

THE BECKLEY FOUNDATION  
DRUG POLICY PROGRAMME

A DRUGSCOPE BRIEFING PAPER



# Upheavals in the Australian drug market: heroin drought, stimulant flood

Authors: William Bush, Marcus Roberts and Mike Trace

The Beckley Foundation Drug Policy Programme (BFDPP) is a new project dedicated to providing a rigorous, independent review of global drug policy. The aim of this partnership between the Beckley Foundation and DrugScope is to assemble and disseminate information and analysis that supports the rational consideration of these sensitive policy issues at international level and leads to the more effective management of the widespread use of psychoactive substances. It brings together the Beckley Foundation, a charitable trust set up to promote the investigation of the science of drug use, and DrugScope, the UK's leading centre of expertise on drugs.

## SUMMARY

Australia experienced extraordinary and unprecedented changes to its illicit drug market from the end of 2000. A 'heroin drought' made the media headlines and grabbed the attention of drug policy specialists across the world. Less widely publicised was the flood of cocaine and methamphetamine into the country at this time. Such abrupt changes in patterns of drug supply, possession and use are rare, and therefore worthy of close study. This Beckley Briefing Paper takes a dispassionate look at the available evidence and seeks to draw out the wider lessons of the Australian upheaval.

## THE BACKGROUND: WHAT HAPPENED

In the lead up to the Sydney Olympic Games in 2000 something unprecedented started to occur in Australia's illicit drug markets. Heroin overdose deaths had been rising alarmingly, but they started declining. Around Christmas 2000, there was growing evidence for a tightening of supply, followed by a sudden and sharp reduction in availability. Heroin-related deaths were now plummeting. The numbers of people arrested for heroin offences were declining. Heroin was becoming harder to obtain, was of lower quality and cost much more (IDRS 2001 & 2002). The Australian 'heroin drought' had arrived.

But the reduction in the availability of heroin was not the only development in Australia at this time: evidence was emerging of a significant increase in the availability of other drugs. In Sydney, police were arresting more people who were using cocaine – a drug that had not been widely available in Australia (IDRS 2001 p. 90). Police across the country were also reporting a sharp increase in the availability and use of methamphetamines, both among intravenous drug users and within the dance scene, and there were big increases in seizures of crystalline methamphetamine, a particularly potent variant of this drug (IDRS 2002, pp. 69-70 & 2003, p. 74).

The evidence suggests that many heroin users were turning to other drugs to replace or supplement heroin. In New South

Wales, there was a 'marked increase' in the use of cocaine amongst injecting drug users. The proportion reporting recent cocaine use increased from 63% to 84% between 2000 and 2001. The median number of days in the preceding six months when this group said they had used cocaine leapt from 12 to 90 days (IDRS 2001, p. 91).

At the same time, self-reported use of methamphetamine-type stimulants by injecting drug users increased from 64% to 76% between 2000 and 2001, and frequency of use from an average of 15 to 30 days in the preceding six months (IDRS 2001). There was a steep rise in consumption of the most potent imported methamphetamines. *Australian Drug Trends 2001* states that 'between 2000 and 2001, every jurisdiction recorded dramatic increases in the proportion of current methamphetamine users who reported recent use of crystalline forms of methamphetamine' (IDRS 2001). The 2001 *National Drug Strategy Household Survey* found that 37.7% of the 3.4% of the Australian population who had recently used amphetamines had used crystal methamphetamine (AIHW 2002, p. 63). Finally, the heroin shortage led to benzodiazapines – often in the form of temazepam, which is very difficult to inject – being substituted for heroin or to cushion the 'crash' from the 'high' of stimulants (Fry & Miller 2002, pp. 48-49).

What happened in Australia from late 2000 was unique to that country. While the International Narcotics Control Board (INCB) reported a worldwide growth in the availability of stimulants – notably methamphetamine – no other country experienced a comparable shortage of heroin, or the extensive use of stimulants as an alternative to heroin. Historically, there have been few examples anywhere in the world of large and sudden reductions in the availability of drugs. This episode in the recent history of Australian drug policy therefore has much wider significance. First, the Australian experience provides a unique opportunity to examine, in a real world situation, the impact of a reduction in the availability of heroin on drug-related harms. Second, an independent examination of the causes of this upheaval can inform the policy debate about the potential impact of supply reduction strategies on drug markets more generally.

