1. WHAT ARE METHAMPHETAMINES?

Methamphetamines are stimulants, and part of the amphetamine group of drugs manufactured from common pharmaceutical drugs and readily available chemicals such as acetone, bleach, battery acid, and engine coolant. Methamphetamines are potent and illegal stimulants that speed up the function of the brain and nervous system.

There are four main forms of methamphetamine:

- **Ice** – also known as ‘crystal meth’ is the purest form. It has a clear to white crystalline appearance. Ice is usually smoked or injected.
- **Powder** – a white or off-white powder generally known as ‘speed’, typically of low purity, which can be snorted, injected or swallowed.
- **Base** – a damp or oily substance, white/yellow/brown in colour with a higher purity than powder. This form is typically injected and sometimes swallowed.
- **Pills** – methamphetamine has also been sold in pill form

Variations in the methamphetamine structure also produce other drugs such as MDMA (methylene dioxy methamphetamine) or ecstasy.

Crystalline methamphetamine is the purest form of methamphetamine available in Australia. It usually looks like colourless to white crystals or a coarse crystal-like powder, but it can also appear in other colours. Crystalline methamphetamine is also called ‘crystal’, ‘crystal meth’, ‘meth’ or ‘shabu’. Crystalline methamphetamine is usually smoked or injected. A drug that is smoked or injected enters the brain more quickly which creates a “rush” that many people find very difficult to resist repeating.

Crystalline methamphetamine is also sniffed through the nose (snorted), swallowed or inserted into the anus (shafted) or vagina (shelved). There is good evidence to suggest that smoking or injecting crystalline methamphetamine is associated with higher prevalence (use) and also greater harms than oral or intranasal ingestion. All forms of ingestion can have physical and mental impacts, including dependence.

Because of its purity, crystalline methamphetamine is more powerful than speed and base (other forms of methamphetamine) and when used puts a greater strain on the body. Its use can therefore be much more dangerous. It has stronger side effects and a worse ‘comedown’. During a ‘comedown’, the user may feel physically and emotionally drained. Some users may experience a ‘crash’ — negative feelings associated with coming down.

2. WHAT ARE THE ASSOCIATED HARMs?

MENTAL HEALTH

Regular methamphetamine users may suffer from poor mental health, including depression and anxiety. Other common mental health related issues are agitation, anxiety, chronic sleep disturbance, mood changes, impaired concentration and lack of motivation. Methamphetamine users are far more likely than the general population to experience psychotic symptoms. Almost one-quarter of regular methamphetamine users will suffer from a symptom of psychosis in a given year.

Dependence on methamphetamine is a key risk factor for psychosis. People who have a history of schizophrenia are far more likely to experience psychosis after using methamphetamine than other users of the drug. Methamphetamine can cause psychotic symptoms in otherwise healthy people and can also worsen or bring on psychotic symptoms in people with pre-existing mental health problems.

AGGRESSION AND METHAMPHETAMINES

The relationship between crystalline methamphetamine use and aggression is not straight-forward. Crystalline methamphetamine use can increase aggression, but not all users become aggressive when they take crystalline methamphetamine. Men tend to be more aggressive than women.
It is not clear why some people are more prone to violent behaviour than others, but some factors may be:
- Concurrent alcohol or pharmaceutical drug use;
- withdrawal from drugs;
- personality;
- not eating;
- not sleeping for long periods;
- concurrent medical conditions.

**PHYSICAL HEALTH**

Many regular methamphetamine users suffer from poor physical health including disturbed sleep, jaw clenching and teeth grinding, weight loss due to poor appetite, dehydration, increased blood pressure, palpitations and chest pains, hyperthermia (over-heated), dental problems, extreme weight loss, injection related problems (e.g. skin infections) among people who inject the drug, and nasal irritation among people who snort the drug. Serious medical problems regular methamphetamine users may experience include heart disease, kidney failure, liver failure, seizures and stroke.

**RISKS IN PREGNANCY**

Evidence suggests that methamphetamine use amongst pregnant women can have effects on the fetal development. Methamphetamine use during pregnancy has been linked with placental bleeding, early labour and miscarriage, as well as an increased risk of fetal abnormalities. Babies of mothers who regularly use amphetamines may also experience withdrawal symptoms in the first few weeks after birth.

Methamphetamine use in pregnancy is associated with tobacco and other drug use as well as other problems including poor nutrition, homelessness, relationship problems, gender-based violence, legal problems and parenting problems. Not much is known about the effects of methamphetamines on the baby during breastfeeding, however it is considered risky to take any non-prescribed drugs while breastfeeding (without medical advice).

**BLOOD BORNE VIRUSES AND SEXUAL HEALTH**

Methamphetamine injectors are at risk for hepatitis B, hepatitis C and other blood borne infections through unsafe injecting practices such as needle sharing.

The evidence also suggests strong association between methamphetamine use and sexual risk taking. There is evidence to suggest a sexual and drug use risk practices among some men who have sex with men (MSM).

### 3. TRENDS

The following provides an overview of data and trends. Refer to Appendix 1, 2 & 3 for more detail.

**POPULATION DATA**

- Population survey data indicates that amphetamine use as a whole has remained stable (National Drug Strategy Household Survey 2013). NSW respondents report slightly lower use of methamphetamines than the Australian average.
- Amongst people who use amphetamine type stimulants use of powder decreased significantly from 51% in 2010 to 29% in 2013, while the use of crystal methamphetamine more than doubled, from 22% in 2010 to 50% in 2013. There was also a significant increase in frequency of use at daily or weekly rate noting that in crystalline methamphetamine users this rose from 12.4% in 2010 to 25.3% in 2013.
POPULATION SUBGROUPS

- The New South Wales School Students Health Behaviours indicates that there has been a decrease in students having ever used amphetamines from 6.7% to 3.1% between 1996 to 2011. There has also been a decrease in students having used amphetamines in the last 12 months from 5.2% to 2.5% between 1996 and 2011.

