

Cannabis, methamphetamine and mental health: Changing ground-rules and the current state of play





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Cannabis potency

We know little about cannabis potency in Australia but there is no evidence to support the belief that it is now 30 times stronger than it was



Cannabis potency

Hydroponically grown cannabis usually has slightly higher THC levels than 'bush buds' – although not 20-30 times stronger. This is due to the following factors:

- **genetic** (selected seed varieties and cultivation of female plants)
- **environmental** (cultivation techniques, prevention of fertilisation and seed production)
- **freshness** (production sites are close to the consumer and storage degradation of THC is avoided)

Most importantly, we need to remember that **users are now smoking the stronger part, more often**

Cannabis potency

- EMCDDA Report – *An overview of cannabis potency in Europe* (2004) states:
 - Statements in the popular media that potency of cannabis has increased by ten times or more in recent decades are not supported by the limited data that are available from either the USA or Europe. The greatest long-term changes in potency appear to have occurred in the USA. It should be noted here that before 1980 herbal cannabis potency in the USA was very low by European standards

Is cannabis connected to mental illness?

Some people experience very unpleasant psychological effects when they use cannabis

- like severe anxiety or panic attacks
- at higher doses – confusion, delusions and hallucinations

These symptoms are more likely to be felt by people who aren't used to the effects or have smoked more than they are used to

- these symptoms usually do not last
- many of these people try once or twice and never use again due to this effect

Is cannabis connected to mental illness?

Some people appear to be more vulnerable to the psychological effects of cannabis

- i.e. they have a predisposition to a mental illness
- in these people, cannabis can trigger a psychotic episode (which they may recover from) or possibly 'unlock' an illness that may affect them permanently
- many people with illnesses like schizophrenia choose to self-medicate with cannabis

There is now increasing evidence that cannabis may cause a psychotic episode in people who do not have a predisposition

- more likely to occur in the young who smoke a lot, regularly

Methamphetamine

Ever used by 9% of the Australian population

- 8% of 14-19 year olds have ever used (6% recently)
- 22% of 20-29 year olds have ever used (11% recently)

Short-term effects may include:

- euphoria, feeling of well-being
- nausea and anxiety - sweating
- increased blood pressure and pulse rate
- jaw clenching and teeth grinding

Methamphetamine

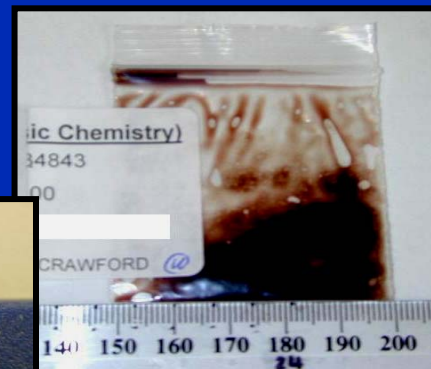
Long-term effects (physical)

- poor appetite - sleep problems
- seizures - fatigue and a loss of energy
- liver and kidney failure - respiratory depression
- high blood pressure and rapid and irregular heartbeat

(psychological)

- anxiety and paranoia - extreme mood swings
- panic attacks - compulsive repetition of actions
- injury associated with dangerous acts arising from disinhibited behaviour

Forms of methamphetamine



Methamphetamine/speed powder

Most methamphetamine in Australia comes in powder form

Speed powder varies in texture from very fine to more coarse and crystalline, and can also vary in colour from white to yellow, pink or brownish

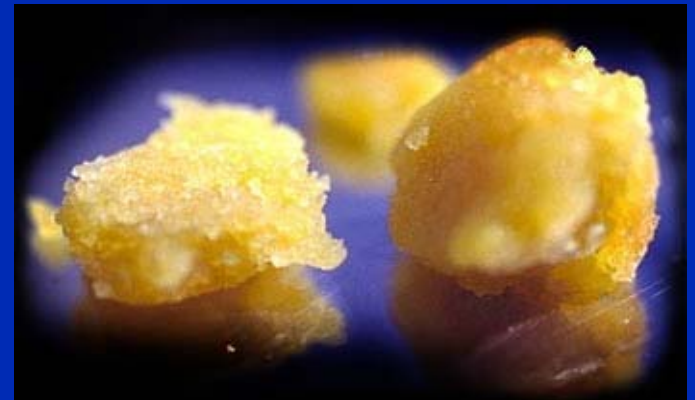
- these variations are mainly due to the different purifying processes used by backyard chemists



