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Illicit Drug Use in Regional Australia, 1988–1998

Paul Williams

Concern has recently been expressed that rates of illicit drug use in regional Australia are approaching or even exceeding those observed in metropolitan areas of the country. An apparent increase in crime, and particularly property crime, in regional Australia in the past decade has been linked to the suspected increase in drug use. Between 1988 and 1998, use of illicit drugs increased in regional Australia by 77 per cent for heroin, 131 per cent for amphetamines, 37 per cent for cocaine, and 47 per cent for cannabis. Compared to metropolitan Australia, however, there were fewer drug users in regional Australia at the commencement of the decade. The subsequent rates of growth and durability of drug use since then have also been lower in regional Australia. Consequently, the gap in rates of drug use between regional and metropolitan Australia grew over the period rather than diminished. In the circumstances, it is unlikely that rates of drug use in regional Australia will contemporaneously match those found in metropolitan areas of the country in the near future. Nonetheless, illicit drug use is increasing in regional Australia; while the current levels are lower than those found in metropolitan Australia, they approximate rates observed in the cities just a few years ago. Accordingly, lessons learned from the response to drugs in metropolitan areas should be adopted early if regional Australia is to avoid the levels of drug-related social disruption evident in the cities.

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The number of people using drugs increased in both metropolitan and regional Australia over the last decade (Williams 1997; AIHW 1999). There has been recent speculation in the press (for example, Jobson 1999a–e; Sidoti 1999; Sydney Morning Herald 1999; Connolly 2000; Paxinos 2000), supported by concerned civic leaders, that the historical disparity between metropolitan and regional rates of drug use diminished, or perhaps even disappeared, in the same period. This perception is supported by anecdotal evidence from law enforcers, health professionals and drug treatment service providers. As with metropolitan areas, it is important to investigate drug use in regional Australia, if only for monitoring purposes. Dunne (1998) has shown that there is a paucity of drug and alcohol services available in rural areas of the country.

From a crime and criminal justice perspective, illicit drug use is intimately associated with criminality. For example, the Australian Institute of Criminology's Drug Use Monitoring in Australia (DUMA) project (Makkai 2000) has shown that, regardless of the alleged offence for which persons are detained by police in metropolitan Australia, up to two-thirds will test positive for cannabis and one-third will test positive to opiates. Among recent property offenders (and these offences account for

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two-thirds of all offences reported to or becoming known to police (Williams et al. 2001), up to 80 per cent of detainees will test positive to opiates. During the period under investigation there has been an increase in crime rates in regional Australia (Carcach 2000a, 2000b). These increases are sometimes advanced as further proof that the rates of drug use in regional Australia now approach levels only previously observed in the cities.

In an earlier paper, Williams showed that, in trend terms, between 1985 and 1995, rates of drug use in regional Australia were at levels which were observed in metropolitan Australia between one and eight years earlier (Williams 1999a). Further, due to lower levels of use in 1985, lower rates of growth in use since then, and lower maintenance of drug use habits among those who commenced using drugs, the gaps between regional and metropolitan levels of use were getting larger, rather than narrower. The purpose of this paper is to revisit the conclusions of the earlier paper to account for more recent data.

Data and Samples

The data used in this study are based on the five National Drug Strategy Household Surveys which were conducted between 1988 and 1998. The surveys include a core set of questions about the prevalence of drug use, including both licit and illicit drugs. Respondents are selected by a multi-stage geographic stratified randomised procedure which is largely proportional to the actual population distribution in regional and metropolitan areas. Between 1988 and 1998, over 5,000 rural and remote residents were included in the interview samples. Further details on the survey methodology can be found elsewhere (Williams 1999b, 2000; AIHW 1999; Roy Morgan Research 1999).[1]

Table 1: *Standardised[(a)] rates of lifetime use of licit and illicit drugs, by region, Australia, 1988–1998 (%)*