- Methamphetamine use has been identified as a growing issue within Aboriginal communities. According to the Australian National Council on Drugs there are increased reports of the use of amphetamines in Aboriginal Communities in Australia. Consultations with the Aboriginal Drug and Alcohol Leadership Network and with approximately 90 Aboriginal workers across NSW have consistently raised methamphetamines as a major area of concern.

- According to ACON methamphetamine use by gay men has increased slightly from 11% in 2011 to 14% in 2014. The rate of methamphetamine use amongst HIV positive respondents was 35% in 2014.

- Justice and Forensic Mental Health Network has reported an increase since 2010 of pregnant women in custody using amphetamines, with a noted increase over the past 12 months - many of these women are poly-substance users.

- The 2014 NSW Needle and Syringe Program (NSP) Enhanced Data Collection Survey found that, among NSP clients in NSW, methamphetamine was the most commonly reported drug last injected (27%) and has overtaken heroin as the most commonly reported substance last injected.

HEALTH SYSTEM REPORTS

Hospitalisations*

- Between 2009-2010 and 2013-14, there were 10,059 methamphetamine-related hospitalisations among 7,336 individuals in NSW.

- In 2013-14, methamphetamine-related hospitalisations comprised 0.1% of all NSW hospitalisations.

- In NSW between 2009-10 and 2013-14, the annual rate of methamphetamine-related hospitalisation more than doubled from 22.4 to 52.6 per 100,000 persons. Over the same period the number of hospitalisations increased from 1,269 to 3,135.

- Males accounted for around two-thirds of admissions. In 2013-14, the rate of hospitalisation in men was 73.1 per 100,000 and in women the rate was 32.7.

- The highest hospitalisation rate was in 16-34 year olds. During 2009-10 to 2013-14, the rate in 16-34 year-olds grew from 42.1 to 93.6 per 100,000 persons.

- In 2013-14, 0.3% of all Aboriginal people in NSW above 16 years experienced a methamphetamine-related hospitalisation. This compares to 0.04% of non-Aboriginal people. Aboriginal people accounted for 15.6% of all patients with methamphetamine-related hospitalisations in that year.

- In 2013-14, the population rate of hospitalisation among Aboriginal males was 6-fold higher than non-Aboriginal males. Among Aboriginal females, the rate was 10-fold higher. In 2013-14, the hospitalisation rate in Aboriginal males was 412.8 per 100,000 and in Aboriginal females was 269.4 per 100,000.

- During the reporting period, 80% of persons had only one methamphetamine-related hospitalisation. In comparison, 7% of persons who had 3 or more hospitalisations accounted for almost one quarter (23%) of all methamphetamine-related hospitalisations during the period.

Emergency department presentations*

- Between 2009 and 2014, the annual total number of overdose, drug and alcohol or mental health presentations to 59 NSW public hospital emergency departments where methamphetamine use was recorded increased more than 7-fold, from 394 to 2,963.

- This number compares to 13,143 presentations for acute alcohol problems in 2014.

- The increase was seen in males and females.

- In 2014, males comprised 68% of methamphetamine-related presentations.

*This data reflects increases in harm associated with methamphetamine use and is not reflective of general use in the community. Increased harm is most likely related to the purity levels, frequency of use and mode of administration.
• The increase in presentations was greatest in 16 to 34 year olds and 35 to 54 year olds.
• There was a 7-fold increase in the number of presentations that were admitted. However, the proportion of presentations that resulted in admissions remained steady at around 30%.

Drug and Alcohol and Mental Health Services
• According to the AIHW Alcohol and Other Drugs Treatment Services Report (2013): amphetamines were a drug of concern (principal or additional) in 28% of closed treatment episodes in 2012-13 and were the principal drug in 1 in 7 treatment episodes (14%). This is a 4% increase since 2011-12.
• The Alcohol & Drug Information Service (ADIS) has reported that crystalline methamphetamine generated the third highest number of calls (after alcohol and cannabis) from June to December 2013 with calls about crystalline methamphetamine becoming the second highest primary drug call (after alcohol) from January to June 2014. Crystalline methamphetamine is the third most commonly discussed drug among Aboriginal communities, and the fourth most commonly discussed drug among CALD communities.
• Data on admissions to acute mental health units with diagnoses of amphetamine related conditions (abuse/dependence or psychoses) has shown that for both amphetamine related admissions per calendar quarter for abuse/dependence or for amphetamine-related psychoses both have risen steadily since 2009. By comparison, opioid-related admissions have stayed fairly steady.
• Mental health inpatient facility clinical benchmarking data from the last few years show that stimulant-related mental health admissions are more common in metro than rural areas and much more common in people in their mid to late twenties than in their teens.
• The Whole of Health Mental Health Project has identified management of clinically complex patients with challenging behaviour as a key theme arising from a series of site visits across NSW. This included patients presenting with behavioural disturbance in relation to alcohol and/or drug intoxication often with mental health and medical comorbidities.