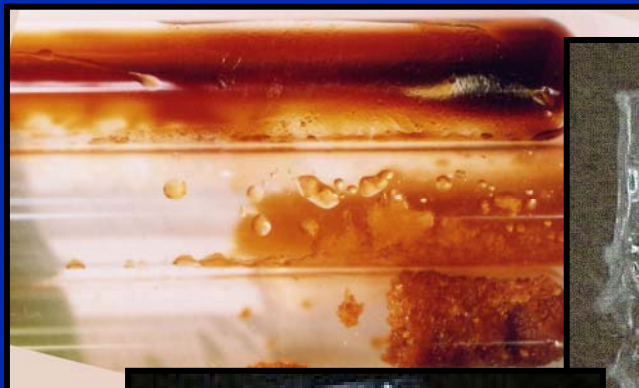
Methamphetamine/base

Base is a sticky, gluggy, waxy or oily form of damp powder – it is the first step in the manufacturing process to produce methamphetamine and is an oil

- oil is not popular, as it is difficult to inject or snort, so manufacturers attempt to purify the product into a crystal
- the result is often messy and impure (a tell-tale sign is a yellowish or brownish tinge) - it doesn't crystallize



Methamphetamine/ice crystal



Methamphetamine/ice crystal

Also known as crystal, crystal meth or meth. It has also been known as shabu, batu and glass

Short-term effects

- same as for amphetamines although more intense due to increased purity

Long-term effects

- 'speed psychosis' (often linked to high blood levels of methamphetamine)
- some evidence to show ice smoking causes lung damage
- seizures
- controversially linked with unsafe sexual behaviour and HIV/STD transmission

