NDLERF

Benzodiazepine and pharmaceutical opioid misuse and their relationship to crime

TASMANIAN REPORT

Monograph Series No. 22

Funded by the National Drug Law Enforcement Research Fund
An Initiative of the National Drug Strategy

Benzodiazepine and pharmaceutical opioid misuse and their relationship to crime

An examination of illicit prescription drug markets in Melbourne, Hobart and Darwin

TASMANIAN REPORT

Raimondo Bruno

Tasmanian School of Pharmacy
University of Tasmania

Funded by the National Drug Law Enforcement Research Fund, an initiative of the National Drug Strategy

Produced by the National Drug Law Enforcement Research Fund (NDLERF)
GPO Box 308 HOBART TASMANIA 7001

© Commonwealth of Australia 2007

ISBN: 978-0-9803794-3-3

ISSN: 1449-7476

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without prior written permission from the Commonwealth available from the National Drug Law Enforcement Research Fund. Requests and enquiries concerning reproduction and rights should be addressed to the National Drug Law Enforcement Research Fund, GPO Box 308 HOBART TASMANIA 7001.

Opinions expressed in this publication are those of the authors and do not necessarily represent those of the National Drug Law Enforcement Research Fund (NDLERF) Board of Management or the Australian Government Department of Health and Ageing.

The research on which this report is based was funded by the National Drug Law Enforcement Research Fund, an initiative of the National Drug Strategy.

Table of Contents

Location of Tables

Location of Figures

Abbreviations

ABCI	Australian Bureau of Criminal Intelligence
ACC	Australian Crime Commission
ADIS	Alcohol and Drug Information Service
AFP	Australian Federal Police
AIHW	Australian Institute of Health and Welfare
COTSA	Clients of Treatment Service Agencies
DACAS	Drug and Alcohol Clinical Advisory Service
DHHS	Department of Health and Human Services
DUCO	Drug use careers of offenders
HIC	Health Insurance Commission
IDRS	Illicit Drug Reporting System
IDU	Injecting drug user
IV	Intravenous
KI	Key informant
KIS	Key Informant Study
MMT	Methadone maintenance treatment
NDARC	National Drug and Alcohol Research Centre
NDLERF	National Drug Law Enforcement Research Fund
NDSHS	National Drug Strategy Household Survey
NSP	Needle and Syringe Program
NAP	Needle Availability Program
PBS	Pharmaceutical Benefits Scheme
PWID	People who inject drugs
SIS	State Intelligence Services, Tasmania Police
SD	Standard deviation
SPSS	Statistical Package for the Social Sciences
SSRI	Specific Serotonin Re-uptake Inhibitor
TASPOL	Tasmania Police
TCA	Tricyclic antidepressant

Acknowledgements

This research was funded by the National Drug Law Enforcement Research Fund, and co-ordinated by Turning Point Drug and Alcohol Centre. The author wishes to thank these organisations for their support.

The author wishes to thank the following people for their contributions to this project.

Bronwyn Smith from Turning Point for her continual support and efforts far above and beyond the call of duty throughout the course of this project.

The other members of the research group: Craig Fry, Peter Millar, Rebecca Jenkinson, Bridie O'Reilly, Fiona Leibrick, Damian Huxtable, and Richard Chenhall.

The members of the local Steering Committee for this study: Steve Wood (Australian Customs Service), Lianne Barden (The Link Youth Health Service), Stephen Biggs, Glenn Ball, Jack Johnston and Emma McCoy (Tasmania Police), Richard Bingham and Paul DeBomford (Department of Justice and Industrial Relations), Cecile McKeowen and Dr David Jackson (Alcohol and Drugs Service, Department of Health and Human Services), Kim Oakley and Iris Ritt (Tasmanian Council on AIDS and Related Diseases), Ian Martin and Catherine Brown (Population Health, Department of Health and Ageing), Dr Geoff Chapman (Southern Tasmanian Division of General Practice), Mary Sharpe (Pharmaceutical Services, Department of Health and Human Services), and Anne Sheehan and Bert Dorgelo (Public Health, Department of Health and Human Services).

Jackie Hallam, for providing assistance throughout this project, Teena Holthouse, who conducted the interviews with injecting drug users, Peter Lucas, who conducted the interviews with key informants, Sonja Heijn for transcription of these interviews, Paul McElwee for development of the database for this study, and Dale Lewis for data entry.

The staff of services who very generously provided the researchers with space and support for interviewing participants: NUFIT, the Tasmanian Council on AIDS, Hepatitis and Related Diseases, and the Link Youth Health Service.

The many key informants who willingly provided their time, effort and experience to contribute to the study.

The following local organizations and persons who generously provided indicator data: Tasmania Police (Stephen Biggs, Emma McCoy, David Old, Jane Lockley & Eileen Rushton), and the Tasmanian Department of Health and Human Services divisions of Pharmaceutical Services (Mary Sharpe), and Sexual Health (Anne Sheehan).

Finally, the author wishes to thank the people who participated in the PWID survey.

Executive Summary

Study aims and background

The purpose of the current study was to contribute to the understanding of the law enforcement sector in regard to the impact of benzodiazepine and pharmaceutical opiate misuse on crime. In particular, the study aimed: to examine the nature of the illicit market in benzodiazepines and pharmaceutical opiates; to investigate any links between misuse of such drugs and criminal activity; to examine the implications of use for health and law enforcement staff; and to consider opportunities, and the potential impacts of, interventions into this issue.

The study was funded by the National Drug Law Enforcement Research Fund (NDLERF), and was conducted in three Australian jurisdictions where there was evidence of existing or emerging patterns of use of diverted pharmaceutical products amongst individuals who inject illicit drugs. This report details only the Tasmanian-specific primary data collected as part of this larger study. A more detailed examination of the research aims can be found in the accompanying National Overview Report (Fry et al. in press), to which this document is a companion.

Methodology

The methodology of the current study took a staged approach, so that relevant issues emerging through the course of the investigation could be examined in progressively more detail as the study progressed. Initially, a series of semi-structured interviews were conducted with eleven law enforcement professionals from a range of levels and bureaux within Tasmania Police in order to refine the focus of the study toward the issues of most relevance for policing in the local jurisdiction. In addition to this, existing Tasmanian-specific literature addressing the research issues were reviewed. In the second 'stage' to this study, a series of detailed face-to-face interviews were carried out with one hundred individuals that regularly injected diverted pharmaceutical products. This survey included sections examining: the drugs they had used and the modes of access to these products; recent involvement in criminal activity; health and other impacts of pharmaceutical opiate and benzodiazepine use; and perceptions of the potential impact of substantially changed availability of such products on the illicit market. The third stage to this investigation saw an examination of Tasmanian-specific indicator data relevant to the research issues, such as prescription data and an examination of pharmacy burglaries. In the final component of the study, a further series of face-to-face interviews were conducted with forty-seven individuals that regularly injected pharmaceutical opiates or benzodiazepines, in order to complement and clarify trends emerging from the earlier survey. Similarly, detailed qualitative interviews were conducted with a number of experts and professionals across the health and law enforcement sectors in order to examine the issues arising from the earlier research stages in greater depth.

Key findings

The following summarises in dot points the key findings across all sections of the local component of the study.

Use of pharmaceutical products among local people who inject drugs

- Benzodiazepine use was almost ubiquitous among both people who inject drugs (PWID) cohorts surveyed. The most commonly used benzodiazepines were diazepam (Valium, Antenex, Ducene), alprazolam (Xanax, Kalma), oxazepam (Serepax), nitrazepam (Mogadon) and temazepam (Temaze).

- Pharmaceutical opiates most commonly accessed by PWID included morphine sulphate (MS Contin, Kapanol), methadone (syrup, Physeptone), and oxycodone (OxyContin). Data from the state's Needle Availability Program suggests that injection of pharmaceutical opiates comprises almost half of all transactions from non-pharmacy outlets, with methadone (syrup or tablets) becoming increasingly predominant over morphine in these figures.
- PWID participants interviewed were clearly very flexible in the types of drugs that they used, with individuals that used one pharmaceutical opiate type typically also using other types as well (for example, those recently accessing diverted methadone syrup were also commonly using Physeptone, morphine and benzodiazepines as well).
- There were stronger relationships between use of diverted methadone and benzodiazepines than there were between the use of other drugs.
- However, while those surveyed were generally predominantly consumers of licit or illicit pharmaceutical opiates, there was a very high use of methamphetamine in both cohorts.

Sources on the illicit market

- PWID respondents most commonly reported purchasing morphine, Physeptone and oxycodone from individuals engaged in small-to-medium-level 'dealing' in these drugs, along with methamphetamine and/or cannabis.
- Reports from key informants (KI) and PWID suggest that these drugs are accessed not through 'doctor-shopping', pharmacy burglary, internet sources, or fraud by the PWID, but are instead diverted by individuals who are receiving prescriptions for these drugs for legitimate medical reasons, who are on-selling some or all of these prescriptions to intermediaries. These intermediary sources may then sell the drugs on to PWID.
- Methadone syrup was reported by those surveyed as typically purchased directly from 'friends' or others who were receiving methadone maintenance treatment (MMT). These individuals typically reported diverting such doses for financial reasons (such as covering the costs of daily methadone dispensing or other bills), to purchase or trade for other illicit drugs, or as a consequence of threats and intimidation by individuals seeking to access methadone. Both PWID and KI noted recent increases in hassling of methadone maintenance patients in and around dispensing points by individuals seeking the drug.
- Benzodiazepines, however, were predominantly accessed by PWID through legitimate prescriptions from a medical practitioner, and it was rare for these individuals to have accessed these drugs from any more than one or two prescribers in the previous six month period. Access to these drugs from non-legitimate sources was clearly a secondary, and substantially less prevalent pathway to access of benzodiazepines, and it was more common for people to receive them as gifts or through trades for other drugs than it was for these to be purchased from a 'dealer'. PWID reported typically seeking diverted benzodiazepines if their legitimate prescription had been used up early, to help manage withdrawal symptoms, or to self-medicate during stressful periods.
- Reports from KI specialising in the issue of 'doctor-shopping' suggested that the demographic characteristics and types of prescriptions accessed by those engaging in such activity were clearly distinct from those seen in PWID groups. PWID themselves very rarely reported trying to access benzodiazepines or pharmaceutical opiates through feigned symptoms from one or more prescribers, with most suggesting that they did not even bother trying because they expected to be refused.
- Theft of pharmaceuticals from pharmacies or forging prescriptions was virtually non-existent among PWID, although a substantial proportion of PWID receiving legitimate prescriptions had recently experienced having these drugs stolen from them, with methadone syrup and alprazolam being the drugs most commonly targeted for such access. Data from Tasmania

Police suggest that pharmacy burglaries are not common and high-value pharmaceutical opiates are not frequently accessed in these events due to the legal requirements to secure these products.

Links between use of pharmaceutical opiates or benzodiazepines and crime

- A minority of PWID subjects suggested that their recent pharmaceutical drug use had contributed to them being involved in some form of criminal behaviour; however, these reports did not appear to differ according to the pharmaceutical drug class that participants were referring to (benzodiazepine or pharmaceutical opiates), nor was there any substantial difference between criminal behaviour reported as associated with general 'use' or 'withdrawal' from these drugs.
- Involvement in property crime was associated with the degree of dependence on morphine, with use of prescribed methadone syrup emerging as a factor protective against such involvement. Law enforcement KI suggested that use of morphine was associated with the lower end of the spectrum of property crime, such as opportunistic, 'soft target' theft or shoplifting, which was consistent with the data emerging from the PWID interviews. Police suggested that this may be due to the fact that the majority of PWID maintained daily use levels requiring $50-100 per day, which meant that higher profile criminal acts were less likely to be considered.
- Prescribed methadone syrup, while a protective factor against involvement in property crime, was associated with the experience of theft, threats or assault 'against' those receiving this drug legitimately, according to responses from both KI and consumers. Both PWID and KI noted recent increases in hassling of methadone maintenance patients in and around dispensing points by individuals seeking the drug.
- While benzodiazepine use was not associated with any crime in particular, PWID consumers reported experiencing extremely disinhibited behaviour when intoxicated by these drugs, particularly when potent benzodiazepines such as alprazolam were combined with methadone and/or alcohol. Individuals thus intoxicated reported uncharacteristic and bizarre behaviour. KI were aware that use of alprazolam and methadone in combination had been increasing in recent months and were concerned with this in terms of the increased overdose risk of such an activity, but there were no reports of particular recent problems with the associated disinibited behaviour by front-line workers.

Implications of benzodiazepine and pharmaceutical opiate use for health workers

- KI reported, and data from consumers demonstrated, that intravenous administration of pharmaceutical opiates not designed for such use carries a degree of health harms. Two main themes of opportunities for health intervention were proposed.
- Primary prevention suggestions included developing peer education programs built around demonstrating the harms associated with intravenous administration of tablets, using graphic demonstrations of images such as lungs riddled with particulate matter from years of injection, similar to the approaches used in anti-smoking campaigns.
- KI more commonly suggested secondary health interventions, such as distribution of pill and biological filters through the Needle Availability Program to reduce the health harms, and the future burden on the public health system, from continued introduction of particulate matter in the circulatory system from regular injection of these pharmaceuticals. Additionally, acknowledgement that some individuals receiving methadone maintenance therapy will continue to administer 'take-away' doses of this drug intravenously, and taking steps to reduce the harm of this (such as not diluting these doses, or changing the formulation of these doses to Biodone or injectable methadone), was suggested by many KI.

Opportunities for interventions

- The patterns of sourcing of diverted pharmaceuticals by providers and the modes of access to these drugs from PWID consumers create particular challenges for policing and limited points for intervention in these systems. Experience in policing in this area suggested that the establishment of close relationships between health and law enforcement sectors helped support good outcomes for both sectors. For example, where problems with prescription or diversion were identified by police, historically prescribers had been more responsive to interventions made by agencies overseeing prescription (Pharmaceutical Services) than those approaches made by police directly.
- KI suggested that an appropriate point for supply reduction may be in further supporting medical practitioners in regard to patient assessment and identifying multiple options for treatment so that the best match could be made between patient need and the treatment provided. Increasing access to specialist pain management and drug withdrawal or maintenance programs may assist in such processes.

Possible impacts of supply reduction of diverted pharmaceutical opiates

- Reports from KI and PWID surveys suggested that a substantial reduction in the availability of diverted pharmaceutical products may have a range of possible unanticipated consequences that need to be considered.
- Given that surveys of local PWID consumers consistently suggest that many are using pharmaceutical opiates in the place of heroin (due to its poor availability on the local market), it is possible that such a reduction in availability of diverted pharmaceutical opiates may produce an environment conducive to the establishment of a local heroin market. However, as it was shown that PWID consumers were particularly flexible in their patterns of use of pharmaceutical opiates, it may be that reducing the supply of one opiate form may simply lead to an increase in use of an alternative pharmaceutical product. This appears to have been the case in response to the removal of gel capsules of temazepam from the market, with use of alprazolam among local PWID groups increasing in response. Alternatively, there were suggestions that a proportion of PWID may shift from regular pharmaceutical opiate use to regular use of stolen opium poppies or methamphetamine if these supplies reduced, both of which would carry particular health and policing issues that may be more demanding than the current scenario.
- Alternatively, data from PWID consumers suggested that some consumers may increase their involvement in criminal activity if there were to be a reduction in the availability of diverted pharmaceutical opiates in order to pay the increased purchase price of these products on the illicit market. Similarly, there were suggestions that there may be increased targeting and intimidation of those receiving pharmaceutical products legitimately, as has been seen toward individuals receiving methadone maintenance in recent months.
- KI also noted that increased regulation on prescription of these medications or on the dispensing of these drugs also had the potential to unnecessarily burden those who have legitimate need of treatment with these medications, and may lead to reduced health outcomes for these individuals.
- Finally, KI noted (with PWID data supporting these reports) that substantial supply reduction of these drugs on the illicit market had the potential to produce a sizeable increase in demand for treatment services such as pharmacological maintenance therapy, pain management, detoxification or withdrawal management. These services within Tasmania are already significantly stretched, with notable waiting lists for treatment common. Additional demand on these services would be unlikely to be able to be met, with this scenario producing reduced health outcomes for those within, and attempting to access, such services.

Chapter one: Introduction

Review of relevant Tasmanian literature

Illicit Drug Reporting System 2000-2002

The Illicit Drug Reporting System (IDRS) is an annual survey of illicit drug-related market trends in each jurisdiction in Australia. The methodology comprises interviews with 100 regular injecting drug users (IDU), and with approximately thirty professionals working with substance users, as well as an examination of existing indicators of drug use (such as needle exchange or pharmaceutical maintenance programs).

The IDRS IDU samples since 2000 (Bruno & McLean 2001; 2002; 2003) have traditionally been dominated by users of pharmaceutical products, with 76% of the 2002 IDRS sample reporting recent use of (illicit) morphine, 80% using methadone and 83% reporting use of benzodiazepines. While associations between particular drug use and involvement in criminal activity is not made directly in this survey, half of the IDU sample in 2002 self-reported engaging in some form of crime in the month prior to interview. The most commonly reported crimes were dealing (34%) or property crime (28%), with relatively few respondents reporting involvement in violent crime (6%) or fraud (2%). Most IDU reporting involvement in criminal activity indicated that they had engaged in such activities less than once per week. Forty-one percent of the 2002 IDU sample reported being arrested in the 12 months prior to interview, with the most common grounds for arrest being property crime (25%), violent crimes (14%) and use/possession (9%). With the caveat that the IDRS surveys simply gather convenience samples of IDU – meaning that the samples may not be directly comparable or retain the same participants across years – there appears to have been little change in the reported crime rates across the three surveys. The only exceptions were increases in reported rates of arrest for violent crime (6% in 2000 and 14% in 2002), and steadily escalating proportions reporting both engaging in, and being arrested for, property crimes (both increasing by around 10% between the 2000 and 2002 samples). Reported rates of involvement in dealing had also decreased between 2000 (49%) and 2002 (34%).

The IDRS also monitors trends in drug-related indicator data. As can be seen in Table 1 below, the number of police arrests for opiate-related offences (possession or providing) in Tasmania has remained relatively low and stable, particularly in comparison to cannabis (1,540 cases in 2001/02) or methamphetamine (89 cases in 2001/02) related offences.

Table 1. Number of arrests (including cautions and diversions) for opioid-related offences in Tasmania, 1996/97-2001/02.

	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Arrests	28	16	25	9	9	34
% Consumers	86	94	96	78	89	68

Source: Tasmania Police

Data from Tasmania Police regarding pharmacy break-ins involving thefts of pharmaceuticals are also published in the IDRS reports. Available data suggest that, in Tasmania, there has been a steady decline in such occurrences over the past few years, with 17 such incidents in 1998/99, 10 in 1999/00, 2 in 2000/01 and 4 in 2001/02. Although the products stolen were not detailed in all cases, benzodiazepines were the most commonly stolen drug, featuring in at least 12 of the

17 incidents in 1998/99, 8 of the 10 burglaries in 1999/00 and 1 of the 4 incidents in 2001/02. Opioid-based products are rarely stolen in such burglaries, due to enhanced security measures (such as floor safes) utilised for the storage of such drugs.

Drug use careers of offenders

The Drug Use Careers of Offenders (DUCO) study was carried out in several Australian jurisdictions in 2000 and 2001 (Williams & Morris, 2002). In Tasmania, 174 male prison inmates from both medium and maximum security were surveyed between February and May 2001 regarding their drug use and criminal histories, and the associations between these. The Tasmanian inmates had an average of 101 lifetime offences, of which approximately half had resulted in charges. The most common offence among the sample pool was break and enter, with a mean of 56 lifetime offences among those that had committed at least one such offence.

Within the Tasmanian in-mate sample, 32% reported ever using morphine, with 18% using the drug in the six months prior to their arrest. Illicitly-accessed methadone had been used by 24% of the sample, and 8% in the six months prior to incarceration, with 43% ever using benzodiazepines, and 21% using them in the six months prior to arrest (Table 2). Regular (at least once weekly) use of pharmaceutical products within the sample was quite low, with only 9% reporting such use of morphine, 4% of methadone, and 13% using benzodiazepines regularly. However, among these individuals, the cost of their weekly expenditure on these drugs was a substantial burden, particularly in the case of morphine, where the average weekly expenditure on the drug was $920 per week. Findings from the sample as a whole suggested that where expenditure on substance use exceeded finances available from legitimate means (social security, work), illegal activities were undertaken to maintain such use.

Table 2. Pharmaceutical-related statistics from the 2001 Tasmanian DUCO sample.

	Lifetime use	Recent use[a]	At least weekly use	Mean weekly expenditure[b]
Morphine	32%	18%	9%	$920
Illicit methadone	24%	8%	4%	$108
Benzodiazepines	43%	21%	13%	$53

[a]In the six months prior to arrest

[b]Among those reporting using these drugs at least once weekly or more often, corrected for inflation (See Williams & Morris, 2002 for method)

Source: Williams and Morris, 2002

Thirty-nine percent of the inmates sampled as a whole reported that the main reason for committing the offence for which they were currently incarcerated was drug-related, with equal numbers reporting being under the influence of drugs at the time of the offence (15.5%), and committing offences in order to obtain money for drugs (16.8%). Only a minority of the in-mates sampled reported that drugs (of any sort) had played a major part (13.5%) or were totally responsible (15.6%) for their lifetime offending histories.

Conclusions

To date, there have been no direct studies of the links between pharmaceutical misuse and crime carried out in Tasmania. From two related studies, DUCO and the IDRS, however, several conclusions can be made. Firstly, it is clear that misuse of pharmaceutical products is common among samples of IDU in Tasmania. Secondly, pharmaceutical opiates represent only a small

proportion of drug-related offences (possession, dealing) in Tasmania in comparison to drugs such as cannabis and methamphetamine; and, further, regular users of pharmaceuticals appear to only comprise a minority (10% or less) of individuals in Tasmanian prisons. Finally, however, regular use of prescription drugs (morphine in particular) carries with it a substantial financial burden, which renders it more probable that criminal activity will be engaged in to sustain such habits.

Study rationale

It is clear that there is a substantial gap in the Tasmanian-specific literature in terms of research examining the issue of the association between pharmaceutical misuse and criminal activity. While existing studies indicate that a proportion of those regularly illicitly using pharmaceutical opiates may engage in some forms of criminal activity beyond that of simply illicitly accessing such drugs, even the minimal extant literature suggests that the relationships between illicit pharmaceutical use and criminal behaviour are complex. There remain many issues in regard to illicit pharmaceutical use that merit further examination: are there particular challenges for emergency services staff when responding to individuals intoxicated with pharmaceutical substances which are distinct from those posed by the effects of other illicit drugs?; is there a different set of health costs and benefits that arise from an illicit drug market dominated by diverted pharmaceutical products?; are there distinct patterns of criminal activity associated with misuse of such products, or does an easy availability of diverted pharmaceuticals actually produce some protective effects on criminal behaviour in comparison to markets dominated by heroin or other powder drugs? The current study was funded by the National Drug Law Enforcement Research Fund to explicitly examine some of these issues. The series of specific research questions that the current study was designed to target are discussed in detail in the National Overview Report (Fry et al. in press) for this study.

Study aims and objectives

Briefly, the purpose of the current study was to enhance the understanding of the law enforcement sector in regard to the impact of benzodiazepine and pharmaceutical opiate misuse on crime in three select Australian jurisdictions where there is evidence of emergent illicit markets. The primary aims of the overall study were to:

- Gain a greater understanding of illicit benzodiazepine and pharmaceutical opiate market-place dimensions and characteristics.
- Investigate the hypothesised relationship between benzodiazepine / pharmaceutical opiate misuse and crime.
- Explore the implications for emergency services staff of emergent illicit markets for benzodiazepine and pharmaceutical opiates.
- Consider appropriate interventions to address both the law enforcement and health impacts of benzodiazepine and pharmaceutical opiate misuse.

This document details only the Tasmanian-specific primary data collected as part of this larger study. As such, the bulk of the substantive examination of these research aims will be found in the National Overview Report (Fry et al. in press) for this study rather than the current document.

Chapter two: Methodology

Stage one: Key informant interviews

In July 2003, face-to-face semi-structured interviews were conducted with eleven law enforcement professionals from Tasmania Police. These KI worked in the greater Hobart area, and represented both Drug Investigation Services (n=3), Criminal Investigation Bureaux in each of the main stations (n=6) and officers on general policing duties from smaller areas (n=2).

The aim of the interview questions was to prioritise the research questions to be investigated within the study, and, more specifically, to inform the development of the interview instruments for the surveys of individuals that inject drugs (Stage two and Stage four) and the subsequent interviews with health and law enforcement professionals (Stage four). Questions covered topics such as: particular drug types most likely to be associated with crime; diversion of pharmaceutical substances to the illicit drug market; the impact of pharmaceutical misuse on policing; the impact of changes in the illicit availability of pharmaceuticals on policing; opportunities for supply reduction and harm reduction responses; and also questions about current pharmaceutical drug markets.

All KI had contact with users of illicit drugs at least once per week, and had gathered their information through direct contact with suppliers (n=8), consumers of illicit drugs (n=11) and through discussions with colleagues (n=8). All KI were very confident about the information that they provided.

Stage two: Survey of people who inject drugs

During September and October 2003, structured, face-to-face interviews were conducted with one hundred individuals that regularly inject illicit drugs. Inclusion criteria for the study were that the individual must have injected pharmaceutical opioids or benzodiazepines at least once monthly in the six months prior to interview, and that they had resided in Hobart for the past twelve months with no substantial periods of time away from the local drug market (such as incarceration, holidays etc) within the preceding six months. Participants were recruited using advertisements distributed through Needle Availability Program (NAP) outlets in the Hobart area and through snowball methods (recruitment of friends and associates through word of mouth). Participants were interviewed at three local NAP outlets: NUFIT Drug and Alcohol Service, the Link Youth Health Service, and the Tasmanian Council on AIDS, Hepatitis and Related Diseases. The major location for recruitment and subsequent interview was Hobart city, although approximately one-third of the sample was recruited and interviewed in Glenorchy city (in the northern suburbs of Hobart).

The interview schedule was standardised and administered in a similar way across all jurisdictional research sites (i.e. Hobart, Melbourne and Darwin). The interview schedule contained sections on demographics, drug use history, recent benzodiazepine and pharmaceutical opiate use, modes of access and street prices of such drugs, criminal activity, health and other impacts of benzodiazepine and pharmaceutical opiate use, and finally perceptions of the impact of substantially changed benzodiazepine and pharmaceutical opiate illicit drug markets. Participants were screened for appropriateness both by referring staff members of the recruitment sites and the interviewers, the latter through a series of questions designed to elicit participants' knowledge of injecting drug use practice. The University of Tasmania's institutional research ethics committee granted approval for the survey. Participants were given an information sheet describing the

interview content prior to commencement, allowing them to make a more informed decision about their involvement. Information provided was confidential, and participants were informed that they were free to withdraw from participation without prejudice or to decline to answer any questions if they so wished. Interviews generally lasted between 50 and 60 minutes (ranging from 30 to 120 minutes), and participants were reimbursed $30 for their time and out-of-pocket expenses.

Stage three: Secondary indicator data

With the intention of complementing the data collected from primary sources, existing data pertaining to the issue of benzodiazepine and pharmaceutical use and misuse, particularly as this related to crime or health issues, was collated from a number of sources. Given that the majority of this data is not Tasmanian-specific, the bulk of the examination of these indicators can be found in the companion National report to this document. Where relevant, Tasmanian-specific data from Tasmania Police, the Drug Use Monitoring System (DRUMS), and the Illicit Drug Reporting System (IDRS) (Bruno & McLean 2000, 2001, 2002, 2003, 2004) were included in the current document.

Stage four: Survey of people who inject drugs

During March and April 2004, a second round of structured, face-to-face interviews was conducted with forty-seven individuals that regularly injected illicit drugs. The intention of this component of the study was to facilitate interpretation of the data collected at previous stages, and as such the survey instrument was specifically designed to examine the key issues emerging from the first and second stages of the study in greater detail and depth. Additionally, this survey sought to provide a monitoring role by replicating some components of the interview utilised in the second stage of the survey. This interview instrument included sections on: demographics; drug use history; recent benzodiazepine and pharmaceutical opiate use; modes of access and street prices of such drugs; the impact of market changes to the availability of such drugs on a wide variety of aspects of the individual's life; recent behaviour while under the influence of such drugs; and a quantitative and qualitative examination of recent criminal activity and the motivations for such behaviour.

The interview methodology was exactly the same as that used in the Stage two survey of people who inject drugs (PWID), and the same interviewer was responsible for all interviews and screening. Inclusion criteria remained that the individual must have injected pharmaceutical opioids or benzodiazepines at least once monthly in the six months prior to interview, and that they had resided in Hobart for the past twelve months with no substantial periods of time away from the local drug market (such as incarceration, holidays etc.) within the preceding six months. Interview sites, ethics processes and participant reimbursement remained consistent with those used in the Stage two survey (above). Interviews generally lasted 30 minutes, ranging from 15 to 45 minutes.

Stage four: In-depth key informant interviews

During April and May 2004, fact-to-face, semi-structured interviews were conducted with a number of workers within the alcohol and other drugs arena. These interviews were intended to be truly qualitative in nature to allow a greater depth and examination of key issues not afforded by the briefer semi-structured interviews conducted with KI in Stage one. Individuals were selected to participate in this component of the study on the basis of expertise within the

areas of pharmaceutical misuse and associated health and criminal impacts. Such a focused approach meant that only a small number of individuals were approached to take part, and these were selected either from the participants in the Stage one study, from recommendations of the local steering group for the project, or on the basis of participation on previous, related, local research projects (such as the Illicit Drug Reporting System). Recruitment also aimed to tap a range of experts that would come into contact with different aspects of the pharmaceutical opiate/benzodiazepine misuse health and crime nexus. Participants included: detectives within Tasmania Police; medical practitioners and allied health professionals specialising in alcohol and other drug work from acute, inpatient, outpatient, and justice arenas; workers within the Needle Availability Program; and professionals within the state and federal departments overseeing the distribution of the target pharmaceutical products within Tasmania. These descriptions of the positions of the individuals contributing to this study are deliberately broad in order to maintain the anonymity of these participants. In total, twelve participants contributed to Stage four of this study.

The interview itself was qualitative in nature, but discussions centred around several key themes, dependent on the expertise of the individual being interviewed. These included: the impact of pharmaceutical opiate and benzodiazepine misuse on their client group and work; examples and perceptions of the impacts of substantial changes to the availability of such pharmaceuticals on the illicit drug market; approaches used by individuals to illicitly source such products (such as doctor-shopping, drug trading etc.), possible approaches to restricting such diversion and the potential impacts of same; criminal activity in association with the diversion and misuse of such products; and, finally, policing issues in relation to illicit pharmaceutical opiates or benzodiazepines in terms of the role of, and impacts on, policing, opportunities for supply reduction and the potential consequences of changes in the approaches to such issues.

The methodology of this component of the study was approved by the University of Tasmania's institutional research ethics committee. Participants were fully briefed as to the aims of the interview and the interview themes and were provided an information sheet about the study. Participants completed a consent form prior to commencing and were assured that they could withdraw their consent at any stage of the interview, or refuse to answer any particular questions, without prejudice. Interviews were recorded and transcribed in full. Transcriptions were provided to the interviewees for their approval and for them to provide any clarifications they saw fit. Interviews ranged between 45 and 120 minutes.

Chapter three: Study findings

Stage one: Key informant interviews

Drugs most commonly associated with crime

KI were asked to nominate the drugs that, in their experience, were most commonly associated with crime in Tasmania. Methamphetamine (n=10) and cannabis (n=7) were primarily the drugs nominated as associated with crime (with 6 nominating methamphetamine as the drug they most closely associated with crime, and 2 nominating cannabis as such). Such an opinion by these officers is supported by the fact that the drugs they had the most experience with in their policing duties were also cannabis (n=7) and methamphetamine (n=4).

Methamphetamine was noted by KI to be associated with property crime, low level fraud, and, to a lesser extent, assaults. Similarly, cannabis was regarded as being associated with property crime and dealing. Several KI noted that the number of smaller/petty crimes associated with these drugs were quite time-consuming and impacted greatly on their workloads.

Pharmaceutical products were less frequently nominated by KI as being strongly linked with crime, despite these drugs comprising a substantial part of the Tasmanian illicit drug market. Morphine (n=4) and methadone (n=2) were nominated by KI as being associated with crime (with two nominating morphine as the drug most strongly associated with crime in Tasmania), and none of the eleven KI nominated benzodiazepines as particularly linked with crime. Again, these drugs were mainly associated with property crimes and dealing, although one KI did note problems associated with violence or intimidation in order to access take-away doses of methadone from clients of the methadone replacement program.

Benzodiazepines

Diversion of benzodiazepines to the illicit drug market

All KI commenting on diversion methods for benzodiazepines (n=10) believed that they were primarily accessed through prescriptions. These prescriptions may be dispensed for legitimate reasons or through doctor-shopping (patients feigning symptoms). KI noted that the benzodiazepines may not have been prescribed to the individual dealing the drugs, but prescribed legitimately, or otherwise, to a third person who then on-sells to a dealer. Prescription fraud or thefts were also mentioned as pathways to accessing these drugs. None of the KI mentioned thefts of these drugs from pharmacies as a common mode of access, and Tasmania Police data suggest a low and decreasing number of pharmacy burglaries over the past few years.

Impact of illicit benzodiazepine use on policing

Seven of the KI believed that misuse of benzodiazepines did have an impact on policing, either through the involved work associated with tracking doctor-shoppers (such as the time spent liaising with other agencies, n=2), more frequent contact with users due to their commission of crime (n=4), challenges associated with the management of individuals under the influence of benzodiazepines (n=1) or the use of benzodiazepines to facilitate specific offences (e.g. date rape: n=1). Benzodiazepines (and pharmaceutical opiates) were generally regarded by KI as having a different impact on policing than other illicit substances, in that users of cannabis were considered more likely to go without the drug than to commit crime (due to the differing extents of dependence developed by the two drug types), and that use of methamphetamine was more likely to be associated with crime.

Different brands of benzodiazepines were not generally considered by KI to have particular impacts on policing or on the types of crimes committed, with the exception of flunitrazepam which was noted by two KI as a form more closely associated with the commission of date rape. One KI noted that benzodiazepines were often a minor aspect of drug use, whereby the drug would generally be consumed only if users could not access their preferred drug.

Impact of benzodiazepine intoxication on policing

Five KI indicated that there were some policing issues when people are intoxicated by benzodiazepines, namely: the unpredictability of individuals' behaviour; difficulties with interviewing (keeping people awake, inadmissibility of evidence, taking up police time while individuals 'straighten up'); and issues of duty of care as the officer may not be aware of what drugs the individual has ingested.

Impact of illicit drug markets and policing activities on benzodiazepine use

In terms of availability of illicit drugs in the market and the impact of market changes on the types of drugs used by Tasmanian users, KI generally regarded the local users as quite flexible in terms of the drugs that they will use. Benzodiazepines were regarded as being more commonly used when individuals were unable to access a drug of choice such as methamphetamine or morphine. Most KI did not identify any particular recent policing strategies targeted to a reduction of benzodiazepine misuse, other than increased liaison and co-ordination with other stakeholders (pharmacies, Pharmaceutical Services).

Pharmaceutical opiates

KI reports in regards to the effects of pharmaceutical opiate misuse on policing and crime were generally quite similar to those reported for benzodiazepines.

Diversion of pharmaceutical opiates to the illicit market

All KI commenting on diversion methods for pharmaceutical opiates again reported that these drugs were commonly accessed through prescription of some form rather than theft. As per patterns with benzodiazepines, it was regarded that prescriptions are acquired for legitimate or feigned symptoms and then on-sold. Two KI also described more organised processes of procurement for morphine, with individuals 'recruited' specifically to access these drugs from doctors (either from local doctors or travelling interstate). In regards to methadone, two KI noted use of violence and other standover tactics to access the drug from individuals on the maintenance program.

Impact of illicit pharmaceutical opiates use on policing

Ten of the eleven KI believed that misuse of pharmaceutical opiates did have an impact on policing, with similar types of impacts noted to those arising from benzodiazepine misuse. However, KI noted a relatively greater impact of pharmaceutical opiate misuse on policing than benzodiazepines due to the greater dependence produced through regular use of opiates. There was a clear division among the KI as to the relative impact of morphine and methadone on policing, with half regarding morphine as having the greater impact, and half nominating methadone as requiring more attention. Morphine was considered to be more closely associated with commission of property crimes, as regular users require finances to maintain a habit, whereas methadone was considered to be more associated with assaults (upon individuals receiving methadone maintenance) and time spent following up reports of thefts of scripts.

Impact of pharmaceutical opiate intoxication on policing

Six KI indicated similar policing issues when individuals were intoxicated by pharmaceutical opiates as per issues noted in relation to benzodiazepines: unpredictable behaviour; difficulties in interviewing (aggression, keeping people awake, admissibility of evidence); and duty of care concerns.

Impact of illicit drug markets and policing activities on pharmaceutical opiate use

KI also regarded users of illicit pharmaceutical opiates as being flexible in their use of drugs to match the prevailing illicit market, with three KI reporting that consumers may simply switch to methamphetamine use if they cannot access pharmaceutical opiates. One KI noted that illicit morphine still remained readily available despite the recent arrest of a large scale supplier.

How law enforcement can impact on pharmaceutical misuse

Nine KI responded to the question of what strategies police could implement to impact on the misuse of pharmaceutical products. Three suggested enhanced targeting or surveillance of suppliers, indicating, however, that such a dedicated, proactive approach may require increased resources, and one suggested enhancement of school-based drug education programs. Some KI noted concern that, if there was a major reduction in the availability of these drugs, then existing users may swap to using other substances such as methamphetamine, which may cause further problems.

Likely implications of effective supply reduction of pharmaceuticals

Three KI believed that effective supply reduction of pharmaceuticals would have a beneficial effect, particularly in terms of reducing uptake of such substance use by new users (and consequently reducing the impact of drug-related crime if more people are kept out of such a situation). The remainder of respondents were less optimistic, suggesting that such supply reduction would be likely to have a limited impact on existing local users, with several informants (n=4) suggesting that as the price of the products increased (due to a decrease in availability) the level of crime committed by users would also increase in order to finance a habit, including raids on pharmacies or the homes of people known to be receiving such products. Other KI (n=4) suggested that such an impact may cause existing local users to switch to use of other drugs (such as methamphetamine) which may cause further problems or criminal behaviour.

Challenges faced by law enforcement in regard to illicit use of pharmaceuticals

In regards to the particular challenges faced when attempting to police the illicit use of pharmaceutical products, many of the problems noted by KI were similar to those faced when policing any illicit drug (needle stick injuries, ready availability of the drug, frivolous information from vindictive sources, the high person-hour costs involved in surveillance/searches, challenges translating knowledge to evidence). However, two problems particular to the policing of pharmaceutical products were reported: because the drugs are prescribed, this means that it is legitimate for some people to posses the drug, and, as such, these drugs are not as easily policed as methamphetamine or cannabis; and the fact that the main source of these products is generally via a legal prescription from a medical practitioner, rendering it difficult for police to move to constrain supply.

Appropriate harm minimisation approaches to pharmaceutical misuse

Finally, KI were asked to suggest appropriate harm minimisation approaches to the misuse of pharmaceuticals. Participant responses were targeted at all aspects of the issue: diversion of the user to counselling and support; more closely managed pharmaceutical maintenance programs; enhancement of drug education for young people; removal of the financial incentives to divert the pharmaceuticals; and the development of more jobs and training programs for youth generally. Three suggestions fell within the scope of the current project or held limited resourcing implications: police not attending overdoses unless an offence is committed; tightening of controls on the issue and re-issue of prescriptions; and identification of individuals who use illicit drugs that legitimately receive prescriptions, so that it can become more clear as to whether an individual's possession of such pharmaceuticals is legitimate or otherwise.

Summary with reference to NDLERF research questions

Is benzodiazepine /pharmaceutical opiate use amongst illicit drug users related to the commission of particular crimes (either to obtain these drugs and/or while under their influence)?

Which drugs from the benzodiazepine group and the pharmaceutical opiate group are most likely to be associated with crime (which is committed either to obtain the drugs and/or while under their influence)?

- Illicit use of pharmaceuticals was less commonly regarded as associated with crime than use of drugs such as methamphetamine or cannabis by these interviewees.
- Benzodiazepines were generally regarded as less strongly associated with crime than other pharmaceutical products, with the exception of the use of flunitrazepam as an aid to commit sexual assault.
- Morphine was regarded as being associated with the commission of property crime to meet the financial demands of addiction.
- Methadone was considered to be associated with assault, in terms of assaults committed upon individuals legitimately receiving these drugs by others seeking to access methadone illicitly.

What effect does being under the influence of/withdrawing from these drugs have on the types of crime committed and the behaviour of those committing the crimes?