Other services
• Data collected from the Magistrates’ Early Referral into Treatment (MERIT) program indicates that amphetamine use among program participants has more than doubled from 265 in 2009/10 to 533 in 2012/13. Heroin use amongst the program participants nearly halved over the same period. According to the January-June 2014 Drug Court data, amphetamines have overtaken heroin as principal drug of concern for participants.

Data Limitations
i. Awareness among clinicians of methamphetamines and crystalline methamphetamine may have grown over time and increased the likelihood of information about the drug being recorded in both the Emergency and Admitted Patient data.
ii. Diagnosis coding used in EDs does not permit discrimination of specific drug types. Analysis was restricted to drug, alcohol and mental health problem diagnosis groupings because the term “ice” was used frequently in many non-drug related contexts.

NON GOVERNMENT ORGANISATION (NGO) SERVICE EXPERIENCE
• Services provided by the non-government sector in most Local Health Districts report increases in methamphetamine-related presentations over the last 3 years. There were 15.7% methamphetamine related episodes in 2011/12 which rose to 21.8% in 2013/14 (report from Network of Alcohol Drug Agencies, 2014).

AVAILABILITY AND PURITY
• Since 2008, there has been an increase in seizures of amphetamines highlighting increases in street and laboratory detections of amphetamines (primarily methamphetamines), with a sharp increase between 2011 and 2012.
• Data from the NSW Forensic Toxicology Laboratory Database – Division of Analytical Laboratories (DAL) shows that since late 2012 there has been a very substantial increase in amphetamine purity.
• In early 2011 50% of seizures had a purity of 10% or less. By July-Sept 2014, median purity was nearly 80%, and 75% of seizures were more than 60% pure.

• The Illicit Drug Reporting System (IDRS) and Ecstasy and Related Drugs Reporting System (EDRS) reports by National Drug and Alcohol Research Centre (NDARC) indicate that among people who inject drugs the availability of methamphetamine is either ‘easy’ or ‘very easy’.

SUMMARY

• The prevalence of methamphetamine is still relatively low. The key current challenges arise from factors such as shifts in drug supply and use. Methamphetamine is more available and purity is high. Amongst amphetamine type stimulant users there is greater use of the more potent forms (crystalline methamphetamine) and therefore impacts and harms have increased.

• Caution needs to be taken in interpreting the limited health service data available due to the variability in data sources and the reliance on clinician notes rather than diagnostic coding and standardised information systems.

• Issues arising from patients presenting with behavioural disturbance in relation to intoxication include: the increased complexity of the presentation sometimes requiring more resources or different skill-sets to manage; the volume of people presenting with behavioural disturbance in relation to alcohol and/or drug intoxication in metropolitan hospitals; in rural sites where the number were smaller but due to resources at the facility, the impact of behavioural disturbance was greater.

4. CURRENT NSW HEALTH RESPONSE

NSW delivers an integrated care system to ensure that individuals have access to a full spectrum of services from prevention/harm minimisation to acute care and general health services through to specialist public services and the non-government sector. Drug and alcohol treatment is provided by specialist doctors, nurses and allied health staff in both general health and specialist treatment settings. Drug and alcohol treatment services in NSW will typically accept any individual with problematic substance use regardless of their primary drug of concern, refer to Appendix 4 for further information.

LOCAL HEALTH DISTRICT SERVICE DELIVERY

In 2006, in response to heightened concern about the use of methamphetamine, NSW Health established the Stimulant Treatment Program (STP) at St Vincent’s Hospital and in Newcastle. The primary aim of these clinics was to establish ongoing clinical interventions for people with co-morbid mental health and stimulant-related problems. The STP provides clinical support for clients presenting to other health services including mental health, accident and emergency services and general practitioners as well as those who self-refer. The purpose of the program is to improve the health and social outcomes of people who use stimulants, including amphetamines through the provision of support services such as brief intervention, counselling, prevention, education, relapse prevention and referral to other health services, including mental health. The services also provide support for families and carers. Medication assisted treatment (dexamphetamine) is provided to a very small proportion of these clients. An independent evaluation found the program:

• had been successful in attracting treatment-naive stimulant users, including those under-represented in traditional drug treatment services;

• is effective as approximately 50% of clients recovered from stimulant dependence after receiving counselling and that this recovery was accompanied by significant improvements in mental health and social functioning.

Other NSW Health responses to amphetamine use include screening / referral, brief interventions and treatment:

• Inpatient and outpatient withdrawal management services that are primarily provided through public drug and alcohol services and public hospitals. These services are designed to safely manage the withdrawal syndrome associated with cessation of drug use.

• A range of outpatient psychosocial services including: counselling, relapse prevention, assertive case management and brief interventions, are provided through both public drug and alcohol services and NGO’s.
• Drug and Alcohol Consultation Liaison services support public hospitals by offering assistance in the management of drug and alcohol concerns both in emergency departments and hospital wards.

• Major metropolitan and rural emergency departments have access to specialist mental health staff or drug and alcohol staff who can assist in assessment, managing the care and referral of patients who use amphetamines, including those who may be behaviourally disturbed. Smaller rural and remote emergency departments are able to consult with specialist mental health staff via video conference for advice on treatment and management options, and via telephone with specialist drug and alcohol staff.

• NSW Health provides treatment for people who have entered the criminal justice system to address their substance use issues through the Diversion Program. These services operate across the Local Health District and NGO service sector and include the Magistrates Early Referral Into Treatment (MERIT) program and the Adult Drug Court.

The Ministry's Whole of Health Program is investigating action to better ensure smooth flow of individuals through hospitals and to appropriate care and support. Work is being done to identify opportunities to review and improve Local Health District systems to manage disturbed behaviour in emergency departments, including for those who may have used methamphetamines.