	Year of survey				
Substance	**1988**	**1991**	**1993**	**1995**	**1998**
Metropolitan					
Amphetamines	4.8	7.8	6.0	7.4	11.9
Barbiturates[(b)]	6.1	5.6	1.6	1.6	2.1
Cannabis	28.1	32.9	35.9	36.7	49.6
Cocaine	2.2	3.3	3.0	3.8	5.6
Ecstasy	1.2	2.4	2.8	3.1	6.2
Heroin	1.2	2.0	1.8	1.7	2.8
Inhalants	2.8	3.5	4.0	3.5	5.7
Injecting	1.2	1.9	1.9	1.9	2.9
LSD	6.1	8.4	8.6	5.8	13.6
Methadone[(c)]	n/c	n/c	n/c	n/c	0.8
Painkillers[(b)]	64.3	84.7	3.3	11.3	12.5
Steroids	n/c	n/c	0.4	0.5	0.7
Tranquillisers[(b)]	23.6	30.9	3.5	3.9	7.7
Regional					
Amphetamines	3.5	7.3	4.7	*3.7	*8.1
Barbiturates[(b)]	5.3	4.0	1.0	1.1	1.9
Cannabis	27.8	31.3	**29.3	**30.2	*40.8
Cocaine	2.7	2.8	1.3	1.9	**3.7
Ecstasy	1.4	1.7	1.3	**1.1	4.7
Heroin	1.3	0.8	1.0	1.3	2.3
Inhalants	3.1	3.1	**1.8	1.9	**3.8
Injecting	0.9	1.4	1.8	1.3	2.4
LSD	4.4	5.9	5.8	*2.4	*10.1
Methadone[(c)]	n/c	n/c	n/c	n/c	0.2
Painkillers[(b)]	51.8	82.2	2.5	12.9	10.9
Steroids	n/c	n/c	0.0	0.6	0.7
Tranquillisers[(b)]	17.7	31.6	2.7	3.3	5.9

Notes:
(a) 1991 persons aged 14+ years standard population
(b) 1985–1991 questions did not distinguish between medical and non-medical use
(c) diverted methadone
* p<0.01
** p<0.05
n/c = data not collected in that year

Methodology

For the purpose of this paper, the samples have been geographically stratified into metropolitan (capital and other large cities) and regional (rural and remote towns and cities) according to the Rural and Remote Area classification system (Department of Human Services and Health 1994). For the purposes of this paper the raw samples in each survey were weighted to the estimated resident populations for each strata and year, and adjusted by the average design effect which applied in the face-to-face interviews conducted in 1998.[2] Resultant estimates were then age-standardised to the estimated 1991 resident national population to remove distortions due to the different age/sex structures (for example, proportionally, rural areas have more aged persons and fewer young adults; and this trend accelerated over the decade).[3]

Results

Lifetime Use

Rates of lifetime use (used at least once) for most substances were higher for most years in metropolitan areas of the country (Table 1). For example, amphetamine use in 1988 in metropolitan regions (4.8%) was

1.4 times the regional rate in 1988 (3.5%), and it was 1.5 times the rate in 1998 (11.9% versus 8.1%). For the major classes of illicit drugs, between 1988 and 1998 in regional Australia, the proportion of persons who had tried illicit drugs changed as follows:

- amphetamines—increased from 3.5 per cent to 8.1 per cent;
- cocaine—increased from 2.7 per cent to 3.7 per cent;
- ecstasy—increased from 1.4 per cent to 4.7 per cent;
- heroin—increased from 1.3 per cent to 2.3 per cent;
- LSD—increased from 4.4 per cent to 10.1 per cent; and
- cannabis—increased from 27.8 per cent to 40.8 per cent.

