## Contents

1. **Background** .......................................................... Page 3

2. **Purpose** ................................................................ Page 4

3. **Methodology** .......................................................... Page 4
   - 3.1 Definitions .................................................................. 4
   - 3.2 Data ............................................................................. 5

4. **Findings** ................................................................ Page 5
   - 4.1 Presentations in Australia and New Zealand.................. 6
   - 4.2 Presentations in Australian jurisdictions......................... 7
   - 4.3 Presentations according to ED delineation ......................... 7

5. **Summary of findings** .................................................. Page 8

6. **Discussion** ............................................................. Page 8

7. **Implications** .......................................................... Page 9
   - 7.1 Robust data collection.................................................... 10
   - 7.2 Screening, Brief Intervention and Referral for Treatment Programs ................................................................. 10
   - 7.3 Multidisciplinary interventions in the ED ........................ 10
   - 7.4 Improved integration of AOD services............................ 10
   - 7.5 Independent regulatory body to control alcohol advertising, sponsorship and promotions... 10
   - 7.6 Development and implementation of long-term demand and supply reduction strategies... 11

8. **Limitations** ............................................................ Page 11

Acknowledgements ......................................................... Page 12

References ...................................................................... Page 12

Citation ......................................................................... Page 13

Further information ........................................................ Page 13
1. Background

The Australasian College for Emergency Medicine (ACEM, the College) is the not-for-profit organisation in Australia and New Zealand with responsibility for training emergency physicians and advancing professional standards in emergency medicine. Fellows of ACEM (FACEMs) – our members – are specialist emergency physicians working in Australian and New Zealand emergency departments (EDs), and internationally.

The College is the peak authority for ensuring the highest standard of quality, patient-focused medical care is provided and maintained in EDs across Australia and New Zealand.

Based on the clinical experiences of our members, the College believes alcohol and other drug (AOD) harm is one of the largest, preventable public health issues facing EDs in our region. Due to the volume and nature of presentations, AOD harm can have detrimental effects on ED staff, other patients and accompanying persons. This adversely impacts the way EDs function. (1)

ACEM has been a vocal advocate for public policy changes and specific measures to address AOD harm in the Australian and New Zealand communities, particularly in relation to alcohol. (2)

As part of its Alcohol Harm in EDs Program the College has conducted the Alcohol Harm Snapshot Survey (AHSS) each year since 2013 (with the exception of 2015). The survey is conducted on a weekend night in December, in more than 100 EDs based in Australian and New Zealand. The primary aim of the AHSS is been to quantify alcohol’s burden on EDs and further our understanding its contribution to the ED workload.

Over time, findings have typically shown that between one in seven and one in eight patients presenting to Australian-based EDs during the AHSS do so in relation to alcohol. The highest proportion recorded from New Zealand-based EDs has been one in four. (2) Further research by the College has shown that during peak patient presentation times, all regions have EDs in which one in three patient presentations are associated with alcohol. This represents a third of the ED workload. (3)

For more than a decade our members have expressed concern not only about alcohol harm, but also methamphetamine’s impact on the acute health system, particularly in the EDs where our members work. In 2015, to better understand these concerns, the College explored ED staff perceptions of recent trends in AOD-related ED presentations. Seventy-two per cent1 of Australian-based Directors of Emergency Medicine (DEMs) reported a perception that amphetamine-type stimulant (ATS) ED presentations increased between 2014 and 2015, and more than half of DEMs2 identified rising ATS ED presentations as an emerging trend. (4)

Feedback from our members – together with the lack of nationally consistent data quantifying the extent and impact of AOD harm in EDs in Australia and New Zealand – led the College to explore the issue further by including methamphetamine in the 2018 AHSS. (4)

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1 58 Australian DEMs and eight New Zealand DEMs responded; 72% cf. 14% in New Zealand
2 56% of 48 DEMs who responded
2. Purpose

In December 2018, ACEM undertook the fifth AHSS in Australian and New Zealand EDs, and the first ever audit of methamphetamine-related presentations. The data will be used to continue to establish the general scale and trends of alcohol-related presentations to EDs, and establish a baseline estimate of methamphetamine ED presentations. This report presents initial findings from the AHSS.