NON-GOVERNMENT ORGANISATIONS SERVICE DELIVERY

In addition to services provided by Local Health Districts, non-government organisations (NGOs) deliver a large proportion of drug and alcohol treatment services in NSW. The Government provides funding to support over 1000 treatment places in a range of non-government service types. These services are located in rural, regional and metropolitan regions. The programs range from short term to long term programs (up to 12 months) and include:

• Community engagement and advocacy
• Early Intervention and prevention
• Research, development, training
• Residential rehabilitation and
• Treatment services - including community outreach, withdrawal management, residential treatment, day programs and continuing aftercare.

There are 57 specialist NGOs providing a range of residential and non-residential drug and alcohol treatment options. Treatment is community based, 78% provide services for adults over 18 years, and 70% are in cities while less than 5% are located in outer rural/remote areas.

ABORIGINAL DRUG AND ALCOHOL SERVICES

In NSW the government supports a partnership model between specialist treatment services and Aboriginal health services to ensure people have access to the best evidenced based care that is delivered with sensitivity to cultural requirements.

In terms of specialist Aboriginal drug and alcohol treatment, six Aboriginal residential rehabilitation services across NSW are delivered by non-government and Aboriginal Community Controlled Health Services. In addition, the Aboriginal Medical Service Redfern provides a multipurpose drug and alcohol service.

Further leadership and sector development is provided through:

• The Aboriginal Health and Medical Research Council's (AH&MRC) Aboriginal Drug and Alcohol Network (ADAN), convened by the AH&MRC and comprised of regional representatives of Aboriginal Community Controlled Health Services and Local Health Districts. ADAN provides workforce development, policy advice and convenes an annual symposium attended by 80 Aboriginal drug and alcohol workers.

• The NSW Ministry of Health provides funding in to twelve Aboriginal Community Controlled Health Services for projects aimed at awareness raising, education and prevention in NSW.
PREVENTION AND HARM MINIMISATION

The Centre for Population Health and Drug & Alcohol Population & Communities Program provides the following drug and alcohol prevention and education programs:

• **Health information:** ‘Your room’ website which is the primary drug and alcohol information and resource website for NSW Health http://yourroom.com.au/. A suite of web-based and printed factsheets on a range of topics including methamphetamines, ecstasy, alcohol, cannabis, steroids, hallucinogens, inhalants. These are progressively being updated and a revised methamphetamine fact sheet is available. The ‘Drug information at your Library’ Project provides alcohol and other drug information to communities through 369 public libraries across NSW, its website www.druginfo.sl.nsw.gov.au.

• There are two telephone services:
  – **The Alcohol and Drug Information Service**, in 2012/13 they received 23,545 calls from members of the public and the three top drugs of concern were alcohol, methamphetamine and cannabis.
  – **Family Drug Support** – in 2013/14 FDS received 22,433 telephone calls from concerned family members and the greatest numbers of concerns were about cannabis, followed by methamphetamines and alcohol.

• **Life Education NSW** – which delivers drug and alcohol information and prevention education to primary and secondary school students. Life Education NSW accesses some 340,000 students annually. Life Education also works with school teachers and parents on the delivery of their programs. Primary school students are their main focus followed by secondary school students.

• **Australian Drug Foundation** - supports a network of 69 Community Drug Action Teams (CDATs) across the State. CDATs are coalitions of representatives from local government agencies, non-government service providers, business people and community members who identify and respond to local drug and alcohol issues. Included in their annual funding is a quantum of $300,000 which is made available annually to CDATs to assist them in undertaking their events and activities.

• **Australian Red Cross** – which delivers drug and alcohol overdose information and prevention skills to ‘at-risk’ communities across NSW, including young people and Aboriginal communities. ‘Save A Mate’ or SAM is delivered through a variety of contexts - local schools, juvenile justice facilities, rehabilitation facilities and TAFEs and youth centres. ‘Save a Mate’ is often used by CDATs as part of their suite of local community activities. In 2013/14 – the ARC conducted 239 SAM alcohol and other drug workshops for 3758 participants – 1303 metropolitan and 2369 regional and 86 rural/remote. In addition the ARC provided a ‘chill out space and referrals’ at 6 youth music events.

• The New South Wales **Needle and Syringe Program (NSP)** aims to reduce transmission of blood borne viruses and other harms related to injecting drug use through the provision of sterile injecting equipment and health related information and support. The program is delivered through a mix of primary and secondary NSP outlets in health, welfare and pharmacy settings, augmented by mobile and outreach services and vending and dispensing machines. There are 1,021 outlets providing state-wide coverage and access to injecting equipment for people who inject drugs.

NSW GOVERNMENT RESPONSE

• The **NSW Government** is committed to addressing the problem of crystalline methamphetamine through the following initiatives:
  – investing an additional $7 million in new stimulant treatment services;
  – allocating $4 million in funding to enhance the role of the non-government drug and alcohol sector in addressing the needs of methamphetamine users, especially among rural and regional communities;
  – educating the community on the reality of crystalline methamphetamine;
  – tripling the number of roadside drug tests to over 97,000 by 2016-17;
  – mandatory state-wide recording of pseudoephedrine sales in pharmacies;
  – halving the threshold required to arrest dealers for possessing large commercial quantities of crystalline methamphetamine; and
  – confiscating the assets of dealers and traffickers by establishing ‘serious drug offender confiscation orders’.
Crystalline Methamphetamine Background Paper – NSW Data