What are the implication of this for police and other frontline workers such as accident and emergency staff, ambulance officers and health/youth workers?

- The major policing issues noted with respect to intoxication with pharmaceutical products were: unpredictable behaviour; difficulties with interviewing (keeping people awake, admissibility of evidence); and issues of duty of care of individuals detained in police custody while under the influence of these products.

What would be the potential/likely implications of more effective supply reduction of benzodiazepines and pharmaceutical opiates in terms of crime, offending and/or creating an environment that is more conducive to the establishment of a heroin/cocaine market and an environment in which the overall level of harm may actually be increased?

Three key themes emerged from the interviews:

- That such a supply reduction may have beneficial effects in terms of minimizing the uptake of such substances by new consumers.

- That existing consumers may increase their involvement in crime to finance the increased cost of such drugs on the illicit market, or increasingly target locations or individuals known to be a source of such drugs.
- That existing consumers may switch to predominant use of other drugs such as methamphetamine, which may cause a new set of problems in terms of health and criminal behaviour.

Stage two: Survey of people who inject drugs

Overview of the sample of people who inject drugs

A total of one hundred individuals that: a) injected at least once per month; b) had injected a pharmaceutical opioid or benzodiazepine in the preceding six months; and c) had resided in Hobart for at least the preceding twelve months were interviewed. The demographic characteristics of this group are presented in Table 3 below. The median age of PWID participants was 28.9 years (range 18-57), and 65% were male. One-third (32%) of participants lived within the Hobart city area, 28% in Glenorchy city, 21% in Clarence, 7% in Brighton, 2% from the Huon area and 2% from the Kingston area. Eight percent did not have any fixed address at the time of interview.

Table 3. Demographic characteristics of the PWID sample.

Characteristic	N=100
Median age (years)	28.9 (range 18-57)
Sex (% male)	65%
Ethnicity (%):	
English speaking background	100%
Non-English speaking background	0%
Aboriginal or Torres Strait Islander	10%
Employment (%):	
Not employed	78%
Full-time	3%
Part-time/casual	6%
Student	2%
Home duties	11%
Accommodation (%):	
Own house/flat	77%
Parent's/family house	9%
Boarding house/hostel	4%
Friends/house-sitting	-
No fixed address/homeless	10%
School education (mean years)	10.1 (range 7-12)

Table 3 continued.

Characteristic	N=100
Tertiary education (%):	
None	59%
Trade/technical	34%
University	7%
Prison history (%)	37%
Treatment history (%):	
Not currently in treatment	37%
Methadone maintenance therapy	56%
Buprenorphine maintenance therapy	3%
Drug & alcohol counselling	4%

Source: Stage two survey of PWID

Among those interviewed, there was a mean of 10.1 years (range 7-12) of school education, with 34% having a trade or technical qualification and 7% having university qualifications. More than three-quarters (78%) of the sample were not currently employed at the time of interview, while 11% were engaged in home duties, 6% in casual employment, 3% employed full-time and 2% currently enrolled in education full-time. In regard to source of income, the majority received their major income through a government pension or benefit (72%), with smaller proportions receiving the majority of their income through paid employment (8%) or through family members (1%). Almost one-fifth of the participants attained the majority of their income in the month prior to interview via illicit means, either through criminal activity (17%) or through sex work (2%). One-third (37%) of the sample had a previous prison history.

Two-thirds (63%) of the sample were involved in some form of treatment for substances use at the time of interview. This was most commonly methadone maintenance therapy (56%), with smaller proportions currently involved in buprenorphine maintenance (3%) or counselling (4%). Among these participants, the average duration of their involvement in treatment was 35 months (range 1-168 months).

Overview of drug use among the people who inject drugs sample

Among the current sample, the mean age of first use of any illicit drug was 14.1 years (range 9-24 years), with cannabis being the drug most commonly first used (88%: Table 4). First injection was, on average, four years later than the first use of any drug, at 18.8 years (range 12-45 years). Within the present sample, methamphetamine was most commonly the first drug injected (56%), followed by morphine (26%) and heroin (13%).

Table 4. Initiation into any, and injecting, drug use.

N=100	First drug ever used %	First drug ever injected %
Heroin	3	13
Methadone	1	4
Morphine	-	26
Methamphetamine	4	56

Table 4 continued.

N=100	First drug ever used %	First drug ever injected %
Cocaine	-	-
Ecstasy	-	1
Benzodiazepines	4	-
Cannabis	88	-
Other	-	-
Mean age of initiation	14.2 (range 9-24)	18.8 (range 12-45)

Source: Stage two survey of PWID

Heroin was the drug of choice for two-fifths of the PWID sample (Table 5). However, not a single participant reported that heroin was the drug that they had used most often in the month preceding interview. Methadone syrup was the single most commonly used drug amongst the cohort, reported as the drug they had predominantly used by 56% of the sample, in keeping with the proportion receiving methadone maintenance therapy (also 56%). Methadone was the drug of choice for 18% of the participants, with syrup generally the preferred form and also the form more commonly used in comparison to Physeptone tablets of methadone. Morphine was also the drug of choice for 18% of participants, with MS Contin being the most preferred brand. Where morphine was used by participants, MS Contin also appeared to be the form most commonly used, followed by Kapanol. Benzodiazepines were reported as the drug of choice and the drug most often used in the preceding month by 3% of the sample. In all such cases, Xanax (alprazolam) was the preferred and most commonly used benzodiazepine.

Table 5. Drug of choice and drugs most commonly used in the preceding month.

N=100	Drug of choice %	Drug most often injected in past month %	Drug most often used in past month %
Heroin	40	1	-
Methadone	18	50	56
Syrup	17	48	54
Physeptone	1	2	2
Morphin	18	32	18
MS Contin	7	17	7
Kapanol	3	8	5
Ordine	1	1	1
Anamorph	1	-	-
Oxycontin	-	1	-
Buprenorphine	-	-	1
Methamphetamine	12	13	6
Cocaine	-	-	-
Benzodiazepines	3	2	3
Xanax	3	2	3

Table 5 continued.

N=100	Drug of choice %	Drug most often injected in past month %	Drug most often used in past month %
Cannabis	6	-	14
Other	2	-	1

Source: Stage two survey of PWID

Frequency of injection by PWID participants during the month prior to interview (Table 6) was quite varied. Eleven percent reported injecting once per week or less often, 55% injected a few times per week (but not daily) in this time, and 34% reported injecting on a daily basis or more often.

Table 6. Frequency of injection during the past month.

Frequency of injection during the last month (N=100)	%
Weekly or less	11
More than weekly (but not daily)	55
Once a day	16
Two to three times per day	15
More than three times per day	3

Source: Stage two survey of PWID

Participants were also asked about their usual place of injection in the month prior to interview. In keeping with other studies with PWID conducted in the Tasmanian context (Bruno & McLean 2001, 2002, 2003, 2004), the overwhelming majority usually inject in private homes (91%: Table 7). Just 5% reported most commonly injecting in public toilets (with three of these individuals being homeless at the time of interview), 2% most commonly injecting in a car, and a single individual typically injecting in another public environment (street/park or beach).

Respondents were asked how much money they had spent on illicit drugs on the day prior to interview. The responses to this question are summarised in Table 8 below. Just over half of the sample (59%) had spent money on illicit drugs on the day before the interview, and that this was most commonly between $20 and $99. The median amount of money spent amongst the sample was $22.50 (range $0-720). Amongst only those participants that had spent money on the day prior to interview, the median amount of money spent was $50 (range $10-720). The drugs most commonly purchased were cannabis (23%), with a median expenditure of $25, and morphine (20%), with a median expenditure of $62.50. Smaller proportions of participants had purchased powder methamphetamine (13%), methadone (9%) or benzodiazepines (5%) on the day prior to interview.

Table 7. Usual location of injection in the month prior to interview.

Location	Usual %
Private home	91
Public toilet	5
Car	2
Street/park or beach	1

Source: Stage two survey of PWID

Table 8. Amount spent on illicit drugs on the day prior to interview.

Drug (N=100)*	Purchased %	Median expenditure	Expenditure range
Cannabis	23%	$25.00	$10-75
Methadone	9%	$25.00	$0-100
Benzodiazepines	5%	$10.00	$10-40
Morphine	20%	$62.50	$10-370
Methamphetamine: powder	13%	$100.00	$40-600
Methamphetamine: base/paste	2%	$100.00	$50-150
Other opiates	1%	$64.00	$64
Did not purchase any drugs	41%	-	-
Amount spent on day prior to interview			
Nothing		41%	
Less then $20		6%	
$20-49		14%	
$50-99		21%	
$100-199		12%	
$200-399		3%	
$400 or more		3%	

* no participants purchased crystal methamphetamine, pharmaceutical stimulants, heroin, cocaine, antidepressants, or buprenorphine on the day prior to interview

Source: Stage two survey of PWID

Drug use histories of the PWID participants are summarised in Table 9 below. Despite being individuals that had injected pharmaceutical opioids or benzodiazepines in the preceding six months, it was clear that there was a substantial level of polydrug use amongst this group. All, or almost all, had used heroin, methadone syrup, Physeptone, morphine, methamphetamine, pharmaceutical stimulants, benzodiazepines and cannabis at some stage in their lives. In the six months prior to interview, cannabis, benzodiazepines, morphine, methamphetamine, methadone syrup, and alcohol were the drugs most commonly used.

Table 9. Drug use history of the PWID sample (N=100).

Drug Class	Ever used %	Ever injected %	Injected last 6 months %	Median number of days injected in last 6 months*	Ever swallowed %	Swallowed last 6 months %	Used last 6 months %	Median number of days used in last 6 months*
Heroin	75	74	16	4	13	2	16	4
Methadone syrup (licit)	79	76	54	72	77	60	60	180
Methadone syrup (illicit)	92	90	69	24	35	21	69	24
Physeptone (licit)	23	21	11	40	18	3	11	40
Physeptone (illicit)	88	87	60	6	42	20	60	7
Morphine (licit)	25	22	11	10	15	4	11	24
Morphine (illicit)	96	94	75	40	52	29	81	36
Homebake†	27	24	4	34	6	1	4	40
Other opiates (licit)	37	20	7	10	33	21	24	13
Other opiates (illicit)	65	44	24	9	48	22	36	7
Methamphetamine	100	100	81	12	43	13	81	16
Pharmaceutical stimulants	81	75	39	5	51	23	47	6
Cocaine	51	40	9	2	16	2	10	4
Hallucinogens	73	26	1	1	71	13	14	2
Ecstasy	64	42	11	1	57	21	26	2
Benzodiazepines (licit)	84	43	14	6	82	68	68	180
Benzodiazepines (illicit)	93	58	42	11	89	75	81	12
Alcohol	95	15	2	1	95	60	60	12

Table 9 continued.

Drug Class	Ever used %	Ever injected %	Injected last 6 months %	Median number of days injected in last 6 months*	Ever swallowed %	Swallowed last 6 months %	Used last 6 months %	Median number of days used in last 6 months*
Cannabis	100	-	-	-	-	-	85	180
Anti-depressants	61	5	1	2	61	29	29	180
Inhalants	37	-	-	-	-	-	5	5
Buprenorphine (licit)	13	9	4	2	13	8	9	25
Buprenorphine (illicit)	16	11	3	4	10	4	8	7

*Among those using the drug

†'Homebake' is a term used to describe the end product of an illicit drug manufacturing process, typically conducted within domestic kitchens, using codeine-based pharmaceuticals to make morphine and/or heroin. The end product may contain a combination of heroin, morphine, codeine and unwanted chemicals used in the manufacturing process, such as pyridine hydrochloride or chloroform

Source: Stage two survey of PWID

Recent Benzodiazepine Use

Benzodiazepine use was almost ubiquitous amongst the PWID sample, with 84% having these drugs prescribed to them at some stage of their lives, and 93% using them illicitly at some time (Table 9). In terms of more recent patterns of use, more than two-thirds (68%) of participants had been prescribed benzodiazepines in the six months prior to interview, and 81% had used illicitly-accessed benzodiazepines in this period (Table 9).

Routes of administration of benzodiazepines and forms used

Ninety percent of PWID participants reported using benzodiazepines administered orally in the preceding six months (including both licit and illicit use). The benzodiazepines most commonly used orally were Valium (diazepam: 69%); Serepax (oxazepam: 49%); Xanax (alprazolam: 44%); Antenex (diazepam: 30%); Temaze tablets (temazepam: 28%); Mogadon (nitrazepam: 28%); Kalma (alprazolam: 23%); Ducene (diazepam: 20%) and Hypnodorm (flunitrazepam: 17%) (Table 10). Data from the 2003 IDRS survey of regular PWID in Hobart (Bruno & McLean 2004) showed a similar pattern of oral use: Valium (69%), Xanax (29%), Serepax (27%), Mogadon (19%), and Temaze tablets (12%). In keeping with the substantial proportion of individuals receiving prescriptions for benzodiazepines, the median frequency of oral use was 115 days out of the previous 180 among the PWID sample.

Intravenous administration of benzodiazepines in the six months prior to interview was reported by almost half of the PWID participants (46%: Table 10). However, amongst these individuals, benzodiazepine injection was not a particularly common event, with the median frequency of injection being 9 days in the preceding 180 days. While capsule preparations of temazepam had been the benzodiazepine most commonly injected in each of the previous three IDRS surveys in Hobart (Bruno & McLean 2002, 2003, 2004), within the current PWID sample, Xanax (alprazolam) was the benzodiazepine most commonly used intravenously (25%). Other commonly injected benzodiazepines were 20mg Euhypnos capsules (temazepam: 21%), 20mg Normison capsules (temazepam: 14%), and Temaze tablets (temazepam: 10%).

Table 10. Use of benzodiazepines in the preceding six months among the PWID sample (N=100).

Benzodiazepine	Used orally in past 6 months %	Number of days used orally in last 6 months	Injected in past 6 months %	Number of days injected in last 6 months
Alprazolam				
Alprax	5	8	3	12
Alprazolam (generic)	1	2	-	-
Kalma	23	6	8	8
Xanax	44	12	25	5
Diazepam				
Antenex	30	72	2	3
Diazepam (generic)	12	38	2	4
Ducene	20	16	2	3
Valium	69	24	7	4
Valpam	9	8	-	-

Table 10 continued.

Benzodiazepine	Used orally in past 6 months %	Number of days used orally in last 6 months	Injected in past 6 months %	Number of days injected in last 6 months
Nitrazepam				
Alodorm	14	8	1	6
Mogadon	28	15	1	4
Oxazepam				
Alepam	12	5	1	2
Murelax	13	6	-	-
Serepax	49	5	4	3
Temazepam				
Euhypnos 10mg capsules	5	2	5	10
Euhypnos 20mg capsules	9	3	21	3
Normison 10mg tablets	6	5	4	7
Normison 10mg capsules	3	3	9	12
Normison 20mg capsules	9	5	14	8
Temaze 10mg capsules	9	5	10	8
Temaze 20mg capsules	5	3	7	10
Temaze 10mg (tablets)	28	5	6	2
Temtabs (tablets)	5	6	-	-
Other benzodpazepines				
Ativan (lorazepam)	-	-	-	-
Frisium (clobazepam)	-	-	-	-
Halcion (triazolam)	1	50	-	-
Hypnodorm (flunitrazepam)	17	10	5	3
Lexotan (bromazepam)	4	15	-	-
Paxam (clonazepam)	3	1	1	1
Rivotril (clonazepam)	9	3	2	17
Related products				
Buspar (buspirone)	-	-	-	-
Catapres (clonidine)	7	3	-	-
Imovane (zopiclone)	-	-	-	-
Stillnox (zolpidem)	4	1	-	-
Unisom (sleep gel)	2	5	-	-
Any benzodiazepine				
Use	90	115	46	9

Source: Stage two survey of PWID

Other drug use by benzodiazepine users

Studies of regular injecting drug users in Hobart in recent years have consistently shown that benzodiazepine use is common among such groups, regardless of whether the individual reports primarily injecting methadone, morphine or methamphetamine (Bruno & McLean 2001, 2002, 2003, 2004). However, these studies have also indicated that, while common to all such groups, benzodiazepine use was higher in primary regular injectors of methadone and morphine than primary injectors of methamphetamine. While the 2002 Hobart IDRS study suggested that benzodiazepine injection was more common in primary injectors of methadone or morphine than primary injectors of methamphetamine, there was no such differential relationship identified among the participants in the 2003 IDRS (Bruno & Mclean 2003, 2004).

The association between recent use of benzodiazepines and other drugs within the current PWID sample is detailed in Table 11. Given that participants in the current study were selected on the basis of their use of pharmaceutical opiates and benzodiazepines, it is difficult to infer trends in regard to patterns of use on the basis of this sample. However, when the information discussed above is taken into consideration in conjunction with the data presented in Table 11, a number of points can be observed. Firstly, a significantly greater proportion of those that had recently used benzodiazepines had also used illicitly-accessed methadone syrup (continuity-corrected $\chi^2(1)=4.1$, $p=0.04$) than those that had not recently used benzodiazepines. Secondly, those that had recently 'injected' benzodiazepines were significantly more likely to have also accessed methadone syrup (continuity-corrected $\chi^2(1)=5.6$, $p=0.02$) or Physeptone ($\chi^2(1)=4.2$, $p=0.04$) illicitly than those that did not inject benzodiazepines. Finally, it is noteworthy that 'all' of those that reported recently injecting benzodiazepines had also accessed benzodiazepines via illicit means in the preceding six months. These findings, in conjunction with those in the somewhat broader local IDRS studies, would support a relationship between benzodiazepine use and illicit methadone use amongst 'regular injecting drug user' cohorts in Hobart.

Table 11. Relationships between recent benzodiazepine use and use of other drugs (N=100).

Drug Class	% of the PWID sample using this drug	% of those that used benzodiazepines that also used this drug in the past six months	% of those that injected benzodiazepines that also used this drug in the past six months
Heroin	16	15	13
Methadone syrup (licit)	60	62	69
Methadone syrup (illicit)	69	73*	82*
Physeptone (licit)	11	12	16
Physeptone (illicit)	60	63	71*
Morphine (licit)	11	12	4
Morphine (illicit)	81	80	80
Homebake	4	3	7
Other opiates (licit)	24	25	31
Other opiates (illicit)	36	36	42

Table 11 continued.

Drug Class	% of the PWID sample using this drug	% of those that used benzodiazepines that also used this drug in the past six months	% of those that injected benzodiazepines that also used this drug in the past six months
Methamphetamine	81	81	82
Pharmaceutical stimulants	47	48	53
Cocaine	10	12	9
Hallucinogens	14	10	11
Ecstasy	26	25	20
Benzodiazepines (licit)	68	75	76
Benzodiazepines (illicit)	81	89	100*
Alcohol	60	60	69
Cannabis	85	84	82
Anti-depressants	29	29	36
Inhalants	5	3	2
Buprenorphine (licit)	9	9	9
Buprenorphine (illicit)	8	7	4

*chi-square tests significant at $p<0.05$

Source: Stage two survey of PWID

Sources of benzodiazepines

PWID participants were asked to nominate the methods through which they had accessed each of the benzodiazepine types that they had used in the six months prior to interview (Table 12). It is clear that these individuals are accessing benzodiazepines from a range of sources. When considering all of the different sources of benzodiazepines in the preceding six months, almost two-thirds of participants had received them as a gift (65%) or through a legitimate medical prescription (64%). Purchasing the drug through friends (37%), swapping of drugs to obtain benzodiazepines (27%) and purchasing the drug from a dealer (21%) were other commonly used pathways to access. It is noteworthy that only 5% of those studied reported faking symptoms to obtain benzodiazepines from a medical practitioner in the preceding six months (doctor-shopping), and that no participants reported stealing benzodiazepines or forging scripts to access the drug in this time. When asked to specify the source that the PWID participant had attained the majority of their benzodiazepines from in the preceding six months, it was clear that illicit sources of access were 'secondary' to legitimate access to these drugs from a medical practitioner for this group: 52% of participants reported that they attained the majority of their benzodiazepines from a medical practitioner for legitimate reasons compared to 11% accessing the majority of their benzodiazepines through swapping drugs; 9% as gifts; and 9% as a purchase from friends. Just 5% reported predominantly purchasing benzodiazepines from a 'dealer' in the preceding six months, with 3% most commonly accessing them through presenting with feigned symptoms to a medical practitioner. Again, no participant had stolen benzodiazepines or forged prescriptions to access such drugs in the preceding six months. Similarly, not a single PWID participant had ever purchased any benzodiazepine over the internet.

Table 12. Pathways to access of benzodiazepines in the preceding six months among the PWID sample (N=100).

Benzodiazepine	All sources in past six months						Main source in the past six months						Median price last paid (range in parentheses)
	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	
Alprazolam													
Alprax	-	-	4	1	1	1	-	-	4	1	1	-	$6:2mg (n=1)
Alprazolam (generic)	-	-	1	-	-	-	-	-	1	-	-	-	-
Kalma	8	-	11	7	2	1	7	-	10	6	2	1	-
Xanax	16	-	19	14	7	6	13	-	15	12	5	4	$4:2mg ($1.0-5.0, n=9)
Diazepam													
Antenex	15	2	8	5	4	5	15	2	4	3	2	3	$1:2mg ($1.0-2.0, n=3) $1:5mg ($0.5-10.0, n=3)
Diazepam (generic)	8	-	3	1	1	2	7	-	1	1	-	2	$0.75:5mg (n=1)
Ducene	5	-	10	3	4	-	5	-	8	2	2	-	$2.25:2mg ($2.0-2.5, n=2) $3:5mg ($0.5-25.0, n=4)
Valium	37	3	23	12	10	10	32	3	11	4	7	8	$1:5mg ($0.5-2.0, n=8)
Valpam	3	-	5	1	-	1	3	-	4	1	-	1	$0.2:5mg (n=1)
Nitrazepam													
Alodorm	4	-	5	5	1	3	4	-	4	2	1	3	$1:5mg ($0.5-2.0, n=3)
Mogadon	10	1	12	3	1	4	10	-	11	2	1	4	$1.25:0.5mg ($0.5-2.0, n=4)

Table 12 continued.

Benzodiazepine	All sources in past six months						Main source in the past six months						Median price last paid (range in parentheses)
	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	
Oxazepam													
Alepam	5	-	4	2	1	-	5	-	2	2	1	-	-
Murelax	5	-	7	2	-	2	5	-	4	2	-	2	$7.50:15mg ($5.0-10.0, n=2)
Serepax	11	-	28	5	6	7	10	-	24	4	5	6	$1.5:15mg ($0.5-2.0, n=3) $2:30mg ($1.0-2.0, n=5)
Temazepam													
Euhypnos 10mg capsules	2	-	3	1	1	1	2	-	3	1	1	1	$2:10mg ($1.5-2.5, n=2)
Euhypnos 20mg capsules	4	-	13	9	3	1	3	-	12	8	1	1	$5:20mg ($3.0-40.0, n=11)
Normison 10mg tablets	-	-	3	2	1	1	-	-	3	2	1	1	$2:10mg (n=1)
Normison 10mg capsules	1	-	4	2	3	3	-	-	4	1	1	1	$3.75:10mg ($2.5-5.0, n=2)
Normison 20mg capsules	4	-	6	7	6	2	4	-	4	7	5	1	$10:20mg ($1.0-40.0, n=11)
Temaze 10mg capsules	3	-	7	4	1	-	3	-	7	4	1	-	$5:10mg ($1.0-5.0, n=5)
Temaze 20mg capsules	2	-	3	2	3	-	2	-	3	2	3	-	$10:20mg (n=1)
Temaze 10mg (tablets)	12	-	9	4	2	2	11	-	9	4	2	2	$2:10mg ($1.0-25.0, n=6)
Temtabs (tablets)	-	-	4	-	-	1	-	-	4	-	-	1	-

Table 12 continued.

Benzodiazepine	All sources in past six months						Main source in the past six months						Median price last paid (range in parentheses)
	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	
Other benzodiazpeines													
Ativan (lorazepam)	-	-	-	-	-	-	-	-	-	-	-	-	-
Frisium (clobazepam)	-	-	-	-	-	-	-	-	-	-	-	-	-
Halcion (triazolam)	1	-	-	-	-	-	1	-	-	-	-	-	-
Hypnodorm (flunitrazepam)	3	-	5	8	3	2	3	-	2	8	2	1	$2.50:1mg ($1.0-50.0, n=11)
Lexotan (bromazepam)	-	-	3	-	-	1	-	-	3	-	-	1	-
Paxam (clonazepam)	-	-	2	-	1	-	-	-	2	-	1	-	$1:2mg (n=1)
Rivotril (clonazepam)	1	-	4	1	2	1	1	-	4	1	2	1	$6:2mg ($2.0-10.0, n=2)
Related products													
Buspar (buspirone)	-	-	-	-	-	-	-	-	-	-	-	-	-
Catapres (clonidine)	3	-	3	-	1	-	3	-	3	-	1	-	$2:100mg (n=1)
Imovane (zopiclone)	-	-	-	-	-	-	-	-	-	-	-	-	-
Stillnox (zolpidem)	2	-	2	-	-	-	2	-	2	-	-	-	-
Unisom (sleep gel)	-	-	-	-	-	-	-	-	-	-	-	-	
Any benzodiazepine	**64**	**5**	**65**	**37**	**21**	**27**	**52**	**3**	**9**	**9**	**5**	**11**	-

Source: Stage two survey of PWID

In terms of benzodiazepines prescribed directly to PWID participants for self-reported legitimate reasons, diazepam was clearly the most commonly prescribed benzodiazepine (37% receiving Valium, 15% Antenex), with smaller proportions being prescribed Xanax (16%), Serepax (11%) or Mogadon (10%). In keeping with such a finding, among those individuals that reported receiving benzodiazepines through doctor-shopping, diazepam was almost exclusively prescribed.

Valium too was the benzodiazepine that was most commonly received through swaps between consumers for drugs (10%), followed by Serepax (7%) and Xanax (6%). A range of benzodiazepines were also given to PWID participants as gifts, most commonly Serepax (28%), Valium (23%), and Xanax (19%). Surprisingly, given the relative availability of such drugs from other sources, there was no major difference between the benzodiazepines most commonly received through gifts or bartering and those that were purchased, with Valium, Xanax and Serepax among those most commonly purchased, although noteworthy minorities also reported purchasing 20mg temazepam gel capsules (Euhypnos or Normison) or flunitrazepam in the preceding six months (Table 12).

PWID participants that reported accessing benzodiazepines from any source other than a medical practitioner in the previous six months were asked to nominate the level of dealing and the other drugs sold by the individual that they had accessed the majority of their illicit benzodiazepines from (Table 13). In keeping with the relative dominance of non-financial modes of access to benzodiazepines indicated in Table 12 (gifts or swapping), the largest proportion of participants reported that their usual source of illicit benzodiazepines was a friend (26%). These individuals typically (65%, n=17 out of 26) did not sell or provide any other substances. The next most commonly reported provider type was a 'small-time' dealer (20%), who generally did also provide other substances, typically methamphetamine (55%), morphine (50%), and/or cannabis (40%). Smaller proportions of PWID participants reported generally accessing their illicit benzodiazepines from 'user/dealers' (individuals selling drugs to financially support their own use: 13%) or large-scale suppliers (9%). The 'user/dealers' typically provided other drugs in addition to benzodiazepines, typically methamphetamine (46%), morphine (46%), cannabis (46%) and/or methadone (31%). Befitting their reported status as 'large-scale suppliers', while they were not typically the participants' main supply of illicit benzodiazepines, such individuals also sold methamphetamine (89%), morphine (78%) and/or methadone (56%).

Table 13. Other drugs sold by providers of benzodiazepines.

	Friend %	User/dealer (selling to fund use) %	Small-time dealer %	Large-scale supplier %	Total %
Provider type	26	13	20	9	68
Other drugs sold					
Heroin	-	-	5% (n=1)	-	1% (n=1)
Methadone	8% (n=2)	31% (n=4)	20% (n=4)	56% (n=5)	22% (n=15)
Morphine	8% (n=2)	46% (n=6)	50% (n=10)	78% (n=7)	37% (n=25)
Other opiates	-	-	5% (n=1)	11% (n=1)	3% (n=2)
Methamphetamine	4% (n=1)	46% (n=6)	55% (n=11)	89% (n=8)	38% (n=26)
Cocaine	-	-	-	11% (n=1)	1% (n=1)

Table 13 continued.

	Friend %	User/dealer (selling to fund use) %	Small-time dealer %	Large-scale supplier %	Total %
LSD	-	-	5% (n=1)	33% (n=3)	6% (n=4)
Ecstasy	-	8% (n=1)	5% (n=1)	22% (n=2)	6% (n=4)
Cannabis	4% (n=1)	46% (n=6)	40% (n=8)	33% (n=3)	28% (n=19)
Benzodiazepines (multiple types)	8% (n=2)	15% (n=2)	15% (n=3)	22% (n=2)	13% (n=9)
Does not sell any other drugs	65% (n=17)	8% (n=1)	5% (n=1)	11% (n=1)	29% (n=20)

Source: Stage two survey of PWID

Price, availability and market changes

Where PWID participants had reported purchasing benzodiazepines illicitly in the preceding six months, they were asked to nominate the price that they last paid for each type of benzodiazepine. These are summarised in Table 12, however, given that less than half the sample (47%) had purchased benzodiazepines illicitly in this time, the numbers reporting on the price of each benzodiazepine type are quite small, and as such these prices should be interpreted with caution. Median prices for the more commonly purchased benzodiazepines were $4 per 2mg Xanax tablet, $1 for a 5mg Valium tablet, $5 for a 20mg Euhypnos capsule, $10 for a 20mg Normison capsule and $2.50 for a 1mg Hypnodorm tablet. These prices are relatively commensurate with those reported in the 2003 IDRS study in Hobart, conducted just a few months prior to the current study. In the IDRS (Bruno & McLean 2004), reported median purchase prices were $5 per 2mg Xanax, $1 for 5mg Valium, $5 for 20mg Euhypnos capsules, $6 for 20mg Normison capsules, and $2.50 for 1 mg Hypnodorm. The IDRS report also contains a comparison of reported prices over time (2001-2003), suggesting that the price of most tablet benzodiazepine preparations has remained reasonably stable in this period, but prices for temazepam gel capsules (Euhypnos, Normison) have increased slightly (both were a median of $4 each in the 2001 IDRS study in Hobart).

Participants that reported accessing benzodiazepines illicitly in the past six months were asked their perceptions about the illicit market in recent months (Table 14). Less than half of the participants had illicitly accessed temazepam gel capsules in the six months prior to interview (47%). Among these individuals, opinion was split about the ease of access to such preparations, with 57% (n=27) regarding them as difficult or very difficult to access in this time, and 43% (n=20) as easy or very easily accessed in this time. There was a clearer opinion in terms of changes to the availability of these preparations, with 64% (n=30) noting that gel capsules of benzodiazepines had become more difficult to access in the previous six months, although 30% (n=10) noted no change in availability in this time. Consistent with the noted price changes for temazepam gel capsules over time across the 2001-2003 IDRS studies, 39% (n=18) of those that had recently purchased these preparations reported that their price had increased, although an equal number perceived no price changes in the preceding six months (39%, n=18).

Reported market trends for illicit access to benzodiazepine tablets were much clearer. Among the 66% of PWID participants that had recently accessed such preparations illicitly, the drugs were considered easy (58%, n=38) or very easy (23%, n=15) to access, with this situation predominantly regarded as remaining stable in the preceding six months (67%, n=44: although 21% noted a

decreasing availability of the drugs in this time). Prices were also generally considered as having remained stable in this time (51%, n=34), with a minority reporting that prices had increased in the preceding six months (24%, n=16).

Table 14. PWID reported trends in illicit access to benzodiazepines in the preceding six months (N=100).

	Gel capsules %	Tablets %
Didn't purchase illicitly	52	34
Ease of access*		
Very easy	5	15
Easy	15	38
Difficult	17	9
Very difficult	10	1
Change to access*		
Easier	3	6
No change	14	44
More difficult	30	14
Fluctuates	1	1
Price change*		
Increasing	18	16
Stable	18	34
Decreasing	-	3
Fluctuates	2	3
Last time accessed*		
Median time to score	15 minutes (range 0-2,880)	20 minutes (range 0-120)

*proportion of total sample

Source: Stage two survey of PWID

PWID participants were also asked about the ease at which they accessed benzodiazepines from a medical practitioner in the preceding six months. When considering this information, it should be noted that only 5% of the 100 individuals participating reported feigning symptoms in an attempt to access benzodiazepines in the six months prior to interview, and previous studies with similar local PWID populations (e.g. Bruno & McLean 2004) have indicated that a high proportion of this group experience symptoms that would suggest a legitimate reason for receiving prescribed benzodiazepines. As such, these trends would best be considered as describing the ease with which benzodiazepines are prescribed when symptoms are present for their use, rather than reflecting the ease at which these drugs are accessed when symptoms are feigned. Table 15 summarises access to benzodiazepines from medical practitioners within the preceding six months. Just 10% of the PWID sample reported requesting gel capsule preparations of temazepam from medical practitioners in this time. The majority of these participants reported that it was 'very difficult' to access gel capsule preparations from doctors. Anecdotally, many respondents suggested that they simply didn't bother to ask for such preparations, as they knew they would be

refused and, further, that this may jeopardise their relationship with their doctor (whom they may be seeing for methadone maintenance or other reasons). Of those commenting on availability, most perceived that it had recently become more difficult to access such preparations from doctors (n=16) or that there had been no recent changes to this situation (n=10). Of the 10 individuals that had recently requested temazepam gel capsules from a medical practitioner, 6 had been successful, and 5 had been unsuccessful (one individual had requested from more than one doctor). While four participants reported requesting gel capsules from more than one doctor, only two had approached more than two medical practitioners for the drug in the preceding six months.

Sixty-one percent of PWID participants had requested (or received as part of ongoing medical treatment) benzodiazepine tablets from medical practitioners in the six months prior to interview. Reports of ease of access were strikingly similar to those reported for illicit access to benzodiazepine tablets: the clear majority reporting that these drugs were easy (55%, n=36) or very easily prescribed (29%, n=19); and that this situation had remained similar (64%, n=42) or prescription had become slightly more difficult in the preceding six months (29%, n=19). All participants that had requested benzodiazepine tablets from medical practitioners in the preceding six months had been successful on at least one occasion (remembering that only 5 individuals reported feigning symptoms to attempt to gain a prescription in this time), with only three individuals reporting that their request was refused. While 10 participants reported requesting benzodiazepine tablets from more than one medical practitioner in the preceding six months, only three participants had made such a request of more than two doctors in this time. In sum, it would appear that – given the level of access that this group of PWID have to benzodiazepines, which are commonly prescribed for legitimate clinical reasons – there is very little use of, or the requirement for, 'doctor-shopping' to obtain these drugs.

Table 15. PWID reported trends in access to benzodiazepines from medical practitioners in the preceding six months.

	Gel capsules %	Tablets %
Didn't request	90	39
Ease of access*		
Very easy	5	19
Easy	2	36
Difficult	2	9
Very difficult	20	2
Change to access*		
Easier	1	2
No change	10	42
More difficult	16	19
Fluctuates	-	3
Access attempts from GP		
Requested from GP (n)	10	61
Successful from GP (n)	6	61
Unsuccessful from GP (n)	5	3
Requested from >1 GP (n)	4	10
Successful from >1 GP (n)	1	10

*proportion of total sample

NB: GP refers to a medical practitioner

Source: Stage two survey of PWID

Relative benzodiazepine preferences

It was clear from the examination of pathways to access of benzodiazepines within the current sample that theft of benzodiazepines, or forging of scripts to access benzodiazepines, was non-existent among this group. Similarly, use of 'doctor-shopping' to access these drugs was minimal, with just 5% reporting feigning symptoms to access these drugs in the six months prior to interview. Such low levels of access may reflect the relatively easy availability of these drugs to the PWID group, or they may also reflect the fact that such drugs are not attractive enough to this group that they would merit such measures (or a combination of the two). To gain some insight into the issue of relative 'attractiveness' of the many differing preparations of benzodiazepines to this group of regular PWID, participants were asked to rate their preference for each form that they had used in the preceding six months, on a scale of 1 (their least desired drug) to 10 (their most desired drug). While there is a clear hierarchy of benzodiazepine preference that has been established in the relevant literature that relates to the relative potency of psychoactive effect of the benzodiazepine and its speed of onset of effect, it would be anticipated that other aspects such as ease of preparation for intravenous administration, or the degree to which each benzodiazepine complements the other drugs used by this group (such as methadone), may play a role in the relative preference for each of these forms. This information in turn can help predict which forms would be most likely to be targeted for theft or doctor-shopping should the degree of motivation exist for such modes of access.

Benzodiazepines, overall, were not considered particularly attractive to this PWID group, with a median preference rating of 6.0 (Table 16) for the group of drugs overall, in comparison to median preference ratings of 10.0 for heroin and 8.0 for cannabis in this sample. However, there was considerable variation in regard to relative preferences across each benzodiazepine type. The benzodiazepine preparations most desired overall were gel capsule preparations of temazepam, flunitrazepam (Hypnodorm), clonidine (not a benzodiazepine but a related drug) and alprazolam (Xanax, Kalma), all receiving median ratings of 7.0 or 8.0. The next step down in preference (median ratings of 6.0 or 7.0) were oxazepam (Murelax, Serepax) and nitrazepam (Mogadon, Alodorm). Least preferred, and generally receiving ratings in the range of 5.0-6.0, were diazepam (Valium) and temazepam tablets (Temaze, Normison). As such, with the recent removal of temazepam capsule preparations from the market and the heavy scheduling restrictions on access to flunitrazepam, it could be predicted that alprazolam would be the benzodiazepine most likely to be targeted for illicit use among regular PWID groups. In keeping with such an assertion, it was noted in the 2003 Hobart IDRS study that, as injection of temazepam gel capsules had declined among local PWID cohorts (due to restrictions on prescription of these preparations), injection of alprazolam had increased (Bruno & McLean 2004). Additionally, associated with this change, alprazolam was increasingly being used among such groups in the same ways that temazepam gel capsules had been used, not only in terms of intravenous use on its own, but in combination with methadone syrup (Bruno & McLean 2004). The use of multiple central nervous system depressants is known to increase the risk of overdose (Warner-Smith et al. 2000), and there were anecdotal reports of several overdose deaths during 2002-2003 in Hobart that were associated with the use of methadone in combination with alprazolam noted by KI in the 2003 IDRS study (Bruno & McLean 2004).

Table 16. Relative benzodiazepine preferences.

Benzodiazepine	n	Drug preference (out of 10) Median	Drug preference (out of 10) Mean
Alprazolam			
Alprax	6	6.0	6.3
Alprazolam (generic)	1	3.0	3.0
Kalma	25	7.0	6.6
Xanax	16	8.0	7.2
Diazepam			
Antenex	28	5.5	5.7
Diazepam (generic)	12	5.0	6.0
Ducene	19	5.0	6.1
Valium	64	6.0	6.0
Valpam	9	5.0	5.0
Nitrazepam			
Alodorm	14	6.5	6.0
Mogadon	28	6.0	5.5
Oxazepam			
Alepam	13	5.0	5.5
Murelax	13	7.0	6.5
Serepax	47	6.0	5.8
Temazepam			
Euhypnos 10mg capsules	7	8.0	8.0
Euhypnos 20mg capsules	25	7.0	6.4
Normison 10mg tablets	7	8.0	6.4
Normison 10mg capsules	10	8.5	7.9
Normison 20mg capsules	20	9.0	8.0
Temaze 10mg capsules	15	5.0	6.0
Temaze 20mg capsules	10	7.5	7.8
Temaze 10mg (tablets)	28	5.5	5.5
Temtabs (tablets)	5	6.0	5.2

Table 16 continued.

Benzodiazepine	n	Drug preference (out of 10) Median	Drug preference (out of 10) Mean
Other benzodiazepines			
Halcion (triazolam)	1	7.0	7.0
Hypnodorm (flunitrazepam)	16	8.0	7.0
Lexotan (bromazepam)	4	8.0	8.3
Paxam (clonazepam)	2	1.5	1.5
Related products			
Catapres (clonidine)	7	8.0	8.0
Stillnox (zolpidem)	4	2.0	3.8
Unisom (sleep gel)	2	6.5	6.5
Any benzodiazepine		6.0	6.2

Source: Stage two survey of PWID

Summary of recent benzodiazepine use with reference to NDLERF research questions

Is there a correlation between the use of benzodiazepines and other drugs?

- Benzodiazepine use was common among the entire PWID sample.
- However, those that had recently used benzodiazepines were significantly more likely to have recently used illicitly accessed methadone syrup than those that had not recently used benzodiazepines. A similar relationship was shown for injection of benzodiazepines and use of diverted methadone syrup and of Physeptone tablets.

How are benzodiazepines obtained on the illicit market?