3. Methodology

On 16 December 2018 at 2am local time, the AHSS was undertaken to estimate the point-prevalence of alcohol and methamphetamine harm in EDs based in Australia and New Zealand. As with previous years, the survey was a point-in-time snapshot of presentations to EDs. (2)

3.1 Definitions

For the purposes of the snapshot, ED clinicians were required to identify the number of patients in their departments who were clinically intoxicated due to alcohol or methamphetamine, or who had presented directly or indirectly in relation to either drug. The criteria used to define alcohol and methamphetamine presentations was broad and included the following (based on ED clinician judgement and/or patient self-report).

**Injuries as a result of alcohol or methamphetamine use**

- Unintentional, including motor vehicle accidents and road traffic injuries, drowning, burns, poisoning and falls
- Intentional, such as those resulting from acts of violence against self or others

**Intoxication**

- Alcohol and/or methamphetamine involvement as determined by relevant measures (e.g. blood alcohol content)
- Clinical intoxication determined by clinician assessment, including ED triage staff if not yet seen by a doctor
- Intoxication, but unrelated to the clinical presentation

**Medical conditions as the result of alcohol or methamphetamine use**

- Degeneration of nervous system
- Polyneuropathy
- Myopathy due to other toxic agents
- Cardiomyopathy
- Gastritis
- Liver disease
- Withdrawal state
- Dependence syndrome
- Other medical condition(s) that the treating doctor believed was attributable to or exacerbated by either drug
Mental and behavioural conditions due to alcohol or methamphetamine use

- Mental health presentations due to intoxication
- Mental health presentation due to use
- Psychosis and behavioural disturbance due to use
- Overdose

Underlying AOD use

- Alcohol use
- Drug use

Indirect harm

- Unintentional or intentional injuries caused by an affected third party

3.2 Data

Data collected included a count of the number of patients waiting to be seen at 2am local time, the number of patients being seen, and, where applicable, the number of patients in observation and/or short stay units. No individual-level patient information was collected.

Emergency departments provided estimates on the number of:

- all patients;
- patients with alcohol-related presentations; and
- patients with methamphetamine-related presentations.

To reduce the burden on EDs and to maximise responses, no information was collected on patient presentations that were both alcohol and methamphetamine related. No information was collected on ED length of stay.

Data is presented as percentages, which are rounded up or down in the report body to the nearest whole number.

4. Findings

Across Australia and New Zealand, 118 hospital EDs participated in the survey. Of those, 87% were accredited by ACEM to deliver the FACEM Training Program and the remaining 13% were not.

In Australia 98 (71%) EDs provided data. Twenty (100%) New Zealand hospital EDs provided data.

Australian data was submitted by 32 (76%) hospital EDs in New South Wales (NSW), 26 (81%) in Queensland, 18 (51%) in Victoria, and 13 (100%) in Western Australia (WA).

Three (43%) hospital EDs provided data in South Australia (SA), and six (67%) EDs combined provided data from the Australian Capital Territory (ACT), Northern Territory (NT) and Tasmania. Data for these jurisdictions should be interpreted with caution due to small numbers, particularly in SA.

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4 Percentages denote the proportions of participating EDs of all EDs in each jurisdiction/jurisdictional grouping.
4.1 **Presentations in Australia and New Zealand**

At the time of the snapshot, a combined 3109 patients were receiving emergency medical care in Australian and New Zealand EDs. Of these – across both countries – 430 (14%) patients had alcohol-related presentations, while 83 (3%) patients had a methamphetamine-related presentation.

There were 2680 patients in EDs receiving emergency care at 2am in Australia and 429 in New Zealand. In New Zealand, 74 patients presented to 20 EDs across the country in relation to alcohol; fewer than five presented in relation to methamphetamine.

Figure 1 shows that New Zealand had a higher prevalence of alcohol presentations than Australia, and Australia had a higher prevalence of methamphetamine presentations than New Zealand.