Before discussing these issues, a word on the development of Australian drug markets since 2001. The price, purity and availability of heroin across Australia have not yet returned to the levels reported in 2000, but by 2003 its price and use had stabilised. In New South Wales and South Australia median days of use had returned to pre-shortage levels, and intravenous drug users were reporting that heroin was 'easy' to 'very easy' to obtain (IDRS 2003, p. 66 & 2004, pp. 16-17). By 2003, the use of cocaine by illicit drug users had 'decreased substantially' (IDRS 2003, p. 11; AIC 2003b). In contrast, methamphetamines are still easy to obtain. Around 30% or

more of police detainees at sites in Western Australia, Victoria and Queensland are testing positive for amphetamines. Worryingly, there have been reports of further increases in usage of crystal methamphetamine, with larger amounts of this drug being seized at the Australian border (IDRS 2003, p. 93 & AIC 2003b).

---

### THE CAUSES: EXPLAINING THE DROUGHT

The Australian 'heroin drought' is held up as an example of law enforcement having a significant impact on the supply of drugs (AFP 2001, p. 17 and Gordon S, 2002). Superficially, this is a plausible explanation. Shortly before the 'drought', in mid-2000, Australian law enforcement had seized 606 kg of heroin and dismantled a major drug trafficking syndicate. The Australian Government attributed the 'heroin drought' – but not the increased availability of other drugs – to these law enforcement successes. But this explanation does not stand up to more detailed scrutiny: other factors were more influential.

#### The limits of law enforcement

The first problem with this explanation is that the Government's law enforcement successes in 2000 were of the same order of magnitude as a number of others during the previous decade when heroin availability was rising. If the seizure of similar amounts of heroin in the 1990s had not resulted in 'heroin droughts', then why should this suddenly be the case in 2000? Two years earlier, in October 1998, following the seizure of 440 kg of heroin, the Commissioner of the Australian Federal Police had commented that 'the indications are we haven't made much dent on the market' (*Herald Sun* (Melbourne), 25 November 1998). In a commentary prepared at the height of the heroin shortage, the Australian National Crime Authority estimated that between 1999 and 2000 only about 12% of heroin being trafficked into Australia was intercepted (NCA 2001, pp. 21-22). Taken by itself, the 606 kg seized in 2000 represented about 9% of the annual Australian market; its interception, then, left 91% of supply untouched – hardly the conditions for a 'drought'.

The successful dismantling of a major drug syndicate is also unlikely to explain the heroin drought. Methamphetamine-type stimulants were being manufactured in the same region that was the source of Australia's heroin, and were being produced by the same criminal groups. These groups were also involved in the supply of South American cocaine to Australia. If the disruption of a major syndicate abruptly reduced the supply of heroin, then it should have resulted in a reduction in the supply of methamphetamines and cocaine as well. But this was not the case; on the contrary, the availability of these drugs increased.

**Alternative explanations**

A number of factors help to explain the upheavals in the Australian drug market. Consider four points in particular:

- 1 Less heroin was being manufactured in Burma and Myanmar, the main sources of Australian heroin. This was due to years of adverse weather conditions, which meant that opium production in these countries in 2000 was under half (46%) of the level in 1997 (the ban on opium growing in Afganistan was probably not a factor, because this region has historically provided only a small proportion of heroin to the Australian market). Put simply, considerably less heroin was being produced in this region (see AFP 2001, p. 21, US DOS 2001 VIII, pp. 6 & 14, Gordon S 2002 and Morrison S 2003).
- 2 In the same region (the so-called ‘golden triangle’), there was a ‘drastic’ increase in the manufacture and trafficking of methamphetamines (INCB 2001 & Gordon S 2001).
- 3 The Asian crime syndicates that had previously been concentrating on heroin were beginning to traffick South American cocaine (AIDR 2002, p. 68).
- 4 There was a rising demand for opiates in China, which is on the route for supplies to Australia. According to official Chinese data, from 1990 to 1999 opium and heroin addiction in China rose by 870% (Gordon S 2001 & Morrison S 2003).