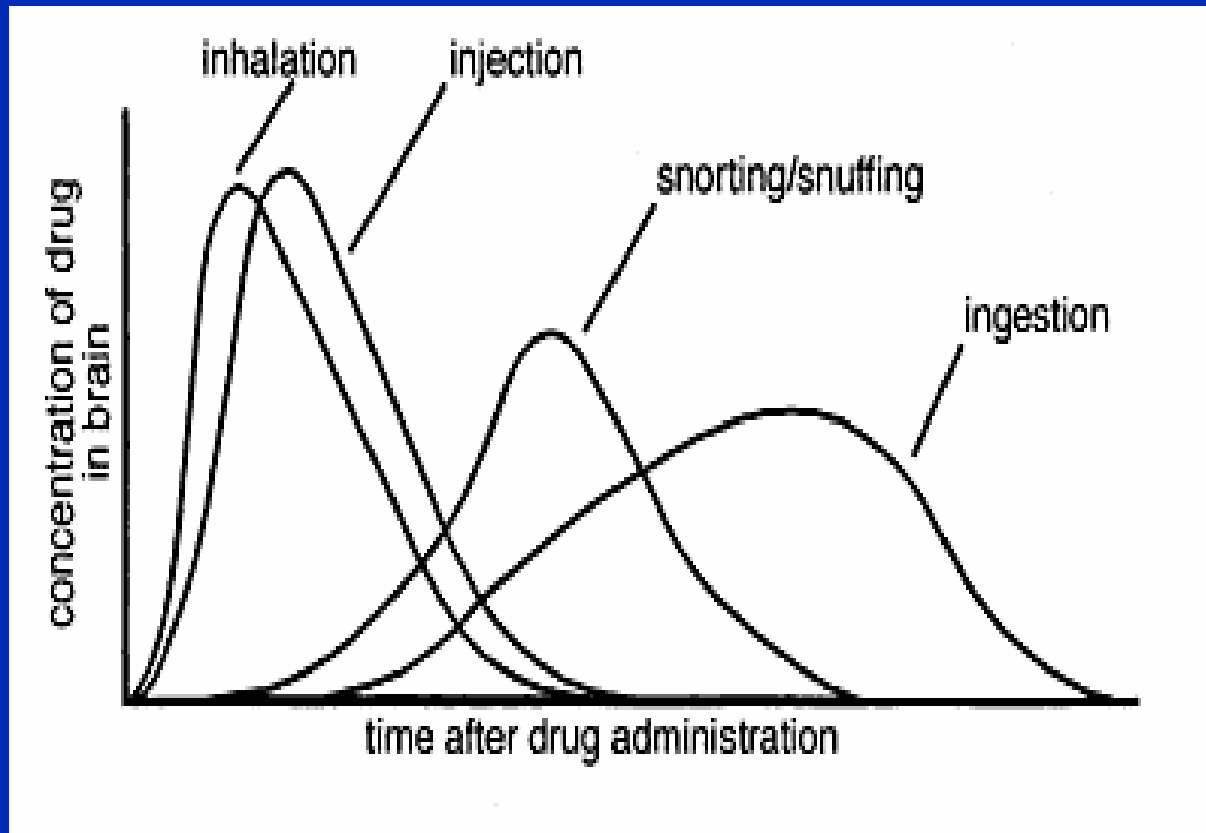
Route of administration

Methamphetamine may be snorted, injected, smoked or taken orally

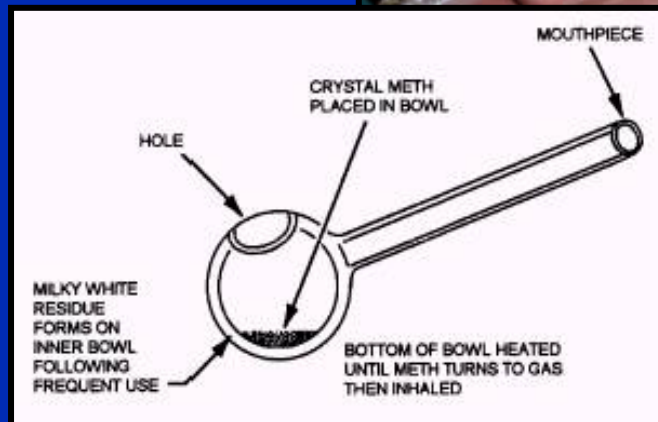
The route of administration is directly related to the onset, peak and duration of effect – i.e. the faster the drug reaches the brain means that the user is exposed to a higher concentration of the drug and thus a more intense effect

- the duration of effect of amphetamine is believed to be anywhere from 7-14 hours, although this is debated by experts. The peak can last for approximately one hour if not injected