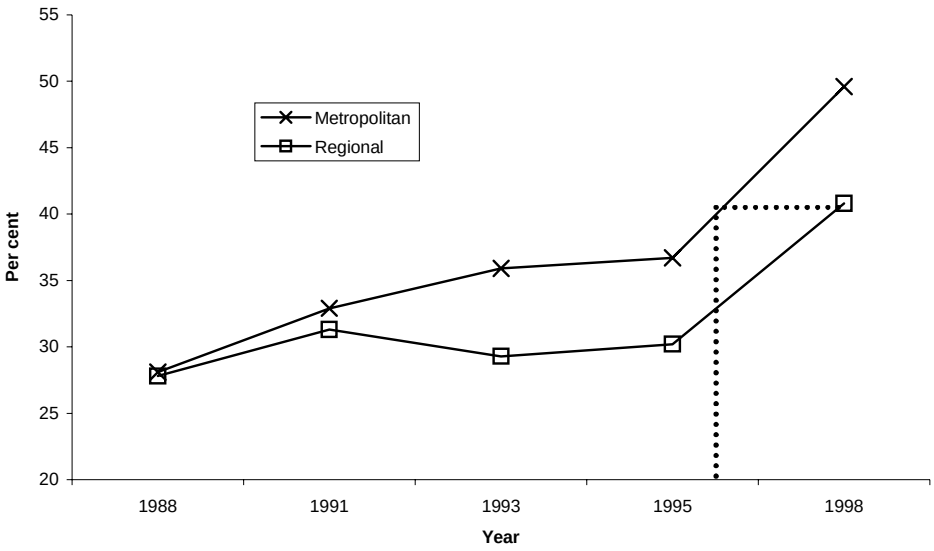
In 1998, the differences between regional and metropolitan areas in rates of lifetime consumption were statistically significant for amphetamines, cocaine, inhalants, LSD and cannabis.

Diagrammatically, the trends can be illustrated as in Figure 1. In the case of cannabis, after similar rates were observed at the start of the decade under investigation, metropolitan rates subsequently outstripped those in regional areas. In 1998, the rate of lifetime cannabis consumption (that is, used cannabis at least once) was at a level that was observed in metropolitan Australia approximately two-and-a-half years previously (indicated by the dotted line). Similar patterns, but to a lesser or greater degree, can be observed for all of the substances.

Recent Use

When we turn to recent use (defined as used in the previous 12 months) we observe a similar pattern, with rates of consumption in metropolitan areas exceeding those in regional areas (Table 2). Differences between regional and metropolitan rates of recent use were generally closer than those for lifetime use. For example, only cannabis (24.7% versus 18.7%), LSD (4.4% versus 0.3%) and tranquilliser (3.5% versus 2.2%) differentials are statistically

Figure 1: *Lifetime rates of cannabis use, by region, Australia, 1988–1998*



Source: National Drug Strategy Household Survey unit record files

Table 2: *Standardised[a] rates of recent use of licit and illicit drugs in the past 12 months, by region, Australia, 1988–1998 (%)*

	Year of survey				
Substance	**1988**	**1991**	**1993**	**1995**	**1998**
Metropolitan					
Amphetamines	1.0	2.9	2.1	2.6	4.8
Barbiturates[b]	0.9	1.6	0.4	0.2	0.4
Cannabis	8.1	15.6	15.1	15.5	24.7
Cocaine	0.4	0.8	0.6	0.7	1.6
Ecstasy	0.4	1.3	1.4	1.4	3.0
Heroin	n/c	0.5	0.2	0.4	0.9
Inhalants	0.4	1.1	0.6	0.7	1.4
Injecting	0.5	0.6	0.6	0.7	1.1
LSD	0.9	2.2	1.7	2.1	4.4
Methadone[c]	n/c	n/c	n/c	n/c	0.3
Painkillers[b]	38.6	76.2	2.1	3.8	6.2
Steroids	n/c	n/c	0.1	0.1	0.2
Tranquillisers[b]	7.9	9.6	1.0	1.0	3.5
Regional					
Amphetamines	0.0	2.0	1.5	1.1	3.3
Barbiturates[b]	0.5	0.8	0.0	0.2	0.1
Cannabis	7.3	12.1	**10.5	**10.9	*18.7
Cocaine	0.0	0.6	0.0	0.4	1.2
Ecstasy	0.0	0.8	**0.3	0.2	2.2
Heroin	n/c	0.0	0.0	0.2	0.8
Inhalants	0.5	0.8	0.3	0.2	0.8
Injecting	0.0	0.0	0.5	0.4	0.7
LSD	0.0	0.8	0.8	**0.7	**0.3
Methadone[c]	n/c	n/c	n/c	n/c	0.0
Painkillers[b]	26.9	72.4	0.8	3.5	4.7
Steroids	n/c	n/c	0.0	0.2	0.0
Tranquillisers[b]	4.5	10.5	0.5	0.4	**2.2