![Figure 1 Percentage of alcohol and methamphetamine presentations at 2am in Australian and New Zealand EDs](image)

4.2 **Presentations in Australian jurisdictions**

The percentages of alcohol and methamphetamine ED presentations are shown by jurisdiction in Figure 2. In Australia, the percentages of alcohol presentations were reasonably similar across the eastern states, at between 11% and 13% in NSW, Queensland and Victoria and the combined jurisdictions of ACT, NT and Tasmania.

Of all the Australian jurisdictions, WA had the highest percentage of alcohol presentations at 2am on the night of the AHSS, with almost one in five ED patients presenting in relation to alcohol (Figure 2).

Western Australia also had the highest percentage of presentations related to methamphetamine compared with the other states and territories; about one in 16 presentations – or 6% – were methamphetamine related. At the time of the survey, there were 23 patients in EDs in relation to methamphetamine across all 13 WA hospitals.

The eastern states each had similar percentages (2% to 3%) of methamphetamine presentations. Patient numbers were also similar. For instance, at 2am on the night of the snapshot survey there were 19 patients with methamphetamine-related presentations in EDs across Queensland, 18 in NSW and 16 in Victoria.
4.3 Presentations according to emergency department delineation

Figure 3 shows the percentage of alcohol and methamphetamine ED presentations in Australia and New Zealand according to ED delineation. Only data from EDs accredited by ACEM for the provision of specialist training (through the FACEM Training Program) are included here. In this context, ED delineation can broadly be viewed as a crude proxy measure for metropolitan, suburban and rural/regional hospital settings, although not directly comparable.

Different patterns of alcohol harm were observed between patients in major referral, urban district and rural/regional hospital ED settings. The highest prevalence of alcohol-related presentations was in metropolitan ED settings, followed by EDs in rural/regional settings.

By contrast, methamphetamine harm across all hospital role delineations between 2% and 3% (Figure 3).

5 See the College’s Statement on the Delineation of Emergency Departments (S12).
5. Summary of findings

The following was found at 2am on the snapshot night of 16 December 2018.

- Alcohol presentations were of higher prevalence than methamphetamine presentations (14% cf. 3%) across all Australian and New Zealand EDs;
- There was a higher prevalence overall of alcohol presentations in New Zealand EDs compared with Australian EDs (17% cf. 13%), whereas in Australian EDs there was a higher prevalence of methamphetamine presentations than in New Zealand EDs (3% cf. 1%);
- The highest prevalence of alcohol presentations in Australia was in WA EDs, which experienced almost the same prevalence as New Zealand EDs (18% cf. 17%);
- Western Australian EDs had the highest prevalence of methamphetamine presentations compared with EDs in other jurisdictions (6% cf. 3% each in Victoria and Queensland, 2% each in NSW and SA, and 1% in the ACT; NT and Tasmania combined
- Alcohol harm varied by ED delineation, with alcohol presentations most commonly observed in metropolitan EDs, followed by rural/regional EDs, then urban district EDs (17% cf. 14% and 10%, respectively); and
- The pattern of methamphetamine harm was similar across ED delineation, with 2% of all presentations related to methamphetamine in rural/regional EDs and 3% each in metropolitan and urban district EDs.

6. Discussion

Emergency department presentations relating to AOD harm can represent significant challenges for the acute health system, particularly in the context of the pressures of rising patient demand, hospital access block, overcrowding and limitations to ED capacity and resourcing. Inconsistent collection of routine AOD-related ED data means the impacts of alcohol and methamphetamine harm are underestimated in EDs, and the acute health system is under-resourced to properly care for affected populations. Demand for community-based generalist and specialist AOD treatment services also outstrips supply. (5)

Findings from ACEM’s 2018 AHSS show that in EDs overall, presentations due to alcohol harm represent a greater proportional burden than those due to methamphetamine harm. Overall, prevalence in the snapshot did not appear dissimilar to annual patterns of risky drinking⁶ and methamphetamine⁷ use in the general population, although there are varying consumption patterns and harms between genders, among age groups and by geography. (6) As an example, prevalence of recent methamphetamine use has increased in recent years among young rural Australians and their use is now higher than use by their city and regional counterparts. (7)