As long ago as 1996, the Australian Office of Strategic Crime Assessments (AOSCA) had been forecasting a shortage of heroin in Australia, given emerging evidence of the increase in the demand for opiates in China – and other new Asian markets – and an increase in the manufacture and trafficking of methamphetamine-type stimulants. This analysis was developed in a 1999 paper by Dr Grant Wardlaw, the director of the AOSCA (Wardlaw G 1999 & Morrison S 2003, p. 6).\*

**An interplay of factors**

On balance, the most plausible explanation for both the heroin drought and the increase in the availability of stimulants is the

strategic decisions and actions of the crime syndicates that supply the Australian market. These decisions were made in a particular set of circumstances – most notably, a big fall in opium production, which was due to factors beyond human control (weather conditions), at a time of booming demand.

This conclusion was confirmed in the Australian press by the Commissioner of the Australian Police, Mr Keelty. In June 2001, the Commissioner told a Melbourne newspaper that police had learnt that the drug syndicates ‘have their market research which tells them that these days people are more prepared to pop a pill than inject themselves’. He proceeded to disclose criminal intelligence of ‘a business decision by Asian organised crime gangs to switch from heroin production as their major source of income to the making of methamphetamine, or speed, tablets . . . [T]he Asian drug barons would continue to supply some heroin to the Australian market, but intelligence suggested they were gearing up to aim for a new and much bigger market of people prepared to use methamphetamine pills’ (Moor K 2001). The police later confirmed these reports before a parliamentary inquiry.

This does not mean that law enforcement successes are no part of the explanation for the upheaval in the Australian market. But their impact was indirect and secondary. When crime syndicates make decisions about drug markets, the effectiveness of law enforcement will influence what they do. Confronted with a reduction in heroin production, the drug traffickers probably calculated that it was safer and more profitable to supply Asian markets than Australian ones. As one commentator explains, while heroin has a higher street price in Australia than China, ‘the high retail value of the Australian heroin market is unlikely to benefit traffickers further up the supply chain. Those individuals will be more concerned with immediate needs to reduce the risks of trafficking and receive optimal returns on their investment. In “lean” years, other markets closer to source, and with fewer trafficking costs (for example, the Asian markets) may simply offer a better proposition’ (Morrison S 2003).

The sudden onset of a large fall in heroin supply, combined with a ramping up of the supply of stimulants, points to a

**Table 1** Illicit cultivation of opium poppy and production of opium, 1989-2001 in Myanmar

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
<b>Myanmar</b>	143,000	150,100	160,000	153,700	165,800	146,600	154,070	163,000	155,150	130,300	89,500	108,700	105,000

Source: UNDCP 2003

\* Dr Wardlaw wrote: ‘The analysis of the impact of trends in the Chinese heroin market on Australia indicates that the future of the heroin market in Australia may be influenced by changes in the Chinese heroin market. There is potential for the supply of heroin to Australia to be temporarily affected by significant increases in demand elsewhere, particularly in potentially large markets such as China. Such a temporary shortage could alter the dynamics of the local market by increasing the price of heroin, lowering its purity, leading to users substituting heroin with other types of drugs and increasing drug related crime . . . As has been the case with heroin, for synthetic drugs such as amphetamines, Ice, and Ecstasy, there has been an increasing demand in Asian markets. Partly to service this demand, production of synthetic drugs has increased in the Golden Triangle. Given that this region also supplies Australia with most of its heroin, the infrastructure and networks to supply synthetic drugs to the Australian market from this source are already in place’ (Wardlaw 1999, 5).

decision by suppliers. But the law enforcement successes in preceding months may help to explain why wider developments affecting the production of drugs had a greater impact on Australian drug markets than on others in the region.

### The official story

The political environment in Australia has not been conducive to a dispassionate examination of the causes of these upheavals of the drug market. Drug policy is highly sensitive. At the federal level, the present Liberal-National Party Government claims the heroin shortage and drop in overdose deaths are clear and unambiguous evidence of the success of the law enforcement aspects of its 'tough on drugs' strategy. Less has been said about the growth in stimulants.