Notes:
(a) 1991 persons 14+ years standard population
(b) 1988–1991 questions did not distinguish between medical and non-medical use
(c) diverted methadone
* p<0.01
** p<0.05
n/c = data not collected in that year

significant. Nonetheless, the proportions of people who had recently used illicit drugs in regional areas between 1988 and 1998 changed as follows:

- amphetamines—increased from 0.0 per cent to 3.3 per cent; [4]
- cocaine—increased from 0.0 per cent to 1.2 per cent; [4]
- ecstasy—increased from 0.0 per cent to 2.2 per cent; [4]
- heroin—increased from 0.0 per cent to 0.8 per cent; [4, 5]
- LSD—increased from 0.0 per cent to 0.3 per cent; [4] and
- cannabis—increased from 7.3 per cent to 18.7 per cent.

Durability of Use

Another measure of difference between metropolitan and rural regions is durability of use. One simple means to estimate this is a relative rate ratio, the proportion of persons currently using compared to the proportion that have ever used. For example, Table 2 shows that in 1998, 4.8 per cent of persons in metropolitan areas had recently used amphetamines. Table 1 shows that in the same year, 11.9 per cent indicated they had used amphetamines at least once. These two rates are combined (4.8/11.9) to produce a relative rate ratio of 0.40 and this is interpreted as showing that 40 per cent of those who commenced using at some time in their past were still using in 1998. The obverse of the rate is also true. We can state that a 0.40 rate ratio indicates that 60 per cent of persons who had tried amphetamines had given up, or at least not used in the preceding 12 months. For ease of interpretation, the relative rate ratios have been converted to their percentage equivalent (Table 3).[6]

What we observe when comparing the relative durability between areas is that, as with the components which make up the ratio (lifetime and recent use), durability of use is generally higher in metropolitan Australia than in regional Australia. In practical terms, this can be interpreted as more persons who commence using drugs in metropolitan areas remain drug users than their counterparts in regional areas.

In regional Australia in 1998, the proportions of people who had tried and were still using illicit drugs was between one in 20 (5%—barbiturates) and almost one in two (46%—cannabis). In 1998 in regional Australia among those persons who had ever used:

- amphetamines—41 per cent were still using;
- cocaine—32 per cent were still using;
- ecstasy—47 per cent were still using;
- heroin—35 per cent were still using;
- LSD—three per cent were still using; and
- cannabis—46 per cent were still using.

In trend terms, more regional persons were still using in 1998 than in previous years of the survey. Importantly, and in contrast to results up to 1995 which were the subject of the previous paper (Williams 1999a), more amphetamine users, more cocaine users and more heroin users continued to use these drugs than users in metropolitan Australia.