- PWID participants predominantly received benzodiazepines through legitimate prescriptions from a medical practitioner.
- Access to benzodiazepines from non-legitimate sources were clearly a secondary, and substantially less prevalent, pathway to access of these drugs. It was also more common for PWID participants to access benzodiazepines through gifts or trading of other drugs than to access these through illicit purchase.
- Feigning symptoms to obtain benzodiazepines was uncommon and no participants had recently stolen benzodiazepines, forged prescriptions or purchased these drugs over the internet.

To what extent is doctor-shopping used to obtain benzodiazepines and how easy is it to obtain such drugs by this method?

- PWID participants had good access to legitimate prescriptions for benzodiazepines, predominantly prescribed for legitimate clinical considerations. As such, there was very little use of, or the requirement for, 'doctor-shopping' to obtain these drugs.

Are illicit benzodiazepines sold by sellers of other illicit drugs? What is their cost?

- While access to benzodiazepines was predominantly through legitimate prescriptions, where these were accessed illicitly, this was most commonly through friends (who did not provide or sell any other drugs) or from individuals characterised as 'small-time dealers', who may also provide methamphetamine, morphine and/or cannabis.
- Median purchase prices ranged from $1 per 5mg Valium tablet, and $4 per 2mg Xanax tablet, to $5-10 for 20mg gel capsules of temazepam.

Do those drug users who steal benzodiazepines exclusively or primarily inject them?

- No PWID participants reported stealing benzodiazepines in the preceding six months.

Are there particular types of benzodiazepines that are more likely to be targeted by those wishing to steal them and if so why?

- Theft or 'doctor-shopping' to access benzodiazepines was minimal or non-existent amongst the current PWID cohort.
- However, there was a hierarchy of preference for benzodiazepines, with gel capsules of temazepam, flunitrazepam and alprazolam most preferred, followed by oxazepam and nitrazepam, with diazepam and temazepam tablets least preferred. This appears to be related to relative potency and speed of effect of these formulations, and is well-established in the literature.

Pharmaceutical opiates

Given that the current PWID sample was selected only if they were currently, illicitly injecting pharmaceuticals, it is not surprising that a high proportion of participants had used pharmaceutical opiates. Almost all of the participants (92%) had ever used illicitly accessed methadone syrup, and 79% had had this prescribed to them at some stage (Table 9). Similarly, 88% had ever used illicitly accessed Physeptone, with 23% receiving this through prescription at some time. Morphine had been used illicitly by 96% of participants, and had been prescribed to 25%. Other pharmaceutical opiates such as oxycodone had been used by almost two-thirds (65%) illicitly, and had been prescribed to one-third (37%) of participants. Buprenorphine use was much less common, however, with 16% of participants ever using it illicitly and 13% ever having it prescribed to them.

Routes of administration and forms used

Eleven percent of the PWID sample had received a prescription for morphine in the preceding six months; however, 81% had used the drug illicitly in this time. Injection was the predominant mode of administration, with only one-third (36%) of participants that had recently accessed the drug by either means administering morphine orally (Table 9). The preparations of morphine most commonly used orally were 30 and 60mg tablets of MS Contin. Preparations most commonly injected, in decreasing prevalence, were 60mg MS Contin, 50mg Kapanol, 100mg MS Contin, 100mg Kapanol, 30mg MS Contin and 20mg Kapanol, all of which were injected by more than 20% of the PWID sample in the six months prior to interview (Table 17).

Sixty percent of the PWID participants had received methadone syrup as part of a methadone maintenance treatment in the six months prior to interview, and 69% of the total sample had accessed methadone syrup via illicit means in this time. Of those receiving methadone as part of a therapeutic treatment, all had swallowed the drug in the preceding six months, and almost all (n=54 of 60) had also injected their syrup in this time. However, when methadone syrup was accessed via illicit means, this was predominantly injected, with all of those accessing methadone syrup illicitly injecting the drug in the preceding six months, and less than one-third of these individuals swallowing it (n=21 of 69) in this time (Table 9). Physeptone was less commonly

prescribed to PWID participants, with only 11% receiving such a prescription in the preceding six months, compared to 60% of the sample accessing it illicitly. All of the individuals sampled that had accessed Physeptone in the preceding six months, whether via licit or illicit methods, had injected the drug in this time. Oral use was much less common, with less than one-third of those accessing the drug by either method administering it orally in the six months prior to interview.

Use of buprenorphine in the six months prior to interview was uncommon amongst the PWID sample, with just 8 participants receiving buprenorphine as part of a treatment program, and 4 participants accessing it illicitly in this time. All participants that had accessed buprenorphine in this time reported using the drug orally; however, half of those receiving the drug licitly and three-quarters of those accessing it illicitly had also injected the drug in this time. All of those participants accessing buprenorphine had used Subutex rather than Temgesic (Table 17).

Other types of pharmaceutical opiates had been prescribed to one-quarter (24%) of the PWID participants in the preceding six months and accessed illicitly by one-third (36%). When these drugs were prescribed to participants, they were more commonly used orally than intravenously (83% swallowing, in comparison to 29% injecting), but there was a more equal balance in terms of administration of those accessed illicitly, with 61% of those accessing such drugs illicitly administering them orally at some stage in the preceding six months, in comparison to 67% of these participants injecting such drugs. This pattern becomes more clear on consideration of Table 17, which indicates that there are different administration patterns for the 'other opiates' most commonly accessed: the two such drug types most commonly accessed were oxycodone (Endone, MS Mono, OxyNorm), which tended to be administered intravenously when PWID participants accessed it; and tramadol (Tramal), which was more commonly administered orally when accessed.

Table 17. Use of pharmaceutical opiates in the preceding six months among the PWID sample (N=100).

Opioid	Used orally in past 6 months %	Number of days used orally in last 6 months	Injected in past 6 months %	Number of days injected in last 6 months
Morphine				
Anamorph	2	2	18	4
Kapanol 20mg	6	3	26	6
Kapanol 50mg	6	2	49	12
Kapanol 100mg	3	5	39	8
MS Contin 5mg	1	20	1	2
MS Contin 10mg	2	8	8	2
MS Contin 15mg	1	4	2	2
MS Contin 30mg	11	2	28	9
MS Contin 60mg	10	2	63	7
MS Contin 100mg	5	3	44	8
MS Contin 200mg	-	-	8	3
Morphalgin 5mg (morphine with aspirin)	-	-	-	-
Ordine oral liquid (morphine hydrochloride)	5	2	11	5

Table 17 continued.

Opioid	Used orally in past 6 months %	Number of days used orally in last 6 months	Injected in past 6 months %	Number of days injected in last 6 months
Oxycodone				
Endone 5mg (oxycodone hydrochloride)	7	6	11	3
MS Mono (oxycodone)	-	-	11	1
Oxycontin (oxycodone hydrochloride)	7	5	28	4
OxyNorm 10mg (oxycodone hydrochloride)	1	30	-	-
Proladone suppository (oxycodone pectinate)	1	3	1	2
Methadone				
Methadone syrup (methadone hydrochloride)	68	96	82	48
Physeptone 10mg (methadone hydrochloride)	19	2	59	12
Buprenorphine				
Subutex (buprenorphine hydrochloride)	8	27	5	3
Temgesic 0.2mg (buprenorphine hydrochloride)	-	-	-	-
Fentanyl				
Durogesic patch (fentanyl)	-	-	-	-
Fentany IV liquid (fentanyl)	-	-	-	-
Tramadol				
Tramal 50mg C (tramadol)	23	5	2	7
Zydol 50mg C (tramadol)	-	-	-	-
Other related products				
Codeine Phosphate	5	12	3	2
Dilaudid (hydromorphone hydrochloride)	-	-	-	-
Palfium (dextromoramide tartate)	-	-	1	1
Pethidine 50mg (pethidine hydrochloride)	1	5	3	12
Any pharmaceutical opiate				
Use	84	96	100	96

Source: Stage two survey of PWID

Other drug use by pharmaceutical opiate users

The association between recent use of pharmaceutical opiates and other drugs within the current PWID sample is detailed in Table 18 below. Given that participants were selected on the basis of their regular injection of pharmaceutical products, it is difficult to infer trends in regards to patterns of use on the basis of this sample. However, on examination of Table 18, a number of points can be made. Firstly, this PWID sample were clearly flexible in the drugs that they used, with individuals that used one pharmaceutical opiate type typically also using other types as well (for example, those that had recently accessed methadone illicitly also commonly had used Physeptone, morphine and benzodiazepines as well). Secondly, this association was particularly strong for those that had recently accessed methadone syrup illicitly, with these participants also significantly more likely to have accessed Physeptone and benzodiazepines illicitly, and other pharmaceutical opiates licitly, than participants that had not recently accessed methadone syrup illicitly (all comparisons at $\alpha<0.05$). The impact of such a pattern of use would mean that in a market where there was a fluctuating level of access to one opiate type, these individuals are already accustomed to shifting to other opiate types. However, these individuals typically also showed a high level of use of methamphetamines. These associations have consistently been shown in recent local studies with broader samples of regular injecting drug user cohorts (Bruno & McLean 2001, 2002, 2003, 2004).

Thirdly, those small number of participants (n=11) that were able to access prescriptions of Physeptone were significantly more likely to have accessed prescriptions for other pharmaceuticals (morphine, other opiates, benzodiazepines) than those that did not receive prescriptions for Physeptone (all comparisons at $\alpha<0.05$).

Table 18. Relationship between recent pharmaceutical opiate use and use of other drugs.

	% of those that used each pharmaceutical opiate that also used other drugs in the past six months								
Drug Class	**Full PWID sample**	**Licit methadone syrup**	**Illicit methadone syrup**	**Licit Physeptone**	**Illicit Physeptone**	**Licit morphine**	**Illicit morphine**	**Licit other opiates**	**Illicit other opiates**
	%	%	%	%	%	%	%	%	%
Methadone syrup (licit)	60	-	61	55	60	55	59	58	67
Methadone syrup (illicit)	69	70	-	91	80*	46	64	88*	75
Physeptone (licit)	11	10	15	-	10	36	9	33*	14
Physeptone (illicit)	60	60	70*	55	-	73	63	71	64
Morphine (licit)	11	10	7	36*	13	-	11	17	14
Morphine (illicit)	81	80	75	64	85	82	-	88	89
Other opiates (licit)	24	23	33*	73*	28	36	26	-	36
Other opiates (illicit)	36	40	39	46	38	45	40	54	-
Methamphetamine	81	80	84	82	80	46*	79	71	78
Benzodiazepines (licit)	68	65	71	100*	75	82	69	88*	72
Benzodiazepines (illicit)	81	87	87*	91	88	91	79	96	92
Cannabis	85	85	85	73	83	82	84	79	86
Buprenorphine (licit)	9	5	7	9	10	20	10	17	37
Buprenorphine (illicit)	8	3	4	-	7	-	9	4	3

*Chi-square tests significant at $p<0.05$

Source: Stage two survey of PWID

Sources of pharmaceutical opiates

PWID participants were asked to nominate the methods through which they had accessed each of the pharmaceutical opiate types that they had used in the six months prior to interview (Table 19). From this data it is clear that these individuals are accessing pharmaceutical opiates from a range of sources, which often differs across the particular types of opiate.

Considering pathways to access of morphine, this is clearly predominantly purchased from a dealer, or, to a lesser extent, purchased from a friend. These two modes of access accounted for the clear majority of the access to morphine among the PWID, with smaller minorities receiving morphine as a gift or through trades for other drugs. It is noteworthy, however, that of the 100 PWID participants, only four were receiving prescriptions for morphine for self-reported legitimate reasons, and just two reported receiving prescriptions for morphine through feigning symptoms (doctor-shopping). Additionally, not a single participant had stolen morphine or accessed the drug through forging a script in the six months prior to interview.

Modes of access to Physeptone were very similar to those for morphine, with the drug clearly most commonly purchased from a 'dealer' or a friend, and a much smaller proportion receiving the drug through trades for other drugs or as a gift. Only six participants reported recently receiving Physeptone through a self-reported legitimate prescription, and a single participant had accessed Physeptone through feigning symptoms. No participants reported stealing Physeptone or forging scripts to access this drug in the six months prior to interview.

Access to methadone syrup was quite different to that of morphine or Physeptone. The clear majority of PWID participants that had accessed this drug in the preceding six months had done so as part of a legitimate treatment program. The next most common pathway to access was through purchasing the drug from a friend, or receiving it as a gift. Seventeen percent of PWID participants respectively reported purchasing methadone syrup from a dealer, or of accessing the drug through swapping for other drugs. Again, other pathways to access were almost non-existent, with only two participants reporting recently accessing methadone syrup through feigning symptoms, and none reporting stealing the drug or forging a script in an attempt to access methadone syrup in the preceding six months.

Buprenorphine was clearly distinct from both methadone and morphine in terms of access. While only a very small number of individuals had used the drug in the preceding six months, apart from the six individuals that had received the drug as part of a legitimate treatment program, those that had accessed the drug illicitly had only done so through trading for other drugs or as a gift. Not a single individual reported paying for buprenorphine in the six months prior to interview, which would suggest that the small number of individuals currently receiving treatment with buprenorphine (see Bruno & McLean 2004 for details) are generally not allowing any substantial level of diversion of this drug. Again, none of the 100 PWID participants had accessed buprenorphine through theft, feigning symptoms or forging scripts in the six months prior to interview.

The two most commonly accessed 'other opiates' – namely oxycodone and tramadol – again showed different modes of access by the PWID participants. Tramadol was most commonly received through legitimate prescriptions by medical practitioners or through a gift, with access through illicit purchase or trades for other drugs very rare. In contrast, access to oxycodone was primarily through purchase from 'dealers', followed by gifts or purchases from friends, with only very small proportions accessing the drug through trades or legitimate prescription. None of the PWID participants had accessed either type of opiate through feigning symptoms, theft or forging scripts in the preceding six months.

No PWID participant reported accessing any opiate from an internet site at any time in their lives.

Table 19. Pathways to access of pharmaceutical opiates in the preceding six months among the PWID sample (N=100).

Opioid	All sources in past six months						Main source in the past six months						Median price last paid (range in parentheses)
	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	
Morphine													
Anamorph	-	-	1	4	14	-	-	-	1	4	13	-	$20:30mg ($7.5-50.0, n=5)
Kapanol 20mg	2	-	4	5	14	2	2	-	4	5	14	2	$10:20mg ($2-45, n=18)
Kapanol 50mg	3	-	5	13	29	2	3	-	4	12	29	2	$30:50mg ($10-100, n=36)
Kapanol 100mg	2	-	5	5	29	-	2	-	4	5	28	-	$60:100mg ($20-80, n=32)
MS Contin 5mg	-	-	-	1	1	-	-	-	-	1	1	-	$3.50:5mg ($2-5, n=2)
MS Contin 10mg	-	-	7	2	5	-	-	-	7	2	5	-	$5:10mg ($4-50, n=7)
MS Contin 15mg	-	-	-	1	2	-	-	-	-	1	2	-	$5:15mg ($5.0-7.5, n=3)
MS Contin 30mg	-	1	5	7	20	1	-	-	5	7	20	1	$20:30mg ($10-75, n=24)
MS Contin 60mg	-	1	9	16	43	2	-	1	8	15	40	2	$40:60mg ($20-70, n=51)
MS Contin 100mg	-	1	4	10	30	3	-	1	2	9	27	3	$70:100mg ($20-90, n=35)
MS Contin 200mg	-	-	-	2	5	1	-	-	-	2	5	1	$95:200mg ($50-120, n=6)
Morphalgin 5mg	-	-	-	-	-	-	-	-	-	-	-	-	-
Ordine oral liquid	-	-	4	2	7	-	-	-	4	2	7	-	-

Table 19 continued.

Opioid	All sources in past six months						Main source in the past six months						Median price last paid (range in parentheses)
	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	
Oxycodone													
Endone 5mg	2	-	6	2	4	1	2	-	6	2	4	1	$5:5mg ($5-25, n=3)
MS Mono 60mg MS Mono 90mg MS Mono 120mg	-	-	3	3	4	2	-	-	3	3	4	1	$30:60mg (n=1) $58:90mg ($50-65, n=2) $45:120mg ($20-70, n=4)
Oxycontin 10mg Oxycontin 20mg Oxycontin 40mg Oxycontin 80mg	3	-	8	6	14	-	3	-	8	6	14	-	$10:10mg (n=2) $10:20mg (n=3) $20:40mg ($0.5-40, n=12) $20:80mg ($10-40, n=5)
OxyNorm 10mg	1	-	-	-	-	-	1	-	-	-	-	-	-
Proladone suppository	-	-	1	1	1	-	-	-	1	1	1	-	-
Methadone													
Methadone Syrup	59	2	19	27	17	17	58	1	9	8	5	2	$0.75:1mg (0.2-2.0, n=61)
Physeptone 10mg	6	1	7	24	25	5	5	1	6	20	24	3	$10:10mg ($5-10, n=39)
Buprenorphine													
Subutex	6	-	4	-	-	10	6	-	3	-	-	9	-
Temgesic 0.2mg	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 19 continued.

Opioid	All sources in past six months						Main source in the past six months						Median price last paid (range in parentheses)
	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	Real sympt %	Fake sympt %	Gift %	Buy: friend %	Buy: dealer %	Swap %	
Fentanyl													
Durogesic patch	-	-	-	-	-	-	-	-	-	-	-	-	-
Fentany IV liquid	-	-	-	-	-	-	-	-	-	-	-	-	-
Tramadol													
Tramal 50mg	15	-	6	2	1	2	15	-	6	1	1	2	-
Zydol 50mg	-	-	-	-	-	-	-	-	-	-	-	-	-
Other related products													
Codeine Phosphate	2	-	3	1	-	1	2	-	3	1	-	-	-
Dilaudid (hydromorphone. HCL)	-	-	-	-	-	-	-	-	-	-	-	-	-
Palfium (dextromoramide tartate)	-	-	-	-	-	-	-	-	-	-	-	-	-
Pethidine 50mg (pethidine.HCL)	-	-	1	2	-	-	-	-	1	2	-	-	-
Any pharmaceutical opiate	**74**	**4**	**46**	**43**	**59**	**27**	**65**	**-**	**7**	**12**	**14**	**1**	**-**

Source: Stage two survey of PWID

PWID participants that reported accessing pharmaceutical opiates from any source other than a medical practitioner in the previous six months were asked to nominate the level of dealing and other drugs sold by the individual that they had nominated as the source of the majority of their morphine, methadone syrup, Physeptone and buprenorphine (Tables 20-22).

In keeping with the dominance of access to morphine through purchasing from a dealer (Table 19), the largest proportions of participants reported that their usual source of morphine was a small-time dealer or large-scale provider (Table 20). The majority (80%) of these small-time suppliers also sold other drugs, most commonly methamphetamine (44%), cannabis (32%) or methadone (20%). Those nominated as 'large-scale suppliers' always sold other drugs, most commonly methamphetamine (91%) and cannabis (82%), with approximately half also providing benzodiazepines (50%) and/or multiple types of morphine (55%), and around one-third also provided methadone. PWID participants less commonly reported accessing morphine from a user/dealer (an individual selling drugs to fund their own use: 14% of the sample). One third of such individuals were reported as not providing any other substances (36%), with the remainder typically providing methamphetamine (29%) and/or cannabis (29%). The small proportion (11% of the PWID sample) that had typically accessed morphine from a friend in the preceding six months reported that these sources tended not to provide any other drugs (73%), but those that did may have provided benzodiazepines (18%) and/or other types of morphine (18%). Overall, morphine tended to be purchased from individuals seen as 'small-time' or 'large-scale' suppliers, with these individuals also tending to supply methamphetamine and cannabis, with a minority providing methadone and/or benzodiazepines.

Table 20. Other drugs sold by providers of morphine.

	Friend	User/dealer (selling to fund use)	Small-time dealer	Large-scale supplier	Total
	%	%	%	%	%
Dealer type	11	14	25	22	72
Other drugs sold					
Heroin	-	-	-	-	-
Methadone	-	14% (n=2)	20% (n=5)	32% (n=7)	19% (n=14)
Morphine (multiple types)	18% (n=2)	-	12% (n=3)	55% (n=12)	25% (n=17)
Other opiates	-	-	8% (n=2)	23% (n=5)	10% (n=7)
Methamphetamine	9% (n=1)	29% (n=4)	44% (n=11)	91% (n=20)	50% (n=36)
Cocaine	-	-	-	-	-
LSD	-	7% (n=1)	4% (n=1)	9% (n=2)	6% (n=4)
Ecstasy	-	-	8% (n=2)	14% (n=3)	7% (n=5)
Benzodiazepines	18% (n=2)	14% (n=2)	12% (n=3)	50% (n=11)	26% (n=18)
Cannabis	9% (n=1)	29% (n=4)	32% (n=8)	82% (n=18)	43% (n=31)
Does not sell any other drugs	73% (n=8)	36% (n=5)	20% (n=5)	-	25% (n=18)

Source: Stage two survey of PWID

Trends around the purchase of Physeptone were similar to those for morphine. As detailed in Table 19, Physeptone was most commonly purchased rather than received through gifts or bartering, and PWID participants reported that the providers were generally small-time dealers (18% of the PWID typically purchasing Physeptone from such a source) or large-scale providers (13%). Of the providers nominated as 'large-scale suppliers', three-quarters were reported by PWID as also selling morphine, methamphetamine and/or cannabis, with a smaller proportion (21%) providing benzodiazepines. Among those suppliers nominated as 'small-time dealers', approximately half were reported as also providing morphine (56%), cannabis (50%) and/or methamphetamine (44%). The next most common supply source of Physeptone was through friends (13% of the PWID sample), with these individuals typically not supplying any other drug (85%). Only a very small proportion of PWID participants reported usually accessing their Physeptone from a 'user/dealer' (6%) with approximately half of these also providing cannabis (50%), and one-third also providing morphine (33%). In sum, similar to patterns for morphine, Physeptone was typically purchased, from small-time or large scale suppliers, with around half to one-third of these individuals also providing morphine, methamphetamine and/or cannabis.

Table 21. Other drugs sold by providers of Physeptone.

	Friend	User/dealer (selling to fund use)	Small-time dealer	Large-scale supplier	Total
	%	%	%	%	%
Dealer type	13	6	18	13	50
Other drugs sold					
Heroin	-	-	-	-	-
Methadone	-	17% (n=1)	17% (n=3)	23% (n=3)	12% (n=7)
Morphine	8% (n=1)	33% (n=2)	56% (n=10)	77% (n=10)	26% (n=23)
Other opiates	-	-	6% (n=1)	15% (n=2)	6% (n=3)
Methamphetamine	-	-	44% (n=8)	77% (n=10)	36% (n=18)
Cocaine	-	-	-	-	-
LSD	-	-	-	15% (n=2)	4% (n=2)
Ecstasy	-	-	-	8% (n=1)	2% (n=1)
Benzodiazepines	-	-	28% (n=5)	31% (n=4)	18% (n=9)
Cannabis	-	50% (n=3)	50% (n=9)	77% (n=10)	44% (n=22)
Does not sell any other drugs	85% (n=11)	17% (n=1)	-	8% (n=1)	26% (n=13)

Source: Stage two survey of PWID

Patterns of access for methadone syrup were clearly distinct to those for Physeptone or morphine. PWID participants reported mainly purchasing methadone syrup from friends (25% of the sample), with smaller proportions predominantly purchasing from a small-time dealer (17%) or a user/dealer (14%), with a very small number (5%) reporting usually purchasing from what they considered a 'large-scale supplier'. The most commonly reported supply source of methadone syrup – friends – were reported as typically not providing any other drugs (72%), with the exception of benzodiazepines (12%). All of the 'small-time dealers' that PWID reported typically

purchasing methadone syrup from also supplied other drugs, with around half supplying morphine (65%), benzodiazepines (59%), cannabis (53%) and/or methamphetamine (53%). The third most common source of methadone syrup was reported as being 'user-dealers', with the majority (79%) of this group also providing other drugs, generally cannabis (57%), although smaller proportions were reported as providing morphine (29%) and/or benzodiazepines (21%). Only a very small proportion reported usually buying methadone syrup from a 'large-scale' supplier, with these individuals, as one would expect, reported as providing an array of other drugs. In sum, methadone syrup was typically reported as being accessed through friends that tended not to supply any other drugs (with the possible exception of benzodiazepines), with purchase from small-scale suppliers or user/dealers that may also provide cannabis, benzodiazepines, or morphine, slightly less common.

In terms of illicit supply of buprenorphine (n=5), all but one PWID participant had accessed the drug from a friend or could not characterise their source's level of dealing.

Table 22. Other drugs sold by providers of methadone syrup.

	Friend	User/dealer (selling to fund use)	Small-time dealer	Large-scale supplier	Total
	%	%	%	%	%
Dealer type	25	14	17	5	61
Other drugs sold					
Heroin	-	7% (n=1)	-	-	2% (n=1)
Methadone	-	-	18% (n=3)	20% (n=1)	7% (n=4)
Morphine	-	29% (n=4)	65% (n=11)	40% (n=2)	28% (n=17)
Other opiates	-	-	6% (n=1)	20% (n=1)	3% (n=2)
Methamphetamine	4% (n=1)	-	53% (n=9)	60% (n=3)	21% (n=13)
Cocaine	-	-	-	-	-
LSD	-	-	6% (n=1)	20% (n=1)	3% (n=2)
Ecstasy	-	-	6% (n=1)	20% (n=1)	3% (n=2)
Benzodiazepines	12% (n=3)	21% (n=3)	59% (n=10)	20% (n=1)	28% (n=17)
Cannabis	4% (n=1)	57% (n=8)	53% (n=9)	40% (n=2)	33% (n=20)
Does not sell any other drugs	72% (n=18)	21% (n=3)	-	-	34% (n=21)

Source: Stage two survey of PWID

Price, availability and market changes

Where PWID participants had reported purchasing pharmaceutical opiates illicitly in the preceding six months, they were asked to nominate the price that they last paid for each type of pharmaceutical opiate. These are summarised in Table 19. Median last purchase prices for the most commonly purchased morphine preparations were $10 per 20mg Kapanol, $30 per 50mg Kapanol, $60 per 100mg Kapanol, $20 per 30mg MS Contin, $40 per 60mg MS Contin, and $70 per 100mg MS Contin tablet. The median last purchase price of methadone syrup was $0.75 per mg, and Physeptone tablets were last purchased for a median of $10 per 10mg tablet. Oxycontin

40mg tablets were purchased for a median price of $20. These prices were reasonably consistent with those reported in the 2003 Hobart IDRS study (Bruno & McLean 2004), with the noteworthy exceptions that prices were reported as being more expensive in that survey for 50mg Kapanol ($35/tablet), 100mg Kapanol ($70/tablet), 60mg MS Contin ($50/tablet), and for methadone syrup ($1/mg) despite this survey being conducted just three months prior to the current study. Rather than noting a sudden market change, this difference may just reflect the focus of the current study on regular pharmaceutical users, who, in comparison to the somewhat more broad entry criteria for the IDRS study, may be a group that are accessing these drugs at a cheaper market rate due to being regular consumers of these substances.

Participants were also asked about the illicit market characteristics for each of the main pharmaceutical opiate types (Table 23). Those that could comment on the availability of morphine generally agreed that it was easy (45% of the sample) or very easy (24%) for them to access in the preceding six months, and, most commonly, that there had been no notable change in availability in this time (51% of the PWID sample), although there were notable minorities suggesting an increasing (12%) or decreasing (10%) availability in this time. PWID participants also tended to report the price of morphine as remaining stable (44% of the sample) or decreasing (14%) in the preceding six months. Physeptone, on the other hand, was most commonly regarded as being difficult to access (29% of the sample, although a minority (13%) regarded it as easy to access), and this as having remained stable (30%) or becoming more difficult to access (20%) in the preceding six months. In keeping with this, views were somewhat mixed in terms of recent price changes of Physeptone, with 29% of the sample reporting that prices had remained stable in the preceding six months, and 18% suggesting that prices had increased in this time. Methadone syrup was primarily regarded as being relatively easy to access (32%: although it was clear that at least half of those reporting on availability did not have to search for the drug as they had standing regular arrangements for access to methadone syrup), with almost equal minorities suggesting that the drug was very easy (15%) or difficult (13%) to access in recent months. The majority noted no change in availability of methadone syrup (42% of the PWID sample) in the preceding six months, with 14% suggesting that it had become more difficult to access in that time. Prices were generally regarded as having remained stable (41% of the sample) or perhaps increased (11%) in recent months.

The number of participants accessing buprenorphine illicitly, or morphine or Physeptone through prescriptions, was too small to merit examination of trends in such availability.

Table 23. PWID reported trends in illicit access to pharmaceutical opiates in the preceding six months.

	Methadone Syrup	Physeptone	Morphine	Buprenorphine
	%	%	%	%
Didn't purchase illicitly/ could not comment	36	47	25	97
Ease of access				
Very easy	15	8	24	-
Easy	32	13	45	-
Difficult	13	29	6	2
Very difficult	2	3	-	1

Table 23 continued.

	Methadone syrup	Physeptone	Morphine	Buprenorphine
	%	%	%	%
Change to access				
Easier	7	2	12	-
No change	42	30	51	1
More difficult	14	20	10	1
Fluctuates	-	-	3	-
Price change				
Increasing	11	18	7	-
Stable	41	29	44	1
Decreasing	3	1	14	-
Fluctuates	5	1	7	-
Last time accessed				
Median time to score	18 minutes (range 0-120 min, but 33% did not search)	30 minutes (range 5-4,320 min, 20% did not search)	20 minutes (range 5-2,880 min)	16 minutes (range 2-30 min)

Source: Stage two survey of PWID

Relative pharmaceutical opiate preferences

To gain some insight into the relative 'attractiveness' of the many differing pharmaceutical opiates to this group of regular pharmaceutical opiate consumers, participants were asked to rate their preference for each form that they had used in the preceding six months, on a scale of 1 (their least desired drug) to 10 (their most desired drug). Gaining a better understanding of a preference hierarchy for this class of products among regular PWID cohorts may provide some reference points for understanding what products PWID groups may shift to should there be a decline in the availability of one product or another. Interestingly, median preference ratings were reasonably similar across each major class of methadone, Physeptone and some particular types of morphine (the former rated 8.0, with morphine varying between ratings of 6.0 and 9.5: Table 24).

Within the differing preparations of morphine, the more potent tablets of MS Contin appeared to be the most preferred preparations (median rating 9.5 for 200mg and 8.0 for 100mg tablets respectively), along with Anamorph and Ordine (median rating 8.0). All potencies of Kapanol were on the next step down on the preference list (median rating 7.0), with the less strong preparations of MS Contin (30 and 60mg tablets) being less preferred again by this PWID cohort.

Methadone, either in syrup or tablet form, appeared to be quite attractive to this PWID cohort, with both forms receiving a median preference rating of 8.0. While only a small number of participants could respond to their preference for buprenorphine, this in general appeared to be not particularly attractive to this group (median preference rating of 6.5).

In terms of other pharmaceutical opiate preferences, MS Mono was clearly the most preferred preparation of oxycodone (median preference rating of 8.0), while Endone and Oxycontin, along with the differing product tramadol, appearing to not be particularly desired by this cohort (median preference rating of 5.0).

In summary, the high preference across a large proportion of participants for a number of different preparations of pharmaceutical opiates – in particular methadone syrup, Physeptone, Anamorph, Ordine, and potent tablets of MS Contin – fits well with the picture attained from Table 18, suggesting that these individuals appear quite flexible in the opiates that they use, and are hence easily able to adapt to market variations in availability of any particular type of opiate.

Table 24. Relative pharmaceutical opiate preferences.

Opioid	n	Drug preference (out of 10) Median	Drug preference (out of 10) Mean
Morphine			
Anamorph	18	8.0	7.6
Kapanol 20mg	27	7.0	6.2
Kapanol 50mg	50	7.0	6.7
Kapanol 100mg	39	7.0	7.1
MS Contin 5mg	2	6.0	6.0
MS Contin 10mg	9	5.0	5.7
MS Contin 15mg	3	10.0	8.0
MS Contin 30mg	33	5.0	5.5
MS Contin 60mg	68	5.5	5.8
MS Contin 100mg	44	8.0	7.5
MS Contin 200mg	8	9.5	8.9
Morphalgin 5mg (morphine with aspirin)	-	-	-
Ordine oral liquid (morphine hydrochloride)	13	8.0	8.2
Any morphine		**6.0**	**5.9**
Oxycodone			
Endone 5mg (oxycodone hydrochloride)	15	5.0	5.0
MS Mono (oxycodone)	11	8.0	8.8
Oxycontin (oxycodone hydrochloride)	31	5.0	5.6
OxyNorm 10mg (oxycodone hydrochloride)	-	-	-
Proladone suppository (oxycodone pectinate)	2	7.0	7.0

Table 24 continued.

Opioid	n	Drug preference (out of 10) Median	Drug preference (out of 10) Mean
Methadone			
Methadone syrup (methadone hydrochloride)	84	8.0	7.4
Physeptone 10mg (methadone hydrochloride)	60	8.0	7.4
Buprenorphine			
Subutex (buprenorphine hydrochloride)	8	6.5	5.9
Temgesic 0.2mg (buprenorphine hydrochloride)	-	-	-
Fentanyl			
Durogesic patch (fentanyl)	-	-	-
Fentany IV liquid (fentanyl)	-	-	-
Tramadol			
Tramal 50mg (tramadol)	23	5.0	4.9
Zydol 50mg (tramadol)	-	-	-
Other related products			
Codeine Phosphate	6	2.5	3.7
Dilaudid (hydromorphone hydrochloride)	-	-	-
Palfium (dextromoramide tartate)	1	10	10
Pethidine 50mg (pethidine hydrochloride)	3	6.0	5.7
Any 'other opiate'		5.0	4.9

Source: Stage two survey of PWID

Summary of recent pharmaceutical opiate use with reference to NDLERF research questions

Is there a correlation between the use of pharmaceutical opiates and other drugs?

- PWID participants were clearly flexible in the types of drugs that they used, with individuals that used one pharmaceutical opiate type typically also using other types as well (for example, those recently accessing methadone syrup illicitly were also commonly using Physeptone, morphine and benzodiazepines as well).
- This relationship was strongest amongst those not receiving methadone maintenance treatment.
- While selected for involvement in the study on the basis of pharmaceutical use, there was also a high proportion of this cohort reporting recent methamphetamine use.

How are pharmaceutical opiates obtained on the illicit market?

- Morphine, Physeptone and, to a lesser extent Oxycontin, were most commonly purchased from a 'dealer' by PWID participants.
- Methadone syrup and tramadol were more commonly accessed through legitimate prescription, with those accessing diverted methadone syrup predominantly purchasing the drug from a 'friend' or receiving it as a gift.
- There was very little use of diverted buprenorphine amongst the current cohort, with those accessing this drug illicitly doing so through gifts or trades.
- Across all these drug types, theft, feigning of symptoms or purchase via internet sources was rare or non-existent.

To what extent is doctor-shopping used to obtain pharmaceutical opiates and how easy is it to obtain such drugs by this method?

- Amongst the current cohort, access to pharmaceutical opiates through feigning symptoms or doctor-shopping was extremely rare or non-existent.

Are illicit pharmaceutical opiates sold by sellers of other illicit drugs?

- Participants reported typically purchasing morphine and Physeptone from small or large-scale 'dealers' that typically also provided drugs such as methamphetamine, morphine and/or cannabis.
- Methadone syrup was typically purchased from friends or 'user/dealers' who typically did not provide any other drugs for sale, with the possible exception of cannabis.

Do those drug users who steal pharmaceutical opiates exclusively or primarily inject them?

- No participants in the current cohort reported stealing pharmaceutical opiates or forging prescriptions to access these drugs in the preceding six months.

Are there particular types of pharmaceutical opiates that are more likely to be targeted by those wishing to steal them?

- Reported preferences of the PWID group were very similar for a range of pharmaceutical opiates, in particular, methadone syrup, Physeptone, Anamorph, Ordine, and potent tablets of MS Contin were well regarded by participants. This matches well with a picture of PWID groups being flexible in the opiates that they use.

Health benefits and risks

Injection-related health issues and overdose

There was a substantial rate of injection-related problems reported among the PWID participants, with 87% reporting at least one such problem in the month prior to interview (Table 25). It is noteworthy that this rate of experience of injection-related problems is greater than those identified in the Hobart IDRS samples between 2000 and 2003 (72-78%: Bruno & McLean 2001, 2002, 2003, 2004), which, in turn is relatively greater than that seen in PWID cohorts from other jurisdictions within the IDRS series of studies. This is likely to reflect the increased harms associated with the injection of pharmaceutical products by every participant in the current study, in comparison to injection of such products by the majority, but not all, of the participants in the local IDRS studies. Pharmaceutical products such as morphine tablets are often covered with a waxy film that cannot be completely removed in the preparation of the drug for injection. These waxy build-ups potentially damage injection sites, and introduces particulate matter into the circulatory system, which builds up in filtration areas such as the lungs or liver. While other pharmaceuticals such as Normison (temazepam) have been specifically designed to not be amenable for injection. Accordingly, the most commonly reported problems among the Tasmanian IDU were scarring/bruising of injection sites (81%) and difficulty injecting (43%), which indicates vascular damage. Thrombosis, which relates to blood clots or particulate matter lodged in the venous system, was reported by 11% of the cohort (which is consistent with trends reported in the 2003 Hobart IDRS survey). Experience of a 'dirty hit' – feeling physically unwell soon after injection – is commonly due to the injection of contaminants or impurities. This was closely related to the injection of methadone syrup, with 13 of the 15 individuals reporting such a recent experience associating it with the injection of methadone syrup. This may reflect the large volume of such injections (typically 100mL of solution), or, perhaps more likely, the fact that the majority of pharmacies use non-distilled tap water to prepare take-away doses of methadone syrup, and the 'dirty hits' may be a reaction to contaminants. This trend has been reported in the 2002 and 2003 IDRS studies (Bruno & McLean 2003, 2004).

Table 25. Injection-related health problems reported by PWID participants in the month prior to interview (N=100).

Injection-related health problem	% experiencing the problem in the last month
Scarring/bruising	81%
Difficulty injecting	43%
Thrombosis	11%
'Dirty hit'	15% (n=13 methadone, n=1 each of methamphetamine, morphine)
Infections/abscesses	10%
Overdose	6% (n=2 each of morphine, methadone, methamphetamine)
At least one injection-related problem	87% (median = 2, range 0-5)

Source: Stage two survey of PWID

It could be anticipated that one potential benefit of a drug use culture, where injection of pharmaceutical opioids is predominant, should be a relatively low rate of experience of overdose in comparison to jurisdictions where heroin use is more common, given the fact that consumers can be more confident about the purities and quantities of opioids they are using. However, the illicit use of pharmaceutical products may instead confer a false sense of safety. Amongst the six participants reporting experiencing a non-fatal overdose in the month prior to interview, all but one of those relating to use of pharmaceutical products (two were associated with use of crystalline methamphetamine, see Table 25) were cases in which multiple central nervous system depressant drugs were consumed together or within hours of each other. Two participants reported experiencing an overdose following consumption of morphine on top of methadone syrup, and one from consuming methadone syrup and benzodiazepines concurrently. Examination of the experience of overdose in the longer six month period prior to interview (Table 26) shows that only a small proportion of this cohort of regular injectors had experienced any overdose in this time (15%), and most of these (n=8/15) had experienced such an overdose one time in this period. Overdose was slightly more commonly attributed to use of benzodiazepines (8%) than morphine (6%). Anecdotal comments from consumers would suggest that such overdoses often stem from a second administration of benzodiazepines after the subjective effect of a first administration (of benzodiazepines or another opiate) has diminished, with problems arising due to the continued presence of the initial drug in the individual's system.

Table 26. Reported experience of overdose in the preceding six months among the PWID sample (N=100).

	% experiencing in past six months	Range among those experiencing
Heroin overdose	5%	1-2
Morphine overdose	6%	1-4
Benzodiazepine overdose	8%	1-2
Narcan administration	3%	na

na: refers to 'not applicable'

Source: Stage two survey of PWID

Benzodiazepines benefits and risks

Participants that had used benzodiazepines in the month prior to interview were asked to nominate any deleterious effects they had experienced in this time, either due to benzodiazepine use, or withdrawal from benzodiazepines (Table 27). It is noteworthy that only a very small proportion of those recently using benzodiazepines (13%) did not report experiencing any negative effects associated with the drug. The negative effects most commonly experienced were predominantly psychological or social, with around two-thirds of this group experiencing low motivation (67%) or concentration problems (61%), and around one-third reporting that benzodiazepine use had contributed to relationship problems (causing arguments for 42%, relationship problems for 37%) or anxiety (34%). It is particularly noteworthy that almost half of those recently using benzodiazepines had experienced a memory 'black-out' in the previous month, which is a particularly severe neurological effect. In keeping with the one-third of this group who suggested that they experienced benzodiazepine dependence in the preceding month, physical withdrawal symptoms such as nausea, coldness, pain or muscle spasms and psychological symptoms such as irritability, concentration and memory problems were reported by approximately half of this group. Two-thirds of this group reported sleeping problems (63%)

and/or anxiety (65%) due to benzodiazepine withdrawal in the preceding month. Just one-third of those recently using benzodiazepines reported experiencing no ill-effects from benzodiazepine withdrawal.