APPENDIX 1

METHAMPHETAMINE-RELATED EMERGENCY DEPARTMENT PRESENTATIONS IN NSW 2009 TO 2014*

Summary
• Between 2009 and 2014, the annual total number of overdose, drug and alcohol or mental health presentations to 59 NSW public hospital emergency departments where methamphetamine use was recorded increased more than 7-fold, from 394 to 2,963 (Figure 1.1).
• This number compares to 13,143 presentations for acute alcohol problems in 2014.
• The increase was seen in males and females (Figure 1.1).
• In 2014, males comprised 68% of methamphetamine-related presentations.
• The increase in presentations was greatest in 16 to 34 year olds and 35 to 54 year olds (Figure 1.2).
• There was a 7-fold increase in the number of presentations that were admitted (Figure 1.3). However, the proportion of presentations that resulted in admissions remained steady at around 30% (Table 1.3).

Notes
• Included are unplanned Emergency Department (ED) presentations to 59 public hospitals participating in the NSW Emergency Department and Ambulance Public Health Surveillance System to describe methamphetamine-related activity in NSW.
• Presentations were included for analysis if the person presenting was 16 years of age or over.
• Analysis included presentations with certain primary ED diagnoses assigned by the treating clinician and where the text recorded by the triage nurse on presentation to the ED included certain search terms. ED diagnosis categories included in the analysis were overdose/poisoning, acute alcohol problems, illicit drugs and mental health problems. The text search was not case-sensitive, and was performed after replacing punctuation with space characters. The text search included the terms: ‘ice’, ‘meth’, and ‘metham’.

Limitations
• Diagnosis coding used in EDs does not permit discrimination of specific drug types. Analysis was restricted to drug, alcohol and mental health problem diagnosis groupings because the term ‘ice’ was used frequently in many non-drug related contexts.
• These statistics depend on both the mention and recording of relevant information during ED triage.
• Due to the large number of presentations, manual review was not performed and there may be a small proportion of false positive matches.
• Drug use is a factor in many other types of illnesses and injuries that lead to emergency department presentations, but it is difficult to estimate this proportion. The diagnosis groupings we used therefore may underestimate the total impact of methamphetamine use on ED activity.
• The introduction of Activity Based Funding of hospital EDs in July 2012 led to a change in the diagnoses available for selection and an apparent increase in completeness of diagnoses relating to mental illness. This may have affected these statistics.
• Awareness among Emergency Department clinicians of methamphetamines and “ice” may have grown over time and increased the likelihood of information about the drug being recorded at triage.

Data source
NSW emergency department and ambulance public health surveillance system (PHREDSS), Centre for Epidemiology and Evidence, NSW Ministry of Health.

*This data reflects an increase in harms associated with methamphetamine use, most likely related to the increased purity, frequency of use and mode of administration. This data is not reflective of general use in the community.
Table 1.1: Methamphetamine-related Emergency Department presentations among poisoning, drug, alcohol and mental illness presentations, persons aged 16 years and over, 59 NSW hospitals, 2009 to 2014

<table>
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<td></td>
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<td>651</td>
</tr>
<tr>
<td>2014</td>
<td>2020</td>
<td>68.2</td>
<td>943</td>
</tr>
</tbody>
</table>

Figure 1.1: Methamphetamine-related Emergency Department presentations, by sex, persons aged 16 years and over, 59 NSW hospitals, 2009 to 2014
Figure 1.2: Methamphetamine-related Emergency Department presentations by age group, persons aged 16 years and over, from 59 NSW hospitals, 2009 to 2014

Table 1.2: Methamphetamine-related Emergency Department presentations by age group, persons aged 16 years and over, 59 NSW hospitals, 2009 to 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>16 - 34 years</th>
<th>35 - 54 years</th>
<th>55+ years</th>
<th>Total</th>
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<tr>
<td>2014</td>
<td>1922</td>
<td>1003</td>
<td>38</td>
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</table>
Table 1.3: Methamphetamine-related Emergency Department presentations by admission status*, persons age 16 years and over, from 59 NSW hospitals, 2009 to 2014

<table>
<thead>
<tr>
<th>Year</th>
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<th>Not admitted</th>
<th>Total</th>
<th>% admitted</th>
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<tbody>
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<td>963</td>
<td>1897</td>
<td>2963</td>
<td>32.5</td>
</tr>
</tbody>
</table>

*Admission status was missing in 1.5% of records so numbers in “Admitted” and “Not admitted” columns may not add up to the total number of presentations.
METHAMPHETAMINE-RELATED HOSPITALISATIONS IN NSW, PERSONS AGED 16 YEARS AND OVER, 2009-10 TO 2013-14*

Summary
- Between 2009-2010 and 2013-14, there were 10,059 methamphetamine-related hospitalisations among 7,336 individuals in NSW.
- In 2013-14, methamphetamine-related hospitalisations comprised 0.1% of all NSW hospitalisations.
- In NSW between 2009-10 and 2013-14, the annual rate of methamphetamine-related hospitalisation more than doubled from 22.4 to 52.6 per 100,000 persons. Over the same period the number of hospitalisations increased from 1,269 to 3,135 (Figure and Table 2.1).
- Males accounted for around two-thirds of admissions. In 2013-14, the rate of hospitalisation in men was 73.1 per 100,000 and in women the rate was 32.7 (Figure and Table 2.1).
- The highest hospitalisation rate was in 16-34 year olds. During 2009-10 to 2013-14, the rate in 16-34 year-olds grew from 42.1 to 93.6 per 100,000 persons (Figure and Table 2.2)
- In 2013-14, 0.3% of all Aboriginal people in NSW above 16 years experienced a methamphetamine-related hospitalisation. This compares to 0.04% of non-Aboriginal people. Aboriginal people accounted for 15.6% of all patients with methamphetamine-related hospitalisations in that year.
- The population rate of hospitalisation among Aboriginal males was 6-fold higher than non-Aboriginal males. Among Aboriginal females, the rate was 10-fold higher. In 2013-14, the hospitalisation rate in Aboriginal males was 412.8 per 100,000 and in Aboriginal females was 269.4 per 100,000 (Figure and Table 2.3)
- During the reporting period, 80% of people admitted for a methamphetamine-related hospitalisation had only one. In comparison, 7% of persons who had 3 or more hospitalisations accounted for almost one quarter (23%) of all methamphetamine-related hospitalisations during the period (Table 2.4).

