



Drug policy for methamphetamine use urgently needed

During 2004 there have been media reports of a dramatic increase in the use of methamphetamine (MA), locally known as 'tik', in the Western Cape. These reports have been supported by findings from the South African Community Epidemiology Network on Drug Use (SACENDU) Project.¹ SACENDU is an alcohol and other drug (AOD) sentinel surveillance system operational in Cape Town, Durban, Port Elizabeth (PE), Mpumalanga, and Gauteng (Johannesburg/Pretoria). The system monitors trends in AOD use and associated consequences on a 6-monthly basis from multiple sources, including over 50 specialist treatment centres.

SACENDU findings reveal that the proportion of clients at specialist substance abuse treatment centres reporting MA as their primary and/or secondary drug of abuse increased significantly between the first half of 2002 and the first half of 2004, from 4 patients seen at 23 centres to 241 patients seen at 25 centres (Table I). The sharp increase in the number of clients seeking treatment for MA-related problems is unprecedented in the country. Data from other sites suggest that while MA use is increasing elsewhere the extent of use is greatest in Cape Town.² In addition, in Cape Town MA has rapidly become the third most commonly reported primary illicit substance of abuse (after methaqualone and cannabis), where previously it was rarely reported as a problem drug.³ Not only does the rapidly growing popularity of MA point to the urgent need to address this problem in the Western Cape, but the demographic profile of clients in treatment for MA-related problems also highlights this urgency. MA is the drug of choice for young people; the average age of patients who reported MA as their primary substance of abuse in the first half of 2004 was 20 years, with 60% of patients being younger than 20 years of age. This is cause for concern given that adolescents are particularly vulnerable to the neurotoxic effects of MA.

More specifically, MA's potent and toxic action on the sympathetic and central nervous systems makes a strong case

for the urgency with which MA use should be addressed, especially in the Western Cape. Positron emission tomography (PET) imaging and postmortem studies in humans provide evidence of MA's neurotoxicity, with regular users showing a loss of dopamine nerve terminals in the caudate and putamen, reduced glucose metabolism in the thalamus, caudate and putamen, and increased glucose metabolism in the parietal cortex.⁴ These structural brain changes are associated with long-term impairment in cognitive processing, memory and emotion.⁵ Other MA-related chronic health problems include cardiovascular and pulmonary complaints such as myocardial infarction, arrhythmias, cerebral oedema, hyperpyrexia, chronic pulmonary congestion, seizures and strokes; psychiatric consequences such as paranoia, acute and chronic MA-induced psychosis, hallucinations, depression, anxiety and uncontrollable anger; dermatological problems; malnutrition and weight loss; and the risk of overdose and death.⁵ In addition, the behaviours associated with MA use, which include high-risk sexual behaviours, place MA users at increased risk for HIV and other infectious disease transmission.⁶

Based on a review of the international literature and advice from colleagues in other countries, it is clear that there are a variety of potentially useful interventions that should be considered in dealing with this new public health threat. Raising awareness and providing accurate information to the public and policy makers on MA and introducing specific, science-based prevention programmes that target individual, family and community risk and protective factors for substance use appear to be the most promising prevention strategies.

In terms of treatment, consideration should be given to: (i) ensuring that there is adequate access to affordable and effective treatment in general; (ii) establishing MA treatment protocols in public hospitals and specialised care facilities; (iii) training health and social service providers to identify, assess and manage MA-induced psychosis, anxiety, withdrawal and

Table I. Patients in specialist substance abuse treatment centres in Cape Town with methamphetamine as primary or secondary substance of abuse (2002 - 2004)

	2002a		2002b		2003a		2003b		2004a	
	N	%	N	%	N	%	N	%	N	%
Primary	4	0.3	13	0.8	38	2.3	38	2.3	241	10.7
Secondary	7	0.4	19	1.2	43	2.6	83	5.0	188	8.3
Overall*	11	0.7	32	2.1	81	4.8	121	7.3	429	19.0
Total no. of patients	1 608		1 551		1 686		1 659		2 255	

* Patients who have methamphetamine as primary or secondary substance of abuse.
a = data collected between January and June; b = data collected between July and December.



overdose; (iv) specifically equipping primary health care providers and emergency room personnel to provide brief screening and interventions; and (v) introducing science-based models of substance abuse treatment into community settings, especially cognitive-behavioural approaches.

Interdiction strategies should include: (i) monitoring the distribution and use of precursor chemicals used in the manufacture of MA; (ii) investigating companies that distribute precursor chemicals (e.g. pseudoephedrine, ephedrine, anhydrous ammonia and red phosphorous) or equipment used in clandestine methamphetamine laboratories; (iii) expanding community policing strategies to engage the public in MA issues; and (iv) continuing to put pressure on drug-related organised crime (especially focusing on drug-related crimes such as perlemoen (abalone) smuggling and high-intensity drug dealing/trafficking areas).

Provincial responses during 2004 have focused almost exclusively on social service and policing interventions. Given

the likely future burden of MA on the health sector, a greater public health response to this threat is urgently required.

C D H Parry

B Myers

A Plüddemann

*Alcohol and Drug Abuse Research Group
Medical Research Council
Tygerberg*

1. Parry CDH, Bhana A, Plüddemann A, *et al*. The South African Community Epidemiology Network on Drug Use (SACENDU): Description, findings (1997 - 1999), and policy implications. *Addiction* 2002; **97**: 969-976.
2. Plüddemann AP, Parry CDH, Bhana A, Harker N, Potgieter H, Gerber W. Monitoring alcohol and drug abuse trends in South Africa (July 1996 - December 2003): Phase 15. *SACENDU Research Brief* 2004; **7**(1): 1-12.
3. Myers B, Parry CDH, Plüddemann A. Indicators of substance abuse treatment demand in Cape Town. Findings from the SACENDU Project 1998 - 2002. *Curationis* 2004; **5**: 27-31.
4. McCann UD, Ricaurte GA. Amphetamine neurotoxicity: accomplishments and remaining challenges. *Neurosci Biobehav Rev* 2004; **27**: 821-826.
5. Brecht ML, O'Brien A, von Mayrhauser C, Anglin MD. Methamphetamine use behaviours and gender differences. *Addict Behav* 2004; **29**: 89-106.
6. Semple SJ, Patterson TL, Grant I. The context of sexual risk behaviour among heterosexual methamphetamine users. *Addict Behav* 2004; **29**: 807-810.