Table 27. Effects of benzodiazepine use and withdrawal experienced by PWID participants in the preceding month (n=82)*.

Effects of use*		**Effects of withdrawal***	
No problems	**13%**	**No problems**	**28%**
Physical:		**Physical:**	
Swelling of limbs	10%	Feeling nauseous	48%
Hospitalisation	4%	Feelings of coldness	55%
Contact with ambulance	5%	Aches and pains	55%
Dependence	31%	Problems sleeping	63%
Gangrene	2%	Muscle tension/spasms	55%
Blackout / loss of memory	49%	Other	-
Psychological/social:		**Psychological/social:**	
Anxiousness	34%	Anxiousness	65%
Getting into arguments	42%	Getting into arguments	43%
Relationship problems	37%	Relationship problems	37%
Low motivation	67%	Low motivation	61%
Concentration problems	61%	Concentration problems	57%
Aggression	42%	Memory problems	55%

*percentages are a proportion of the 82 participants using benzodiazepines in the preceding month

Source: Stage two survey of PWID

Participants were also asked what they perceived as the benefits and potential harms of their benzodiazepine use (Table 28). The perceived benefits were generally in line with the indications for prescription of these medications (reducing anxiety, promoting sleep, managing withdrawal symptoms) which is clearly in keeping with the high proportion of participants reporting that they received these medications through prescription for legitimate symptoms (Table 12). Only two participants nominated benefits of their benzodiazepine use that were clearly contradictory to their medical indications, namely that they 'provide a good high when used with other drugs' and that they 'help you get away with stealing'.

In terms of the potential harms nominated by PWID participants from their benzodiazepine use, 10 individuals regarded their use as free of risk as they were solely using these drugs as prescribed by a medical practitioner, while concerns commonly noted were the risks of overdose (n=8) and injection (n=7) of these drugs. Only a small number of participants nominated potential harms that were strongly related to the focus of the current study, in terms of the effect of benzodiazepine intoxication on their behaviour (for example the disinhibitive effects of benzodiazepines causing people to behave 'stupidly', take part in stealing, or become violent: n=6), or the responses of others to them when they were in possession of benzodiazepines (for example, being 'stood-over' when in gaol by others aiming to procure their prescribed benzodiazepines: n=1).

Table 28. Perceived benefits and risks of benzodiazepine use.

Benefits of benzodiazepines	n
Anxiolitic/calming effects	
Reduces anxiety/calming/helps you relax	35
Helps you cope with life problems	8
Reduces stress	6
Increases confidence	4
Reduces arguments/stops you losing your temper	3
Reduces aggression	2
Reduces post-traumatic stress disorder symptoms	1
Lets you feel 'normal'	1
Increases concentration	1
Tranquilising/sleep enhancing effects	
Helps you sleep	21
Reduces pain	4
Use in addiction	
Reduces cravings/withdrawals/'hanging out'	5
Helps you beat addiction to other drugs	4
Abuse	
Relaxed muscles	6
Euphoria/mood enhancement	3
Escapism	2
Good high when used with other drugs	1
Crime	
Reduces crime	1
Helps you get away with stealing	1
Other	
Increases creativity and motivation	2
None	4
Don't know	1

Risks of benzodiazepine use	n
Behaviour under the influence of benzodiazepines	
Disinhibition ('doing stupid things/stealing sprees/less aware of what you are doing')	4
Violence/assault	2
Car accidents (while under the influence)	1
Sleep too deeply (unable to wake up when need to)	1
Physical effects	
Overdose	8
Long-term health problems	3
Difficult to break addiction	1
Liver damage	1
Brain damage	1
Reduced sexual pleasure	1
Increased blood pressure	1
Psychological effects	
Memory loss	3
Reduced motivation	2
Less emotionally responsive	2
Escapism	1
Personality change	1
Mental health problems	1
Intravenous harm	
Lose limbs/digits through injection	3
Injection-related harms	2
Hospitalisation (from effects of injection)	1
Infections from injection	1
Other	
Stand overs (while in gaol)	1
No risks (use as prescribed)	10

Source: Stage two survey of PWID

Morphine benefits and risks

PWID participants that had used morphine in the month prior to interview were asked to nominate any negative effects that they had experienced in this time due to their general use of morphine or from withdrawal from the drug (Table 29). In terms of the general impact on their lives from use of morphine in the preceding month, only 16% of those that had recently used the drug suggested that it had not caused them any problems. Among the remainder, psychological impacts were most common, namely low motivation (61%) or problems concentrating (45%). Notably, one-quarter reported that their morphine use had caused them to become aggressive in the preceding month. Between one-quarter and one-third of those recently using morphine suggested that their use of the drug had caused other psychological impacts or social problems, in terms of relationship problems, arguments or anxiety. Among the noteworthy physical harms reported by this PWID group were memory loss (28%), swelling of limbs from injection (27%) and dependence (30%), with 6% having to call an ambulance due to side effects of morphine use and 2% being hospitalised for this. In terms of withdrawal, just 30% of those recently using morphine suggested that they had experienced no withdrawal symptoms from morphine use in the preceding month. Among the remainder, physical and psychological symptoms commonly associated with withdrawal were commonly experienced (nausea, coldness, aches, muscle tension, irritability, anxiousness and demotivation).

Table 29. Effects of morphine use and withdrawal experienced by PWID participants in the preceding month (n=64)*.

Effects of use*		**Effects of withdrawal***	
No problems	**16%**	**No problems**	**30%**
Physical:		**Physical:**	
Swelling of limbs	27%	Feeling nauseous	50%
Hospitalisation	2%	Feelings of coldness	58%
Contact with ambulance	6%	Aches and pains	59%
Dependence	30%	Problems sleeping	69%
Gangrene	-	Muscle tension/spasms	61%
Blackout/loss of memory	28%	Other	-
Psychological/social:		**Psychological/social:**	
Anxiousness	33%	Anxiousness	61%
Getting into arguments	33%	Getting into arguments	41%
Relationship problems	30%	Relationship problems	34%
Low motivation	61%	Low motivation	58%
Concentration problems	45%	Concentration problems	61%
Aggression	25%	Memory problems	55%

*percentages are a proportion of the 64 participants using morphine in the preceding month

Source: Stage two survey of PWID

PWID participants were also asked about the benefits and potential harms that they perceived to be associated with their use of morphine (Table 30). The reported benefits were functional in nature and reflected issues commonly associated with opiates, in terms of pain reduction (n=17), escape from emotional pain (n=12), relaxation (n=11), elimination of withdrawal (n=11) and management of the 'comedown' from other drugs such as methamphetamine (n=2). In terms of the perceived potential harms from use of morphine, issues at the forefront of PWID's thinking were those of overdose (n=13), addiction (n=11), health impacts (n=12), and problems associated with injection (n=20). Morphine use was also seen as being detrimental to personal and family relationships (n=7). Surprisingly, financial problems arising from addiction (n=4) and the potential for criminal sanctions or eventual involvement in crime (n=3) were less commonly noted as a potential issue. Two individuals also noted that the biggest problems for them arose from involvement in the 'drug scene', in terms of the company that they had to keep to access such substances.

Table 30. Perceived benefits and risks of morphine use.

Benefits of morphine use	**n**
Psychological effects	
Reduces pain	17
'Peace of mind'/dulls emotional pain/personal problems	12
Relaxation/calming	6
Reduces anxiety	5
Allows you to 'feel normal'/'get through the day'	3
Increases motivation/creativity	2
Increases confidence	1
Reduces nightmares	1
Increases sexual arousal	1
Rest	1
Drug use effects	
Reduces withdrawal/'hanging out' from other drugs	11
Feels good/euphoria	4
Good for managing 'comedown' from other drugs	2
Rush	2
Instant gratification	1
Going on the nod	1
Other	
None	13

Table 30 continued.

Risks of morphine use	n
Physical harms	
Overdose	13
Addiction	11
Health problems	10
Kidney loss	1
Damage to internal organs	1
Decline in self-care	1
Skin problems	1
Psychological harms	
Reduced self-confidence	1
Reduces motivation	1
Irritability	1
Aggressive	1
Social/relationship harms	
Impact on social life/social relationships	4
Detrimental to family life	3
Wastes time	1
'social degeneration' (personally and in society)	1
Injection-related harms	
Vein problems	5
Injecting risks	4
Dirty hit	3
Exposure to blood borne viruses	2
Thrombosis	2
'Blow out' veins	1
Not meant to be injected	1
Vein scarring	1
Missing a vein	1
Other harms	
No negative effects	7
Financial problems	4
Eventually ruins life/'no future'	2
The 'drug scene'/the company that you keep	2
Arrested	2
Can lead to crime	1
Doctor finding out about use	1
Risky driving (while under the influence)	1

Source: Stage two survey of PWID

Methadone benefits and risks

Participants that had used methadone within the month prior to interview were asked to nominate any negative effects that they experienced from either use of or withdrawal from methadone in this time (Table 31). One-fifth of those recently using methadone reported experiencing no ill-effects from its use, with the most common complaints among the remainder reflecting low motivation (59%) and/or concentration problems (51%). Of those reporting experiencing some negative effects from the use of methadone in the preceding month, more than half perceived that they were dependent on the drug. While approximately one-third of those recently using methadone experienced some adverse social effects from such use (relationship problems, irritability, anxiousness), it was particularly noteworthy that one-third reported memory loss from recent use of methadone, and one participant had been hospitalised as a result of methadone use in the preceding month. In terms of the effects of withdrawal from methadone use, in keeping with the high proportion of individuals perceiving that they were dependent on this drug, more than 80% of recent methadone users had experienced some of the physical or psychological symptoms of withdrawal from the drug, including difficulties sleeping (80%), pain (78%), coldness (75%), anxiousness (80%), muscle tension (75%) and/or nausea (68%).

Table 31. Effects of methadone use and withdrawal experienced by PWID participants in the preceding month (n=84)*.

Effects of use*		**Effects of withdrawal***	
No problems	**22%**	**No problems**	**17%**
Physical:		**Physical:**	
Swelling of limbs	16%	Feeling nauseous	68%
Hospitalisation	1%	Feelings of coldness	75%
Contact with ambulance	6%	Aches and pains	78%
Dependence	44%	Problems sleeping	80%
Gangrene	1%	Muscle tension/spasms	75%
Blackout/loss of memory	29%	Other	-
Psychological/social:		**Psychological/social:**	
Anxiousness	37%	Anxiousness	80%
Getting into arguments	30%	Getting into arguments	53%
Relationship problems	34%	Relationship problems	46%
Low motivation	59%	Low motivation	74%
Concentration problems	51%	Concentration problems	70%
Aggression	30%	Memory problems	55%

*Percentages are a proportion of the 84 participants using methadone in the preceding month

PWID participants were also asked what they perceived as the potential benefits and risks of their methadone use (Table 32). Participants were effusive about the benefits of prescribed methadone, in terms of the resultant reduction of illicit drug use (n=15), criminal activity (n=9) or financial burdens (n=9), when individuals are part of a methadone maintenance program, as well as the positive impacts of such improvement on quality of life and relationships (n=11). In terms of the reported negative effects of methadone use, most commonly reported were the problems of methadone addiction (addiction, withdrawal, problems with reducing doses, feeling chained to the chemist: n=25), the risk of overdose (n=14), health problems (n=16) and the risk of harm

from injection of methadone (n=12). Noteworthy among the less common responses were the negative effects of stigmatisation from others (including pharmacy staff) due to being enrolled in a methadone maintenance program (n=4), the threat from other drug consumers that might steal or threaten you for your dose (n=1), and involvement in criminal behaviour (associated with addiction to Physeptone rather than methadone syrup).

Table 32. Perceived benefits and risks of methadone use.

Benefits of methadone use	n
Removal from the illicit drug market	
Reduces illegal drug use	15
Financially better (than use of street drugs)	9
Avoids 'hanging out'/withdrawal	7
Clean drug (as pharmaceutical)	5
Controlled dose	2
Don't have to buy the drug illegally	1
Don't have to inject all the time	1
Regular dose	1
Effects on crime	
Reduces involvement in criminal activity	9
Social/relationship effects	
'Feel normal'/'can function normally'	12
Improves quality of life	5
Improves family life	3
'Life begins with methadone'	2
Enhances relationships	1
Physical effects	
Pain management	15
Enhances sleep	4
Improves health	2
Psychological effects	
Easier to cope with life problems	4
Decreases stress	3
Enhances relaxation	3
Decreased anxiety	2
Feel mentally stable	2
Increased confidence	1
Increased self-esteem	1
Reduces nightmares	1
Reduces aggravation	1
Reduces depression	1
Other	
Euphoria/pleasurable feeling	2
None	8

Table 32 continued.

Risks of methadone use	n
Methadone 'lifestyle'/program issues	
Addiction	17
Overdose/death	13
Difficult to 'come off'/discomfort in tapering off dose	3
The drug culture/ lifestyle	3
Withdrawal	3
No follow up/support for those on the program	2
Stigmatization because you are on the program	2
Mistreatment by dispensing staff	2
Non-sterile solution	2
'Liquid handcuffs'/'married to the chemist'	2
Expensive	1
Risk of others dying if they access it accidentally (children, etc.)	1
Junkies stealing or scamming your dose	1
Bad taste	1
Risks from interaction with other drugs	1
Physical effects	
Health problems	7
Teeth problems	5
Bad for bones	1
Poor sleep	1
Brain damage	1
Decreased appetite	1
Physical health problems	1
Kidney problems	1
Makes you age quickly/look older	1
Prevents conception	1
Psychological effects	
Suicide	1
Decreased motivation	1
Numbing of emotions	1
Injection-related harms	
Injection-related harms/vein problems	9
Blood-borne virus infection	2
Thrombosis	1
Crime	
Criminal behaviour (arising from the drive of addiction)	2
Other	
None	10

Source: Stage two survey of PWID

Buprenorphine benefits and risks

As only a very small number of participants had used buprenorphine in the preceding month (n=3), trends in regard to effects of use and withdrawal from buprenorphine, along with associated benefits of risk, are difficult to draw conclusions from and hence are not detailed here.

Benzodiazepine and pharmaceutical dependence

For each pharmaceutical type that the PWID participants reported using in the month prior to interview, they were asked a series of questions to ascertain their level of psychological dependence on these drugs (Table 33). These questions were based on the Severity of Dependence Scale (Gossop et al. 1995), which was a series of five questions about their thoughts on their use of each drug class within the preceding month ('did you think your drug use was out of control'; 'did the prospect of missing a hit make you very anxious or worried'; 'did you worry about your drug use'; 'did you wish you could stop'; 'how difficult did you find it to stop or go without these drugs'). Each question was answered on a four point scale. Higher ratings (to a maximum of 15) reflect a greater degree of psychological dependence on the drug in question, with scores less than 6 suggesting only mild or moderate psychological dependence.

In relation to the particular drug classes, for both morphine and benzodiazepines, approximately one-fifth of those recently using these drugs reported no real psychological dependence, with the remainder split reasonably equally between those with mild indications of dependence (approximately 40%) and more severe levels of dependence (approximately 40%: Table 33). Responses were notably different for methadone, with only 10% of those recently using methadone not perceiving any dependence on the drug. Twenty-nine percent of this group perceived only a mild level of dependence on methadone, while sixty-one percent reported more severe levels of dependence. These measures of perceived dependence on each drug class are used as predictor variables in the section discussing criminal activity below.

Table 33. Self-reported Severity of Dependence Scale (SDS) ratings of dependence of PWID participants that had used each drug type in the preceding six months.

Drug	n	Mean SDS score	SDS score range	% with SDS = 0*	% with SDS <6*	% with SDS >6*
Benzodiazepine	76	4.7	0-14	21%	42%	37%
Morphine	64	5.3	0-15	16%	44%	40%
Methadone	83	6.5	0-15	10%	29%	61%
Buprenorphine	2	6.0	4-8	0%	50%	50%

*Broadly speaking, SDS = 0 would suggest that the individual perceives no psychological dependence on the drug, ratings of less than six would indicate a mild level of psychological dependence, and ratings above 6 may suggest that dependence is an issue for the individual

Source: Stage two survey of PWID

Summary of recent pharmaceutical opiate use with reference to NDLERF research questions

What are the implications of benzodiazepine and pharmaceutical opiate use for police and other frontline workers such as accident and emergency staff, ambulance officers and health/youth workers?

- More than four-fifths of the current PWID cohort reported experiencing injection-related harms in the month prior to interview, most commonly indications of damage to the venous system (scarring or bruising of injection sites, difficulties locating veins), which are likely to reflect the degree of harm associated with the intravenous administration of pharmaceutical products that were not designed for such use.
- Fifteen percent of the cohort reported experiencing a 'dirty hit' (an injection that made them feel physically unwell) in the previous month, which was associated with the injection of methadone syrup. As this involves the injection of a large volume of non-sterile solution, this may be a reaction to contaminants in the dilution process.
- Almost half of the current sample reported experiencing memory loss or a 'black-out' associated with benzodiazepine use in the month prior to interview.
- Pharmaceutical opiate use had brought a minority of the current cohort (6%) into contact with ambulance services in the month prior to interview.
- Across all of these target pharmaceuticals, between one-third and one-half of participants had experienced social problems such as relationship difficulties or irritability associated with use and/or withdrawal from these substances in the month prior to interview.

Illegal activity among people who inject drugs

For each of the pharmaceutical classes that PWID participants reported using in the month prior to interview, they were asked whether they had been involved in any type of criminal activity or behaviour that they associated as an effect of their use of, or withdrawal from, the drug (Table 34). Across each of the classes of benzodiazepines, morphine and methadone, approximately one-fifth of those recently using these drugs reported that their use of these drugs had contributed to them getting into fights in the preceding month. This was equally associated with withdrawal and use generally, although getting involved in fights was more strongly associated with methadone withdrawal than of use per se. Involvement in violent crime, fraud, or dealing was very infrequently associated with use of, or withdrawal from, any of these classes of drugs, each nominated by less than 5% of those recently consuming each of these drugs. While 10% of participants using each class of drug reported that they had been in criminal trouble due to property crime committed while withdrawing from these drugs, 15% reported that their use of benzodiazepine or morphine was a factor in their getting in criminal trouble for property crime, in comparison to 11% reporting that their use of methadone was a factor in such criminal activity. While approximately 10% of those recently using each of benzodiazepine, morphine or methadone reported that this use had brought them to the attention of police in this time, approximately 25% reported that such drug use had contributed to them being involved in recent criminal activity (that they were not caught or charged for). In sum, a minority of participants suggested that their recent pharmaceutical drug use had caused them to be involved in some form of criminal behaviour; however, these reports did not appear to differ according to the pharmaceutical drug class that participants were referring to (benzodiazepine, morphine or methadone use), nor was there any substantial difference between criminal behaviour reported as associated with general 'use' or 'withdrawal' from these drugs.

Table 34. Self-reported effects of pharmaceutical use on criminal activity or behaviour experienced by PWID participants in the preceding month*.

	Benzodiazepine* n=82	Morphine* n=64	Methadone* n=84
Effects of use			
Getting into fights	23%	20%	17%
Criminal trouble – violent crime	4%	2%	1%
Criminal trouble – property crime	15%	14%	11%
Criminal trouble – fraud	1%	2%	1%
Criminal trouble – other	2%	3%	2%
Criminal behaviour not charged for	27%	27%	23%
Contact with police	11%	8%	7%
Effects of withdrawal			
Getting into fights	21%	19%	28%
Criminal trouble – violent crime	1%	-	1%
Criminal trouble – property crime	9%	10%	10%
Criminal trouble – fraud	2%	-	1%
Criminal trouble – dealing	-	2%	1%
Criminal trouble – other	6%	10%	11%

*Percentages are as a proportion of those using the drug in the preceding month; buprenorphine not included in table as only 3 participants had used the drug in this time and none reported any criminal behaviour

Source: Stage two survey of PWID

PWID participants were asked about their involvement in criminal activity in the preceding month, as well as whether they were arrested in the preceding year, or had a previous prison history (Table 35). In terms of involvement in any criminal activity (specifically: property crime; provision of drugs; fraud; or violent crime), this was relatively common amongst the current PWID participants (70%) in the preceding month. When this was considered according to the type of drug participants had predominantly injected in the preceding month, it appeared that recent involvement in crime was somewhat more common amongst primary methamphetamine injectors (92%) than among those who had most commonly injected morphine (66%) or methadone (65%)1. A series of stepwise linear regression analyses were performed to determine whether any drug use variables might predict such involvement in crime. An initial analysis, examining only the degree to which each individual reported being dependent on benzodiazepines, morphine or methadone (using scores from the Severity of Dependence Scale – see Chapter three, Stage two, Health benefits and risks) showed that reported psychological addiction was the best, and only, significant predictor of involvement in any criminal activity in the preceding month (with total crime score = 1.7 + 0.1xSDS score for morphine dependence: $F(1, 97)=4.5$, $p=0.04$). However, the R2 value for this relationship was extremely low (0.034), suggesting that, while this is a real relationship, it is extremely weak. When other variables were added as potential predictors of involvement in crime (frequency of licit and illicit use of morphine, methadone, benzodiazepines, other opiates and methadone, as well as frequency of injection of benzodiazepines), frequency

[1] It must be remembered, however, that all of these participants also regularly inject pharmaceutical opiates (the criteria on which they were selected for the current study) and so these results may not generalise to broader PWID cohorts in Hobart.

of use of illicit Physeptone and of illicit morphine emerged as the best predictors of any criminal involvement in the preceding month, superseding the level of morphine dependence as a predictor (total crime score in past month = 1.5 + 0.01 x frequency of use of illicit Physeptone + 0.007 x frequency of use of illicit morphine: $F(1, 96) = 5.06$, $p=0.008$); however, again there was an extremely low R2 value for this relationship, indicating that while this was a significantly better predictor than chance, it remains an extremely poor predictive model. As the score for involvement in any crime is a composite variable, comprising the frequency of involvement in property crime, provision of drugs, fraud and violent crime, it may be that this variable is too complex to easily predict, and more specific modelling was attempted for the frequency of involvement of each particular crime type in the sections below.

Slightly more than one-third of the PWID participants reported that they had previously been charged and sentenced to time in prison (37%: Table 35), with this proportion appearing to be slightly higher among those that had most often injected morphine (50%) or methamphetamine (46%) than those that had predominantly injected methadone (29%) in the preceding six months. More than half of the participants (55%) reported that they had been arrested in the year prior to interview, with this being more common among participants that had predominantly injected methamphetamine (85%) than morphine (53%) or methadone (48%). Such recent arrest for property crime was reported by almost one third of the participants (29%), and was slightly more common among those predominantly injecting methamphetamine (38%) or methadone (31%) than morphine (22%). Arrest for violent crime in the preceding 12 months was reported by 10% of the PWID sample, and was slightly more commonly reported amongst primary morphine (16%) or methamphetamine (15%) injectors than primary methadone injectors (6%). Recent arrest for drug dealing, drug driving, drink driving, or fraud was very low (less than 5% of the sample), and did not appear to differ notably with the type of drug that individuals reported most commonly injecting.

Table 35. Criminal activity among the PWID sample (N=100).

	Drug most injected in the past month				
	Methadone (n=52)	**Morphine (n=32)**	**Methamphet (n=13)**	**Other (n=3)**	**Total (N=100)**
Crime in the past month					
Property	37% (n=19)	47% (n=15)	54% (n=7)	100% (n=3)	42%
Dealing	42% (n=22)	41% (n=13)	46% (n=6)	67% (n=2)	44%
Fraud	6% (n=3)	6% (n=2)	15% (n=2)	33% (n=1)	8%
Violence	13% (n=7)	16% (n=5)	31% (n=4)	33% (n=1)	17%
Sex work	8% (n=4)	3% (n=1)	8% (n=1)	-	6%
Any crime	65% (n=34)	66% (n=21)	92% (n=12)	100% (n=3)	70%
Prison history	29% (n=15)	50% (n=16)	46% (n=6)	-	37%
Arrested in the past year					
Possession	2% (n=1)	9% (n=3)	23% (n=3)	-	7%
Dealing	2% (n=1)	-	8% (n=1)	-	2%
Drug driving	2% (n=1)	-	8% (n=1)	-	2%

Table 35 continued.

	Drug most injected in the past month				
	Methadone (n=52)	**Morphine (n=32)**	**Methamphet (n=13)**	**Other (n=3)**	**Total (N=100)**
Arrested in the past year (continued)					
Drink driving	-	3% (n=1)	8% (n=1)	-	2%
Property crime	31% (n=16)	22% (n=7)	38% (n=5)	33% (n=1)	29%
Fraud	2% (n=1)	3% (n=1)	8% (n=1)	33% (n=1)	4%
Violent crime	6% (n=3)	16% (n=5)	15% (n=2)	-	10%
Other driving	6% (n=3)	9% (n=3)	15% (n=2)	-	8%
Failure to appear	10% (n=5)	6% (n=2)	15% (n=2)	-	9%
Other	10% (n=5)	-	15% (n=2)	33% (n=1)	8%
Any reason	**48% (n=25)**	**53% (n=17)**	**85% (n=11)**	**33% (n=1)**	**55%**

Source: Stage two survey of PWID

Self-reported property crime last month

PWID participants were asked how often they had committed a property crime (shoplifting, burglary, car theft, receiving stolen goods, etc) in the month prior to interview and the reasons for this crime (Table 36). Forty-two percent of the sample reported committing such a crime in this time, although more than half of these (23% of the sample) had done so only on one or two occasions. Nine percent of the sample reported committing property crime, on average, once weekly, 6% more than weekly, and 6% on a daily basis. Examination of reported rates of property crime divided by the drug type participants reported most commonly injecting in the preceding month suggests that property crime may have been slightly greater among those predominantly injecting methamphetamine (54%) or morphine (47%) than those that had primarily injected methadone (37%).

In terms of predictors of the extent of involvement in property crime in the preceding month, a series of stepwise linear regression analyses were performed. In the first analysis, the degree of self-reported dependence on morphine, methadone and benzodiazepines (SDS scores) were investigated as possible predictors. Only the degree of dependence on morphine emerged as a significant predictor of the frequency of involvement in property crime (frequency of property crime = 0.62 + 0.06xSDS score for morphine dependence: $F(1, 98)=5.1$, $p=0.03$). Examination of the R^2 value for this equation (0.04) suggests that this was a significant, but quite poor frequency of property crime. In a second analysis, the frequency of use of licit and illicit methadone, Physeptone, morphine, other opiates, benzodiazepines and methamphetamine were added as possible predictors. Again, only a single variable emerged as a significant predictor of frequency of involvement in property crime, and this was the frequency of use of prescribed methadone syrup (superseding the level of morphine dependence as a predictor). This was a 'protective' factor, with a greater frequency of methadone syrup use associated with lower frequency of involvement in property crime (frequency of property crime = 1.16 – 0.003 x frequency of use of prescribed methadone syrup: $F(1, 98) = 5.77$, $p=0.018$). The R^2 for this relationship (0.046) was extremely small, suggesting that this was a real, but very poor, predictor of involvement in property crime.

Participants that had been involved in committing property crime in the preceding month were asked the reasons that they had done so (Table 36). This showed two clear themes. Firstly, 'financial imperatives' were the more commonly endorsed reasons ('I needed money to support myself, I needed money to repay debt, I needed food/goods for my family/myself'), by between

20-30% of the sample (half to three-quarters of those recently committing property crime), and these were relatively equally supported regardless of whether the individual had most commonly injected morphine, methadone or methamphetamine in the previous month. Secondly, 'drug-related' reasons were endorsed by only a small proportion of the sample overall, but were endorsed by around three-quarters of those involved in property crime that had predominantly injected morphine in the month prior to interview. These reasons for committing property crime included 'I needed money for opioids', 'I was withdrawing from an opioid' and 'I was under the influence of an opioid'. These responses fit well with the regression analyses above, suggesting that dependence on morphine may be a predictor of involvement in property crime (and that involvement in methadone maintenance therapy may protect against such involvement).

Table 36. Reasons for committing property crime*.

	Drug most injected in the past month				
	Methadone (n=52)	**Morphine (n=32)**	**Methamphet (n=13)**	**Other (n=3)**	**Total (N=100)**
Crime in past month					
Committed property crime	37% (n=19)	47% (n=15)	54% (n=7)	100% (n=3)	42%
Reasons for committing property crime					
Peer group norm	12% (n=6)	13% (n=4)	8% (n=1)	-	11%
Money for opioids	8% (n=4)	31% (n=10)	8% (n=1)	-	15%
Money for stimulant	8% (n=4)	-	8% (n=1)	33% (n=1)	6%
Money for opioid (after refusal from GP)	10% (n=5)	16% (n=5)	-	-	10%
Medication stolen	-	6% (n=2)	-	-	2%
Just wanted money/goods	23% (n=12)	28% (n=9)	23% (n=3)	67% (n=2)	26%
Needed money to support family/self	23% (n=12)	28% (n=9)	23% (n=3)	-	24%
Need money to repay debt	19% (n=10)	22% (n=7)	15% (n=2)	-	19%
Needed food/goods for family/self	31% (n=16)	25% (n=8)	46% (n=6)	33% (n=1)	31%
Peer pressure	2% (n=1)	6% (n=2)	-	-	3%
Lost temper	8% (n=4)	13% (n=4)	15% (n=2)	33% (n=1)	11%
Withdrawing from opioid	8% (n=4)	38% (n=12)	8% (n=1)	-	17%
Withdrawing from stimulant	2% (n=1)	-	8% (n=1)	-	2%
Under influence of opioid	6% (n=3)	22% (n=7)	8% (n=1)	-	11%
Under influence of benzodiazepine	2% (n=1)	-	8% (n=1)	-	2%
Under influence of stimulant	2% (n=1)	-	8% (n=1)	-	2%
Under influence of alcohol	2% (n=1)	-	-	-	1%
Can't explain why	10% (n=5)	6% (n=2)	8% (n=1)	33% (n=1)	9%
Other reason	2% (n=1)	6% (n=2)	8% (n=1)	33% (n=1)	5%

*Participants were asked if each of the items in the table were 'a lot like' the reason they committed the crime(s), 'a little like' their reason, or 'not at all' like their reason for criminal activity. Data included here relates to items that were endorsed as either 'a little' or 'a lot' like the individual's reasons for committing the crime.

NB: GP refers to a medical practitioner

Source: Stage two survey of PWID

Self-reported drug dealing last month

Participants were asked if they had sold any drugs to others in the month prior to interview, and, if so, how often (Table 37). Forty-four percent of the PWID sample had sold drugs to others in this time, with almost half of these doing so on less than four occasions in this time (18% of the sample), 8% selling once per week, 9% more than weekly, and 8% on a daily basis. These proportions were relatively similar regardless of what drug the participants had primarily injected in this time. Stepwise linear regression – using the degree of dependence to morphine, methadone and benzodiazepines as possible predictors – failed to identify any significant prediction of the frequency of involvement in dealing of drugs amongst the PWID sample.

Table 37. Reasons for dealing drugs*.

	Drug most often injected in the past month				
	Methadone (n=52)	**Morphine (n=32)**	**Methamphet (n=13)**	**Other (n=3)**	**Total (N=100)**
Crime in past month					
Dealt drugs	42% (n=22)	41% (n=13)	46% (n=6)	67% (n=2)	44%
Reasons for dealing drugs					
Peer group norm	13% (n=7)	25% (n=8)	-	33% (n=1)	16%
Money for opioids	6% (n=3)	28% (n=9)	8% (n=1)	33% (n=1)	14%
Money for stimulant	6% (n=3)	-	15% (n=2)	-	5%
Money for any drug	13% (n=7)	28% (n=9)	38% (n=5)	33% (n=1)	22%
Money for opioid (after refusal from GP)	12% (n=6)	13% (n=4)	8% (n=1)	33% (n=1)	12%
Medication stolen	2% (n=1)	3% (n=1)	-	-	2%
Just wanted money/goods	35% (n=18)	34% (n=11)	38% (n=5)	33% (n=1)	35%
Needed money to support family/self	35% (n=18)	34% (n=11)	38% (n=5)	67% (n=2)	36%
Need money to repay debt	21% (n=11)	25% (n=8)	23% (n=3)	33% (n=1)	23%
Needed food/goods for family/self	35% (n=18)	25% (n=8)	38% (n=5)	67% (n=2)	33%
Peer pressure	4% (n=2)	-	-	-	2%
Lost temper	8% (n=4)	6% (n=2)	-	-	6%
Withdrawing from opioid	13% (n=7)	16% (n=5)	8% (n=1)	-	13%
Withdrawing from stimulant	2% (n=1)	-	8% (n=1)	-	2%
Under influence of opioid	2% (n=1)	16% (n=5)	-	-	6%
Under influence of benzodiazepine	2% (n=1)	-	-	-	1%
Under influence of stimulant	-	-	8% (n=1)	-	1%
Under influence of alcohol	-	-	-	-	-
Can't explain why	2% (n=1)	6% (n=2)	-	-	3%
Other reason	8% (n=4)	3% (n=1)	-	33% (n=1)	6%

*Participants were asked if each of the items in the table were 'a lot like' the reason they committed the crime(s), 'a little like' their reason, or 'not at all' like their reason for criminal activity. Data summarised here relates to items that were endorsed as either 'a little' or 'a lot' like the individual's reasons for committing the crime.

NB: GP refers to a medical practitioner

Source: Stage two survey of PWID

Participants that reported selling drugs to others in the month prior to interview were asked to nominate the reasons that they had done so. 'Financial imperatives' were the most commonly endorsed reasons ('I needed money to support myself, I needed food/goods for my family/myself'), by around one-third of the sample (three-quarters of those recently selling drugs), and these were relatively equally supported regardless of whether the individual had most commonly injected morphine, methadone or methamphetamine in the previous month. A similar pattern occurred for the reason 'I needed money to pay debts', with the exception that it was endorsed by a smaller proportion of the sample (23%). One-fifth of the PWID sample (22%, half of those recently selling drugs to others) reported that one of their reasons for doing so was to get money to pay for their own drug use. When this was broken down by the type of drug that participants had most often injected in the month prior to interview, this was most strongly associated with predominant use of methamphetamines (38% of this group), or morphine (28%), than methadone (13%). Selling of drugs with the reason of making money to pay for opioid use was less commonly reported (14% of the entire sample), and, as one would expect, was more often endorsed by participants that had predominantly injected morphine (28%) in the previous month, rather than those predominantly injecting methamphetamine (8%) or methadone (6%). It was noteworthy too that 12% of the PWID sample (25% of those selling drugs in the past month) reported that one of the reasons they had sold drugs was to raise money to buy opioids following a refusal for their prescription from a medical practitioner. Also, two participants had sold drugs to raise money after they had their own medication stolen.

Self-reported fraud last month

Just eight percent of the PWID participants reported committing fraud in the month prior to interview (Table 38), with all of these individuals reporting doing so on less than four occasions in this time. With such small numbers, it is difficult to determine whether involvement in fraud was more strongly associated with predominant use of any drug type in particular, as three of those recently committing fraud had primarily injected methadone in the preceding month, while two individuals that had most commonly injected morphine and methamphetamine respectively had committed fraud in this time.

Attempts were made to determine whether any drug use factors or perceived psychological dependence on any particular drug type was predictive of involvement in fraud in the preceding month. Stepwise linear regression analyses indicated that the extent of psychological dependence on morphine, methadone or buprenorphine were not statistically significant predictors of such activity. However, when the frequency of use of licitly and illicitly accessed drugs were included as potential predictors[2], frequency of use of Physeptone (illicitly accessed) and methamphetamine emerged as significant predictors of such involvement (frequency of involvement in fraud = -0.023 + 0.0026 x [frequency of illicit Physeptone use] + 0.0024 x [frequency of methamphetamine use]: $F(2, 97) = 12.73$, $p<0.001$). The R^2 for this prediction equation was relatively small (0.19), indicating that while these variables were useful predictors of involvement in fraud, there are a number of other factors that would be important in making such a prediction. Such a situation is apparent when one considers that there was a low frequency of fraud in the preceding month despite high levels of Physeptone and methamphetamine use within the sample in this time.

Participants that reported committing fraud in the month prior to interview were also asked to nominate the reasons that they had done so (Table 38). While the majority of individuals cited financial imperatives as reasons for their involvement in fraud ('I needed money/goods for myself or my family': 6%; 'I needed money to pay debts': 5%; 'I needed money to support myself/my family': 5%), all but one of those participants recently involved in fraud also nominated drug-

[2] Frequency of use of licitly and illicitly accessed morphine, methadone, Physeptone, benzodiazepines and other pharmaceutical opiates; frequency of use of methamphetamine; and frequency of injection of benzodiazepines were included as potential predictors of criminal activity.

related imperatives for such involvement, whether this was money to purchase opioids (n=4) or to purchase stimulants (n=3). Also noteworthy was 6 of the 8 participants recently involved in fraud reported that they had been withdrawing from a drug (n=5 opioids, n=1 stimulants) which had affected their decision to be involved in fraudulent activity. Half of those also reported that they were under the influence of a drug (opioid n=2; benzodiazepine n=1; stimulant n=1) when they committed the fraud.

Table 38. Reasons for committing fraud*.

	Drug most injected in the past month				
	Methadone (n=52)	**Morphine (n=32)**	**Methamphet (n=13)**	**Other (n=3)**	**Total (N=100)**
Crime in past month					
Committed fraud	6% (n=3)	6% (n=2)	15% (n=2)	33% (n=1)	8%
Reasons for committing fraud					
Peer group norm	-	-	-	-	-
Money for opioids	4% (n=2)	3% (n=1)	-	-	3%
Money for stimulant	-	-	15% (n=2)	33% (n=1)	3%
Money for opioid (after refusal from GP)	2% (n=1)	-	-	-	1%
Medication stolen	2% (n=1)	-	-	-	1%
Just wanted money/goods	4% (n=2)	6% (n=2)	8% (n=1)	-	5%
Needed money to support family/self	2% (n=1)	3% (n=1)	15% (n=2)	33% (n=1)	5%
Need money to repay debt	2% (n=1)	3% (n=1)	15% (n=2)	33% (n=1)	5%
Needed food/goods for family/self	4% (n=2)	3% (n=1)	15% (n=2)	33% (n=1)	6%
Peer pressure	2% (n=1)	-	8% (n=1)	-	2%
Lost temper	-	3% (n=1)	-	-	1%
Withdrawing from opioid	6% (n=3)	3% (n=1)	-	33% (n=1)	5%
Withdrawing from stimulant	-	-	8% (n=1)	-	1%
Under influence of opioid	2% (n=1)	3% (n=1)	-	-	2%
Under influence of benzodiazepine	2% (n=1)	-	-	-	1%
Under influence of stimulant	-	-	8% (n=1)	-	1%
Under influence of alcohol	-	-	-	-	-
Can't explain why	2% (n=1)	3% (n=1)	-	-	2%

*Participants were asked if each of the items in the table were 'a lot like' the reason they committed the crime(s), 'a little like' their reason, or 'not at all' like their reason for criminal activity. Data summarised here relates to items that were endorsed as either 'a little' or 'a lot' like the individual's reasons for committing the crime.

NB: GP refers to a medical practitioner

Source: Stage two survey of PWID

Self-reported violent crime last month

Seventeen percent of the PWID participants reported being involved in violent crime in the month prior to interview, with this crime most commonly being physical assault rather than armed robbery or sexual assault. Among these individuals, such involvement occurred only once or twice in the month prior to interview for all but one participant, who had been involved in assault on a weekly basis in this time. When the commission of violent crime was examined on the basis of the drugs that PWID participants reported primarily injecting in the past month, it was clear that this behaviour was more common amongst primary injectors of methamphetamine (31%) than of morphine (16%) or methadone (13%) (Table 39).

A series of stepwise linear regression analyses were performed to determine whether drug use factors or perceived psychological dependence on any particular drug type was predictive of commission of violent crime in the preceding month. Analyses indicated that the extent of psychological dependence on morphine, methadone or buprenorphine were not statistically significant predictors of such activity. However, when the frequency of use of licitly and illicitly accessed drugs were included as potential predictors[3], 'frequency of injection of illicitly accessed benzodiazepines' emerged as significant and the best predictor of involvement in violent crime (frequency of involvement in violent crime = 0.138 + 0.0037 x [frequency of injection of illicitly accessed benzodiazepines]: $F(1, 98) = 6.4$, $p=0.013$). Examination of the R^2 for this relationship (0.05) indicated that, while this may be a real predictor, it is of very poor predictive power for involvement in violent crime, and other issues need to be taken into consideration.