Even though alcohol use is endemic in Australia and New Zealand, media in both countries has reported methamphetamine ‘epidemics’ for years, particularly the use of ‘ice’ and ‘P’.⁸(8-10) Recent methamphetamine use in the Australian and New Zealand general populations is low at about one per cent (1.4% and 0.8% respectively), with research suggesting a similarly low rate of presentation to major tertiary hospital EDs where AOD presentations are common. (6, 11-13) Despite these low figures, methamphetamine presentations have become a serious issue for ED staff. (12-14)

In the ED methamphetamine presentations are of high acuity⁹. Among other factors, frequent and heavy methamphetamine use is associated with psychosis, major depression, higher levels of health service utilisation and frequent ED presentation. (15-19) Patients attending EDs due to methamphetamine use have complex needs and require active care, greater clinical resources, and longer ED lengths of stay for stabilisation. (12, 19) A 2017 study of presentations to an inner-city Australian ED related to methamphetamine use over one month found that patients were predominantly male, acutely intoxicated, had used methamphetamine in the past 28 days, presented voluntarily, needed physical and mechanical restraint and were aggressive to other patients and staff. (20) Taken together, this presentation group is highly resource intensive and needing complex care.
In the past decade methamphetamine has become more potent, cheaper and easier to obtain, possibly explaining some of the increases in harm such as those observed in ED settings. (21, 22) For instance, among patients seeking help from EDs for mental health crises, almost a third have substance use recorded as a feature of their presentation, and long ED stays are widespread. (23, 24) A sizeable proportion of toxicology presentations also involve methamphetamine intoxication. This has prompted jurisdictions such as WA to establish specialised urgent care centres where ED patients who are behaviourally unwell, particularly those who are agitated and aggressive, can be cared for safely. (13, 25)

State governments and hospitals have begun to invest in reorienting EDs to include models of care that integrate specialist expertise in mental health, emergency medicine, and drugs and alcohol. Some examples include the Psychiatric and Non-prescription Drug Assessment (PANDA) Unit at St Vincent’s Hospital Sydney, in NSW; the Mental Health Observation and Assessment (MHOA) Units and Urgent Care Centres (Toxicology) in WA; and the Alfred Mental Health Service at the Alfred Hospital in Victoria. These models are multidisciplinary in their staffing mix, targeted to manage the health effects of drug and alcohol use and minimise the risks related to aggression and violence in the ED.

7. **Implications**

Findings from ACEM snapshot surveys have consistently shown that about one in seven presentations to EDs are alcohol related. While methamphetamine presentations are of lower prevalence than alcohol presentations, the significant harms associated with both drugs warrant action in the following priority areas.

- Robust data collection from EDs
- Screening, brief intervention and referral for treatment programs in the ED
- Multidisciplinary interventions in the ED
- Improved integration and resourcing of AOD services
- Independent regulatory body to control alcohol advertising, sponsorship and promotions
- Long-term supply-reduction strategies

7.1 **Robust data collection**

Implementation of consistent, routine AOD ED presentation data collection is required to help governments and stakeholders better understand the burden of AOD across the Australian and New Zealand acute health systems and the associated resourcing needs.

**Key actions include:**

- Implementing compulsory collection of minimum alcohol-related presentation data through addition of AOD data elements to the National Non-Admitted Patient Emergency Department Care Database.
- Introducing Last Drinks surveys to ensure that sources of problematic alcohol supply can be identified.

7.2 **Screening, Brief Intervention and Referral for Treatment Programs**

ACEM’s Statement on Alcohol Harm (1) supports the World Health Organization recommendation that EDs be resourced to conduct screening and other brief interventions and referral for treatment (SBIRT) programs. The routine use of validated, standardised screening tools offers an important mechanism for identifying, reducing and preventing problematic use, abuse, and dependence on alcohol and other drugs.

Where possible, EDs should contribute to the ongoing assessment of efficacy and quality improvement of SBIRT programs. As appropriate and feasible, EDs should also contribute to state and national research into alcohol harm.

