

Methamphetamine use and related harms – NDRI Submission to ‘Ice’ Select Committee



About NDRI

The National Drug Research Institute’s (NDRI) mission is to conduct and disseminate high quality research that contributes to the primary prevention of harmful drug use and the reduction of drug-related harm in Australia. Since its inception in 1986, the Institute has grown to employ about 30 research staff, making it one of the largest centres of drug research and public health expertise in Australia. It is a designated World Health Organization (WHO) Collaborating Centre for Alcohol and Drug Abuse.

NDRI’s Key Result Areas are to i) conduct research that will contribute to the primary prevention of harmful drug use and the reduction of drug related harm, and ii) contribute to national capacity for research and disseminate research findings to key groups. Researchers have completed about 500 research projects, resulting in a range of positive outcomes for policy, practice and the community. For example, NDRI research has significantly informed and contributed to policy and evidence-based practice such as the National Amphetamine-Type Stimulants (ATS) Strategy, the National Drug Strategy and the National Alcohol Strategy; contributed to Australia’s involvement in international strategies, such as WHO Global and Regional Strategy to Reduce Harmful Use of Alcohol; directly contributed to Australian and State government alcohol and illicit drug policy; informed liquor licensing decisions and government debate regarding cannabis policy; significantly contributed to international evidence-based school interventions; influenced NHMRC guidelines to reduce alcohol health risks; and been cited in development of policy documents for Aboriginal Australians.

The quantum, quality and impact of NDRI outputs were examined in the Research Quality Framework with the Institute’s work described as *“research considered truly internationally competitive and making a major contribution to the advancement of knowledge. Sustained contribution to setting and maintaining new directions within the international research community [and having] very high impact directly demonstrated from most research activities, research outcomes are able to be used and have been used by end-users, and a record of knowledge transfer at a high level.”* NDRI also received an “A” ranking in the ATN Universities’ trial of research impact.

Relevant expertise

NDRI has an extensive track record of completing and disseminating research in the amphetamines area, particularly methamphetamine. A listing of publications NDRI researchers have published on the topic, plus some key projects related to this research area, are listed at Appendix A.

By way of example:

- NDRI led the development of the [National Amphetamine-Type Stimulant Strategy – 2007-2009](#) to develop a common framework in Australia to enhance responses to ATS use and to coordinate activities to prevent use and respond to harms at national and jurisdictional levels. Development of the National Strategy, which addresses supply, demand and harm reduction as well as both health and law enforcement issues, included a thorough review of the evidence and broad stakeholder consultation.
- NDRI Director Steve Allsop and Adjunct Associate Professor Nicole Lee edited a book on the subject, [Perspectives on Amphetamine-Type Stimulants](#), published in 2012.

- NDRI's expertise and research has been regularly and extensively quoted in parliamentary inquiries, including Victorian Parliamentary inquiries into the [supply and use of Methamphetamines, particularly 'ice', in 2014](#) and its inquiry into amphetamine and "party drug" use a decade earlier.

Methamphetamine consumption trends

Consumption data and research evidence indicate that there are changes in methamphetamine use and harms in Australia. While overall methamphetamine prevalence remains stable, there seems to be more frequent use within populations that already use drugs and a rapid shift within drug-using populations towards use of methamphetamine in crystal form, with a consequential increase in harms.

The latest National Drug Strategy Household Survey (NDSHS) showed no change in recent or lifetime population use rates in 'meth/amphetamine' since 2010. Rates of use by people aged 14 years or older in the past 12 months was stable at 2.1 per cent – the equal lowest figure recorded since the 1993 survey. However, while overall use remained stable, there have been statistically significant changes in the type and frequency of methamphetamine use. Recent use of powder decreased from 50.6 per cent in the 2010 survey to 28.5 per cent in the 2013 survey, and recent use of base dropped to 7.6 per cent from 11.8 per cent. Previous 12-month use of ice more than doubled however from 21.7 per cent to 50.4 per cent.