When participants were asked the reasons for their involvement in violent acts in the month prior to interview (Table 39), the most common response was that they had lost their temper (n=15 of the 17 individuals being involved in such actions in the preceding month). Almost one-third of those that had been involved in violent acts in the preceding month also suggested situational reasons for their behaviour ('protecting their family, self defence, dealing with a problem situation': n=5 of the 17 individuals). Unlike the criminal behaviour discussed previously, financial reasons – either for general finances (e.g. for debt, food etc) or to fund drug use – were not commonly endorsed by participants (endorsed by less than one-third of those committing violent crime) (Table 39). Around half of this group reported that they were under the influence of drugs (opioids, n=6; benzodiazepines, n=2; stimulants, n=3) when they committed the violent crime, with half reporting that they were withdrawing from drugs when they committed the act (opioids, n=7; stimulant, n=1). It was noteworthy that no participants nominated that alcohol use was a factor in this behaviour.

[3] Frequency of use of licitly and illicitly accessed morphine, methadone, Physeptone, benzodiazepines and other pharmaceutical opiates; frequency of use of methamphetamine; and frequency of injection of benzodiazepines were included as potential predictors of criminal activity.

Table 39. Reasons for committing violent crime*.

	Drug most injected in the past month				
	Methadone (n=52)	**Morphine (n=32)**	**Methamphet (n=13)**	**Other (n=3)**	**Total (N=100)**
Crime in past month					
Committed violent crime	13% (n=7)	16% (n=5)	31% (n=4)	33% (n=1)	17%
Reasons for committing violent crime					
Peer group norm	4% (n=2)	6% (n=2)	8% (n=1)	-	5%
Money for opioids	-	-	-	-	-
Money for stimulant	-	-	-	33% (n=1)	1%
Money for opioid (after refusal from GP)	2% (n=1)	-	-	-	1%
Medication stolen	2% (n=1)	-	-	-	1%
Just wanted money/goods	4% (n=2)	3% (n=1)	8% (n=1)	33% (n=1)	5%
Needed money to support family/self	2% (n=1)	-	-	33% (n=1)	2%
Need money to repay debt	6% (n=3)	3% (n=1)	-	33% (n=1)	5%
Needed food/goods for family/self	4% (n=2)	-	-	33% (n=1)	3%
Peer pressure	4% (n=2)	-	8% (n=1)	-	4%
Lost temper	10% (n=5)	16% (n=5)	31% (n=4)	33% (n=1)	15%
Withdrawing from opioid	6% (n=3)	9% (n=3)	-	33% (n=1)	7%
Withdrawing from stimulant	-	-	8% (n=1)	-	1%
Under influence of opioid	4% (n=2)	6% (n=2)	-	-	4%
Under influence of benzodiazepine	2% (n=1)	-	-	33% (n=1)	2%
Under influence of stimulant	-	-	23% (n=3)	-	3%
Under influence of alcohol	-	-	-	-	-
Can't explain why	2% (n=1)	3% (n=1)	-	33% (n=1)	3%
Other reason	4% (n=2)	6% (n=2)	8% (n=1)	-	5%

*Participants were asked if each of the items in the table were 'a lot like' the reason they committed the crime(s), 'a little like' their reason, or 'not at all' like their reason for criminal activity. Data summarised here relates to items that were endorsed as either 'a little' or 'a lot' like the individual's reasons for committing the crime.

NB: GP refers to a medical practitioner

Source: Stage two survey of PWID

Sex work

Six of the 100 PWID participants reported being involved in sex work in the month prior to interview. Among these participants, half were engaging in such work several times per week, one on a weekly basis, and two on less than a weekly basis. Four of this group had most commonly injected methadone in the month prior to interview, while one had predominantly injected morphine and one methamphetamine in this time. When asked the reasons behind such involvement, five of these six participants reported that this was to support themselves financially, with only a single participant reporting that this activity helped to support their pharmaceutical opiate use.

Theft of pharmaceuticals by PWID participants

PWID participants were asked whether they had accessed any pharmaceutical drugs through theft in the preceding six months. In keeping with the modes of access reported above for benzodiazepines and pharmaceutical opiates, no participants reported forging prescriptions for pharmaceutical products, stealing prescription drugs from medical practitioners, or stealing drugs from pharmacies in the preceding six months. It was clear that, among the current sample, if such drugs were going to be accessed through theft, this was primarily from other PWID, who may or may not be accessing these drugs legitimately. A single participant reported stealing another person's prescription in the preceding six months, while nine had stolen pharmaceuticals from others in this time (one participant had done so only once, four twice, two participants three times, and the remaining participant had stolen pharmaceuticals from others five times in the preceding six months). These PWID participants reported most commonly that such theft was opportunistic (n=4) or 'borrowed and replaced' later (n=2), although one reported 'standing over' a less physically able individual to take their methadone syrup, one as taking benzodiazepines from a relative that was prescribed these drugs, and one stealing from a dealer of these drugs.

Theft of pharmaceuticals from PWID participants

Somewhat in keeping with the data described above in regard to theft of prescription drugs, it was surprisingly common for PWID participants to report that legitimately prescribed pharmaceutical drugs had been stolen from them in the preceding six months. Nine participants reported having their prescriptions stolen from them in the preceding six months, with prescriptions for benzodiazepines the most commonly stolen prescription (reported by 6 of the 9 participants, with 12 prescriptions reported as stolen in the preceding six months). Almost one-third (29%) of the entire PWID sample reported having had some legitimately prescribed prescription drug stolen from them in the preceding six months. Within this group of participants, methadone syrup had been stolen on 23 occasions in the preceding six months (some participants had their medications stolen on several occasions in this time). Benzodiazepines, which were the drug most commonly prescribed to this group, were also the drug most commonly 'stolen' from these participants, with these drugs stolen on 34 occasions from this group of 29 participants. Alprazolam (stolen on 17 occasions) was the benzodiazepine most commonly targeted for theft, followed by oxazepam (stolen on five occasions) and diazepam (stolen on four occasions)[4]. Legitimately prescribed morphine was reported as stolen from PWID participants on seven occasions in the preceding six months, with lower levels of reported theft of Physeptone (2 occasions), anti-depressants (2 occasions) and dexamphetamine (2 occasions).

Other issues

Not a single PWID participant reported spiking another person's drink with benzodiazepines or any other drug in the six months prior to interview.

[4] This pattern of theft of benzodiazepines is in keeping with the hierarchy of benzodiazepine preferences described in Table 16.

Summary of involvement in criminal activity with reference to NDLERF research questions

Is benzodiazepine or pharmaceutical opiate use amongst illicit drug users related to the commission of particular crimes (either to obtain these drugs and/or while under their influence)?

Which drugs from the benzodiazepine group and the pharmaceutical opiate group are most likely to be associated with crime (which is committed either to obtain the drugs and/or while under their influence)?

- A minority of participants suggested that their recent pharmaceutical drug use had caused them to be involved in some form of criminal behaviour; however, these reports did not appear to differ according to the pharmaceutical drug class that participants were referring to (benzodiazepine, morphine or methadone use), nor was there any substantial difference between criminal behaviour reported as associated with general 'use' or 'withdrawal' from these drugs.
- The degree of dependence on morphine emerged as a significant (but insubstantial) predictor of frequency of involvement in property crime. Increased use of prescribed methadone syrup was a 'protective' factor against involvement in property crime. While financial imperatives were most commonly reported as reasons for involvement in property crime, opioid addiction and withdrawal were also strong reasons provided for such behaviour.
- Involvement in selling of drugs to others was unrelated to the extent of any particular pharmaceutical product, and was most commonly explained in terms of a means of financial support (for food, bills, debts) by PWID participants engaging in dealing.
- Frequency of involvement in violent crimes was more common among PWID participants that, while using some pharmaceutical products, had predominantly injected methamphetamines in the preceding six months. Frequency of injection of benzodiazepines emerged as a significant but insubstantial predictor of such activity. Reasons for involvement in violent acts were primarily reported as being situational rather than related to financial reasons, although were commonly engaged in while under the influence of, or withdrawing from, opiates or stimulants.

Are there particular types of benzodiazepines or pharmaceutical opiates that are more likely to be targeted by those wishing to steal them, and if so, why?

- Almost one-third of the PWID participants reported having some legitimately prescribed drug stolen from them in the preceding six months, most commonly methadone syrup or alprazolam tablets.

Perceptions of police activity and impact

Changes to police activity in relation to prescription drugs, last 6 months

All PWID participants were asked if they had perceived any changes in the way that police were approaching issues around the use of prescription drugs in the preceding six months (Table 40). Almost half of the participants could not comment on this question (47%). Amongst the remainder, 38% perceived that there had been an increased police focus on such issues in the preceding six months, while 15% had noticed no change. Those that had indicated changes in policing were asked to describe these (Table 40). Most commonly noted (by 20% of the participants) was an increased presence of police in pharmacies and in surrounding areas (for example, adjoining car parks), particularly in pharmacies that serve a high number of individuals receiving methadone maintenance treatment, focused toward days when take-away doses of this medication are commonly dispensed (such as Fridays). The changes noted ranged from simple presence of police, which acted as a deterrent to soliciting for, or sale of, take-away doses of methadone syrup,

to targeted searches of individuals that police considered as possibly offering drugs for sale in these areas. Flowing from this, another commonly perceived difference in police behaviour was a changed approach to searches of individuals and environments (noted by 8% of the sample), including an increased effort to investigate whether names on prescription drugs found in a person's possession matched the name of the individual concerned. Smaller proportions of the sample reported increases in general police presence (4%) and of the number of drug 'raids' (1%) and number of people arrested for dealing (3%) in recent months. A number of indirect effects of changes in policing approaches to the issue of pharmaceutical drugs were reported by PWID participants, including that it was becoming more difficult to access benzodiazepines from medical practitioners (n=1), that prescribers were looking to take people off morphine in an attempt to reduce the potential for diversion (n=1), and that they perceived there to be restrictions on the number of places within the methadone maintenance program (n=1).

Table 40. Perceived recent changes in law enforcement activity directed at prescription drug use by PWID participants (N=100).

Changes in police activity directed at prescription drug use	Percent
More activity	38%
No change	15%
Don't know	47%
Examples	
Direct policing efforts	
Increased presence in and around pharmacies	20%
Increase in dealers busted recently	3%
Increased police presence generally	4%
Increased searches, changed approach to searches	8%
Recent 'crackdown' on pharmaceuticals	5%
Increase in raids	1%
Indirect policing efforts	
Restrictions in places on methadone program	1%
People being taken off morphine as medication	1%
Benzodiazepines more difficult to access from prescribers	1%

Source: Stage two survey of PWID

Police activity reducing availability of illicit prescription drugs

All PWID participants (N=100) were also asked whether police activity in the preceding six months had made it more difficult for them to access illicit prescription drugs (Table 41). The clear majority (75% of the sample) had not noted any changes in the availability of these drugs in the preceding six months, although almost one-fifth (19%) had perceived a decreased availability. These individuals were asked to provide examples of what had caused the perceived change (Table 41). Examples relating to the 'direct' impact of policing were very similar to those noted in the section above – reduced availability arising from arrests of individuals selling drugs (n=6), and less people selling methadone syrup (n=3) connected with an increased police presence around areas where such transactions may occur (n=2). Examples relating to 'indirect' changes were

again similar to those discussed above, including a perceived increasing reluctance of medical practitioners to prescribe benzodiazepines and pharmaceutical opiates (n=1), or that a prescriber or prescribers previously regarded as 'generous' had been cautioned to change their approach to prescription of such medications (n=1). One participant suggested that recent change in the illicit market surrounding pharmaceutical products may reflect increasing caution on the part of consumers following a recent series of overdose deaths anecdotally related to the concomitant use of methadone and alprazolam. Participants were asked whether there had been any other recent changes that may have had impacts on the illicit availability of prescription products, and responses were almost identical to those discussed in relation to the impact of policing changes (Tables 40 and 41).

Table 41. Impact of law enforcement or other changes*.

Has police activity made it more difficult to access prescription drugs?	**Percent**
Yes	19%
No	75%
Don't know	6%
Examples	
Direct policing impacts	
Dealer recently busted	5%
Police presence around pharmacies that dispense methadone make purchase more difficult	2%
Less people selling methadone	3%
Dealers paranoid due to recent busts	1%
Policing/medical practitioner interactions	
Doctors 'pressured' over prescribing practices	1%
More difficult to obtain prescriptions from doctors	1%
Some individuals removed from methadone maintenance	1%
Other impacts	
Recent overdose in a private home so consumers more cautious	1%
Has any other activity directed at prescription drugs made it more difficult for you to access these drugs recently?	**Percent**
Yes	19%
No	76%
Don't know	5%
Examples	
Policing impacts	
Police presence around pharmacies that dispense methadone	1%
A few notable dealers of pharmaceuticals recently busted	4%
Neighbourhood watch programs impacting on activities	1%
Medical professional/policy impacts	
Medical practitioners less willing to prescribe benzodiazepines	8%
'Generous' medical practitioners struck off/cautioned	1%
Take-away doses are increasingly difficult to get	1%

*It should be noted that these reported examples may not have necessarily occurred in the exact manner described by the participant. The question related to the reasons that the participant perceived as contributing to the decreased availability of pharmaceutical products.

Source: Stage two survey of PWID

Drug substitutions by PWID participants

One series of research questions, examined within the current study, involved an examination of whether enhancing supply reduction of pharmaceutical products in the illicit drug market might have the potential to cause shifts in the types of drugs that PWID groups seek to inject. Such a change to the market may have unintended consequences in terms of establishing greater demand for substances that may have stronger associations with crime or health harms than pharmaceutical products, such as heroin or crystalline methamphetamine. One approach to examining this issue is to examine the way individuals that are already in the marketplace behave when there are fluctuations in the availability of the drugs that they currently use.

As a first step in this process, PWID participants were asked what their drug of choice was, where a drug of choice referred to that which they would choose if all drugs were equally available and priced. This was compared to the drug which participants had injected most often in the month prior to interview (Table 42), and, if these differed, participants were asked the reasons for not predominantly using their drug of choice in this time. The first point that emerges from this table is that 41% of this sample nominated heroin as their drug of choice, and, as such, would most likely use heroin if they could. Of these participants, only a single individual reported that heroin was indeed the drug they had most often injected in the preceding month. The remainder substituted heroin with either methadone (n=26), morphine (n=11) or methamphetamine (n=3). In all but three cases (relating to preferential use of methadone over heroin due to the potential health issues associated with heroin use) the reasons given by PWID participants for not predominantly using heroin were market driven, either because heroin was not easily available on the local market (n=28, 68% of those nominating heroin as their drug of choice), was comparatively expensive (n=3, 7%), or was low in purity (n=5, 12%). In sum, this may suggest that a substantial proportion of pharmaceutical opiate consuming PWID groups have a high preference for heroin, but, due to the poor availability of heroin in the Hobart market (with associated high prices and low potency), these participants are commonly using pharmaceutical opiates 'in the place of' heroin. The logical consequences of this in terms of supply reduction is not only that there may be a substantial local market for heroin should the availability of this drug increase in Hobart, but that – should supply reduction efforts reduce the availability of pharmaceutical opiates to such a point that they are equally as difficult to access as heroin for consumers – then this 'may' have the potential to create a situation where increased efforts are made to establish lines of regular supply of heroin into the local market. Such a potential is examined in subsequent sub-sections.

Table 42. Drug of choice versus the drug used most often in the month prior to interview.

Drug of choice	Drug used most	Reason
Heroin (n=41)	Heroin (n=1)	na
	Methadone (n=26)	Availability (n=17)
		Price (n=3)
		Health issues (n=3)
		Purity (n=3)
	Morphine (n=11)	Availability (n=9)
		Purity (n=1)
	Methamphetamine (n=3)	Availability (n=2)
		Purity (n=1)
Methadone (n=20)	Methadone (n=19)	na
	Morphine (n=1)	Price (n=1)
Morphine (n=17)	Morphine (n=14)	na
	Methadone (n=2)	Health issues (n=2)
	Methamphetamine (n=1)	Health issues (n=1)

na: refers to 'not applicable'

When PWID participants nominated pharmaceutical opiates as their drug of choice, however, in almost all cases these individuals had injected their most preferred drug most often in the preceding month (n=23 of 27 participants). In all but one case, when there were discrepancies between the preferred drug and that most often used, this related to a decision to avoid use of the preferred drug due to health reasons (n=3 of 4 participants). The single remaining participant was the sole individual to nominate a market-related reason (price) as to why they had not predominantly used their pharmaceutical-opiate drug of choice in the preceding month. In keeping with trends reported in Chapter three, Stage two, Pharmaceutical Opiates, this would be consistent with a picture in which illicit pharmaceutical opiates are relatively easily accessed by those seeking them.

As a further part of examination of this issue, PWID participants were asked which drug they would seek out if the drug they most commonly used was not available (Table 43). For those participants most commonly using pharmaceutical opiates, the substitute substances that they nominated as seeking first and second are summarised in Table 43. Interestingly, in terms of the first substitute drug that participants would look to, only slightly more than half reported looking for an alternate formulation within the most desired drug class (for example, substituting Kapanol for MS Contin, (both of which are morphine) or an alternate pharmaceutical opiate (n=46 of the 84 participants, 55%). Benzodiazepines were common substitutes (n=12 of the 84 individuals, 14%), and, to a lesser extent, cannabis (n=5, 6%). However, surprisingly, one-fifth of the participants (n=16 of the 84 individuals) indicated that their first substitute for a pharmaceutical opiate would be methamphetamine. This is a substitution that would not be predicted on the basis of the pharmacological properties of the drugs concerned.

PWID participants were also asked what the second drug would be that they would search for if both their predominantly used drug 'and' their first substitute was not available (Table 43). One-quarter of participants (n=21 of the 84 individuals) reported that they would continue looking for a pharmaceutical opiate, another quarter (n=22) would substitute with benzodiazepines, 13% would shift to use of cannabis, 12% methamphetamine, and just 11% would not use any illicit drug in this situation.

Table 43. Drug substitutions if predominantly used drug was not available.

Drug used most	First substitute	Second substitute
Methadone (n=52)	Morphine (n=19)	Morphine (n=14)
	Methamphetamine (n=12)	Benzodiazepines (n=14)
	Benzodiazepines (n=8)	Cannabis (n=7)
	Methadone (n=7)	Methamphetamine (n=5)
	Other opiates (n=3)	Nothing (n=5)
Morphine (n=32)	Morphine (n=7)	Benzodiazepines (n=8)
	Methadone (n=7)	Methamphetamine (n=5)
	Cannabis (n=5)	Methadone (n=5)
	Benzodiazepines (n=4)	Cannabis (n=4)
	Methamphetamine (n=4)	Nothing (n=4)
	Other opiates (n=3)	Morphine (n=2)

Source: Stage two survey of PWID

PWID perceptions of the impact of substantially changed availability of benzodiazepines

PWID participants that had recently used benzodiazepines were asked to consider what potential impact a scenario of substantially 'increased' or 'decreased' availability of benzodiazepines would have on them, not only in terms of their drug use but how this might affect all aspects of their life. Participants were not only asked to consider how this might affect them, but also how this might affect the people that they know who use benzodiazepines. The rationale behind such a dual approach comes from a substantial literature that suggests that such questions may allow individuals to discuss less socially desirable aspects of their 'own' behaviour. Participants' responses are summarised below in Tables 44 and 45, and the combined totals of the potential impacts of changes on personal behaviour and that of others will be discussed in subsequent paragraphs.

In regard to the potential impact of a substantially 'reduced' availability of benzodiazepines, the single most common response was that such a change would not affect the participant, as they were appropriately using benzodiazepines that were prescribed for legitimate reasons (n=64, although it is noteworthy that this response was substantially more common with reference to the participant's own behaviour as opposed to that of others). Of the remaining responses with reference to the impact of such a change on participants' use of benzodiazepines, there were just seven responses suggesting that participants would stop (n=5) or reduce (n=2) use of benzodiazepines. A greater number (n=11) suggested that PWID would continue to use benzodiazepines, increasingly looking to medical practitioners to prescribe them (legitimately: n=2; or illegitimately: n=2), or simply pay the increased illicit market price for these drugs when they did appear (n=2). There were also six responses suggesting that PWID would increase their

use of other drugs (increasing use of methadone in particular) to substitute for benzodiazepines if these were no longer available. PWID participants, when asked their reasons for use of benzodiazepines (see Table 28) commonly described using these drugs for legitimate reasons in terms of their anxiolitic, calming, sleep-promoting, and/or pain-reducing effects. In keeping with such reasons for use, many PWID participants reported that a substantial reduction in the availability of benzodiazepines would have sizeable negative consequences on their lives, in terms of having difficulties coping with life generally, or with stressful situations (n=16), increased anxiety (n=2), sleep difficulties (n=3), physical pain (n=1), or problems with managing withdrawal symptoms without them (n=2). In terms of the calmative effect of benzodiazepines, participants also noted some major impacts on behaviour if these drugs were no longer available, with 4 responses suggesting that participants would be more argumentative, and 3 suggesting that they would be more violent without benzodiazepines. Eleven responses (wholly referring to the behaviour of others without benzodiazepines) suggested that people may end up in gaol should there be a reduction of availability of benzodiazepines, due to increased aggression or increased criminal activity in order to source these drugs.

In terms of considering their behaviour, were there to be a substantial 'increase' in the illicit availability of benzodiazepines, while there were 35 responses suggesting that such an issue would not apply to the participant or their friends – as they were only using benzodiazepines appropriately as prescribed – there was an almost equal number of responses suggesting that they would not change their level of benzodiazepine use (n=40 responses) as those suggesting that they would increase the amount or frequency of benzodiazepine use (n=42). Participants also reported a mixture of positive and negative potential outcomes from an increased availability of benzodiazepines. Potential negative outcomes included the potential for increased injection-related harm (through increased benzodiazepine injection: n=4), the potential for addiction (n=6), overdose (n=4) or other health problem from increased use (n=5), or that young people may take up use of the drug (n=1). Notably, a very small number of participants suggested that an increase in the availability of benzodiazepines might increase the level of crime (n=2) or violence (n=1) among PWID through the disinhibitive effects of benzodiazepines. However, on the contrary, there were three reports that such an increase might reduce the level of criminal activity, and two reporting that this change would reduce financial pressures. Other reported potential positive effects of an increase in the availability of benzodiazepines included reduced stress and enhanced self esteem (n=6), that such a situation might allow consumers more control over their use (n=2) or to reduce their intravenous drug use (n=1), or that the reduction in time spent trying to locate these drugs would mean that they could spend more time with their family (n=1).

Table 44. Effects of decreased availability of benzodiazepines.

Effects of decreased availability on…	You n	Friends n	Total n
Psychological effects			
Have problems coping without them/more psychiatric cases	3	10	13
Suicide	1	4	5
Increased anxiety	2	-	2
Increased stress	1	-	1
Physical effects			
Problems sleeping	1	2	3
Hang out/withdrawal	1	1	2
Increased physical pain	1	-	1
Social/relationship effects			
More arguments at home	1	3	4
Would have a major impact on my life (I wouldn't be able to leave the house/function less well in life)	1	1	2
Effect on crime			
Increased crime (would end up in gaol)	-	11	11
Increased violence (without them)	-	3	3
Financial problems	-	2	2
Effect on use of other drugs			
Increase/substitute use of other drugs	2	3	5
Go to the doctor for them	3	1	4
Increase use of methadone	1	-	1
Effect on benzodiazepine use			
Would have no effect (use appropriately as prescribed)	50	14	64
Wouldn't use	4	1	5
Increase doctor-shopping for them	1	1	2
Start looking for them on the street (as opposed to GP)/look for other sources	1	1	2
Decrease use of benzodiazepines	1	1	2
Would pay more for them	1	-	1
Would continue to use	-	1	1
Buy them in larger amounts when available	-	1	1
Other			
Don't know	-	5	5

Source: Stage two survey of PWID

Table 45. Effects of increased availability of benzodiazepines.

Effects of increased availability on…	You n	Friends n	Total n
Psychological effects			
Would be happy	-	3	3
Would allow me to have more control over use (and feel like a normal person)	2	-	2
Would be more content within oneself	-	2	2
Would reduce stress	-	1	1
Physical effects			
Increase addiction	2	4	6
Increase risk/likelihood of overdose	-	4	4
Health problems (from overuse)	2	1	3
End up hospitalised from using too much	1	1	2
Social/relationship effects			
Would be home more (less time spent chasing)	-	1	1
Effect on crime			
Reduce involvement in criminal activity	1	2	3
Would have less financial problems	1	1	2
Increase in level of crime (from disinhibition)	-	2	2
Would buy them to sell and make more cash	1	-	1
Increased violence (from disinhibition)	-	1	1
Effect on use of other drugs			
Would use less Intravenous (IV) drugs	1	-	1
Effect on benzodiazepine use			
Increase amount or frequency of use	17	25	42
Would have no effect	29	11	40
Not applicable	16	19	35
Younger people would start using them	-	1	1
Injection-related harms			
Increased vein damage	-	2	2
Start injecting them	1	-	1
Increased risk of limb/digit amputation	-	1	1
Other			
Don't know	-	3	3

Source: Stage two survey of PWID

PWID perceptions of the impact of substantially changed availability of pharmaceutical opiates

PWID participants were also asked what they thought the possible impacts on their lives and behaviour would be of substantial increases or decreases to the availability of pharmaceutical opiates on the illicit market (Table 46 and 47).

Responses to the potential impact of a substantial decrease in the availability of pharmaceutical opiates suggested that such a shift would have much more of a substantial impact on the lives and behaviour of local PWID than would a similar change in the availability of benzodiazepines (Table 44 and 46). There were 38 responses suggesting a change in illicit markets would not affect their use of pharmaceutical opiates as this was prescribed to the respondent for legitimate reasons. While there were a further 31 responses suggesting that PWID may reduce or stop use of pharmaceutical opiates, there was a substantial number of individuals that reported, either explicitly (n=3) or implicitly, that they would not stop their use of these drugs. Some PWID respondents reported that there might be a shift to people looking to receive methadone maintenance treatment (n=11) or that some might attempt to access pharmaceuticals through doctor-shopping (n=3). Other participants suggested that they would look to substitute other drugs in the place of pharmaceutical opiates, turning to stolen opium poppy products (n=5), cannabis (n=3), heroin (n=2), benzodiazepines (n=2), methamphetamine (n=1) or alcohol (n=1). Commonly, PWID participants also identified that there would be an increase in financial problems experienced by regular pharmaceutical opiate consuming PWID (n=10), with a consequent increase in the number and severity of crimes committed by this group (n=40). A minority of participants also noted that such a situation would leave them or their peers with problems coping with pain management (n=3) or with other life stressors (n=11).

In terms of the possible effects of an increased availability of pharmaceutical opiates on the illicit market, PWID responses again were a mixture of positive and negative. Firstly, in terms of the general impact on the extent of pharmaceutical opiate use, while there were 41 responses suggesting that there would be no change to the extent to which PWID might use these drugs, there were almost twice as many responses (n=77) suggesting that there would be an increase both in frequency and amount of use of these drugs. Moreover, PWID participants suggested that such an easy availability would be an incentive for people to commence using pharmaceutical opiates (n=4). While PWID respondents could see benefits of an increased availability of these drugs through decreased purchase prices, which may lead to reduced financial burdens (n=10) and a consequent decrease in involvement in criminal activity (n=7), a number also suggested that there may actually be 'increases' to the extent of involvement in crime as people developed stronger addiction through increased use of these drugs. Similarly, a number of PWID participants were concerned with the increased risk of overdose (n=13) with the increased opportunity (and temptation) to use, along with the increased level of addiction (n=9). Finally, there were mixed suggestions of the potential impact on social and psychological aspects on PWID's lives, with some suggesting that an increased availability of these drugs would make life easier (n=3) or that they might be able to 'stop doing things that they didn't want to do in order to access these drugs' (n=1) and may have a more 'normal' lifestyle (n=1). On the other hand, some PWID suggested that the possibility for heavier drug use would lead to increased relationship difficulties (n=1) and worse lifestyles (n=1).

Table 46. Effects of decreased availability of pharmaceutical opiates.

Effects of decreased availability on…	You n	Friends n	Total n
Psychological effects			
Wouldn't be able to cope	1	5	6
Suicidal	1	4	5
Would be angry	1	3	4
Would be devastated	-	3	3
Physical effects			
Physical pain (wouldn't be able to manage pain effectively)	3	-	3
Try alternative pain management/pain clinic	2	-	2
Wouldn't eat/wouldn't be able to feed child (due to increased cost of drug)	2	2	-
Effect on crime			
Increase in crime (number and severity)	10	26	36
Increase in financial problems	5	5	10
Turn to sex work (to afford)	2	-	2
Increase in armed robbery	-	2	2
Reduce financial problems (would stop using)	1	-	1
Wouldn't resort to crime to pay for it	1	-	1
More likely to be attacked for methadone doses	1	-	1
Increased violence between dealers and buyers	-	1	1
Effect on other drug use			
Try to go on methadone maintenance	5	6	11
Increase in use of opium/poppy field raids	2	3	5
Increase doctor-shopping for benzodiazepines or other medications	2	1	3
Increase cannabis use	2	1	3
Increase in heroin use/steps to improve access to heroin	1	1	2
Increase benzodiazepine use	2	-	2
Look for a cheaper substitute	2	-	2
Increase experimentation with other drugs	1	-	1
Increase alcohol use	1	-	1
Increase methamphetamine use	1	-	1
Effect on pharmaceutical opiate use			
Wouldn't affect me (prescribed/on maintenance program)	22	16	38
Might/would stop use	20	11	31
Reduce dosage/cut back use	2	1	3
Would not stop use	-	3	3
Other			
Don't know	-	5	5

Source: Stage two survey of PWID

Table 47. Effects of increased availability of pharmaceutical opiates.

Effects of increased availability on…	You n	Friends n	Total n
Psychological effects			
Would make life easier	1	2	3
Would be happier	2	3	5
Would stop doing things I don't want to do in order to get it	1	-	1
Physical effects			
Increased risk of overdose	6	7	13
Increased risk/level of addiction/tolerance	2	7	9
Decrease pain/improved pain management	1	1	2
Increased health harms (from increased use)	1	-	1
Social/relationship effects			
Would have a more normal lifestyle (less time spent getting or making money to get drugs)	1	-	1
Would have a worse lifestyle due to heavier drug use	1	-	1
Increase arguments	-	1	1
Would improve relationships with family (less time searching, more time with children etc.)	1	1	-
Effect on crime			
Would have less financial problems	8	2	10
Decrease involvement in criminal activity	2	5	7
Increase crime (as to greater addiction from more use)	1	3	4
Start dealing	1	-	1
Dealers would make more money	-	1	1
Would increase the number of people selling (if cheaper to buy in bulk)	1	1	-
Effect on pharmaceutical opiate use			
Increase amount and/or frequency of use	39	38	77
No effect on the extent of use	26	15	41
Would provide an incentive for more people to start use	1	1	2
Younger people would start using	1	-	1
Increase the temptation to use	1	-	1
Other			
Don't know	-	2	2

Source: Stage two survey of PWID

Summary of involvement in criminal activity with reference to NDLERF research questions

What would be the potential/likely implications of more effective supply reduction of benzodiazepines and pharmaceutical opiates in terms of crime, offending and/or creating an environment that is more conducive to the establishment of a heroin/cocaine market and an environment in which the overall level of harm may actually be increased?

- A substantial proportion of pharmaceutical opiate consuming PWID groups appear to have a high preference for heroin, but, due to the poor availability of heroin in the Hobart market, these participants are commonly using pharmaceutical opiates 'in the place of' heroin. The logical consequences of this in terms of supply reduction is not only that there may be a substantial local market for heroin should the availability of this drug increase in Hobart, but should supply reduction efforts reduce the availability of pharmaceutical opiates to such a point that they are equally as difficult to access as heroin for consumers, then this 'may' have the potential to create a situation where increased efforts are made to establish lines of regular supply of heroin into the local market.
- When PWID participants were asked what drug they would seek out, within the current market context if they could not access their pharmaceutical opiate of choice, only half reported looking for an alternate formulation within that drug class (such as substituting morphine for methadone, or Kapanol for MS Contin). While some reported they would shift to use of benzodiazepines or cannabis, one-fifth suggested they would look to use methamphetamine, which is a substitution that would not be predicted on the basis of the pharmacological properties of the drug.
- Among PWID participants not receiving benzodiazepines for legitimate reasons, it was commonly reported that a substantial decrease in the illicit availability of benzodiazepines would have a deleterious effect on psychological and social aspects of their life, in terms of issues such as increased anxiety and irritability. It was more common for these individuals to report paying increased illicit market prices or attempting to access these drugs via 'doctor-shopping' than stopping or reducing use in response to a decreased availability of diverted benzodiazepines. There was also some suggestion that crime or violent behaviour may increase in response to such a market change.
- Only a minority of PWID respondents using diverted pharmaceutical opiates reported that they would stop or decrease their use of these drugs if there was a substantial decrease in the availability of these products on the illicit market. More commonly, respondents suggested they would experience an increased financial burden to maintain their level of use, and predicted that the level of involvement in, and the severity of, criminal activities may increase in response. A smaller proportion reported that such a market change would cause them to seek pharmaceutical maintenance therapy, with others suggesting that they would shift to use of other drugs, such as stolen poppy preparations, heroin, methamphetamine or benzodiazepines (possibly sought through 'doctor-shopping').

Summary

The following is a summary of the main findings of the Stage two interviews with PWID.

Correlations between use of pharmaceutical products and use of other drugs

Benzodiazepines

- Benzodiazepine use was common among the entire PWID sample.
- However, those that had recently used benzodiazepines were significantly more likely to have recently used illicitly accessed methadone syrup than those that had not recently used benzodiazepines. A similar relationship was shown for injection of benzodiazepines and use of diverted methadone syrup and of Physeptone tablets.

Pharmaceutical opiates

- PWID participants were clearly flexible in the types of drugs that they used, with individuals that used one pharmaceutical opiate type typically also using other types as well (for example, those recently accessing methadone syrup illicitly were also commonly using Physeptone, morphine and benzodiazepines as well).
- This relationship was strongest amongst those not receiving methadone maintenance treatment.
- While selected for involvement in the study on the basis of pharmaceutical use, there was also a high proportion of this cohort reporting recent methamphetamine use.

Sources of pharmaceutical products on the illicit market

Benzodiazepines

- PWID participants predominantly received benzodiazepines through legitimate prescriptions from a medical practitioner.
- Access to benzodiazepines from non-legitimate sources were clearly a secondary and substantially less prevalent pathway to access of these drugs. It was also more common for PWID participants to access benzodiazepines through gifts or trading of other drugs than to access these through illicit purchase.
- Feigning symptoms to obtain benzodiazepines was uncommon and no participants had recently stolen benzodiazepines, forged prescriptions or purchased these drugs over the internet.

Pharmaceutical opiates

- Morphine, Physeptone and, to a lesser extent Oxycontin, were most commonly purchased from a 'dealer' by PWID participants.
- Methadone syrup and tramadol were more commonly accessed through legitimate prescription, with those accessing diverted methadone syrup predominantly purchasing the drug from a 'friend' or receiving it as a gift.
- There was very little use of diverted buprenorphine amongst the current cohort, with those accessing this drug illicitly doing so through gifts or trades.
- Across all these drug types, theft, feigning of symptoms or purchase via internet sources was rare or non-existent.

The extent and ease of 'doctor-shopping' to access pharmaceutical products for illicit use

Benzodiazepines

- PWID participants had good access to legitimate prescriptions for benzodiazepines, predominantly prescribed for legitimate clinical considerations. As such, there was very little use of, or the requirement for, 'doctor-shopping' to obtain these drugs.

Pharmaceutical opiates

- Amongst the current cohort, access to pharmaceutical opiates through feigning symptoms or doctor-shopping was extremely rare or non-existent.

Provision of pharmaceutical opiates by sellers of other drugs

Benzodiazepines

- While access to benzodiazepines was predominantly through legitimate prescriptions, where they were accessed illicitly, this was most commonly through friends (who did not provide or sell any other drugs) or from individuals characterised as 'small-time dealers', who may also provide methamphetamine, morphine and/or cannabis.
- Median purchase prices ranged from $1 per 5mg Valium tablet, and $4 per 2mg Xanax tablet, to $5-10 for 20mg gel capsules of temazepam.

Pharmaceutical opiates

- Participants reported typically purchasing morphine and Physeptone from small or large-scale 'dealers' that typically also provided drugs such as methamphetamine, morphine and/or cannabis.
- Methadone syrup was typically purchased from friends or 'user/dealers' who typically did not provide any other drugs for sale, with the possible exception of cannabis.

Particular pharmaceutical products more likely to be targeted for theft or diversion

Benzodiazepines

- Theft or 'doctor-shopping' to access benzodiazepines was minimal or non-existent amongst the current PWID cohort.
- However, there was a hierarchy of preference for benzodiazepines, with gel capsules of temazepam, flunitrazepam and alprazolam most preferred, followed by oxazepam and nitrazepam, with diazepam and temazepam tablets least preferred. This appears to be related to relative potency and speed of effect of these formulations, and is well-established in the literature.

Pharmaceutical opiates

- Reported preferences of the PWID group were very similar for a range of pharmaceutical opiates, in particular methadone syrup, Physeptone, Anamorph, Ordine, and potent tablets of MS Contin were well regarded by participants. This matches well with a picture of PWID groups being flexible in the opiates that they use.
- Almost one-third of the PWID participants reported having some legitimately prescribed prescription drug stolen from them in the preceding six months, most commonly methadone syrup or alprazolam tablets.

Implications of use of pharmaceutical opiates and benzodiazepines for health and emergency services workers

- More than four-fifths of the current PWID cohort reported experiencing injection-related harms in the month prior to interview, most commonly indications of damage to the venous system (scarring or bruising of injection sites, difficulties locating veins), which are likely to reflect the degree of harm associated with the intravenous administration of pharmaceutical products that were not designed for such use.
- Fifteen percent of the cohort reported experiencing a 'dirty hit' (an injection that made them feel physically unwell) in the previous month, which was associated with the injection of methadone syrup. As this involves the injection of a large volume of non-sterile solution, this may be a reaction to contaminants in the dilution process.
- Almost half of the current sample reported experiencing memory loss or a 'black-out' associated with benzodiazepine use in the month prior to interview.
- Pharmaceutical opiate use had brought a minority of the current cohort (6%) into contact with ambulance services in the month prior to interview.
- Across all of these target pharmaceuticals, between one-third and one-half of participants had experienced social problems such as relationship difficulties or irritability associated with use and/or withdrawal from these substances in the month prior to interview.

Links between use of pharmaceutical opiates and benzodiazepines and crime

- A minority of participants suggested that their recent pharmaceutical drug use had caused them to be involved in some form of criminal behaviour; however, these reports did not appear to differ according to the pharmaceutical drug class that participants were referring to (benzodiazepine, morphine or methadone use), nor was there any substantial difference between criminal behaviour reported as associated with general 'use' or 'withdrawal' from these drugs.
- The degree of dependence on morphine emerged as a significant (but insubstantial) predictor of frequency of involvement in property crime. Increased use of prescribed methadone syrup was a 'protective' factor against involvement in property crime. While financial imperatives were most commonly reported as reasons for involvement in property crime, opioid addiction and withdrawal were also strong reasons provided for such behaviour.
- Involvement in selling of drugs to others was unrelated to the extent of any particular pharmaceutical product, and was most commonly explained in terms of a means of financial support (for food, bills, debts) by PWID participants engaging in dealing.
- Frequency of involvement in violent crimes was more common among PWID participants that, while using some pharmaceutical products, had predominantly injected methamphetamines in the preceding six months. Frequency of injection of benzodiazepines emerged as a significant but insubstantial predictor of such activity. Reasons for involvement in violent acts were primarily reported as being situational rather than related to financial reasons, although were commonly engaged in while under the influence of, or withdrawing from, opiates or stimulants.

Impacts of more effective supply reduction of diverted pharmaceuticals

- A substantial proportion of pharmaceutical opiate consuming PWID groups appear to have a high preference for heroin, but, due to the poor availability of heroin in the Hobart market, these participants are commonly using pharmaceutical opiates 'in the place of' heroin. The logical consequences of this in terms of supply reduction is not only that there may be a substantial local market for heroin should the availability of this drug increase in Hobart, but

that, should supply reduction efforts reduce the availability of pharmaceutical opiates to such a point that they are equally as difficult to access as heroin for consumers, then this 'may' have the potential to create a situation where increased efforts are made to establish lines of regular supply of heroin into the local market.