Route of administration

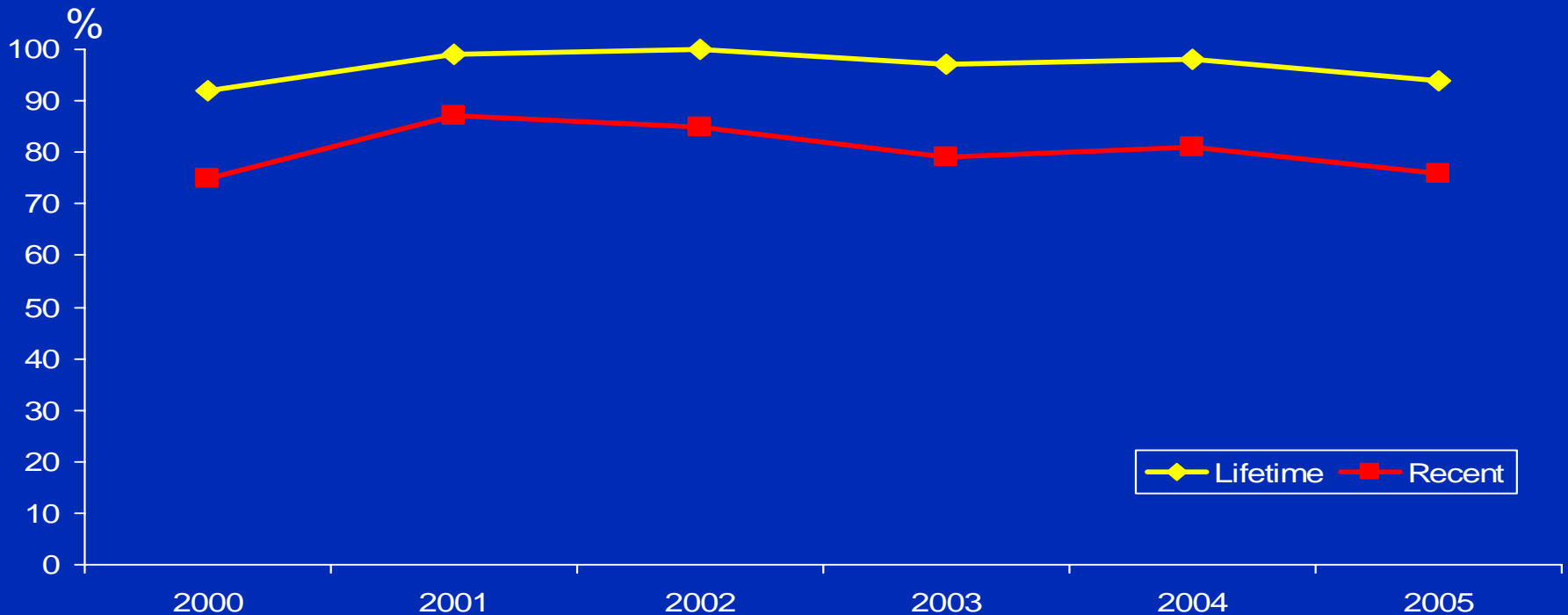


Ice/crystal smoking



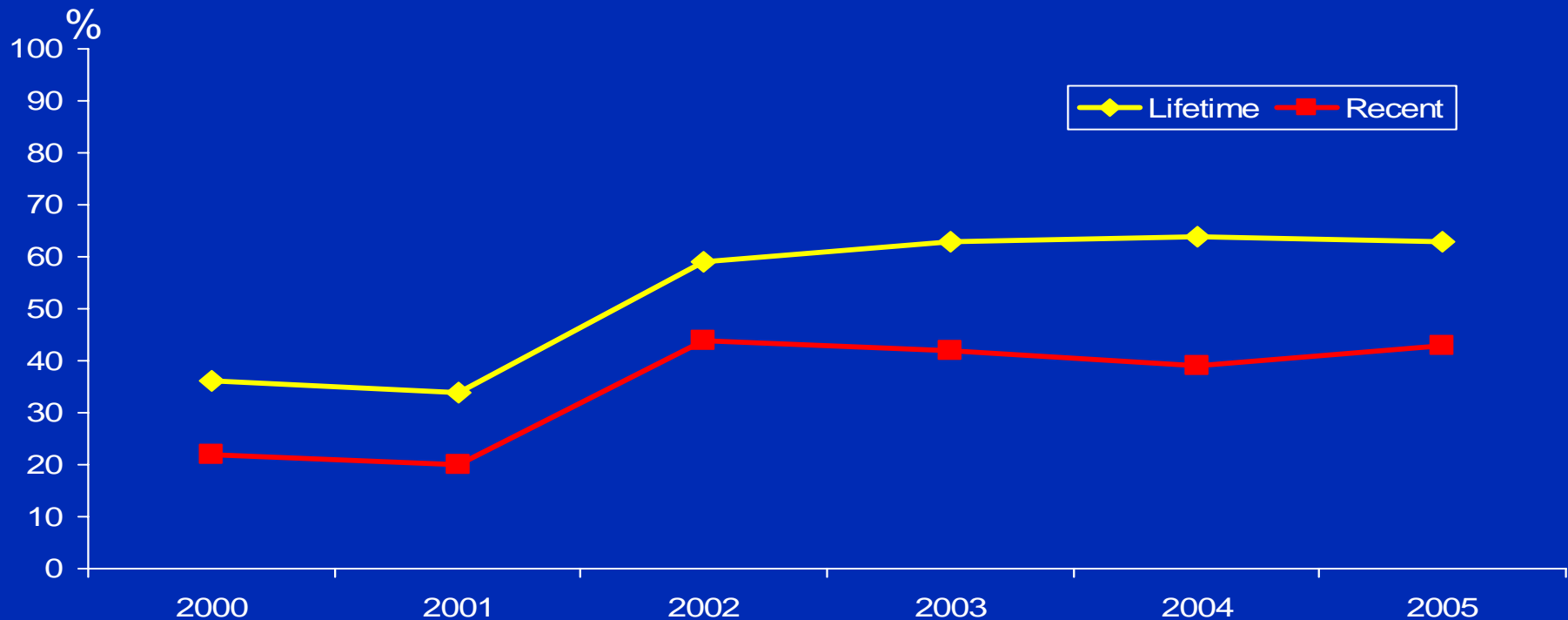
Methamphetamine/Speed: Have things changed?

