%) and unknown intent overdoses (15%)

**Table 41: AOD overdose-related ambulance attendances by month in metropolitan Sydney and regional NSW, March and June 2017**

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	124 (2.1)	34 (1.9)	160 (2.1)	83 (1.4)	46 (2.6)	129 (1.7)	201 (3.4)	108 (6.1)	310 (4.0)
June	87 (1.5)	33 (1.8)	120 (1.6)	64 (1.1)	36 (2.0)	100 (1.3)	177 (3.0)	119 (6.7)	297 (3.8)
September									
December									

AOD overdose can involve either single or multiple substances

**Table 42: Characteristics of AOD overdose-related ambulance attendances in metropolitan Sydney and regional NSW, March and June 2017**

	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.)	211 (3.5)	67 (3.8)	280 (3.6)	147 (2.5)	82 (4.6)	229 (3.0)	378 (6.3)	227 (12.7)	607 (7.8)
Number of fatal overdoses	N<5	N<5	5 (2%)	N<5	N<5	6 (3%)	N<5	N<5	6 (1%)
Age- median (quartiles)	35 (26-45)	35 (26-44)	34 (25-49)	36 (27-47)	36 (27-46)	36 (26-47)	31 (20-44)	37 (20-49)	33 (20-46)
Male	139 (66%)	42 (63%)	181 (65%)	78 (53%)	37 (45%)	115 (50%)	124 (33%)	86 (38%)	210 (35%)
Transport to hospital	146 (69%)	54 (81%)	202 (72%)	131 (89%)	73 (89%)	204 (89%)	374 (99%)	220 (97%)	596 (98%)
Police co-attendance	29 (74%)	10 (26%)	39 (14%)	40 (69%)	18 (31%)	58 (25%)	91 (24%)	45 (20%)	136 (22%)

All proportions are based on non-missing information  
AOD overdose can involve either single or multiple substances

**Table 43: Drugs involved in overdose-related ambulance attendances in metropolitan Sydney and regional NSW March and June 2017**

	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	72 (34%)	22 (33%)	94 (34%)	51 (35%)	22 (27%)	73 (32%)	112 (30%)	72 (32%)	185 (31%)
Alcohol intoxication only	42 (20%)	11 (16%)	53 (19%)	N>4	N<5	17 (7%)	N<5	N<5	N<5
Amphetamine	≥12 (≥4%)	N<5	16 (6%)	≥6 (≥5%)	N<5	10 (4%)	N<5	0	N<5
Crystal methamphetamine	≥10 (≥3%)	N<5	14 (5%)	≥6 (≥5%)	N<5	10 (4%)	N<5	0	N<5
Cannabis	N<5	0	N<5	7 (5%)	0	7 (3%)	N<5	≥5 (≥2%)	9 (2%)
Heroin	71 (34%)	8 (12%)	80 (29%)	≥10 (≥4%)	N<5	12 (8%)	N<5	0	N<5
Emerging psychoactive substances	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Benzodiazepines	19 (9%)	5 (7%)	24 (9%)	17 (12%)	17 (21%)	34 (15%)	108 (29%)	53 (23%)	162 (27%)
Opioid analgesics	8 (4%)	18 (27%)	27 (10%)	14 (10%)	12 (15%)	26 (11%)	27 (7%)	25 (11%)	52 (9%)
Opioid pharma-cotherapy	N>4	N<5	14 (5%)	N<5	N<5	N<5	N<5	N<5	6 (1%)

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



## Chapter 5: Results – Queensland

### Alcohol intoxication-related attendances in Queensland

At the time of writing Queensland data was not available for analysis. When it becomes available this report will be updated with results which will cover one month from each quarterly period of data collection and coding for Queensland in 2017. Tables are included here to indicate the results that will be presented.

**Table 44: Alcohol intoxication-related ambulance attendances by month in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 45: Characteristics of alcohol intoxication-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Multiple drugs involved			

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

**Figure 49: Alcohol intoxication-related attendances by month in Queensland, March, June, September and December data 2017**

**Figure 50: Alcohol intoxication-related attendances by time of day in Queensland, March, June, September and December data 2017**

**Figure 51: Alcohol intoxication-related attendances by day of week in Queensland, March, June, September and December data 2017**

### All amphetamine-related attendances in Queensland

Results are presented covering one month from each quarterly period of data collection and coding for Queensland in 2017.

**Table 46: Amphetamine-related ambulance attendances by month in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 47: Characteristics of amphetamine-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Alcohol involved/mentioned			
Alcohol intoxication			
Multiple drugs involved (excluding alcohol)			
Crystal methamphetamine			

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

**Figure 52: Amphetamine-related attendances by month in Queensland, March, June, September and December data 2017**

**Figure 53: Amphetamine-related attendances by time of day in Queensland, March, June, September and December data 2017**

**Figure 54: Amphetamine-related attendances by day of week in Queensland, March, June, September and December data 2017**

## Crystal methamphetamine-related attendances in Queensland

Results are presented covering one month from each quarterly period of data collection and coding for Queensland in 2017.

**Table 48: Crystal methamphetamine-related ambulance attendances by month in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 49: Characteristics of crystal methamphetamine-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Alcohol involved/mentioned			
Alcohol intoxication			
Multiple drugs involved (excluding alcohol)			

Note: all proportions are based on non-missing information  
Figures include March, June, September and December data.

**Figure 55: Crystal Methamphetamine-related attendances by month in Queensland, March, June, September and December data 2017**

**Figure 56: Crystal methamphetamine-related attendances by time of day in Queensland, March, June, September and December data 2017**

**Figure 57: Crystal methamphetamine-related attendances by day of week in Queensland, March, June, September and December data 2017**

## Cannabis-related attendances in Queensland

Results are presented covering one month from each quarterly period of data collection and coding for Queensland in 2017.

**Table 50: Cannabis-related ambulance attendances by month in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 51: Characteristics of cannabis-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Alcohol involved/mentioned			
Alcohol intoxication			
Multiple drugs involved (excluding alcohol)			

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

**Figure 58: Cannabis-related attendances by month in Queensland, March, June, September and December data 2017**

**Figure 59: Cannabis-related attendances by time of day in Queensland, March, June, September and December data 2017**

**Figure 60: Cannabis-related attendances by day of week in Queensland, March, June, September and December data 2017**

## Heroin-related attendances in Queensland

Results are presented covering one month from each quarterly period of data collection and coding for Queensland in 2017.

**Table 52: Heroin-related ambulance attendances by month in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 53: Characteristics of heroin-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Alcohol involved/mentioned			
Alcohol intoxication			
Multiple drugs involved (excluding alcohol)			
Responded to naloxone			

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

**Figure 61: Heroin-related attendances by month in Queensland, March, June, September and December data 2017**

**Figure 62: Heroin-related attendances by time of day in Queensland, March, June, September and December data 2017**

**Figure 63: Heroin-related attendances by day of week in Queensland, March, June, September and December data 2017**

## Emerging psychoactive substance-related attendances in Queensland

Results are presented covering one month from each quarterly period of data collection and coding for Queensland in 2017.

**Table 54: Emerging psychoactive substance-related ambulance attendances by month in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 55: Characteristics of emerging psychoactive substance-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metro Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Alcohol involved/mentioned			
Alcohol intoxication			
Multiple drugs involved (excluding alcohol)			

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

## Benzodiazepine-related attendances in Queensland

Results are presented covering one month from each quarterly period of data collection and coding for Queensland in 2017.

**Table 56: Benzodiazepine-related ambulance attendances by month in metropolitan Brisbane and regional Queensland data 2017, quarterly**

	Metropolitan Brisbane	Regional Queensland	Queensland
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March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 57: Characteristics of benzodiazepine-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Alcohol involved/mentioned			
Alcohol intoxication			
Multiple drugs involved (excluding alcohol)			

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

**Figure 64: Benzodiazepine-related attendances by month in Queensland, March, June, September and December data 2017**

**Figure 65: Benzodiazepine-related attendances by time of day in Queensland, March, June, September and December data 2017**

**Figure 66: Benzodiazepine-related attendances by day of week in Queensland, March, June, September and December data 2017**

## Opioid analgesic-related attendances in Queensland

Results are presented covering one month from each quarterly period of data collection and coding for Queensland in 2017.

**Table 58: Opioid analgesic-related ambulance attendances by month in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 59: Characteristics of opioid analgesic-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Alcohol involved/mentioned			
Alcohol intoxication			
Multiple drugs involved (excluding alcohol)			
Morphine			
Oxycodone			

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

**Figure 67: Opioid analgesic-related attendances by month in Queensland, March, June, September and December data 2017**

**Figure 68: Opioid analgesic-related attendances by time of day in Queensland, March, June, September and December data 2017**

**Figure 69: Opioid analgesic-related attendances by day of week in Queensland, March, June, September and December data 2017**



## Opioid pharmacotherapy-related attendances in Queensland

Results are presented covering one month from each quarterly period of data collection and coding for Queensland in 2017.

**Table 60: Opioid pharmacotherapy-related ambulance attendances by month in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
March attendances (per 100,000 population)			
June attendances (per 100,000 population)			
September attendances (per 100,000 population)			
December attendances (per 100,000 population)			

**Table 61: Characteristics of opioid pharmacotherapy-related ambulance attendances in metropolitan Brisbane and regional Queensland, March, June, September and December data 2017**

	Metropolitan Brisbane	Regional Queensland	Queensland
Number of attendances (per 100,000 population)			
Mean attendances per day			
Daily range			
Age- median (quartiles)			
Male			
Public outdoor space			
Police co-attendance			
Transport to hospital			
Alcohol involved/mentioned			
Alcohol intoxication			
Multiple drugs involved (excluding alcohol)			

Note: all proportions are based on non-missing information  
Figures include March, June, September and December data.

**Figure 70: Opioid pharmacotherapy-related attendances by month in Queensland, March, June, September and December data 2017**

**Figure 71: Opioid pharmacotherapy-related attendances by time of day in Queensland, March, June, September and December data 2017**

Figure 72: Opioid pharmacotherapy-related attendances by day of week in Queensland, March, June, September and December data 2017

## Alcohol intoxication and other drug-related attendances: 2016 and 2017

Table 62. Number of alcohol intoxication and other drug-related attendances in 2016 and 2017 (March, June, September, December), by metropolitan Brisbane and regional Queensland

N attendances	Metropolitan Brisbane			Regional Queensland		
	2016 <sup>^</sup>	2017 <sup>^</sup>	% Diff	2016 <sup>^</sup>	2017 <sup>^</sup>	% Diff
Alcohol intoxication						
Amphetamine						
Crystal methamphetamine						
Cannabis						
Heroin						
Emerging psychoactive substance						
Benzodiazepine						
Opioid analgesic						
Opioid pharmacotherapy						

<sup>^</sup>2016 and 2017 numbers include March, June, September and December data

\*p<0.05 \*\*\* p<0.001

## Alcohol and other drug overdose-related ambulance attendances in QLD

Table 63: AOD Overdose-related ambulance attendances by month in Queensland, March, June, September and December data 2017

Attendances (per 100,000 pop.)	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Met.	Reg.	QLD	Met.	Reg.	QLD	Met.	Reg.	QLD
March									
June									
September									
December									

AOD overdoses include all reported substances

Table 64: Characteristics of AOD overdose-related ambulance attendances in Queensland, March, June, September and December data 2017

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Met.	Reg.	QLD	Met.	Reg.	QLD	Met.	Reg.	QLD

Number of attendances (per 100,000 pop.)									
Number of fatal overdoses									
Age- median (quartiles)									
Male									
Transport to hospital									
Police co-attendance									

Note: all proportions are based on non-missing information  
AOD overdoses include all reported substances  
Figures include March, June, September and December data.

**Table 65: Drugs involved in overdose-related ambulance attendances in Queensland, March, June, September and December data 2017**

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Met.	Reg.	QLD	Met.	Reg.	QLD	Met.	Reg.	QLD
Alcohol involved/ mentioned									
Alcohol intoxication only									
Amphetamines									
Crystal methamphetamine									
Cannabis									
Heroin									
Emerging psychoactive substances									
Benzodiazepines									
Opioid analgesics									
Opioid pharmacotherapy									

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

## Chapter 6: Results – Tasmania

Due to industrial action in June 2017, the number of patient care records completed by paramedics were reduced, and do not reflect full paramedic caseload for that monthly period. Please use caution when interpreting these results.

### Alcohol intoxication-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of alcohol intoxication-related ambulance attendances are shown in Table 66. Characteristics of alcohol intoxication-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 67. Data regarding month, time of day and day of week of attendances are displayed in Figure 73 to Figure 75.

- Alcohol intoxication-related attendances peaked in December 2017 (Table 66).
- As shown in Table 67, in March, June, September and December 2017:
  - there were a total of 879 alcohol intoxication-related cases
  - the majority of patients attended for alcohol intoxication-related cases were male (61%)
  - median age of patients with alcohol intoxication-related attendances was 37 years in metropolitan areas and 38 years among those in regional areas
  - a higher proportion of patients with alcohol intoxication-related attendances were transported to hospital in metropolitan (76%) compared to regional (73%) areas
- As presented in Figure 74, alcohol intoxication-related attendance numbers peaked between 10pm and 2am in metropolitan and regional areas
- Saturdays represented the peak day for alcohol intoxication-related attendances in both metropolitan and regional areas of Tasmania (Figure 75).

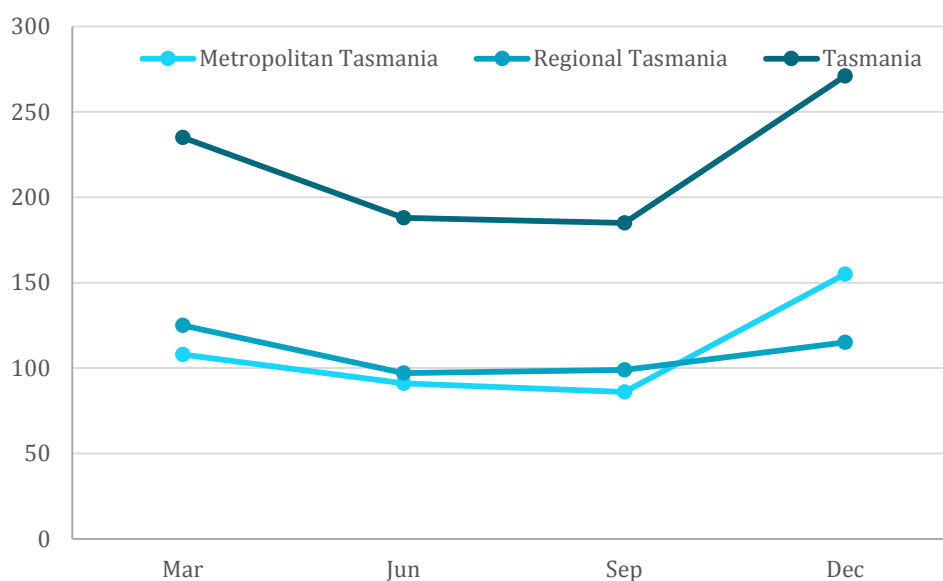
**Table 66: Alcohol intoxication-related ambulance attendances by month in Greater Hobart and regional Tasmania, March, June, September and December 2017**

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	108 (49.0)	125 (42.1)	235 (45.4)
June attendances (per 100,000 population)	91 (41.3)	97 (32.7)	188 (36.3)
September attendances (per 100,000 population)	86 (39.0)	99 (33.3)	185 (35.7)
December attendances (per 100,000 population)	155 (70.3)	115 (38.7)	271 (52.4)

**Table 67: Characteristics of alcohol intoxication-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

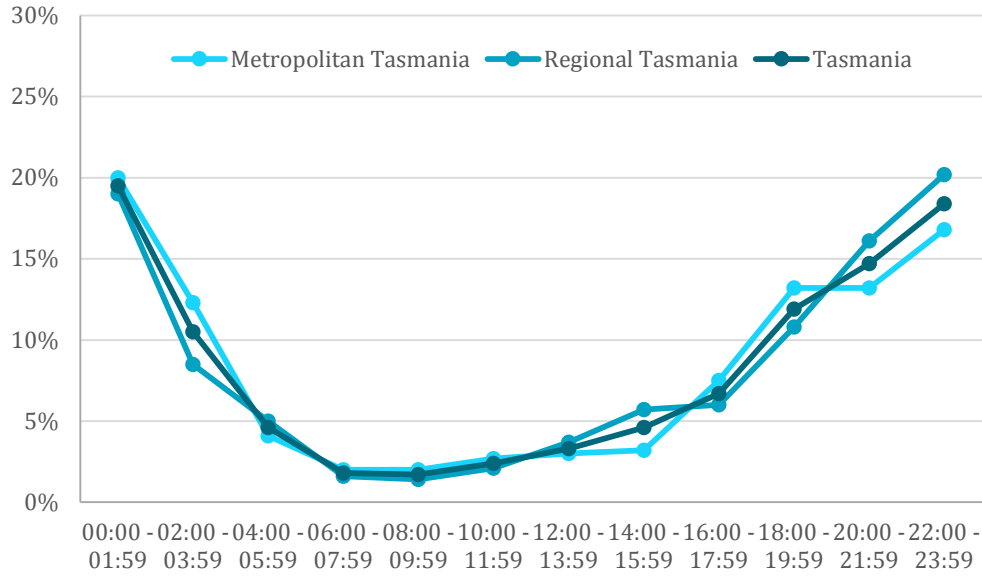
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	440 (199.5)	436 (146.8)	879 (169.8)
Mean attendances per day	7.4	7.0	7.2
Daily range	<5-20	<5-21	<5-21
Age- median (quartiles)	37 (23-52)	38 (24-52)	38 (24-52)
Male	261 (59%)	278 (64%)	540 (61%)
Public outdoor space	112 (26%)	108 (25%)	220 (25%)
Police co-attendance	76 (18%)	86 (20%)	163 (19%)
Transport to hospital	335 (76%)	319 (73%)	656 (75%)
Multiple drugs involved	26 (6%)	15 (3%)	41 (5%)

All proportions are based on non-missing information



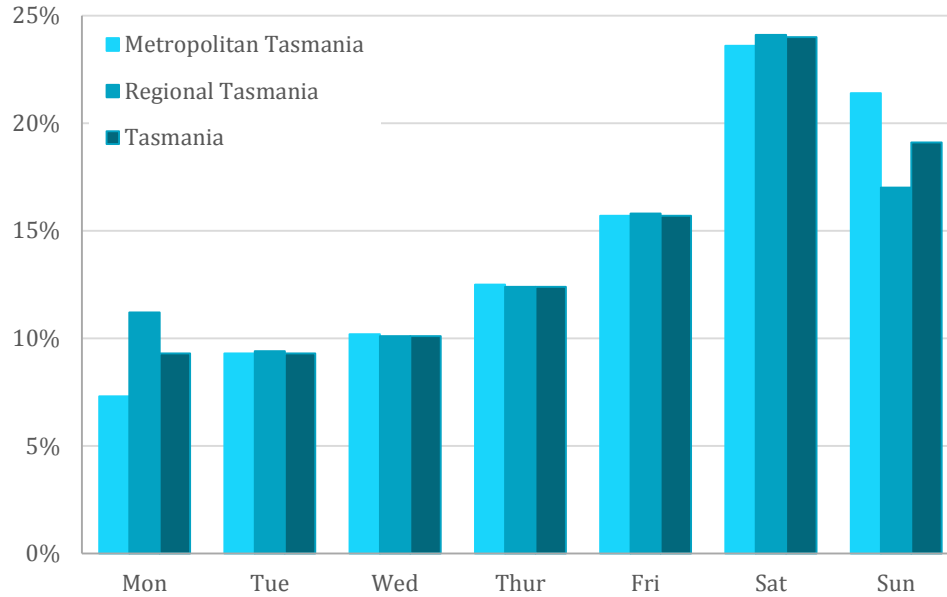
Note: Metropolitan Tasmania = Greater Hobart region

**Figure 73: Alcohol intoxication-related attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region

**Figure 74: Alcohol intoxication-related attendances by time of day in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region

**Figure 75: Percentage of alcohol intoxication-related attendances over total attendances by day of week in metropolitan and regional Tasmania, March, June, September and December 2017**

## All amphetamine-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of amphetamine-related ambulance attendances are shown in Table 68. Characteristics of amphetamine-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 69. Data regarding month of year, time of day and day of week of attendances are displayed in Figure 76 to Figure 78.

- Amphetamine-related attendance numbers were highest in December 2017 (Table 68).
- As shown in Table 69, in March, June, September and December 2017:
  - there were 56 amphetamine-related cases in Tasmania
  - the majority of patients attended for amphetamine-related cases were male (71%)
  - median age of patients with amphetamine-related attendances in Tasmania was 33 years
  - the majority of patients with amphetamine-related attendances were transported to hospital (70%)
- As presented in Figure 77, amphetamine-related attendance numbers in metropolitan Tasmania peaked from 4pm to 8pm, while regional attendances peaked from 12pm to 2pm.
- Overall, Fridays represented the peak days for amphetamine-related attendances in both metropolitan and regional Tasmania (Figure 78).