Meth/amphetamines are also being used more often. The NDSHS reported a significant increase in the proportion of at least weekly use and a slight increase in monthly use. For respondents where ice was the main form of methamphetamine used, those who used at least once a week doubled to 25.3 per cent and monthly use increased to 20.2 per cent from 17.5 per cent.

Treatment and law enforcement data

Information from the Illicit Drug Reporting System shows that in 2011-12 the number of national amphetamine-related inpatient hospital admissions was 250 admissions per million persons, the highest number ever recorded. Ambulance call-outs and treatment presentations data are also increasing. In Victoria, for example, there was an 88 per cent increase (Lloyd 2013) in ice-related call-outs in metropolitan Melbourne in 2012-13 (1112 call-outs compared to 592 in 2011-12) and a 198 per cent increase in regional Victoria (231 compared to 77).

Australian drug treatment episode figures show that amphetamine was the third most common principal drug of concern nationally in 2012-13, accounting for 1 in 7 (14 per cent) of treatment episodes, increasing from 7 per cent in 2009-10 (AIHW 2014). The proportion of episodes with amphetamines as the principal drug was higher than the national average in South Australia and Western Australia.

Methamphetamine seizures, both domestically and internationally, have reached record proportions. Global ATS seizures reached an all-time high in 2012, up 15 per cent from 2011 (United Nations 2014), and over the past five years, methamphetamine seizures have almost quadrupled. The number and weight of ATS (excluding MDMA) detections at the Australian border in 2012-13 were the highest on record, with the number of detections increasing 85 per cent and a six-fold increase recorded in weight of detections. Crystal methamphetamine accounted for the majority of ATS detections (IDRS 2014). Within Australia, the number and weight of ATS seizures also increased and ATS arrests increased to record levels. The number of clandestine laboratories detected nationally has more than doubled over the past decade and law enforcement data suggests methamphetamine purity is increasing ((Australian Crime Commission 2014).

Aboriginal West Australians and methamphetamine use

There is a paucity of data on the use of amphetamine type stimulants (ATS) among Aboriginal and Torres Strait Islander people. The 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) reported that a little over 10 per cent reported ever using ATS and five per cent that they had done so in the previous 12 months (Australian Bureau of Statistics 2010; Australian Institute of Health & Welfare 2011). However, for methodological reasons, this is likely to have been an underestimate. A qualitative research project conducted for the Australian Government Department of Health (AGDH) at about same time as the 2008 NATSISS found that:

While the research is unclear with regards to the prevalence of methamphetamine use in Indigenous communities, especially remote and regional communities, it is clear that it is an issue of increasing significance (Blue Moon Research & Planning 2008).

The report of a review of the Aboriginal and Torres Strait Islander alcohol, tobacco and other drugs (ATOD) treatment sector conducted by NDRI (which remains unreleased by the Department of the Prime Minister and Cabinet) found that after alcohol and cannabis, methamphetamine use was of particular concern. Representatives from Aboriginal community-controlled organisations reported increasing use and injecting of methamphetamine and harms arising from this, particularly in urban areas but also in rural and remote towns (Gray *et al.* 2014).

Concern about observed increases in methamphetamine use prompted the National Aboriginal Community Controlled Health Organisation and the (now scrapped) National Indigenous Drug and Alcohol Committee to conduct a survey on ATS issues among workers in the ATOD field (NIDAC 2014). The report cautioned that it was not a representative sample survey, but 88 per cent of respondents reported observing a recent increase in ATS use among their clients. A key issue for many Aboriginal and Torres Strait Islander service providers is that while ATOD service providers are skilled in treating alcohol related problems, fewer have the skills to address the issues arising from illicit drug use (Gray *et al.* 2014).

Prevention and harm reduction

The increase in harms from crystal methamphetamine use means harm reduction measures in known cohorts are very important. While there is limited specific evidence that can guide effective prevention and public health responses to amphetamine use and harm, there is evidence that peer interventions have some credibility and impact with drug users (Allsop 2012).