NSW Trends in Ecstasy and Related Drugs Markets 2005: Findings from the PDI (Dunn, Degenhardt & Stafford, 2006)



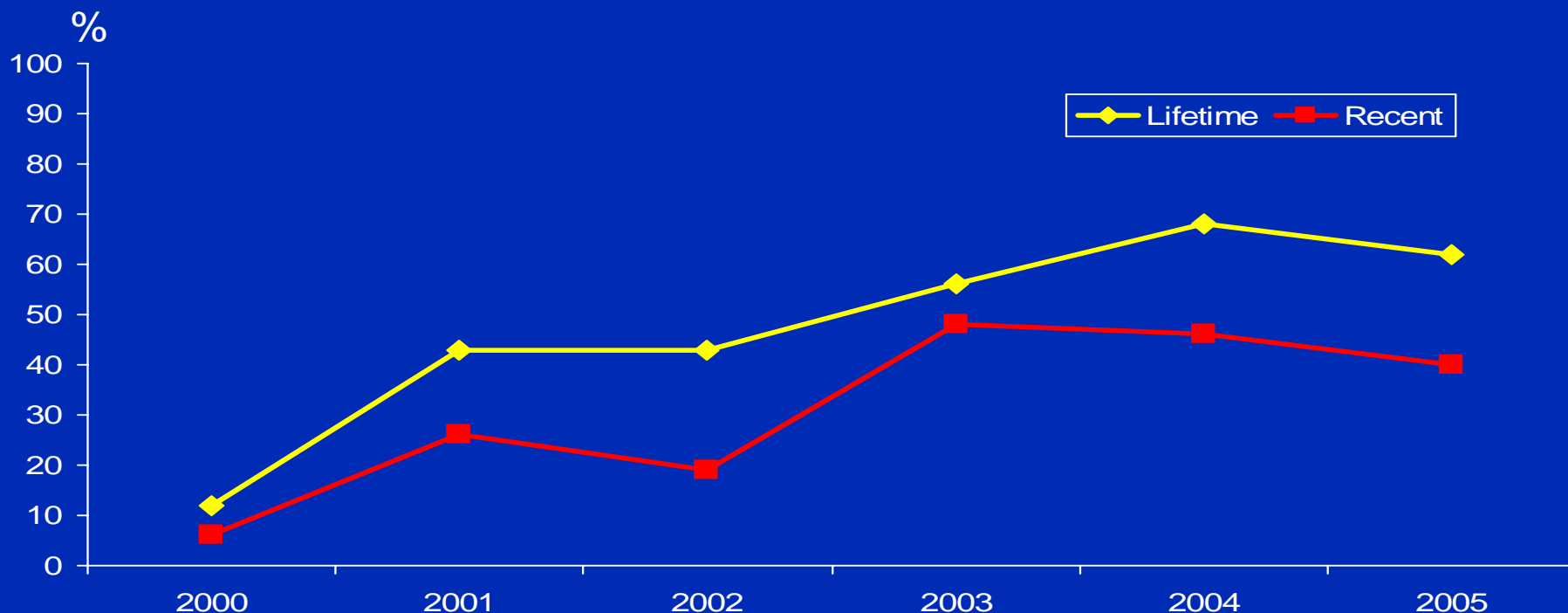
Methamphetamine/Base: Have things changed?

NSW Trends in Ecstasy and Related Drugs Markets 2005: Findings from the PDI (Dunn, Degenhardt & Stafford, 2006)



Methamphetamine/Crystal: Have things changed?