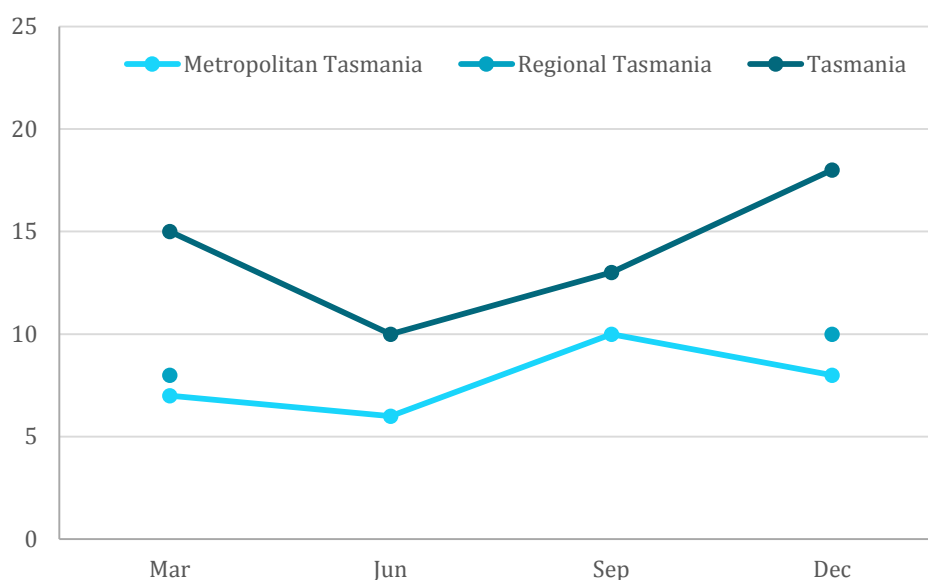
**Table 68: Amphetamine-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	7 (3.2)	8 (2.7)	15 (2.9)
June attendances (per 100,000 population)	≥5 (2.7)	N<5	10 (1.9)
September attendances (per 100,000 population)	≥8 (4.5)	N<5	13 (2.5)
December attendances (per 100,000 population)	8 (3.6)	10 (3.4)	18 (3.5)

**Table 69: Characteristics of amphetamine-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	31 (14.1)	25 (8.4)	56 (10.8)
Mean attendances per day	0.4	0.5	0.5
Daily range	<5-2	<5-4	<5-4
Age- median (quartiles)	34 (29-41)	29 (22-38)	33 (23-38)
Male	23 (74%)	17 (68%)	40 (71%)
Public outdoor space	N<5	N<5	7 (13%)
Police co-attendance	N<5	N<5	7 (13%)
Transport to hospital	23 (74%)	16 (64%)	39 (70%)
Alcohol involved/mentioned	≥6	N<5	11 (20%)
Alcohol intoxication	N<5	N<5	N<5
Multiple drugs involved (excluding alcohol)	10 (32%)	10 (40%)	20 (36%)

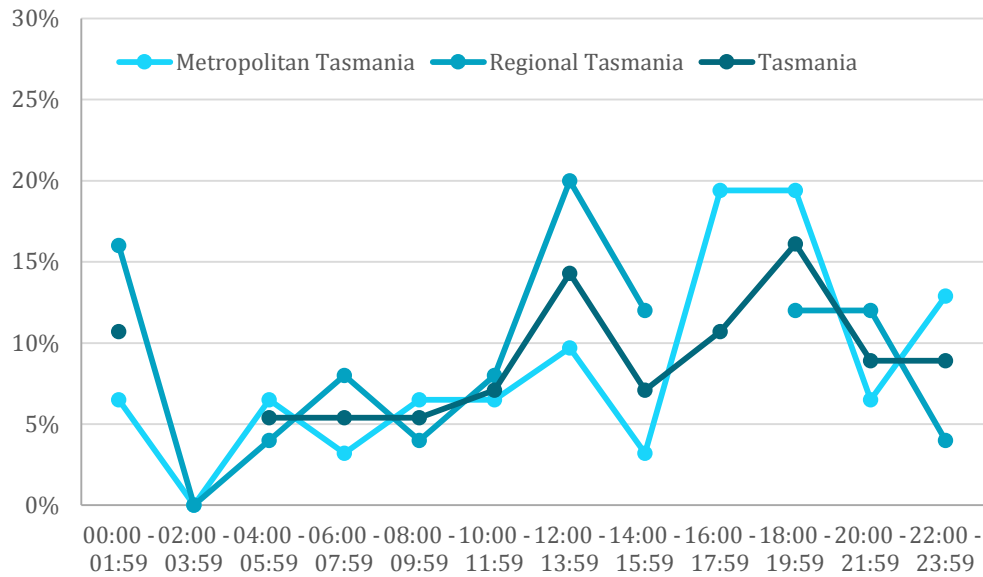
All proportions are based on non-missing information



Note: Metropolitan Tasmania = Greater Hobart region. Broken lines are due to N<5

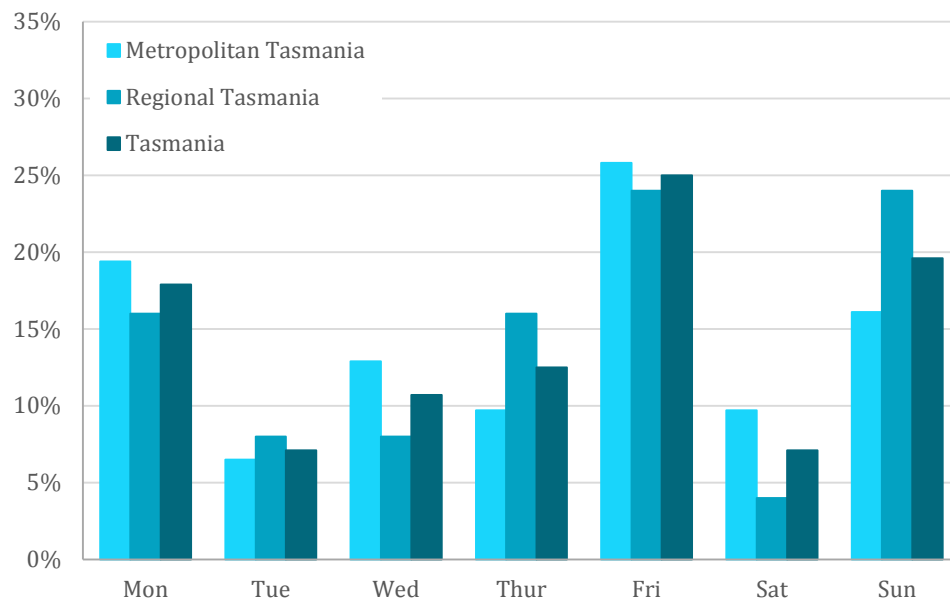
**Figure 76: Amphetamine-related attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**





Note: Metropolitan Tasmania = Greater Hobart region. Broken lines are due to N<5

**Figure 77: Amphetamine-related attendances by time of day in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region.

**Figure 78: Percentage of amphetamine-related attendances over total attendances by day of week in metropolitan and regional Tasmania, March, June, September and December 2017**

## Crystal methamphetamine-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 70. Characteristics of crystal methamphetamine-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 71. Data regarding month of year, time of day and day of week of attendances are displayed in Figure 79 to Figure 81.

- Crystal methamphetamine attendances peaked in March 2017 (Table 70).
- As shown in Table 71, in March, June, September and December 2017:
  - there were 34 crystal methamphetamine-related cases were recorded in Tasmania
  - the majority of crystal methamphetamine-related attendances were male patients (77%)
  - median age of patients with crystal methamphetamine-related attendances was 33 years, with similar age distributions in metropolitan and regional areas
  - the majority of patients with crystal methamphetamine-related attendances were transported to hospital, across both metropolitan (81%) and regional areas (85%)
- As presented in Figure 79, attendance numbers peaked in metropolitan Tasmania from 4pm to 6pm and in regional areas from 10am to 4pm and 8pm to 8pm
- Fridays represented the peak day for crystal methamphetamine-related attendances in metropolitan and regional Tasmania (Figure 80)

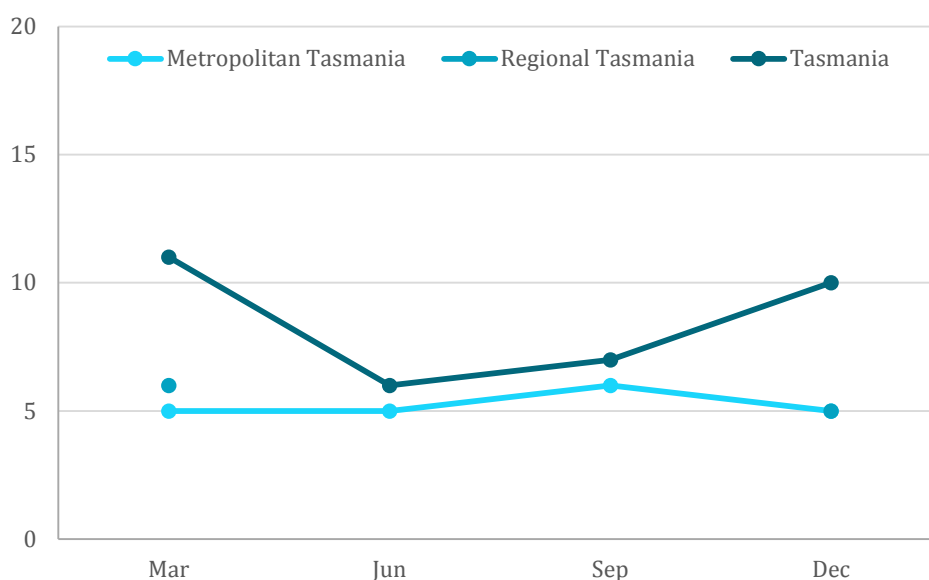
**Table 70: Crystal methamphetamine-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	5 (2.3)	6 (2.0)	11 (2.1)
June attendances (per 100,000 population)	N<5	N<5	6 (1.2)
September attendances (per 100,000 population)	N<5	N<5	7 (1.4)
December attendances (per 100,000 population)	5 (2.3)	5 (1.7)	10 (1.9)

**Table 71: Characteristics of crystal methamphetamine-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

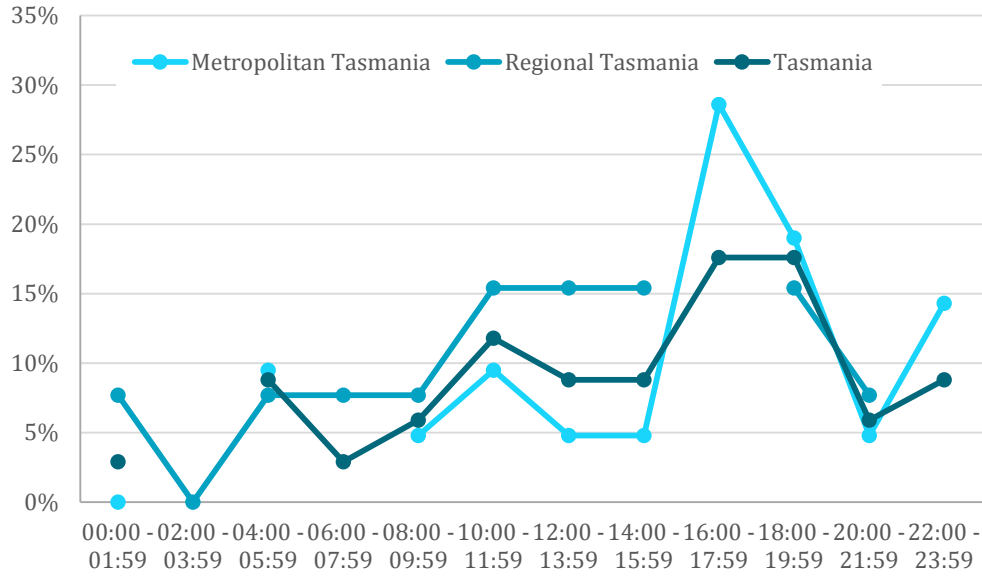
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	21 (9.5)	13 (4.4)	34 (6.6)
Mean attendances per day	0.3	0.3	0.3
Daily range	<5-2	<5-3	<5-3
Age- median (quartiles)	34 (30-39)	33 (24-38)	33 (26-38)
Male	14 (67%)	12 (92%)	26 (77%)
Public outdoor space	N<5	N<5	6 (18%)
Police co-attendance	N<5	N<5	N<5
Transport to hospital	17 (81%)	11 (85%)	28 (82%)
Alcohol involved/mentioned	N<5	N<5	5 (15%)
Alcohol intoxication	N<5	N<5	N<5
Multiple drugs involved (excluding alcohol)	9 (43%)	5 (39%)	14 (41%)

All proportions are based on non-missing



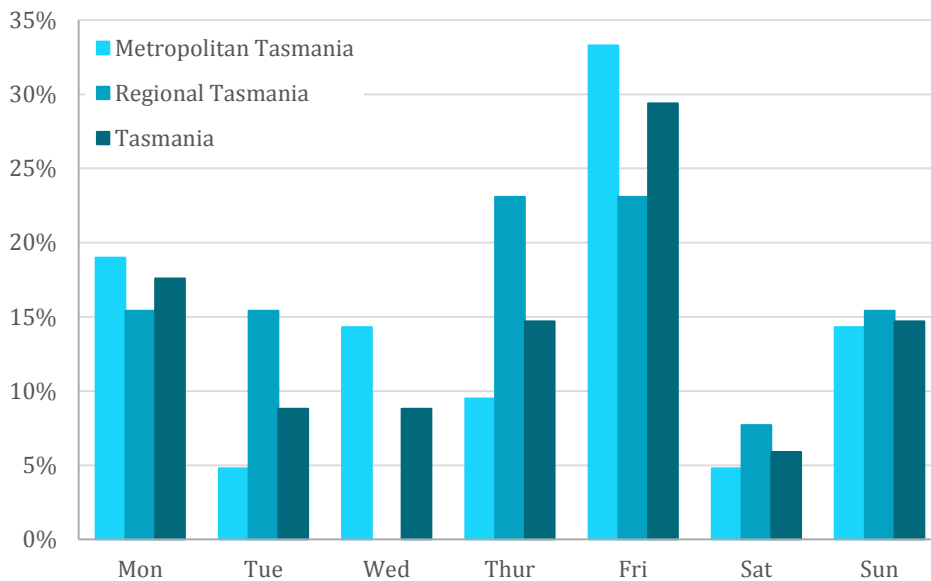
Note: Metropolitan Tasmania = Greater Hobart region. Broken lines are due to N<5

**Figure 79: Crystal amphetamine-related attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region. Broken lines are due to N<5

**Figure 80: Crystal methamphetamine-related attendances by time of day in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region.

**Figure 81: Percentage of crystal methamphetamine-related attendances over total attendances by day of week in metropolitan and regional Tasmania, March, June, September and December 2017**

## Cannabis-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 72. Characteristics of cannabis-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 73. Data regarding month, time of day and day of week of attendances are displayed in Figure 82 to Figure 84.

- cannabis-related attendances peaked during December in metropolitan and regional areas respectively (Table 72).
- As shown in Table 73, in March, June, September and December 2017:
  - there were 167 cannabis-related cases in Tasmania
  - cannabis-related attendances involved a higher proportion of male patients in regional Tasmania (66%) than in metropolitan areas (62%)
  - the median age of patients with cannabis-related attendances was 28 years
  - the majority of patients with cannabis-related attendances in Tasmania were transported to hospital (68%)
  - a lower proportion of cannabis-related attendances involved alcohol in regional (44%) compared to metropolitan areas (48%)
- As presented in Figure 83, cannabis-related attendance numbers peaked from 10pm to midnight in metropolitan areas and from 8pm to 12am in regional areas.
- Fridays represented the peak day for cannabis-related attendances in metropolitan Tasmania, while Thursday were the peak days in regional Tasmania (Figure 84).

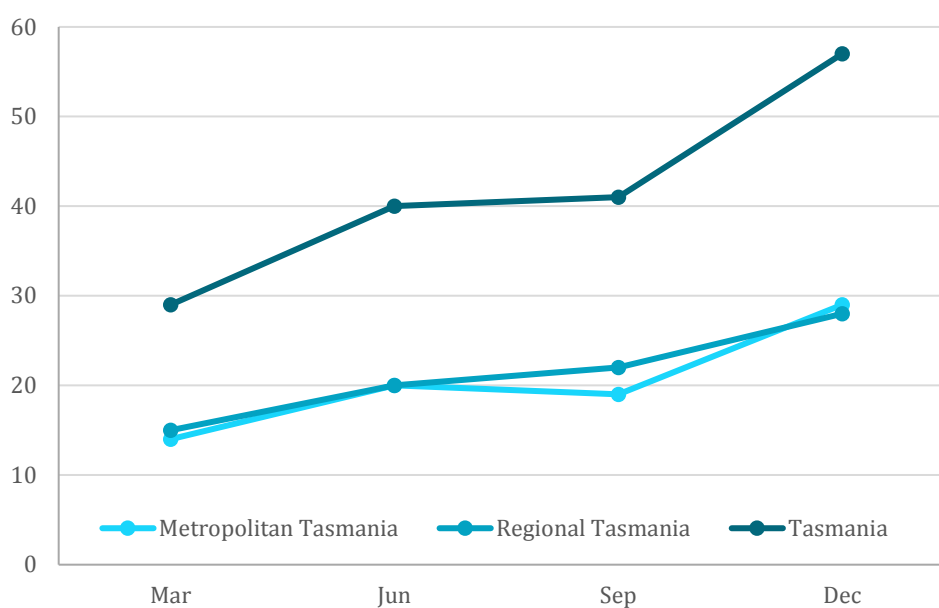
**Table 72: Cannabis-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	14 (6.3)	15 (5.0)	29 (2.1)
June attendances (per 100,000 population)	20 (9.1)	20 (6.7)	40 (7.7)
September attendances (per 100,000 population)	19 (8.6)	22 (7.4)	41 (7.9)
December attendances (per 100,000 population)	29 (13.2)	28 (9.4)	57 (11.0)

**Table 73: Characteristics of cannabis-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

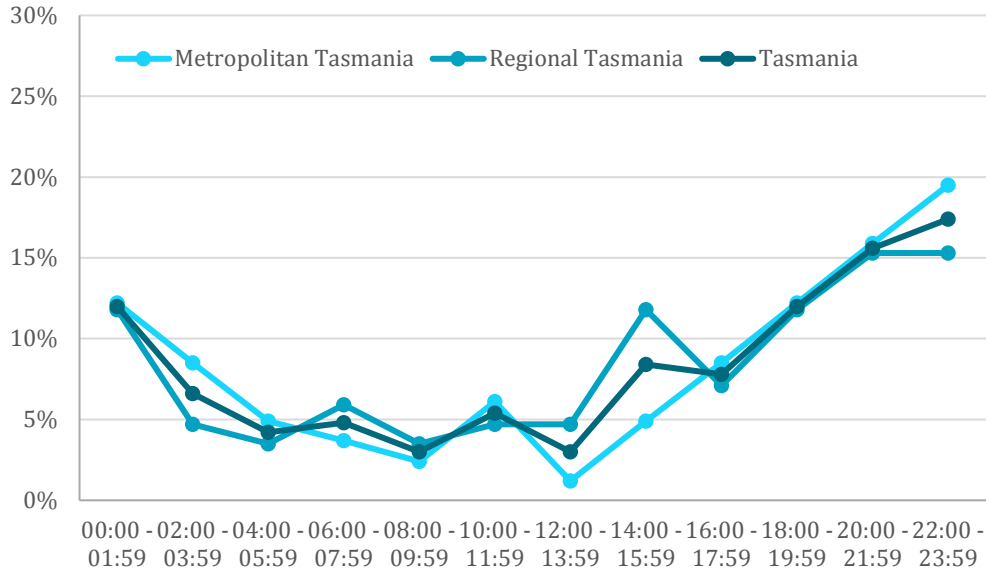
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	82 (37.2)	85 (28.6)	167 (32.3)
Mean attendances per day	1.2	1.5	1.4
Daily range	<5-5	<5-6	<5-6
Age- median (quartiles)	24 (19-36)	31 (21-35)	28 (20-40)
Male	51 (62%)	56 (66%)	107 (64%)
Public outdoor space	10 (13%)	13 (16%)	23 (14%)
Police co-attendance	12 (15%)	9 (12%)	21 (13%)
Transport to hospital	57 (70%)	57 (67%)	114 (68%)
Alcohol involved/mentioned	39 (48%)	38 (44%)	77 (46%)
Alcohol intoxication	20 (24%)	19 (22%)	39 (23%)
Multiple drugs involved (excluding alcohol)	16 (20%)	13 (15%)	29 (17%)

All proportions are based on non-missing information



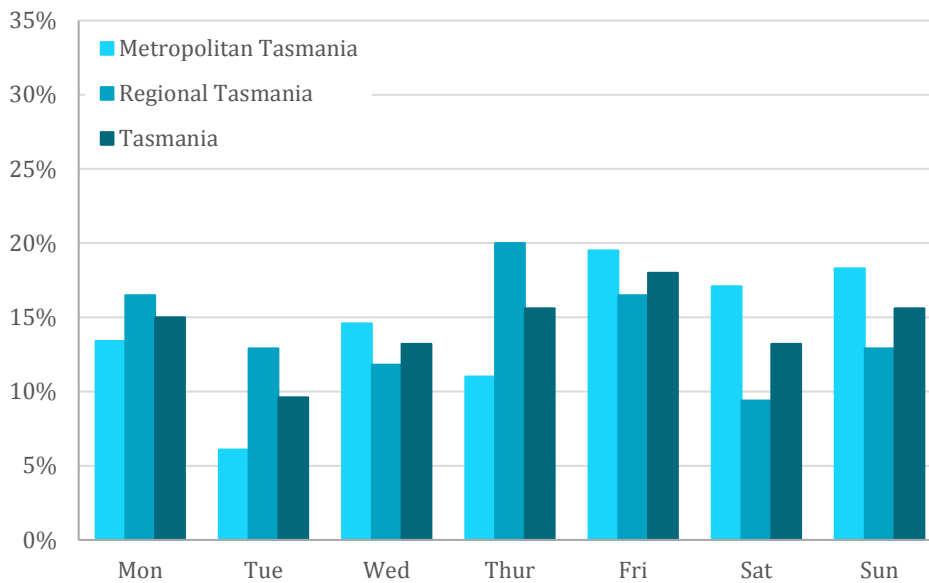
Note: Metropolitan Tasmania = Greater Hobart region.