This is particularly important as attracting methamphetamine users to and retaining them in treatment is a significant challenge.

Mass media campaigns are not recommended for issues that affect a relatively small proportion of the population and research suggests that it can increase uptake. Any mass media should focus on highlighting treatment options (like gambling advertising campaigns have done) rather than the dangers of methamphetamine. Information campaigns should be targeted to at risk users or current users at locations they frequent.

School drug education, specifically about methamphetamine, is also not recommended for similar reasons. Methamphetamine use in school aged children is very small until later teenage years, with older young people more at risk (20-29 year olds).

Treatment

There are no pharmacological interventions available to treat amphetamine dependence or withdrawal, leaving an important gap in evidence-based treatment options (Lee & Rawson 2008, ANCD 2014). This means psychological interventions remain the mainstay of treatment for methamphetamine use – as well as underlying mental health problems – with treatment predominantly provided through community-based drug treatment services.

Withdrawal, where levels of dependence require it, is commonly followed by such psychological counselling as narrative therapy, motivational interviewing and cognitive behavioural therapy.

With regards to methamphetamine treatment, it is important to recognise and consider:

- The long withdrawal and recovery period, and the high relapse rate, for methamphetamine users, especially ice, which means it is crucial to ensure services are funded to reflect 14 day withdrawal, longer term treatment (12-18 months) and especially assertive follow-up/aftercare.
- The larger number of users by far are not dependent (only a small percentage use weekly or daily which might suggest dependence), but are at high risk of harms from regular but not frequent use. They aren't appropriate for tertiary services, which are geared toward complex presentations, but there are no services for them. Either tertiary services need to be funded to provide low intensity services or we need to place more emphasis on developing online interventions.
- There is a need for funding and evaluating innovative programs like step-up/step-down withdrawal models (e.g. combinations of non-residential and residential withdrawal) and additional psychological intervention trials.
- ensuring practitioners and frontline workers, including police and ambulance workers, understand how methamphetamine works in the brain and body and therefore why we see the types of behaviours we do and how to deal with them. It is worth considering extending such efforts to the families of users too.

References and Further information

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APPENDIX A – NDRI AMPHETAMINE-RELATED PUBLICATIONS AND PROJECTS

Publications (in chronological order, most recent first)

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Projects (in chronological order, most recent first)

Investigating methamphetamine use and harms in the Western Region of Melbourne

Project Team: Principal Investigator: Associate Professor C Fry

Chief Investigator: Dr R Dwyer and Associate Professor D Kerr

Project staff: C Clark

Project Status: Current in 2015

Funded by: Victoria University

Recent reports from drug and alcohol experts and the media suggest growing problems with methamphetamine use and harms in the Western Region. However, reliable region specific data is limited, which means we have almost no understanding of the extent, nature and impacts of these emerging trends. This pilot project will gather evidence on methamphetamine use and harms in the Western region to provide a more informed and relevant evidence base from which to develop targeted and effective responses to this potentially significant public health problem.

Progress to date:

Data collection is in progress

Understanding the barriers to improved access, engagement and retention of methamphetamine users in health services

Project Team: Chief Investigator: Professor D Moore, Associate Professor P Dietze, Professor G Bammer and Professor P Perez

Project staff: Dr R Dwyer

Project Status: Current in 2015

Funded by: NHMRC

Amount: \$756,850

The research aims to map the social contexts and epidemiology of methamphetamine use, related harms and health service utilisation/provision amongst street-based injecting drug users; to integrate these diverse data in order to better understand the barriers to improved access, engagement and retention of methamphetamine injectors in specialist drug treatment and other health services; to make recommendations for appropriate interventions; and to further develop and supply an enhanced ethno-epidemiology framework to the Australian context.

