# Impacts of meth/amphetamine, other drugs and alcohol in rural and remote areas in northern and north-east Queensland: An environmental scan

December 2015

Alan Clough, Jan Robertson, Michelle Fitts, Kenny Lawson, Katrina Bird, Ernest Hunter, Bruce Gynther and Karin Obrecht





Published 2015 James Cook University Cairns, Queensland, Australia

Contact details: alan.clough@jcu.edu.au

ISBN: 978-0-9942333-6-3

© James Cook University

#### **Table of Contents**

Li	st of Figuresviii
Li	st of Tablesx
Α	uthor informationxi
Α	cknowledgementsxii
Fı	undingxiii
Ex	xecutive summaryxiv
1.	Introduction1
	1.1 Questions
	1.2 What is not in this discussion paper?
	1.3 Strengths and weaknesses in this discussion paper
	1.4 Where in Queensland was the information collected?3
2.	Background5
	2.1 The Indigenous Leaders Forum (ILF) of the Local Government Association of Queensland (LGAQ) and the Queensland Police Service (QPS) instigated this research 5
	2.2 During 2014, concerns began to be reported by key community people and service providers in rural and remote Indigenous communities in north Queensland about 'new drugs'
	2.3 During 2014, community people were saying that 'new drugs' were being used in some rural and remote Indigenous communities in Queensland
3.	Setting and summary of methods used8
	3.1 Setting
	3.2 Survey data describing views of community residents on whether 'new drugs' were being used in the community
	3.3 A web-based survey of front-line service providers9
	3.4 Interviews to capture information about the prevalence and impacts of meth/amphetamine use
	3.5 What information is needed for a decision-making framework to inform practical and cost-effective responses?
4. w	Results: survey data describing views of community resident on whether 'new drugs' ere being used in the community12
5.	Results of the web-based survey of front-line service providers14

drugsdrugs drugs	16
5.1.1 Interpretation of this data	16
5.2 Changes in workload and commitment of time and resources during the past six months compared with last year (2014)	17
5.2.1 Differences between the 'very remote' communities and the 'remote' and 'out regional' localities	
5.3 Experiences of incidents and behaviours, their estimated frequency of occurrence the perceived role of alcohol and drugs during the past six months	
5.3.1 Persons agitated or violent requiring physical restraint or Police intervention	20
5.3.2 Persons threatening suicide or self-harm	22
5.3.3 Persons exhibiting paranoia, delusional behaviour, bizarre thinking, hallucination	
5.3.4 Persons unusually suspicious of others around them	22
5.3.5 Persons agitated or violent requiring sedation	24
5.3.6 Any injury to front line service providers	24
5.3.7 Persons complaining of hyperthermia	24
5.3.8 Persons with recent chemical burns or exposure to chemical contaminants	24
5.3.9 Other drug and alcohol related incidents reported	25
5.4 Elements of a typical incident perceived to be linked with meth/amphetamine	25
5.5 Resources needed, preparedness and confidence of front line service providers respond to the current drug and alcohol related workload	
6. Results of face-to-face interviews	29
6.1 Where were the interviews conducted and with whom?	29
6.2 Presence of new drugs – is it 'ice'?	29
6.3 When did 'ice' begin to be noticed?	31
6.3.1 'Very remote' communities	31
6.3.2 'Remote' and 'outer regional' localities	32
6.4 Who is using the new drugs?	33
6.4.1 'Very remote' communities	33
6.4.2 'Remote' and 'outer regional' localities	33
6.5 Methods of use	34
6.5.1 'Very remote' communities	34

	6.5.2	'Outer regional' and 'remote' localities	34
	6.6	Availability and ease of access	34
	6.7 Imp	pacts of drug use on the individual	35
	6.8 Imp	acts on the family	35
	6.9 Imp	acts on the community	36
	6.10 Pr	otective factors for preventing uptake of new drugs	37
	6.11 Ad	Iditional resources required to address current drug and alcohol issues	38
7.	Resu	lts: Towards a decision-making framework to inform practical and cost-effective	
re	sponses	5	45
	7.1	Typical cases seen by front-line service providers and in communities	45
	7.2	A 'best case' scenario	45
	7.3	A 'worst case' scenario	46
	7.4	What is the potential for a 'worst case' surge in supply and demand?	47
		More precise data are needed to estimate the costs to service providers of a 'wo	
		enario	
		Cost per case	
		Incidence cases	
		Total costs for each sector and for the public sector overall	
		ure projections: scenario analysis	
		net need: the human cost on individuals, families and communities	
	7.8 Pric	oritizing expenditure: identifying cost effective responses	49
8.	. Discu	ssion and conclusions	51
	8.1 Sun	nmary	51
	8.1.1	Web-based survey of front-line service providers	51
	8.1.2	Information from interviews	51
	8.2 Reg	ional contextual issues and impacts of substance misuse	52
	8.3	Challenges	53
	8.4 Opp	portunities for prevention approaches	53
	8.5 Issu	ies for treatment services	54
	8.6 A ne	eed to upscale and co-ordinate a cross-sectoral response	56
	8.7 Opp	oortunities	56
	8.8	Recommendations	59

	8.8.1 Recommendation 1: A co-ordinated cross-sectoral response	. 59
	8.8.2 Recommendation 2: A focus on prevention	. 60
	8.8.3 Recommendation 3: Workforce capacity building	. 60
	8.8.4 Recommendation 4: Treatment approaches	. 59
	8.9 Conclusions	. 59
Re	eferences	. 62

#### List of Figures

Figure 1	Indigenous communities and selected towns in Queensland regions including 'very remote', 'remote' and 'outer regional' communities and towns where the information in this discussion paper was collected	2
Figure 2	The views of 1158 adults (562 males and 596 females) resident in communities affected by alcohol management in Queensland	13
Figure 3	Indigenous communities and selected towns in Queensland regions where information is available from the online survey (n=193, comprised of 126 fully completed surveys, 57 partially completed, 10 ineligible, i.e. less than six months in service or work unit)	15
Figure 4	Proportion of workload over the past 18 months caused by alcohol, alcohol/drugs combined, other reason (not drugs/alcohol), cannabis, meth/amphetamine, inhalants, other drugs	16
Figure 5a	Changes in workload and commitment of time and resources during the past six months compared with last year (2014)	18
Figure 5b	Changes in workload and commitment of time and resources during the past six months compared with last year by remoteness (2014)	19
Figure 6	Persons agitated or violent requiring physical restriat or police intervention	21
Figure 7	Persons threatening suicide or self-harm	21
Figure 8	Persons appearing paranoid, delusional, bizarre thinking or hallucinations	22
Figure 9	Persons appearing unusually suspicious of others around them	<b>2</b> 3
Figure 10	Persons agitated or violent requiring sedation	23
Figure 11	Any injury to front line service providers	24
Figure 12	Comparative frequency of observed behaviours by drug and/or alcohol use over the past six months	26

Figure 13 Indigenous communities and selected towns in Queensland regions where information is available from in-depth interviews and focus groups with a total of 53 participants with experience across 11 localities (with some participants commenting on more than one of these 11 localities)..... 30

#### List of Tables

Table 1	Comments about recent changes in the use of amphetamine- type stimulants (ATS), including 'ice', in Indigenous communities in rural and remote Queensland. Statements were made by some of the 304 community leaders and service providers interviewed during 2013-2014	6
Table 2	Characteristics of participants who responded to the web- based survey	14
Table 3	Meth/amphetamine use reported in interviews by remoteness of sit including terminology used to describe drugs and reported methods of use	32
Table 4	Examples of protective factors identified by interview participants for the uptake of new drugs in selected communities	40
Table 5	Extra resources identified by interview participants to address current drug and alcohol issues arranged by key themes	42
Table 6	Estimating the costs per sector	48

#### **Author information**

The authors provided the following contributions:

Development of the concept, design of the survey and interview questionnaires, interpretation of the data and contribution to the final manuscript.

#### Author affiliations:

AUTHOR	POSITION	AFFILIATION
A/Prof Alan Clough	Principal Research Fellow	
Dr Jan Robertson	Research Fellow	AIHTM: Australian Institute of Tropical Health & Medicine,
Dr Michelle Fitts	Research Officer	Division of Tropical Health and
Dr Kenny Lawson	Principal Research Fellow	Medicine, James Cook University
Mrs Katrina Bird	Research Assistant	
Prof Ernest Hunter	Regional Psychiatrist	
Dr Bruce Gynther	Regional Psychiatrist	Remote Area Mental Health Service, Queensland Health
Dr Karin Obrecht	RegionalPsychiatrist	

#### Acknowledgements

The authors wish to acknowledge the following people who provided input and guidance for this paper and/or provided assistance with data collection:

Dennis Brinn Queensland Health

Professor Jan Copeland National Cannabis Prevention and Information Centre

Gavin Farry Queensland Ambulance

Cameron Francis Dovetail and Queensland Health

Snr Sgt Adam Frost Queensland Police

Detective Snr Sgt Kevin Goan Queensland Police

Richard Henshaw Queensland Health

Stephanie King Mount Isa Centre for Rural and Remote Health

Dr Minh Le Cong Royal Flying Doctor service

A/Prof Michael Liddell James Cook University

Sarah Mayes Queensland Police

Dr Richard Stone Queensland Health

Detective Snr Sgt Mick Walker Queensland Police

Alan Wason Mulungu Aboriginal Corporation Medical Centre

Dr Mark Wenitong Apunipima

#### **Funding**

Some of the costs for this research were met by the Queensland Police Service Drug and Alcohol Co-ordination Unit. Authors and other contributors provided input from their existing resources in-kind. Some of the data presented was gathered as part of a National Health and Medical Research Council (NHMRC) Project Grant#1042532 (Associate Professor Clough, Chief Investigator). Associate Professor Clough holds an NHMRC Career Development Fellowship #1046773. Dr Jan Robertson was supported by a Research Fellowship from the Australian Primary Health Care Research Institute-funded Centre for Research Excellence for the Prevention of Chronic Conditions in Rural and Remote High Risk Populations at James Cook University & University of Adelaide. The information and opinions contained in this paper do not necessarily reflect the views or policy of the Australian Primary Health Care Research Institute or the Australian Government Department of Health.

#### **Executive summary**

This paper offers an environmental scan of the perceived impacts of meth/amphetamine, other drugs and alcohol use in northern and north-east Queensland. This research has found that populations living in 'very remote' localities have different experiences of meth/amphetamine compared with populations living in less remote places. Our evidence indicates that some serious incidents involving meth/amphetamine abuse impacting on Aboriginal and Torres Strait islander individuals, families and communities have occurred in recent times in the 'remote' and 'outer regional' centres in northern and northeast Queensland. Although the use of the term 'ice' is widespread, the 'very remote' communities of northwest Cape York and the Gulf of Carpentaria have seen very few such incidents to date, although community leaders hold deep concerns.

Where meth/amphetamine is believed to be involved, workload and time commitment of front-line service providers had increased over the preceding six months compared with last year (2014). On average, amongst front line service providers, incidents or behaviours observed or experienced where meth/amphetamine is believed to be a factor, have tended to occur not more than monthly during the past six months. In rank order, the behaviours or incidents observed or experienced linked with meth/amphetamine are manifest in:

- Persons agitated or violent requiring physical restraint or Police intervention
- Persons threatening self-harm or suicide;
- Persons who appear paranoid, delusional, experiencing bizarre thinking or hallucinations;
- Persons who are unusually suspicious of others around them, and,
- Persons agitated or violent requiring sedation

Notwithstanding that the impacts of meth/amphetamine on these services was perceived to be growing, all of these kinds of incidents, along with injuries to front-line service providers, were more frequently linked with i) alcohol, ii) cannabis and the iii) combined use of alcohol and drugs. Importantly, we documented a significant component of patient and client behaviours that are not linked with drugs or alcohol, probably reflecting underlying mental health issues in the population.

Resources were regarded as not sufficient to deal with the current drug and alcohol workload by almost two-thirds of front line service personnel with just under half believing their work unit's front-line staff were sufficiently confident or adequately prepared to address it. Any surge in the use of 'ice' is likely to impact on front line staff and, of course, on users' families, immediately.

New drugs in different forms of meth/amphetamine were reportedly tried in recent times in 'very remote', 'remote' and 'outer regional' localities. Meth/amphetamine use was already established in some 'outer regional' and 'remote' localities. We found no evidence that its use is currently spreading to significant numbers of new users in Aboriginal and Torres Strait Islander populations. Among both Indigenous and mainstream populations it seems that established users of illicit drugs are suffering serious adverse experiences and manifestations of mental health problems as the currently available forms of ATS in the market are taken up. This kind of response is being seen in users observed across the spectrum of socio-economic position.

Remoteness, strong community action and community-level fears of the impacts of new drugs are currently the main protective factors identified. We found no evidence for trafficking of meth/amphetamine into Aboriginal and Torres Strait Islander communities nor that meth/amphetamine is being manufactured in these communities. Preventative activities are essential and need to be scaled up including: awareness raising and education within a culturally specific framework, employment support programs and diversionary activities and support for advocacy and strong community action.

From 2013 in Queensland, preventative health services were seriously reduced. Going forward, a sustained but realistic re-investment in preventative services is now required to address any possible surge in the use of 'ice' in the 'very remote', 'remote' and 'outer regional' areas of northern and north east Queensland.

The Queensland Government recently announced \$6 million worth of funding for the health sector to fund treatment, mainly in southern regions of the State. Enhanced treatment is needed of course; but our analysis suggests that a focus on prevention in the northern and north east regions will be more cost-effective and sustainable within an integrated and robust cross-sector strategy.

With no evidence-based interventions readily available, to reduce the prospects of any possible increase in the use of 'ice' in the region in the future, with a focus on prevention, the following recommendations are made.

#### Recommendation 1: A co-ordinated cross-sectoral response

Illicit drug use, in general, has its causes and consequences across various sectors in society. Conversely, benefits from success will be shared across sectors, implying that it is worthwhile for all sectors to invest in targeted prevention, management and treatment. Silo approaches from individual sectors are obviously to be avoided. There needs to be a coordinated cross-sectoral response, fittingly led by health, with limited State resources allocated appropriately across sectors. This needs high-level backing, and would be facilitated by an appropriate office to coordinate and oversee strategy implementation

across sectors to rapidly and efficiently respond across the continuum of prevention, management and treatment.

#### Recommendation 2: A focus on prevention

The 'very remote' communities in particular are comparatively unscathed by 'ice' with some unique geographical and socio-cultural features furnishing some protective factors. Consequently, the priority for these regions is to mitigate the risk of an outbreak by vigorously supporting supply reduction alongside advocacy, awareness-raising and preventative initiatives by the health sector across Queensland. Significant stakeholders in these efforts would include Community-Controlled Health Services and Youth services, amongst others. The Indigenous Leaders' Forum (ILF) of the Local Government Association of Queensland (LGAQ) may have a role to play here to advocate for appropriate service provision.