Definitions
Methamphetamine-related hospitalisations were defined as admission records containing ICD-10 (Australian Modification) codes T43.61 (poisoning by methylamphetamine) or F15.1 (mental and behavioural disorders due to use of methylamphetamine) in a primary or other diagnosis field. Methylamphetamine is an alternative name for methamphetamine. Contiguous admissions were linked such that patients incurring transfers or type change admissions were counted only once.

Data sources
NSW Admitted Patient Data Collection, linked data and ABS population estimates (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health

*This data reflects an increase in harms associated with methamphetamine use, most likely related to the increased purity, frequency of use and mode of administration. This data is not reflective of general use in the community.
Figure 2.1: Methamphetamine-related hospitalisations, by sex, persons aged 16 years and over, NSW, 2009-10 to 2013-14.

Table 2.1: Methamphetamine-related hospitalisations, by sex, persons aged 16 years and over, NSW, 2009-10 to 2013-14.

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total NSW</th>
<th>Male</th>
<th>Female</th>
<th>Total NSW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>868</td>
<td>401</td>
<td>1,269</td>
<td>31.2</td>
<td>14.0</td>
<td>22.4</td>
</tr>
<tr>
<td>2010-11</td>
<td>1,023</td>
<td>474</td>
<td>1,497</td>
<td>36.3</td>
<td>16.3</td>
<td>26.1</td>
</tr>
<tr>
<td>2011-12</td>
<td>1,246</td>
<td>608</td>
<td>1,854</td>
<td>43.7</td>
<td>20.7</td>
<td>32.0</td>
</tr>
<tr>
<td>2012-13</td>
<td>1,729</td>
<td>742</td>
<td>2,471</td>
<td>59.8</td>
<td>24.9</td>
<td>42.1</td>
</tr>
<tr>
<td>2013-14</td>
<td>2,144</td>
<td>991</td>
<td>3,135</td>
<td>73.1</td>
<td>32.7</td>
<td>52.6</td>
</tr>
</tbody>
</table>
Table 2.2. Methamphetamine-related hospitalisations, by age, persons aged 16 years and over, NSW, 2009-10 to 2013-14.

<table>
<thead>
<tr>
<th>Year</th>
<th>16-34 years</th>
<th>35-54 years</th>
<th>55+ years</th>
<th>Total NSW</th>
<th>16-34 years</th>
<th>35-54 years</th>
<th>55+ years</th>
<th>Total NSW</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>789</td>
<td>461</td>
<td>19</td>
<td>1,269</td>
<td>42.1</td>
<td>23.3</td>
<td>1.1</td>
<td>22.4</td>
</tr>
<tr>
<td>2010-11</td>
<td>913</td>
<td>563</td>
<td>21</td>
<td>1,497</td>
<td>48.5</td>
<td>28.4</td>
<td>1.1</td>
<td>26.1</td>
</tr>
<tr>
<td>2011-12</td>
<td>1,105</td>
<td>719</td>
<td>30</td>
<td>1,854</td>
<td>58.2</td>
<td>36.1</td>
<td>1.6</td>
<td>32.0</td>
</tr>
<tr>
<td>2012-13</td>
<td>1,408</td>
<td>1,008</td>
<td>55</td>
<td>2,471</td>
<td>73.2</td>
<td>50.5</td>
<td>2.8</td>
<td>42.1</td>
</tr>
<tr>
<td>2013-14</td>
<td>1,825</td>
<td>1,239</td>
<td>71</td>
<td>3,135</td>
<td>93.6</td>
<td>61.8</td>
<td>3.5</td>
<td>52.6</td>
</tr>
</tbody>
</table>
Figure 2.3: Methamphetamine-related hospitalisations, by Aboriginality and sex, persons aged 16 years and over, NSW, 2009-10 to 2013-14.

Table 2.3: Methamphetamine-related hospitalisations, by Aboriginality and sex, persons aged 16 years and over, NSW, 2009-10 to 2013-14.