**Figure 82: Cannabis-related attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region.

**Figure 83: Cannabis-related attendances by time of day in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region.

**Figure 84: Percentage of cannabis-related attendances over total attendances by day of week in metropolitan and regional Tasmania, March, June, September and December 2017**

## Heroin-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of heroin-related ambulance attendances are shown in Table 74. Characteristics of heroin-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 75. As shown, there were a few heroin-related attendances in Tasmania over the period presented.

**Table 74: Heroin-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

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

**Table 75: Characteristics of heroin-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	N<5	N<5	N<5
Mean attendances per day	-	-	-
Daily range	-	-	-
Age- median (quartiles)	N<5	45 (38-46)	41.5 (36-45.5)
Male	-	-	-
Public outdoor space	-	-	-
Police co-attendance	-	-	-
Transport to hospital	-	-	-
Alcohol involved/mentioned	-	-	-
Alcohol intoxication	-	-	-
Multiple drugs involved (excluding alcohol)	-	-	-
Responded to naloxone	-	N<5	N<5

## Emerging psychoactive substance-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of emerging psychoactive substance-related ambulance attendances are shown in Table 76. Characteristics of emerging psychoactive substance-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 77. As shown, there



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

**Table 76: Emerging psychoactive substance-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

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

**Table 77: Characteristics of emerging psychoactive substance-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

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

## Benzodiazepine-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 78. Characteristics of benzodiazepine-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 79. Data regarding time of day and day of week of attendances are displayed in Figure 86 and Figure 87.

- Benzodiazepine-related attendances peaked in December 2017 (Table 78).
- As shown in Table 79, in March, June, September and December 2017:
  - there were 111 benzodiazepine-related cases in Tasmania

- the majority of patients attended for benzodiazepine-related cases were female (60%), with lower proportions of females in regional areas (56%) than in metropolitan areas (64%)
- the median age of patients with benzodiazepine-related attendances was higher in regional (48 years) compared to metropolitan areas (40 years)
- a similar proportion of patients with benzodiazepine-related attendances were transported to hospital in metropolitan (91%) and regional areas (89%)
- multiple drugs were involved in more than half (53%) of all benzodiazepine-related attendances
- As presented in Figure 86, benzodiazepine-related attendance numbers peaked between 4pm and 8pm in metropolitan Tasmania and from 12pm to 2pm in regional Tasmania
- Wednesdays represented the peak days for benzodiazepine-related attendances in both metropolitan and regional attendances (Figure 87).

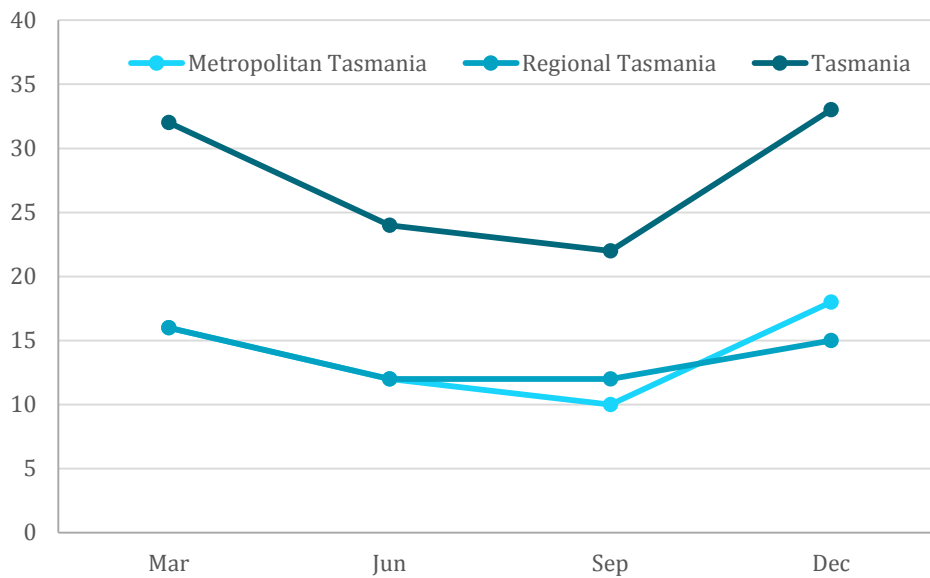
**Table 78: Benzodiazepine-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	16 (7.3)	16 (5.4)	32 (6.2)
June attendances (per 100,000 population)	12 (5.4)	12 (4.0)	24 (4.6)
September attendances (per 100,000 population)	10 (4.5)	12 (4.0)	22 (4.3)
December attendances (per 100,000 population)	18 (8.2)	15 (5.0)	33 (6.4)

**Table 79: Characteristics of benzodiazepine-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

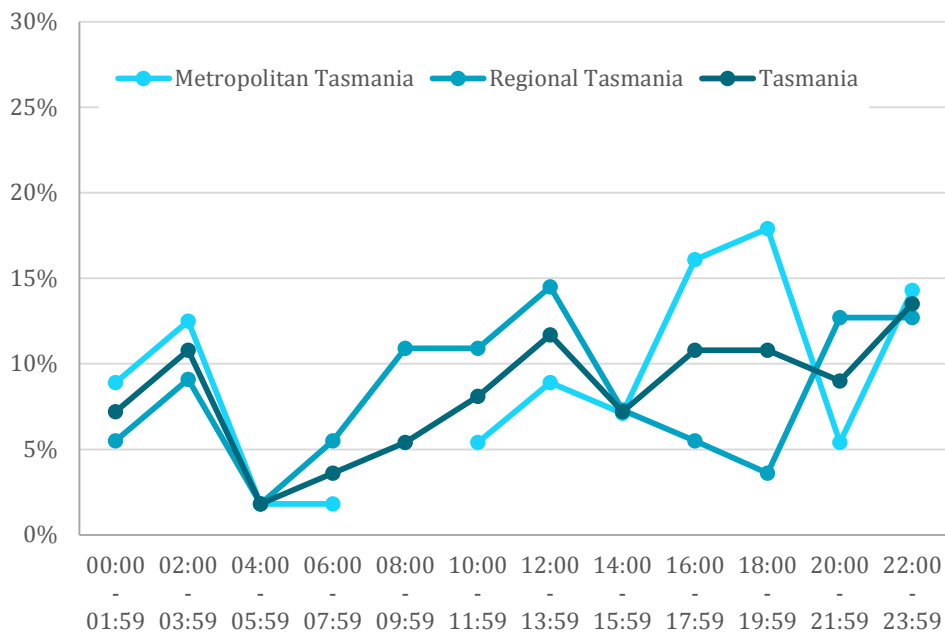
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	56 (25.4)	55 (18.5)	111 (21.4)
Mean attendances per day	1.1	0.8	0.9
Daily range	<5	<5	<5
Age- median (quartiles)	40 (30-55)	48 (40-59)	46 (35-57)
Male	20 (36%)	24 (44%)	44 (40%)
Public outdoor space	N<5	N<5	5 (5%)
Police co-attendance	14 (25%)	10 (18%)	24 (22%)
Transport to hospital	51 (91%)	49 (89%)	100 (90%)
Alcohol involved/mentioned	32 (57%)	19 (35%)	51 (46%)
Alcohol intoxication	25 (45%)	14 (25%)	39 (35%)
Multiple drugs involved (excluding alcohol)	29 (52%)	30 (55%)	59 (53%)

All proportions are based on non-missing information



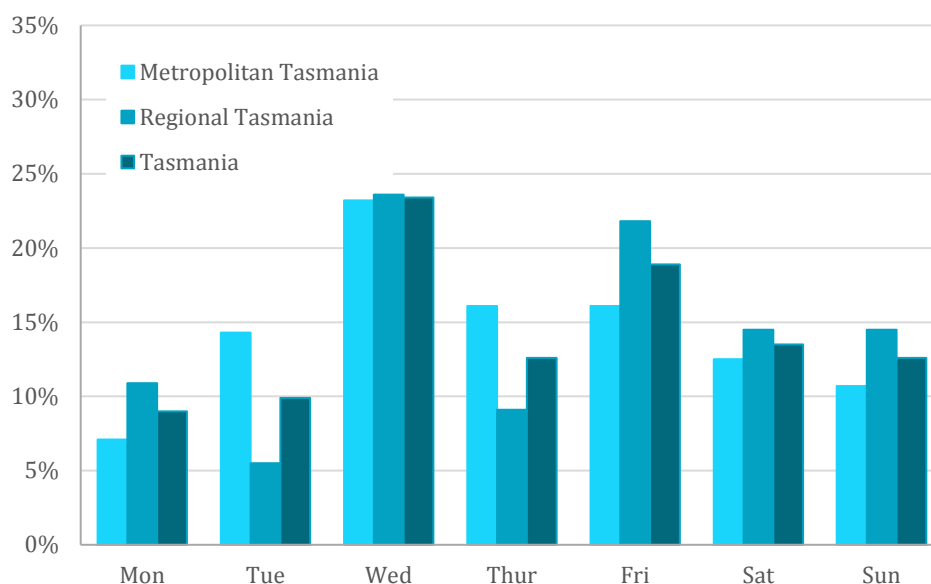
Note: Metropolitan Tasmania = Greater Hobart region. Broken lines are due to N<5

**Figure 85: Benzodiazepine-related attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region. Broken lines are due to N<5

**Figure 86: Benzodiazepine-related attendances by time of day in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region.

**Figure 87: Percentage of benzodiazepine-related attendances over total attendances by day of week in metropolitan and regional Tasmania, March, June, September and December 2017**

## Opioid analgesic-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 80. Characteristics of opioid analgesic-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 81. Data regarding month of year, time of day and day of week of attendances are displayed in Figure 88 to Figure 90.

- Opioid analgesic-related attendances were highest in March 2017 (Table 80).
- As shown in Table 81, in March, June, September and December 2017:
  - there were 47 opioid analgesic-related cases in Tasmania
  - more than half of all opioid analgesic-related attendances were male patients (53%)
  - the median age of patients with opioid analgesic-related attendances were higher in metropolitan areas (47 years) than in regional areas (44 years)
  - the majority of patients with opioid analgesic-related attendances across Tasmania were transported to hospital (81%)
- As presented in Figure 89, overall opioid analgesic-related attendance numbers peaked in the evening between 10pm and midnight.

- Tuesdays and Mondays represented the peak day for opioid analgesic-related attendances in metropolitan areas, whereas attendances were highest on Wednesdays in regional areas (Figure 90).

**Table 80: Opioid analgesic-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

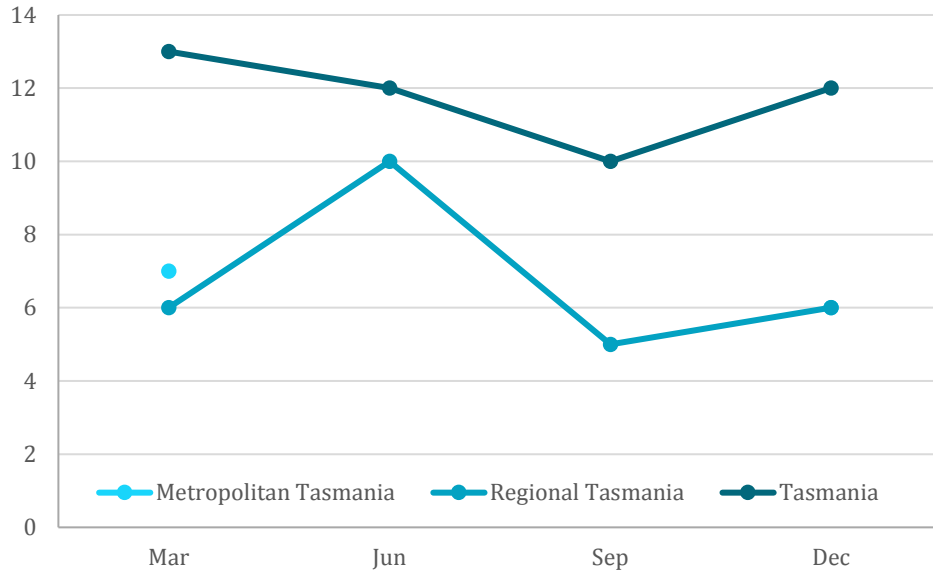
	Greater Hobart	Regional Tasmania	Tasmania
March attendances (per 100,000 population)	7 (3.2)	6 (2.0)	13 (2.5)
June attendances (per 100,000 population)	-	10 (3.4)	12 (2.3)
September attendances (per 100,000 population)	N<5	N>4	10 (1.9)
December attendances (per 100,000 population)	6 (2.7)	6 (2.0)	12 (2.3)

Numbers of attendances in metropolitan and regional areas were too low to report by month

**Table 81: Characteristics of opioid analgesic-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

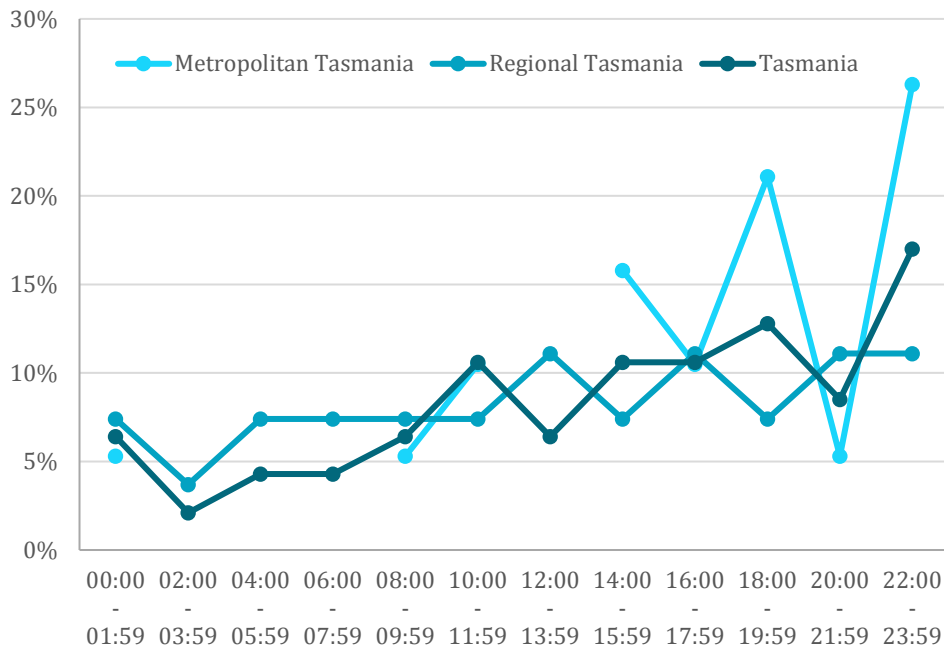
	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	19 (8.6)	27 (9.1)	47 (9.1)
Mean attendances per day	0.3	0.5	0.4
Daily range	<5	<5	<5
Age- median (quartiles)	47 (27-57)	44 (26-52)	46 (27-56)
Male	8 (42%)	16 (59%)	25 (53%)
Public outdoor space	N<5	N<5	5 (11%)
Police co-attendance	N<5	N<5	N<5
Transport to hospital	15 (80%)	22 (82%)	38 (81%)
Alcohol involved/mentioned	8 (42%)	6 (22%)	14 (30%)
Alcohol intoxication	N<5	N<5	10 (21%)
Multiple drugs involved (excluding alcohol)	12 (63%)	16 (60%)	28 (60%)
Morphine	0	N<5	N<5
Oxycodone	14 (74%)	11 (41%)	25 (53%)

All proportions are based on non-missing information



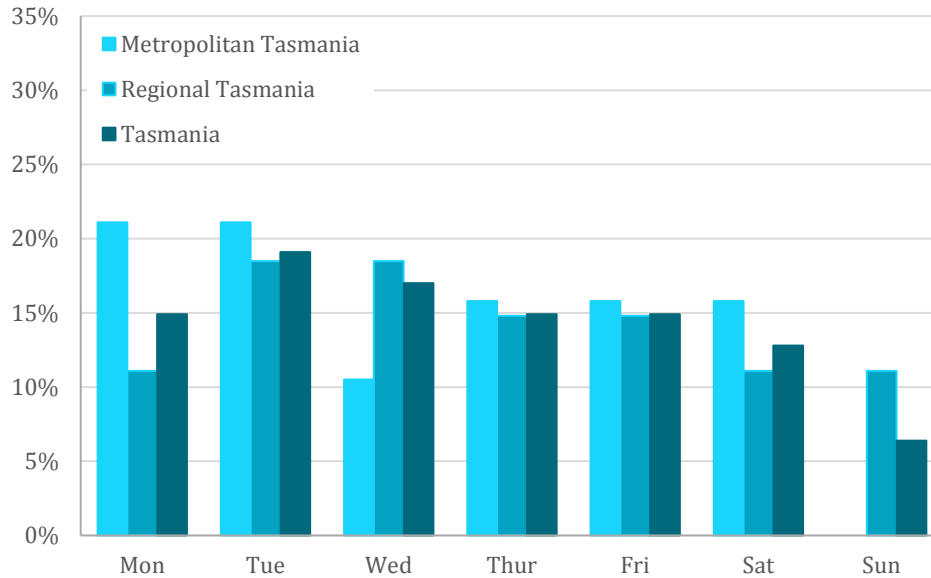
Note: Metropolitan Tasmania = Greater Hobart region. Broken lines are due to N<5

**Figure 88: Opioid analgesic-related attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region. Broken lines are due to N<5

**Figure 89: Opioid analgesic-related attendances by time of day in metropolitan and regional Tasmania, March, June, September and December 2017**



Note: Metropolitan Tasmania = Greater Hobart region.

**Figure 90: Percentage of opioid analgesic-related attendances over total attendances by time of day in metropolitan and regional Tasmania, March, June, September and December 2017**

## Opioid pharmacotherapy-related attendances in Tasmania

Results are presented covering one month from each quarterly period of data collection and coding for Tasmania in 2017.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Table 82. Characteristics of opioid pharmacotherapy-related ambulance attendances in Tasmania for March, June, September and December 2017 are shown in Table 83.

- Opioid pharmacotherapy-related attendances were low in all months in 2017 (Table 82).
- As shown in Table 83, 10 opioid pharmacotherapy-related cases were recorded in Tasmania.

**Table 82: Opioid pharmacotherapy-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

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

**Table 83: Characteristics of opioid pharmacotherapy-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 population)	N<5	N<5	10 (1.9)
Mean attendances per day	-	-	0.08
Daily range	-	-	<5-1
Age- median (quartiles)	-	-	34 (29-40)
Male	N<6	N<6	N/A
Public outdoor space	N<5	0	N<5
Police co-attendance	0	N<5	N<5
Transport to hospital	N<5	N<5	N<5
Alcohol involved/mentioned	0	0	0
Alcohol intoxication	0	0	0
Multiple drugs involved (excluding alcohol)	N<5	N<5	N<5

## Alcohol intoxication and other drug-related attendances: 2016 and 2017

Alcohol intoxication and other drug-related ambulance attendance numbers in March, June, September and December 2016 and 2017 are shown in Table 84.

As presented in Table 85, in Tasmania there were no statistically significant increases or decreases in alcohol intoxication or other drug-related ambulance attendances between 2016 and 2017.