#### **Recommendation 3: Workforce capacity building**

It is further recommended that a coordinated approach be taken to upskill drug and alcohol and mental health workers to increase confidence in dealing with meth/amphetamine — related issues. Partnership approaches could involve collaboration between state health and peak bodies such as Queensland Network of Alcohol and other Drug Agencies and Queensland Aboriginal and Islander Health Council. Such initiatives, particularly those appropriately tailored to identified needs in different parts of the region, are likely to be particularly welcomed in the services operating in the 'remote' towns and 'outer regional' centres, i.e. where many outreach service providers are based.

#### **Recommendation 4: Treatment approaches**

There is a need for better engagement by drug and alcohol and mental service providers with community members and leaders in order to improve culturally safe service provision. Protocols and brokerage for community engagement could be supported by a coordinated cross-sector effort. We also recommend a further investment in outreach approaches by drug and alcohol and mental service providers, which may facilitate provision of and access to family support services and earlier interventions with problematic users of ATS. The Cairns-based mental health co-responder model (see example, Section 8.7, iii) which integrates surveillance, rapid response and referral to services may provide an effective example of inter-agency case-management. It is recommended that this model is evaluated and examined for its utility in other major 'outer regional' or 'remote' centres. Notwithstanding current fiscal constraints, there have been many calls for an increase in sites for residential rehabilitation services that can incorporate traditional practices in programs and ensure access to social supports such as family. We recommend exploration of infrastructure costs to provide residential rehabilitation services where the dearth of services is most critical, e.g. the Western Cape York region, and for the provision of safe

clusion facilities to manage patients in mental health crisis in both 'outer regional' emote' and 'very remote' sites.	

#### 1. Introduction

Concern has been rising in Australia regarding changes in meth/amphetamine use over the last decade. These changes have included an apparent shift to use of the purer crystal form, commonly described as 'ice' <sup>1</sup>. Use of this purer form is associated with more severe harms <sup>2, 3</sup>. Further changes reported include an increased likelihood that Aboriginal and Torres Strait Islander people and people living in remote and very remote areas were recent meth/amphetamine users <sup>1</sup>.

In 2014, the National Aboriginal Community Controlled Health Organisation (NACCHO) and National Indigenous Drug and Alcohol Committee (NIDAC) conducted an online survey of Aboriginal community-controlled health services across Australia regarding the use of 'ice' in Indigenous communities and populations. Their report also reflected this growing unease among the health professionals surveyed <sup>4</sup>. At about the same time, the evidence compiled in the Victorian Parliament's Inquiry into the supply and use of meth/amphetamine, including 'ice', was released <sup>5</sup>. In light of these published concerns and with the launching of a number of government inquiries and initiatives at Commonwealth and State level, there was a clear need for more detailed, objective evidence about a feared surge in the use of 'ice' in Indigenous communities in particular. This discussion paper focuses on rural and remote regions in northern and northeast Queensland.

#### 1.1 Questions

The paper reports information gathered to address three groups of questions:

- 1. What is the evidence that meth/amphetamine, particularly crystal meth/amphetamine, or 'ice', is being used in Aboriginal and Torres Strait Islander (Indigenous) communities in rural and remote areas in northern and northeast Queensland?
- 2. In the usual work of service providers at the front line in these regions, what behaviours, symptoms and signs believed to be linked with the use of meth/amphetamine do they observe or experience?
  - i. Are these incidents experienced differently from behaviours, symptoms and signs linked with other drug use and alcohol?
  - ii. Has there been any recent increase in the occurrence of such cases?

- iii. What are the resource implications for key service providers and do they have the resources available to deal with any surge in the use of 'ice'?
- 3. If 'ice' is being used,
  - i. Where is it being used? Is its use spreading?
  - ii. What groups in the population are using it and how is it being used?
  - iii. How easy is it to get?
  - iv. What are the impacts on affected individuals, families and communities?
  - v. What factors might reduce these impacts, particularly those factors which promote resilience and which support recovery?

#### 1.2 What is not in this discussion paper?

- 1. The full details of the methods and procedures for sampling, data collection, analysis and interpretation are not provided as part of this discussion paper.
- 2. The paper does not include a comprehensive review of the literature about meth/amphetamine use and its health and social effects in Australia or elsewhere.
  Only literature relevant to the above questions is used to support the discussion.
- 3. A full description of the pharmacology and epidemiology, health and social effects of meth/amphetamine use in Queensland, Australia or elsewhere is not provided.

#### 1.3 Strengths and weaknesses in this discussion paper

The analysis of the data we collected uses straightforward descriptive approaches. A fully-specified study design with dedicated resources for this research could not be prepared with the time available; researchers and collaborators allocated their time from existing research projects and service roles to provide input. Random sampling of survey and interview participants was not possible and there is little by way of current relevant administrative data that we could present. The numbers who responded to the survey (n=157 participants provided some information) and who were interviewed (n=53) are not representative samples of the service and stakeholder groups as they were not randomly selected. The conclusions and recommendations we make should be seen in light of these limitations.

#### 1.4 Where in Queensland was the information collected?

Figure 1 shows the general location of the Indigenous communities and other localities where this information was collected. The discrete Indigenous communities in Figure 1 became the focus of this research because an existing evaluation study of Queensland's alcohol management plans (AMPs) was already under way<sup>6</sup>. This evaluation study was investigating the long-term shifts in alcohol and drug use behaviours in AMP communities.

We also collected information relevant to other Indigenous communities, towns and population centres near communities where AMPs are in place. The linkages between the Indigenous communities with AMPs and the nearby associated communities and towns are complex and varied and it is beyond the scope of this paper to delve into these linkages in an exhaustive way. However, it is useful and informative to consider the relevance of any novel drug availability and use in the Indigenous communities closer to towns and regional centres compared with the more remote localities.

To define these kinds of localities within an established framework, we used the Australian Standard Geographical Classification which describes five categories of geographical remoteness<sup>7</sup>. The information in this report reflects the contemporary situation in two types of these geographical categories as depicted in Figure 1:

- i. <u>'very remote'</u> communities and towns, mostly located in far north
   Queensland and Gulf regions, and
- ii. <u>'outer regional' and 'remote'</u> communities and towns some of which are located in the northwest and along Queensland's east coast.

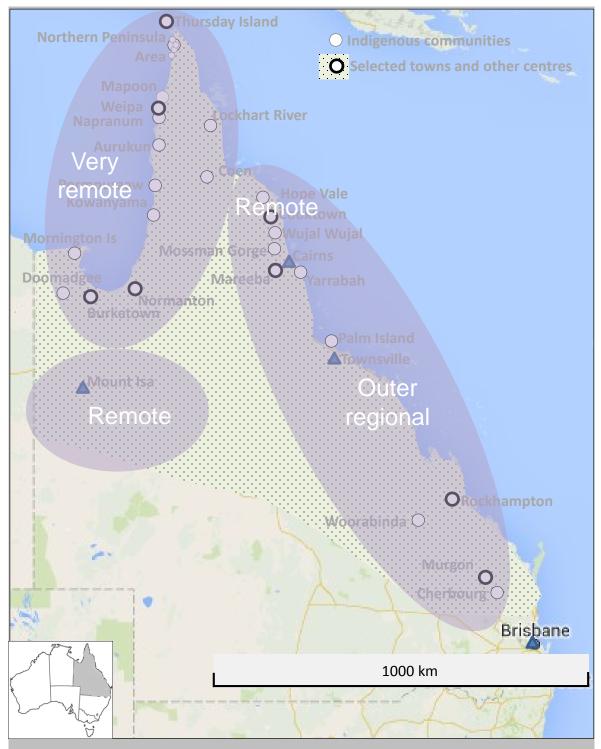


Figure 1. Indigenous communities and selected towns in Queensland regions including 'very remote', 'remote' and 'outer regional' communities and towns where the information in this discussion paper was collected

#### 2. Background

2.1 The Indigenous Leaders Forum (ILF) of the Local Government Association of Queensland (LGAQ) and the Queensland Police Service (QPS) instigated this research

The Indigenous Leaders Forum (ILF) of the Local Government Association of Queensland (LGAQ) passed resolutions at its May (2015) meeting on Palm Island as follows:

'ILF members are looking to understand the extent of illicit drug uptake and in partnership with other government agencies (police and health) to develop strategies to prevent further uptake.

Three motions were passed by the ILF in regard to illicit drugs and or specifically "Ice". The third motion listed below relates specifically to JCU in which the ILF members ask that JCU work with their communities to undertake research as a matter of urgency.

The LGAQ, on behalf of the Aboriginal and Torres Strait Islander Leaders' Forum (ILF), write to the Police Commissioner offering the support of councils in being proactive to prevent the emergence of the drug 'Ice' into Aboriginal and Torres Strait Islander communities.

The LGAQ, on behalf of the Aboriginal and Torres Strait Islander Leaders' Forum (ILF), write to the Federal Government seeking for the national taskforce to include issue of 'ice' in Aboriginal Torres Strait Islander communities on their agenda.

The Aboriginal and Torres Strait Islander Leaders' Forum (ILF) support JCU to undertake research that considers the impacts of drugs other than alcohol within indigenous communities.'

## 2.2 During 2014, concerns began to be reported by key community people and service providers in rural and remote Indigenous communities in north Oueensland about 'new drugs'

During 2013 and 2014, our research team was in the process of interviewing key community leaders and service providers (n=304) for the alcohol management plan (AMP) evaluation study<sup>6</sup>. Towards the end of 2014, a few of the key people we were interviewing began to offer comments about the possible uptake of the use of what seemed to be amphetamine-type stimulants (ATS) in their communities; and some used the term 'ice'<sup>8</sup>. Table 1 contains the comments we recorded.

The information in Table 1 is equivocal and reflects uncertainty and the influence of rumour and anecdote together with fears about reported or suspected events in the local community. Interestingly, it suggests that 'ice' was not an issue for health centres in some communities at that time, but more consistently reflected concerns about the availability of 'ice' in the regional towns near the communities.

Table 1. Comments about recent changes in the use of amphetamine-type stimulants (ATS), including 'ice', in Indigenous communities in rural and remote Queensland. Statements were made by some of the 304 key community leaders and service providers interviewed during 2013-2014.

- \* Aboriginal and Torres Strait Islander
- † Torres Strait Islander

Health service provider, Female, Aboriginal, aged 25-50	"People are wanting education about ice. They know nothing about it. They put it on top of bongs. We have ice users in [nearby regional town]".
Health service provider, Male, non-A&TSI*, aged 50+	"In recent times, [community names] Queensland Health Clinics have NOT received any referrals due to amphetamine usage."
Social welfare worker, Male, TSI <sup>†</sup> , aged 25-50	"There is talk of ice here but there is more marijuana. I have heard of "snow cones"; marijuana laced with some powdered drug."
Local Government worker, Male, non-A&TSI*, aged 25-50	"There is a rumour that ice is in the community."
Drug and alcohol treatment worker, Female, Aboriginal, aged 25-50	"They are being introduced to ecstasy, ice, when they go in to [nearby town]. Utensils were found in the school ground last year, needles. They are opened up to another world of drugs."

# 2.3 During 2014, community people were saying that 'new drugs' were being used in some rural and remote Indigenous communities in Queensland In parallel surveys during 2014, we had asked 953 adult residents of eight AMP communities for their views on trends in local drug use in the context of alcohol restrictions. Around 6% of them specifically nominated 'ice' as a new kind of drug being used by local residents. Even though this evidence is very limited and based mainly on peoples' perceptions rather than direct experiences, these consistent reports from very reliable sources in the communities were concerning. No similar reports had appeared in surveys of alcohol, tobacco, cannabis and other substance use during the preceding 15 years of systematic research in far north Queensland <sup>9</sup>, and also in similar communities in Arnhem Land (Northern Territory, NT)<sup>10</sup>. The use of any form of meth/amphetamine has been very rare in such 'very remote' localities.

This raises a number of questions<sup>11</sup>, and in a recent publication in the Medical Journal of Australia, we urged preparedness<sup>8</sup>. We specifically recommended:

- improving community-level understandings of 'ice' and its health and social consequences which we argued was immediately warranted as a prudent, initial preventative measure;
- research to better understand the resilience and protective factors that may protect
  particular Indigenous individuals, families and communities from using 'ice', and
  which may support the recovery of those who use it, and,
- epidemiological studies to document current patterns and styles of meth/amphetamine use generally, the precise nature of the substance(s) being used, and to monitor trends and patterns in demand<sup>8</sup>.

#### 3. Setting and summary of methods used

In June, 2015, the relevant ethics committees were formally asked to approve an amendment to existing study approvals. Interviews and surveys were conducted to compile the information reported here. Full details of the methodology used to collect and analyse the information provided in this discussion paper will be published elsewhere. A brief summary is provided in the following sections to assist with the interpretation of results.

#### 3.1 Setting

The total population living in the shaded region in Figure 1 is close to 1 million people with around 170,000 living outside the main centres of Townsville, Cairns, Mount Isa, Rockhampton, Mackay, Gladstone and the Whitsunday coast. This discussion paper does not include detailed information about 'ice' use in these larger centres. We were provided some information about the impacts of 'ice' in the larger population centres, but our report should not be considered in any way as a complete picture for these much larger places. The total population of the 15 Indigenous communities where AMPs are in place was 17,485 at the 2011 census and of these around half (53%) were living in the 'very remote' communities depicted in Figure 1.

#### 3.2 Survey data describing views of community residents on whether 'new drugs' were being used in the community

By the end of July, 2015, we had completed surveys with 1158 community residents conducted as part of the AMP evaluation. The surveys were conducted in 10 of the 15 communities with AMPs in place. The 10 communities surveyed included four in the 'outer regional' and 'remote' group and six in the 'very remote' category. Among a number of survey questions, participants (aged 18 years and over) were asked whether they believed there were any 'new drugs being used in the community recently'. Participants were asked to rate their opinion by indicating either: 'strongly agree', 'agree', 'don't know/unsure', 'disagree' or 'strongly disagree'.

The survey results were depicted using graphs of participant agreement or disagreement comparing the two categories of remoteness, i.e. participant responses in 'outer regional' and 'remote' communities compared with responses in 'very remote' communities.