Progress to date:

Nicola Thomson submitted her PhD thesis for examination on 7 October 2014. A paper she co-authored with David Moore has been published by *Addiction Research and Theory*. Cameron Duff has submitted three papers: one has been published by *IJDP*, a second (co-authored with David Moore) has been published by *Critical Public Health*, and a third (also co-authored with David Moore) has been published by *Health*. Material from this project has also been published in Fraser, S., Moore, D. & Keane, H. (2014). *Habits: Remaking Addiction* (Harmondsworth: Palgrave). The Burnet Institute has also published several articles on the epidemiological findings from the project. A jointly authored article using computer simulations to model the effects of methamphetamine policy has been completed and will be submitted for publication.

An internet based intervention for psychostimulant use that is relevant as a treatment program by athletes who have a psychostimulant misuse issue

Project Team: Chief Investigator: Dr R J Tait

Co-investigator: H Christensen, K M Griffiths, R McKetin and Ms F J Kay-Lambkin

Project Status: Completed in 2015

Funded by: Commonwealth Department of Health and Ageing

Amount: \$324,249

Breaking the ice is an internet-based intervention to reduce psychostimulant use. It contains three modules involving quizzes, goal setting, and recommended lifestyle changes. This intervention will be evaluated in a randomised controlled trial comparing participants who are current users of psychostimulants to a wait list control group.

Progress to date:

The Breaking the ice randomised control trial started recruiting participants in January 2013, with baseline recruitment closing in July 2013. The 3 month follow-up has been completed and a manuscript published in the *Journal of Medical Internet Research- Mental Health*. The 6 month follow-up was completed in January 2014 and the final outcome manuscript has been accepted by the *Journal of Medical Internet Research*.

Systematic review - amphetamines and hepatitis C

Project Team: Principal Investigator: Dr S J Carruthers

Project Status: Discontinued in 2015

Early in the identified hepatitis C epidemic heroin use was associated with higher prevalence of hepatitis C compared with regular amphetamine injection. Since the decline in heroin availability in 2001 the use of amphetamines has risen and the use of heroin has declined. Investigations of risk among amphetamine users found that as amphetamines users replaced heroin users the prevalence of hepatitis C among primary amphetamine users has risen to mirror that among regular heroin users. This review will look at the available literature on amphetamine use, risk behaviours for the transmission of blood borne viruses and prevalence among populations of users who made the transition to amphetamine use when heroin availability declined.

Beyond internet as tool: A mixed-methods study of online drug discussion

Project Team: Principal Investigator: Dr M J Barratt

Chief Investigator: Professor S Lenton

Co-investigator: Professor M Allen

Project Status: Completed in 2012

Funded by: NDRI Scholarship

This PhD research involves investigating the intersection between illicit drug use and internet technologies, specifically the use of public internet forums by people who use 'party drugs'. A qualitatively driven mixed-methods design comprised: observations of, and engagement with, 40 public internet forums where drugs were discussed; an online survey of 837 party drug users who participated in online drug discussion; and 27 synchronous online interviews with a subset of the survey sample. Public internet forums provide a cultural context within which multiple meanings of drugs and drug use are constructed. They also offer an opportunity for researchers to engage with people who use drugs to better inform practice and policy.

Progress to date:

Monica's thesis has been passed and her PhD has been conferred. Monica will continue to publish articles from the thesis over 2012.

Amphetamine use among detainees at the East Perth watch house: what is the impact on crime?

Project Team: Principal Investigator: N Rowe

Chief Investigator: N Gately, Dr C Wilkinson, Dr C McGregor, Professor S Allsop, J Kessell and Dr A Gunnell

Project Status: Completed in 2011

Funded by: Criminology Research Council

Amount: \$55,251

The present study was designed to utilise existing datasets from two major sources: the Drug Use Monitoring Australia project and statistics on reported crime in Western Australia. The strength of the study lies in the opportunity to conduct detailed analysis of the relationships between offender information and reported crime statistics over an extended period. While previous studies have analysed these data independently, this study enabled higher order statistical analysis of the relationship of specific drug use and drug use behaviours to trends in types of reported crime in WA. Much of the current research on drugs and crime is descriptive; this study conducted statistical analysis to show relationships between important indicators such as drug use, crime and interventions that can be used to provide support for the provision or cessation of specific intervention activities. The interpretation of the data also took into account other available WA data indicators such as the number of clandestine laboratories detected, drug seizure data, treatment utilisation, needle and syringe program data and the dissemination of drug education campaigns such as 'Drug Aware' to support and strengthen the findings. As well as describing the characteristics of amphetamine users among the detainee population (DUMA data), the project identified the types of crime for which amphetamine users are being detained. Findings will be compared to other data sources to corroborate their results and to identify potential markers for crime patterns in the WA community.