In Australia, as elsewhere, the Government measures the success of its supply-side policies by collecting data on the quantity of drugs seized, while failing to publish research estimates of the size of the drug market. Indeed, the Government publicly rebuked the National Crime Authority when it produced estimates that law enforcement was intercepting about 12% of heroin destined for Australian market, and concluded that drug trafficking was increasing and that other approaches to drug-related harm – such as the prescription of heroin – needed to be considered in conjunction with law enforcement.\*

## IMPACT ON DRUG-RELATED HARMS

A sharp reduction in the availability of a highly damaging drug such as heroin should have a demonstrable impact on drug-related harm. An examination of the available evidence on health and crime during the Australian 'drought' reveals a more complex picture than might be anticipated.

### Health

For injecting drug users, the immediate impact on health was overwhelmingly beneficial. The heroin shortage resulted in a dramatic reduction in opioid overdoses, both fatal and non-fatal. Deaths from opioid overdoses had risen from 6 in 1964 to 1,116 in 1999. In 2000, overdose deaths declined by 25% and, in 2001, by a further 58% – a decline from 1,116 deaths to 386, a rate that had not been seen for ten years and a trajectory reduction never seen anywhere else in the world (IDRS 2001, 2002 & 2003). The scarcity of heroin also had an impact on the demand for treatment. In New South Wales the number of opioid detoxifications 'decreased noticeably during the first half of 2001' – and, following a moderate increase in May and June, were to remain at a much lower level throughout the 'drought' (Roxburgh A *et al* 2003, pp. 16-17).

Conversely, a worrying health consequence of the heroin drought was evidence of a negative impact on safe injecting practices. A higher frequency of injection by individual users was associated with the lower quality of the available heroin and with a tendency for users to supplement heroin use with shorter acting stimulants. When used intravenously, cocaine is arguably a more harmful drug, because of its injecting frequency-related and dose-related effects (van Beek I *et al* 2001). The increase in the injection of benzodiazepines in the form of temazepam gel was of particular concern. This gel is insoluble in water. It damages veins, produces blood clots and there is a high risk of overdose (see Fry & Miller 2002, p. 48). All this is particularly worrying in the light of evidence for a significant drop in the number of clean needles and syringes distributed – notably, across New South Wales where there was an estimated 16% reduction during this period (Weatherburn D *et al* 2001). Was this due to an overall fall in the numbers of injecting drug users? Or was it because injecting drug users had less contact with needle exchange services? There is little evidence of a decline in the size of the illicit drug using population, which, even before the heroin drought, had been overwhelmingly composed of problem drug users. It is unlikely, therefore, that the fall in the distribution of sterile equipment is *entirely* the result of injecting drug users resorting to other means of administering drugs or ceasing to use illicit drugs altogether. This means it is very likely that *some* drug users who were still injecting were less likely to be using sterile equipment than in the past, and therefore at greater risk of contracting blood borne diseases, notably HIV/AIDS and hepatitis.

The most worrying consequence of the drug upheavals was arguably the increase in mental disorders associated with the greater use of potent methamphetamines. In recent years 'there has been a dramatic rise [across Australia] in the number of psychotic disorders due to stimulant use from 200 in 1998-9 to 1,028 in 1999-2000, and a further small increase to 1,252 in 2000-01' (McKetin R and McLaren J 2004, p. 16). Increased mental problems has been a dominant concern emerging from surveys of injecting drug users. For example, one survey reports: 'it was ... unanimously agreed that the users of the more potent forms of methamphetamine reached these states of chaos far more quickly into their use careers than do uses of methamphetamine powder. It was perceived by [key informants] that users of the more potent forms start to experience serious physical and psychological side-effects after only a few months of heavy use, and therefore tend to present requesting help after a relatively short period of time. Users of methamphetamine powder may take some years of heavy chronic use before they reach such states of disorder' (Darke S *et al* 2002, p. 33).