Rates of Change in Prevalence

The final factor which was examined in Williams' earlier paper (1999a) was the relative rates of change in prevalence in metropolitan and regional Australia. What we find when we look at the 1988–1998 rates of change (Table 4) is that for lifetime use, rates of growth in metropolitan Australia outstripped those in regional

Table 3: *Durability of drug use by region, Australia, 1988–1998 (%)*

Substance	1988	1991	1993	1995	1998
Metropolitan					
Amphetamines	20.83	37.18	35.00	35.14	40.34
Barbiturates[a]	14.75	28.57	25.00	12.50	19.05
Cannabis	28.83	47.42	42.06	42.23	49.80
Cocaine	18.18	24.24	20.00	18.42	28.57
Ecstasy	33.33	54.17	50.00	45.16	48.39
Heroin	n/a	25.00	11.11	23.53	32.14
Inhalants	14.29	31.43	15.00	20.00	24.56
Injecting	41.67	31.58	31.58	36.84	37.93
LSD	14.75	26.19	19.77	36.21	32.35
Methadone[b]	n/a	n/a	n/a	n/a	37.50
Painkillers[a]	60.03	89.96	63.64	33.63	49.60
Steroids	n/a	n/a	25.00	20.00	28.57
Tranquillisers[a]	33.47	31.07	28.57	25.64	45.45
Regional					
Amphetamines	n/a	27.40	31.91	29.73	40.74
Barbiturates[a]	9.43	20.00	n/a	18.18	5.26
Cannabis	26.26	38.66	35.84	36.09	45.83
Cocaine	n/a	n/a	n/a	21.05	32.43
Ecstasy	n/a	47.06	23.08	18.18	46.81
Heroin	n/a	n/a	n/a	15.38	34.78
Inhalants	16.13	25.81	16.67	10.53	21.05
Injecting	n/a	n/a	27.78	30.77	29.17
LSD	n/a	13.56	13.79	29.17	2.97
Methadone[b]	n/a	n/a	n/a	n/a	n/a
Painkillers[a]	51.93	88.08	32.00	27.13	43.12
Steroids	n/a	n/a	n/a	33.33	0.00
Tranquillisers[a]	25.42	33.23	18.52	12.12	37.29

Notes:
(a) 1988–1991 questions did not distinguish between medical and non-medical use
(b) diverted methadone
n/a = not available

Australia. For example, amphetamine use increased at an average annual rate of 9.5 per cent in metropolitan Australia between 1988 and 1998, and at an average annual rate of 8.75 per cent in regional Australia.

When we turn to recent use, that is, use in the previous 12 months, a similar picture for the illicit drugs emerges, with several exceptions (heroin, painkillers and tranquillisers). For these substances, the rates of increase were higher between 1988 and 1998 in regional than in metropolitan Australia.[7]

Table 4: *Average annual rates of change in illicit drug use, 1988–1998, by region, Australia (%)*

	Lifetime use		Recent use	
Substance	**Metropolitan**	**Regional**	**Metropolitan**	**Regional**
Amphetamines	9.50	8.75	16.98	7.42 (c)
Barbiturates	–10.11	–9.75	–7.79	–20.63 (b)
Cannabis	5.85	3.91	11.79	9.86
Cocaine	9.79	3.20	14.87	10.41 (c)
Ecstasy	17.85	12.87	22.32	15.55 (c)
Heroin	8.84	5.87	8.76 (c)	14.87 (d)
Inhalants	7.37	2.06	13.35	4.81
Injecting	9.22	10.31	8.20	3.42 (a)
LSD	8.35	8.66	17.20	–13.07 (c)
Methadone	n/a	n/a	n/a	n/a
Painkillers	–15.11	–14.43	24.18 (a)	42.50 (b)
Steroids	11.84 (a)	5.27 (b)	14.87 (a)	0.00
Tranquillisers	–10.60	–10.40	28.47 (a)	34.49 (c)

Notes:
(a) 1993–1998 only
(b) 1995–1998 only
(c) 1991–1998 only
(d) 1988 rate imputed as 0.2
n/a = not available

Discussion

There are a number of factors which explain the 1998 rates in regional Australia compared to metropolitan Australia. The first is the relative size of the pre-existing using populations. As we have observed, there were proportionally fewer users in regional Australia in 1988 than in metropolitan Australia. The second factor is the rate at which users cease drug use. We observed in regional Australia between 1988 and 1998 that, proportionally, fewer drug users maintained their use than did drug users who lived in metropolitan Australia. Finally, there is the rate at which new users entered the pre-existing pool. We observed that rates for lifetime use (that is, used at least once) grew faster in metropolitan Australia between 1988 and 1998 than those in regional Australia. For recent usage, however, rates grew faster in regional Australia for heroin, painkillers and tranquillisers over this period, but not for other drugs. What does this tell us about drug use in regional Australia?