This information has a range of potential uses including strategic policy development, planning and resource allocation for crime prevention bodies. The study will increase the knowledge base and utility of currently available data relating to drugs and crime and contribute to the planning of future productive research in the area.

Progress to date: Report completed

Improving understanding of psychostimulant-related harms in Australia: An integrated ethno-epidemiological approach

Project Team: Chief Investigator: Professor D Moore, Associate Professor P Dietze, Professor L Maher, Professor G Bammer and Dr M C Clatts

Project Status: Completed in 2011

Funded by: NHMRC

Amount: \$603,910

National drug surveys and surveillance systems have detected sharp increases in the use of 'psychostimulant' drugs such as the amphetamines, ecstasy and cocaine. The level of harms associated with excessive use of these drugs, such as mental health problems and drug dependence, has also increased, as has the use of these drugs via injection. These increases in the prevalence of use and related harms have also been detected internationally. Previous research on psychostimulant drugs, in Australia and overseas, has suggested that using these drugs in particular ways might be associated with a greater chance of contracting HIV and other blood-borne viruses such as Hepatitis C (e.g., through sharing needles and syringes or other equipment associated with injecting drugs); sexually transmitted infections and other sexual health problems (e.g., through unsafe sex); and of being involved in violent incidents. Despite this previous research, however, little is known about the specific social and cultural contexts associated with psychostimulant-related harms, and this has stymied the development of appropriate responses to prevent such harms occurring. This research project will provide a greater understanding of the individual, social and cultural factors associated with psychostimulant-related harms through an innovative combination and integration of anthropological and epidemiological approaches known as 'ethno-epidemiology'. To access a diverse range of psychostimulant-using contexts, research will focus on three urban sites: street-based drug users in Sydney, club drug users in Melbourne and home-based, recreational drug users in Perth. These groups have been chosen because they have high prevalences of psychostimulant use. The research project will provide important data that will inform future interventions, improve multidisciplinary models for drug research, and build Australia's capacity to conduct cutting-edge public health research.

Progress to date:

This project is completed. To date, 6 journal articles have been published (including a methods paper in *Addiction*) and over 10 conference papers have been presented at national or international conferences. Two modelling papers are to be re-submitted to the *International Journal of Drug Policy* following revision. A further ethnographic paper on methamphetamine use in Perth is nearing completion as are papers on epidemiological work. Three PhD students have submitted their theses with two passed with minor revision and the third being revised in line with examiner comments. The fourth PhD student has completed a first draft of her thesis.

Ethnography of psychostimulant use & related harms among street-based injecting drug users in Sydney

Project Team: Chief Investigator: S Hudson

Co-investigator: Professor L Maher and Professor D Moore

Project Status: Completed in 2010

Funded by: NHMRC Project Grant 323212

This PhD research involved investigation of the cultural practices and social contexts of psychostimulant use and related harms among young injecting drug users involved in street drug markets in Sydney. This study was undertaken as part of an NHMRC-funded project that involved ethnographic, epidemiological and integrative research on psychostimulant use and related harms amongst young people in Sydney, Melbourne and Perth.

Progress to date:

Susan Hudson's thesis was passed subject to minor revisions.