<table>
<thead>
<tr>
<th>Year</th>
<th>Aboriginal Male</th>
<th>Aboriginal Female</th>
<th>Aboriginal Total</th>
<th>Non-Aboriginal Male</th>
<th>Non-Aboriginal Female</th>
<th>Non-Aboriginal Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>91</td>
<td>51</td>
<td>142</td>
<td>753</td>
<td>342</td>
<td>1,095</td>
</tr>
<tr>
<td>2010-11</td>
<td>120</td>
<td>63</td>
<td>183</td>
<td>884</td>
<td>399</td>
<td>1,283</td>
</tr>
<tr>
<td>2011-12</td>
<td>140</td>
<td>92</td>
<td>232</td>
<td>1,077</td>
<td>506</td>
<td>1,583</td>
</tr>
<tr>
<td>2012-13</td>
<td>209</td>
<td>143</td>
<td>352</td>
<td>1,481</td>
<td>589</td>
<td>2,070</td>
</tr>
<tr>
<td>2013-14</td>
<td>280</td>
<td>188</td>
<td>468</td>
<td>1,794</td>
<td>772</td>
<td>2,566</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Aboriginal Rate per 100,000</th>
<th>Non-Aboriginal Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>152.1</td>
<td>27.7</td>
</tr>
<tr>
<td>2010-11</td>
<td>194.3</td>
<td>32.1</td>
</tr>
<tr>
<td>2011-12</td>
<td>219.7</td>
<td>38.6</td>
</tr>
<tr>
<td>2012-13</td>
<td>317.7</td>
<td>52.4</td>
</tr>
<tr>
<td>2013-14</td>
<td>412.8</td>
<td>62.6</td>
</tr>
</tbody>
</table>

Notes:
- Persons with unstated or missing values for Aboriginality are not included in the figure and table above.
- Statistical testing showed that the observed difference between Aboriginal and non-Aboriginal populations was statistically significant ($p<0.0001$), as was the observed difference between males and females ($p<0.0001$).
Table 2.4: Methamphetamine-related hospitalisations per person, patients aged 16 and over, NSW, 2009-10 to 2013-14.

<table>
<thead>
<tr>
<th>Number of methamphetamine-related hospitalisations, between 2009-10 and 2013-14, per person</th>
<th>1 Hospitalisation</th>
<th>2 Hospitalisations</th>
<th>3+ Hospitalisations</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Total NSW*</td>
<td>5846</td>
<td>80%</td>
<td>948</td>
<td>13%</td>
</tr>
</tbody>
</table>

*Note: TOTAL NSW contains stays for patients where Local Health District of residence was not recorded/missing/no fixed address
AMPHETAMINE RELATED ADMISSIONS — NSW ACUTE MENTAL HEALTH UNITS

The figure below shows admissions to NSW acute adult and CAMHS mental health units with stimulant-related diagnoses, by quarter.

Notes
- Admissions of persons aged 65 and under to designated NSW Mental Health acute units
- Stimulants include amphetamines (Speed, ice etc) and ecstasy but excludes specific cocaine diagnoses
- Stimulant abuse/dependence = any primary or comorbid ICD-10 diagnosis of stimulant abuse, dependence, intoxication or poisoning (F15).
- Stimulant-related psychoses = any primary or comorbid diagnosis of stimulant-related psychosis (F15.5, F15.7), OR episodes with any psychosis diagnosis and a comorbid stimulant abuse/dependence diagnosis
- Numbers will differ from separation-based NSW hospital performance data. Data reflect date of admission for a hospital stay. Stays are only included where there is likely to be a reasonable temporal relationship between stimulant misuse and the date of admission, ie admissions to non-acute, forensic or tertiary units, or following transfer from another hospital are excluded. Includes day-only admissions and PECC units.

Source: NSW Health Information Exchange (HIE), extracted 21/4/15. InforMH.
APPENDIX 4

TREATMENT OPTIONS FOR METHAMPHETAMINE USERS IN NSW

The delivery of high quality and effective treatment services in NSW is based on clinical practice being evidence informed and that services meet the range of biological, psychological and social needs of individuals. This includes establishing clear referral pathways to specialist services from hospitals and the primary health services.

Across NSW there are a range of drug and alcohol treatment programs and services that will typically accept any individual with problematic substance use regardless of what their primary drug of concern is. These programs are offered by a range of government, non-government and primary care providers in a range of settings in rural, regional and metropolitan areas.

The majority of these services are non-acute and usually short to medium term. Services provided by frontline drug and alcohol workers include:

**General (non-drug specific) Treatment Services**

**Counselling services**

Drug and alcohol counselling is usually the first option for methamphetamine users who are interested in changing their drug use. Outpatient or community based services involve drug counselling, skills development, relapse prevention and management of physical consequences of long term drug use (e.g. hepatitis C, or liver disease). The majority of state government funded outpatient treatment is provided in drug and alcohol services located in Local Health Districts, which are often aligned with major hospitals or other community health centres.

A number of core elements of the drug treatment spectrum are designed to apply across all drug types. These include withdrawal management services (detoxification), residential rehabilitation services, hospital consultation liaison services and outpatient counselling services. The design of these services and the models of care applied do not vary significantly for any given client irrespective of the type of drug used.

**Withdrawal Management**

Withdrawal management services are designed to safely manage the withdrawal syndrome associated with cessation of drug use. It can be undertaken in an inpatient, residential or community setting. This can occur in a drug and alcohol unit in the public, NGO or private sector, in a general hospital bed, in a general practice setting or managed on an outpatient basis in the patient’s home. These services are generally short term and range between 3-14 days. There are also a slowly increasing number of NGO’s equipped to provide withdrawal management services and continuing aftercare and follow up support in the community.

**Residential rehabilitation**

Residential rehabilitation services are long term residential programs lasting from three to twelve months. Residential rehabilitation services are long term residential programs lasting from three to twelve months, predominantly run by the non-government sector, with a view to providing structured interventions in a safe environment for managing the client’s addiction, and to provide a break from the social environment that frequently contributes to addictive behaviours. Residential programs generally include elements of living skills training, parenting skills, case management, and group work and counselling.