#### 3.3 A web-based survey of front-line service providers

Front-line service providers in health (including emergency medicine), law enforcement, emergency services, community and youth support, justice, education and local government along with other relevant sectors were approached and invited to participate in a confidential web-based survey. Participants were asked to provide information about the following:

- The towns and communities they had worked in during the preceding 6-18 months<sup>1</sup>.
- The proportion of their service workload that they estimated to be caused by a range of substances and ensuing behavioural factors:
  - o Alcohol;
  - o Cannabis;
  - Meth/amphetamine;
  - o Inhalants (e.g. petrol, paint, glue, aerosols);
  - Combined use of alcohol and drugs or more than one drug;
  - Reasons other than alcohol or drug use (recognising that many patients or clients have established mental health issues that can be exacerbated by drugs and/or alcohol), and,
  - Other drugs (e.g. cocaine, synthetic cannabinoids).
- Whether the service workload related to the above substance use and behavioural factors had changed (increased, decreased) during the preceding six months compared with the previous calendar year (2014)
- A list of behaviours and incidents was created based on evidence in the literature that they are linked with meth/amphetamine abuse and on the views of some key informants who described these in interviews.
  - Persons agitated or violent requiring physical restraint or Police intervention<sup>12, 13</sup>
  - Persons agitated or violent requiring sedation<sup>13-16</sup>
  - o Persons threatening self-harm or suicide<sup>17</sup>
  - Persons who appear paranoid, delusional, experiencing bizarre thinking or hallucinations<sup>2, 13, 18</sup>

James Cook University

<sup>&</sup>lt;sup>1</sup> The Cairns and Hinterland Hospital and Health Services Ethics Committee required that Queensland Health staff working in the Torres and Cape District did not provide this information to the researchers.

- o Persons who are unusually suspicious of others around them 12, 13
- Persons complaining of a greatly elevated body temperature above normal (hyperthermia)<sup>13, 19</sup>
- o Persons with recent chemical burns or exposure to chemical contaminants<sup>13</sup>
- o Any injury to front-line service providers<sup>13</sup>
- Any other incidents not listed above which may be related to acute intoxication with alcohol and/or drugs.<sup>12, 14, 20, 21</sup>

In terms of the substance use and behavioural factors, participants were asked to assess whether, during the past six months, they had observed or experienced any of the above kinds of incidents or behaviours and, if so, how often: 'never', 'rarely', 'monthly', 'weekly', 'daily'.

 We also asked front-line service providers whether they felt that they had the resources and information needed to cope with their current drug and alcoholrelated workload.

#### 3.4 Interviews to capture information about the prevalence and impacts of meth/amphetamine use

Using qualitative methods developed for the AMP evaluation study<sup>6</sup>, semi-structured interviews were conducted with Indigenous community members and with providers of services to Indigenous communities in selected localities. Participants were sought from these sectors:

- Local Government Council members;
- Health service providers;
- Men's and women's groups;
- Justice groups, and,
- Police.

The following issues were discussed and the information recorded or noted:

- Whether any new drugs have been used in the community/town recently and what
  are the differences between the past six months and any trend over the past one to
  two years? Further inquiry was made regarding the types of drugs, accessibility,
  methods of use and who was using them.
- How is the use of any new drugs affecting:

The individual user?

The family?

The community?

 To enhance protective factors, what additional resources are needed (over and above those normally needed) by service providers and community members to adequately address current drug and alcohol issues?

#### 3.5 What information is needed for a decision-making framework to inform practical and cost-effective responses?

To inform the most appropriate response to any new drug and alcohol issues, 'ice' in particular, a practical framework is required that is accessible to decision-makers. In order to provide the basis for such a framework, we considered:

- the nature of the typical cases seen by front-line service providers and in communities;
- the plausible 'worst case' and 'best case' scenarios for the future occurrence of typical acute and severe cases and,
- the kinds of interventions relevant to the region to prevent a 'worst case' scenario from occurring.

In order to make the most cost-effective responses to address the impacts of any new patterns of drug use, information is needed to better understand the economic consequences of not responding. A surge in the use of more harmful types of drugs will have consequences for service providers, with associated economic costs. By contrasting the possible cost savings from implementing interventions against the costs of not responding, a simple 'business case' can be developed to show what could be saved with investments in interventions. Specific information is required to do this. We provide an overview of the data requirements for a 'business case' and how it can be used to prioritise expenditure.

# 4. Results: survey data describing views of community resident on whether 'new drugs' were being used in the community

Data from surveys with a total of 1158 residents (562 males and 596 females) are reported in this section. Overall, 41% of survey participants asserted that new drugs were being used in their community; some (around 5%) specifically nominated 'ice' (see Figure 2). However, people's opinion was somewhat divided because around one-quarter (26%) said they were unsure or did not know and around one third (34%) disagreed with the proposition.

When the data for the survey participants is depicted graphically across the two groups of remoteness categories, it is clear that the 490 people surveyed in the six 'very remote' communities tended to be less sure, or to disagree, that 'new drugs have been used in the community recently' (see Figure 2). This was quite different in the four 'remote' and 'outer regional' communities where the 668 people surveyed tended, on the other hand, to take the opposite view and agree that new drugs have, in fact, been used in the community.

This comparison points to underlying different experiences of 'new drugs' in these different geographical areas. In general terms, the closer a community is to a town, the stronger was the view that 'new drugs' were being used in the community (Figure 2). Survey participants were invited to provide further comment if they wished. Some of their additional comments reinforced not only the great concern being felt, but also revealed an encouraging resolve to address the uptake of 'ice' locally (see Figure 2).

The views of 1158 adults (562 males and 596 females) resident in communities affected by alcohol management plans in Queensland

'New drugs have been used in the community recently'

'outer regional' and 'remote' communities (n=668)

Agree

'very remote' communities (n=490)



"There's ice first time. We need the police worried in here, really cracking down on it."

"Soon ice will come and that will mean we are in big trouble."

"There are other drugs. I don't know what they are taking, but they don't get that stupid on marijuana."

"That other stuff wouldn't come here. We're strong here. We talk about that a lot in men's group last year. Already decided we don't want that here".

"No, we will fight to keep ice out."

### 5. Results of the web-based survey of front-line service providers

Between July and November, 2015, a total of 193 people responded to the survey. There were 126 fully completed surveys and 57 incomplete surveys, a total of 183. Thirty-six survey participants were excluded because they provided no formal consent to use the information after starting the survey (n=22) or had not worked for at least six months in their service or work unit (n=14); meaning that it was not possible to be sure that they would have any recent directly-relevant experience. The characteristics of the remaining 157 survey participants who provided at least some information in response to the survey are summarised in Table 2. It is difficult to report a precise number of people initially invited to complete the survey (to calculate a response rate) as participants were usually invited through their central service management structures meaning that recruitment was generally outside the control of the researchers. However, we are confident that at least 250 people were invited to participate.

Table 2. Characteristics of participants who responded to the web-based survey							
In what servi	In what service are you currently employed?						
Health	Law	Community	Justice	Local	Education	Other	
	enforcement	and youth		Government			
		support					
		services					
118	12	11	7	5	2	2	
Would you do	escribe your role	within your ser	vice or work u	nit as having m	ainly direct or	indirect	
contacts with	service clients or	patients?					
Mainly	Mainly indirect	Other					
direct							
130 24 3							
I have served	in this current ro	le in my work i	unit or service	for			
Less than 6	6 to 18	Longer than					
months	months	18 months					
34	9	114					
I have served	in my work unit	for a total of					
Less than 6	6 to 18	Longer than					
months	months	18 months					
17	2	38					
What propor	tion of your servi	ce's client base	is Aboriginal a	nd/or Torres S	trait Islander?		
None	About 25%	About 50%	About 75%	75% or			
				more			
2	32	26	15	82			

The majority of participants worked in health services (75%) and had mainly direct contact with service clients or patients (83%). Around 94% had been working in their current role for at least six months with a majority (88%) having worked in their service at least 18 months. Most participants (88%) worked in services whose client base comprised around half or more Aboriginal and/or Torres Strait Islander clients. Figure 3 shows the localities where the survey participants were based or the location they were reporting on. In the end, it was difficult in this survey's results to clearly distinguish between the information that related directly to the 'very remote' communities from information about populations closer to, and in, the larger centres. Overall, however, the survey participants reported

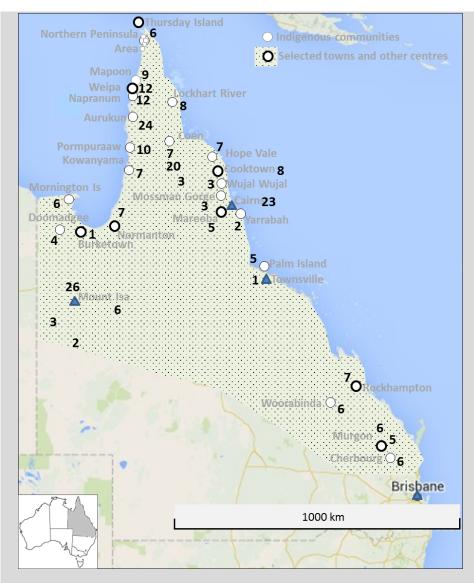


Figure 3. Indigenous communities and selected towns in Queensland regions where information is available from the online survey (n=193 comprised of 126 fully completed surveys, 57 partially completed, 10 ineligible, i.e. less than six months in service or work unit).

information for localities from across the regional spectrum of geographical remoteness.

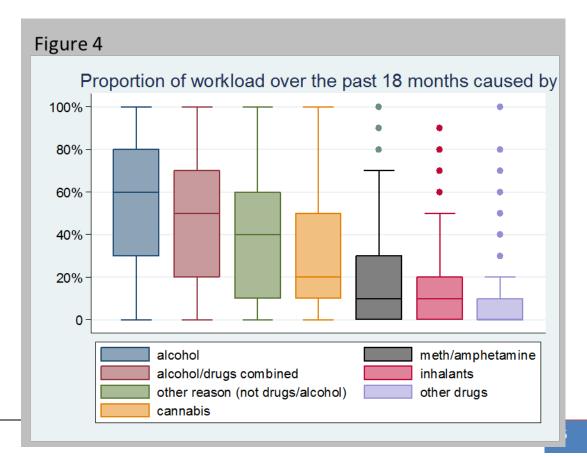
#### 5.1 Relative proportion of service workload estimated to be caused by alcohol and/or drugs

We specifically asked survey participants to reflect on their observations and experiences in their work unit or service from the beginning of 2014, approximately 18 months before the survey. They were asked to estimate the proportion of their work unit's workload caused by the alcohol and/or drug use factors and behaviours listed in section 3.3.

#### 5.1.1 Interpretation of this data

It is important to stress that these estimates were made independently of each other in the survey, so they should not be read as precisely determined proportions adding up to 100% of each participant's actual workload. The nature of these estimates permits a ranking, not a precise quantification, of the relative workload believed by the front line service providers to be caused by each substance use and behavioural factor in their work unit.

In Figure 4 (and subsequent figures like it) the results for each factor comprise the categories along the horizontal x-axis. The vertical y-axis summarises the clustering of participants around the different estimated proportions of workload for each factor. The line in the middle of each vertical box represents the median value, i.e. the proportion of



workload that was estimated by half (50%) of the participants for the substance use/behavioural factor depicted. Dots in the figures are outlying values. With these limitations in mind, from Figure 4, it is possible to say that half of the participants were of the view that alcohol ranked first as the major significant cause of their workload over the past 18 months. Moreover, in descending rank order, the workload of front line service providers over the past six months was seen to be caused by:

- i. alcohol;
- ii. a combination of alcohol and drugs;
- iii. reasons other than alcohol and drugs;
- iv. cannabis;
- v. meth/amphetamine;
- vi. inhalants, and,
- vii. other drugs.

#### 5.2 Changes in workload and commitment of time and resources during the past six months compared with last year (2014)

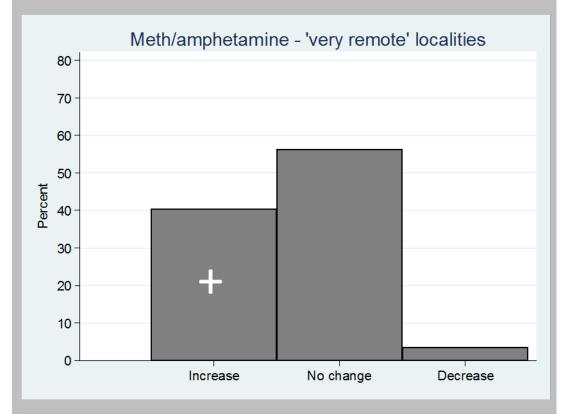
Figure 5a suggests that, overall, where meth/amphetamine was believed to be involved, workload and time commitment of front-line service providers increased over the past six months compared with last year (2014). Just over half (53%) of participants believed there had been an increase compared with 2014. Opinion was more divided about changes in workload caused by alcohol, the combined use of alcohol and drugs and cannabis which were seen to have increased by 35%, 40% and 26% of participants, respectively (Figure 5a).

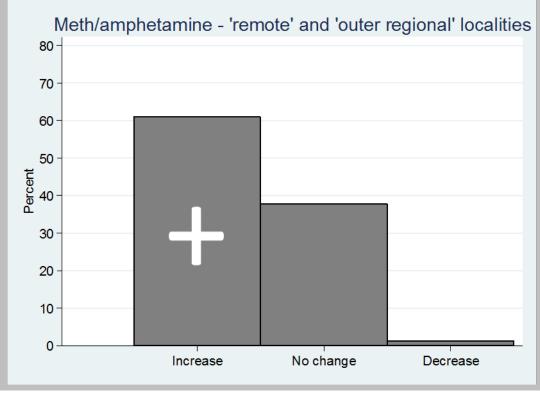
#### 5.2.1 Differences between the 'very remote' communities and the 'remote' and 'outer regional' localities

Figure 5b shows that, for meth/amphetamine, the proportion of participants who perceived associated changes in workload and time commitment in the 'very remote' localities is considerably lower than the proportion in the localities closer to towns or regional centres, i.e. the 'remote' and 'outer regional' localities.



Figure 5b. Changes in workload and commitment of time and resources during the past six months compared with last year by remoteness (2014)





# 5.3 Experiences of incidents and behaviours, their estimated frequency of occurrence and the perceived role of alcohol and drugs during the past six months

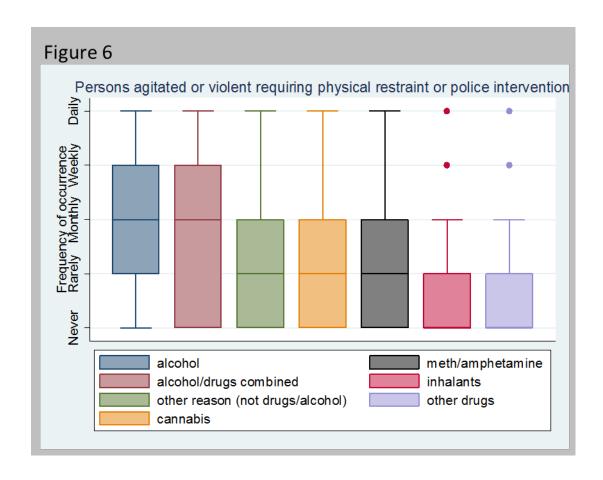
Participants were asked to estimate how often during the past six months the incidents and behaviours listed in section 3.3 were observed or experienced.