- When PWID participants were asked what drug they would seek out, within the current market context, if they could not access their pharmaceutical opiate of choice, only half reported looking for an alternate formulation within that drug class (such as substituting morphine for methadone, or Kapanol for MS Contin). While some reported they would shift to use of benzodiazepines or cannabis, one-fifth suggested they would look to use methamphetamine, which is a substitution that would not be predicted on the basis of the pharmacological properties of the drug.
- Among PWID participants not receiving benzodiazepines for legitimate reasons, it was commonly reported that a substantial decrease in the illicit availability of benzodiazepines would have a deleterious effect on psychological and social aspects of their life, in terms of issues such as increased anxiety and irritability. It was more common for these individuals to report paying increased illicit market prices or attempting to access these drugs via 'doctor-shopping' than stopping or reducing use in response to a decreased availability of diverted benzodiazepines. There was also some suggestion that crime or violent behaviour may increase in response to such a market change.
- Only a minority of PWID respondents using diverted pharmaceutical opiates reported that they would stop or decrease their use of these drugs if there was a substantial decrease in the availability of these products on the illicit market. More commonly, respondents suggested they would experience an increased financial burden to maintain their level of use, and predicted that the level of involvement in, and the severity of, criminal activities may increase in response. A smaller proportion reported that such a market change would cause them to seek pharmaceutical maintenance therapy, with others suggesting that they would shift to use of other drugs, such as opium poppies, heroin, methamphetamine or benzodiazepines (possibly sought through 'doctor-shopping').

Stage three: Secondary indicator data

There is a very limited amount of data available relating to issues surrounding the illicit use of pharmaceutical products within Tasmania. The data that does exist is regularly summarised within the Tasmanian Illicit Drug Reporting System reports (Bruno & McLean 2000, 2001, 2002, 2003, 2004). The key indicator data pertaining to pharmaceutical misuse are summarised below.

Jurisdictional indicators

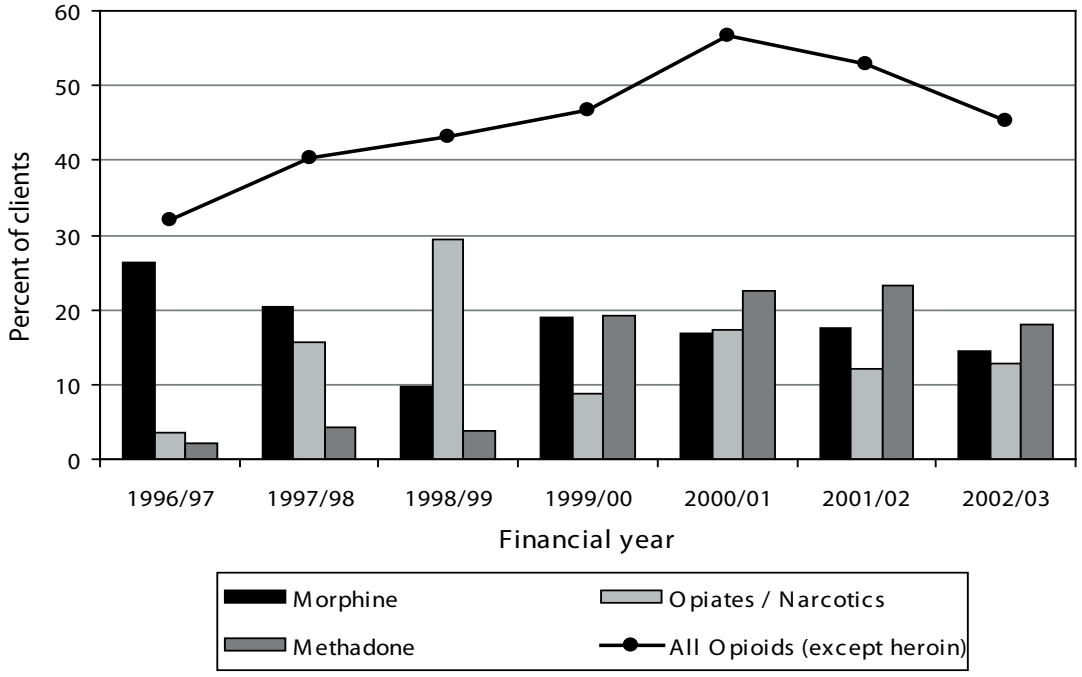
Use trends – Needle Availability Program data

In Tasmania, whenever an individual collects sterile injecting equipment from a non-pharmacy Needle Availability Program outlet (which relates to approximately 80% of all client transactions when pharmacy figures are included: Bruno & McLean unpublished data), data is collected relating to the demographics of the client as well as to the drug that participants 'usually' inject. Data from clients nominating an opioid other than heroin (methadone, morphine or 'opiates/narcotics' as it is recorded in the database) has shown wide variation across the preceding seven years within the state (Figure 1). While some of this variation may relate to inconsistencies in data collection (see Bruno & McLean 2004 for a discussion of this issue), this primarily relates to changes in the proportion of clients nominating the catch-all 'opiates-narcotics' category as the drug they predominantly use rather than specifying a specific single drug. When this data is collapsed, a trend becomes clearer, with the percentage of clients reporting opioids (excluding

heroin) as the drug they most often injected steadily increasing from 32.1% in 1996/97 to 56.6% in 2000/01, then decreasing again to 53.0% in 2001/02 and further still to 45.3% in 2002/03. This trend is the exact opposite to that reported for use of methamphetamine, which has steadily risen from 30% of transactions in 2000/01 to 51% in 2002/03. Also noteworthy in the opiate use data is the indication that, although injection of morphine had consistently been reported as more popular than injection of methadone to 1998/99, the popularity of both drugs was equivalent in 1999/00, and in 2000/01 methadone was a more commonly reported substance, a trend continuing into 2002/03. While responses categorised in the 'opiates/narcotics' category may have masked the true level of injection of methadone in previous years, data from the IDRS studies (discussed below) would seem to support a shift to increasing levels of injection of methadone in Hobart in recent years.

Reported use of benzodiazepines as the main drug injected by non-pharmacy Needle Availability Program outlet clients has undergone massive changes in the past four years, with an increase from 0.3% to 13.5% of clients between 1998/99 and 1999/00, returning to more modest levels (3.5%) in 2000/01. This proportion remained reasonably stable at 3.8% in 2001/02, dropping again in 2002/03, to less than 1% of all client transactions (Table 48). While there are limitations with this dataset, it would appear that the apparent rapid increase in benzodiazepine use between 1998/99 and 1999/00 stabilised at a lower level during 2000/01 and 2001/02, and the level of primary benzodiazepine use may have returned to more traditional low levels during 2002/03. While data from the Needle Availability Program is likely to underestimate the true level of injection of benzodiazepines (as the question usually asked is 'what is the drug you usually inject'), data from the IDRS IDU surveys detailed below follow similar patterns. This turnaround is likely to reflect the combined impacts of the decreased availability of the benzodiazepines most commonly favoured for injection (both from the efforts of prescribers and the changes to PBS subsidies) and the education efforts of many of the local needle availability outlet staff.

Figure 1: Percentages of opioids reported as 'drug most often injected' by Tasmanian Needle Availability Program clients, 1996/97-2002/03



Source: Sexual Health, Department of Health and Human Services (2003a)

Table 48. Percentage of benzodiazepines reported as 'drug most often injected' by Tasmanian non-pharmacy Needle Availability Program clients, 1997-2003.

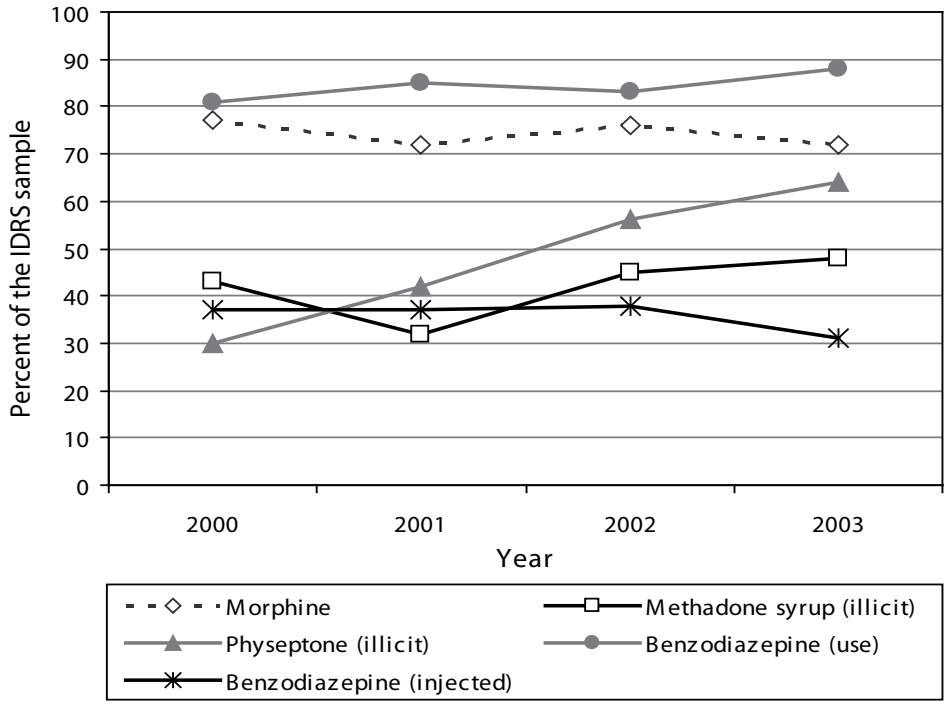
Year	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03
Number of clients reporting benzodiazepines	18	24	1294	505	761	52
Percent of total clients reporting benzodiazepines	0.3%	0.3%	13.5%	3.5%	3.8%	0.2%

Source: Sexual Health, Department of Health and Human Services (2003a)

Use trends – Illicit Drug Reporting System data

The IDRS is an annual national study designed to monitor trends in illicit drug markets. In the middle of each year in Hobart, a convenience sample of 100 individuals that regularly inject illicit drugs are interviewed about the drugs they use, changes to their availability, price and purity, along with other social and health aspects of drug use. Details of the study are available in Bruno & McLean (2001, 2002, 2003, 2004); however, the proportion of the PWID sample that had used each of the main pharmaceutical products examined in the current study are summarised below in Figure 2. This illustrates a number of trends. Firstly, while the proportion of this sample using morphine has remained relatively high and stable over the four years of the study (ranging between 72% to 77%), the median frequency of use had decreased in this time (52 days in the preceding six months in 2000, 31 days in 2001, 24 in 2002, and 21 in 2003). The proportions reporting use of illicit methadone syrup have not changed substantially across the four surveys (43% in 2000, 48% in 2003, despite an increase in the proportion of the sample that were receiving methadone maintenance treatment from 36% to 58% in this time). What was noted was a continual increase in the proportion of the participants that had recently used Physeptone, which more than doubled from 30% in the 2000 study to 64% in 2003. A high proportion of participants reported use of benzodiazepines in the six months prior to interview in each of the studies, rising slightly from 81% in 2000 to 88% in the 2003 study, with much of this use being a combination of licit and illicitly accessed benzodiazepines. Benzodiazepine injection, however, had remained stable in the studies conducted between 2000 and 2002 (37% to 38%), decreasing somewhat in 2003 (31%) due to the decreased availability of gel capsules of temazepam (which were the preparation of choice for PWID to inject) due to a policy change toward their prescription through the Pharmaceutical Benefits Scheme in concert with increased efforts by frontline health intervention workers to discourage intravenous use of such preparations.

Figure 2: Proportions of Hobart IDRS participants reporting use of pharmaceutical products in the six months prior to interview

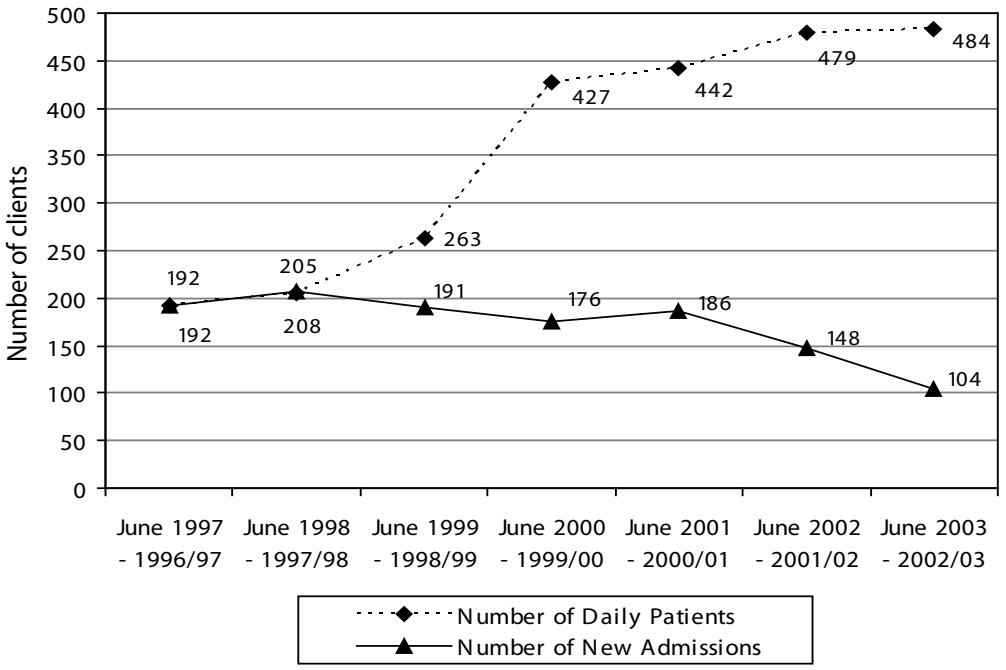


Source: Bruno and McLean (2001, 2002, 2003, 2004)

Prescribing trends

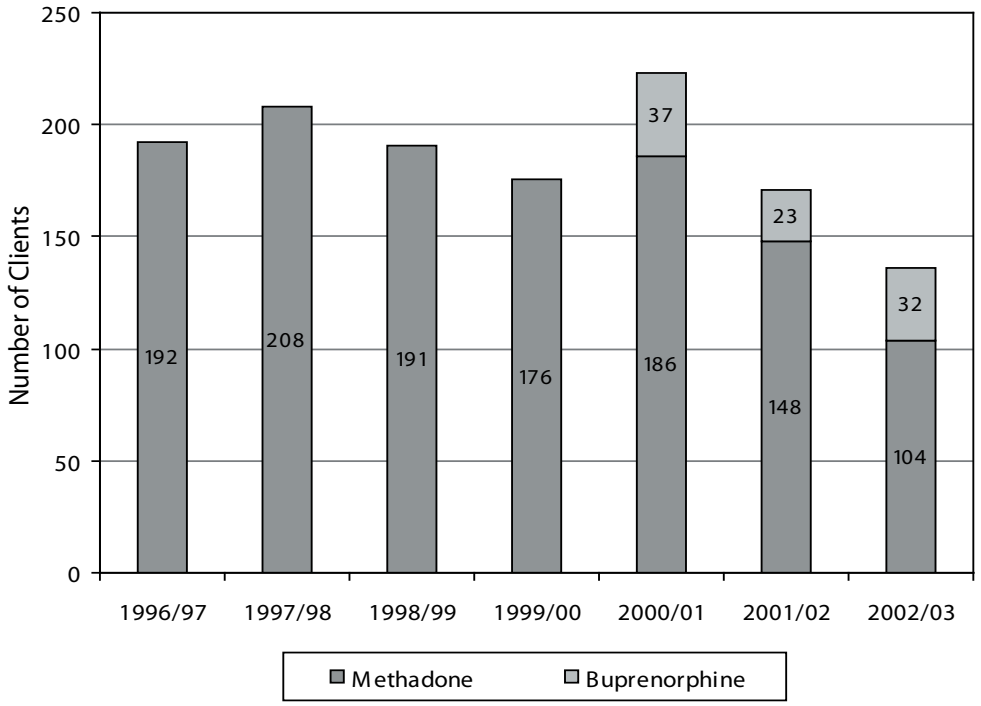
There has been a steady growth in the number of clients on Tasmania's methadone maintenance program since 1996 (Figure 3). At the end of the 2002/03 financial year there were around 484 daily recipients of methadone, more than treble the number on the program in 1995. However, this increase in numbers is likely to primarily reflect the long-term nature of methadone maintenance therapy, as the number of new applications for the program had remained consistent between 1997-2001 (approximately 200 new applications per annum), and had been decreasing in the previous two financial years. In 2001/02, there was a drop in this number of new admissions to methadone maintenance to 148 (Figure 3), and in 2002/03 this had dropped to 104, the difference partially accounted for by the number of new admissions to buprenorphine maintenance (n=23 in 2001/02, n=32 in 2002/03) (Figure 4), which was made available as a treatment option for the first time in 2000/01. Figure 4 indicates an apparent increase in new admissions to maintenance pharmacotherapies in 2000/01, but this primarily reflects an influx of individuals that were previously receiving treatment with methadone switching to buprenorphine.

Figure 3: Growth of the Tasmanian methadone maintenance program, 1996-2003



Source: Pharmaceutical Services, Department of Health and Human Services (2003b)

Figure 4: New admissions to maintenance pharmacotherapy treatments in Tasmania, 1996/97-2002/03



Source: Pharmaceutical Services, Department of Health and Human Services (2003b)

Tasmanian prescription rates for Schedule 8 pharmaceuticals[5] since 1991 were also provided by Pharmaceutical Services (DHHS). During this time, Tasmanian consumption of morphine has been consistently 120% or more of the national average, and increasing over recent years to 133% in 2002, while national use has stabilised (Figure 5). Following this trend of increasing prescription of morphine within the state, the number of applications received by Tasmanian Pharmaceutical Services for approval to prescribe narcotics[6] has steadily increased from 351 in 1989/90 to over 1,700 applications in 2002/03[7] (Figure 6).

In contrast, despite the use of methadone syrup amongst a large proportion of the PWID sample, both in the current study, and the previous IDRS IDU participants in all four Tasmanian studies, local rates of consumption of methadone syrup have been continuously below that of the national average in the past ten years (Figure 7). These proportions are distorted, however, by the high numbers of methadone maintenance patients in New South Wales. Noteworthy also is the sharp decline in consumption of methadone syrup nationally in 2001, possibly associated with the wide introduction of buprenorphine maintenance treatment. In contrast to the trend for use of methadone syrup, Tasmanian consumption of methadone 10mg tablets has been consistently above 200% that of the national average since 1992 (Figure 8) with a rapid increase over the past few years. It is worth noting that increasing numbers of IDU surveyed in the Tasmanian IDRS studies have reported recent use of 10mg Physeptone (methadone) tablets (30% in 2000, 42% in 2001, 56% in 2002, 65% in 2003) following this general trend. When the level of use of methadone syrup and Physeptone tablets are combined, the overall rate of consumption of methadone in the state equals that of the Australian average after years of local rates being below the average nationally (Figure 9).

While a proportion of these differences in consumption rates can be accounted for by prescription practices and the aging nature of the Tasmanian population it does, however, indicate a certain willingness to prescribe tablet opioids among Tasmanian doctors. This said, these practices do 'not' seem to apply to the injecting drug user population, as a near-negligible proportion of PWID in the current study and among the previous Tasmanian IDRS studies reported accessing opioids via licit means[8] in the six months prior to interview.

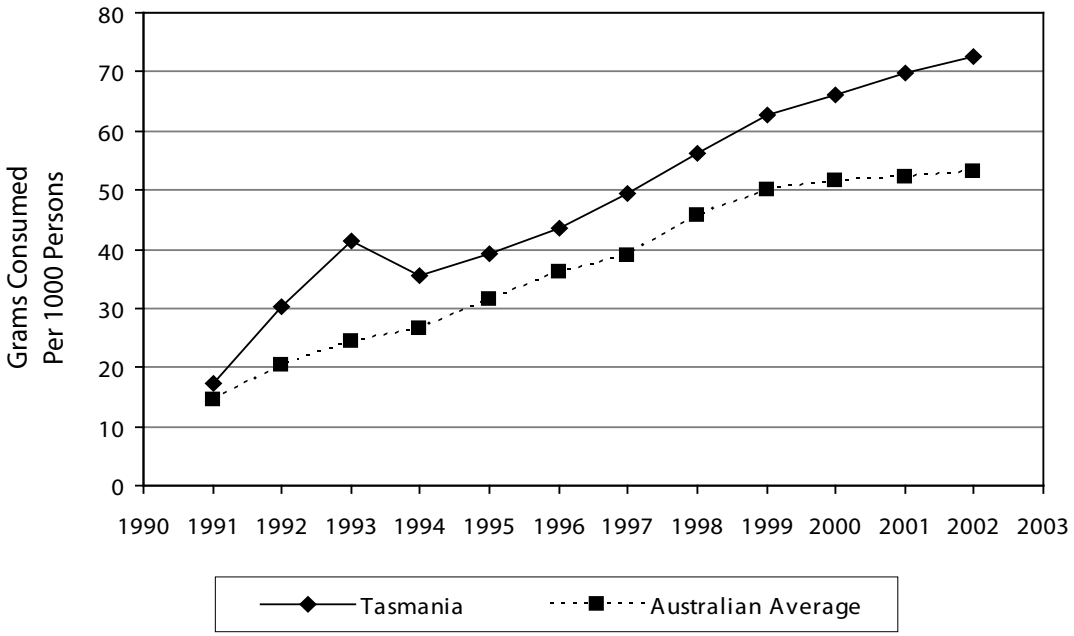
[5] Pharmaceuticals classed under Schedule 8 are variously classed as narcotic substances or drugs of addiction / dependence in differing jurisdictions.

[6] The *Alcohol and Drug Dependency Act 1968* requires medical practitioners to seek the approval of the Secretary of Pharmaceutical Services when narcotics are prescribed for a patient for more than two months, or for a person who is drug dependent.

[7] It is worth noting that the level of compliance in regard to submission of applications is significantly dependent on reminders being sent to doctors, and as such these figures are unlikely to reflect the absolute number of cases requiring such a submission.

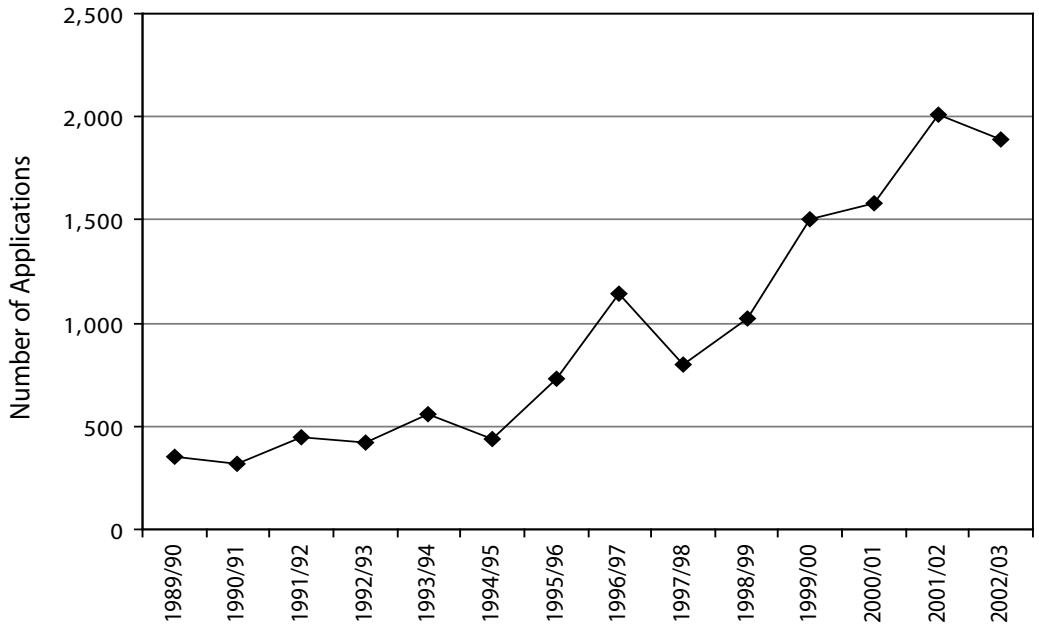
[8] During interviewing, 'licit means' was defined as having the drug prescribed directly to the individual. By this definition, doctor-shopping would be considered as 'licit means', which suggests that there is a stable illicit source of these drugs to PWID.

Figure 5: Consumption of morphine per 1,000 persons, 1991-2002



Source: Pharmaceutical Services, Department of Health and Human Services (2003b)

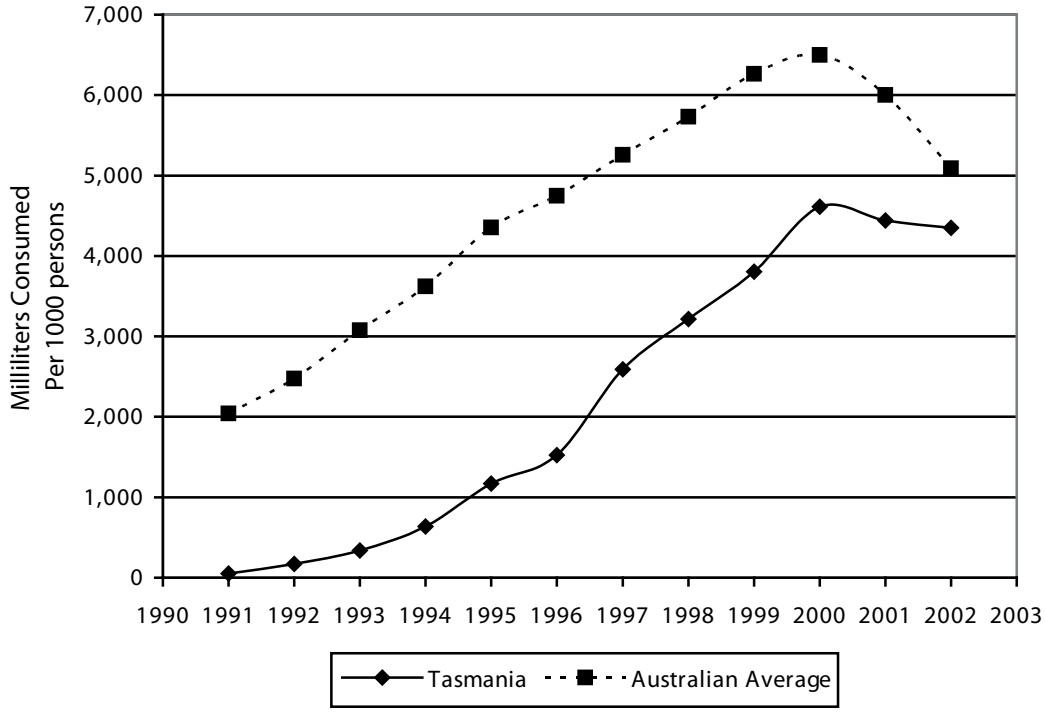
Figure 6: S22 applications* received by Pharmaceutical Services, Tasmania: 1989/90-2002/03



*Applications are for approval to prescribe narcotics to a patient for more than two months or for a person who is drug dependent.

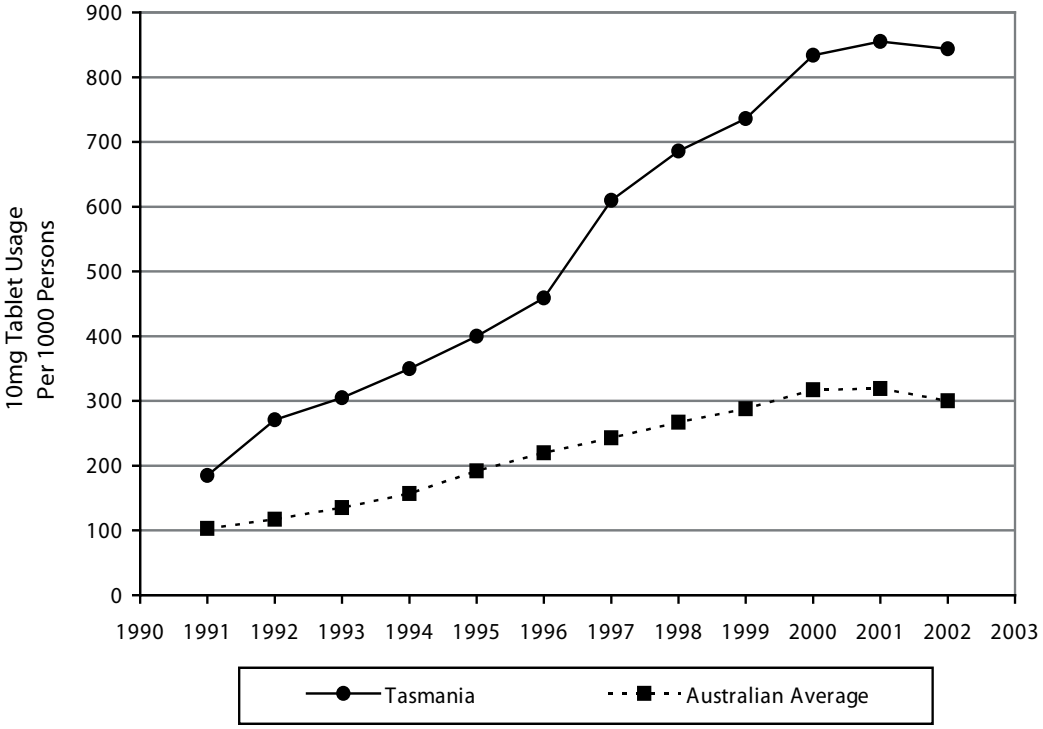
Source: Pharmaceutical Services, Department of Health and Human Services (2003b)

Figure 7: Consumption of methadone syrup per 1,000 persons, 1991-2002



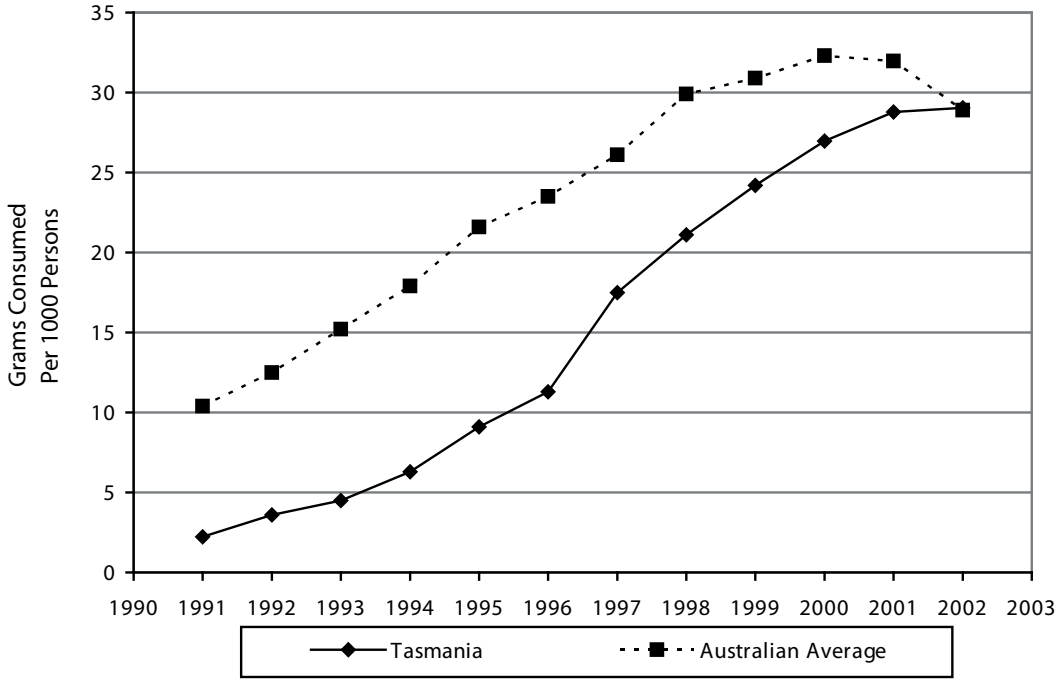
Source: Pharmaceutical Services, Department of Health and Human Services (2003b)

Figure 8: Consumption of methadone 10mg tablets per 1,000 persons, 1991-2002



Source: Pharmaceutical Services, Department of Health and Human Services (2003b)

Figure 9: Consumption of methadone per 1,000 persons, 1991-2002



Source: Pharmaceutical Services, Department of Health and Human Services (2003b)

Crime

Data pertaining to drug-related arrests by Tasmania Police, and crimes committed by PWID participants in the Tasmanian IDRS studies, has been summarized in Chapter one.

Tasmania Police provided information in relation to burglaries of Tasmanian pharmacies between 1998/99 and 2002/03 (Tasmania Police, unpublished data). The data suggests that, following a steady decline between 1998/99 and 2000/01, the number of pharmacy burglaries has slightly increased in recent years, from just two during 2000/01 to 10 during 2002/03 (Table 49). Although the products stolen were not explicitly detailed in all cases, benzodiazepines were the most commonly stolen pharmaceutical, featuring in at least 12 of the 17 incidents in 1998/99, 8 of the 10 1999/00 burglaries and 1 of the 4 incidents in 2001/02. Part of the reason for this is that opioid-based products are commonly stored in more secure areas (such as floor safes), and hence these higher-illicit value products are rarely stolen. It is noteworthy that at least one of the burglaries in 2002/03 netted a wide array of products including morphine, methadone, Physeptone, benzodiazepines and an array of other opiates, and (unlike the majority of the other burglaries) appeared quite organised and targeted in the products accessed. That said, it is clear that access to pharmaceutical products through pharmacy burglaries is clearly not a major pathway to access of the pharmaceutical products used by PWID within Tasmania.

Table 49. Pharmacy burglaries in Tasmania 1998/99-2002/03.

	1998/99 n	1999/00 n	2000/01 n	2001/02 n	2002/03 n
Number of pharmacy burglaries	17	10	2	4	10
Number of burglaries accessing:					
Benzodiazepines	12	8	-	1	2
Pharmaceutical opiates	-	-	-	-	3

Source: Tasmania Police (unpublished data)

Doctor-shopping

Prior to 2003[9], the Health Insurance Commission (HIC) identified people as 'doctor-shoppers' if, in one year, a person: 1) saw 15 or more different general practitioners; 2) had 30 or more Medicare consultations; and 3) obtained more Pharmaceutical Benefits Scheme (PBS) prescriptions than appears to be clinically necessary.

Following national trends, the number of identified doctor-shoppers in the state had declined over the past five financial years, from 184 in 1995/96 to 134 in 2000/01 (Health Insurance Commission, unpublished data: Table 50). Amongst the group of identified doctor-shoppers in 2000/01, benzodiazepines were the most commonly accessed medication, followed by codeine-based compounds and narcotic analgesics. It is notable that the number of identified doctor-shoppers accessing each of these drug types increased between 2000/01 in comparison to the numbers accessing in 1999/00. It is unclear at this stage whether this represents a trend toward increases in doctor-shopping or if this simply relates to changes in identification or reporting processes.

The largest number of scripts obtained by identified doctor-shoppers was also for benzodiazepines. However, it should be noted that, while the median number of scripts for both benzodiazepines and codeine compounds obtained by Tasmanian doctor-shoppers had remained fairly stable between 1998/98 and 2000/01 (or had possibly declined in the case of benzodiazepines), the median number of prescriptions for narcotic analgesics per doctor-shopper had been steadily increasing. Since 1995/96, median prescriptions for narcotic analgesics had more than doubled from 9 scripts per doctor-shopper, to 22 in 2000/01, with a concomitant increase in the range of the number of scripts accessed (Table 50).

Data from the Stage two PWID survey suggests that, despite the high level of misuse of pharmaceutical products among the regular IDU cohort in the current study, doctor-shopping is a very uncommon mode of access to these drugs. In regard to benzodiazepines, only five of the PWID participants' IDU reported accessing these drugs through faking symptoms, and none of the IDU participants had forged prescriptions or altered existing prescriptions to access

[9] Due to privacy and budgetary concerns, this project was discontinued late in 2002, and has been replaced by a 'Prescription Shopping Project', which defines 'prescription shoppers' as a person who has been supplied prescription drugs by six or more prescribers within a three month period, or 30 or more in a year, or has been prescribed a total of 25 target pharmaceutical benefits or a total of 50 or more pharmaceutical benefits (Australian Medical Association 2004; Kamien 2004). The goal of the new program is to provide feedback and educational intervention to excessive prescribers with the aim of changing their prescribing practices, as well as, with a patient's consent, to authorise the HIC to contact patients or give drug information to their doctor (Kamien 2004). A total of 22,000 prescription shoppers have been identified by the HIC in Australia using these new criteria (Health Insurance Commission 2003a, 2003b, 2003c; Australian Medical Association 2004; Kamien 2004), substantially more than through the earlier criteria. However, only data relating to the earlier definition of 'doctor-shopping' is currently available and hence discussed above.

benzodiazepines in the preceding six months. Similarly, there were only four PWID participants reporting faking symptoms to access pharmaceutical opiates from a medical practitioner in the preceding six months. Similar figures were identified in all four previous Hobart IDRS studies (Bruno & McLean 2001, 2002, 2003, 2004). It appears that the level of availability of pharmaceutical opioids and related substances from illicit sources currently is at such a level that PWID do not feel compelled to resort or rely on doctor-shopping to access these drugs.

Table 50. Doctor-shopping patterns in Tasmania 1995/96-2000/01*.

	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
Number of doctor-shoppers enrolled						
Australia	9,931	10,296	9,738	9,348	8,780	8,179
Tasmania	184	183	162	146	104	134
Benzodiazepines						
Number of Tasmanian doctor-shoppers accessing	173	169	155	140	98	127
Median scripts per doctor-shopper	13	14	30	37	27	29
25-75 percentile of accessed scripts	5-30	7-31	14-56	20-62	12-54	11-48
Narcotic analgesics						
Number of Tasmanian doctor-shoppers accessing	96	95	101	81	61	79
Median scripts per doctor-shopper	9	8	15	16	26	22
25-75 percentile of accessed scripts	4-29	3-17	3-52	4-50	11-63	4-52
Codeine compounds						
Number of Tasmanian doctor-shoppers accessing	155	148	133	113	81	105
Median scripts per doctor-shopper	9	9	14	14	9	12
25-75 percentile of accessed scripts	3-20	4-21	5-37	4-37	4-31	4-37

*2001/02 and 2002/03 data were not available at the time of printing

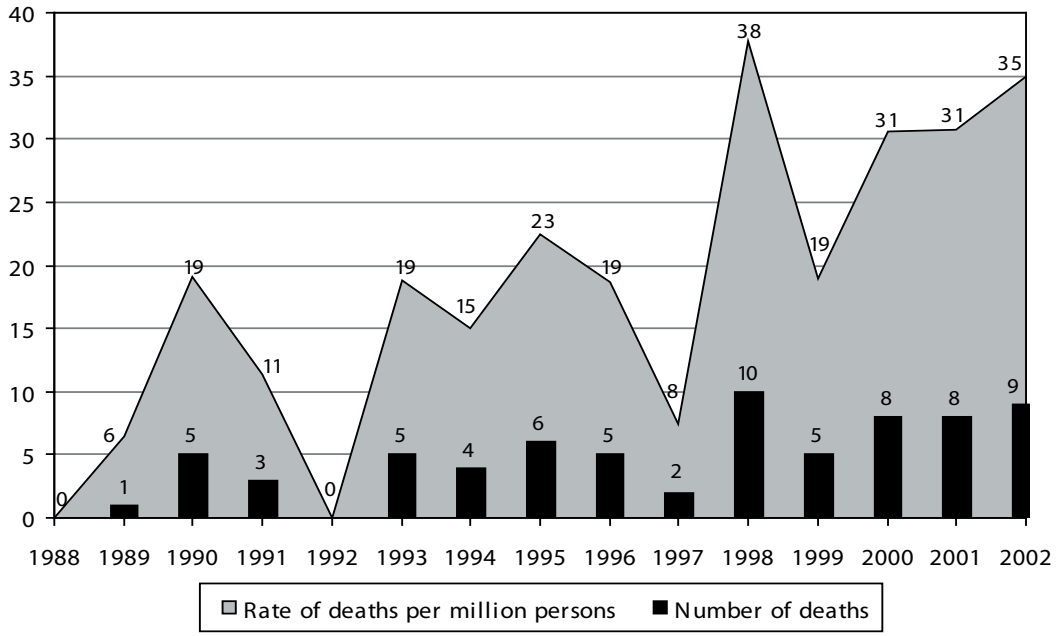
Source: Professional Review Division, Health Insurance Commission, unpublished data

Overdose

The number of opioid-related fatalities among those aged 15-44 years noted by the State Coroners Office has remained quite small during the period 1988-2002 (State Coroners Office, unpublished data; Degenhardt 2001, 2002, 2003: Figure 10), these minimal figures make clear analysis of trends difficult. However, when the rate of deaths per million population are considered, it becomes clearer that there has been an increase in rates of over-dose over time in Tasmania, from less than 10 deaths per million population prior to 1990 to over 30 deaths per million population in recent years.

Up until 1999, there was approximately an even sex distribution among the victims of opioid-related fatalities, although in 2000 the five fatalities related to four males and a single female, and in 2001 the figures reflect the death of two males and three females. The seven accidental deaths due to opioids in 2002 related to seven males and two females. With the exception of a single fatal overdose clearly associated with heroin use, the cases to 1999 largely relate to methadone or morphine. Benzodiazepines were also present in many of these cases[10].

Figure 10: Number of opioid overdose deaths among those aged 15-44 years, 1988-2002



Source: Degenhardt (2001, 2002, 2003) and State Coroners Office, (Unpublished data)

[10] Toxicological and demographic detail for cases in 2000 and 2001 was not provided to the authors.