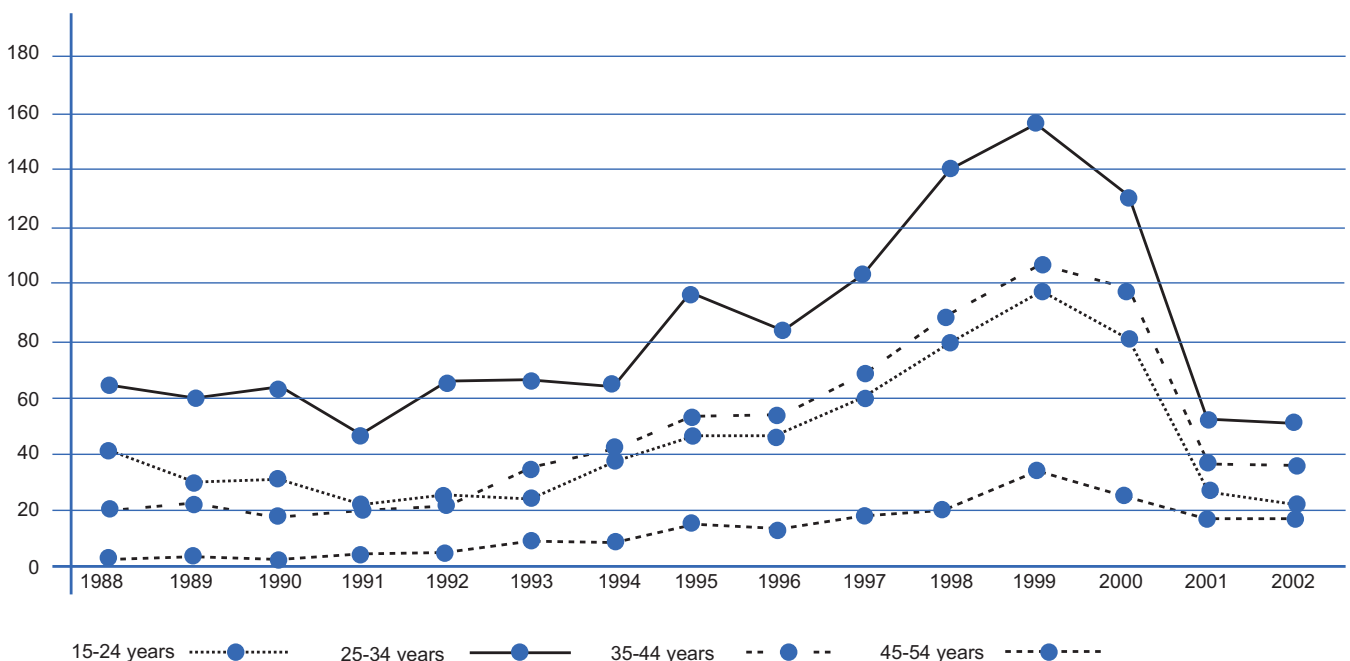
\* The chairman of this independent agency, which had the status of a standing royal commission, published these observations in August 2001 during the heroin shortage. Two months later, in the course of the election campaign, the Prime Minister announced that the authority would be replaced. In spite of the government's denial, this action was widely seen as a response to the outspoken comments of the independent Authority.

**Table 2** Number of accidental deaths due to opioids among those aged 15-54 years by jurisdiction, 1988-2002

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Missing state	Aust
1988	204	99	16	12	18	0	0	2	-	351
1989	158	99	19	8	18	1	2	2	-	307
1990	196	79	8	19	14	5	0	0	-	321
1991	146	64	9	13	13	3	0	2	-	250
1992	182	79	18	30	22	0	1	4	-	336
1993	188	86	23	41	24	5	2	5	-	374
1994	209	97	37	32	38	4	5	3	-	425
1995	273	140	42	38	70	6	0	13	-	582
1996	260	145	32	32	64	5	2	17	-	557
1997	333	203	36	52	76	2	2	9	-	713
1998	452	243	64	53	78	10	13	14	-	927
1999	481	376	79	64	92	5	8	11	-	1116
2000	349	323	124	50	72	8	2	10	-	938
2001	177	73	58	18	35	8	5	12	-	386
2002	158	93	40	21	28	9	6	8	-	364

Source: IDRS 2001, 2002, 2003

**Graph 1** Rate of accidental deaths due to opioids per million population among those aged 15-54 years, Australia 1988-2002



Source: IDRS 2001, 2002, 2003

The picture that emerges of the impact on health of the ‘heroin drought’ and ‘stimulant flood’ is mixed. For many it was an overwhelming benefit – most notably, the hundreds of users who would otherwise have died from opioid overdoses. For others it was a mixed blessing, as the switch to other drugs brought its own risks and dangers.