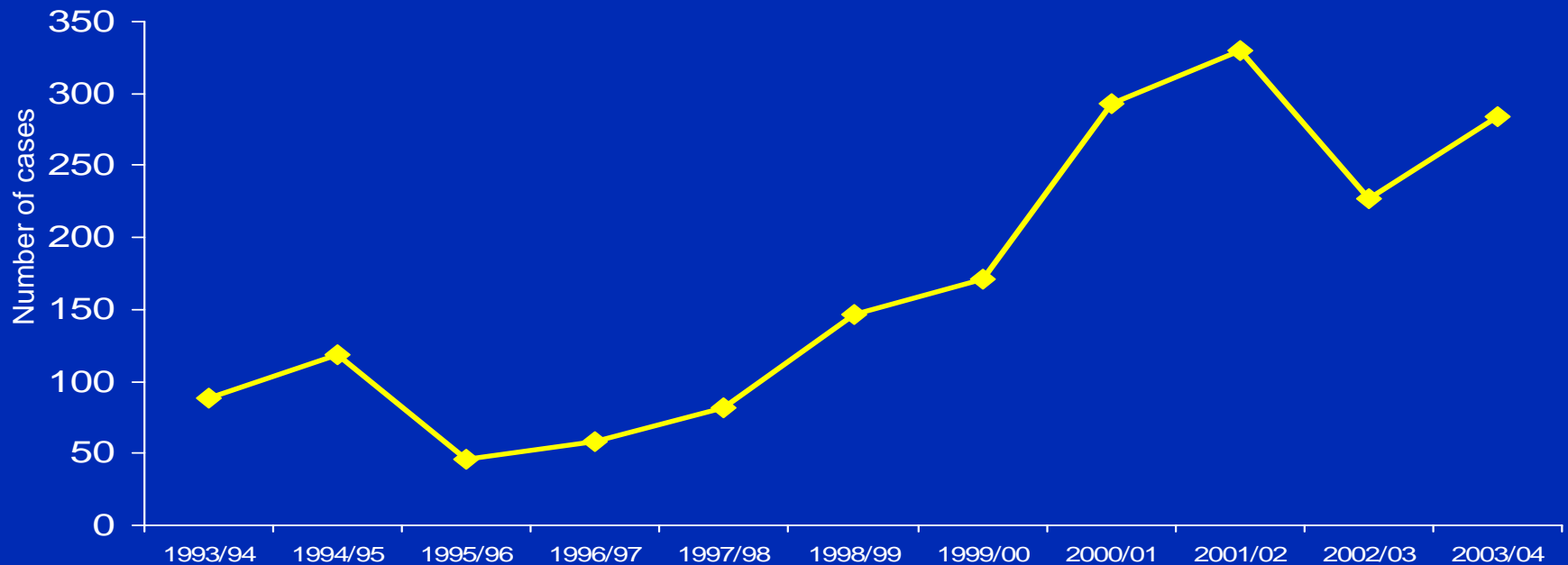
NSW Trends in Ecstasy and Related Drugs Markets 2005: Findings from the PDI
(Dunn, Degenhardt & Stafford, 2006)



Total number of hospital admissions in persons aged 15-54 where amphetamines were implicated, NSW, 1993-2004