**Table 84. Number of alcohol intoxication and other drug-related attendances in 2016 and 2017 (March, June, September and December), Tasmania**

N attendances	2016*	2017*	% Diff
Alcohol intoxication	638	879	+38%
Amphetamine	49	56	+14%
Crystal methamphetamine	32	34	+0.6%
Cannabis	129	167	+29%
Heroin	0	N<5	-
Emerging psychoactive substance	0	N<5	-
Benzodiazepine	76	111	+86%
Opioid analgesic	51	47	-0.5%
Opioid pharmacotherapy	5	10	+100%

\*2016 and 2017 numbers include March, June, September and December data

## Alcohol and other drug overdose-related ambulance attendances in Tasmania

AOD overdose-related ambulance attendances by month are shown in Table 85, and characteristics of AOD overdose-related ambulance attendances are displayed in



Table 86. Drugs involved in AOD overdose-related ambulance attendances in Tasmania are presented in Table 86. It is important to note that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As shown in Table 85 to Table 86:

- in Tasmania, overdoses with unknown intent peaked during March and intentional overdose-related attendances remained consistent across each full month of reporting (March, September and December) in 2017
- the majority of patients attended to for overdose with unknown intent and intentional AOD overdose in Tasmania were female (63% and 67% respectively), but the majority were male (63%) for accidental overdose related attendances
- alcohol was involved in 54% of accidental overdose-related attendances across Tasmania, 35% of overdoses with unknown intent and 33% of intentional overdoses
- following alcohol involvement, benzodiazepines contributed to the greatest proportion of AOD overdose-related attendances with unknown intent (28%) and intentional overdoses (29%)

**Table 85: AOD overdose-related ambulance attendances by month in metropolitan and regional Tasmania, March, June, September and December 2017**

Attendances (per 100,000 resident population)	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Greater Hobart	Regional Tasmania	Tasmania	Greater Hobart	Regional Tasmania	Tasmania	Greater Hobart	Regional Tasmania	Tasmania
March	N<5	N<5	7 (1.4)	8 (3.6)	9 (3.6)	17 (3.3)	25 (11.5)	18 (6.0)	43 (8.3)
June	N<5	N<5	N<5	N<5	≥5	11 (2.1)	≥5	N<5	9 (1.7)
September	N<5	N<5	N<5	7 (3.2)	6 (2.0)	13 (2.5)	20 (9.2)	21 (7.0)	41 (7.9)
December	N<5	N>4	9 (1.7)	7 (3.2)	6 (2.0)	13 (2.5)	23 (10.6)	20 (6.7)	43 (8.3)

Numbers of AOD overdose-related attendances were too low to report by month for some categories  
AOD overdoses include all recorded substances

**Table 86: Characteristics of AOD overdose-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Greater Hobart	Regional Tasmania	Tasmania	Greater Hobart	Regional Tasmania	Tasmania	Greater Hobart	Regional Tasmania	Tasmania
Number of attendances (per 100,000 pop.)	11 (5.0)	13 (4.4)	24 (4.6)	25 (11.3)	29 (9.8)	54 (10.4)	92 (41.7)	75 (25.2)	167 (32.3)
Number of fatal overdoses	0	0	0	0	0	0	0	0	0
Age- median (quartiles)	40 (32-54)	31 (22-45)	38 (25-47)	27 (20-51)	38 (20-51)	35 (22-50)	32.5 (20-47)	30 (18-44)	32 (19-46)
Male	5 (46%)	10 (77%)	15 (63%)	11 (44%)	9 (31%)	20 (37%)	26 (28%)	29 (39%)	55 (33%)
Transport to hospital	10 (91%)	12 (92%)	22 (92%)	22 (88%)	29 (100%)	51 (94%)	92 (100%)	73 (97%)	165 (99%)
Police co-attendance	N<5	N<5	N<5	5 (20%)	5 (17%)	10 (35%)	16 (17%)	9 (12%)	25 (15%)

Note: Totals may include cases with either missing or unclassified location information  
AOD overdoses include all recorded substance  
Figures include March, June, September and December data

**Table 87: Drugs involved in overdose-related ambulance attendances in metropolitan and regional Tasmania, March, June, September and December 2017**

	Accidental overdose			Overdose with unknown intent			Intentional overdose		
	Greater Hobart	Regional Tasmania	Tasmania	Greater Hobart	Regional Tasmania	Tasmania	Greater Hobart	Regional Tasmania	Tasmania
Alcohol involved/ mentioned	8 (73%)	5 (39%)	13 (54%)	9 (36%)	10 (35%)	19 (35%)	36 (39%)	19 (25%)	55 (33%)
Alcohol intoxication only	N<5	N<5	7 (29%)	N<5	0	N<5	0	0	0
Amphetamine	0	0	0	N<5	N<5	N<5	N<5	N<5	N<5
Crystal methamphetamine	0	0	0	N<5	N<5	N<5	N<5	N<5	N<5
Cannabis	N<5	0	N<5	0	N<5	N<5	N<5	N<5	N<5
Heroin	0	N<5	N<5	0	N<5	N<5	0	0	0
Emerging psychoactive substance	0	0	0	0	0	0	0	0	0
Benzodiazepines	N<5	N<5	N<5	9 (36%)	6 (21%)	15 (28%)	25 (37%)	23 (31%)	48 (29%)
Opioid analgesics	N<5	N<5	N<5	N<5	0	N<5	7 (8%)	6 (8%)	13 (8%)
Opioid pharmacotherapy	0	0	0	0	0	N<5	0	N<5	N<5

Note: Totals may include cases with either missing or unclassified location information  
Figures include March, June, September and December data.

## Chapter 7: Results – Australian Capital Territory

### Alcohol intoxication-related attendances in ACT

Results are presented covering one month from each quarterly period of data for ACT in 2017.

Numbers and rates of monthly alcohol intoxication-related ambulance attendances are shown in Table 88. Characteristics of alcohol intoxication-related ambulance attendances in ACT are shown in Table 89, including March, June, September and December data for 2017. Data regarding month, time of day and day of week of attendances are displayed in Figure 91 to Figure 93.

Alcohol intoxication-related attendances peaked in December 2017 (Table 88).

- As shown in Table 89, in March, June, September and December 2017:
  - there were 537 alcohol intoxication-related cases in the ACT
  - the majority of patients attended for alcohol intoxication-related cases were male (55%)
  - median age of patients with alcohol intoxication-related attendances was 36 years
  - the majority of patients with alcohol intoxication-related attendances (68%) were transported to hospital
  - one in five alcohol intoxication-related attendances involved police co-attendance (20%)
- As presented in Figure 92, alcohol intoxication-related attendance numbers peaked from 10pm to midnight in ACT.
- Saturdays represented the peak day for alcohol intoxication-related attendances (Figure 93).

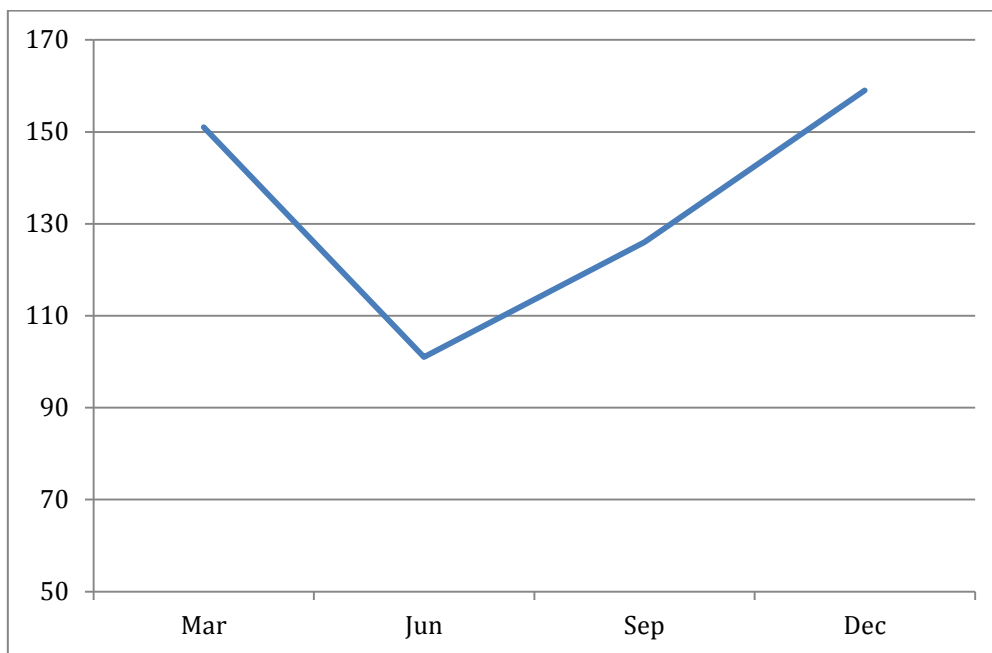
**Table 88: Alcohol intoxication-related ambulance attendances in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	151 (37.4)
June attendances (per 100,000 population)	101 (25.0)
September attendances (per 100,000 population)	126 (31.2)
December attendances (per 100,000 population)	159 (39.4)

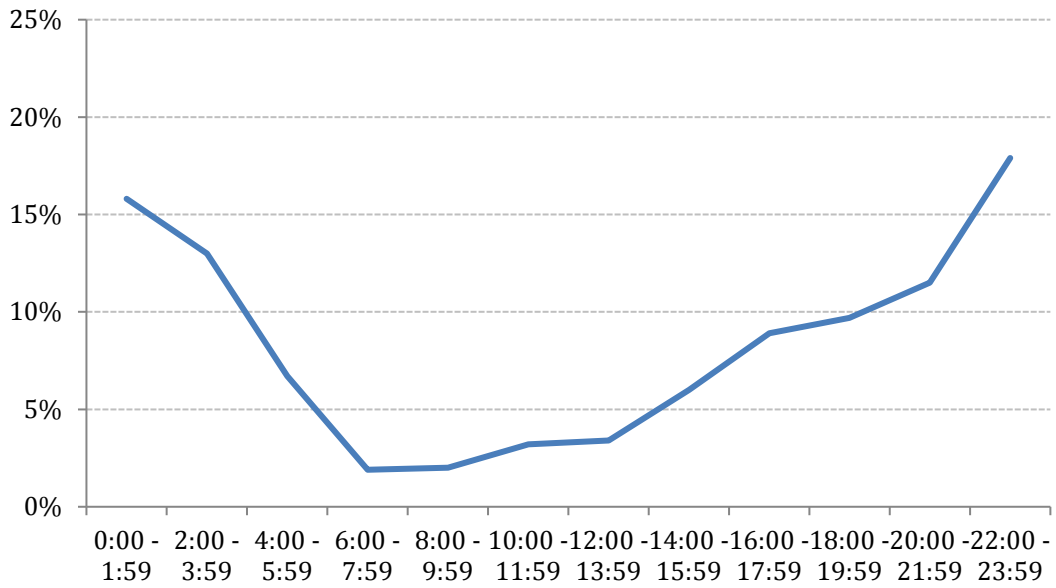
**Table 89: Characteristics of alcohol intoxication-related ambulance attendances in ACT, March, June, September and December 2017**

	ACT
Number of attendances (per 100,000 population)	537 (133.1)
Mean attendances per day	4.4
Daily range	<5-14
Age- median (quartiles)	36 (23-52)
Male	296 (55%)
Public outdoor space	93 (18%)
Police co-attendance	109 (20%)
Transport to hospital	364 (68%)
Multiple drugs involved	9 (2%)

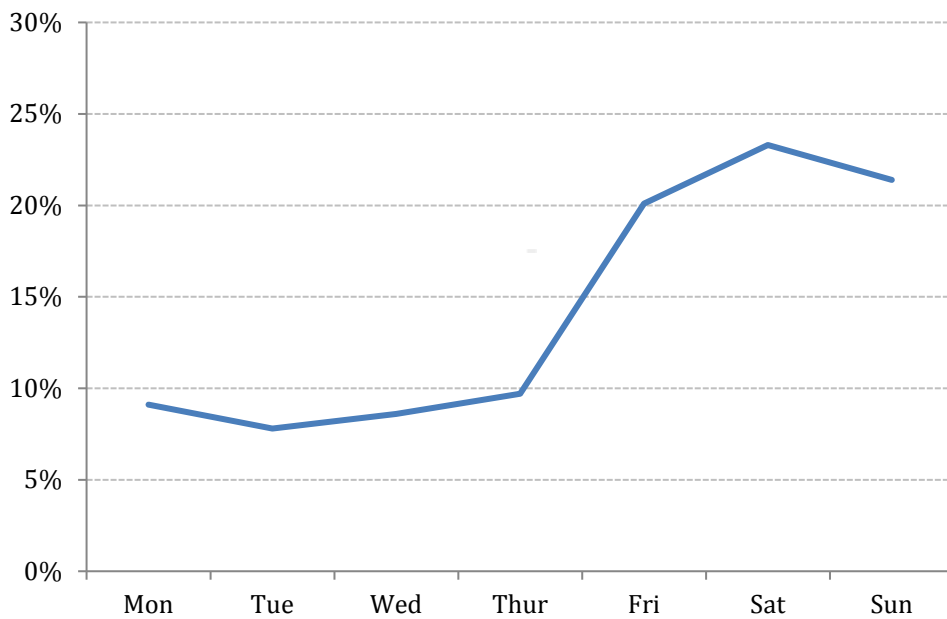
Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.



**Figure 91: Alcohol intoxication-related attendances by month in ACT, March, June, September and December 2017**



**Figure 92: Alcohol intoxication-related attendances by time of day in ACT, March, June, September and December 2017**



**Figure 93: Percentage of alcohol intoxication-related attendances over total attendances by day of week in ACT, March, June, September and December data 2017**

### All amphetamine-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2017.

Numbers and rates of monthly amphetamine-related ambulance attendances are shown in Table 90. Characteristics of amphetamine-related ambulance attendances in ACT for March, June, September and December in 2017 are shown in Table 91. Data regarding month, time of day and day of week of attendances are displayed in Figure 94 to Figure 96.

- Amphetamine-related attendances peaked in December 2017 (Table 90)
- As shown in Table 91, in March, June, September and December 2017:
  - there were 51 amphetamine-related cases in the ACT
  - the majority of patients attended for amphetamine-related cases were male (71%)
  - median age of patients with amphetamine-related attendances was 32 years
  - the majority of patients with amphetamine-related attendances (78%) were transported to hospital
  - As presented in Figure 95, amphetamine-related attendance numbers peaked in the morning between 8am and 10am and between 2pm to 4pm, while Fridays represented the peak day for amphetamine-related attendances (Figure 96).

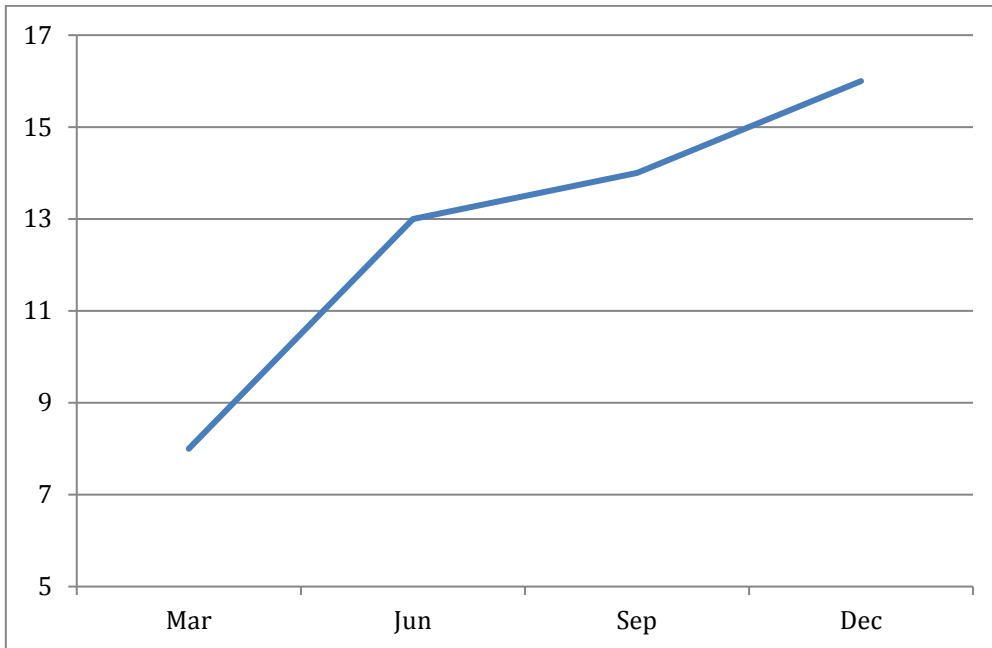
**Table 90: Amphetamine-related ambulance attendances by month in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	8 (2.0)
June attendances (per 100,000 population)	13 (3.2)
September attendances (per 100,000 population)	14 (3.5)
December attendances (per 100,000 population)	16 (4.0)

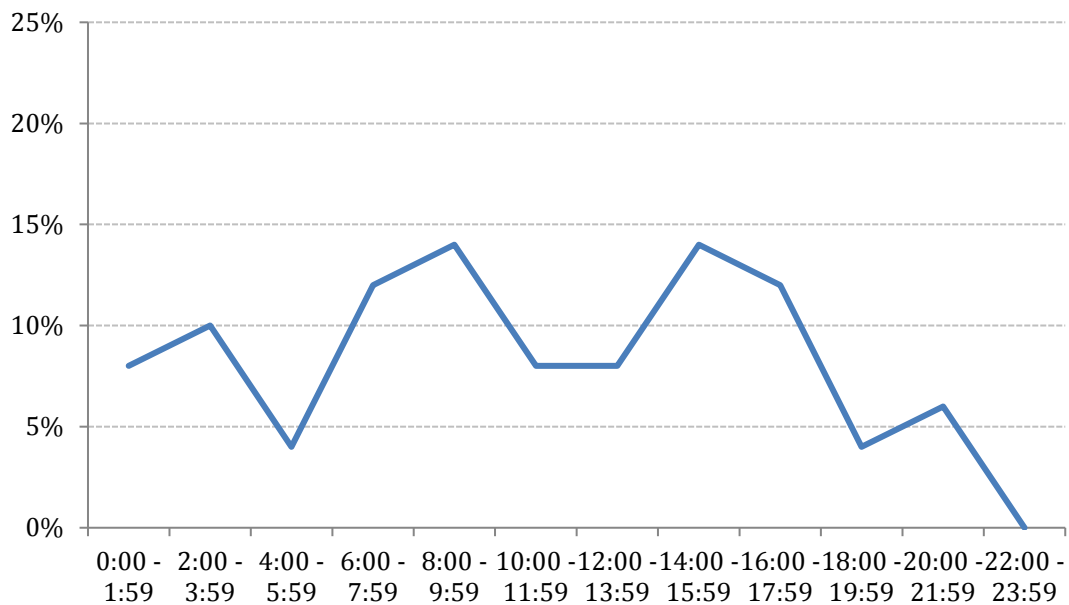
**Table 91: Characteristics of amphetamine-related ambulance attendances in ACT, March, June, September and December 2017**

	ACT
Number of attendances (per 100,000 population)	51 (12.6)
Mean attendances per day	0.4
Daily range	<5
Age- median (quartiles)	32 (25-42)
Male	36 (71%)
Public outdoor space	6 (12%)
Police co-attendance	11 (22%)
Transport to hospital	40 (78%)
Alcohol involved/mentioned	10 (20%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	16 (31%)

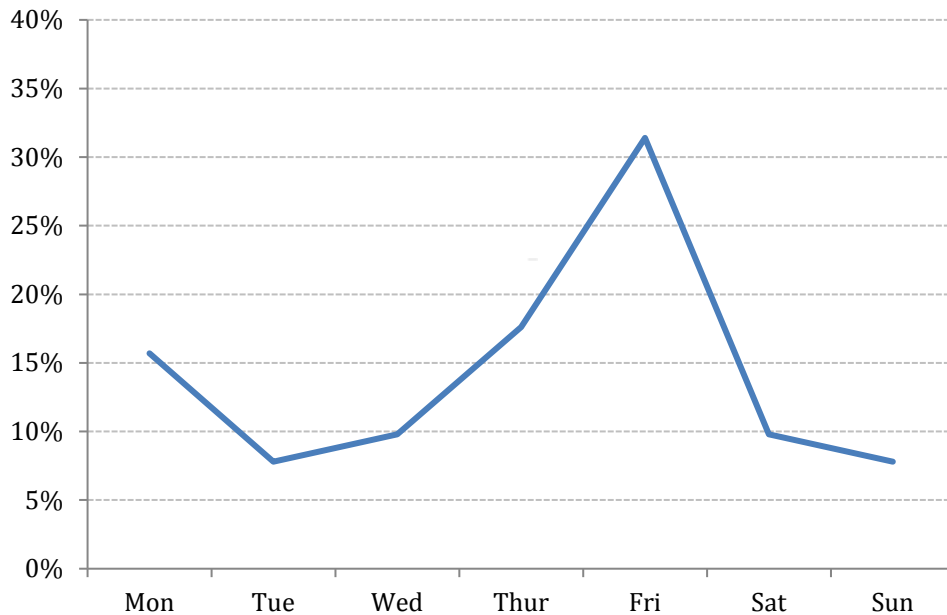
Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.



**Figure 94: Amphetamine-related attendances by month ACT, March, June, September and December 2017**



**Figure 95: Amphetamine-related attendances by time of day in ACT, March, June, September and December 2017**



**Figure 96: Percentage of amphetamine-related attendances over total attendances by day of week in ACT, March, June, September and December 2017**

### **Crystal methamphetamine-related attendances in ACT**

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2017.

Numbers and rates of crystal methamphetamine-related ambulance attendances are shown in Table 92. Characteristics of crystal methamphetamine-related ambulance attendances in ACT for March, June, September and December 2017 are shown in Table 93. Data regarding numbers of attendances occurring in each month, time of day and day of week of attendances are displayed in Figure 97 to Figure 99.

- Crystal methamphetamine-related attendances peaked during December 2017 (Table 92).
- As shown in Table 93, in March, June, September and December 2017:
  - there were 35 crystal methamphetamine-related cases in the ACT
  - the majority of patients attended for crystal methamphetamine-related cases were male (71%)
  - median age of patients with crystal methamphetamine-related attendances was 32 years
  - the majority of patients with crystal methamphetamine-related attendances (77%) were transported to hospital
- As presented in Figure 92, crystal methamphetamine-related attendance numbers peaked during the morning between 6am and 8am.



