

KEY POINTS

1. Intravenous benzodiazepine use among injecting drug users (IDU) is an important public health issue due to its association with serious injection-related health problems, reduced physical and psychological health, and greater risk of overdose.
2. Nationally, around two-thirds of IDU surveyed used benzodiazepines during the first six months of 2000, with 15% of IDU reporting intravenous use in this period. Diazepam (eg. Valium®) is the benzodiazepine most commonly used by IDU. Results of the 2000 IDRS show that IDU surveyed in Hobart and Melbourne reported higher rates of oral and intravenous use of benzodiazepines compared to other jurisdictions.
3. Reported recent injection of benzodiazepines by IDU in the Victorian 2000 IDRS had increased compared to that reported in previous Melbourne IDRS studies, with use of temazepam (Normison®) predominating. Within this sample, intravenous use of benzodiazepines was related to greater levels of injection-related health problems and more recent experience of overdose.
4. While 2000 was the first year of IDU sampling for the Tasmanian IDRS, local indicator data suggested a marked increase in the injection of benzodiazepines among IDU in Hobart during 2000, particularly of Normison®.
5. Ongoing monitoring of benzodiazepine misuse amongst the IDU target group is indicated, together with in-depth investigation of supply characteristics and health impacts in Australian jurisdictions where significant trends are detected.

Trends in Benzodiazepine use among injecting drug users in Victoria and Tasmania: Findings from the Illicit Drug Reporting System

INTRODUCTION

This issue of the *Drug Trends Bulletin* provides a brief report on benzodiazepine use trends amongst injecting drug users (IDU) in Victoria and Tasmania. Findings from Victoria and Tasmania are highlighted because of the relatively higher rates of recent benzodiazepine use reported by IDU sampled in these jurisdictions as part of the national IDRS study, compared to those sampled in other participating jurisdictions (Table 1).

Benzodiazepines (commonly known as 'sleeping pills') are routinely and successfully used in the treatment of sleep and anxiety disorders and, amongst IDU, the amelioration of the symptoms of opiate withdrawal. However, studies have indicated that misuse of benzodiazepines by IDU may have serious adverse physical and psychological sequelae.¹⁻² Misuse has been linked to higher rates of needle risk-taking behaviour (such as needle sharing) and psychopathology, reduced health and social functioning and greater risk of opiate overdose.³ These harms are exacerbated among IDU who inject benzodiazepines.⁴ In addition, the intravenous use of benzodiazepines, most notably of Normison® (temazepam) is a particularly important public health issue as injection may cause vascular damage and in severe cases lead to amputation of fingers and limbs, due to venous thrombosis and ensuing ischaemia.⁵

Table 1: Proportion of IDU samples reporting benzodiazepine use and injection in preceding six months by jurisdiction, IDRS 2000.

	Used last 6 months (%)	Injected last 6 months (%)	Benzodiazepine most often used
NSW (N=150)	61	13	Diazepam
SA (N=107)	65	5	Diazepam
VIC (N=152)	74	36	Temazepam
QLD (N=101)	60	16	Diazepam
WA (N=100)	69	21	Diazepam
TAS (N=100)	78	36	Temazepam
NT (N=100)	29	12	Diazepam
ACT (N=100)	77	15	Diazepam

NATIONAL TRENDS

The 2000 IDRS was the first year in which comparable data from the IDU survey component was collected in all Australian jurisdictions.⁶ The proportion of IDU survey participants reporting benzodiazepine use and injection in the previous six months is shown in Table 1. In addition to the marked variation in reported benzodiazepine use between jurisdictions, it is clear that diazepam (eg. Valium®) was the type used most in all settings except Victoria and Tasmania where temazepam (eg. Normison®) is preferred. These two states also reported the highest rates of recent intravenous benzodiazepine use (Table 1).

reporting intravenous and 71% oral routes of administration during this period (Table 2). Of the group who had used benzodiazepines (n=116), the types most commonly used in the preceding six months were temazepam (41%) (eg. Normison®, Temaze®), diazepam (40%) (eg. Valium®) and oxazepam (15%) (eg. Serepax®). Together, these types have represented around 84% of all subsidised

Pharmaceutical Benefits Scheme benzodiazepine prescriptions in Victoria since 1995.⁸ Table 2 also shows an apparent increase in the reported recent injection of benzodiazepines (36%) in 2000 compared to that reported in previous Melbourne IDRS studies (around 20%).⁹⁻¹¹ The types of benzodiazepines most commonly injected by this group (n=55) included temazepam (64%), diazepam (22%) and oxazepam (9%). Interestingly, the use of flunitrazepam (ie. Rohypnol®) was much less commonly reported (n=1), and is consistent with results from the 1998 and 1999 Victorian IDRS studies also demonstrating

Table 2: Self-reported recent benzodiazepine use by IDU samples recruited to the Victorian arm of the IDRS study, 1997 - 2000.

	IDRS 1997 N=254	IDRS 1998 N=293	IDRS 1999 N=154	IDRS 2000 N=152
Benzodiazepine use (last 6 mths)				
Swallowed (%)	74	70	64	71
Injected (%)	21	22	19	36

VICTORIAN TRENDS

152 current IDU were interviewed at seven sites across Melbourne between June and July 2000. Most participants were male (64%) with a mean age of 28 years (SD 7.35, Range 17-47). Full socio-demographic and drug use history details for the Melbourne sample can be found in the Victorian IDRS study report for 2000.⁷

Benzodiazepine use

Most Melbourne IDU (74%) had used benzodiazepines in the last six months, with 36%

that the use of flunitrazepam by IDU has reduced following its rescheduling in 1998 as a Schedule 8 drug of addiction under the Drugs, Poisons & Controlled Substances Act, 1981.