**Drug and Alcohol Hospital Consultation Liaison Services**

Drug and Alcohol Consultation Liaison Services (DACL) are intended to provide direct access to specialist drug and alcohol services for support, treatment advice and/or assistance with the management of specific conditions in patients presenting to emergency departments or admitted to inpatient wards with drug and alcohol related issues. These services provide an effective way to ensure that complex hospital presentations are managed appropriately in a timely manner and that vital hospital resources can be used more efficiently.
According to the recently finalised DACL evaluation 2014 report findings; DACL services successfully:

- Prevented an increase in average length of stay in ED over time.
- Prevented a worsening in emergency admission performance.
- Reduced the frequency of ED presentations over time.
- Decreased the rate of admissions over time.
- Improved patient health outcomes through the effective screening of patients with D&A problems and referral to DACL services.

**Drugs in Pregnancy Services**

Several hospitals in NSW provide drug use in pregnancy services to operate in tandem with ante-natal services. These services can assist pregnant women with amphetamine use problems during pregnancy and assist in ongoing care after delivery.

**Diversion Programs**

In partnership with the Department of Justice, NSW Health provides treatment for people who have entered the criminal justice system to address their substance use issues. These services operate across the Local Health District and NGO service sectors and include the Magistrates Early Referral into Treatment (MERIT) program and the Adult Drug Court Program. MERIT is offered at 65 local courts across NSW regional and metropolitan areas and the adult Drug Courts are located in Parramatta, Sydney, and Newcastle.

**SUBSTANCE-SPECIFIC TREATMENT**

**Stimulant Treatment Program (STP)**

The Stimulant Treatment Program (STP) was established in NSW in 2006 to provide a specialised treatment option for stimulant users including methamphetamine users. The purpose in establishing a substance specific treatment service was to attract people who may not otherwise have sought help. The service is currently delivered through two clinics; in Darlinghurst (St Vincent’s Hospital) and in Newcastle (Hunter New England Local Health District), the STP is funded by the NSW Ministry of Health.

The STP clinical model is based on a harm minimisation philosophy and involves an evidence based, stepped-care approach that modifies the intensity and nature of the clinical intervention according to the severity of the problem and individual goals of the client. The treatment approach of the service incorporates a range of interventions including comprehensive assessment; brief intervention; counselling (group and individual) and medication assisted treatment.

The STP aims to:

- Assist people using stimulants who want to reduce or cease use.
- Assist people who are abstinent to avoid relapse.
- Establish a clinical model for those experiencing co-morbid mental health and stimulant-related problems.
- Reduce health, social and legal costs associated with stimulant use.
- Improve the health and social outcomes of people who use stimulant drugs.

In 2012 an evaluation of the NSW Health STP was conducted and the findings demonstrated that methamphetamine users entering the program showed significant reductions in stimulant use and related harm at both 3 and 6 month follow up. Overall the evaluation findings proved that the model of care was successful in lowering amphetamine type stimulant dependence and improving health and social functioning of amphetamine type stimulant users. This included substantial decreases in psychotic symptoms, hostility, crime, injecting drug use and disability due to mental health [3].

**Non-government Organisation Service Delivery**

The non-government sector in NSW provides a significant proportion of drug and alcohol treatment services including: community outreach; withdrawal management; residential treatment; day programs; and after/continuing care. Most NGO services report that they approach treatment delivery generally in the same manner for all substance users including methamphetamine, but with some variances depending on severity of use and drug type.
Self-Help Groups in NSW

Self-Help groups can be effective in providing support to amphetamine type stimulant users seeking abstinence and support. Self-Help groups allow users the opportunity to be with others who have an understanding of amphetamine type stimulant related issues, and have developed their own strategies in overcoming amphetamine type stimulant dependence. There are three main self-help groups available to amphetamine type stimulant users in NSW:

- **Narcotics Anonymous (NA):** Is a non-profit fellowship. Membership is made up of recovering drug ‘addicts’ who meet regularly to help each other stay clean. The only requirement for members is the desire to stop using. NA advocates a twelve-step recovery program [5].

- **Crystal Meth Anonymous:** is for people who are having difficulties with crystalline methamphetamine. The only requirement for member is a desire to stop using. Crystal Meth Anonymous advocates a twelve-step recovery program [5].

- **SMART Recovery Australia:** SMART Recovery is a voluntary self-help group that assists people in recovering from alcohol, drug use and other addictive behaviours. SMART Recovery teaches practical skills help people deal with problems and enables them to abstain and achieve a healthy lifestyle balance. SMART Recovery is based on principles of Cognitive Behavioural Therapy [5].
References


SUBSTANCE-SPECIFIC TREATMENT

HARMS CAN BE MINIMISED AND EFFECTIVE TREATMENTS ARE AVAILABLE:

a) For people who use crystalline methamphetamine
Stimulant Health Check
(02) 9361 8000
or rural and regional NSW 1800 422 599

Stimulant Treatment Line
(02) 9361 8088 or rural and regional NSW 1800 10 11 88

ACON
(02) 9206 2000
or 1800 063 060

Aboriginal Medical Services and Aboriginal Residential Rehabilitation Services
(02) 9212 4777

DAMEC (Drug & Alcohol Multicultural Education & Counselling) NSW
(02) 8706 0150

NUAA (NSW Users and AIDS Association)
(02) 8354 7343
or 1800 644 413

Narcotics Anonymous
1300 652 820

Crystal Meth Anonymous
www.crystalmeth.org.au

SMART Recovery Australia
Sydney (02) 9373 5100
or 1800 422 599

b) For family members/friends
Family Drug Support
1300 368 186