- Fridays represented the peak day for crystal methamphetamine-related attendances in 2017 (Figure 93).

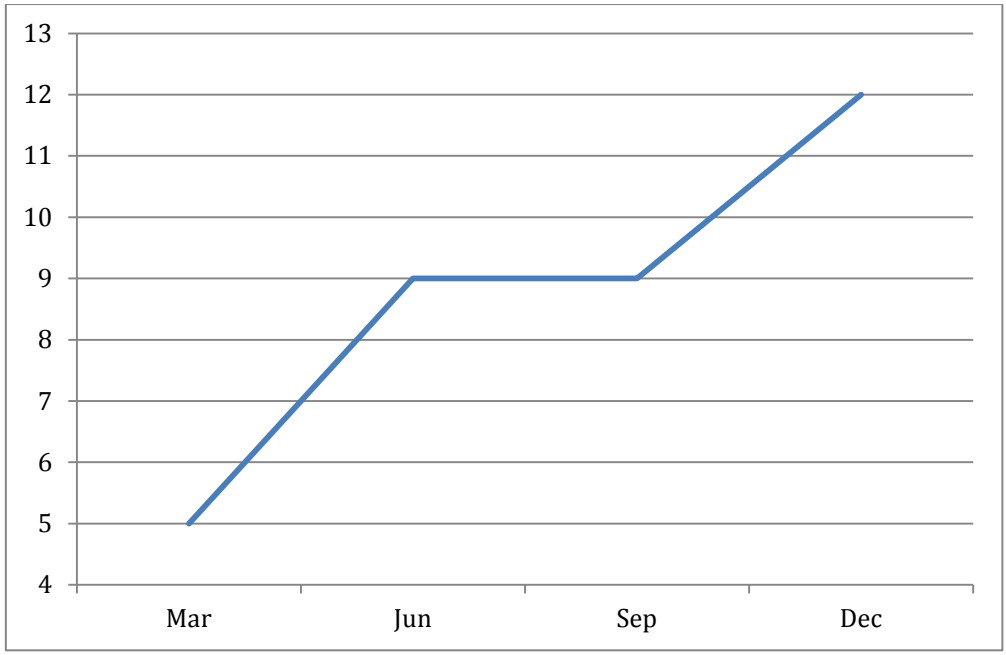
**Table 92: Crystal methamphetamine-related ambulance attendances by month in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	5 (1.2)
June attendances (per 100,000 population)	9 (2.2)
September attendances (per 100,000 population)	9 (2.2)
December attendances (per 100,000 population)	12 (3.0)

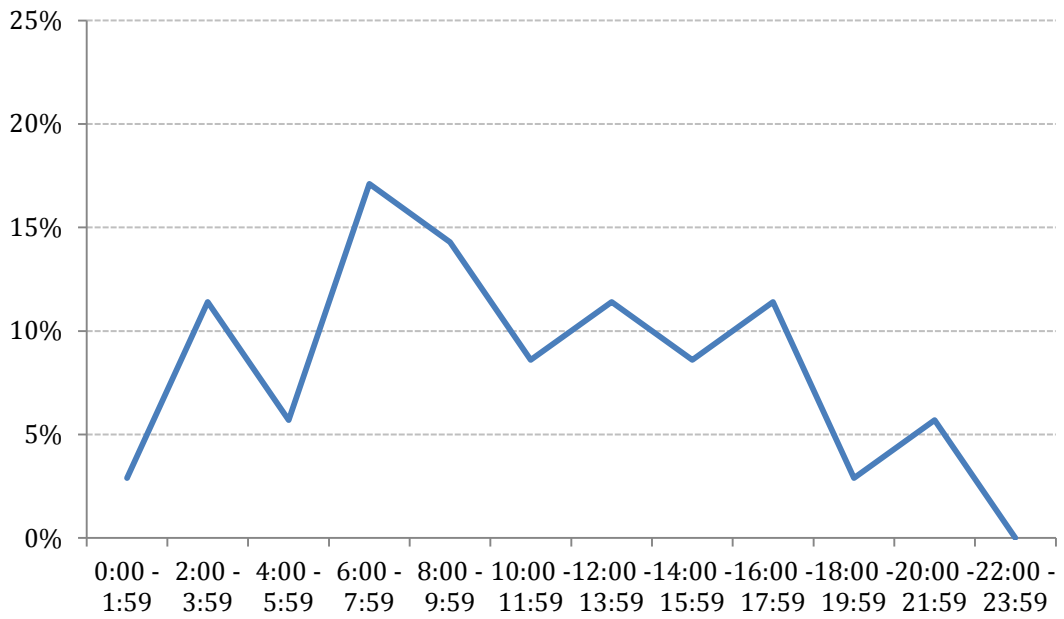
**Table 93: Characteristics of crystal methamphetamine-related ambulance attendances in ACT, March, June, September and December 2017**

	ACT
Number of attendances (per 100,000 population)	35 (8.7)
Mean attendances per day	0.3
Daily range	N<5
Age- median (quartiles)	32 (23-43)
Male	25 (71%)
Public outdoor space	N<5
Police co-attendance	8 (23%)
Transport to hospital	27 (77%)
Alcohol involved/mentioned	7 (20%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	10 (29%)

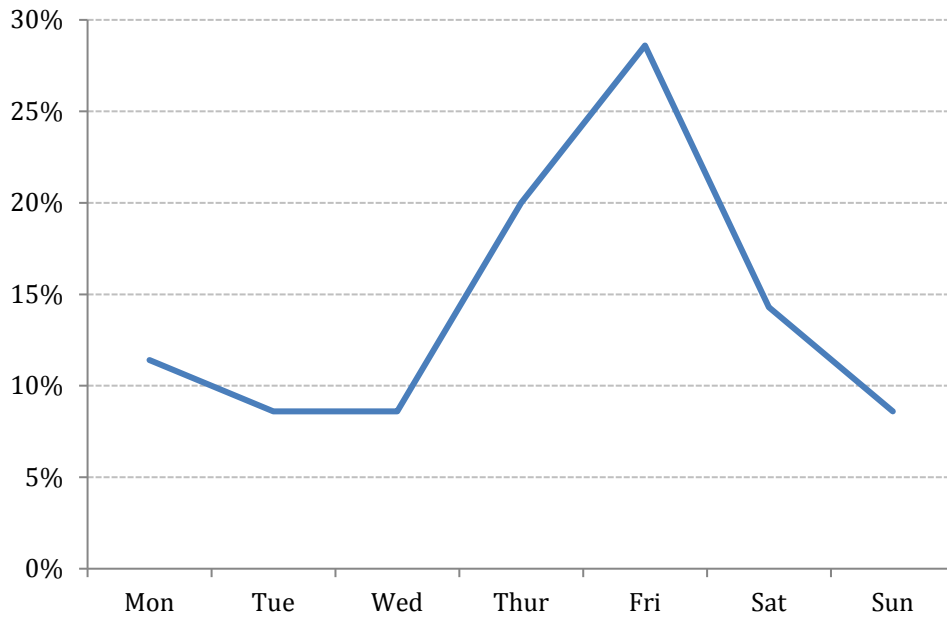
Note: all proportions are based on non-missing information



**Figure 97: Crystal amphetamine-related attendances by ACT, March, June, September and December 2017**



**Figure 98: Crystal methamphetamine-related attendances by time of day in ACT, March, June, September and December 2017**



**Figure 99: Percentage of crystal methamphetamine-related attendances over total attendances by day of week in ACT, March, June, September and December 2017**

## Cannabis-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2017.

Numbers and rates of cannabis-related ambulance attendances are shown in Table 94. Characteristics of cannabis-related ambulance attendances in ACT for March, June, September and December 2017 are shown in Table 94. Data regarding month, time of day and day of week of attendances are displayed in Figure 100 to Figure 102.

- As shown in Table 94, in March, June, September and December 2017:
  - Cannabis attendances peaked in December 2017.
  - there were 51 cannabis-related cases in the ACT
  - the majority of patients attended for cannabis-related cases were male (61%)
  - median age of patients with cannabis-related attendances was 30 years
  - more than three-quarters of patients with cannabis-related attendances were transported to hospital (80%)
- As presented in Figure 97, cannabis-related attendance numbers in ACT peaked between 8pm and 12am.
- Saturdays represented the peak day for cannabis-related attendances in 2017 (Figure 102).

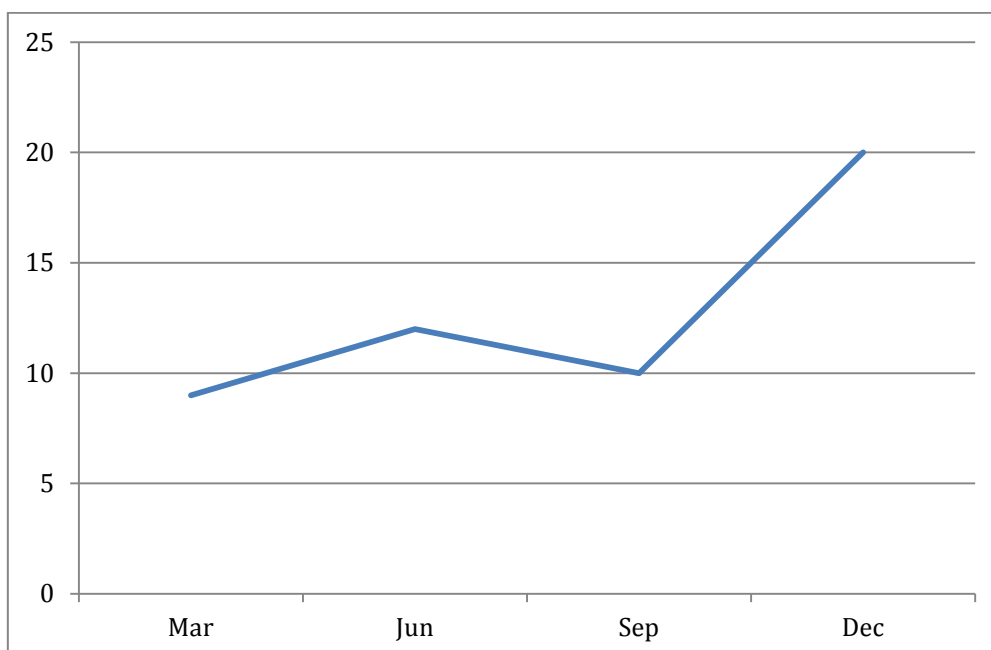
**Table 94: Cannabis-related ambulance attendances by month in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	9 (2.2)
June attendances (per 100,000 population)	12 (3.0)
September attendances (per 100,000 population)	10 (2.5)
December attendances (per 100,000 population)	20 (5.0)

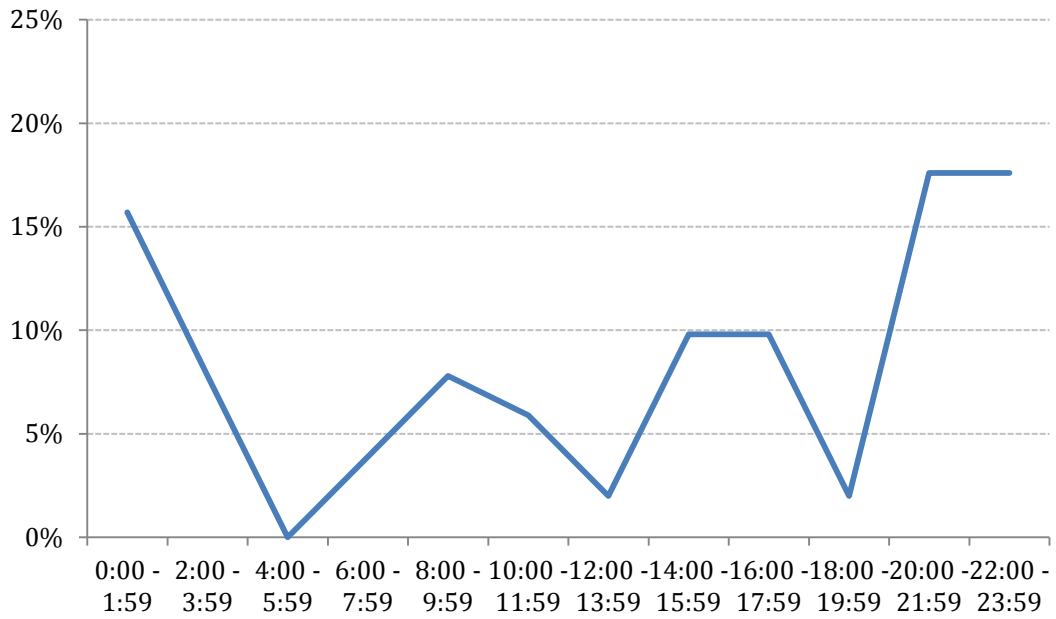
**Table 95: Characteristics of cannabis-related ambulance attendances in ACT, March, June, September and December 2017**

	ACT
Number of attendances (per 100,000 population)	51 (12.6)
Mean attendances per day	0.4
Daily range	N<5
Age- median (quartiles)	30 (21-36)
Male	31 (61%)
Public outdoor space	N<5
Police co-attendance	N<5
Transport to hospital	41 (80%)
Alcohol involved/mentioned	22 (43%)
Alcohol intoxication	13 (26%)
Multiple drugs involved (excluding alcohol)	18 (35%)

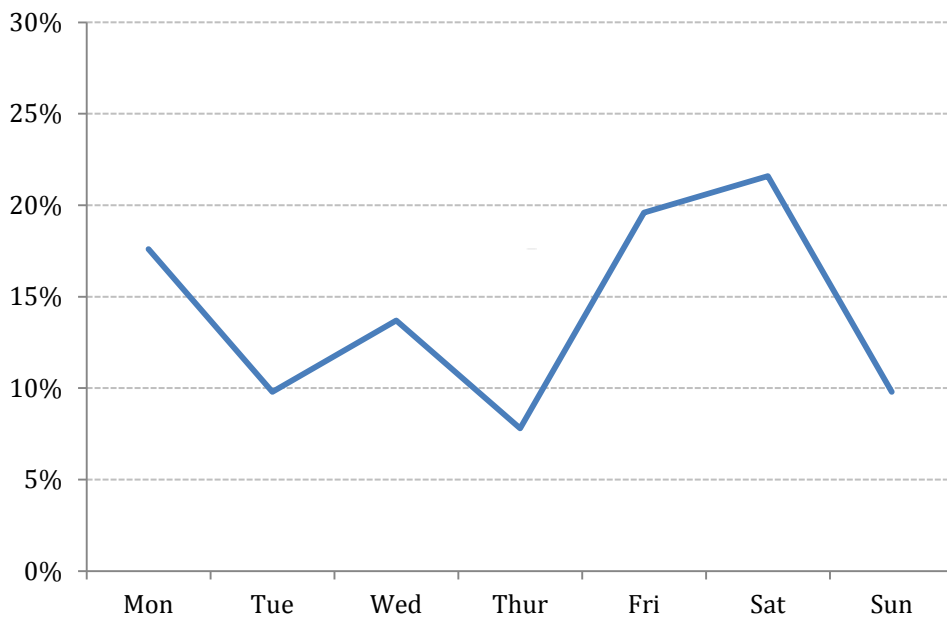
Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.



**Figure 100: Cannabis-related attendances by month in ACT, March, June, September and December 2017**



**Figure 101: Cannabis-related attendances by time of day in ACT, March, June, September and December 2017**



**Figure 102: Percentage of cannabis-related attendances over total attendances by day of week in ACT, March, June, September and December 2017**

## Heroin-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2017.

Numbers and rates of heroin-related ambulance attendances are shown in Table 96. Characteristics of heroin-related ambulance attendances in ACT for March, June, September and December 2017 are shown in Table 97. Data regarding month, time of day and day of week of attendances are displayed in Figure 103 to Figure 105.

- Heroin attendances peaked in December 2017 (Table 96).
- As shown in Table 97, in March, June, September and December 2017:
  - there were 70 heroin-related cases in the ACT
  - the majority of patients attended for heroin-related cases were male (66%)
  - median age of patients with heroin-related attendances was 39 years
  - almost two-fifths of patients with heroin-related attendances were transported to hospital (39%)
  - As presented in Figure 104, heroin-related attendance numbers peaked from 2pm to 4pm.
  - Fridays represented the peak day for heroin-related attendances in 2017 (Figure 105).

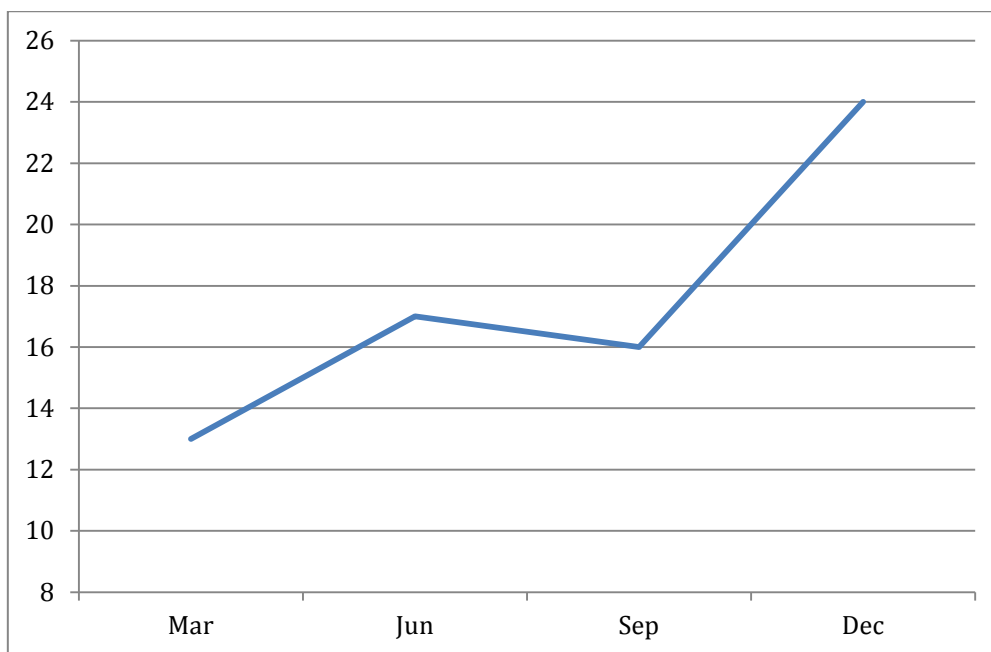
**Table 96: Heroin-related ambulance attendances by month in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	13 (3.2)
June attendances (per 100,000 population)	17 (4.2)
September attendances (per 100,000 population)	16 (4.0)
December attendances (per 100,000 population)	24 (5.9)

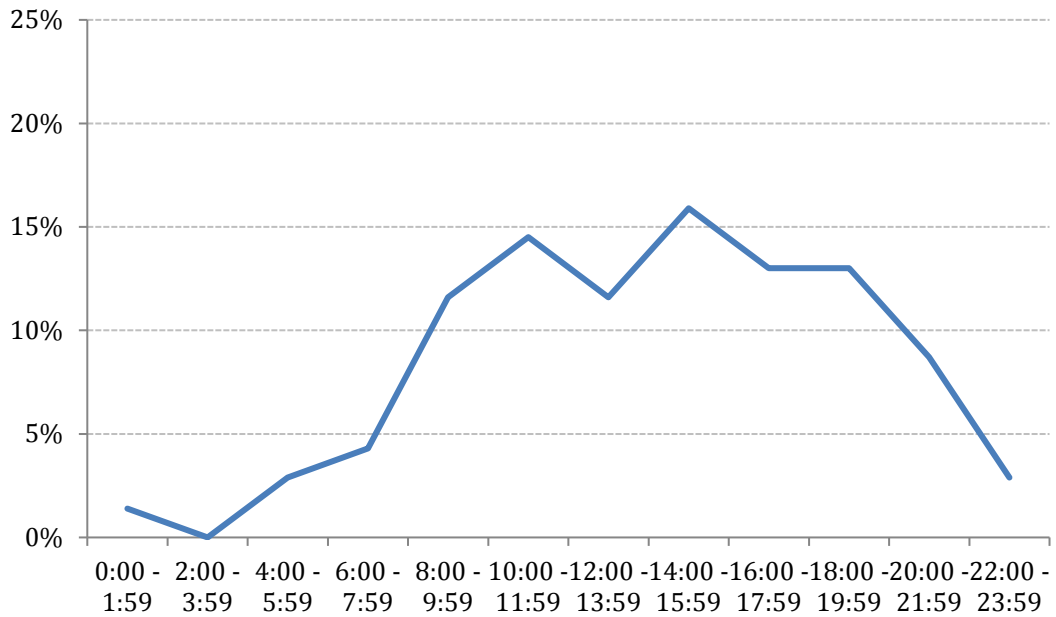
**Table 97: Characteristics of heroin-related ambulance attendances in ACT, March, June, September and December 2017**

	ACT
Number of attendances (per 100,000 population)	70 (17.3)
Mean attendances per day	0.6
Daily range	N<5
Age- median (quartiles)	39 (30-45)
Male	46 (66%)
Public outdoor space	12 (17%)
Police co-attendance	8 (11%)
Transport to hospital	27 (39%)
Alcohol involved/mentioned	6 (9%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	11 (16%)
Responded to naloxone	34 (49%)

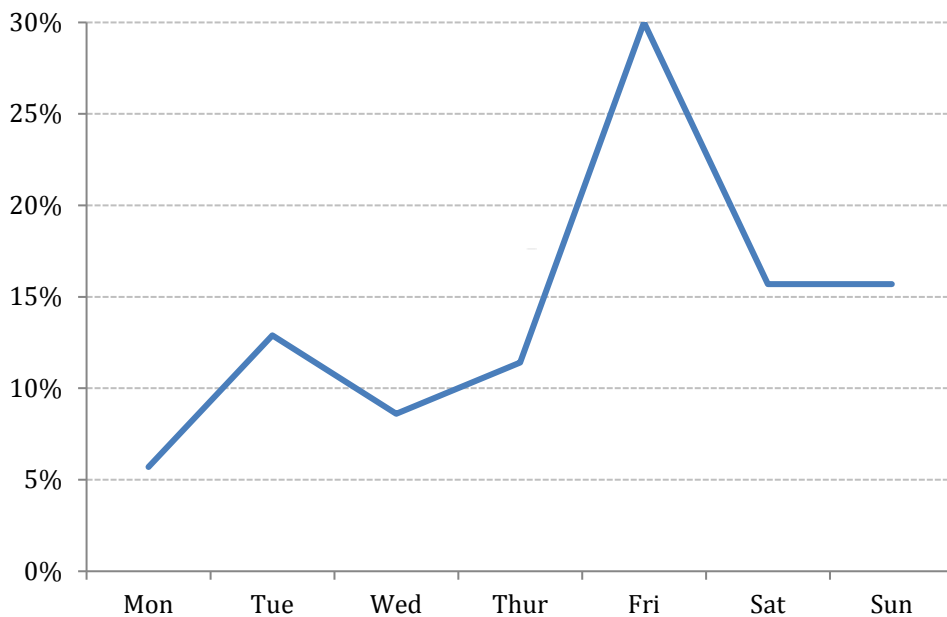
Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.