### Crime

There is evidence that there was a significant increase in drug-related property crime during this period. Across Australia, robbery and ‘other theft’ rates reached new peaks in 2001. Robbery was 14% above the average for the previous three years – a period during which it had remained at about the same level. By contrast, ‘other theft’ (including pick-pocketing, bag snatching and shop lifting) increased by only 3% in 2001 – a much lower rate of increase than the 10% recorded between 1999 and 2000 (AIC, 2003a). There were regional variations. In 2001 police in Victoria recorded a 25% increase in property offences compared to the previous year. In New South Wales an initial rise in property crime was followed by a fall. As one commentator explained: ‘Immediately after the shortage [of heroin] took hold, the robbery rate across New South Wales jumped 55% in the space of just two months. It then began to fall quite rapidly’ (Donnelly *et al.* 2004, pp. 2, 4-5).

At the same time, there was a substantial increase in violent crime, which has been partly attributed to the Australian ‘stimulant flood’. It is believed that regular amphetamine users are ‘more likely to be engaged in violent offending such as physical assault’ and are ‘significantly more likely to act impulsively with no planning’ (Makkai T and Payne J 2003, p. xvi). As heroin availability fell in Australia and the use of stimulants increased, frontline workers and researchers were commenting on a rise in the numbers of incidents of violence between drug users, including ‘domestic violence among amphetamine users and their partners’ (Rose and Najman 2002, p. 67).

Official crime statistics tell a similar story. In 2001 police in Victoria recorded an increase of 20% in violent offences, with particularly large increases in two areas of Melbourne that are well known for drug problems. Across Australia, there was a 10% increase in recorded crimes of assault during 2001, a marked rise on the 3% or so annual rate of increase recorded for the previous three years (AIC 2003a). Since 2001, Australian crime rates in many categories have declined. For example, in New South Wales over the two years to December 2003 there were ‘significant downward trends’ in a number of categories of crime and trends in none of the main categories were moving upwards (Moffatt S *et al.* 2004, pp. iii & 4).

A reasonable explanation for some of this rise in property crime during this period is that problem heroin users were adjusting their behaviour in response to massive rises in the street price of

heroin. The price of a gram of heroin reportedly rose from around \$40 to \$300 in Australia between 1999 and 2001. The evidence for a subsequent drop in property crime in New South Wales might be explained as a result of heroin users adjusting their behaviour as the drought continued and switching to other drugs (Donnelly N *et al.* 2004, pp. 4-5). At the same time, the switch from opioid use to stimulant use could have been linked – to a greater or lesser extent – with a rise in violent crime.

However, while these are reasonable conjectures, the precise relationship between changes in Australian drug markets and crime rates are not conclusively established by the available evidence. Aside from anything else, drug use is only one of a whole range of factors that will impact on crime rates. At the same time, it is difficult to avoid the conclusion that the increased price and declining potency of heroin, and the sharp rise in stimulant use, had a largely negative effect on drug-related crime – at the very least, there is no evidence of a lasting positive impact.

## CONCLUSION

This discussion of the impact of the upheaval in the Australian drug markets on drug-related harms raises a number of points of wider significance. Two points in particular stand out:

- 1 **Balancing harms.** The impact of any changes in the use and availability of drugs on drug-related harm will be complex and contradictory. It will rarely, if ever, be possible to produce a cost-benefit analysis that is completely value neutral. Typically, changes in policy and patterns of drug use will have costs and benefits. These must be weighed against each other on the basis of strategic priorities, political calculation and value judgements. In this case, the overall impact of the 'heroin drought' on health may have been broadly positive, while the impact on crime was broadly negative. One particularly striking negative consequence was the impact of the increased availability of potent stimulants on mental disorders and violence.
- 2 **Unanticipated consequences.** The precise consequences of a change in prevalence levels for a particular drug - or of the achievement of any drug policy objective - will depend upon the overall epidemiological, strategic and structural context. The exact consequences of a reduction in the use and availability of any particular drug or drugs - whether heroin, crack or methamphetamine - will depend on the way in which drug markets adapt and develop. It will also depend upon the way drug treatment and other services are configured. For example, one of the lessons of the Australian experience may be that if treatment is geared up to deal primarily with injecting opioid users, it will have difficulties responding effectively to market changes that increase the problematic use of other drugs. Where changes can be anticipated, appropriate services need to be in place. Failure to provide such services may result, for example, in an inability to engage people with drug problems in services and higher rates of unsafe injecting.