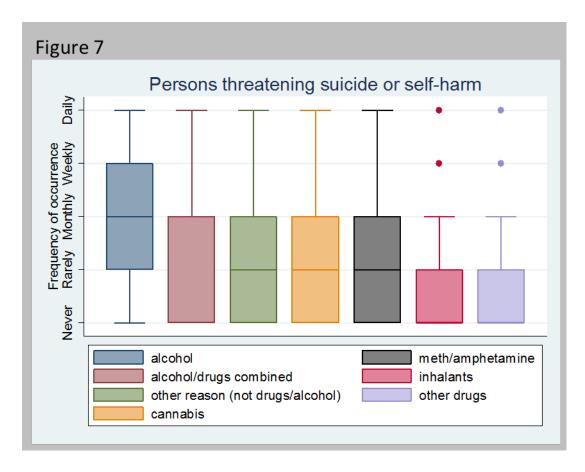
#### Interpretation of graphs

The graphs in the following sections are similar for each type of incident or behaviour examined. Against each of the frequency categories on the vertical (y) axis: 'never', 'rarely', 'monthly', 'weekly', 'daily', each substance use group or factor is rated. The order of presentation of the types of incidents and behaviours in the following (sections 5.3.1 to 5.3.9) is from the more frequently seen (on average) to the least, namely: i) persons agitated or violent requiring physical restraint or police intervention, ii) persons threatening suicide or self-harm, iii) persons exhibiting paranoia, delusional behaviour, bizarre thinking, hallucinations, iv) persons appearing unusually suspicious of others around them, v) persons agitated or violent requiring sedation, vi) any injury to front line service providers, vii) persons complaining of hyperthermia, viii) persons with chemical burns or exposure to chemical contaminants, and ix) other drug and alcohol related incidents.

Between 132 and 139 participants provided assessments. Overall, in line with workload estimates described in section 4, these diagrams show that alcohol or a combination of alcohol and other drugs tended to be seen by participants as the more prominent and more regular causes of the incidents and behaviours observed or experienced.

5.3.1 Persons agitated or violent requiring physical restraint or Police intervention These incidents were observed or experienced by 84% (=117/139) of participants. Half the participants saw these kinds of incidents linked with alcohol and also with the combined use of alcohol and other drugs on a monthly basis (Figure 6). More rarely were they linked with reasons other than drugs and alcohol, cannabis or meth/amphetamine. Seldom were these incidents seen where inhalants or other drugs were involved.

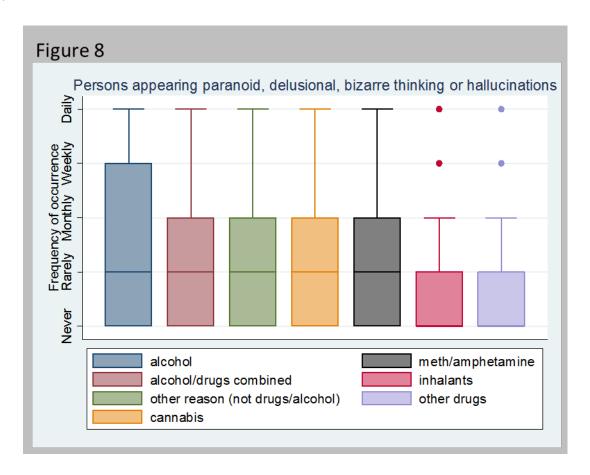




#### 5.3.2 Persons threatening suicide or self-harm

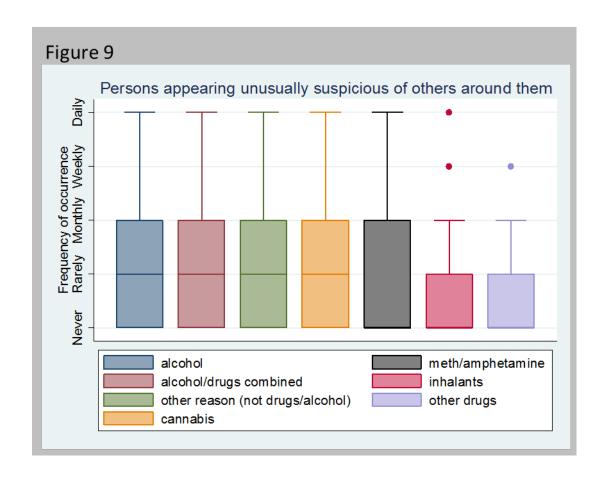
Persons threatening suicide or self-harm were observed or experienced, by 86% (=112/136) of participants. Half of the participants believed these incidents were linked with alcohol and on a monthly basis (the median value) (Figure 7).

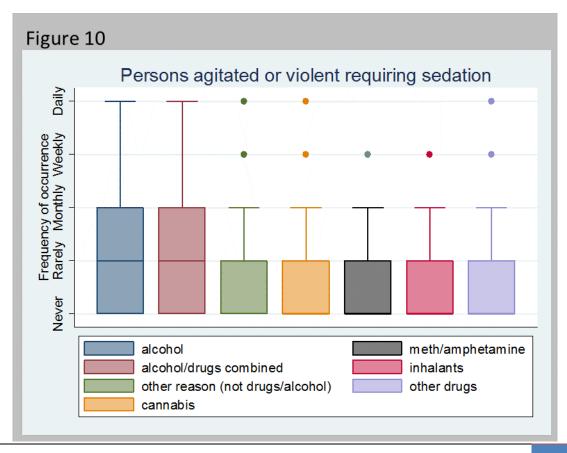
5.3.3 Persons exhibiting paranoia, delusional behaviour, bizarre thinking, hallucinations Persons appearing paranoid, delusional, with bizarre thinking and hallucinating were behaviours observed or experienced by 82% (=112/136) of participants. Half the participants saw these incidents linked mainly with alcohol but also with a range of other substance use or behavioural factors, but not frequently during the past six months (Figure 8).



#### 5.3.4 Persons unusually suspicious of others around them

Around two-thirds (66%=88/133) of participants observed or experienced persons unusually suspicious of others around them. Half the participants saw these incidents linked with alcohol and several other substance use and behavioural factors, but again, generally not frequently (Figure 9).



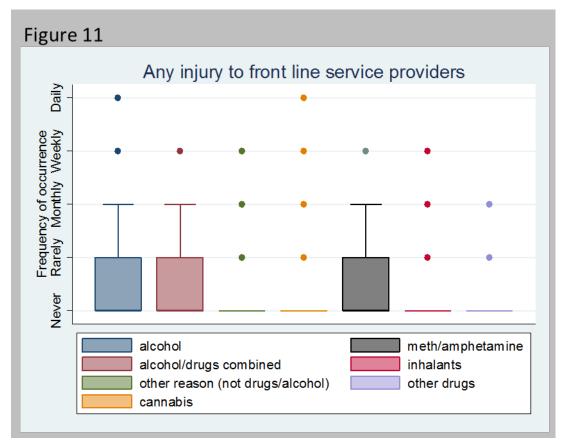


#### 5.3.5 Persons agitated or violent requiring sedation

Almost two-thirds (63%=87/138) of participants observed or experienced persons agitated or violent requiring sedation in the preceding six months. These events were not seen very often, and a range of substance use and behavioural factors were thought to be involved (Figure 10).

#### 5.3.6 Any injury to front line service providers

Injuries to front-line service providers were observed or experienced by 34% (=45/133) of participants. These did not occur frequently, but when they did, alcohol, the combined use of alcohol and drugs and meth/amphetamine were seen as the lead factors (Figure 11).



#### 5.3.7 Persons complaining of hyperthermia

Few participants (16%=21/133) observed or experienced incidents where persons were complaining of hyperthermia (data not shown).

5.3.8 Persons with recent chemical burns or exposure to chemical contaminants Also, few participants (10%=13/133) observed or experienced incidents where persons were suffering chemical burns or exposure to chemical contaminants (data not shown).

#### 5.3.9 Other drug and alcohol related incidents reported

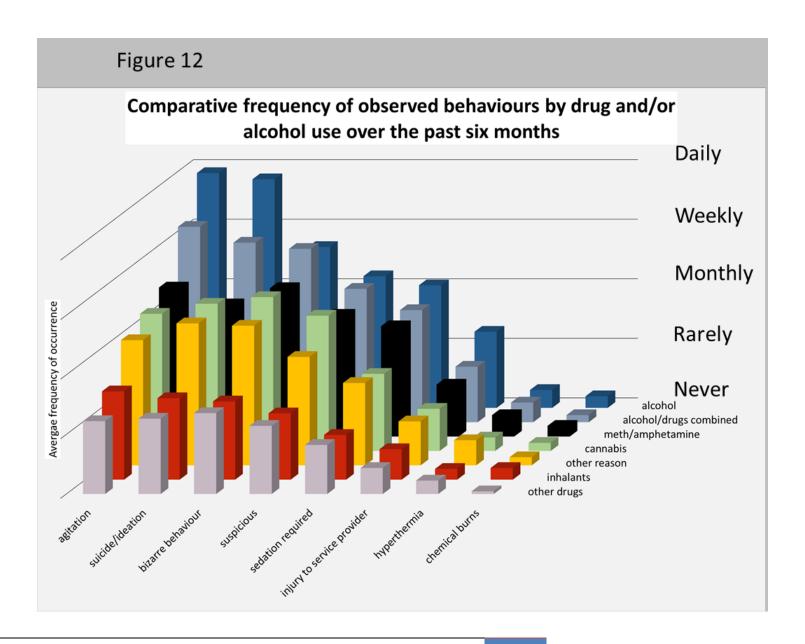
Thirty-nine percent (=52/132) of participants reported other types of drug and alcohol-related incidents. Emphasising, once again, the serious nature of the range of incidents observed and experienced by front line service providers, these incidents featured: mental health presentations and situational crises for clients, child neglect and abuse, violence (including domestic violence), aggression, verbal abuse, assault, murder, suicide and property damage, public intoxication from alcohol and drugs. In just five of these 52 further incidents was any form of meth/amphetamine believed to have played a role.

# 5.4 Elements of a typical incident perceived to be linked with meth/amphetamine

To summarise the above results for the type of incidents observed and experienced, Figure 12 plots the average estimated frequency of occurrence (vertical y-axis) of each type of incident observed or experienced (horizontal x-axis) across each of the substance use and behavioural factors seen to be involved (inclined z-axis). This provides a picture of the profile of the meth/amphetamine incidents and behaviours ranked according to their observed average relative frequency of occurrence (along the x-axis) and positioned within the substance use and behavioural factors ranked according to frequency (along the z-axis).

The chart (Figure 12) suggests that, on average amongst the front line service providers surveyed, incidents or behaviours observed or experienced in the populations they service where meth/amphetamine is believed to be a factor, have occurred infrequently during the past six months, generally not more than monthly. In rank order of average frequency of occurrence, the behaviours or incidents observed or experienced linked with meth/amphetamine have tended to be manifest in:

- Persons agitated or violent requiring physical restraint or police intervention;
- Persons threatening self-harm or suicide;
- Persons who appear paranoid, delusional, experiencing bizarre thinking or hallucinations;
- Persons who are unusually suspicious of others around them, and,
- Persons agitated or violent requiring sedation.



Notwithstanding the perceived impact of meth/amphetamine, all of these, along with injuries to front-line service providers, were perceived to occur more frequently during the past six months where alcohol and the combined use of alcohol and drugs were involved.

Importantly, there is a significant influence of cannabis use and a background of 'other reasons' (see Figure 12) which include patient and client behaviours that are not linked with drugs or alcohol, specifically underlying mental health issues.

5.5 Resources needed, preparedness and confidence of front line service providers to respond to the current drug and alcohol related workload Resources were regarded as not sufficient to deal with the current drug and alcohol workload by 63% (=83/132) of survey participants with around half 48% (=63/132) believing their work unit's front-line staff were sufficiently confident or adequately prepared to address it. Although wide-ranging comments were received from survey participants, including considered recommendations to rectify the situation, some of the more impactful statements are listed below.

"Police have no diversionary centre for those affected by drugs and or alcohol. The only option for a predominantly indigenous client base is to place them in a watch house. Whilst there is a great community relationship and most clients recognise that this is a necessity and a majority are not charged, they are diverted to a place of safety or detained for a breach of the peace and alternative care options sourced - ie QAS [Queensland Ambulance Service]. This is a stop gap policy as Qhealth [Queensland Health] have no security options, secure areas for mental health or drug affected clients. The diversionary centre does not take any police related clients from immediate incidents even when beds are spare. Clients that are in a drug induced psychosis through either the combination of alcohol and drugs have very limited options. If an Emergency Examination Order is executed by police, I have only seen two in 4.6 years actually enforced by Drs at [regional] Hospital. One reason is a lack of resources at the hospital, two there is no safe areas for staff or the affected patient and if they are chronic they are required to be intubated and sent out via RFDS placing them at a greater clinical risk."

"Risk Management plan and support for isolated clinics especially single post clinics [is required]."

"Need to improve the way we test our employees for fitness for work. We currently use random instant urine tests, however we believe that some employees are using substitute or fake urine to pass the tests."

"Blaming any increase in presentations that are drug related is myopic. In my experience, drug use is a response to trauma, systematic disadvantage, lack of opportunities, racism, boredom, poor attachments, poverty. By only focusing on the supposed "ice epidemic" you absolve society of the collective responsibility for vulnerable populations by shifting drug use from a social problem exacerbated by entrenched social disadvantage to an "individual problem" in which individuals can be blamed for their "poor life choices and decision making processes".

"Where I work is critically understaffed and has been placed on a risk register in terms of patient safety because of it. We cannot cope with the load we have now let alone if it increases."

"[There is a] complexity of cases involving alcohol and drug use, domestic violence, and complex trauma history within context of regular loss and grief. This level of work requires consistent groups of workers across disciplines that effectively work together. Group programs are important to gain support for people in numbers within a given community. Likewise this also needs to take account of high level of chronic disease in same group, often also with possible level of brain injury due to trauma and past alcohol and drug use. Needs to be a linking of services so as simple messages get repeated by all health workers to support required changes whether that be in relation to chronic disease management, alcohol/drug use, domestic violence, child safety issues. Rather than all these issues being divided and responded to separately we need a framework that supports working from a trauma based perspective that accommodates all aspects what is occurring in communities that has a strengths base to it. This would also likely enhance staff retention and support as well as get better outcomes with what resources are already in place. Training for all in relation to working from a trauma lens highlighting importance of relational context of indigenous culture and importance of collaboration in its true sense...policies to drive higher level of on the ground collaboration and planning for effective responses to individual communities and people."