**Figure 103: Heroin-related attendances by month in ACT, March, June, September and December 2017**



**Figure 104: Heroin-related attendances by time of day in ACT, March, June, September and December 2017**



**Figure 105: Percentage of heroin-related attendances over total attendances by day of week in ACT, March, June, September and December 2017**

### Emerging psychoactive substance-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2017.



Numbers and rates of emerging psychoactive substance-related ambulance attendances are shown in Table 98. Characteristics of emerging psychoactive substance-related ambulance attendances in ACT for March, June, September and December 2017 are shown in Table 99. There were zero cases involving emerging psychoactive substances in the ACT in 2017.

**Table 98: Emerging psychoactive-related ambulance attendances by month in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	0
June attendances (per 100,000 population)	0
September attendances (per 100,000 population)	0
December attendances (per 100,000 population)	0

**Table 99: Characteristics of emerging psychoactive-related ambulance attendances in ACT, March, June, September and December 2017**

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

Figures include March, June, September and December data

## Benzodiazepine-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2017.

Numbers and rates of benzodiazepine-related ambulance attendances are shown in Table 100. Characteristics of benzodiazepine-related ambulance attendances in ACT for March, June, September and December 2017 are shown in Table 101. Data regarding month, time of day and day of week of attendances are displayed in Figure 106 to Figure 108.

- Benzodiazepine-related attendances numbers peaked in March 2017 (Table 100).
- As shown in Table 100, in March, June, September and December 2017:
  - there were 56 benzodiazepine-related cases in the ACT

- the majority of patients attended for benzodiazepine-related cases were female (64%)
- median age of patients with benzodiazepine-related attendances was 38.5 years
- multiple drugs (excluding alcohol) were involved in over half (55%) of all benzodiazepine-related attendances
- As presented in Figure 107, benzodiazepine-related attendance numbers peaked between the hours of 2pm and 4pm.
- Mondays represented the peak day for benzodiazepine-related attendances (Figure 108).

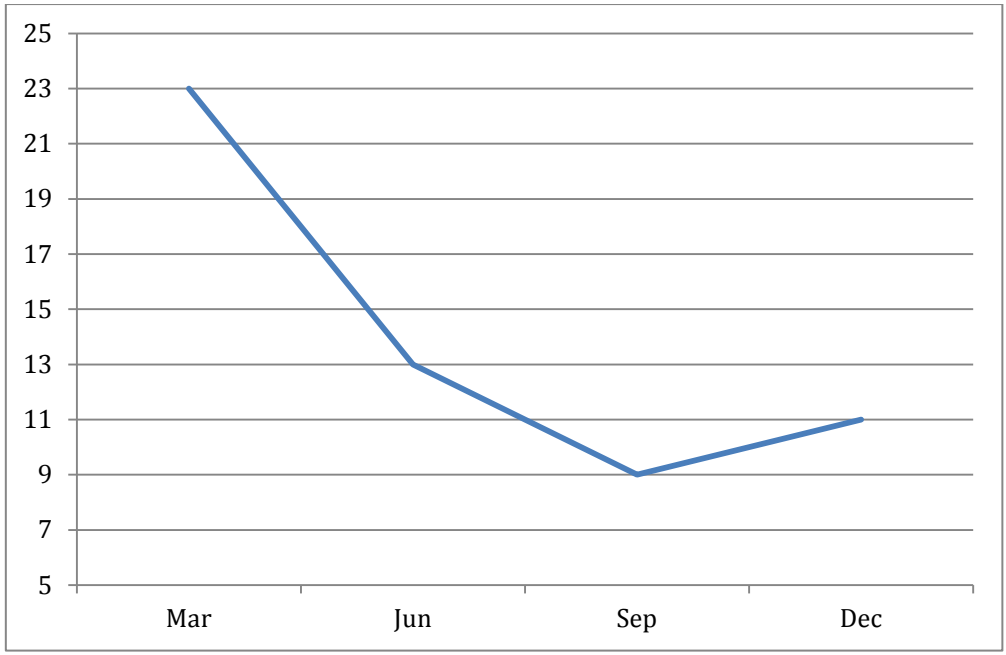
**Table 100: Benzodiazepine-related ambulance attendances by month in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	23 (5.7)
June attendances (per 100,000 population)	13 (3.2)
September attendances (per 100,000 population)	9 (2.2)
December attendances (per 100,000 population)	11 (2.7)

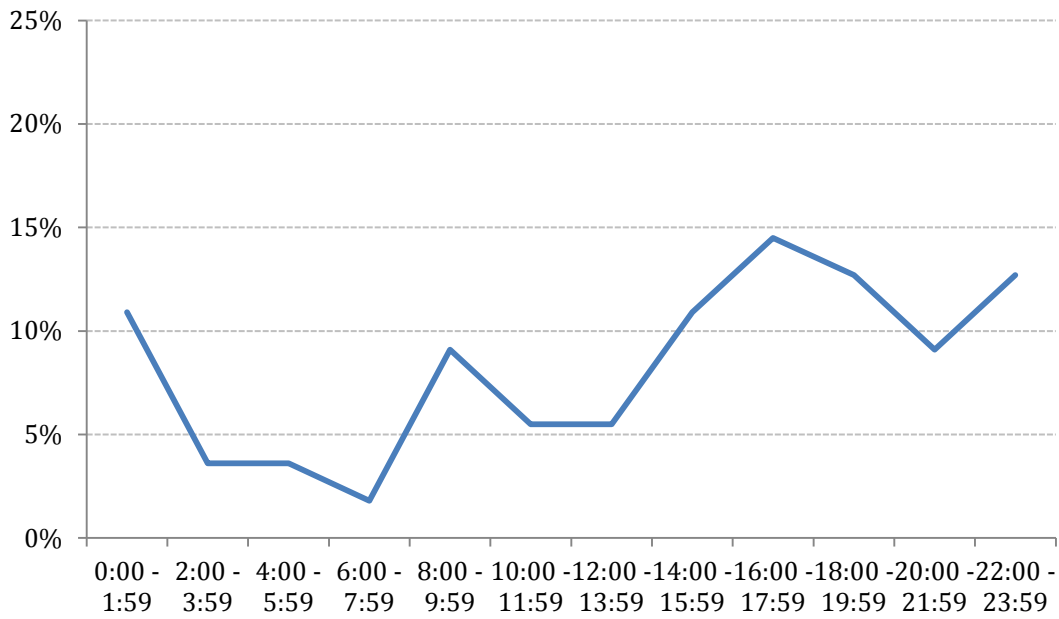
**Table 101: Characteristics of benzodiazepine-related ambulance attendances in ACT, March, June, September and December 2017**

	ACT
Number of attendances (per 100,000 population)	56 (13.9)
Mean attendances per day	0.5
Daily range	N<5
Age- median (quartiles)	38.5 (27-46)
Male	20 (36%)
Public outdoor space	N<5
Police co-attendance	13 (23%)
Transport to hospital	50 (89%)
Alcohol involved/mentioned	15 (27%)
Alcohol intoxication	9 (16%)
Multiple drugs involved (excluding alcohol)	31 (55%)

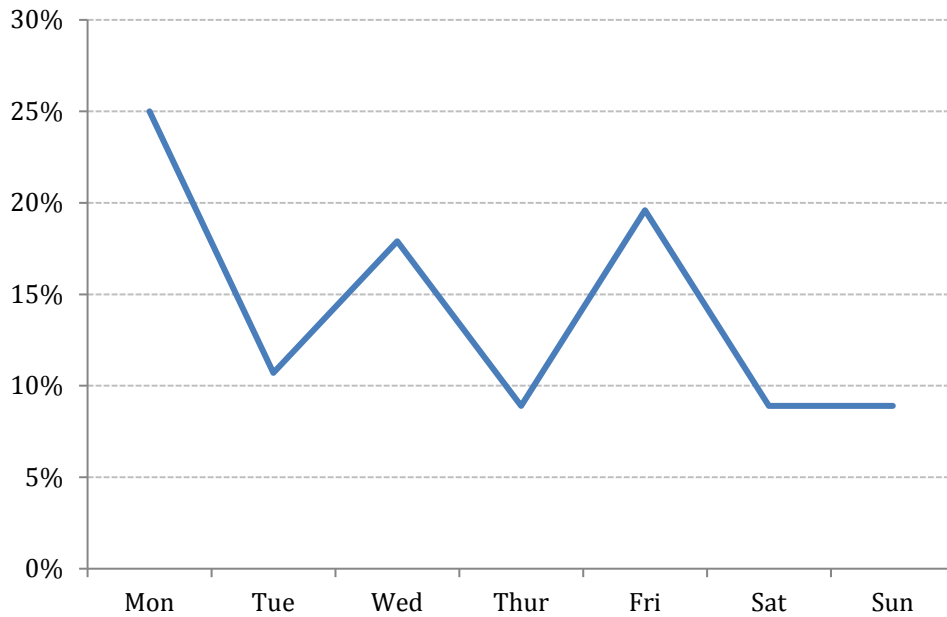
Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data



**Figure 106: Benzodiazepine-related attendances by month in ACT, March, June, September and December 2017**



**Figure 107: Benzodiazepine-related attendances by time of day in ACT, March, June, September and December 2017**



**Figure 108: Percentage of benzodiazepine-related attendances over total attendances by day of week in ACT, March, June, September and December 2017**

## Opioid analgesic-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2017.

Numbers and rates of opioid analgesic-related ambulance attendances are shown in Table 102. Characteristics of opioid analgesic-related ambulance attendances in ACT for March, June, September and December 2017 are shown in Table 103. 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 2017 (Table 102).
- As shown in Table 103, in March, June, September and December 2017:
  - there were 22 opioid analgesic-related cases in the ACT
  - the half of opioid analgesic-related attendances involved male patients (50%)
  - median age of patients with opioid analgesic-related attendances was 46 years
  - the majority of patients with opioid analgesic-related attendances were transported to hospital (77%)
  - more than one-third of all opioid analgesic-related attendances involved multiple drugs (36%) (excluding alcohol)

**Table 102: Opioid analgesic-related ambulance attendances by month in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	N<5
June attendances (per 100,000 population)	N<5
September attendances (per 100,000 population)	7 (1.7)
December attendances (per 100,000 population)	8 (2.0)

**Table 103: Characteristics of opioid analgesic-related ambulance attendances in ACT, March, June, September and December 2017**

	ACT
Number of attendances (per 100,000 population)	22 (5.5)
Mean attendances per day	0.2
Daily range	N<5
Age- median (quartiles)	46 (35-48)
Male	11 (50%)
Public outdoor space	0
Police co-attendance	N<5
Transport to hospital	17 (77%)
Alcohol involved/mentioned	10 (46%)
Alcohol intoxication	5 (23%)
Multiple drugs involved (excluding alcohol)	8 (36%)
Morphine	N<5
Oxycodone	12 (55%)

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

## Opioid pharmacotherapy-related attendances in ACT

Results are presented covering one month from each quarterly period of data collection and coding for ACT in 2017.

Numbers and rates of opioid pharmacotherapy-related ambulance attendances are shown in Table 104. Characteristics of opioid pharmacotherapy-related ambulance attendances in ACT for March, June, September and December 2017 are shown in Table 105. Numbers are less than five therefore no further detail can be reported.

**Table 104: Opioid pharmacotherapy-related ambulance attendances by month in ACT, March, June, September and December 2017**

	ACT
March attendances (per 100,000 population)	N<5
June attendances (per 100,000 population)	N<5
September attendances (per 100,000 population)	0
December attendances (per 100,000 population)	0

**Table 105: Characteristics of opioid pharmacotherapy-related ambulance attendances in ACT, March, June, September and December 2017**

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

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

## **Alcohol intoxication and other drug-related attendances: 2016 and 2017**

Alcohol intoxication and other drug-related ambulance attendance numbers in March, June, September and December 2016 and 2017 are shown in Table 106. There were no statistically significant increases or decreases in alcohol intoxication or other drug-related ambulance attendances between 2016 and 2017.

**Table 106. Number of alcohol intoxication and other drug-related attendances in 2016 and 2017 (March, June, September and December), ACT**

<b>N attendances</b>	<b>2016*</b>	<b>2017*</b>	<b>% Diff</b>
Alcohol intoxication	514	537	+4.5%
Amphetamine	43	51	+18.6%
Crystal methamphetamine	35	35	0%
Cannabis	60	51	-15.0%
Heroin	54	70	+29.6%
Emerging psychoactive substance	N<5	0	-
Benzodiazepine	65	56	-13.8%
Opioid analgesic	33	22	-33.3%
Opioid pharmacotherapy	6	N<5	-

\*2016 and 2017 numbers include March, June, September and December data

## **Alcohol and other drug overdose-related ambulance attendances in ACT**

AOD overdose-related ambulance attendances by month are shown in Table 107, and characteristics of AOD overdose-related ambulance attendances are displayed in Table 108. Drugs involved in AOD overdose-related ambulance attendances in ACT are presented in Table 109. It is important to note that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

- As shown in Table 107 to Table 109:
  - accidental AOD overdose and intentional-related attendances peaked in March while overdoses with unknown intent were highest in December 2017
  - the majority of patients attended for accidental AOD overdose cases were male (64%), while the majority of patients attended for intentional AOD overdose (81%) and overdose with unknown intent (63%) were female
  - heroin contributed to the greatest proportion of AOD accidental overdoses (57%) in ACT
  - alcohol was involved in 23% of accidental overdoses, 12% of overdoses with unknown intent and 18% of intentional overdose-related attendances
  - benzodiazepines contributed to the greatest proportion of AOD overdose-related attendances with unknown intent (14%) and intentional overdoses (25%)

**Table 107: AOD overdose-related ambulance attendances by month in ACT, March, June, September and December 2017**

Attendances (per 100,000 population)	Accidental overdose	Overdose with unknown intent	Intentional overdose
March	13 (3.2)	8 (2.0)	19 (4.7)
June	10 (2.5)	8 (2.0)	16 (4.0)
September	9 (2.2)	9 (2.2)	14 (3.5)
December	12 (3.0)	18 (4.5)	18 (4.5)

**Table 108: Characteristics of AOD overdose-related ambulance attendances in ACT, March, June, September and December 2017**

	Accidental overdose	Overdose with unknown intent	Intentional overdose
Number of attendances (per 100,000 population)	43 (10.7)	44 (10.9)	67 (16.6)
Number of fatal overdoses	0	N<5	N<5
Age- median (quartiles)	37 (29-49)	35 (21-49)	28 (19-40)
Male	28 (64%)	16 (37%)	13 (19%)
Transport to hospital	19 (43%)	34 (79%)	66 (98%)
Police co-attendance	N<5	N<5	12 (18%)

Note: all proportions are based on non-missing information

AOD overdoses include all recorded substances

Figures include March, June, September and December data.

**Table 109: Drugs involved in overdose-related ambulance attendances in ACT, March, June, September and December 2017**

	Accidental overdose	Overdose with unknown intent	Intentional overdose
Alcohol involved/mentioned	10 (23%)	5 (12%)	12 (18%)
Alcohol intoxication only	N<5	N<5	0 (0%)
Amphetamine	N<5	0 (0%)	0 (0%)
Crystal methamphetamine	N<5	0 (0%)	0 (0%)
Cannabis	N<5	0 (0%)	0 (0%)
Heroin	25 (57%)	5 (12%)	0 (0%)
Emerging psychoactive substance	0 (0%)	0 (0%)	0 (0%)
Benzodiazepine	N<5	6 (14%)	17 (25%)
Opioid analgesic	N<5	N<5	6 (9%)
Opioid pharmacotherapy	0 (0%)	0 (0%)	0 (0%)

Figures include March, June, September and December data.



## Chapter 8: Results – Northern Territory

### Alcohol intoxication-related attendances in NT

Results are presented covering one month from each quarterly period of data collection and coding for the Northern Territory in 2017.

Numbers and rates of alcohol intoxication-related ambulance attendances in the Northern Territory are shown in. Characteristics of alcohol intoxication-related ambulance attendances for March, June, September and December 2017 are shown in Table 111. Data regarding time of day and day of week of attendances are displayed in Figure 109 to Figure 111.

- Alcohol intoxication-related attendances peaked in December 2017 (Table 110).
- As shown in Table 111 in March, June, September and December 2017:
  - there were 1,422 alcohol intoxication-related cases in the Northern Territory
  - the majority of patients attended for alcohol intoxication-related cases were female (54%)
  - median age of patients with alcohol intoxication-related attendances was 43 years
  - two-thirds of patients with alcohol intoxication-related attendances were transported to hospital (67%)
  - only 0.4% of alcohol intoxication-related attendances involved multiple drugs
- As presented in Figure 110, alcohol intoxication-related attendance numbers in the Northern Territory peaked in the evening between 8pm and midnight.
- Fridays represented the peak day for alcohol intoxication-related attendances (Figure 111).