Summary

Examination of Tasmanian-specific indicator data in relation to use and misuse of pharmaceutical opiates or benzodiazepines indicates the following:

- Data from the state's Needle Availability Program (NAP) indicated that pharmaceutical opiates represented a substantial proportion of the drugs most commonly injected by local PWID, only just second to methamphetamine injection, and represented the drugs used by just under half of all client transactions at non-pharmacy NAP outlets in 2002/03. Use of methadone (syrup or tablets) had appeared to increase in recent years, replacing morphine as the most commonly reported pharmaceutical opiate predominantly used by these clients.
- The IDRS series of studies with regular PWID groups over the past four years had shown an increase in the use of Physeptone between 2000 and 2003. The extent of use of morphine and diverted methadone syrup by those surveyed had remained relatively stable in this period, although the frequency of use of morphine had continued to decline over these surveys.
- Reflecting the long-term nature of methadone maintenance treatment, the number of daily patients receiving such therapy had more than trebled since 1995, with almost 500 patients receiving treatment currently. The number of new admissions into methadone maintenance, however, had steadily declined in the past three financial years, from almost 200 during 2000/01 to just over 100 in 2002/03. The number of patients admitted to buprenorphine maintenance had remained relatively stable in this period, at around 30 per annum.
- Tasmanian prescription rates of morphine had consistently been 120% or more of the national average since 1991, and local prescription rates continued to increase despite a stabilisation of rates at the national level in the past four years. Consistent with this pattern of increasing prescription locally, requests for approval to prescribe opiates for applications other than short-term use had steadily increased in recent years. Tasmanian prescription rates of Physeptone tablets had been consistently double that of the national average since 1992 and had rapidly increased in the past few financial years.
- Data from Tasmania Police suggested that the number of burglaries of pharmacies remained relatively low, with 10 incidents during the 2002/03 financial year. While this was a slight increase from the number of incidents during 2000/01 and 2001/02, it was clear that pharmacy burglaries were not a major pathway to access of pharmaceutical opiates and benzodiazepines on the illicit market, as these products were only accessed in a minority of these incidents (due to the substantial secure storage requirements for Schedule 4 and Schedule 8 products).

Stage four: Survey of people who inject drugs

Overview of the sample of people who inject drugs

A total of 47 individuals that: a) injected at least once per month in the preceding six months; b) had injected a pharmaceutical opioid or benzodiazepine in the preceding six months; and c) had resided in Hobart for at least the preceding twelve months were interviewed. The demographic characteristics for this group are presented in Table 51 below. These characteristics are largely similar to those interviewed in the second stage of this study, with 30% of this sample also being interviewed in that survey.

Table 51. Demographic characteristics of the PWID sample.

Characteristic	N=47
Median age (years)	30.2 (range 20-49)
Sex (% male)	72%
Ethnicity (%):	
English speaking background	100%
Non-English speaking background	0%
Aboriginal or Torres Strait Islander	6%
Employment (%):	
Not employed	83%
Full-time	-
Part-time/casual	13%
Student	2%
Home duties	2%
Accommodation (%):	
Own house/flat	53%
Parent's/family house	23%
Boarding house/hostel	15%
Friends/house-sitting	-
No fixed address/homeless	4%
School education (mean years)	10 (range 7-12)
Tertiary education (%):	
None	51%
Trade/technical	38%
University	10%
Prison history (%)	47%
Treatment history (%):	
Not currently in treatment	28%
Methadone maintenance therapy	66%
Buprenorphine maintenance therapy	-
Drug & alcohol counselling	2%
GP prescribed morphine	2%

NB: GP refers to a medical practitioner

Source: Stage four survey of PWID

The median age of the PWID participants was 30.2 years (range 20-49 years), and 72% were male. The sample was reasonably evenly split between participants living within the Hobart city area (26%), Glenorchy city (32%) and Clarence (30%), with 6% residing in Kingborough, and 2% each in the Brighton and Southern Midlands areas. One participant (2%) did not have any fixed address at the time of interview.

Among those interviewed, there was a mean of 10.0 years of school education (range 7-12 years), with 38% having a trade or technical qualification and 10% having university qualifications. Four-fifths (83%) of the sample were not currently employed at the time of interview, while 13% were engaged in part-time or casual employment, and 2% respectively were engaged in home duties or enrolled in full-time education. In regard to sources of income, all participants were receiving income from government pensions or benefits, with 9% receiving some income from paid employment in the fortnight prior to interview. While it was not common for participants to receive the majority of their income from criminal activity, almost half (49%) of the participants had received some income from criminal activity in the preceding month, most commonly through selling of drugs (32%). Almost half of the sample (47%) had a previous prison history.

Just over two-thirds (72%) of the PWID sample were involved in some form of treatment for substance use at the time of interview. This was most commonly methadone maintenance treatment (66%), with smaller proportions receiving counselling for drug-related issues (2%) or receiving morphine for pain management (2%).

Recent drug use among the people who inject drugs sample

In a noteworthy difference between the current sample and that recruited for the second stage of this study, when participants were asked their preferred drug, heroin was nominated by only around one-fifth of the participants (23%), compared to two-fifths in the earlier sample. This is a substantial difference, not only from the earlier sample but also from other samples of PWID in Hobart between 2000 and 2003 (Bruno & McLean 2001, 2002, 2003, 2004), where heroin was consistently nominated as the drug of choice by at least two-fifths of participants. However, given the strict entry criteria for the current study, it is possible that some participants may have been swayed to select a pharmaceutical opiate as their drug of choice as it may have appeared to them that such a response was desirable to the interviewer. Methadone was the drug of choice for one-third of participants (32%), followed by morphine (26%) and methamphetamine (11%) (Table 52). In keeping with the proportion of participants in the current study that were receiving methadone maintenance treatment, methadone was the drug most commonly injected in the preceding month by 55% of the sample. While 26% of the PWID sample reported that morphine was their drug of choice, 34% reported that this was the drug they had most often injected in the previous month. In terms of morphine preparations, MS Contin was reported as the most preferred preparation of the drug (15%), followed by Kapanol (6%), Anamorph (2%) or Ordine (2%). MS Contin was the morphine preparation most commonly injected (23% of the sample), followed by Kapanol (6%) and Oxycontin (2%). Methamphetamine was the drug of choice for 11% of the PWID sample and nominated as the drug most often injected by 9%. Four percent of the participants nominated benzodiazepines as their drug of choice, evenly split between diazepam and alprazolam, with 2% nominating alprazolam as the drug they had most often injected in the preceding month.

Frequency of injection by PWID participants during the month prior to interview (Table 53) was generally quite similar to that reported by participants in the earlier study (11% injecting weekly or less, 55% several times per week, 34% daily or more frequently, see Table 6), with 9% reporting that they injected once per week or less frequently, 64% on multiple occasions during a week (but not every day), and 28% injecting once per day or more frequently.

Table 52. Drug of choice and drugs most often injected in the preceding month.

N=47	Drug of choice	Drug most often injected in past month
	%	%
Heroin	23	-
Methadone	32	55
Morphine	26	34
MS Contin	15	23
Kapanol	6	6
Ordine	2	-
Anamorph	2	-
Oxycontin	-	2
Buprenorphine	-	-
Methamphetamine	11	9
Cocaine	2	-
Benzodiazepines	4	2
Valium	2	-
Xanax	2	2
Cannabis	2	-
Other	-	-

Source: Stage four survey of PWID

Table 53. Frequency of injection during the past month.

Frequency of injection during the last month (n=47)	%
Weekly or less	9
Two-three days per week	32
Four-six days per week	32
Once a day	28

Source: Stage four survey of PWID

Participants were also asked about their usual place of injection in the month prior to interview. Consistent with trends reported both in the earlier PWID study (see Table 7) and local IRDS studies with similar cohorts (e.g. Bruno & McLean 2003), almost all participants reported usually injecting in private homes (89%), (see Table 54). Just 6% reported most commonly injecting in public toilets, and 4% typically injecting in their car.

Table 54. Usual location of injection in the month prior to interview.

Location	Usual %
Private home	89
Public toilet	6
Car	4
Street/park or beach	-

Source: Stage four survey of PWID

Recent drug use of the PWID participants are summarised below in Table 55. Despite being recruited on the basis of recent use of pharmaceutical opioids or benzodiazepines, and the high proportion of the sample also receiving methadone maintenance treatment, it was clear that there was a substantial level of polydrug use amongst this cohort. More than three-quarters of the PWID sample had used cannabis, methamphetamine or illicitly-accessed morphine in the six months prior to interview. More than half had also used illicitly-accessed Physeptone in this time, and almost as many had used diverted pharmaceutical stimulants such as dexamphetamine or methylphenidate. While a substantial proportion of the sample were receiving methadone syrup legitimately as part of a maintenance program, 36% had accessed syrup via illicit means in the preceding six months. Almost one-third (28%) had accessed pharmaceutical opiates other than morphine or methadone in the six months prior to interview, although this was generally only on a small number of occasions in this time (median frequency of use of 3 days in this time). Finally, while heroin was the drug of choice for almost one-quarter of the sample, only 19% of the participants reported recently using the drug, and the median frequency of this use was just a single occasion in the preceding six months.

Table 55. Recent drug use of the PWID sample (n=47).

Drug Class	Injected last 6 months %	Median number of days injected in last 6 months*	Used last 6 months %	Median number of days used in last 6 months*
Heroin	19	1	19	1
Methadone syrup (licit)	83	48	62	144
Methadone syrup (illicit)			36	12
Physeptone (licit)	2	120	2	168
Physeptone (illicit)	49	6	51	5
Morphine (licit)	4	54	4	174
Morphine (illicit)	68	13	72	15
Homebake	2	1	2	1
Other opiates (licit)	-	-	4	5
Other opiates (illicit)	19	1	28	3
Methamphetamine	79	10	79	10
Pharmaceutical stimulants	38	2	40	2

Table 55 continued.

Drug Class	Injected last 6 months %	Median number of days injected in last 6 months*	Used last 6 months %	Median number of days used in last 6 months*
Cocaine	2	1	2	1
Hallucinogens	2	1	4	1
Ecstasy	4	2	13	4
Benzodiazepines (licit)	6	24	45	180
Benzodiazepines (illicit)	21	12	75	10
Alcohol	-	-	62	12
Cannabis	-	-	81	180
Anti-depressants	-	-	15	180
Inhalants	-	-	2	180
Buprenorphine (licit)	-	-	-	-
Buprenorphine (illicit)	-	-	-	-

*Among those using the drug

Source: Stage four survey of PWID

Recent benzodiazepine use

Benzodiazepine use was very common among the PWID sample, used by 85% of participants within the preceding six months. Almost half (45%) of the participants were receiving benzodiazepines through prescription, with these participants reporting a median of daily use of these drugs in the preceding six months. Three-quarters (75%) of the participants had recently accessed benzodiazepines via illicit means, although this was generally less of a frequent occurrence, with the median frequency of illicit use of benzodiazepines being just 10 days in the preceding six months (Table 56).

Routes of administration of benzodiazepines and forms used

Consistent with the pattern seen amongst the previous PWID survey, oral administration of benzodiazepines was the predominant mode of administration among the current sample, with just 23% of the sample reporting recent injection of benzodiazepines, in comparison to the 85% using this class of drug in the preceding six months. Again consistent with the pattern identified in the earlier PWID study, Valium (diazepam) was the benzodiazepine most commonly used among the current sample (by 53% of participants), with use of Xanax (alprazolam) also common (51%). Antenex (diazepam: 29%), Mogadon (nitrazepam: 19%), Serepax (oxazepam: 15%), and temazepam tablets (Temaze, Temtabs: 15% respectively) were also commonly used, with the proportions of the cohort reporting their use generally slightly lower than those noted among the earlier PWID sample (Table 10). It is noteworthy that temazepam gel capsules (20mg Euhypnos: 8%; 20mg Normison: 13%; 20mg Temaze: 11%) and flunitrazepam (Hypnodorm: 11%) continue to be accessed by a minority of participants despite the restrictions on their access.

Intravenous administration of benzodiazepines in the six months prior to interview (where these drugs were aggressed via either licit or illicit means) was reported by 23% (95% CI 11-35%) of the sample (Table 56), a figure which was significantly lower than that identified amongst the earlier

PWID cohort (46%; 95% CI 36-56%), (see Table 10). It is unclear whether this represents a shift in the intravenous use of benzodiazepines among PWID groups or whether this change is more likely to reflect sampling differences. Among those recently injecting benzodiazepines, this remains a relatively infrequent event, with a median frequency of injection of 14 days (range 1-104 days) in the preceding six months. Similar to the earlier study, alprazolam and temazepam, both of which are benzodiazepines with a rapid onset, were the preparations most commonly injected. Within the alprazolam class, 15% of the PWID sample reported recently injecting Xanax and 9% had injected Kalma in the preceding six months. Again, surprisingly given the restrictions on prescription of gel capsule formulations of temazepam – 10mg capsule prescription requires PBS authority prior to approval, while 20mg can only be prescribed outside of a PBS subsidy, which increases the price from less than $5 to more than $20 – both 10mg and 20mg capsules were reported as being accessed and injected by PWID participants (Table 56). There were smaller proportions of participants reporting injection of nitrazepam or oxazepam, and, despite the high proportion of the current sample reporting recent use of diazepam, only 4% reported injection of Valium and 2% of Antenex in the preceding six months.

Table 56. Use of benzodiazepines in the preceding six months among the PWID sample (n=47).

Benzodiazepine	Used in past 6 months %	Injected in past 6 months %
Alprazolam		
Alprax	2	-
Alprazolam (generic)	-	-
Kalma	17	9
Xanax	51	15
Diazepam		
Antenex	29	2
Diazepam (generic)	4	-
Ducene	5	-
Valium	53	4
Valpam	4	-
Nitrazepam		
Alodorm	9	4
Mogadon	19	2
Oxazepam		
Alepam	11	4
Murelax	4	-
Serepax	15	-

Table 56 continued.

Benzodiazepine	Used in past 6 months %	Injected in past 6 months %
Temazepam		
Euhypnos 10mg capsules	4	4
Euhypnos 20mg capsules	8	6
Normison 10mg tablets	-	-
Normison 10mg capsules	2	2
Normison 20mg capsules	13	11
Temaze 10mg capsules	4	2
Temaze 20mg capsules	11	9
Temaze 10mg (tablets)	15	2
Temtabs (tablets)	15	-
Other benzodiazepines		
Halcion (triazolam)	-	-
Hypnodorm (flunitrazepam)	11	2
Lexotan (bromazepam)	2	2
Lorazepam	2	-
Paxam (clonazepam)	-	-
Rivotril (clonazepam)	2	-
Related products		
Catapres (clonidine)	4	-
Stillnox (zolpidem)	2	-
Unisom (sleep gel)	-	-
Any licit benzodiazepine		
% using in past six months	45	6
Median frequency of use	180 days	24 days
Any illicit benzodiazepine		
% using in past six months	75	21
Median frequency of use	10 days	12 days

Source: Stage four survey of PWID

Sources of benzodiazepines

While the proportions of the current PWID sample accessing benzodiazepines in general was somewhat lower than that reported among the earlier group of participants (see Table 12), the relative proportions reporting accessing benzodiazepines from each of the different supply sources examined remained similar across both samples (Table 57).

It is clear that the PWID participants were accessing benzodiazepines from a range of sources. When discussing all of their different sources of benzodiazepines in the preceding six months, two-fifths of the participants had received them as a gift (42%) or through a legitimate medical prescription (38%). Purchasing benzodiazepines from a friend (21%) or from a dealer (15%) were other common pathways to access, and 19% of participants had swapped other drugs to obtain benzodiazepines. Almost exactly replicating the trends seen in the earlier PWID cohort, just 6% of those studied reported feigning symptoms to obtain benzodiazepines from a medical practitioner in the preceding six months, and not a single participant reported stealing benzodiazepines or forging scripts to access such drugs in this time (Table 57). Similarly, no participants had ever tried to purchase benzodiazepines through the internet.

When PWID participants were asked to report the sources that they had obtained the majority of their benzodiazepines from in the preceding six months (Table 57), it was clear that, among those receiving prescriptions for benzodiazepines, almost all had predominantly accessed these for legitimate reasons, with 34% of the sample predominantly accessing their benzodiazepine prescriptions for legitimate reasons, in comparison to 4% (n=2) predominantly accessing prescriptions through feigning symptoms. Remembering that the median frequency of use of legitimately accessed benzodiazepines in the preceding six months (180 days, range 6-180 days) was substantially greater than the median frequency of use of benzodiazepines accessed via illicit sources (10 days, range 1-159 days, with more than 75% of these using illicit benzodiazepines less than 14 days of the past 180), it was clear that illicit access to benzodiazepines was 'secondary' to legitimate access to these drugs for this group. This was also found in the earlier PWID survey. Amongst those accessing benzodiazepines via illicit means in the preceding six months, PWID most commonly reported accessing the majority of their illicitly accessed benzodiazepines as gifts (38% of the sample), with much smaller proportions reporting predominantly accessing their illicit benzodiazepines through trades for other drugs (13%) or purchasing them from a friend (13%) or a dealer (9%).

Table 57. Pathways to access of benzodiazepines in the preceding six months (n=47).

Source	Real symptoms %	Fake symptoms %	Gift %	Steal %	Forge script %	Buy: friend %	Buy: dealer %	Swap %
Main source	34	4	38	-	-	13	9	13
All sources	38	6	42	-	-	21	15	19

Source: Stage four survey of PWID

PWID participants that reported accessing benzodiazepines from any source other than a medical practitioner in the preceding six months were asked to nominate the characteristics of their provider and the other drugs sold by the individual that they had accessed the majority of their illicit benzodiazepines from. Data from participants that could report on this information are summarised below in Table 58. In keeping with the predominance of illicit access as gifts or through trades, and consistent with the pattern noted in the earlier study (Table 13), the largest proportion reported that their usual illicit source of benzodiazepines was a friend (50% of those accessing benzodiazepines illicitly). Regardless of whether they were best categorised as a 'friend selling their prescription' (n=9), as a 'friend giving away their prescription' (n=1) or as a 'friend swapping their prescription drugs' (n=1), these individuals typically (n=7/11) did not sell or provide any other substances. The next most commonly reported provider type was a 'user/dealer' (an individual perceived as selling drugs to help pay for their own illicit consumption), who generally did also provide other substances, typically cannabis (71%), methamphetamine (71%), or morphine (57%). Smaller proportions of PWID participants reported generally accessing their

illicit benzodiazepines from an individual perceived as a 'small-time dealer', who were typically also providers of morphine (75%) and/or cannabis (50%). These reports are consistent with those identified in the Stage two PWID survey (Table 13).

Table 58. Other drugs sold by providers of benzodiazepines.

	Friend selling their prescription	Friend giving away their script	Friend swapping their prescription drugs	User/ dealer (selling to fund use)	Small-time dealer	Total
Provider type	19% (n=9)	2% (n=1)	2% (n=1)	15% (n=7)	9% (n=4)	47% (n=22)
Other drugs sold						
Heroin	-	-	-	-	-	-
Methadone	-	-	-	-	25% (n=1)	5% (n=1)
Morphine	11% (n=1)	-	-	57% (n=4)	75% (n=3)	36% (n=8)
Other opiates	-	-	-	-	-	-
Methamphetamine	-	-	-	71% (n=5)	25% (n=1)	27% (n=6)
Cocaine	-	-	-	-	-	-
LSD	-	-	-	-	-	-
Ecstasy	-	-	-	14% (n=1)	-	5% (n=1)
Benzodiazepines	-	-	-	14% (n=1)	-	5% (n=1)
Cannabis	22% (n=2)	-	-	71% (n=5)	50% (n=2)	41% (n=9)
Does not sell any other drugs	55% (n=5)	100% (n=1)	100% (n=1)	-	25% (n=1)	36% (n=8)

Source: Stage four survey of PWID

Access to benzodiazepines from a medical practitioner

PWID participants that had accessed benzodiazepines from a medical practitioner in the preceding six months were asked about how easy it was to access such drugs from doctors. As noted in the earlier PWID study, it is important to consider that only a very small proportion of these participants reported feigning symptoms in an attempt to access benzodiazepines, and previous local studies with similar PWID populations have suggested that a substantial proportion of this group certainly experience symptoms which would be legitimate indications for their prescription (e.g. Bruno & McLean 2004). As such, these figures are likely to reflect the ease at which practitioners prescribe benzodiazepines to PWID groups where there are indications for the prescription of these drugs, rather than the ease at which these drugs are accessed when symptoms are feigned.

Table 59 summarises trends in access to benzodiazepines from medical practitioners in the preceding six months. Just 13% of the PWID participants reported requesting temazepam gel capsule formulations in this time, with all of these individuals reporting that they were extremely difficult to access from doctors. Participants were asked to elaborate on this, with almost all reporting that they were flatly refused when these requests were made, with some prescribers explaining this refusal as due to pharmacies no longer stocking these formulations. While only a small proportion of the sample had actually requested such formulations from prescribers in the preceding six months, a larger number of participants reported on changes to the ease of their availability, with 26% of the sample suggesting that there had been no change to the availability of temazepam gel capsules from medical practitioners in the preceding six months, while 9% reported that access had become more difficult, and 4% that access had become less difficult in this time.

In relation to benzodiazepine tablets, two-fifths of the participants reported recently requesting these from medical practitioners, with the majority of these suggesting that they were 'easy' or 'very easy' to access (32% of the sample). Most also reported that there had been no recent change in the level of access to these drugs (26% of the sample), although a small proportion (9%) suggested that benzodiazepine tablets had become slightly more difficult for them to access from prescribers in the preceding six months. Participants were asked to elaborate on these issues, with most reporting that the reasons behind their easy access to benzodiazepines were due to an established history of being prescribed these medications (n=10), and that to access these drugs you 'needed to be fairly genuine' with your prescriber (n=1).

Table 59. PWID reported trends in access to benzodiazepines from medical practitioners in the preceding six months.

	Gel Capsules %	Tablets %
Didn't request	87	61
Ease of access		
Very easy	-	6
Easy	-	26
Difficult	-	6
Very difficult	13	-
Change to access		
Easier	4	4
No change	26	26
More difficult	9	9
Fluctuates	-	-

Source: Stage four survey of PWID

Further supporting the reports that the PWID participants were accessing benzodiazepines appropriately, when participants were asked how many prescribers they had received benzodiazepine prescriptions from in the preceding six months, almost all (n=17/21) had only received prescriptions from a single prescriber, while 3 participants had received prescriptions from two doctors. A single participant reported accessing benzodiazepine prescriptions from six practitioners in the preceding six months. In keeping with this, only three participants

reported being refused a prescription for some benzodiazepine in the preceding six months (some of those that had been refused a prescription of temazepam gel capsules were offered a tablet benzodiazepine), with one being refused by one prescriber, one refused by two, and one individual being refused a benzodiazepine prescription by three medical practitioners. Two of these three individuals did not receive any benzodiazepine prescriptions in the preceding six months. It is noteworthy that none of the participants in the current study would meet the Health Insurance Commission's definition of 'prescription shopping' (an individual who has been supplied prescription drugs by six or more prescribers within a three month period, or 30 or more in a year, or has been prescribed a total of 25 target pharmaceutical benefits or a total of 50 or more pharmaceutical benefits, see Kamien 2004), and, as there were only three participants that reported attempting to access benzodiazepines from more than two medical practitioners in the preceding six months (requesting from 3, 4, and 6 prescribers respectively in this time), then the definition would have to be lowered substantially to even capture the most extreme of these cases. In sum, while three participants (6% of the sample) reported recently accessing benzodiazepines from a prescriber in the preceding six months through feigning symptoms, it is clear that 'doctor-shopping' for benzodiazepines as defined above did not occur within the current (or previous) PWID cohort.

PWID participants that had accessed, or attempted to access, benzodiazepines from medical practitioners were invited to discuss their experiences the last time they had made such a request. Discussions focused on the reasons leading to such requests, factors that may have led to prescription by the practitioner and factors that may have led to refusal, as well as the impact of such a refusal on the individual.

Most common among the reasons reported for requesting benzodiazepines from a medical practitioner were sleeping difficulties (n=4) or anxiety, distress, or problems coping with stressful situations (n=5), all of which, if genuine issues, would clearly be legitimate reasons for benzodiazepines. Two individuals reported seeking benzodiazepines in order to manage the discomfort associated with the 'come down' from extended methamphetamine use. However, three participants did report seeking prescriptions to get 'stoned'.

When requests for benzodiazepines were accepted by medical practitioners, this was predominantly among individuals that had established, regular prescriptions and standing relationships with a particular medical practitioner (n=9). Five participants reported that they had been prescribed benzodiazepines at times when they had been having genuine troubles coping with stressors, such as the death of somebody close to them (one individual, for example, reporting being totally overwhelmed, and honestly telling the doctor about how they were feeling). Two participants reported not actually requesting benzodiazepines from their doctor, but having them prescribed to help with reduction of their dose of methadone. The single participant that reported receiving a benzodiazepine prescription through a faked reason had indicated that they were 'tired and stressed out from their kids'.

In terms of the situations leading to refusal of a request for benzodiazepine prescription, ironically, several participants reported that this had occurred when they were being open and honest with their doctors. For example, four participants that were receiving methadone maintenance reported approaching a second medical practitioner for a benzodiazepine prescription, and when they mentioned that they were receiving methadone, their request was refused and they were referred back to the practitioner overseeing their maintenance treatment. In another case, an individual had come to the realisation that they were using too many benzodiazepines illicitly, and explained this to a practitioner with the hope that they could assist in reducing such use, but was refused prescription. Another participant reported having their standing benzodiazepine prescription withdrawn when they asked to be changed from temazepam to Hypnodorm. Other reported

scenarios leading to denial of prescription were also consistent with prescription guidelines, for example, the practitioner offering to prescribe antidepressants in place of benzodiazepines after a few weeks of benzodiazepine prescription; or refusal as the individual was identified as previously engaging in 'doctor-shopping'. Only two participants reported continuing to seek benzodiazepines after being refused a prescription, with one attempting again with a different doctor, and the other seeking benzodiazepines on the illicit market.

Illicit access to benzodiazepines

PWID participants that reported accessing benzodiazepines illicitly in the preceding six months were asked their perceptions about the illicit benzodiazepine market in this period (Table 60). Despite the restrictions on their availability, 30% of the sample reported purchasing temazepam gel capsules in the six months prior to interview. Among these individuals, opinion was split about the ease of access to these preparations, with half (15% of the sample) regarding them as easy to access, and half (15%) regarding them as difficult or very difficult to access in recent months. This splitting of opinions was continued in discussions of other market aspects, with 17% of the sample reporting that there had been no recent change in the availability of temazepam gel capsules, and 13% reporting that they had recently become more difficult to access. In terms of price, in comparison to 6% of participants reporting that prices had remained stable in the preceding six months 15% thought that the price of temazepam gel capsules had increased in recent months. These reports are quite similar to those identified in the earlier PWID study (Table 14).

Reported trends for illicit access to benzodiazepine tablets were slightly clearer. Among the almost half of the PWID cohort that had purchased benzodiazepine tablets illicitly in the preceding six months (45%, see Table 60), tablets were generally considered as 'easy' or 'vary easy' to access (by 37% of the sample), and that this situation had not changed in recent months (28%, although 12% thought that it had become more difficult to access benzodiazepine tablets illicitly in the previous six months). The majority of those purchasing benzodiazepine tablets illicitly felt that their market prices had remained stable in the six months prior to interview (30% of the sample). There were, however, some distinct patterns reported by participants in regard to the different benzodiazepine types.

Of the 20% of the PWID sample that reported alprazolam (most commonly Xanax) as the benzodiazepine that they had most often used in the preceding six months, half had noted no change in the illicit market for this drug in that time. The remaining half (n=5) reported that the market for alprazolam had recently expanded, most notably in terms of increased demand for the drug (n=4), making it more difficult to access (n=2), with a concomitant increase in price (n=2). One participant explained this in terms of 'Xanax (being) king of the drugs at the moment – the market is bigger because gel capsules have gone out and people are going to Xanax to get a similar good effect'. In keeping with this, as noted in the earlier PWID sample and in the 2004 IDRS study (Bruno & McLean 2004), PWID participants appear to be using alprazolam in similar ways to which they had used temazepam gel capsules, both in terms of injection and in combination with methadone syrup (n=2) for a more potent 'high'. One participant reported that they recently had started staying away from Xanax use, as they couldn't 'handle the comedown – the fights and arguments causes problems with my friendships'. Additionally, one PWID participant reported that they had recently been threatened by people wanting him to divert his prescription, and that they now had to be more careful with their prescriptions as people were being more desperate in their attempts to access Xanax or other alprazolam tablets.

In terms of recent illicit market changes for other forms of benzodiazepines, no participants specified any notable recent changes in the market surrounding temazepam. One individual felt that demand for oxazepam had reduced amongst PWID, with this having a positive effect for this individual as they were 'hassled less by other people (for tablets), so I get to keep more of my

script'. Of the 10 PWID participants nominating diazepam as the benzodiazepine they had most commonly accessed illicitly, most perceived that there had been no recent market changes around this benzodiazepine (7 out of 9 participants commenting), with two respondents suggesting that there had been an increased demand for diazepam tablets, with an associated increase in price.

Table 60. PWID reported trends in illicit access to benzodiazepines in the preceding six months (n=47).

	Gel capsules %	Tablets %
Didn't purchase illicitly	70	55
Ease of access		
Very easy	-	11
Easy	15	26
Difficult	6	11
Very difficult	9	-
Change to access		
Easier	-	4
No change	17	28
More difficult	13	12
Fluctuates	-	-
Price change		
Increasing	15	6
Stable	6	30
Decreasing	-	2
Fluctuates	2	4

Source: Stage four survey of PWID

PWID participants that had accessed, or attempted to access, benzodiazepines from illicit sources were invited to discuss their experiences the last time this had occurred. Participants mainly talked about the reasons that they sought to access benzodiazepines illicitly. For a minority, benzodiazepines were accessed for opportunistic reasons (e.g. they were offered to them as a gift or to purchase, n=4; or they were offered in trade for another drug, n=3). Others reported simply seeking the experience of intoxication, either on its own (n=2) or to give them a 'buzz' on top of their daily methadone use (n=4). Some participants reported situational reasons for their illicit purchase; for example, two individuals indicated that they had bought benzodiazepines illicitly because their regular doctor was away, and they knew that it was likely that they would be refused prescription if they went to another doctor. Others (n=4) reported that they had over-used the benzodiazepines prescribed to them, and hence ran out before a repeat prescription would be allowed by their doctor, so they purchased benzodiazepines illicitly to maintain their dose in the intervening period. More commonly, participants reported functional reasons for seeking benzodiazepines on the illicit market, such as self-medication to help them cope with stressful situations (n=2) or to help them sleep (n=3), or that they sought out these drugs at stressful times either to get 'out of it' so that they didn't have to dwell on their problems (n=4) or to 'top-up' on

their methadone or other medication (n=2) to help alleviate depression. Participants also reported seeking out benzodiazepines when they had missed a dose of methadone, where benzodiazepines were used to alleviate the symptoms of withdrawal (n=4).

In general, PWID participants were successful when they sought out benzodiazepines illicitly. One participant reported that 'friends help each other out (with benzodiazepines) when they're needed'. This attitude seems to extend outside of the borders of friendship, with another participant reporting that 'people can get nasty if you refuse to sell your own (benzodiazepines)'. In keeping with this, another participant reported, with some disdain, that some people they knew 'tried to play God' with their alprazolam prescriptions, by not sharing it with others when needed. In the few cases where PWID participants reported that they had been unsuccessful in accessing benzodiazepines illicitly, they reported just toughing their situation out, rather than seeking another drug as a substitute or engaging in criminal activity to access these drugs.

Summary of recent benzodiazepine use with reference to NDLERF research questions

How are benzodiazepines obtained on the illicit market?

- Replicating the findings of the earlier PWID survey, PWID participants reported predominantly receiving benzodiazepines through legitimate prescriptions from a medical practitioner. Access to benzodiazepines from non-legitimate sources was a less prevalent pathway to access, but in these cases PWID tended to receive these drugs as a gift or through trades for other drugs rather than purchasing them from a provider.
- Respondents typically reported seeking out benzodiazepines on the illicit market for functional reasons, such as times of particular stress, to manage sleeping difficulties or withdrawal from opiates, or to replace their own prescription if this had been used up too quickly.

To what extent is doctor-shopping used to obtain benzodiazepines and how easy is it to obtain such drugs by this method?

- Again supporting the findings of the earlier survey, PWID participants had good access to legitimate prescriptions for benzodiazepines, predominantly prescribed for legitimate clinical considerations. As such, there was very little use of, or the requirement for, 'doctor-shopping' to obtain these drugs.
- Almost all of those receiving benzodiazepine prescriptions had accessed the drug from a single medical practitioner, with only a single participant receiving prescriptions from more than two doctors in the preceding six months.
- Participants reported seeking benzodiazepine prescriptions from medical practitioners predominantly for issues appropriate to their prescription (sleeping difficulties, anxiety, distress), or having them prescribed without request to support reduction in methadone dosage. PWID participants also reported having their requests refused if the medical practitioner was not the one overseeing their methadone maintenance. If refused prescription, most did not report seeking benzodiazepines from another medical practitioner.

Are illicit benzodiazepines sold by sellers of other illicit drugs?

- Consistent with the results of the earlier survey, PWID participants predominantly accessed diverted benzodiazepines through friends, with these individuals not selling any other illicit drugs (with the possible exception of cannabis). When the drugs were purchased from 'dealers', these were typically perceived as 'user/dealers' and may have also supplied methamphetamine, cannabis and/or morphine.

Pharmaceutical opiates

Morphine: Routes of administration of morphine and forms used

Given that the current PWID cohort was recruited on the basis of their intravenous use of pharmaceutical opiates or benzodiazepines, it is unsurprising that almost three-quarters of the PWID cohort (72%) reported use of morphine in the preceding six months (Table 61). Just two of the participants interviewed (4% of the sample) had received morphine through prescription from a medical practitioner in the preceding six months, using it on a median of 174 days (range 168-180 days) in the preceding six months. Seventy-two percent of the PWID cohort (including both of those receiving licit prescriptions of morphine) had accessed morphine illicitly in the preceding six months, and this was used on a median of 15 out of the preceding 180 days among these participants (range 1-180 days).

Consistent with the patterns reported among the earlier PWID survey and among similar cohorts in the IDRS series of studies (see Bruno & McLean 2004), participants tended to inject rather than swallow morphine when they accessed the drug, with 68% of the PWID participants reporting recent intravenous use of illicitly accessed morphine, in comparison to the 72% that had used the drug illicitly in the preceding six months. The morphine preparations most commonly used and injected, in decreasing order of prevalence, were 60mg MS Contin, 100mg MS Contin, 50mg Kapanol, 100mg Kapanol, 30mg MS Contin and 20mg Kapanol, all of which were injected by 15% or more of the PWID cohort in the preceding six months (Table 61). Only single individuals reported recent use of 200mg MS Contin tablets, or Ordine, with just two reporting recent use of Anamorph.

Table 61. Use of morphine in the preceding six months among the PWID sample (n=47).

Morphine preparation	Used in past 6 months	Injected in past 6 months
	%	%
Anamorph	4	4
Kapanol 20mg	15	15
Kapanol 50mg	36	34
Kapanol 100mg	34	34
MS Contin 5mg	-	-
MS Contin 10mg	-	-
MS Contin 15mg	-	-
MS Contin 30mg	30	28
MS Contin 60mg	57	55
MS Contin 100mg	40	40
MS Contin 200mg	2	2
Morphalgin 5mg (morphine with aspirin)	-	-
Ordine oral liquid (morphine hydrochloride)	2	2
Any licit morphine		
% using in past six months	4	4
Median frequency of use	174 days	54 days
Any illicit morphine		
% using in past six months	72	68
Median frequency of use	15 days	13 days

Source: Stage four survey of PWID

Morphine: Sources of morphine

While PWID participants reported accessing morphine from a range of sources in the preceding six months (Table 62), it was clear that the overwhelming majority of those recently using the drug had most commonly accessed this from a 'dealer', rather than through doctor-shopping, theft or any other method. These reports are strikingly similar to those reported in the earlier PWID sample (Table 19).

PWID participants were asked to nominate all of the different sources through which they had accessed morphine in the preceding six months. Over half the PWID sample (51%) reported purchasing morphine from a dealer, with one-fifth (20%) recently purchasing the drug from a friend. Smaller proportions reported receiving morphine through trades for other drugs (18% of the sample), or had been given morphine (6%, n=3). As noted above, two participants (4% of the sample) were receiving morphine through prescriptions, both for pain management, and were overseen by a specialist. While one individual reported stealing morphine in the preceding six months, on further investigation this was a single opportunistic event (the participant noted finding a tablet on a friend's floor and taking it), and did not involve theft from medical practitioners or pharmacies.

When participants were asked to report the sources from which they had obtained the majority of the morphine that they had used in the preceding six months, it was clear that purchase from a 'dealer' was by far the most common supply source (42% of the sample, see Table 62), with much smaller proportions predominantly accessing morphine through purchasing them from a friend (14%), through trading for other drugs (9%) or from legitimate prescriptions (4%).

Consistent with reports from the earlier PWID survey, none of the participants reported purchasing morphine through the internet, stealing the drug from a pharmacy or medical practitioner, feigning symptoms or forging prescriptions to obtain morphine at any stage in the preceding six months.

Table 62. Pathways to access of morphine in the preceding six months (n=47).

Source	Real symptoms	Fake symptoms	Gift	Steal	Forge script	Buy: friend	Buy: dealer	Swap
	%	%	%	%	%	%	%	%
Main source	4	-	-	-	-	14	42	9
All sources	4	-	6	2	-	20	51	18

Source: Stage four survey of PWID

Participants that had accessed morphine from any source other than a medical practitioner in the preceding six months were asked to nominate their perceived characteristics of their provider, along with the other drugs sold by the individual from whom they had purchased the majority of their illicit morphine. Distinct from trends surrounding access to benzodiazepines, where these often appeared to be sourced through friendship groups, morphine was most commonly accessed from individuals involved in a moderate level of dealing. Among those participants that had purchased morphine illicitly, the largest proportion reported that their usual source for this drug was a 'small-time' dealer (55% of those purchasing morphine illicitly, n=19/34: Table 63). This is consistent with the trend reported in the earlier PWID survey (Table 20). Three quarters (74%) of these individuals were reported as also selling other drugs, most commonly methamphetamine (53%), cannabis (37%), methadone (32%) or multiple types of morphine (26%, see Table 63). Smaller proportions (13%) of PWID participants reported usually purchasing morphine through

a 'user/dealer' (an individual regarded as selling drugs to financially offset the cost of their own use), with these individuals typically selling one other drug, such as methamphetamine (sold by 33% of these individuals), benzodiazepines (33%), methadone (17%) or cannabis (17%). Nine percent of the PWID participants reported predominantly purchasing morphine from a 'large-scale' supplier or, at the opposite end of the spectrum, an individual best categorised by respondents as a 'friend selling their prescription'. Those providers considered to be 'large-scale' suppliers typically also sold methamphetamine (75%) and cannabis (75%), with a smaller proportion also providing methadone (25%). Among those sources described as 'friends selling their prescription', half also provided benzodiazepines, with single individuals also providing methadone or cannabis respectively.

Table 63. Other drugs sold by providers of morphine.

	Friend selling their prescription	User/dealer (selling to fund use)	Small-time dealer	Large-scale supplier	Total
Provider type	9% (n=4)	13% (n=6)	38% (n=19)	9% (n=4)	69% (n=34)
Other drugs sold					
Heroin	-	-	5% (n=1)	-	3% (n=1)
Methadone	25% (n=1)	17% (n=1)	32% (n=6)	25% (n=1)	27% (n=9)
Morphine	-	-	26% (n=5)	-	15% (n=5)
Other opiates	-	-	-	-	-
Methamphetamine	-	33% (n=2)	53% (n=10)	75% (n=3)	44% (n=15)
Cocaine	-	-	5% (n=1)	-	3% (n=1)
LSD	-	-	5% (n=1)	-	3% (n=1)
Ecstasy	-	-	5% (n=1)	-	3% (n=1)
Benzodiazepines	50% (n=2)	33% (n=2)	10% (n=2)	-	18% (n=6)
Cannabis	25% (n=1)	17% (n=1)	37% (n=7)	75% (n=3)	38% (n=13)
Does not sell any other drugs	25% (n=1)	17% (n=1)	26% (n=51)	25% (n=1)	24% (n=8)

Source: Stage four survey of PWID

Morphine: Access to morphine from a medical practitioner

PWID participants that had accessed morphine from a medical practitioner in the preceding six months were asked about how easy it was for them to access such drugs from prescribers. Just 4% of the PWID participants had recently accessed morphine from medical practitioners, with both of these individuals receiving established long-term prescriptions for management of pain. Two other participants reported requesting morphine from a single prescriber (and were refused) in the preceding six months, with the remainder, despite often using these drugs illicitly, not attempting to access morphine from a prescriber in the preceding six months. Consistent with receiving a regular prescription, the two participants that had recently received morphine from a prescriber regarded this as 'easy' or 'very easy' (Table 64), and that this situation had not changed in the preceding six months. One of these respondents noted that they had no problems maintaining access to this prescription, but took care not to return to the prescriber before the script was due for renewal. In the event that they had used up their prescribed morphine doses prior to the renewal date, this individual accessed morphine on the illicit market.