Two further points should be noted also. First, these upheavals were transient. The Australian heroin market appears to be bouncing back over time. Second, the available evidence suggests that users did not respond to the lack of supply of heroin by giving up drugs or accessing treatment, but by quickly switching to other drugs. This is, perhaps, unsurprising given that poly-drug use has been the norm among injecting drug users who favour opiates.

## REFERENCES

- Australian Federal Police (AFP) (2001), *Annual Report 2000–2001*, Canberra.
- Australian Institute of Criminology (AIC) (2003a), *Australian Crime: Facts and Figures 2003*, Canberra.
- AIC (2003b), *Drug use monitoring in Australia project (DUMA), Percent testing positive to opiates, cocaine and amphetamines, charts & data points*.
- Australian Institute of Health and Welfare (AIHW) (2002), *2001 National drug strategy household survey: detailed findings*, Canberra.
- Day C *et al.* (2002), 'The Heroin Drought' in NDARC, *Centrelines*, no. 6 (February 2002) pp. 3-4.
- Donnelly N *et al.* (2004), 'The impact of the Australian heroin shortage on robbery in NSW', NSW Bureau of Crime Statistics and Research, Crime and Justice Statistics, Bureau Brief, March 2004.
- Fry C & Miller P (2002), *Victorian Drug Trends 2001: Findings from the Illicit Drug Reporting System (IDRS)*, Technical report no. 129, National Drug and Alcohol Research Centre, Sydney.
- Gordon S (2001), 'Technology impacts on drug production in Asia: The role of amphetamines in Asia's growing drug problem', *Platypus Magazine*, no. 72.
- Gordon S (2002), 'Drug drought can be sourced to good policing', *Sydney Morning Herald*, Wednesday 23 January 2002.
- IDRS (2001), *Australian drug trends 2001: findings from the Illicit Drug Reporting System*, University of New South Wales, Sydney, 2002.
- IDRS (2002), *Australian drug trends 2002: findings from the Illicit Drug Reporting System*, University of New South Wales, Sydney, 2003.
- IDRS (2003), *Australian drug trends 2003: findings from the Illicit Drug Reporting System*, University of New South Wales, Sydney, 2004.
- International Narcotics Control Board (INCB) (2001), *Report of the International Narcotics Control Board for 2000*, UN, New York.

Makkai T & Payne J (2003), *Drugs and crime: a study of incarcerated male offenders*, Australian Institute of Criminology, Research and Public Policy Series no. 52.

Moffatt S *et al.* (2004), *New South Wales recorded crime statistics 2003*, NSW Bureau of Crime Statistics and Research, Sydney.

Moor K (2001), 'Drug lords push deadly new deals', *Herald Sun* (Melbourne), 19 June.

Morrison S (2003), 'Researching heroin supply', Australian Institute of Criminology, *Trends & Issues in crime and criminal justice*.

National Crime Authority (NCA) (2001), *NCA Commentary 2001*.

Roxburgh A *et al.* (2003), *NSW drug trends 2002: findings from the Illicit Drug Reporting System (IDRS)*, Technical report no. 144 (2003), National Drug and Alcohol Research Centre, University of New South Wales, Sydney.

Topp L *et al.* (2003), 'Changes in patterns of drug injection concurrent with a sustained reduction in the availability of heroin in Australia' in *Drug and Alcohol Dependence*, vol. 70.

van Beek I *et al.* (2001), 'Cocaine injecting: the sharp end of drug-related harm', *Drug and Alcohol Review*, vol. 20, pp. 333-42.

Wardlaw G (1999), 'The future and crime: challenges for law enforcement', Paper presented at the 3rd National Outlook Symposium on *Crime in Australia, Mapping the Boundaries of Australia's Criminal Justice System*, Canberra 22-23 March 1999.

Weatherburn D *et al.* (2001), 'The Australian Heroin Drought and its Implications for Drug Policy', *Crime and Justice Bulletin*, NSW Bureau of Crime Statistics and Research, no. 59.

---

## USEFUL WEBSITES

[www.internationaldrugpolicy.org](http://www.internationaldrugpolicy.org)

[www.beckleyfoundation.org](http://www.beckleyfoundation.org)

[www.drugscope.org.uk](http://www.drugscope.org.uk)