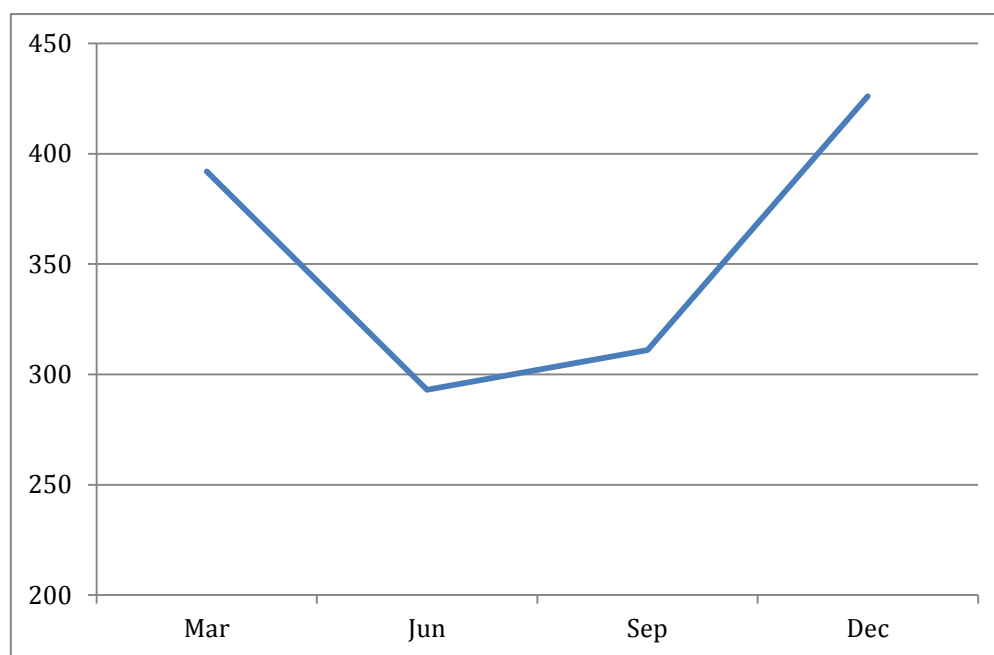
**Table 110: Alcohol intoxication-related ambulance attendances by month in Northern Territory, March, June, September and December 2017**

	NT
March attendances (per 100,000 population)	392 (159.5)
June attendances (per 100,000 population)	293 (119.2)
September attendances (per 100,000 population)	311 (126.6)
December attendances (per 100,000 population)	426 (173.4)

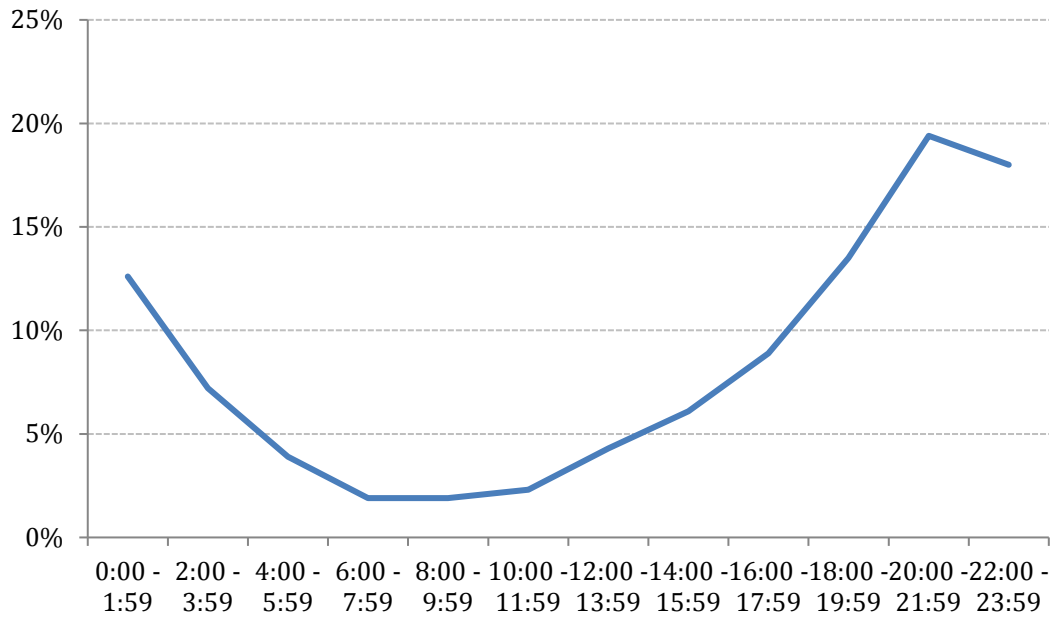
**Table 111: Characteristics of alcohol intoxication-related ambulance attendances in Northern Territory, March, June, September and December 2017**

	NT
Number of attendances (per 100,000 population)	1,422 (578.7)
Mean attendances per day	11.7
Daily range	N<5-30
Age- median (quartiles)	43 (32-49)
Male	649 (46%)
Police co-attendance	378 (27%)
Transport to hospital	951 (67%)
Multiple drugs involved	5 (0.4%)

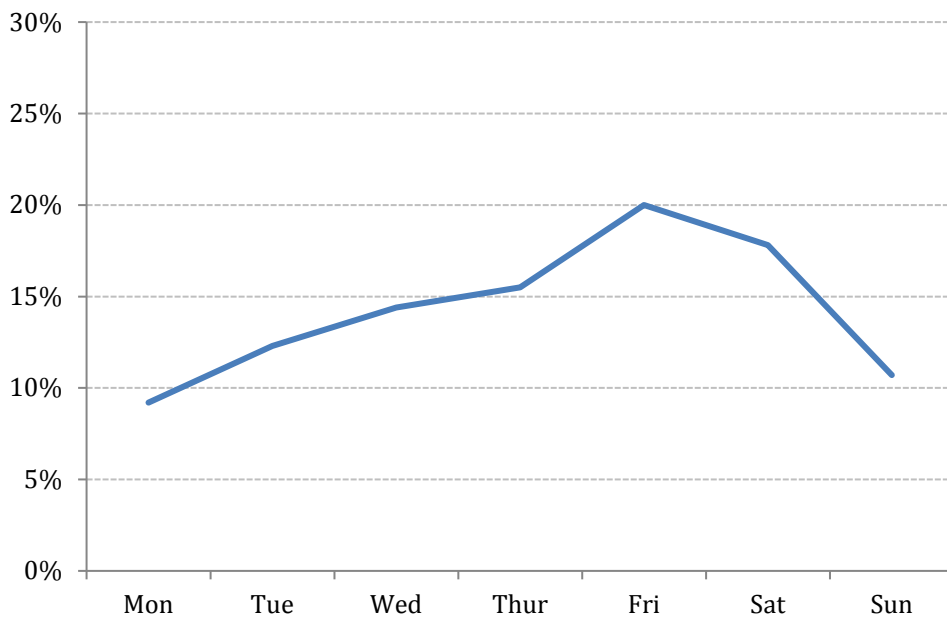
Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.



**Figure 109: Alcohol-related attendances by month in NT, March, June, September and December 2017**



**Figure 110: Alcohol intoxication-related attendances by time of day in NT, March, June, September and December 2017**



**Figure 111: Alcohol intoxication-related attendances by day of week in NT, March, June, September and December 2017**

### All amphetamine-related attendances in NT

Results are presented covering one month from each quarterly period of data collection and coding for the NT in 2017.

Numbers and rates of amphetamine-related ambulance attendances in the NT are shown in Table 112. Characteristics of amphetamine-related ambulance attendances for March, June, September and

December 2017 are shown in Table 113. Data regarding month, time of day and day of week of attendances are displayed in Figure 112 to Figure 114.

- Data for March, June, September and December 2017 are presented in Table 112:
  - there were  $\geq 25$  amphetamine-related attendances in the Northern Territory
  - the majority of patients attended for amphetamine-related cases were male (62%)
  - median age of patients with amphetamine-related attendances in the NT was 32 years
  - the majority of patients with amphetamine-related attendances were transported to hospital (69%)
- As presented in Figure 107, amphetamine-related attendance numbers peaked between 8pm to 10pm.
- Saturdays represented the peak day for amphetamine-related attendances in 2017 (Figure 108).

**Table 112: Amphetamine-related ambulance attendances by month in Northern Territory, March, June, September and December 2017**

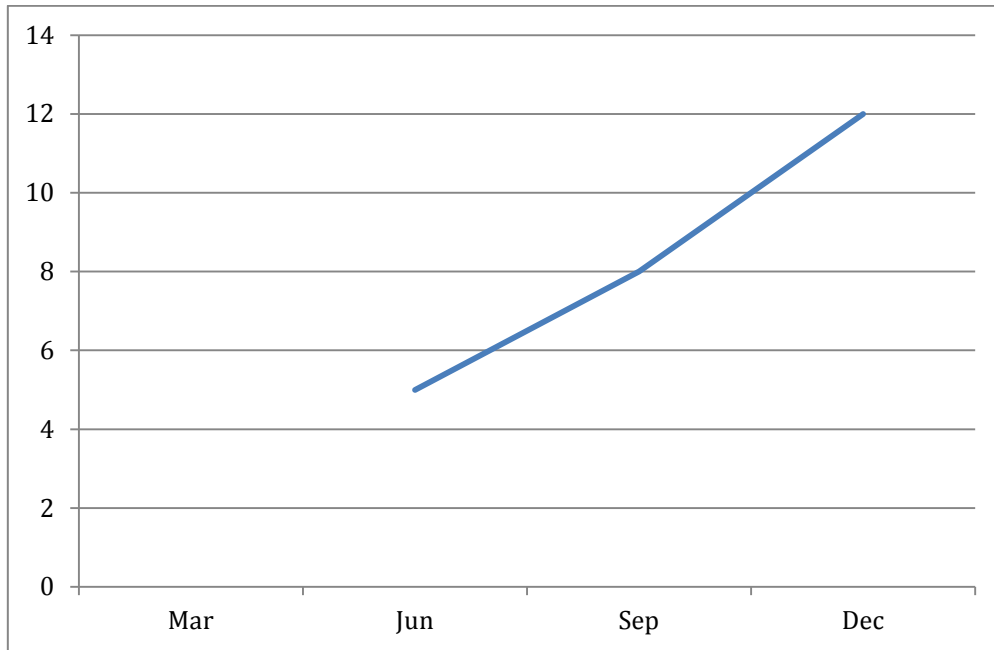
	NT
March attendances (per 100,000 population)	N<5
June attendances (per 100,000 population)	5 (2.0)
September attendances (per 100,000 population)	8 (3.3)
December attendances (per 100,000 population)	12 (4.9)

Numbers of attendances were too low to report by month

**Table 113: Characteristics of amphetamine-related ambulance attendances in NT, March, June, September and December 2017**

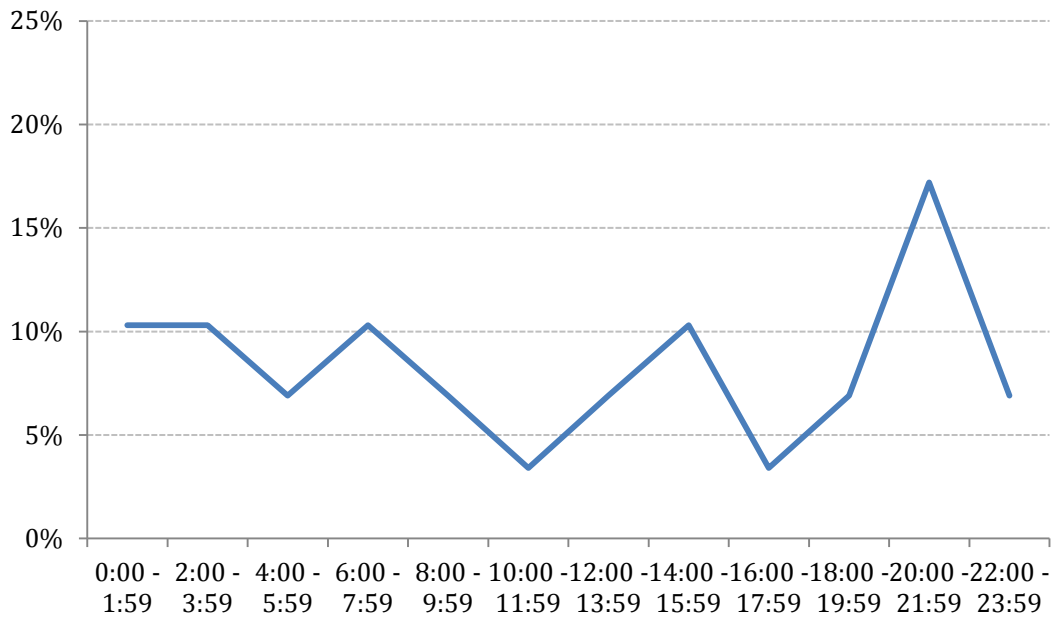
	NT
Number of attendances (per 100,000 population)	$\geq 25$ (11.8)
Mean attendances per day	0.2
Daily range	N<5
Age- median (quartiles)	32 (27-40)
Male	18 (62%)
Police co-attendance	12 (41%)
Transport to hospital	20 (69%)
Alcohol involved/mentioned	13 (45%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	14 (48%)

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data

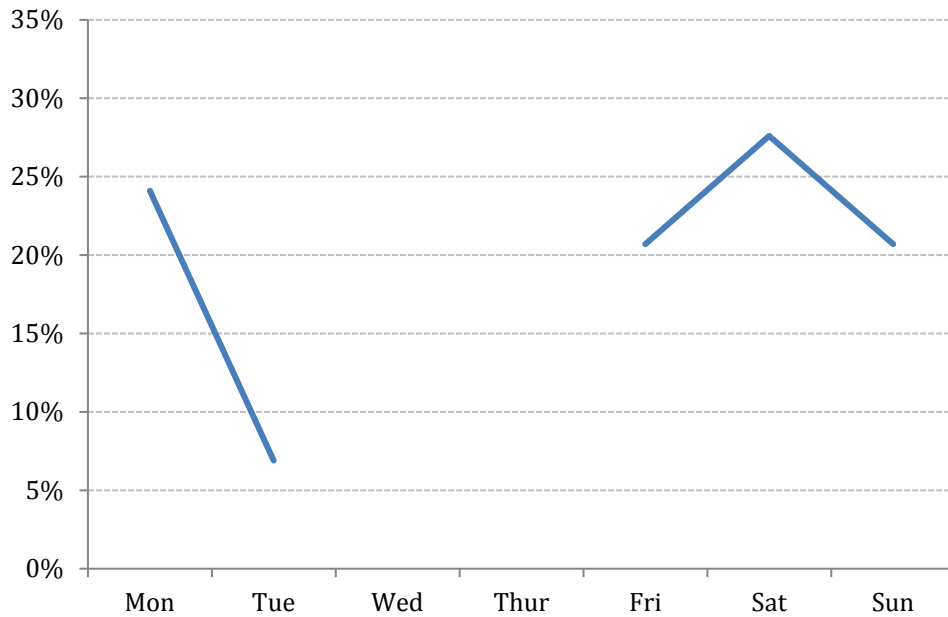


Note: March data not shown due to N<5

**Figure 112: Amphetamine-related attendances by month NT, March, June, September and December 2017**



**Figure 113: Amphetamine-related attendances by time of day in NT, March, June, September and December 2017**



Note: Data not shown due to N<5

**Figure 114: Amphetamine-related attendances by day of week in NT, March, June, September and December 2017**

## Crystal methamphetamine-related attendances in NT

Results are presented covering one month from each quarterly period of data collection and coding for the NT in 2017.

Numbers and rates of crystal methamphetamine-related ambulance attendances in the NT are shown in Table 114. Characteristics of crystal methamphetamine-related ambulance attendances for March, June, September and December 2017 are shown in Table 115.

Crystal methamphetamine attendances were low across all reported months in 2017 (Table 114).

- Data for March, June, September and December 2017 are presented in Table 114:
  - 21 crystal methamphetamine-related cases were recorded in the NT
  - the majority of crystal methamphetamine-related attendances were for male patients (67%)
  - median age of patients with crystal methamphetamine-related attendances was 32 years
  - the majority of patients with crystal methamphetamine-related attendances were transported to hospital (71%)

**Table 114: Crystal methamphetamine-related ambulance attendances by month in NT, March, June, September and December 2017**

	NT
March attendances (per 100,000 population)	N<5
June attendances (per 100,000 population)	N<5
September attendances (per 100,000 population)	5 (2.0)
December attendances (per 100,000 population)	9 (3.7)

**Table 115: Characteristics of crystal methamphetamine-related ambulance attendances in NT, March, June, September and December 2017**

	NT
Number of attendances (per 100,000 population)	21 (8.5)
Mean attendances per day	0.2
Daily range	N<5
Age- median (quartiles)	32 (26-41)
Male	14 (67%)
Police co-attendance	9 (43%)
Transport to hospital	15 (71%)
Alcohol involved/mentioned	10 (48%)
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	10 (48%)

Note: all proportions are based on non-missing information

## Cannabis-related attendances in NT

Results are presented covering one month from each quarterly period of data collection and coding for the NT in 2017.

Numbers and rates of cannabis-related ambulance attendances in the NT are shown in Table 116. Characteristics of cannabis-related ambulance attendances for March, June, September and December 2017 are shown in Table 117. Data regarding month, time of day and day of week of attendances are displayed in Figure 115 to Figure 117.

- Cannabis-related attendances peaked in September 2017 (Table 116).
- As shown in Table 117, for March, June, September and December 2017:
  - there were 134 cannabis-related cases in the NT
  - the majority of patients attended for cannabis-related cases were male (65%)
  - the median age of patients with cannabis-related attendances was 32 years
  - the majority of patients with cannabis-related attendances were transported to hospital (66%)

- Alcohol was involved in more than half (61%) of all cannabis-related attendances
- As presented in Figure 116, cannabis-related attendance numbers in the NT peaked between 8pm and midnight.
- Fridays represented the peak day for cannabis-related attendances in 2017 (Figure 117).

**Table 116: Cannabis-related ambulance attendances by month in NT, March, June, September and December 2017**

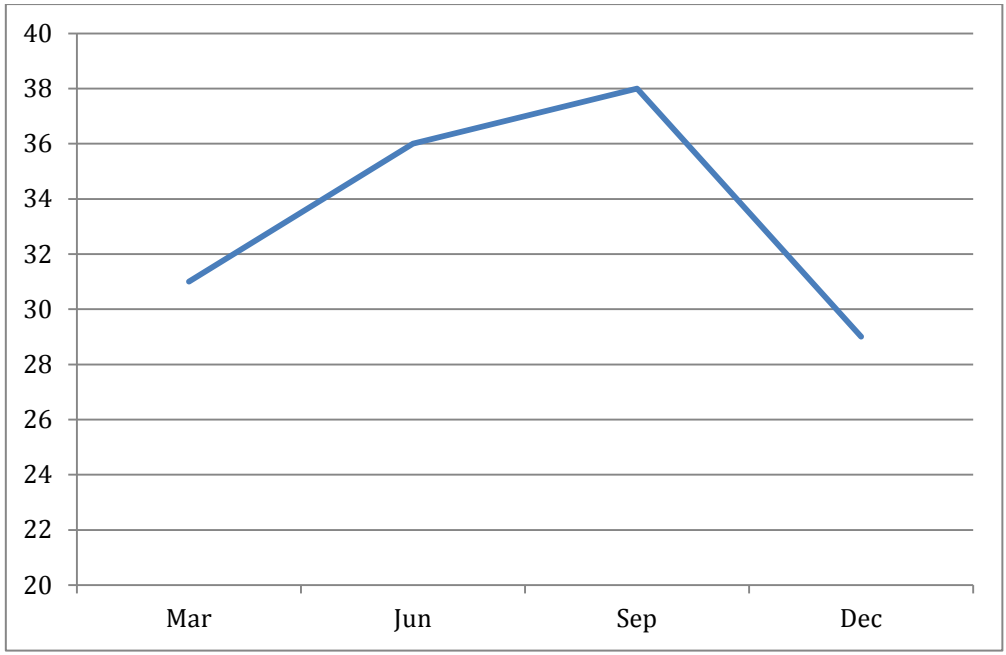
	NT
March attendances (per 100,000 population)	31 (12.6)
June attendances (per 100,000 population)	36 (14.6)
September attendances (per 100,000 population)	38 (15.5)
December attendances (per 100,000 population)	29 (11.8)

**Table 117: Characteristics of cannabis-related ambulance attendances in NT, March, June, September and December 2017**

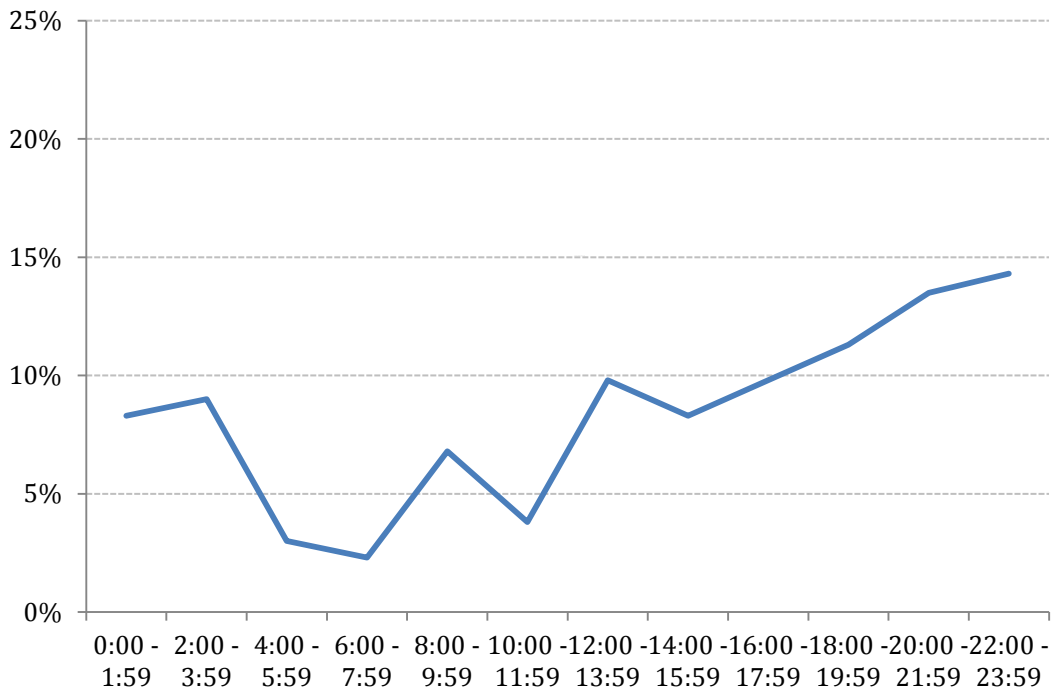
	NT
Number of attendances (per 100,000 population)	134 (54.5)
Mean attendances per day	1.1
Daily range	N<5
Age- median (quartiles)	32 (23-44)
Male	87 (65%)
Police co-attendance	35 (26%)
Transport to hospital	89 (66%)
Alcohol involved/mentioned	82 (61%)
Alcohol intoxication	38 (28%)
Multiple drugs involved (excluding alcohol)	11 (8%)

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

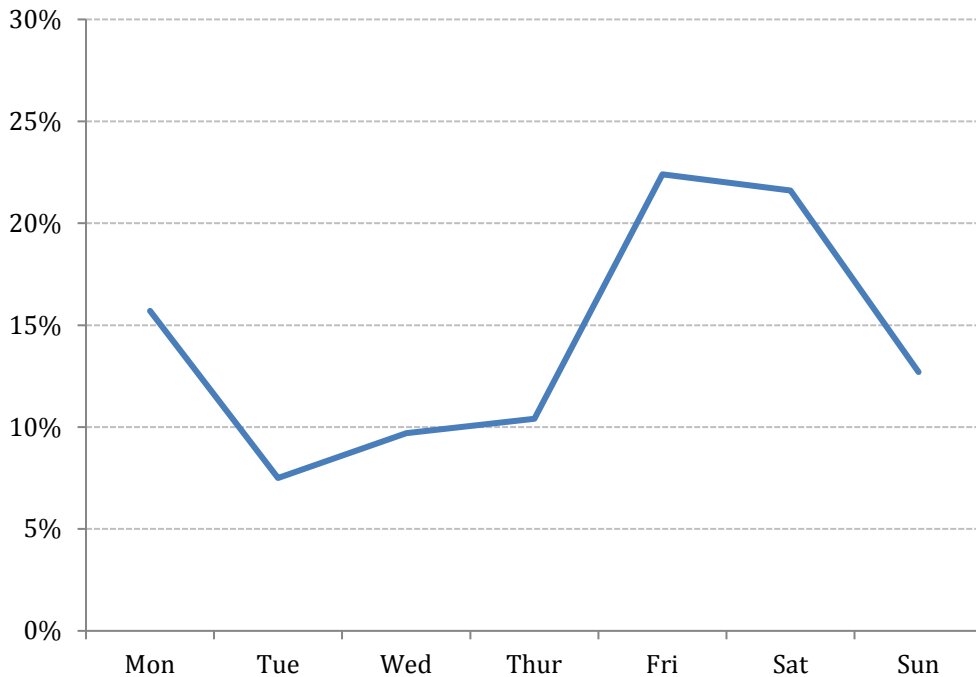




**Figure 115: Cannabis-related attendances by month in ACT, March, June, September and December 2017**



**Figure 116: Cannabis-related attendances by time of day in NT, March, June, September and December 2017**



**Figure 117: Cannabis-related attendances by day of week in NT, March, June, September and December 2017**

### **Heroin-related attendances in NT**

Results are presented covering one month from each quarterly period of data for NT in 2017. There were no heroin-related attendances in the NT during March, June, September and December 2017.

