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## **FACT SHEET – METHAMPHETAMINE** (“meth” “tik”, “tuk”, “Speed”, “crystal”)

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### **What is methamphetamine?**

It is a powerfully addictive stimulant that affects many areas of the central nervous system. It is a white, odourless, bitter-tasting crystalline powder that readily dissolves in water or alcohol. The drug can easily be made in clandestine laboratories from relatively inexpensive over-the-counter ingredients and can be purchased at a relatively low cost (about R15-R30/‘straw’).

### **Modes of administration**

It can be smoked, snorted, orally ingested or injected intravenously. In South Africa it is typically smoked by placing the powder/crystal in a light bulb, from which the metal threading has been removed. A lighter is used to heat the bulb and the fumes are smoked.

### **Consequences of methamphetamine use**

#### Acute intoxication and/or overdose

Methamphetamine triggers release of epinephrine, norepinephrine and dopamine in the sympathetic nervous system. Common effects of intoxication are euphoria, increased energy and self-confidence, insomnia, restlessness, irritability, heightened sense of sexuality, and tremors. Respiratory effects include increased respirations, pulmonary edema, pulmonary hypertension and decreased lung capacity. Cardiovascular effects include increased heart rate and blood pressure, tachycardia (abnormally rapid heart beat) and/or arrhythmias. Users run the risk of overdose characterised by dehydration, hyperthermia, convulsions, renal failure, stroke and myocardial infarction.

#### Long-term/chronic use

Prolonged use can result in severe weight loss/anorexia, severe dermatological problems, higher risk of seizures and uncontrollable rage/violent behaviour. Chronic mental health effects include confusion, impaired concentration and memory, hallucinations, insomnia, depressive reactions, psychotic reactions, paranoid reactions, and panic disorders. Long term use also increases the risk of contracting HIV and Hepatitis C due to injection drug use and sexual risk behaviour.

### **Epidemiology of methamphetamine use in Cape Town:**

The following statistics were collected via the Medical Research Council’s South African Community Epidemiology Network on Drug Use on patients presenting with methamphetamine problems in Cape Town since 2002.

Table 1 shows the proportions of patients who had methamphetamine as a primary or secondary substance of abuse for each respective 6-month period since January 2002 (where 2002a refers to January – June 2002, 2002b to July – December 2002, etc.). The ‘Total patients’ row refers to the total number of patients treated at over 25 specialist treatment centres/programmes for ANY substance (including alcohol, cannabis, Mandrax, heroin, cocaine, etc.). A graphic illustration is provided in Figure 1.

**Table 1: Patients with methamphetamine as primary or secondary substance of abuse**

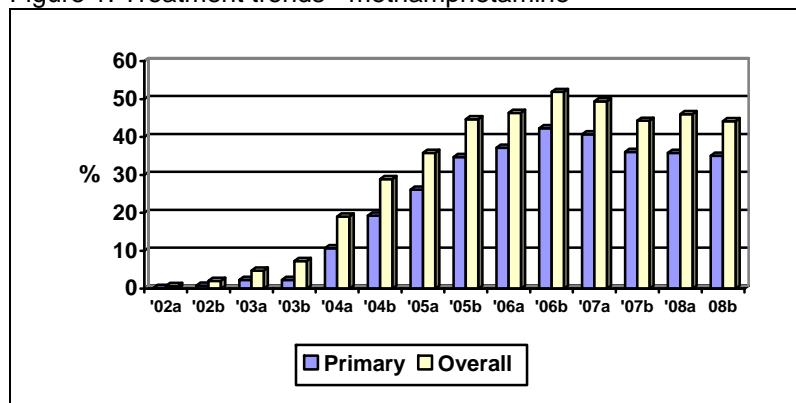
	2003a		2003b		2004a		2004b		2005a		2005b		2006a		2006b		2007a		2007b		2008a		2008b	
	n	%	n	%	n	%	n	%	n	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Primary	38	2.2	38	2.3	241	10.7	445	19.3	644	26.1	739	34.7	990	37.2	1184	42.3	1166	40.7	1103	36.1	944	35.8	985	35.1
Secondary	43	2.5	83	5.0	188	8.3	223	9.6	240	9.7	213	10.0	242	9.1	267	9.6	247	8.6	253	8.3	182	6.9	187	6.7
Overall*	81	4.7	121	7.3	429	19.0	668	28.9	884	35.8	952	44.7	1232	46.3	1451	51.9	1413	49.4	1356	44.3	1126	42.7	1172	41.8
Total patients	1724		1659		2255		2308		2468		2131		2660		2798		2862		3058		2637		2807	