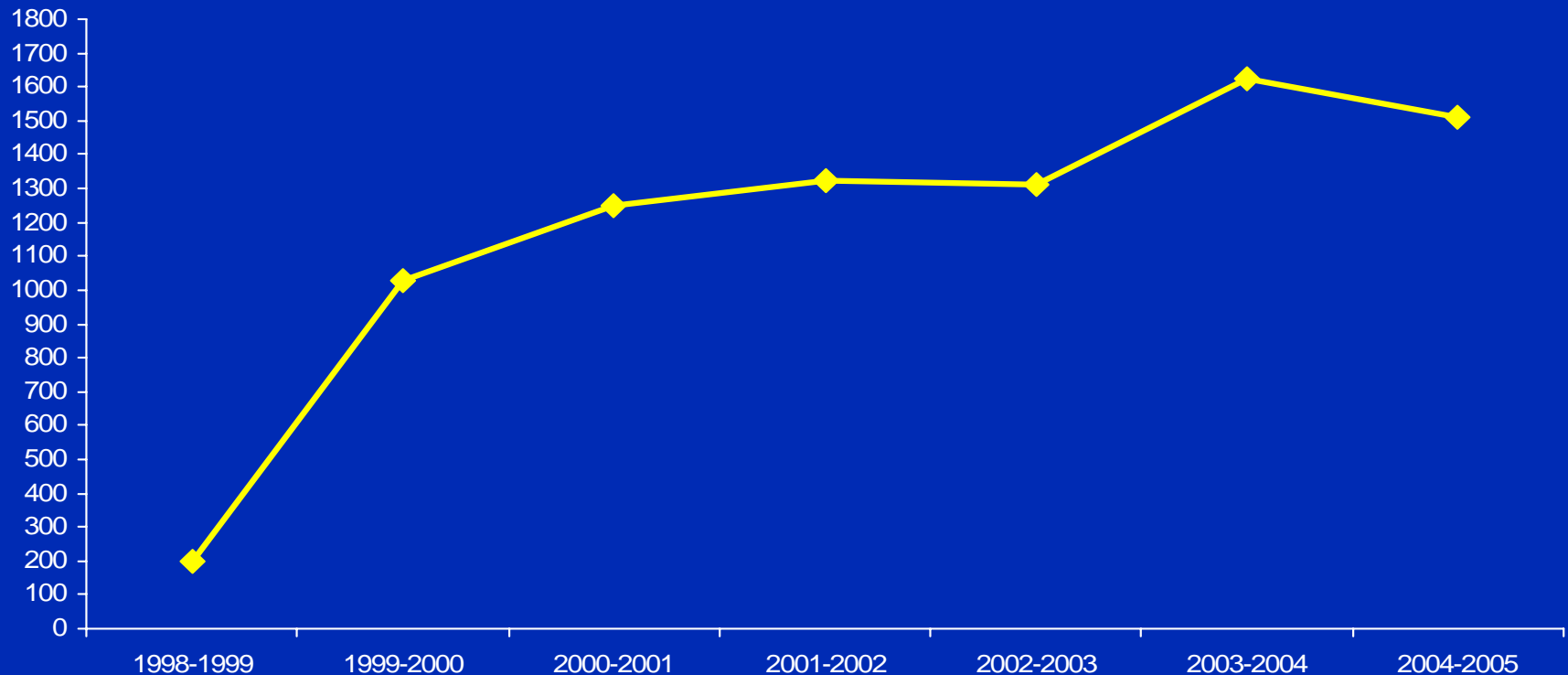
Australian Drug Trends 2005 : Findings from the IDRS

(Stafford et al, 2006)