"[we need].... security skilled in taking down violent patients, aggressive behaviour management training (the week long one not the 30 minute video) written policy & procedures to support staff in decision making around this patient group. Proper seclusion facilities within the Emergency Department - monitored. Recognition that this patient group needs special care and trained staff to care for them."

## 6. Results of face-to-face interviews

#### 6.1 Where were the interviews conducted and with whom?

Face-to-face interviews took place in August 2015 with visits to seven sites across the north Queensland region. Telephone interviews were conducted with participants in a further four sites in September, making 11 sites in total. Those interviewed included community members and/or representatives of local government, youth services, law enforcement, employment, drug and alcohol and other social support services. Of the 53 participants, 29 (55%) identified as being Aboriginal and/or Torres Strait Islander. Participant ages ranged from 19 to ≥50 years. Participants had over 1200 years combined service experience between them in the region's communities and towns.

Figure 13 depicts the distribution of the 11 sites and the numbers of people for each site who provided comment. Some participants reported on more than one site. There were 20 participants who provided comments about five 'very remote' sites and 47 participants who provided comment about the six sites in the 'remote' and 'outer regional' category. Where the available information permits, in the following results, the locational context for the comments is emphasised in the following results.

#### 6.2 Presence of new drugs – is it 'ice'?

New drugs in different forms of meth/amphetamine were reported to have been tried in recent times in two 'very remote', one 'remote' and one 'outer regional' locality; and were not present in three others among the 11 sites for which information is available (Table 3). The use of meth/amphetamine was perceived to be already established in the remaining four sites in the 'outer regional' and 'remote' localities (Table 3).

In response to questioning, a range of meth/amphetamine forms, including crystal, powder or tablet forms were described. Local terms used included 'speed', 'blingo' and 'ekkies' but with the term 'ice' also used by most participants. Generally, a clear understanding, or specific description of the types of substances being used could not be gleaned from the interviews. For instance, some participants, speaking about the 'remote' and 'outer regional' sites, used the words 'speed' and 'ice' interchangeably, exemplified by this statement: "There might be some confusion between speed and ice or using 'the works' to mean the same thing." Users themselves may not be certain about what form or forms of

meth/amphetamine they are accessing: "People are crazy with what they are getting and putting together... people don't know what they are injecting." Although it was reported for one of the 'very remote' localities that a small established group of meth/amphetamine users had tried using something described as 'ice', there was little information forthcoming about patterns of use for communities in this remoteness category.



Figure 13.
Indigenous communities and selected towns in Queensland regions where information is available from in-depth interviews and focus groups with a total of 53 participants with experience across 11 localities (with some participants commenting on more than one of these 11 localities)

#### 6.3 When did 'ice' begin to be noticed?

The presence of meth/amphetamine, described as 'ice' was first perceived by participants around 18 months ago in several communities (see Table 3). The level of concern seems to have generally increased across the communities over the past six months. In some sites, isolated incidents of highly unusual behaviours aligned with acute mental health episodes were believed to be related to meth/amphetamine use and specifically believed by participants to have been due to 'ice'. But, reflecting results from community surveys, there were differences in the experiences of the 'very remote' localities compared with the 'remote' and 'outer regional' localities.

#### 6.3.1 'Very remote' communities

In two 'very remote' communities, and also in one 'remote' community, participants declared their belief that their community was currently free from illicit drugs (other than cannabis). However, in both of the 'very remote' communities, isolated incidents of meth/amphetamine use, of some kind, in the past 18 months were reported. Participants further asserted that meth/amphetamine was not currently used because the users had either left the community or were forced out. For only one 'very remote' Indigenous community could we be confident that meth/amphetamine was the substance used. A behaviourally disturbed community resident was treated at the community clinic. Meth/amphetamine was confirmed by toxicology, according to the experienced clinician who reported this information.

For most of the 'very remote' communities not yet experiencing significant meth/amphetamine use, several participants reported feeling that the arrival of such drugs was almost inevitable. This is believed to be so because of proximity to towns, or because of family connectedness with towns or communities where meth/amphetamine use is already established or emerging. Notwithstanding these concerns, several participants in the 'very remote' localities stated the view that alcohol and cannabis remained the substances of most concern for their community at present.

#### 6.3.2 'Remote' and 'outer regional' localities

In these localities, the picture is more complex with some variations between 'outer regional' and 'remote' centres. In one 'remote' community, injecting drug use, including meth/amphetamine, was reported to be contained to a small closed group of established

Table 3. Meth/amphetamine use reported in interviews by remoteness of site including terminology used to describe drugs and reported methods of use

Remoteness	Reported current presence of meth/amphetamine	Terminology used	Methods of use
'Outer regional' (Town)	Established ≥2 years	Ice; chemical they are putting with yarndi; speed snow cones	Injecting or mixing with alcohol or sprinkling on yarndi.
'Outer regional' (Community)	Emerging ≤2 years	Speed snow cones; meow-meow; mixing cannabis with medications; looks like rock salt; ice; speed; ice and speed	Smoking with cannabis; injecting (speed); melting in a spoon and drinking it; smoking with a glass pipe; injecting ice.
'Remote' (Town)	Established ≥2 years (mainly non-Indigenous users)	Amphetamines and ice;	Shot up and snorted; using lightbulbs; glass pipes; injecting.
'Remote' (Town)	Established ≥2 years (Indigenous and non- Indigenous users)	Bath salts; ice; speed (long standing)	Ice being given out as Iollies and spiking drinks; kids pinching lightbulbs; smoking and injecting.
'Remote' (Community)	Emerging ≤2 years	Ice	Glass pipe; rolled up cardboard and burning on foil; stick it on top of their cannabisin a bong.
'Remote' (Community)	Not present	-	-
'Very remote' (Town)	Established ≥2 years	Ice	No information
'Very remote' (Community)	Emerging ≤2 years	Ice	Injecting (only one person); drinking; smoking with cannabis (in a bong); sniffing.
'Very remote' (Community)	Emerging ≤2 years	Ice	Lacing gunja with ice; injecting.
'Very remote' (Community)	Not present (came and went)	Ice	Smoking with cannabis.
'Very remote' (Community)	Not present (one report of 'pill' use)	-	Pills (not defined).

users, with little evidence of any recent change in their use from amphetamine to methamphetamine. In this community there was a suspected recent increase in the numbers injecting.

In the towns and in the communities in the 'remote' category there are similar small populations of established amphetamine users who inject. Again, no information was reported to us in these localities that would suggest any increase in the numbers injecting or that they had shifted to using purer forms of meth/amphetamine.

Adding to the complexities, in two localities, namely an 'outer regional' community and a 'remote' town, we documented reported use of new psycho-active substances including 'meow-meow' or 'bath salts' (mephadrone or 4-methylylmethcathinone and/or MDPV-methylenedioxypyrovalerone). Participants interviewed in the town attributed five deaths to the use of MDPV between 2011 and 2014, with at least one of the deceased persons Indigenous. Three of these deaths apparently occurred in a cluster between November 2013 and January 2014. Synthetic speed and synthetic cannabis were reportedly also used in the town, a mining centre. Recently the use of synthetic drugs in this centre had apparently decreased in response to changes in laws aimed at generally reducing their accessibility.

#### 6.4 Who is using the new drugs?

#### 6.4.1 'Very remote' communities

People thought to be using meth/amphetamine were reportedly both males and females aged between 16 and 40 years. Younger users in the 'very remote' communities were thought to be very few and largely believed to be using in an experimental and opportunistic manner, with cannabis being their drug of choice.

#### 6.4.2 'Remote' and 'outer regional' localities

The established injecting users of 'speed' in the six 'outer regional' and 'remote' communities were thought to be older – from 30 years upward. Indigenous users, mainly male, in the 'outer regional' and 'remote' towns were thought to be involved in regular use. In the 'outer regional' mining town, a range of synthetic drugs were reported to have been introduced by mine workers seeking to avoid positive drug tests in their workplaces.

#### 6.5 Methods of use

Participants reported knowing of several methods of using meth/amphetamine: smoking, snorting, drinking and injecting (Table 3). Participants specifically described injecting equipment and glass pipes that they had observed.

#### 6.5.1 'Very remote' communities

Reflecting the heightened concerns for the uptake of 'ice' in the 'very remote' localities, there was little hard evidence, but much conjecture, that dealers were using devious strategies to recruit young users:

"They [dealers] are then lacing gunja with 'ice'. We have 11, 12 year olds buying gunja. What is going to happen to them if they are unknowingly using this drug?"

There were frequent reports across the communities of the unusual practice of smoking "snow cones"; where either a powdered form of meth/amphetamine, or "crushed crystals", is sprinkled on top of cannabis packed into the cone of a bong. One member of a 'very remote' community expressed the fear that premixed cannabis and meth/amphetamine may be accessible and appealing to younger users.

#### 6.5.2 'Outer regional' and 'remote' localities

In one 'outer regional' town Indigenous youth reportedly stole light bulbs to use to vaporise substances, as a substitute for a glass pipe. Additionally, there were reports in several sites of people spiking drinks or lacing cannabis with what was thought to be 'ice', for the entertainment of onlookers or perhaps for predatory sexual purposes.

#### 6.6 Availability and ease of access

There were no reports by interview participants of meth/amphetamine manufacture in the 'very remote' or the 'remote' Indigenous communities and no clear reports of any organised trade in meth/amphetamine. However a few community members claimed they were aware of manufacture in the nearby 'outer regional' service centres and towns. Participants said they believed that both local Indigenous people, and Indigenous and non-Indigenous outsiders were bringing meth/amphetamine into the 'remote' and 'very remote' communities. There is no evidence from the interviews to suggest that there has been any significant recent escalation in amphetamine trafficking into the 'remote' and 'very remote' regions in far northern and northwest Queensland. Publically-available police information

for the Gulf of Carpentaria region and for Cape York and Torres Strait suggests that such trafficking is not firmly established<sup>22</sup>.

#### 6.7. Impacts of drug use on the individual

Comments about observed impacts on individuals were more frequently reported by those interviewed and describing circumstances in 'outer regional' and 'remote' localities, not for the 'very remote' localities, reflecting the very limited use in the latter. Suspected meth/amphetamine users, when intoxicated, were reported to exhibit bizarre behaviours, including 'psychosis' reflected in symptoms such as auditory hallucinations and paranoia and symptoms of aggression, violence, irritability, and agitation. Self-harm and suicidality were reported to be associated with intoxication and severe depression was seen to be associated with the 'come down'. Suicidal ideation was observed in one 'outer regional' town in youth who were 'coming down' from meth/amphetamine and, significantly, these youth had not previously exhibited suicidality, according to the clinician who provided the information.

#### 6.8 Impacts on the family

For the 'very remote' communities we have no evidence to describe the impacts on families. However, we were provided comprehensive insights into the experiences of families in a 'remote' town where meth/amphetamine use was already established. Participants interviewed in this 'remote' town reported instances of very aggressive behaviour and violence:

"[family members would be] afraid of approaching an angry teenage boy – there are lots of single mothers. Some of the girls are worse than the boys – temperamental, paranoid – thinking people are talking about them. Girls are moodier than boys when high, a lot less controllable."

Family members were reportedly overwhelmed attempting to deal with the issue:

"Lots of families and friends give up – just let the person do what they have to do – like dodge 'em when they're high. Let them go until they make a mistake." "The ripple effect of ice use impacts the community in various levels. It's impacting at the heart of families adding to the disparity on the home-front. Each family group has one person to keep the family united. The tensions of ice are fueling hopelessness in

the unity of the families —I can't do any more than I am already. Some people are moving away to protect their own family. It's like a cancer — more people are being ostracized and abandoned."

Families of most Indigenous users appeared to be bearing the brunt of providing care for them:

"I don't think a lot of users understand the risks. At the present they are enjoying the buzz the stuff gives them. They get no support other than from their families. The families don't know how to deal with it."

Several participants spoke of the urgent need for support for families of users:

"Sometimes it's not about the user – the parents and immediate family need someone to download on, support. There's no support, no outreach..."

#### 6.9 Impacts on the community

For those communities where meth/amphetamine use was regarded as an emerging issue, participants expressed concerns about the impact on service providers, particularly police, ambulance and health services. One non-Indigenous participant in an 'outer regional' community feared the same kinds of impacts on first response services that they had experienced interstate:

"The impact on resourcing is huge. In [an outer regional area outside Queensland] there were no security staff at the hospitals. Most small hospitals rely on police. Advanced care paramedics can give intramuscular midazolam which can de-escalate things and get the person to a hospital. But then that ties up the nursing staff and police. The ED staff are fully occupied, the police are off the road, the ambulance is off the road.... One ice patient has the capacity to remove emergency response in a small town for at least two hours. If the person is sedated they generally are evacuated to a higher care centre. If someone is unconscious they need constant care not just regular observations."

In one 'remote' town located near an Indigenous community, meth/amphetamine use was reported to be established among mostly non-Indigenous users. In this town, the view of

one service provider was that the full extent of use was not known as many users were not yet seeking treatment or other forms of assistance:

"We are only seeing the tip of the iceberg at the moment."

In another 'remote' town where meth/amphetamine use was reported to be established in both the non-Indigenous and Indigenous population, violence presumed to be associated with meth/amphetamine use was reportedly spilling outside of the homes:

"When they are tripping they end up fighting. The next day they pop again [take more] to carry on that fight. Get a bit of energy to do a few more hours of fighting. They don't seem to feel anything. They are walking around being 'aggro'. There's also random fighting."

#### 6.10 Protective factors for preventing uptake of new drugs

The protective factors related to preventing the uptake of new drugs are summarised in Table 4 at the end of this section. Across communities there was strong agreement that meaningful employment, education and mentoring were major protective factors. The Commonwealth Government's 'Work For the Dole' employment/job readiness scheme is currently being implemented by a range of service providers in 'outer regional', 'remote' and 'very remote' localities. The recent changes in these kinds of services have meant loss of some previous programs that were thought to enjoy a measure of success in preventing drug use generally, as reflected in these comments by a service provider working in 'very remote' communities:

"And it's [a youth mentoring program] that is one of the most important things that they have taken out of this new contract which is quite disappointing".

A further protective factor for the uptake of new drugs identified by several interview participants was the demonstrated ability of their community to take prompt and decisive action:

"Community action doesn't happen until something bigger happens. With sniffing here, we had police support. The community has to join together and say "we have had enough."