\* Patients who have methamphetamine as primary OR secondary substance of abuse

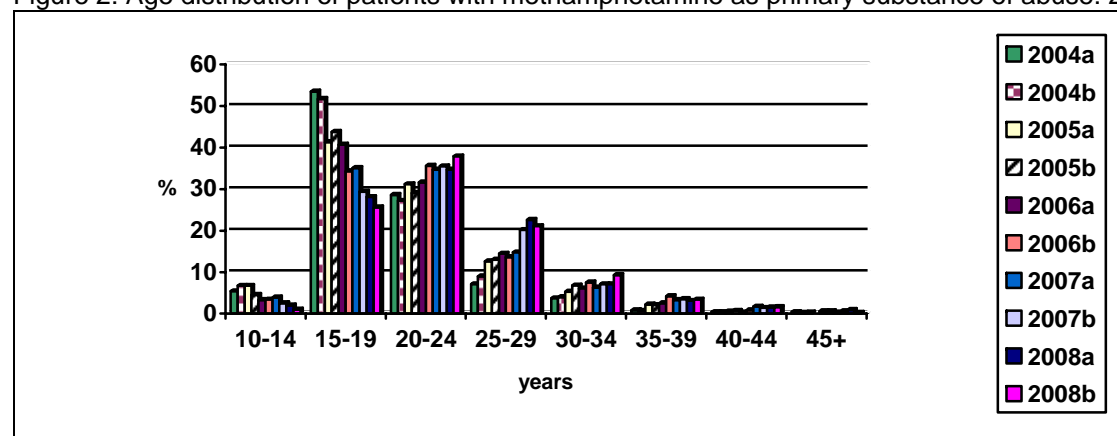
These findings are unprecedented in terms of the sharp increase in the number of patients seeking treatment for methamphetamine related problems, although a decrease was noted in the 2<sup>nd</sup> half of 2007. The majority (currently 79%) are in treatment for the first time.

The average age of patients who reported methamphetamine as their primary substance of abuse in 2<sup>nd</sup> half of 2008 was 24 years and 73% were male. Most of the patients (90%) were Coloured, 7% were white, <1 Indian/Asian and 3% were Black/African. Notably 26% of the patients were younger than 20 years of age (see Figure 2). The ages ranged from 12 to 54 years.

**Figure 1: Treatment trends - methamphetamine**



**Figure 2: Age distribution of patients with methamphetamine as primary substance of abuse: 2004 - 2008**



Patients coming to treatment centres in Cape Town having methamphetamine as their primary drug of abuse in the 2<sup>nd</sup> half of 2008 came from over 180 suburbs/towns. The following suburbs/towns had 20 or more patients reporting to treatment centres with methamphetamine ('tik') as their primary substance of abuse: Athlone, Atlantis, Belhar, Bellville, Delft, Eerste River, Elsies River, Kraaifontein, Manenberg and Mitchell's Plain.

Of the 1911 patients coming to drug treatment in the 2<sup>nd</sup> half of 2008 who were under 20 years of age, 44% had methamphetamine ('tik') as their primary drug of abuse (compared to 46% in the 1<sup>st</sup> half of 2008, 59% in the 2<sup>nd</sup> half of 2006, 60% in the 1<sup>st</sup> half of 2006, 53% in the 2<sup>nd</sup> half of 2005, 49% in the 1<sup>st</sup> half of 2005, 42% in the 2<sup>nd</sup> half of 2004, 25% in the 1<sup>st</sup> half of 2004, and 5% in the 2<sup>nd</sup> half of 2003). In both the first and second half of 2006 72% of persons under 20 years of age coming to treatment for substance abuse problems in Cape Town had 'tik' as a primary or secondary drug of abuse. This decreased significantly in the 2<sup>nd</sup> half of 2007 to 58% and decreased further in the 2<sup>nd</sup> half of 2008 to 52%

### **Promising strategies for addressing methamphetamine in SA:**

#### Prevention strategies

- ▶ Raise awareness and provide accurate information to the public and policy makers on methamphetamine.
- ▶ Introduce specific, science-based prevention programmes that target individual, family and community risk and protective factors for substance use.
- ▶ Actively promote the development of broad-based school-based drug policies.

#### Treatment strategies

- ▶ Ensure that there is adequate access to affordable and effective treatment.
- ▶ Establish methamphetamine treatment protocols in public hospitals and specialized care facilities.
- ▶ Equip primary health care providers/ER personnel to provide brief screening and interventions.
- ▶ Train health and social service providers, especially those in emergency room settings, to identify, assess and manage methamphetamine-induced psychosis, anxiety, withdrawal and overdose.
- ▶ Introduce science-based models of substance abuse treatment into community settings, especially cognitive-behavioural approaches which are particularly effective in treating methamphetamine abuse.
- ▶ Develop a systemic criminal justice approach with substance abusing offenders, using screening, assessment, monitoring and treatment.

#### Interdiction strategies

- ▶ Introduce laws governing the sale of precursor chemicals (e.g. pseudoephedrine, ephedrine, anhydrous ammonia and red phosphorous) used in the manufacture of methamphetamine.
- ▶ Investigate companies that distribute chemicals or equipment used in clandestine methamphetamine laboratories and seek harsher penalties for such crimes.
- ▶ Expand community policing strategies to engage the public in methamphetamine issues.
- ▶ Continue to put pressure on drug-related organised crime (especially focusing on certain related crimes such as perlemoen smuggling as well as on high intensity drug dealing/trafficking areas).