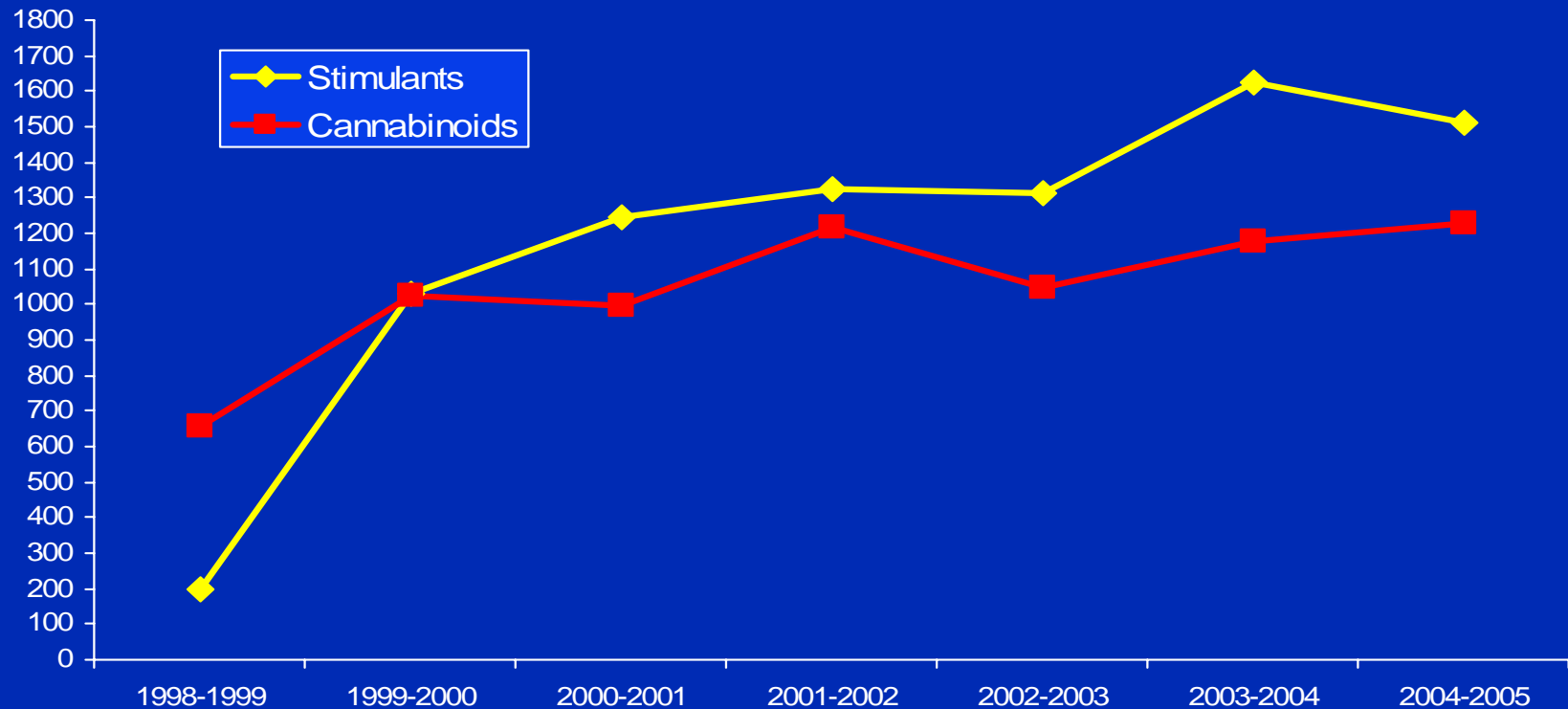
Mental and behavioural disorders due to other stimulants including caffeine, psychotic disorder 1998-2005

AIHW National Hospital Morbidity Database



Mental and behavioural disorders stimulants and cannabinoids, psychotic disorder 1998-2005

AIHW National Hospital Morbidity Database



Methamphetamine psychosis

‘Speed psychosis’ - hallucinations, paranoid delusions which can lead to violent behaviour in certain circumstances

- important to learn the early signs of speed psychosis – to intervene and prevent full blown psychosis

It is caused by a toxic amount of amphetamine in the blood – the higher levels of amphetamine used the greater the risk

- this can be related to the purity of the drug and the route of administration

Methamphetamine psychosis

The most challenging aspect of the frontline management of methamphetamine use

Types of symptoms – paranoia and hallucinations

- feeling overly suspicious of other people
- having strange beliefs that are not plausible
- hearing or seeing things that aren't there

Intensity of symptoms

- range from mild visual disturbances and feeling overly self conscious through to bizarre beliefs and hallucinations

Methamphetamine psychosis

Duration of symptoms

- usually last up to two or three hours, but sometimes can last for days
- when symptoms last longer than a few days, and recur even when the drug is not being used, the person probably has schizophrenia or another chronic psychotic disorder

Psychotic symptoms can occur in otherwise healthy people and can also worsen or bring on psychotic symptoms in those with pre-existing mental health problems

Methamphetamine psychosis

Almost one quarter of regular methamphetamine users will suffer from a symptom of psychosis in a given year (McKetin et al, 2005)

Signs of psychosis include:

- alert, agitated, jumpy and over-reactive behaviour
- rapid incessant speech, shifting from one topic of conversation to another, and confused thought processes
- irrational and unpredictable behaviour, e.g. talking to people who aren't there
- signs of intoxication, e.g. dilated pupils, sweating