Given the underlying patterns it is unlikely in the short term that there will be a convergence of rates of use between regional and metropolitan Australia. There are several scenarios, however, under which rates might converge. One would be a reduction in rates in metropolitan Australia (in athletic parlance—coming back to the field). This is unlikely. Another would be an acceleration of rates of growth in regional Australia (combined with either a reduction or a capping of present rates in metropolitan Australia). The current results suggest that an acceleration of rates for some substances (for example, heroin, amphetamines) has commenced in regional Australia, but even these higher levels are unlikely to bridge the gap in the short to medium term, if ever. A third possibility would be an increase in the durability of use in regional Australia (combined with a decrease or capping in durability of use in metropolitan Australia, plus any other favourable trends—for example, the capping of rates of growth in metropolitan areas). This is also unlikely.

The growing pool of regular users in regional Australia might, however, soon result in a critical mass and scale to support a more reliable illicit drugs market (from both supply and demand perspectives) than that which presently prevails. This will impact on all of the factors sufficient to encourage younger ages of initiation, higher rates of retention of users and, hence, even higher rates of growth in the use of illicit drugs than those reported here. It is no comfort that the rates of use in regional Australia in 1998 were at levels observed in metropolitan Australia in 1995, when those same rates in 1995 in metropolitan areas were already at horrendous levels. There is no evidence that regional Australia's bush spirit, often promulgated as a virtue of small town, rural and remote living, is a sufficient defence against the attraction of drug experimentation by its youth. Regrettably, and despite the evidence that the vast majority will cease use without intervention, for some regional youth, their use will become habitual and problematic. Measures which have been shown to be effective elsewhere in Australia should continue to be supported where they have already been implemented, and introduced where they have not. From a harm minimisation perspective, the growing levels of illicit drug use evident in regional Australia demand a concomitant increase in the availability of treatment and ancillary services. From a law enforcement and criminal justice perspective, it is important that the recent police and drug court diversion options are available in regional as well as metropolitan Australia.

Notes

1 The data used in this paper were provided in unit record form from the Social Sciences Data Archive (SSDA) at the Australian National University (http://ssda.anu.edu.au/). They were originally collected for the Commonwealth Department of Health and Aged Care (DHAC). Neither the collector of the data or DHAC bears any responsibility for analyses or interpretations presented here.

2 The design effect is an estimate of the extent to which clustering interviews within sampled areas contributes to unreliability in results. In 1998, the average design effect was 2.1, which means that the sampling error rate was twice that which might have been expected from a simple random sample of the same population and size.

3 Results were aggregated into 2 x 2 contingency tables and significance tests completed using the chi square (χ^2) statistic. Durability of use was calculated as a simple rate ratio (r_r / r_m where r_r = rural rate of substance use, and r_m = metropolitan rate of substance use) and then converted to a percentage for ease of interpretation.

4 It is likely that there were users who went undetected by the survey in 1988.

5 Data on recent heroin use was only collected from 1991.

6 This simple measure does not capture persons who both commenced and ceased use in 1998. Accordingly, it is an overestimate of the actual durability, and an underestimate of the proportion of users who had ceased drug use.

7 As the survey failed to detect recent heroin users in regional Australia in 1988, 1991 or 1993, a conservative estimate equivalent to the rate that applied in 1995 was substituted for calculating the rate of increase between 1988 and 1998.

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