Another commonly identified protective factor was fear of the impact of the new drug:

"Fear factor about ice is the one thing holding them back."

Geographical isolation was also thought to be a protective factor, particularly when coupled with strong traditional practices:

"There is not much drug and alcohol use from the families up there [small isolated community], that's pretty, more traditional, I would say it is more a traditional way of life, but the people up there are less influenced by white society they live that way and the families have lived up there for a long period of time... over the years I have never ever had a problem with people being affected up there."

6.11 Additional resources required to address current drug and alcohol issues Participants most frequently identified the need for activities aimed at the prevention of drug uptake (see Table 5 at the end of this section):

"It would be helpful to have more resources to include prevention work...we need more Indigenous specific resources for education."

The most commonly mentioned strategy was the provision of drug and alcohol information. The main targets identified were school children and, specifically, primary school students. Community forums or meetings were also perceived as opportunities to provide education, to reflect on community strengths and develop strategies for action. Diversionary activities for youth were also frequently mentioned. Many of the sites had established youth facilities such as recreational centres, but usually were under-resourced and under-staffed.

There were general calls for more residential rehabilitation centres closer to communities. There were some calls for treatment services that specialized in meth/amphetamine use. There were further recommendations for improved follow-up for clients accessing both residential and non-residential drug treatment services.

Specific treatment facilities called for included those for crisis intervention particularly for drug-induced psychosis:

"The biggest problem is if there is a mental health crisis. There is no de-escalation room – a quiet room stripped of everything except the bed where the person can

recover without disturbing other people in ED – staff and patients. We need properly funded mental health units that can deal with chronic depression, self- harm, suicidality. Padded room."

Generally participants felt that social and health service delivery could be vastly improved by better collaborative efforts:

"Everyone works in silos."

Anticipated outcomes of better collaboration included improved client outcomes and cultural safety and less service duplication:

"There's communication issues between services. We need to have adequate staff in order to network well (not just provide services). We need to stop duplication of services. We can contribute cultural stuff [by collaborating with main-stream services]. The downfall is the way services are funded."

Table 4. Exam	ples of protective factors identified by interview participants for the uptake of new drugs in selected communities				
Factor	Comment recorded				
Employment	Work for the Dole has got people engaged again. People are taking ownership and self-responsibility. It provides indirect access to services				
	('outer regional' community)				
	"Work – once you put your mind to it – seek help get up and get active ('outer regional' community)				
Education	We both know people who leave school and go straight onto drugs. They don't do nothing. We wanted to do something with our lives.				
	Boarding school made the difference. It gives you a different look on the world. For the five years experience, I travelled around. We got taught				
	leadership skills, to be open-minded – looking at the big picture. We have to EARN stuff in life, not be given it straight. When I got home I got				
	looking for a job straight away Our friends are really proud of us. They say they are jealous and wish they could be like us. We tell them you				
	can do it, but you have to do it yourself. You can still go out and have fun but do it with your own money. ('outer regional' community)				
	We need the kids to keep going to school. But we have to fix our own selves as parents. For anything to happen tomorrow we gotta start today.				
	('outer regional' community)				
	Educate key people in our community who can pass on the information – find the key people in families and community. Use flip charts and				
	leave them in the community for those people to pass on the story. ('remote' town)				
Demonstrated	Always, as soon as they know somebody is coming in and they are sort of starting to sell it or whatever, they will get rid of those people, I don't				
community	know how they get rid of those people but they do, and even with the sniffing, the petrol sniffing they got rid of the people that were coming				
capacity to	in and introducing that to the community as well				
deal with	We'd report the nonsense straight away. Not just the person using but the person selling it. There's none of the [ice] talk here. We'd report it to				
substance	the police, and the {social support service] if people had a problem with drugs. We'd get them to talk to someone they trust like the [social				
misuse	support service] and they will go to other agencies and then the agencies will come together and have a response and deal with it. Everybody is				
	family so if anything new comes, one little whisper, everyone will know and start getting upset about it and get together to do something. This				

	place is well protected from other drugs.			
	Like I said they just don't go down that road. It was introduced but never stayed. The men and women of the community would say no. It's not			
	the way here.			
Fear of the	In communities everywhere there's some resistance to the idea. There is some sense of horror about it [ice]. I think mobilizing a cultural			
impact of the	approach "this is not us" — building on that. Make it the basis of a real push. The time would be ripe to push that for ice, other			
new drug	amphetamines.('remote' town)			
	People are afraid of different drugs in the community and do talk to kids using cannabis and sniffing about how ice is affecting families and			
	themselves, about when you are hanging out, stressing, when you don't have it for a while. Digging at their skin. They are afraid of the younger			
	kids, young girls, if they do take ice they'll try something new like prostitution.('remote' community)			
	The good thing about it here is that a lot of people here seen ads about the drug and what it can do, like the effects on the brain. ('remote'			
	community)			
	The kids know it's dangerous and it is expensive isn't it. They watch these police shows and they know how expensive it is. We have been			
	having sessions with the younger ones, from 9 to 14 years old. ('remote' community)			
Strong	There is not much drug and alcohol use from the families up there [small isolated community], that's pretty, more traditional, I would say it is			
connection to	more a traditional way of life, but the people up there are less influenced by white society they live that way and the families have lived up			
cultural roots	there for a long period of time over the years I have never ever had a problem with people being affected up here ('remote' town)			

Theme	Resource	Comment recorded
Prevention	Drug and alcohol education	We need to educate kids at high school, and through adopt-a-cop program at primary school. Educate community through our open days at the mall Also could have a community meeting – these are called by the council. ('outer regional' community)
		We need community education and information forums. There needs to be the proper forum for the community to come together. We need to focus on what we CAN do ('remote' town)
	Youth	The kids are bored. There's a need for more structured programs. ('remote' town)
	Diversionary activities	We need more staff at the rec [recreational] centre and staff putting in systems. ('very remote' community)
Support and treatment	Residential rehabilitation	We need a residential healing centre within or near the communitya healing centre for substance misuse so people don't have to leave family and community. ('remote' community)
services		We need a res rehab in the bush, where people can get back to country. Let the country work its magic. We need community workers who are fair dinkum and straight talking. We need a place where the extended family can come and camp. Get the family involved. ('remote' town)
Service delivery	Improved engagement with	Services need to jump in a car and go to people's homes and share a cup of tea. That's a starting step [to engagement] ('very remote' community)
	client	There's a need for people running youth groups to be the right people – not judgemental, seeing good outcomes, being passionate. They need to be constantly reaching out and following up; having yarns and seeing what people would like to do for the day Most people in those jobs are the wrong people. They don't want to mix. ('outer

	regional' community)
	We need community-based well-being staff [rather than fly in-fly out]; but people the community can relate to and trust. ('remote' community)
	There are culturally inappropriate services not linking properly with clientsthey are unable to build up a rapport with their clients ('remote' town)
Improved inter-	We have all these services working in silos – they don't collaborate well. ('very remote' community)
agency collaboration	There might be five organisations working with one person but they are not talking to each other. ('remote' town)
Accountable services	Everyone wants that funding bucket and the numbers, but when the services overlap there are problems. Funding needs to put money into real places not where it's just going to spin around and around. It has got to go to the right people, right jobs and have real outcomes. The community has to decide the need. We need to have a plan for the future. ('remote' town)
Staff development	We drug and alcohol workers need to get educated and aware so we can identify things out of the ordinary; know who to go to – the police, ambulance. ('remote' community)
	When we try and get people into local services we have trouble because the service providers don't understand about mental health issues. There's a need for building [mental health] capacity However the people that deliver the training should be Indigenous, appropriate people, local if possible. ('outer regional' community)

# 7. Results: Towards a decision-making framework to inform practical and cost-effective responses

#### 7.1 Typical cases seen by front-line service providers and in communities

The data we have reported indicates that among the incidents or cases of behaviours likely to be linked with alcohol and/or drug use in the region, alcohol, the combined use of alcohol and drugs and cannabis use will typically be involved. A background of mental health disorders among clients and patients is an important factor. Our evidence indicates that, particularly for communities and towns that are in the 'remote' or 'outer regional' category of remoteness, there is potential for a further significant burden of harm due to an apparent rise in the harmful consequences of meth/amphetamine use. For an already heavily-burdened service system, operational responses will be essential and are likely to be ongoing. Because perfect information to decide the most effective and cost-effective response is lacking, based on the available interviews with key stakeholders and survey information, we can only speculate on the plausible 'best case' and 'worst case' scenarios for the future occurrence of typical acute and severe incidents.

#### 7.2 A 'best case' scenario

A tolerable scenario would be one where sector resources are adequate to cope with a more or less stable system of illicit drug supply and demand in the region, with predictable patterns of use and harms that can be known or better understood and adequately controlled with appropriate investigation. Our data indicates that, generally, these circumstances do not prevail across the region. For the Indigenous populations and communities in this research, we have shown that the 'very remote' settings remain comparatively untouched by 'new drugs' like meth/amphetamine. However, in the 'remote' and 'outer regional' localities in the region, it seems clear that there are populations where long-established illicit drug users have recently experimented with new psychoactive substances, including stronger forms of meth/amphetamine, particularly 'ice'. These populations include both Indigenous and non-Indigenous drug users.

Incidents and behaviours thought to be linked with the abuse of meth/amphetamine have become more frequent during the past six months or so, in comparison to their occurrence

during 2014, as described in section 5. As the data presented in sections 5 and 6 show, the more immediate concern is for the harms associated with illicit drugs, particularly cannabis, along with alcohol, rather than 'ice' specifically.

On this basis then, a realistic 'best case' scenario would be for the 'very remote' Indigenous communities to remain relatively unscathed with the demand for 'ice' in the 'remote' and 'outer regional' localities stabilised as supply is impeded.

#### 7.3 A 'worst case' scenario

A plausible 'worst case' scenario can be considered by reflecting on Figure 12. Increased exposure to meth/amphetamine use across the whole population might lead to growth in the incident cases of the harmful behaviours linked with it. It is plausible that these may grow to rival and compound the existing load on services addressing alcohol and the combined use of alcohol and drugs. Incidents may grow to even higher levels, which would be a 'catastrophic' scenario, but the data does not permit any speculation about this. However, a plausible 'worst case' is that demand for meth/amphetamine may rise in the 'very remote' Indigenous communities to rival and move with the emerging demand documented in the 'remote' and 'outer regional' localities, with consequent impacts on services. Distance from appropriate facilities for patients or clients that become behaviourally disturbed by meth/amphetamine use in 'very remote' communities would further magnify any impacts in such very small, isolated populations where all drug and alcohol behaviours and mental health issues are already magnified, affecting all residents whether directly involved or not.

The human side of a 'worst case' scenario is that there may occur more cases like those described in the following transcription. These cases were described during an interview with a QPS member and Queensland Health mental health practitioner. These particular cases drive home the point that, a worst case scenario may not be restricted to one ethnic group, affecting both Indigenous and non-Indigenous people in similar ways. Also, these examples demonstrate that the impacts are possible across the spectrum of socio-economic position in the region, not just among the more disadvantaged.

I'll just give you this little bit of a story, I won't give you any names, but she is a ['outer regional Indigenous community] woman, 22 years of age, she was, ... she was employed as an admin officer within the [community organisation], so she had a reasonably well paying job, she is

now 28, and she has experienced significant trauma in her life. She has been both the victim of domestic violence, in more recent times has become the perpetrator of high levels of violence, damage to property, assault on significant others, including a child. [details of suicides by multiple partners were excluded]. Basically she was quite traumatized by that event and had a number of presentations to Queensland Health for that. There was little doubt that she has progressed from early cannabis use to currently using crystal methamphetamine, and there is no doubt in my mind the multiple partners she has had over that period of time, since then have been violent towards her and have more likely been her drug suppliers. I have it that she is currently in a relationship with [an older] male who, there is no doubt in my mind that he is her current supplier of substances, mainly ice, and she would be very vulnerable, would be in a very vulnerable position in that relationship. During the past two weeks, she has had a number of admissions to ED, 11 occasions where she has had involvement with QPS which are ice related and have resulted in her going off to hospital for treatment under the Mental Health Act. Now when you unpack her life you can see that it is just getting worse and worse and then all of a sudden it goes really, really pear shaped for her and that is probably when the ice started coming into it. It was more than just cannabis.

Fathers [of non-Indigenous young people] are approaching me and saying, 'I can't talk to my son anymore', I can only imagine what it is like for well to do families who approach me and say that their son is using ice and that they no longer have a relationship with him, he is no longer welcome in the house he is too violent, he is causing problems in my relationships with my partner, he has wormed money out of her you know thousands of dollars, he has stolen money out of our house to pay for his drug use, he has damaged a motor car he is not my son anymore. I can't imagine what it is like. That is the sort of stories that I am hearing.

7.4 What is the potential for a 'worst case' surge in supply and demand? Interviews with key operational staff in QPS were conducted to gain their perspective on the broad supply and demand patterns. Firstly, those interviewed generally concur with findings from survey and interview data that, at present, there is not an 'ice epidemic' in northern and northeast Queensland. There are warning signs though of an emerging problem in the more urban centres but with few or no instances coming to police attention in the more remote areas.

The probability is higher in urban areas for both demand and supply reasons driven by the size of the potential market. The profit margin on 'ice' is significant. For instance, in Cairns, local police described the price as being approximately up to 20 times that of cannabis, with price variations relative to quality. On the supply side, northern Australia is the most challenging for suppliers because of the geographical isolation and dispersion of potential consumers; however it will also be very difficult to police if supply channels become established in the future. In addition, small scale clandestine labs generate supply through

disparate and widely dispersed sources that are also difficult to police. The more organised supply of purer forms of meth/amphetamine is likely to come from areas in southern Queensland, but with the potential for importation of both precursors and product by sea into the north, including across the Torres Strait.

On the demand side, again reflecting the data from surveys and interviews, the police perspective is that there are two broad groups at risk of 'ice' use in the more urban areas. The first is from known groups of illicit drug users who may become exposed to 'ice' as part of a cocktail of multiple drugs on offer. The second group is thought to include individuals who are irregular users of illicit drugs, often with work and life arrangements well-established, but who have a propensity to use 'ice' for a range of reasons, including responses to stressful life events. This enforcement perspective on users is reflected in the evidence for the worst case scenarios described in section 7.3 above.

## 7.5 More precise data are needed to estimate the costs to service providers of a 'worst case' scenario

#### 7.5.1 Cost per case

To develop a 'business case' for investment in any intervention approach, it is first necessary to have data to know the cost of a 'typical case' for the main sectors affected. Naturally, cases vary, and so it is necessary to know the impact of milder or more severe cases where relevant.