Evaluation of a best practice integrated intervention for regular methamphetamine users with comorbid depression

Project Team: Chief Investigator: Associate Professor N Lee, Ms F J Kay-Lambkin, Professor S Allsop and R McKetin

Co-investigator: Dr A Baker, Professor R Mattick and Professor D Kavanah

Project Status: Completed in 2009

Funded by: Beyondblue - The National Depression Initiative

Amount: \$110,000

Aim of the project was to conduct a trial to assess the efficacy of an integrated psychological intervention for methamphetamine dependence, which addresses both drug use and concurrent depression.

Progress to date:

Clinical trial has now been completed and a final report submitted.

Development of the National Amphetamine-Type Stimulant Strategy – 2007-2009

Project Team: Principal Investigator: Professor S Allsop
Chief Investigator: Dr T Makkai, Professor S Lenton and J Baker
Co-investigator: J George
Project Status: Completed in 2008
Funded by: Australian Government Department of Health and Ageing, Drug Strategy Branch
Amount: \$133,319.90

It is appropriate to develop a National Strategy to provide a common framework to enhance response to ATS use and to coordinate activities to prevent use and respond to harms at national and jurisdictional levels. The National Strategy was developed through a process involving a thorough review of the evidence and broad stakeholder consultation. The National Strategy addresses supply, demand and harm reduction, and consequently is consistent with the National Drug Strategy 2004-2009. The nature of ATS use and related harm dictates that the Strategy addresses health and law enforcement issues.

Progress to date:

National consultations have been completed and literature reviewed. Draft Strategy developed and circulated to key stakeholders. Background Paper completed. Final Draft Strategy submitted to be considered by MCDS at next meeting. Completed.

Psychostimulant use and reckless or violent behaviour (REV-UP Study)

Project Team: Chief Investigator: Professor D V Hawks
Co-investigator: Dr W Loxley
Project staff: J S Bevan
Project Status: Completed in 1999
Funded by: National Drug Crime Prevention Fund
Amount: \$99,827

This pilot project developed a methodology for interviewing police suspects, to investigate whether they had experienced reckless and/or violent (including criminal) behaviour which appeared to be associated with use of psychostimulants and/or other licit or illicit drugs, and whether they attributed such behaviour to their use of psychostimulants and/or other licit or illicit drugs. The project contributed to an understanding of some of the possible consequences of psychostimulant use – reckless and violent behaviour – and offered some evidence relating patterns of criminal behaviour to patterns of drug use, so that changes in criminal behaviour which might occur as a result of changes in drug use could be better predicted.

Progress to date: The research is completed. A Technical Report has been distributed. A Journal article was published and 2 Conference Presentations have been made.

Bingeing on psychostimulants

Project Team: Chief Investigator: C Ovensen and Dr W Loxley
Project Status: Completed in 1996

Bingeing on psychostimulants, considered to be the most hazardous pattern of use, is usually characterised as repeated use over several days, involving the administration of high doses by injection. Drug users recruited from a variety of sources were asked what they meant by bingeing. Both qualitative and quantitative analyses were undertaken. The dimensions of bingeing were reported. Opportunity, drug related cues and psychological factors operate as cues to commence and cease bingeing. Polydrug use and injecting drug use appear to be salient characteristics of drug users who binge. It is concluded that bingeing is a more complex and variable phenomenon than previously thought, and should be considered in developing harm reduction strategies.

A pilot test of an innovative method to determine the prevalence of heroin and cocaine users in WA

Project Team: Project staff: M Phillips, W Saunders, T Paiker, T Murphy and D Blaze-Temple
Project Status: Completed in 1989
Funded by: Other

This study is one component of a larger study conducted in conjunction with the Addiction Studies Unit, Curtin University, the Centre for Advanced Studies, Curtin University and the Western Australian Alcohol and Drug Authority. A sociological research technique known as a small world investigation, first reported in the literature in 1967, was applied to the estimation of the prevalence of illicit drug use in WA. It has many advantages over other direct methods of estimating prevalence in that anonymity of the respondent is not compromised, users do not have to be known to any treatment or law enforcement agency, large samples can be obtained economically, and the ratio of occasional to frequent users can be estimated.