### **Emerging psychoactive substance-related attendances in NT**

Results are presented covering one month from each quarterly period of data for the NT in 2017. There were no emerging psychoactive substance-related attendances in the NT during March, June, September and December 2017.

### **Benzodiazepine-related attendances in NT**

Results are presented covering one month from each quarterly period of data for the NT in 2017.

Numbers and rates of benzodiazepine-related ambulance attendances in the NT are shown in Table 118. Characteristics of benzodiazepine-related ambulance attendances for March, June, September and December 2017 are shown in Table 119. Data regarding time of day and day of week of attendances are too small to display in figures and are not included.

- Benzodiazepine-related attendances were low across all reported months in 2017 (Table 118).

- Data for March, June, September and December 2017 are presented in Table 119:
  - $\geq 10$  benzodiazepine-related cases were recorded
  - the median age of patients with benzodiazepine-related attendances was 31 years
  - less than half of patients with benzodiazepine-related attendances were transported to hospital ( $\geq 45\%$ )
  - multiple drugs were involved in more than one-third ( $\geq 40\%$ ) of all benzodiazepine-related attendances

**Table 118: Benzodiazepine-related ambulance attendances by month in NT, March, June, September and December 2017**

	NT
March attendances (per 100,000 population)	0
June attendances (per 100,000 population)	5 (2.0)
September attendances (per 100,000 population)	5 (2.0)
December attendances (per 100,000 population)	N<5

**Table 119: Characteristics of benzodiazepine-related ambulance attendances in NT, March, June, September and December 2017**

	NT
Number of attendances (per 100,000 population)	$\geq 10$ ( $\geq 4.9$ )
Mean attendances per day	0.1
Daily range	N<5
Age- median (quartiles)	31 (27-50)
Male	N<5
Police co-attendance	6 ( $\geq 45\%$ )
Transport to hospital	8 ( $\geq 60\%$ )
Alcohol involved/mentioned	8 ( $\geq 60\%$ )
Alcohol intoxication	5 ( $\geq 40\%$ )
Multiple drugs involved (excluding alcohol)	5 ( $\geq 40\%$ )

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

## Opioid analgesic-related attendances in NT

Results are presented covering one month from each quarterly period of data for the NT in 2017.

Numbers and rates of opioid analgesic-related ambulance attendances in the NT are shown in Table 120. Characteristics of opioid analgesic-related ambulance attendances for March, June, September and December 2017 are shown in

Table 121. Data regarding time of day and day of week of attendances are too small to display in figures and are not included.

- Opioid analgesic-related attendances were low across all reported months in 2017 (Table 120).
- As shown in Table 121, in March, June, September and December 2017:
  - there were 13 opioid analgesic-related cases in the NT
  - the median age of patients with opioid analgesic-related attendances was 41 years
  - the majority of patients with opioid analgesic-related attendances in the NT were transported to hospital (62%)

**Table 120: Opioid analgesic-related ambulance attendances by month in NT, March, June, September and December 2017**

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

Numbers of attendances were too low to report by month

**Table 121: Characteristics of opioid analgesic-related ambulance attendances in NT, March, June, September and December 2017**

	NT
Number of attendances (per 100,000 population)	13 (5.3)
Mean attendances per day	0.1
Daily range	N<5
Age- median (quartiles)	41 (38-49)
Male	N<5
Police co-attendance	N<5
Transport to hospital	8 (62%)
Alcohol involved/mentioned	N<5
Alcohol intoxication	N<5
Multiple drugs involved (excluding alcohol)	7 (56%)
Morphine	N<5
Oxycodone	N<5

Note: all proportions are based on non-missing information  
 Figures include March, June, September and December data.

## Opioid pharmacotherapy-related attendances in NT

Results are presented covering one month from each quarterly period of data for the NT in 2017. There were no opioid pharmacotherapy-related attendances in the NT during March, June, September and December 2017.

## Alcohol and other drug overdose-related ambulance attendances in the NT

AOD overdose-related ambulance attendances by month are shown in Table 122, while characteristics of AOD overdose-related ambulance attendances are displayed in Table 123. Drugs involved in AOD overdose-related ambulance attendances in the NT are presented in Table 124. It is important to note that these cases represent a subset of the AOD-related attendances presented in previous sections (see Chapter 2: Methods).

As shown in Table 122 to Table 124:

- accidental AOD overdose-related attendances and overdoses with unknown intent were low across all reporting months
- intentional overdose-related attendances were highest in March 2017
- the population rates for intentional AOD overdose-related attendances were twice as high as attendances for overdose with unknown intent and four times higher than accidental AOD overdose attendances
- the majority of patients attended to for accidental AOD overdoses and overdoses with unknown intent were male (63% and 53% respectively), while more females were attended to for intentional AOD overdoses (57%)
- alcohol was involved in 33% of overdoses with unknown intent and 38% of intentional overdoses

**Table 122: AOD overdose-related ambulance attendances by month in NT, March, June, September and December 2017**

	Accidental overdose	Overdose with unknown intent	Intentional overdose
March attendances (per 100,000 population)	N<5	N<5	12 (4.9)
June attendances (per 100,000 population)	N<5	N<5	6 (2.4)
September attendances (per 100,000 population)	0	6 (2.4)	11 (4.5)
December attendances (per 100,000 population)	N<5	N<5	N<5

AOD overdoses include single and multiple substances

**Table 123: Characteristics of AOD overdose-related ambulance attendances in NT, March, June, September and December 2017**

	<b>Accidental overdose</b>	<b>Overdose with unknown intent</b>	<b>Intentional overdose</b>
Number of attendances (per 100,000 population)	8 (3.3)	15 (6.1)	≥30 (≥10.0)
Number of fatal overdoses	8 (2%)	14 (3%)	≥30
Age- median (quartiles)	32 (25-49)	29 (19-49)	33.5 (22.5-44)
Male	5 (63%)	8 (53%)	14 (43%)
Transport to hospital	5 (63%)	7(47%)	26 (81%)
Police co-attendance	N<5	5 (33%)	11 (34%)

Note: Totals may include cases with missing location information, and unclassified cases  
AOD overdoses include single and multiple substances

**Table 124: Drugs involved in overdose-related ambulance attendances in NT, March, June, September and December 2017**

	<b>Accidental overdose</b>	<b>Overdose with unknown intent</b>	<b>Intentional overdose</b>
Alcohol involved/mentioned	N<5	5 (33%)	12 (38%)
Alcohol intoxication only	N<5	N<5	N<5
Amphetamines	N<5	0 (0%)	0 (0%)
Crystal methamphetamine	N<5	0 (0%)	0 (0%)
Cannabis	N<5	0 (0%)	0 (0%)
Heroin	0 (0%)	0 (0%)	0 (0%)
Emerging psychoactive substances	0 (0%)	0 (0%)	0 (0%)
Benzodiazepines	0 (0%)	0 (0%)	N<5
Opioid analgesics	N<5	N<5	0 (0%)
Opioid pharmacotherapy	0 (0%)	0 (0%)	0 (0%)

## Chapter 8: Summary

This report provides an overview of findings for the 2017 calendar year for six jurisdictions – Victoria, New South Wales, Queensland, Tasmania, ACT and Northern Territory.

### Victoria

In Victoria, alcohol intoxication, benzodiazepines and amphetamines were the most common contributors to ambulance attendances. Indeed, alcohol intoxication-related cases continued to rise in 2017, with a significantly higher number of cases in both metropolitan Melbourne and regional Victoria in 2017 than 2016. In contrast, the number of amphetamine and crystal amphetamine-related cases declined across Victorian from 2017 to 2016. Comparing the locations of attendances of the top three most common drugs, rates of attendances in metropolitan Melbourne and regional Victoria were similar for alcohol intoxication, while rates for amphetamine-related attendances diverged by geographical location (55.9 and 41.9 per 100,000 population in metropolitan Melbourne and regional Victoria, respectively).

Heroin-related attendances were substantially higher in metropolitan Melbourne (58.9 per 100,000 population) than in regional Victoria (13.6 per 100,000 population) and this was reflected, to a lesser extent, in the higher rate of pharmaceutical opioid-related attendances in regional Victoria (22.9 per 100,000 population) than metropolitan Melbourne (16.9 per 100,000 population). It is important to keep in mind, however, the statistically significant shift in the number of attendances in regional Victoria, with heroin-related attendances significantly higher in 2017 than 2016 while opioid analgesic-related attendances were significantly lower.

In heroin related attendances, transportation to hospital occurred in a greater proportion of cases in regional Victorian (54%) than metropolitan Melbourne (40%). The reasoning for this may be reflected in the higher proportion of regional Victoria cases involving both alcohol and drugs other than alcohol than metropolitan cases. Indeed, this higher involvement of alcohol and additional substances may also explain the lower response to naloxone in heroin-related cases in regional (45%) than metropolitan areas (37%). Yet, in opioid analgesic-related attendances, transportation to hospital occurred more commonly in metropolitan (89%) than regional cases (85%). Once again, this may be partly explained by the higher proportion of metropolitan cases involving alcohol (31%) and drugs other than alcohol (62%) than regional areas (28% of cases involved alcohol and 55% involved drugs other than alcohol). Of note, morphine was involved in a greater proportion of pharmaceutical opioid related attendances in regional areas (13%) than metropolitan cases (7%).

The median ages for attendances of cannabis and amphetamine-related attendances occurred from the late 20s to early 30s, while for alcohol intoxication, heroin, benzodiazepines and pharmaceutical opioids the median ages occurred in late 30s to early 40s. These findings contrast to an oft-held community perception of drugs and alcohol as a young person's problem. Males represented the majority of attendances for all drug types, with the exceptions of pharmaceutical opioids and benzodiazepines. Police co-attended with the ambulance in less than one-third of cases for all substances other than amphetamines (44%), while transportation to hospital occurred in 73 to 89 per cent of attendances in all drug categories with the exception of heroin (41%).

In AOD overdose, the rate of accidental overdose was higher in metropolitan Melbourne (46.0 per 100,000 population) than regional Victoria (19.9 per 100,000 population), while intentional overdoses were greater in regional Victoria (80.6 per 100,000 population) than metropolitan Melbourne (69.3 per 100,000 population). The median age was mid 30s regardless of the intent of the overdose and while males accounted for two-thirds of accidental overdose cases, females accounted for two-thirds of intentional overdose cases. Regarding the type of drugs contributing to overdose, alcohol was involved in around one-third of all overdoses regardless of intent, heroin contributed to the greatest proportion of accidental overdoses, and benzodiazepines were involved in the greatest proportion of intentional overdoses, in both metropolitan and regional areas.

## **New South Wales**

It should be noted that only two snapshot months of data were available and comparisons to 2016 were not possible due to a NSW ambulance service system change. This will be included at a later date when the data is ready for analysis.

In NSW, alcohol intoxication, cannabis, benzodiazepines and amphetamines were the most common contributors to ambulance attendances. Indeed, there were a higher number of cases in metropolitan Sydney than regional NSW for each drug category.

For all drug categories, except benzodiazepines, the majority of attendances were male, with the highest proportion for amphetamines (73%). The median ages for attendances of cannabis and amphetamine-related attendances occurred in early 30s, while for alcohol intoxication, heroin, benzodiazepines, opioids and pharmaceutical opioids the median ages occurred in late 30s to early 40s. These findings contrast to an oft-held community perception of drugs and alcohol as a young person's problem. Males represented the majority of attendances for all drug types, with the exception of benzodiazepines.

For alcohol intoxication attendances the most frequent day of week was Saturday. The most frequent day of attendances for amphetamines and benzodiazepines was Thursday. All other drug types were more varied on frequency of day of week, however were all concentrated in the latter half of the week (i.e. Wed-Sun).

For alcohol intoxication attendances, there were very few with multiple drugs involved (4%). However, for all drug categories considerable proportions had multiple drugs involved. The greatest for opioid-related attendances with 52% involving multiple drugs, followed by benzodiazepine-related attendances (48%) and opioid pharmacotherapy-related attendances (47%). Approximately a third of amphetamine-related attendances had multiple drugs involved.

Police co-attended with the ambulance in less than one-third of cases for all substances other than amphetamines (44%) and cannabis (33%), while transportation to hospital occurred in 75 to 90 per cent of cases with the exception of heroin (53%).

In AOD overdose, the rate of accidental overdose was slightly higher in metropolitan Sydney (3.8 per 100,000 population) than regional NSW (3.5 per 100,000 population), while intentional overdoses were double in regional NSW (12.7 per 100,000 population) than metropolitan Sydney (6.3 per 100,000 population). The median age was mid 30s, for most intent categories regardless of location,



however for intentional overdose, median age was low 30s in metropolitan Sydney and high 30s in regional NSW. Whilst males accounted for two-thirds of accidental overdose cases, females accounted for two-thirds of intentional overdose cases. Regarding the type of drugs contributing to overdose, alcohol was involved in around one-third of all overdoses regardless of intent, heroin contributed to the greatest proportion of accidental overdoses, and benzodiazepines were involved in the greatest proportion of intentional overdoses, in both metropolitan and regional areas.

## **Tasmania**

In Tasmania, alcohol intoxication, cannabis and amphetamine were the most common contributors to ambulance attendances.

In benzodiazepine-related attendances, transportation to hospital occurred in a greater proportion of cases (90%) than those involving opioid analgesia (81%), alcohol (75%) or amphetamines (70%).

The median ages for attendances of alcohol intoxication-related attendances occurred in the late 30s, while for amphetamines and opioid pharmacotherapy the median ages occurred in the early 30s and for cannabis the median ages were late 20s. For benzodiazepines and pharmaceutical opioids the median age was mid 40s. These findings contrast to an oft-held community perception of drugs and alcohol and many other drugs as a young person's problem. Males represented the majority of attendances for all drug types with the exception of benzodiazepines (40%) and opioid pharmaceuticals with just over half (53%). Police co-attended with the ambulance in less than one-fifth of all drug categories, while transportation to hospital occurred in more than two-thirds of cases in benzodiazepines (90%), opioid pharmaceuticals (81%), alcohol intoxication (75%), amphetamines (70%) and cannabis (68%).

In AOD overdose, the rate of accidental overdose (4.6 per 100,000 population) accounted for a minority of cases, while overdose with unknown intent (was less than half similar to unknown intent overdose (9.8 per 100,000 population), intentional overdose accounted for the majority of overdose cases (32.3 per 100,000 population). The median age of accidental and unknown intent overdose was mid to late 30s, while the median age for intentional overdose was 32 years. While males accounted for almost two-thirds of accidental overdose cases, females accounted for around two thirds of intentional and unknown intent overdose. Regarding the type of drugs contributing to overdose, alcohol was involved in around 54 per cent, 35 per cent and 33 per cent of accidental, intentional and unknown intent overdoses.

## **Australian Capital Territory**

In ACT, alcohol intoxication, heroin and benzodiazepines were the most common contributors to ambulance attendances. From 2016 to 2017, there were no statistically significant changes in the number of attendances across any of the drug categories.

In opiate-related attendances, transportation to hospital occurred in a greater proportion of cases involving pharmaceutical opioids (77%) than heroin (39%). The reasoning for this may be reflected in: higher proportion of alcohol involvement in pharmaceutical opioid-related (46%) than heroin cases (9%), higher proportion of additional drugs other than alcohol involvement in pharmaceutical opioid-

related (36%) than heroin cases (16%), and the reluctance of heroin users to be transported to hospital.

The median ages for attendances of cannabis and amphetamine-related attendances occurred in the early 30s, while for alcohol intoxication, heroin and benzodiazepines the median ages occurred in the late 30s and for pharmaceutical opioids and opioid pharmacotherapy the median ages were mid to late 40s. These findings contrast to an oft-held community perception of drugs and alcohol as a young person's problem. Males represented the majority of attendances for all drug types with the exception of benzodiazepines. Police co-attended with the ambulance in less than one-quarter of all drug categories, while transportation to hospital occurred in more than two-thirds of cases in all drug categories with the exception of heroin (39%).

In AOD overdose, the rate of accidental overdose (10.7 per 100,000 population) was similar to unknown intent overdose (10.7 per 100,000 population), but higher than intentional overdose (16.6 per 100,000 population). The median age of accidental and unknown intent overdose was mid 30s, while the median age for intentional overdose was 28 years. While males accounted for almost two-thirds of accidental overdose cases, females accounted for more than 80 per cent of intentional overdose cases and almost two-thirds of unknown intent overdoses. Regarding the type of drugs contributing to overdose, alcohol was involved in around 23 per cent, 18 per cent and 12 per cent of accidental, intentional and unknown intent overdoses.

## **Northern Territory**

In the Northern Territory, alcohol intoxication, cannabis and amphetamines were the most common contributors to ambulance attendances. The median ages for attendances of cannabis, amphetamine and benzodiazepine-related attendances occurred in the early 30s, while for alcohol intoxication and pharmaceutical opioids the median ages occurred in the early 40s. Once again, these findings contrast to an oft-held community perception of drugs and alcohol as a young person's problem. Males represented the majority of attendances for all drug types with the exception of alcohol intoxication. Police co-attended with the ambulance in around one-quarter of alcohol intoxication and cannabis-related attendances and more than 40 per cent of amphetamine and benzodiazepine-related cases. For all drug categories presented, around two-thirds of ambulance attendances were transported to hospital

The rates of AOD overdose varied across the intent categories of accidental overdose (3.3 per 100,000 population), unknown intent overdose (6.1 per 100,000 population) and intentional overdose (10.0 per 100,000 population). The median age of AOD overdose regardless of intent was in late 20s and early 30s. While males accounted for almost two-thirds of accidental overdose cases and more than half unknown intent overdoses, females accounted for the majority of intentional overdose cases. Alcohol was involved in more than one-third of intentional and unknown intent overdoses.

## Implications and directions

These figures are striking in terms of the magnitude of burden of AOD misuse and overdose in the population and on health services – a burden that cannot be estimated accurately or in a timely manner through other means. It is important to note that the data presented here represent a summary of a number of key measures in the surveillance system. There is substantial richness to the system, including the capacity to explore subpopulations, specific geographic locations (mapping cases in detail), contextual data, clinical data, outcome data, correlates of harm, and patient histories. Expansion of data coding and reporting to include all months for all jurisdictions would further enhance the utility and robustness of information to inform policy, intervention, service delivery and evaluation. This would be particularly beneficial in relation to drugs with lower prevalence of use, and for smaller populations and subpopulations. Unfortunately, due to the technical issues year 2017 of Queensland database and two months (September and December) of New South Wales ambulance attendances were not available and this report cannot draw a comprehensive national wide picture of alcohol and drug related ambulance attendances in Australia. This report will be updated when those data become 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 – for example, linkage of alcohol and drug-related ambulance attendances to hospital emergency presentations and hospital admissions. A number of services across jurisdictions have expressed interest in exploring the possibility of linkage with health and law enforcement data collections.
- Examination of repeat and frequently presenting patients.
- Capacity for built-in evaluation of policy and intervention activities e.g. changes to codeine scheduling and the establishment of the Medical Supervised Injecting Facility in Melbourne.
- Identification of impact of AOD misuse and overdose across services and sectors such as law enforcement.

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

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

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

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