#### 7.5.2 Incidence cases

It is then important to know the incidence of new cases to understand the additional volume of burden from any growth over time.

#### 7.5.3 Total costs for each sector and for the public sector overall

With cost per case and incidence, it is then then straightforward to estimate the total costs for each sector (cost per case multiplied by the number of incidence cases), and the total cost for the public sector (summing across sectors). This is depicted in Table 6.

Table 6. Estimating the costs per sector				
SECTOR*	\$ COST PER CASE e.g.	INCIDENT CASES	TOTAL COST	
POLICE	-Emergency call out -Officers/time -Custody -Transfer (e.g. hospital)	Number	Cost per case x number of cases	
HEALTH	-Emergency call out -Medical staff/time -Bed days/secure unit -Security -Transfer (e.g. allied services)	Number	Cost per case x number of cases	
ADDICTION SERVICES	-Program enrollment, cost per person (e.g. staff, materials)	Number	Cost per case x number of cases	
FIRE SERVICE	-Emergency call-out (e.g. clan lab clean up/fires)	Number	Cost per case x number of cases	

<sup>\*</sup>Other sectors that are affected can similarly record costs

#### 7.6 Future projections: scenario analysis

The above would estimate current case-loads. It is then necessary to have the intelligence information to make credible projections regarding how the incidence of cases is likely to change, to then estimate how total costs may change. There is inevitable uncertainty, and so it is important to estimate 'best' and 'worst case' scenarios and to evidence these views where possible to avoid criticisms of 'gaming' for more finance from different sectors.

#### 7.7 Unmet need: the human cost on individuals, families and communities

The analytical method above would describe the potential direct financial consequences for service providers. However, it only tells part of the story. If services do not have the capacity, then there is 'unmet need' and family and communities suffer. That is, the 'who pays' burden shifts from under-resourced public sectors to families and/or communities. It is, therefore, important that there is the intelligence to not only know the incident cases coming to the service providers, but also the incident cases that result in little or no service provision.

#### 7.8 Prioritizing expenditure: identifying cost effective responses

The estimated economic cost from inaction provides the backdrop to urgently generate evidence about: (i) which interventions work to prevent use and restrict supply, (ii) how much do these interventions cost, and (iii) how much of economic costs of inaction can be avoided. This is what cost effectiveness analysis is designed to address.

Nonetheless, sectors always have limited resources, usually less than ideally required to prevent problems and/or manage existing ones. So, the key is prioritizing resources (both existing and new).

Ideally, decision makers would use the kind of cost effectiveness evidence outlined here and prioritise amongst different intervention possibilities to choose the most cost effective in an 'option appraisal exercise'. Decision makers can then allocate resources across sectors in a coordinated manner providing the best opportunity for success.

## 8. Discussion and conclusions

#### 8.1 Summary

In keeping with a priority recommendation for effective policing strategies to respond to illicit drug use among Indigenous populations in rural and remote regions<sup>23</sup>, this paper offers an environmental scan of meth/amphetamine use in northern and northeast Queensland.

The data presented in this paper indicates there is a range of amphetamine type stimulants (ATS), including crystal meth/amphetamine, available and being used in towns and some discrete Indigenous communities in the region. Interviews and community survey information demonstrates that the term 'ice' is used loosely and often to describe an ATS other than crystal meth/amphetamine, particularly in the 'very remote' Indigenous community environment. Despite the considerable lack of clarity regarding the specific ATS in use, our evidence indicates that meth/amphetamine has become problematic in some 'outer regional' and 'remote' towns and communities in the region.

#### 8.1.1 Web-based survey of front-line service providers

As reported in the summary of the survey data in Figure 12, frontline service providers said they observed or experienced behaviours believed to be linked to meth/amphetamine use during the preceding six months. These include agitation requiring police intervention, suicide or suicidal ideation and bizarre behaviours. Although these episodes have been infrequent, they are seen to have caused an increased workload and commitment of time and resources by frontline service providers (see Figure 4). Survey participants were convinced that an increase in workload had occurred during the preceding six months in 'outer regional' and 'remote' localities but views were more equivocal for the 'very remote' communities. The perceived increase in workload in 'very remote' locations is not as pronounced. The greatest proportions of workload however were still seen to be due to the ongoing misuse of both alcohol and a combination of alcohol and drugs.

#### 8.1.2 Information from interviews

Information from interviews aligns with front line service providers' perceptions and experiences. The use of meth/amphetamine or other ATS is currently either an emerging or still absent issue in some 'very remote' communities (Table 3). In the 'very remote' communities there is a fear that the protection afforded by their extreme isolation will not

last, due to strong connections with other communities and towns and highly mobile populations. There is no evidence to indicate that these sites will not be exposed to the same trends towards increased uptake as in the broader Australian population. Regardless of remoteness, there was a strong agreement across sites participating in this research that current drug and alcohol issues could not be adequately addressed, with grave concerns expressed regarding the impost of any escalation in meth/amphetamine use on service provision, particularly in the enforcement and health sectors.

#### 8.2 Regional contextual issues and impacts of substance misuse

'Remote' and 'very remote' communities have high levels of socio-economic disadvantage <sup>24</sup>. Common to rural and remote settings across Australia, geographical isolation impacts on both prevalence and effective management of drug and alcohol issues<sup>25</sup>.

In 2012, Queensland Government cuts to the health sector impacted severely on positions in the domain of preventive health in northern and north-east Queensland. In Cape York alone 96 health positions were lost, including those with a health promotion or prevention focus <sup>26</sup>. This severely limits the ability of government health services to respond to documented community calls for the provision of information regarding harms associated with meth/amphetamine use. The impact of these cuts is compounded by Federal Government reductions in the health budget including funding for drug and alcohol services. These further contractions also reduce the capacity of non-government organisations to respond to substance misuse issues. This includes the few community-controlled health or social and emotional wellbeing services that are well-placed to develop and implement culturally appropriate strategies, prevention and treatments.

Very high rates of cannabis use have been reported in 'very remote' communities in the region <sup>9</sup>. Alcohol restrictions in Indigenous communities in Queensland from 2003 probably reinforced the uptake of cannabis in some communities <sup>27</sup>. Due to high demand, there are well-established supply routes for cannabis and illicit alcohol in the region. These routes potentially provide a vehicle for the trafficking of ATS <sup>22, 28</sup>. There is a need for timely intelligence to inform enforcement interventions. The high prevalence of psychotic disorders identified among Indigenous peoples of Cape York and Torres Strait has been associated with substance misuse, cannabis and alcohol, in particular <sup>29</sup>.

#### 8.3 Challenges

A key problem to be faced is that the more heavily addicted users of illicit drugs do not have access to adequate treatment and rehabilitation services in the region. Existing services are generally not mandated to treat individuals other than those already motivated to change and who have the capacity to be regular, voluntary attenders. It was put to us in interviews with drug and alcohol treatment specialists that a fundamental problem is that severe addiction does not lead to such voluntary commitment. Furthermore, heavily addicted users may have suffered cognitive impairment limiting their capacities to benefit from the available therapies. Inappropriate treatment and a lack of appropriate residential care can mean that users return to the streets or to their families. The consequences are that the most severely addicted and disruptive users are often untreated. Such individuals become repeat cases routinely attended to by emergency services with significant consequences for the hospital system, in particular. In the worst case scenario, as exemplified by the cases described in section 7.3, illicit drug use problems turn into possibly irreversible mental health problems.

Specific challenges are also brought on by the important differences between the 'outer regional, 'remote' and 'very remote' areas, features which must be kept at the forefront of thinking. While the probability of the 'worst case' scenario in the more remote settings seems low at present, the consequences of it actually occurring would likely be disastrous. In 'remote' and 'very remote' settings there is a dearth of appropriate treatment services, and the consequent social implications will be magnified. Responses to patients are likely to involve aeromedical retrieval, which is a further significant cost. However, an 'ice' user in an agitated state may be considered too risky to transport by air, and require prolonged incarceration in the community, the only option where there are no suitable clinic facilities available.

#### 8.4 Opportunities for prevention approaches

For this part of the discussion, we will use the primary, secondary and tertiary prevention typology of prevention approaches <sup>30</sup>. Primary prevention approaches are aimed at the general population in order to prevent or delay the uptake of drugs. They may include school-based programs aimed at all students or social marketing targeting the whole population. Secondary prevention interventions target those drug users at risk of related

harms and often feature brief intervention approaches. Tertiary interventions target those with existing drug related problems and include treatment and rehabilitation. Law enforcement efforts may be considered as primary prevention when targeting supply and secondary or tertiary when targeting users<sup>30</sup>.

An important opportunity that emerges from the information reported here is that there is currently a chance to slow or reduce the uptake of further meth/amphetamine, particularly in 'remote' and 'very remote' communities through an informed and targeted response. The interview data reported a strong focus on the need for primary prevention approaches, with frequent and specific requests for drug and alcohol information targeting primary school students. While there is some debate regarding the impact and effectiveness of such programs, reviews indicate that interactive programs aiming to develop interpersonal skills hold greater potential<sup>31</sup>. Further there are strong recommendations in the information from service providers and community members that programs should meet the specific needs and context of those participating. The use of locally-specific data and information was identified as a significant contributor to the tailoring of programs for particular population groups<sup>32</sup>; a further opportunity to be pursued. There were also calls by interview participants for community forums to both inform the population about the harms from meth/amphetamine, and to identify community strengths and appropriate responses to the local issues.

#### 8.5 Issues for treatment services

While there are drug and alcohol services available in all sites where the information was collected, interview participants expressed the desire for more accessible services for Aboriginal and Torres Strait Islander clients through increased outreach, flexible client contact arrangements and improved cultural safety. In order for community members to access services that meet their needs, further cultural adaptation of services with a large Indigenous client base is a matter of urgency. Real engagement by service providers with community leaders and elders has been shown in the peer-reviewed literature to build trusting relationships with demonstrated favourable impacts on service provision<sup>33</sup>.

Several interview participants reported that many people with problematic use of ATS, including meth/amphetamine, were unready to access treatment. They also reported that

the bulk of the burden of care currently lay with families who felt overwhelmed by related issues such as aggression, vandalism and violence. As identified in a recent report on 'ice' use in the Aboriginal community of Mildura, the provision of family support may encourage users to seek treatment earlier<sup>34</sup>.

In populations with a high prevalence of existing comorbidities (drug and alcohol and mental health problems), the uptake of meth/amphetamine could mean poorer mental health outcomes for users<sup>3</sup>. Existing substance use problems may become mental health problems in those who become exposed to crystal meth/amphetamine. Those with comorbid psychiatric and substance misuse problems may have increased risk of poor outcomes. This has serious implications for delivery of drug and alcohol and mental health services that are already stretched, where they are available at all.

Interview comments related to drug and alcohol service provision primarily highlighted a need for residential rehabilitation services, which have shown to have some positive short-term results for meth/amphetamine users in the broader Australian population<sup>35</sup>. There are a range of residential rehabilitation services in the region. Those situated in Normanton, Yarrabah, Palm Island and Townsville are Aboriginal community-controlled services with varying degrees of incorporation of local traditional practices in their programs. Other services run by non-government organisations are located in Mareeba, Mount Isa and Cooktown. Patients from 'remote' and 'very remote' communities attending these services may face lengthy periods of separation from country, family and social supports. This fact underpins the calls documented in the interviews for further rehabilitation centres to be located closer to communities. Not only would this ensure maintenance of access to social supports, but also provide more opportunity for incorporation of traditional practices supported by the wider community.

There was some lack of confidence expressed around the treatment of meth/amphetamine users in a few sites, where alcohol and cannabis have historically been the principal drugs of concern. Longer-term impacts of meth/amphetamine on brain function and behaviour together with higher risk of associated psychosis compared with other drugs, implies the need for more service contacts over an extended period of time<sup>36, 37</sup>. While the need for improvement in client follow-up on discharge from residential rehabilitation services to

prevent relapse was identified, the transient nature of remote community members makes this a particular challenge.

A further issue identified in both the online surveys and interview data was the management of meth/amphetamine-related violence, notwithstanding that alcohol or alcohol and drug use were identified by online survey respondents as most frequently contributing to agitation or violence requiring crisis intervention. While meth/amphetamine and violent behaviour show a dose-response relationship, the risk of violence is increased by heavy alcohol consumption<sup>38</sup>, posing further concerns for situations where episodic binge drinking is common. An area of concern for both enforcement and health services across sites was the lack of safe spaces to manage acutely-affected clients, such as those clients exhibiting signs of psychosis. While secure areas for safe management of intoxicated or psychotic clients are limited in 'outer regional' towns, these options are even more limited in 'remote' and 'very remote' settings, and may result in clients being kept in police cells. This not only comes with attendant increased risks of death-in-custody but also diverts limited enforcement resources from the normal administration of justice in the wider community.

#### 8.6 A need to upscale and co-ordinate a cross-sectoral response

It is generally recognised that a 'tough on drugs' approach will not be appropriate to address any rise in the use of meth/amphetamine. Collaborative cross-sectoral responses are required. However, the design of such responses needs to be tailored to the regional context which, in the case of the northern and northeast Queensland region described here, includes diverse experiences of illicit drug use, particularly meth/amphetamine, across the region.

So what are the possible elements of such a response? What are the opportunities available and what challenges need to be overcome to operationalise the opportunities that do exist?

#### 8.7 Opportunities

Elements of successful collaborative approaches in both outer regional and remote settings include: development of strategies from the 'bottom-up', or community interface, and supported by senior service management; established relationships of trust between partners; partnerships between service providers perceived by community members to be

credible and authoritative; flexible approaches that permit adaptation to local contexts; partnerships able to include a range of sectors including enforcement, health and other social services. Although this is just a small sample of the constructive initiatives that will be found in the region with more thorough study, some examples of successful collaborations in the region that came to our attention while conducting this research include:

- i. In the far north and Cape region, Apunipima Cape York Health Council is developing a strengths-based approach aimed at raising awareness and encouraging young people to avoid the uptake of 'ice' specifically. In collaboration with Queensland Health, particularly Mental Health and ATODS, the RFDS, Education Queensland and other community-controlled health organisations such as Gurriny Yealamucka and Gindaja, these preventative efforts will reach many of the 'outer regional', 'remote' and 'very remote' Indigenous populations in the far north. Apunipima's strategy also promises support for Local Government Councils and QPS. In the short term, this initiative is likely to rely on core funding from the collaborating services and on collaborators' good will. The model is potentially transferrable to other Community-Controlled health Organisations in Queensland, e.g Mulungu Aboriginal Corporation Aboriginal Primary Health Care Service in Mareeba and Gidgee Healing in Mount Isa.
- ii. Queensland Police Service has developed an *Ice Community Awareness Package* in partnership with Queensland Health as part of the Queensland Government's response under the National Ice Taskforce. The Awareness Package is based around a presentation that is designed to be delivered by Police and Queensland Health members to community groups, along with fact sheets and information on available health services. The Package provides community members with evidenced-based information on crystal meth/amphetamine 'ice', along with practical information for consumers; families and friends; workplaces; schools and communities on treatment, support services, and links to available resources. The *Ice Community Awareness Package* was rolled out state-wide in August and is available to interested community groups through the Queensland Police Service. It provides an evidence-informed framework which can be used to tailor content specifically for local delivery in different localities.