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6 Lifetime risk from alcohol consumption equates to on average more than two standard drinks per day. In 2016, lifetime risk was 17%.
7 In the past 12 months. Note that use is underestimated in general population surveys.
8 In Australia, potent crystalline methamphetamine is colloquially known as ‘ice’; in New Zealand, the drug is known as ‘P’.
9 ‘High acuity’ patients need intense levels of care and are often the sickest patients in the ED.
7.3 Multidisciplinary interventions in the ED

State governments need to invest in reorienting EDs to include models of care appropriate to patient demand and case mix that integrate mental health, general medical and AOD/toxicological care. More flexible and integrated care across mental health, substance use and primary care services is essential, together with a prioritisation of early intervention for methamphetamine-related psychotic symptoms. Changes are needed to the design and resourcing of EDs to better prevent, minimise and manage violent behaviours that often accompany alcohol and drug presentations, including methamphetamine-related psychosis.

7.4 Improved integration of AOD services

A lack of service development and integration means that many people whose presentations primarily involve AOD use and who would be better served in the community seek help from EDs in crisis and with nowhere else to go. Presentations involving methamphetamine-related psychosis are among the most resource intensive in the ED.

**Key actions include:**

- Increased resourcing for community-based AOD services that offer comprehensive medical and psychosocial care and support
- Resourcing for increased specialist AOD treatment options, starting with alcohol or methamphetamine-related harm, including methamphetamine-induced psychosis. Specialist services could include in-hospital withdrawal services and access to specialist psychiatric support
- The provision of integrated care pathways out of EDs and into specialist treatment programs so that health professionals can offer assertive interventions to people whose drug and alcohol use has come to a crisis point, starting with an immediate appointment for publicly funded care and support.

7.5 Independent regulatory body to control alcohol advertising, sponsorship and promotions

Alcohol is one of the most heavily promoted products in the world. Young people are regularly exposed to advertisements that normalise alcohol consumption as a necessary component of sporting events, celebrations and socialising despite the significant harm it causes to the health and wellbeing of individuals, families and communities. ACEM recommends the establishment of an independent regulatory body to control alcohol advertising, sponsorship and promotions, and to strengthen regulation, including complaints and enforcement provisions.

7.6 Development and implementation of long-term demand and supply reduction strategies

Australian and New Zealand EDs need relief from the pressures of managing highly complex, mentally unwell, behaviourally disturbed people whose drug and alcohol use has come to a crisis. All governments need to commit to consistent and coordinated interventions to reduce alcohol and drug-related harm in the community. These reforms need to draw on evidence-based supply-reduction strategies that have been effective, starting with reducing the availability and affordability of alcohol. Significant work undertaken by the NT Government for alcohol policy reform has resulted in a decline in ED presentations by almost 25% (http://newsroom.nt.gov.au/mediaRelease/28719).

**Key actions include:**

- Trialling alcohol demand reduction measures, such as minimum unit pricing and volumetric tax on alcohol sales
- Trialling alcohol supply reduction measures, such as risk-based licensing practices, licensing policies to reduce alcohol outlet density, greater regulation and restriction on alcohol promotion and advertising, and more active enforcement of regulations on off-license and online alcohol outlets
- Evaluating the impact of such demand and supply reduction measures to ensure positive outcomes for communities are achieved
8. Limitations

There are some limitations to the data presented in this report.

- Data presented is provided in aggregate form only, which prevents more in-depth analysis of variation at individual hospital, jurisdictional and ED delineation levels.
- The findings for SA should be interpreted with caution, both due to low participation rates and the very small numbers of patients in those EDs at the snapshot time.
- Data for the ACT, NT and Tasmania are combined so that individual hospitals cannot be identified.
- Anecdotal reports from EDs suggested that patient presentation numbers were lower at 2am on Sunday morning than the night before, an inherent limitation of point-in-time data collections. Findings may be an underestimate.
9. References


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Contact

Nicola Ballenden, Executive Director Policy and Strategic Partnerships
Australasian College for Emergency Medicine
34 Jeffcott Street
West Melbourne VIC 3003
Australia
Telephone +61 3 9320 0444