Correlates of benzodiazepine use among the Victorian IDU sample

Previous studies have indicated that IDU who inject benzodiazepines are likely to experience reduced physical and psychological health compared to those who do not inject the drug¹. Within the Victorian IDU sample, those who had injected benzodiazepines within the

six months prior to interview did not differ from those that had not injected the drug in terms of education history, employment, frequency of injection, rates of injection equipment sharing, current criminal involvement or prison history. However, a significantly higher proportion of benzodiazepine injectors reported that they had recently experienced thrombosis (15% vs 4%) and problems with injecting (64% vs 42%) than those who did not inject benzodiazepines. Of additional concern was that this group had experienced a heroin overdose more recently (8 months prior to interview compared to 23 months prior) and were more likely to have last injected in a public place than those that had not injected benzodiazepines (60% vs 36%). Recent benzodiazepine users were also more likely to have used a combination of heroin plus benzodiazepines or alcohol on the day prior to interview compared to those who did not use benzodiazepines (38% vs 2%).

(5%). While this indicates a high level of use of these drugs amongst IDU, of particular note is the high rate of misuse - 61% of the sample had ever injected benzodiazepines and 37% had injected benzodiazepines in the six months prior to interview.

There were high levels of benzodiazepine use in the last six months among those who had most often injected methadone (90%), morphine (85%) and amphetamine (69%), with injection of benzodiazepines more common among regular users of methadone and morphine (Table 3). Temazepam (Normison®) was more often reported as the main benzodiazepine used by those who had injected the drug in the past six months (63%), with a further 27% reporting that diazepam was their preferred type. Diazepam (Valium®) was the preferred type of benzodiazepine among those who had used this drug type in the previous six months (44%).

Table 3: Patterns of benzodiazepine use amongst primary users of methadone, morphine and amphetamine in the 2000 Tasmanian IDU sample, N=100.

Drug most injected in the past month	Methadone N=29	Morphine N=39	Amphetamine N=29	TOTAL N=100
Benzodiazepine use (last 6 mths)				
Swallowed (%)	79	77	62	73
Injected (%)	45	44	21	37

TASMANIAN TRENDS

100 current IDU were interviewed during August 2000, and had strikingly similar characteristics to the Victorian sample. Most participants were male (73%), with a mean age of 26 years (range 15-50). Full socio-demographic and drug use history details for the Hobart sample can be found in the Tasmanian IDRS study report for 2000.¹²

Benzodiazepine use

Most IDU (78%) from the Hobart sample had used benzodiazepines in the six months prior to interview, with 37% reporting intravenous and 73% oral routes of administration during this period (Table 3). Of those who had used benzodiazepines (via any route), the main types used in the past six months were temazepam (39%) and diazepam (38%), with lower levels of primary use of oxazepam (8%), alprazolam (Xanax®, 6%) and flunitrazepam

Reported use of benzodiazepines as the main drug injected by non-pharmacy needle and syringe outlet clients has undergone a large increase between 1998/99 and 1999/00, from 0.3% to 13.5% of clients. While there are limitations with this dataset, the magnitude of this trend clearly indicates a change in patterns of use among IDU. The majority of people reporting benzodiazepines as the drug they most often inject were clients of southern region needle outlets, where it was almost as commonly reported as morphine (18.5%) and methadone (23%), and reported far more frequently than heroin (4%).¹³

Correlates of benzodiazepine use among the Tasmanian IDU sample

Among the sample of Tasmanian IDU, those that had injected benzodiazepines within the six months prior to interview did not differ from those that had not injected the drug in

terms of education history, employment, frequency of injection, rates of injection equipment sharing, current criminal involvement or prison history. Surprisingly, there was also no difference between the groups in their experience of injection-related health problems such as thrombosis (19% vs 17%), abscesses and infections (11% vs 8%) or difficulty injecting (50% vs 50%). However, this may simply reflect the fact that (unlike most other jurisdictions) most of the non-benzodiazepine injectors in the Hobart sample were frequent injectors of pharmaceutical morphine and methadone - preparations that are also associated with significant venous damage.

CONCLUSIONS

The primary aims of the national IDRS study are to identify emerging trends in illicit drug use, and to utilise this information for the purposes of informing future research priorities and public health initiatives. The recent apparent increase in benzodiazepine injection trends detected by drug trend monitoring exercises in Victoria and Tasmania adds to the growing Australian literature regarding benzodiazepine misuse by IDU. To date, the majority of published Australian data on benzodiazepine misuse derives from the work of Shane Darke and colleagues at the National Drug and Alcohol Research Centre in Sydney, NSW. The Victorian and Tasmanian data reported in the current Drug Trends Bulletin are noteworthy and add to our knowledge about benzodiazepine misuse by IDU in this country, showing markedly different patterns of use relative to other jurisdictions. These findings are concerning from a public health viewpoint because of the associated negative health consequences. Ongoing monitoring of benzodiazepine misuse amongst the IDU target group is indicated, together with in-depth investigation of supply pathways and health impacts in Australian jurisdictions where sig-

nificant trends are detected. Finally, careful exploration of various regulatory, supply, education and training options for the prevention of benzodiazepine injection is warranted.

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