- iii. In the Townsville region, a local partnership, specifically between Community

  Mental Health and QPS, has developed an education resource about 'ice' which is
  aimed at those who interact with affected patients and clients through various
  services. Interested community members are also able to benefit. It is called
  'Breaking the Ice' and covers a range of topics with content progressively updated
  in response to service provider needs and questions and by reference to available
  literature and expertise. It has a focus on developing empathy and compassion and
  enhancing safety for the user with the problem, their carers and associated service
  providers. This adaptable initiative also relies on the good will of the already overstretched personnel who developed it, along with organisational endorsement.
- iv. The Victorian Department of Health and Human Services commissioned the National Centre for Education and Training on Addiction NCETA (and others) to develop an online training package on ice for frontline workers. *The Standard Frontline Worker Ice Training Package* is being developed for a diverse range of services, including health and welfare, education and criminal justice. It is expected to be released in late 2015, initially available in Victoria and later in other jurisdictions.
- v. In Cairns there is a unique mental health, co-responder model that actively integrates front-line Queensland Police, Queensland Ambulance and Queensland Health Adult Community Mental Health Services. Collaborating partners report that call-outs and referrals are more effectively and more safely managed for all concerned. The service has operated for the past five years and has depended on co-ordinated targeting of existing resources. Operating at its capacity, this initiative also relies heavily on the good will and commitment of QPS and Queensland Health staff. It has considerable potential to reduce emergency department presentations and hospitalisations, but has not yet been evaluated.
- vi. Although not currently in operation, over six years from 2008 to 2013, the unique QPS 'Weed-it-Out' initiative had successfully engaged with communities, Local Government Councils, Crime Stoppers, the Australian Federal Police and Australian Customs Service to limit the availability and use of cannabis in far north Queensland Indigenous communities. The initiative was not enforcement-focused but ran in parallel with established policing strategies. The initiative depended

upon strong operational bonds of trust between enforcement agencies. Further relationships of trust between police and community leaders were demonstrated by the signing of an agreement in 2008 to implement the project's strategies to reduce cannabis availability. Also crucial was the credibility gained when the communities supporting the initiative saw illicit drug trafficking controlled. This occurred directly in response to community support for enforcement with credible and appropriate intelligence provided. The other key element of success was a pool of funds (\$1.2 million from the Commonwealth Government over six years) for 'Weed-it-Out'. These funds, separate from QPS operational budgets, permitted a multiplier effect. Preventative capacities were enhanced in QPS members as they did their normal, funded work in the lead enforcement agency in the region while also providing credible information about the health and social effects of cannabis to community populations.

vii. Community characteristics and strengths, including comparative isolation, provide an important opportunity. For strategies to address supply of meth/amphetamine, existing relationships of trust between community-based QPS, including Police and Community Liaison Officers, community leaders and the broader community, hold the prospect for enforcement to gather relevant and timely intelligence about illicit drug supply and supply routes. It is vital that these relationships are maintained to ensure sufficient early warning and sustained monitoring strategies can be effectively employed in the vulnerable areas of the state to identify situational change and to hold back any possible surge in 'ice' availability and use.

#### 8.8 Recommendations

#### 8.8.1 Recommendation 1: A co-ordinated cross-sectoral response

Illicit drug use, in general, has its causes and consequences across various sectors in society. Conversely, benefits from success will be shared across sectors, implying that it is worthwhile for all sectors to invest in targeted prevention, management and treatment. Silo approaches from individual sectors are obviously to be avoided. There needs to be a coordinated cross-sectoral response, fittingly led by health, with limited State resources allocated appropriately across sectors. This needs high-level backing, and would be facilitated by an appropriate office to coordinate and oversee strategy implementation

across sectors to rapidly and efficiently respond across the continuum of prevention, management and treatment.

#### 8.8.2 Recommendation 2: A focus on prevention

The 'very remote' communities in particular are comparatively unscathed by 'ice' with some unique geographical and socio-cultural features furnishing some protective factors. Consequently, the priority for these regions is to mitigate the risk of an outbreak by vigorously supporting supply reduction alongside e advocacy, awareness-raising and preventative initiatives by the health sector across Queensland. Significant stakeholders in these efforts would include Community-Controlled Health Services and Youth services, amongst others. The Indigenous Leaders' Forum (ILF) of the Local Government Association of Queensland (LGAQ) may have a role to play here to advocate for appropriate service provision.

#### 8.8.3 Recommendation 3: Workforce capacity building

It is further recommended that a coordinated approach be taken to upskill drug and alcohol and mental health workers to increase confidence in dealing with meth/amphetamine — related issues. Partnership approaches could involve collaboration between state health and peak bodies such as Queensland Network of Alcohol and other Drug Agencies and Queensland Aboriginal and Islander Health Council. Such initiatives, particularly those appropriately tailored to identified needs in different parts of the region, are likely to be particularly welcomed in the services operating in the 'remote' towns and 'outer regional' centres, i.e. where many outreach service providers are based.

#### 8.8.4 Recommendation 4: Treatment approaches

There is a need for better engagement by drug and alcohol and mental service providers with community members and leaders in order to improve culturally safe service provision. Protocols and brokerage for community engagement could be supported by a coordinated cross-sector effort. We also recommend a further investment in outreach approaches by drug and alcohol and mental service providers, which may facilitate provision of and access to family support services and earlier interventions with problematic users of ATS. The Cairns-based mental health co-responder model (see example, Section 8.7, iii) which integrates surveillance, rapid response and referral to services may provide an effective example of inter-agency case-management. It is recommended that this model is

evaluated and examined for its utility in other major 'outer regional' or 'remote' centres. Notwithstanding current fiscal constraints, there have been many calls for an increase in sites for residential rehabilitation services that can incorporate traditional practices in programs and ensure access to social supports such as family. We recommend exploration of infrastructure costs to provide residential rehabilitation services where the dearth of services is most critical, e.g. the Western Cape York region, and for the provision of safe seclusion facilities to manage patients in mental health crisis in both 'outer regional' 'remote' and 'very remote' sites.

#### 8.9 Conclusions

From 2013 in Queensland, preventative health services were seriously reduced. Going forward, a sustained but realistic re-investment in preventative services is now required to address any possible surge in the use of meth/amphetamine in the 'very remote', 'remote' and 'outer regional' areas of northern and north east Queensland.

The Queensland Government recently announced \$6 million worth of funding for the health sector to fund treatment, mainly in southern regions of the State. Enhanced treatment is needed of course; but our analysis suggests that a focus on prevention in the northern and north east regions will be more cost-effective and sustainable within an integrated and robust cross-sectoral strategy.

## References

- 1. Australian Instuite of Health and Welfare. Trends in methylamphetamine availability, use and treatment: 2003-04 to 2013-14. Canberra: AIHW; 2015.
- 2. Kinner S, Degenhart L. Crystal methamphetamine smoking among regular ecstasy users in Australia: increases in use and associations with harm. Drug Alcohol Rev. 2008;27(3):292-300.
- 3. Vearrier D, Greenberg M, Miller SN, Okaneku JT, Haggerty DA. Methamphetamine: History, Pathophysiology, Adverse Health Effects, Current Trends, and Hazards Associated with the Clandestine Manufacture of Methamphetamine. Disease-a-Month. 2012;58:38-89.
- 4. National Indigenous Drug and Alcohol Committee/National Aboriginal Community-Controlled Health Organisation. Online consultation: amphetamine type stimulant use. NIDAC/NACCHO, 2014 August 2014.
- 5. Parliament of Victoria. Inquiry into the supply and use of methamphetamines, particularly Ice, in Victoria. Melbourne: Parliament of Victoria, 2014.
- Clough AR, Fitts MS, Robertson JA, Shakeshaft A, Miller A, Doran CM, et al. Study Protocol-Alcohol Management Plans (AMPs) in remote indigenous communities in Queensland: their impacts on injury, violence, health and social indicators and their cost-effectiveness. BMC public health. 2014;14:15.
- 7. Australian Statistical Geography Standard (ASGS): Volume 5 Remoteness Structure, July 2011 [Internet]. Australian Bureau of Statistics. 2011 [cited 16 September, 2013]. Available from: http://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005.
- 8. Clough AR, Fitts M, Robertson J. Recent warnings of a rise in crystal methamphetamine ("ice") use in rural and remote Indigenous Australian communities should be heeded. Med J Aust. 2015;203(1):19.
- 9. Bohanna I, Clough AR. Cannabis use in Cape York Indigenous communities: high prevalence, mental health impacts and the desire to quit. Drug Alcohol Rev. 2012;31(4):580-4.
- 10. Clough AR, D'Abbs P, Cairney S, Gray D, Maruff P, Parker R, et al. Emerging patterns of cannabis and other substance use in Aboriginal communities in Arnhem Land, Northern Territory: a study of two communities. Drug Alcohol Rev. 2004;23(4):381-90.
- 11. Usher K, Clough A, Woods C, Robertson J. Is there an ice epidemic in Australia? Int J Ment Health Nurs. 2015;24(4):283-5.
- 12. Fatovich DM, Davis G, Bartu A. Morbidity associated with amphetamine-related presentations to an emergency department: A record linkage study. Emerg Med Australas. 2012;24(5):553-9.
- 13. Darke S, Kaye S, McKetin R, Duflou J,. Major physical and psychological harms of methamphetamine use. Drug and alcohol review. 2008;27(3):253-62.
- 14. Le Cong M, Finn E, Parsch CS. Management of the acutely agitated patient in a remote location. Med J Aust. 2015;202(4):182-3.
- 15. Pritchard A, Le Cong M. Ketamine sedation during air medical retrieval of an agitated patient. Air Med J. 2014;33(2):76-7.
- 16. Le Cong M, Gynther B, Hunter E, Schuller P. Ketamine sedation for patients with acute agitation and psychiatric illness requiring aeromedical retrieval. Emerg Med J. 2012;29(4):335-7.
- 17. Lloyd B, Gao CX, Heilbronn C, Lubman DI. Self-harm and mental health ambulance-related attendances in Australia: 2013 data. Fitzroy, Victoria: Turning Point, 2015.
- 18. Hsieh JH, Stein DJ, Howells FM. The neurobiology of methamphetamine induced psychosis. Front Hum Neurosci. 2014;8:537.
- 19. Kaye S, McKetin R, Duflou J, Darke S. Methamphetamine and cardiovascular pathology: a review of the evidence. Addiction (Abingdon, England). 2007;102(8):1204-11.

- 20. Baker SN. Management of acute agitation in the emergency department. Adv Emerg Nurs J. 2012;34(4):306-18.
- 21. Roche AM, Pidd K, Bywood P, Freeman T. Methamphetamine use among Australian workers and its implications for prevention. Drug Alcohol Rev. 2008;27(3):334-41.
- 22. Robertson J, Dowie R. A cloud over our community. Of Substance. 2008;6(3):28-9.
- 23. Delahunty B, Putt J. Good practice framework Policing Illicit Drugs in Rural & Remote Local Communities. Adelaide: 2006.
- 24. Australian Bureau of Statistics. 2033.0.55.001 Census of Population and Housing: Socio-Economic Indices for Areas (SEIFA), Australia 20112013.
- 25. Drugs and Crime Prevention Committee. Inquiry into Amphetamines and 'Party Drug' Use in Victoria. Melbourne: Parliament of Victoria; 2004.
- 26. Queensland Nurses Union. Hands Off Our Public Health Services 2014 [updated 13/10/201417/11/2015]. Available from: https://www.qnu.org.au/DocumentsFolder/NEW%20WEB%20documents/Media%20Releas es/2014/Cuts-examples-11September2014.pdf.
- 27. Clough AR. Listening to what Indigenous people in remote communities say about alcohol restrictions: "Good thing that the alcohol has gone, but the gunja has kept going". Medical Journal of Australia. 2012;197(5): 275.
- 28. Putt J, Delahunty B. Illict Drug Use in rural and remote Indigenous communities. In: Criminology Alo, editor. Canberra: Australian Government; 2006.
- 29. Hunter EM, Gynther B, Anderson CJ, Onnis LL, Nelson JR, Hall W, Baune BT, Groves AR,. Psychosis in Indigenous populations of Cape York and the Torres Strait. Medical Journal of Australia. 2012;196(2).
- 30. Ritter A, McDonald D. Monograph No.02: Drug policy interventions: A comprehensive list and a review of classification schemes. Fitzroy: Turning Point Alcohol & Drug Centre, 2005.
- 31. Tobler NS, Roona M, Ochshorn P, Marshall DG, Streke AV & Stackpole KM,. School-based Adolescent Drug prevention programs: 1998 Meta-Analysis. The Journal of Primary Prevention. 2000;20(4):275-336.
- 32. McBride N. A systematic review of school drug education. Health Education Research. 2003;18(6):729-42.
- 33. Wright M OCM. Negotiating the right path: Working together to effect change in healthcare service provision to Aboriginal peoples. ALAR Journal. 2015;21(1):108-23.
- 34. MacLean S, Hengsen R, Stephens R, Arabena K. Supporting the Mildura Aboriginal Community's Respnse to ice use. Melbourne: University of Melbourne, Onemda VicHealth Group; 2015.
- 35. McKetin R, Najman J, Baker AL, Lubman DI, Dawe S, Ali R, et al. Evaluating the impact of community-based treatment options on methamphetamine use: findings from the Methamphetamine Treatment Evaluation Study (MATES). Addiction. 2012;107 1998-2008.
- 36. Cretzmeyer M, Sarrazin MV, Huber DL, Block RI, Hall JA. Treatment of methamphetamine abuse: research findings and clinical directions. Journal of Substance Abuse Treatment. 2003;24:267-77.
- 37. Glasner-Edwards S, Mooney L, Marinelli-Casey P, Hillhouse M, Ang A, Rawson R. Clinical course and outcomes of methamphetamine adults with psychosis. Journal of Substance Abuse Treatment. 2008;35:445-50.
- 38. McKetin R, Lubman D, Najman JM, Dawe S, Butterworth, Baker AL. Does methamphetamine use increase violent behaviour? Evidence from a prospective longitudinal study. Addiction. 2014;109(5):798-806.