PWID participants that had ever accessed, or attempted to access, morphine from a medical practitioner were asked to discuss their experiences the last time they had made such a request. The most common response from participants was that they had never tried to access morphine from a prescriber (n=26, or 70% of those recently using morphine), as they felt it was very unlikely that they would be successful in such a request. Among the remainder of the respondents, those that had received a morphine prescription at some stage usually had this provided to them without them making a request, for legitimate presenting issues (work injuries, toothache, burns, headache or other medical conditions : n=8). Two respondents made mention of occasions where they had feigned symptoms in an attempt to access morphine from a medical practitioner. In both of these cases, the request was made because they were 'sick of hunting for dealers', and wanted their own supply. Neither was successful in their request, with one explaining to the practitioner that 'normal pain killers were not effective, but morphine was', and the other saying that they were troubled by continuing pain from a motor vehicle accident several years previously. Only a single participant reported successfully receiving morphine from a prescriber when they did not have legitimate pain symptoms: this participant explained, 'I was hanging out badly – I asked for a script, and (when refused), I threatened to kill myself. He gave me one script and told me not to come back'.

Table 64. PWID reported trends in access to morphine from medical practitioners, and from illicit sources, in the preceding six months.

	Licit %	**Illicit %**
Didn't access via this source	96	28
Ease of access		
Very easy	2	21
Easy	2	43
Difficult	-	9
Very difficult	-	-
Change to access		
Easier	-	11
No change	4	34
More difficult	-	19
Fluctuates	-	9

Table 64 continued.

	Licit %	Illicit %
Price change		
Increasing	na	11
Stable	na	49
Decreasing	na	9
Fluctuates	na	4

na: refers to 'not applicable'

Source: Stage four survey of PWID

Morphine: Illicit access to morphine

Participants that had recently purchased morphine illicitly were asked about recent market trends, with 72% of the cohort able to comment on some aspect of availability or price change (Table 64). Consistent with the reports in the earlier PWID survey (Table 23), morphine was generally regarded as 'easy' (43% of the sample), or 'very easy' (21%) to access, and that this situation had not changed in the preceding six months (34%: although 11% reported that it had become easier, and 19% that morphine had become more difficult to access in this time). Again similarly to the pattern identified in the earlier study, half of the cohort (49%) had noted no recent change in the price of morphine, with 11% reporting increasing prices, 9% that morphine prices had decreased, and 4% that prices had fluctuated in the preceding six months.

Those that had recently used morphine were asked to elaborate on recent market changes for each of the different morphine brands. Twenty-six participants reported on trends around MS Contin (55% of the sample), with the majority of these (n=16) noting no recent market changes. Amongst the remainder, nine (18% of the sample) felt that MS Contin had recently become more difficult to access, either due to increased demand (n=1), because doctors were 'getting tougher' on prescribing it (n=1), or because the dealers that they had contact with had been 'busted' in recent months (n=2). One participant reported that this reduction in availability had caused them to reduce their use of morphine in recent months. However, another noted that, while it was harder to access MS Contin at times, they 'could always find something'. Participants were much more mixed on whether there had been any recent changes to the illicit market for Kapanol (4 perceiving some change, 3 noting no recent change). Equal numbers also suggested that Kapanol had become more difficult (n=2) and easier (n=2) to access in the preceding six months, with one respondent noting that 'prescription rates for Kapanol have gone up, so there are more people getting it now, and they are giving out (diverting) larger amounts at a time'.

Participants that had accessed, or attempted to access, morphine from illicit sources were invited to discuss their experiences the last time this had occurred. As virtually none of these participants had found it difficult to access morphine, discussions generally focused on the reasons why respondents had sought out the drug. Aside from those simply seeking intoxication (n=3), participants reported seeking morphine illicitly to manage or avoid opiate withdrawal (n=15), either due to regular illicit use (n=5), or because they had run out of their prescribed doses of opiates (morphine, n=2; take-away doses of methadone, n=5). Three participants reported buying morphine as a substitute when they could not find any diverted methadone to purchase, while three others, who were regularly receiving methadone as part of a methadone maintenance program, reported using morphine to 'feel something different' or to get a 'buzz' on top of their

regular methadone prescription. Other participants reported seeking out morphine for self-medication; for example, to alleviate the 'come down' from methamphetamine use (n=1), to reduce stress or depression (n=2), or to help manage pain (n=2).

Summary of recent morphine use with reference to NDLERF research questions

How is morphine obtained on the illicit market?

- Replicating findings identified in the earlier PWID survey, diverted morphine was predominantly accessed through purchase from a 'dealer', with access by PWID from medical practitioners, theft, internet sources, or forgery extremely rare or non-existent.
- Participants reported purchasing morphine either due to the demands of addiction, to replace prescribed opiates, for intoxication, or to manage the acute recovery period following methamphetamine use.

To what extent is doctor-shopping used to obtain morphine and how easy is it to obtain by this method?

- Similar to the results of the earlier study, access to morphine from a medical practitioner either for legitimate reasons, or as a result of feigned symptoms, were virtually non-existent amongst the current cohort.
- Most of those interviewed reported never actually trying to request these drugs from a medical practitioner as they felt it was extremely likely this would be refused.

Is illicit morphine sold by sellers of other illicit drugs?

- Participants reported typically purchasing morphine from 'small-time' dealers or 'user/dealers' that typically also provided drugs such as methamphetamine, morphine and/or cannabis.

Methadone: Routes of administration of methadone and forms used

Amongst this sample of individuals that regularly injected pharmaceutical products, use of methadone was quite high, with 87% of the cohort using some form of methadone in the preceding six months (Table 65). All but one of these participants had recently used methadone syrup (85% of the cohort), with 62% of the sample receiving methadone syrup through prescription as part of a maintenance program, with these individuals reporting using it on a median of 144 of the previous 180 days. Two-fifths of the sample (40%) had recently used diverted methadone syrup, although this was a relatively uncommon event (just 12 days in the preceding 180). Patterns of use of Physeptone tablets of methadone differed substantially from those for methadone syrup. While more than half of the participants had used Physeptone in the previous six months (51%), just one had received this through prescription (2%, using Physeptone 168 of the previous 180 days), with the remainder accessing diverted Physeptone in this time, and using it a median of 5 days in this time.

Consistent with the pattern identified in the earlier PWID study (Table 17), where methadone was accessed illicitly, this group of participants tended to inject the drug, rather than administering it via oral means. As indicated in Table 65 below, only those who had received methadone via prescription reported swallowing methadone in the preceding six months. This was consistent for both liquid (methadone syrup) and tablet (Physeptone) forms of the drug.

Table 65. Use of methadone in the preceding six months among the PWID sample (n=47).

Methadone	Used in past 6 months %	Swallowed in past 6 months %	Injected in past 6 months %
Any Physeptone use			
% using in the past six months	51	2	51
Median frequency of use	5 days	48 days	6 days
Licit Physeptone use			
% using in the past six months	2	2	2
Median frequency of use	168 days	48 days	120 days
Illicit Physeptone use			
% using in the past six months	49	-	49
Median frequency of use	5 days	-	5 days
Any methadone syrup use			
% using in the past six months	85	62	83
Median frequency of use	144 days	96 days	48 days
Licit methadone syrup use			
% using in the past six months	62	62	62
Median frequency of use	144 days	96 days	48 days
Illicit methadone syrup use			
% using in the past six months	40	-	40
Median frequency of use	12 days	-	12 days
Any licit methadone use			
% using in the past six months	64	64	64
Median frequency of use	168 days	96 days	48 days
Any illicit methadone use			
% using in the past six months	72	-	72
Median frequency of use	18 days	-	18 days
Any methadone use			
% using in the past six months	87	64	87
Median frequency of use	144 days	96 days	50 days

Source: Stage four survey of PWID

Methadone: Sources of methadone

PWID participants were asked to nominate all of the different sources through which they had accessed methadone in the preceding six months (Table 66). Of those receiving methadone via prescription from a medical practitioner (64% of the sample), not a single individual reported that they had received this prescription through feigning symptoms (or 'doctor-shopping'). Among

those accessing methadone syrup or tablets via illicit means, this was commonly through trades for other drugs (30% of the sample), or purchases from a friend (27%) or a 'dealer' (23%), with a small number receiving methadone as a gift (13%). The majority of these 'trades' in regard to access to methadone syrup appear to be among individuals who are receiving methadone maintenance treatment, as noted in previous local IDRS surveys (e.g. Bruno & McLean 2004). It is not uncommon for these individuals, when picking up, for example, three 'take-away' doses of methadone syrup, to provide one of these doses to another person on the program, with the expectation that this favour will be returned when required in subsequent days. Consumers have reported that this trading helps them avoid the temptation to use all their 'take-away' methadone doses too quickly, and also that it means that they can avoid being pressured by others to divert such doses of methadone.

None of the participants reported accessing methadone in the previous six months by theft, through forging a prescription, or through the internet. Similar results were shown in the earlier PWID study (Table 19).

When participants were asked to report the source from which they had obtained the majority of the diverted methadone that they had used in the preceding six months, it was clear that this was predominantly purchased, either from a friend (23% of the sample) or from a 'dealer' (19%). Smaller proportions had usually accessed their methadone through trades (17%) or as a gift (11%).

Table 66. Pathways to access of methadone in the preceding six months (n=47).

Source	Real symptoms %	Fake symptoms %	Gift %	Steal %	Forge script %	Buy: friend %	Buy: dealer %	Swap %
Main source	64	-	11	-	-	23	19	17
All sources	64	-	13	-	-	27	23	30

Source: Stage four survey of PWID

Participants that had accessed methadone from any source other than a medical practitioner in the preceding six months were asked to nominate the perceived 'status' of their provider, along with the other drugs provided by the individuals from whom they had accessed the majority of their illicitly obtained methadone. Among the 85% of the sample recently accessing methadone syrup that was not directly prescribed to them, this was most commonly accessed through friendship groups (Table 67), with only six participants nominating accessing the majority of their diverted methadone from a source other than a friend in the preceding six months. Those sources characterised as 'friends' – whether they were selling, swapping or simply giving methadone syrup – generally were not providers of other drugs, with the exception of a small proportion also providing cannabis (n=3 of 23) or benzodiazepines (n=2 of 23). Of the six participants accessing the majority of their illicit methadone syrup from a source other than friends, the majority had purchased from individuals characterised as 'user/dealers' (n=4) or as 'small-time' dealers (n=2). Consistent with the pattern identified in the earlier PWID study, these sources tended to also sell morphine, methamphetamines, benzodiazepines and/or cannabis (Table 67).

Table 67. Other drugs sold by providers of diverted methadone syrup.

	Friend selling their prescription		Friend giving away their prescription		Friend swapping their prescription		Friend swapping drugs for service		User/dealer (selling to fund use)		Small-time dealer		Total	
Provider type	40%	(n=19)	2%	(n=1)	4%	(n=2)	2%	(n=1)	9%	(n=4)	4%	(n=2)	62%	(n=29)
Other drugs sold by these providers														
Heroin	-		-		-		-		-		-		-	
Methadone	-		-		-		-		-		-		-	
Morphine	-		-		-		-		25%	(n=1)	50%	(n=1)	7%	(n=2)
Other opiates	-		-		-		-		-		-		-	
Methamphetamine	-		-		-		-		25%	(n=1)	50%	(n=1)	7%	(n=2)
Cocaine	-		-		-		-		-		-		-	
LSD	-		-		-		-		-		-		-	
Ecstasy	-		-		-		-		-		-		-	
Benzodiazepines	5%	(n=1)	-		50%	(n=1)	-		25%	(n=1)	100%	(n=2)	17%	(n=5)
Cannabis	11%	(n=2)	-		-		100%	(n=1)	75%	(n=3)	-		21%	(n=6)
Does not sell any other drugs	79%	(n=15)	100%	(n=1)	50%	(n=1)	-		25%	(n=1)	-		62%	(n=18)

Source: Stage four survey of PWID

Reported supply sources for Physeptone tablets in the preceding six months (Table 68) replicated those identified in the earlier PWID survey (Table 21), and differed substantially to the sources of diverted methadone syrup. While more than a third of those recently accessing diverted Physeptone had accessed the majority of these from a friend (who typically did not provide other drugs), it was more common for participants to have purchased these drugs from a 'dealer'. Such individuals were typically characterised as 'small-time' dealers (17% of the sample), who typically also provided morphine, cannabis, and/or methamphetamine. Nine percent of the cohort had usually purchased their Physeptone from a 'user/dealer', and 4% from an individual characterised as a 'large-scale supplier'. Similar to the reported trends for 'small-time' dealers, these individuals commonly also provided methamphetamine, cannabis and/or morphine.

Table 68. Other drugs sold by providers of Physeptone.

	Friend selling their prescription	Friend swapping their prescription drugs	User/ dealer (selling to fund use)	Small-time dealer	Large-scale supplier	Total
Provider type	17% (n=8)	2% (n=1)	9% (n=4)	17% (n=8)	4% (n=2)	49% (n=23)
Other drugs sold by these providers						
Heroin	-	-	-	13% (n=1)	-	4% (n=1)
Methadone	-	-	-	25% (n=2)	-	9% (n=2)
Morphine	-	-	25% (n=1)	63% (n=5)	100% (n=2)	35% (n=8)
Other opiates	-	-	-	-	-	-
Methamphetamine	-	-	50% (n=2)	50% (n=4)	50% (n=1)	30% (n=7)
Cocaine	-	-	-	13% (n=1)	-	4% (n=1)
LSD	-	-	-	25% (n=2)	-	9% (n=2)
Ecstasy	-	-	-	13% (n=1)	-	4% (n=1)
Benzodiazepines	-	-	-	25% (n=2)	-	9% (n=2)
Pharm. stimulants	13% (n=1)	-	-	-	-	4% (n=1)
Cannabis	13% (n=1)	-	25% (n=1)	63% (n=5)	50% (n=1)	35% (n=8)
Does not sell any other drugs	76% (n=6)	100% (n=1)	-	-	-	26% (n=6)

Source: Stage four survey of PWID

Physeptone: Access to Physeptone from a medical practitioner

PWID participants that had accessed Physeptone from a medical practitioner in the preceding six months were asked about how easy it was for them to access from prescribers[11]. Only two participants had attempted to access Physeptone from a medical practitioner in the preceding six months. One of these had a long-term existing prescription for the drug, and was having treatment overseen by a specialist in pain management. This individual reported that he had no problems accessing this regular prescription, and this situation had not changed in the preceding six months (Table 69). The other individual had requested Physeptone from a single prescriber in this time but was refused.

[11] Participants were not asked about the ease at which they could access methadone syrup from prescribers because entry to a methadone maintenance program is not a process that can be decided by an individual practitioner.

Participants that had ever used Physeptone were asked if they had ever attempted to access the drug from a medical practitioner, and were invited to discuss their experiences the last time they had made such a request. Of the forty participants that had ever used Physeptone, three-quarters (n=31) reported that they had 'never' tried to access Physeptone from a prescriber, often suggesting that they didn't bother asking because they felt it was unlikely that they would be successful. Among the remainder, most had either been referred to a prescriber by another health professional (for example, referred to a doctor by a pharmacist as the local pharmacy was running short on methadone syrup), or had Physeptone prescribed for legitimate indications without the individual making a request; for example, for pain (from injuries or severe persistent headaches, n=3) or due to problems with tolerating methadone syrup (n=2). Just four participants had instigated requests to prescribers for Physeptone. Two participants were receiving methadone maintenance treatment and were travelling for several days, and requested a prescription of Physeptone so that they could maintain their regular dose during the period where they would be unable to reach their dosing pharmacy. Another participant reported seeking a Physeptone prescription when she discovered that she was pregnant, with the aim of weaning her off her morphine habit (rather than subscribing to a long-term methadone maintenance program). In all cases, these individuals did not receive a Physeptone prescription from the prescribers that they approached. The only participant that did successfully receive a Physeptone prescription when making a request was experiencing withdrawal symptoms, and told the prescriber that they had an appointment to be assessed for enrolment in a methadone maintenance program, and they required something to 'tide them over' until that appointment. In sum, it is clear that 'doctor-shopping' to obtain Physeptone prescriptions is not something that is engaged in by local PWID, as most believe that they would be unsuccessful if this was attempted. Also, it appears that prescribers are extremely reluctant to prescribe these drugs to local PWID, and would be unlikely to acquiesce to such requests if they were made.

Methadone: Illicit access to methadone

Participants that had recently accessed diverted methadone syrup were asked about recent illicit market trends, with 64% of the cohort able to comment on some aspect of availability or price change (Table 69). The majority of those providing comment felt that diverted methadone syrup was 'easy' (32% of the cohort) or 'very easy' (13%) for them to access, although a minority (19% of the sample) felt that it was difficult to access in recent months. Of these participants, those that reported it was 'very easy' to access tended to have friends that were enrolled in a methadone maintenance program or had pre-existing arrangements to access the drug. Others described having to 'hang around pharmacies on 'take-away' days' and that 'people will trade for methadone syrup if you have a drug that they want or if they need money'. One-third (34%) of the current PWID sample reported that there had been no recent changes in the availability of diverted methadone syrup, while 17% suggested that it had become more difficult to access in the preceding six months. When participants elaborated on this, several participants reported that there was more demand for diverted methadone syrup in recent months (n=6), because those on the program were 'keeping it for themselves'. Consistent with this, participants receiving methadone maintenance reported being increasingly hassled outside pharmacies when they went to collect their take-away doses of the drug, with some reporting being threatened ('stood over') by people wanting to access their prescription, and another reporting having their bag snatched as they left the pharmacy with their doses. Six participants reported experiencing this increasing challenge in recent months, with one individual mentioning that '(I am) now scared to collect my dose'. One-third (36%) of the cohort felt that there had been no recent change in the price of diverted methadone syrup, while 15% perceived that prices had increased in this time, consistent with an increase in demand for the drug.

Table 69. PWID reported trends in access to methadone from medical practitioners and from illicit sources in the preceding six months.

	Licit Physeptone %	Illicit Physeptone %	Illicit methadone syrup %
Didn't access via this source/no comment	98	47	36
Ease of access			
Very easy	2	9	13
Easy	-	6	32
Difficult	-	36	19
Very difficult	-	2	-
Change to access			
Easier	-	9	9
No change	2	19	34
More difficult	-	23	17
Fluctuates	-	2	-
Price change			
Increasing	na	13	15
Stable	na	34	36
Decreasing	na	2	2
Fluctuates	na	-	4

na: refers to 'not applicable'

Source: Stage four survey of PWID

Those that had recently used diverted methadone syrup were asked to discuss their experiences the last time they had accessed the drug. Several participants reported that they didn't seek the drug out but instead had regular arrangements to access diverted syrup (n=5), or traded some of their take-away methadone doses with friends also receiving methadone maintenance in order to keep their own supply (to avoid temptation to binge or being pressured to divert doses: n=3), with the expectation that these doses would be returned when required. Perhaps reflecting the utility of such an approach, six respondents noted that they had sought out diverted methadone syrup because they had used up their take-away methadone doses too quickly and were experiencing withdrawal symptoms. Others (n=5) reported seeking out diverted methadone syrup in order to add to their prescribed dose of syrup, allowing them to become intoxicated rather than simply avoid withdrawal symptoms. Others indicated that they had sought out the drug when they were experiencing stress or depression with the hopes of alleviating such discomfort (n=2). Finally, one participant reported seeking out methadone because they were stuck without transport too far away from their pharmacy to pick up their prescribed dose.

Those that had recently accessed illicit Physeptone (53% of the sample) were also asked about market trends around this form, with most indicating that Physeptone was 'difficult' for them to access in the preceding six months (36% of the sample), and that this level of access had not changed (19%) or that the drug had become even more difficult to access in recent months (23%).

Participants indicated that there was not a lot of Physeptone about (n=8), and that 'Physeptone isn't easily available like morphine – when you hear of it then you've got to beat others to it' (n=6). Others suggested that they had noticed more local PWID starting to 'prefer Physeptone over methadone syrup', and that this increased demand, in concert with 'people being greedy' (and not diverting their prescribed doses) was responsible for the recent declines in the illicit availability of Physeptone locally. Consistent with these reports, the majority of those commenting felt that the price of Physeptone tablets had remained stable (36% of the sample) or had increased (13%) in recent months.

Similar to the reports around the reasons for seeking out diverted methadone syrup, when participants were asked to discuss their experience last time they had sought out diverted Physeptone tablets, this was often due to the experience of withdrawal symptoms from using prescribed take-away doses of methadone syrup too quickly (n=6) or with the aim of intoxication through using the drug on top of a prescribed maintenance methadone dose (n=3). Some participants reported using Physeptone as a substitute for morphine or methadone syrup when they were unable to obtain these drugs on the illicit market (n=3). If participants were unsuccessful in obtaining diverted Physeptone or some other opiate, one reported increasing their consumption of cannabis in order to avoid withdrawal symptoms, while another reported just sitting through the symptoms of opiate withdrawal if they could not access any other drug.

Summary of recent methadone use with reference to NDLERF research questions

How is methadone obtained on the illicit market?

- Findings from the earlier PWID survey were replicated, with methadone syrup most commonly accessed through legitimate prescription or through trades or purchase from friends. While Physeptone tablets were more commonly purchased from a 'small-time' dealer.

To what extent is doctor-shopping used to obtain methadone and how easy is it to obtain by this method?

- Reports from PWID respondents suggested that 'doctor-shopping' to obtain prescriptions of Physeptone was not something that was engaged in by local PWID, as most believed that requests for the drug would be unsuccessful if attempted. It also appeared that prescribers were extremely reluctant to prescribe these drugs to local PWID, and would be unlikely to acquiesce to such requests if they were made.

Is illicit methadone sold by sellers of other illicit drugs?

- Participants reported predominantly accessing diverted methadone syrup from friends receiving these medications legitimately. These individuals tended not to supply any other drugs, with the possible exception of cannabis.
- Physeptone tablets, however, were predominantly purchased from 'small-time' dealers that also tended to provide morphine, cannabis, and/or methamphetamine.

Buprenorphine

None of the 47 participants in the current PWID sample reported using buprenorphine in the six months prior to interview, either by legitimate or illicit means.

Other pharmaceutical opiates: Routes of administration and forms used

Almost one-third of the current PWID cohort (32%) reported using a pharmaceutical opiate other than morphine, methadone or buprenorphine in the preceding six months. When these drugs were

used, this was a very infrequent event among these participants, with a median frequency of use of just 4 days out of the preceding 180 (Table 70). Within the current PWID sample, these drugs were predominantly accessed illicitly, with only two participants (4% of the sample) reporting recently receiving any of these drugs via legitimate prescription (tramadol in both cases, using the drugs only orally, for a median of just 5 days) in the preceding six months. Twenty-eight percent of the current cohort had accessed these drugs via means other than prescription in the preceding six months, and had used these on a median of four occasions in this time. Oral administration of these drugs was more common than intravenous use, with just three quarters of those recently accessing these drugs illicitly injecting them (19% of the cohort), and doing so on a median of a single occasion in the preceding six months (Table 60).

Consistent with reports in the earlier PWID study (Table 19), the pharmaceutical opiates within this group most commonly accessed were tramadol (Tramal) and oxycodone (OxyContin, MS Mono, OxyNorm, see Table 70). Thirteen percent of the current PWID sample reported recently using tramadol, while 6% reported recent use of 120mg MS Mono or Oxycontin (20, 40, 80mg tablets respectively).

Other pharmaceutical opiates: Sources

PWID participants that had used these pharmaceutical opiates in the preceding six months were asked to nominate all of the sources that they had accessed these drugs from (Table 71). These were most commonly simply given to participants (11% of the sample), or purchased from 'dealers' (8%) or friends (6%). Two individuals (4% of the sample) had received these drugs through legitimate prescription in the six months prior to interview, and single participants had received these drugs through trading for other drugs or stealing them (from another PWID, rather than from a pharmacy or medical practitioner's offices). Consistent with the trends reported in the earlier study, no participants reported recently accessing these drugs through feigning of symptoms, through the internet, through theft from a pharmacy or doctor's surgery, or through forging prescriptions.

Those that had recently accessed these drugs through illicit sources were ask to describe the level of 'dealing' that they perceived these sources were engaged in, and the other types of drugs sold by the individual that participants had purchased the majority of these drugs from in the preceding six months (Table 72). Only five participants could report on this information, with two participants respectively nominating their source as a 'small-time' dealer or as a 'user/dealer'. These individuals commonly reported also selling morphine. The final participant reported purchasing these drugs from a friend, and that this individual did not provide any other drugs for sale.

Table 70. Use of other pharmaceutical opiates in the preceding six months among the PWID sample (n=47).

Opioid	Used in past 6 months %	Injected in past 6 months %
Oxycodone		
Endone 5mg (oxycodone hydrochloride)	3	-
MS Mono 120mg (oxycodone)	6	6
Oxycontin 20mg (oxycodone hydrochloride)	6	6
Oxycontin 40mg (oxycodone hydrochloride)	6	6
Oxycontin 80mg (oxycodone hydrochloride)	6	6
OxyNorm 20mg (oxycodone hydrochloride)	2	2
Proladone suppository (oxycodone pectinate)	-	-
Fentanyl		
Durogesic patch (fentanyl)	-	-
Fentany IV liquid (fentanyl)	-	-
Tramadol		
Tramal 50mg C (tramadol)	13	-
Zydol 50mg C (tramadol)	-	-
Other related products		
Codeine Phosphate	-	-
Dilaudid (hydromorphone hydrochloride)	-	-
Palfium (dextromoramide tartate)	-	-
Pethidine 50mg (pethidine hydrochloride)	-	-
Any licit pharmaceutical opiate		
% using in past six months	4	-
Median frequency of use	5 days	-
Any illicit pharmaceutical opiate		
% using in past six months	28	19
Median frequency of use	4 days	1 day
Any pharmaceutical opiate		
% using in past six months	32	19
Median frequency of use	4 days	1 day

Source: Stage four survey of PWID

Table 71. Pathways to access of other pharmaceutical opioids in the preceding six months (n=47).

Source	Real symptoms	Fake symptoms	Gift	Steal	Forge script	Buy: friend	Buy: dealer	Swap
	%	%	%	%	%	%	%	%
Main source	4	-	11	2	-	6	6	-
All sources	4	-	11	2	-	6	8	2

Source: Stage four survey of PWID

Table 72. Other drugs sold by providers of pharmaceutical opiates other than morphine or methadone.

	Friend selling their prescription	User/dealer (selling to fund use)	Small-time dealer	Total
Provider type	2% (n=1)	4% (n=2)	4% (n=2)	10% (n=5)
Other drugs sold				
Heroin	-	-	-	-
Methadone	-	50% (n=1)	-	20% (n=1)
Morphine	-	100% (n=2)	100% (n=2)	80% (n=4)
Other opiates	-	-	-	-
Methamphetamine	-	50% (n=1)	-	20% (n=1)
Cocaine	-	-	-	-
LSD	-	-	-	-
Ecstasy	-	-	-	-
Benzodiazepines	-	50% (n=1)	-	20% (n=1)
Cannabis	-	100% (n=2)	-	40% (n=2)
Does not sell any other drugs	100% (n=1)	-	-	20% (n=1)

Source: Stage four survey of PWID

Other pharmaceutical opiates: Licit and illicit access

Two participants had accessed these pharmaceutical opiates from a medical practitioner in the preceding six months (Table 73). Both had only received these medications from a single prescriber in this time, and described it as a difficult process to be prescribed these drugs. In both cases, tramadol was prescribed. One of the participants had requested the drug for pain management, and 'had to argue with the doctor to get it'. The other participant had been offered a tramadol prescription for toothache. However, at the time of prescribing, the doctor made it known that they would only prescribe a single box, with no repeats. The participant reported feeling upset and indignant about the way that this prescriber approached the situation.

Table 73. PWID reported trends in access to other pharmaceutical opiates from medical practitioners and from illicit sources in the preceding six months.

	Licit %	Illicit %
Didn't access via this source	96	89
Ease of access		
Very easy	-	-
Easy	-	2
Difficult	4	9
Very difficult	-	-
Change to access		
Easier	-	2
No change	2	9
More difficult	-	-
Fluctuates	-	-
Price change		
Increasing	na	2
Stable	na	9
Decreasing	na	-
Fluctuates	na	-

na: refers to 'not applicable'

Source: Stage four survey of PWID

Among those accessing diverted pharmaceutical opiates and able to comment on recent illicit market trends (11% of the sample), these drugs were generally reported as being difficult to access, and that this and the price of these drugs had remained consistent in the preceding six months (Table 73). These participants reported accessing diverted pharmaceutical opiates either because they had used all their take-away doses of methadone syrup and needed to avoid withdrawal (n=3), as a substitute when they could not find diverted morphine (n=1), or simply because they were offered them (n=1).

In summary, patterns of access and use supported those identified in the earlier PWID survey. Access to these drugs was infrequent among these participants, with drugs such as Oxycontin typically purchased illicitly from 'small-time' dealers that also provided morphine and cannabis. Tramadol was more commonly received from medical practitioners for legitimate reasons, although PWID respondents noted that these doctors were extremely wary of prescribing these medications.

Drug-related behaviour and crime

Intoxication and behaviour while intoxicated

More than three-quarters (78%) of the PWID participants considered that they had been intoxicated with drugs and/or alcohol in the preceding six months. Just over half of those sampled (51%) reported being told that they had exhibited uncharacteristic behaviour while intoxicated, on a median of two occasions (range 1-30 times) in the preceding six months. Participants were asked

to describe the drugs that they had taken and the uncharacteristic behaviour on the last occasion that this had occurred. Individuals discussing the effects of methamphetamine intoxication (n=4) reported being overly talkative (n=2), disruptive (awake all night and disturbing housemates, n=1) or angry and aggressive (n=1). Those discussing the effect of intoxication by pharmaceutical opiates (morphine, n=5; methadone, n=3) reported being overly lethargic, having reduced self-care and difficulties concentrating after use (n=4), while others reported becoming argumentative (n=2) or aggressive (n=1) when intoxicated by these drugs.

Benzodiazepine intoxication, either alone or in combination with other drugs, was more commonly reported by participants as contributing to uncharacteristic behaviour. Two participants reported behaviour exemplifying the disinhibitive effects of benzodiazepines when intoxicated, doing 'stupid things that I normally wouldn't do' (on diazepam or temazepam intoxication) or shoplifting (on intoxication with oxazepam: such behaviour has been noted in other studies, such as Makkai (2002)). The effects reported were more severe when benzodiazepines were used in combination with other central nervous system depressants. Two participants reported uncharacteristic behaviour following use of diazepam, methadone and alcohol, in both cases reporting memory blackouts, one becoming incomprehensible and aggressive, the other 'doing things I regret' (such as being sexually promiscuous). The single most noted problematic combination, however, was use of alprazolam (Xanax) in conjunction with methadone. All six participants reported memory blackouts in conjunction with extremely uncharacteristic, disinhibited behaviour. These included 'weird, unexplainable things', going on stealing 'sprees' (when the individual reported long since stopping engaging in such activity), angry outbursts, or being extremely susceptible to being taken advantage of by others when thus intoxicated (for example, one participant reporting that 'other people tell me what to do when I'm in that state'). These disinhibitive effects of benzodiazepines are well established in the literature (for example: Bonn & Bonn 1998; Dobbin 2001; French et al. 2000; Marshall & Longnecker 1992). The effects of alprazolam when used in conjunction with methadone are of concern when considered on their own; however, reports from both the current series of studies and local IDRS reports suggest that the use of this combination has been increasing amongst local PWID groups in recent months, and is clearly an issue that requires continued monitoring and/or some harm reduction interventions amongst consumers.

Income and expenditure on drugs

Participants were asked about the drugs that they had purchased illicitly in the fortnight prior to interview (Table 74). Almost all (94%) had purchased tobacco products in this time, spending a median of $50 (range $10-200) on this in the previous fortnight. Two-thirds (68%) had purchased cannabis in this time, spending a median of $100 (range $20-400). In terms of other illicit drugs, almost half the sample (49%) had purchased methamphetamine powder, spending a median of $150 (range $50-800). Two fifths of the sample had purchased diverted morphine or methadone, respectively spending a median of $100 on these drugs in the previous fortnight (range $16-280 for methadone, $50-1,000 for morphine). In total, participants in the current sample reported spending a mean of $104 (range $0-296) on licitly purchased drugs (including alcohol, tobacco and legitimately prescribed pharmaceuticals) in the previous fortnight (Table 75), and a mean of $325 (range $0-1,350) on illicit drugs in this time. Participants reported receiving a mean of $520 (range $163-1,550) in the previous fortnight from legitimate sources (including salary, government allowances, child support or loans from family or friends), which meant that, at a group level, this cohort were spending an average of 92% of their legitimate income on purchasing drugs (licit or otherwise: range 3%-300%). Half of the cohort (51%) reported receiving some income in the preceding fortnight from criminal activities (primarily from selling of drugs: 32% of the participants), reporting receiving a mean of $119 from such activities (range $0-1,000). When this is added to income from legitimate sources, at a group level, the cohort on average was spending 70.6% of their income on drugs (licit and illicit: range 3%-174%).

Table 74. Amount spent on illicit drugs on the fortnight prior to interview.

Drug (n=47)*	Purchased %	Median expenditure* $	Expenditure range* $
Heroin	2	$80	$80
Methamphetamine: powder	49	$150	$50-800
Methamphetamine: crystalline	6	$50	$50-150
Methamphetamine: base	4	$70	$50-90
Cocaine	2	$50	$50
Cannabis	68	$100	$20-400
Benzodiazepines	51	$8	$3.5-50.0
Other opiates	2	$3.80	$3.80
Methadone (illicit)	40	$100	$16-280
Morphine	38	$100	$50-1,000
Anti-depressants	13	$3.80	$3.5-3.8
Buprenorphine (illicit)	-	-	-
Alcohol	34	$28	$3.3-100.0
Tobacco	94	$50	$10-200
Methadone (licit)	64	$51	$3.8-60.0
Buprenorphine (treatment)	-	-	-

*Among those that had purchased the drug in this time

Source: Stage four survey of PWID

Table 75. Licit and illicit income and expenditure on licit and illicit drugs.

	Licit $	Illicit $	Total $
Income			
Percent receiving	100%	51%	100%
Mean	$520	$119	$642
Standard deviation	$241	$188	$295
Range	$163-1,550	$0-1,000	$213-1,550
Drug expenditure			
Percent expending	98%	98%	100%
Mean	$104	$325	$430
Standard deviation	$67	$275	$269
Range	$0-296	$0-1,350	$32-1,450

Source: Stage four survey of PWID

Criminal activity

Three-quarters of the current sample (75%, n=35) self-reported being involved in any type of criminal activity (other than drug use or driving under the influence of drugs) in the month prior to interview. Such activities and the reasons behind these behaviours are examined below. Almost half (47%, n=22) of the cohort had been imprisoned at some stage in their life (Table 76).

Table 76. Self-reported criminal activity among the PWID sample (n=47).

Crime in past month	%	n
Shoplifting	**47%**	**22**
Less than once per week	28%	13
Once a week	9%	4
More than once per week	9%	4
Daily	2%	1
Property theft	**9%**	**4**
Less than once per week	9%	4
Dealing	**53%**	**25**
Less than once per week	17%	8
Once a week	9%	4
More than once per week	17%	8
Daily	11%	5
Swap drugs	**66%**	**31**
Less than once per week	30%	14
Once a week	21%	10
More than once per week	13%	6
Daily	2%	1
Services for drugs	**21%**	**10**
Less than once per week	17%	8
Once a week	2%	1
Daily	2%	1
Illegal services for drugs	**6%**	**3**
Less than once per week	2%	1
Once a week	2%	1
More than once per week	2%	1
Provide goods for drugs	**28%**	**13**
Less than once per week	19%	9
Once a week	2%	1
More than once per week	2%	1
Daily	4%	2

Table 76 continued.

Crime in past month	%	n
Sold drugs for goods	**23%**	**11**
Less than once per week	19%	9
Once a week	2%	1
More than once per week	2%	1
Scamming	**40%**	**19**
Less than once per week	21%	10
Once a week	6%	3
More than once per week	9%	4
Daily	4%	2
Fraud	**11%**	**5**
Less than once per week	9%	4
Daily	2%	1
Violence	**11%**	**5**
Less than once per week	9%	4
Once a week	2%	1
Drive under influence	**64%**	**30**
Less than once per week	2%	1
Once a week	9%	4
More than once per week	32%	15
Daily	21%	10
Sex work	**-**	**-**
Any crime (not driving)	**75%**	**35**
Previous imprisonment	**47%**	**22**

Source: Stage four survey of PWID

Property crime

In the earlier PWID survey, no distinction was made between property crime relating to shoplifting and property crime relating to theft of cars or burglary. In that survey, 42% of the PWID cohort reported involvement in property crime in the month prior to interview. In the current survey, 51% reported some recent involvement in property crime, but this was clearly predominantly in relation to shoplifting (reported by 47% of the sample) rather than other property crime (reported by 9% of the sample in the preceding month).

Almost half the sample reported engaging in shoplifting at some stage in the previous month (47%, n=22). Among these individuals, this was predominantly on just a few occasions in this time, with 28% of the sample (60% of those reporting recently shoplifting) doing so less than once per week, 9% of the group doing so once per week, 9% more than once per week, and 2% on a daily basis. The reported reasons behind such involvement were similar regardless of how frequently

shoplifting was engaged in. Those shoplifting on a weekly basis or less frequently most commonly reported having done so because they had no money and needed to get food for themselves or their family (n=8), with smaller proportions having reported shoplifting items that they wanted or needed but could not afford (n=4). Among the remainder, one participant reported shoplifting to help raise money to purchase drugs, and another reported doing so to help pay off bills. Those reporting shoplifting more frequently than once per week reported that they had done so to obtain money to pay for drugs (n=2), for food (n=2) or as a way to obtain items that they could not otherwise afford (n=2).

Just four participants reported involvement in other property crimes (such as car theft or burglary) in the preceding month, and all had done so on less than four occasions in this time. When asked the reasons for doing so, just one reported that this was to obtain money to help finance their use of drugs. Two participants reported that they were ashamed of having engaged in such activity, with one reporting having been involved in property crime only when they had been intoxicated with alprazolam.

Provision of drugs

Just over half the sample (53%) reported selling drugs in the month prior to interview, reasonably consistent with the proportion reporting doing so in the earlier survey (44%, see Table 35). In the fortnight prior to interview, these participants reported making a median of $150 (range $50-600) from such activity. Among those that had recently sold drugs to others, half had done so once per week or less in the previous month (17% of the sample doing so less than once per week, 9% on a weekly basis); with the remainder more frequently than once per week (17% more than once per week, 11% daily). The reasons reported for being involved in providing drugs to others were similar regardless of the frequency that this behaviour was engaged in. Among those providing drugs on a weekly basis or less frequently (n=12), the main reasons reported were to help friends out (n=4), to cover the costs of legal and illegal drug use (n=5), to cover the costs of living expenses (such as food: n=4), or to help pay debts (n=1). Among those selling drugs more frequently (n=13), these participants reported doing so as an income source (n=1), to cover the costs of their own illicit drug use (n=4), or for other situational reasons (for example, living with a provider, or knowing people that sell and acting as a 'middle man').

Eleven percent of the current cohort had provided drugs in exchange for goods in the month prior to interview, with most doing so on less than four occasions in this time (n=9 of 11). No other reasons for this behaviour were offered other than the fact that the respondent wanted the goods offered, and the other party wanted the drugs in question.

Activities to obtain drugs

Consistent with the reports of multiple modes to access of diverted pharmaceutical products amongst both the current PWID participants and those in the earlier study (see Table 19 for example), a number of participants in the current cohort reported accessing drugs through a number of non-financial methods.

Two-thirds (66%) of participants reported trading drugs with others (Table 76), predominantly doing so on a weekly basis or less often (51% of the sample: 30% less then once per week, 21% weekly, 13% more than weekly, 2% daily). Those swapping drugs on a weekly basis or less frequently (n=24) commonly reported that this was swapping take-away doses of methadone syrup with others on the program in order to remove the temptation to use their doses too quickly, with an expectation that these would be replaced when required (n=5), or as a good way to reduce the financial burden of drug use (n=2) by accessing a preferred drug without having to pay for it (n=10). Some participants also reported trading drugs in order to help their friends (if they required

a particular drug). Similar reasons were reported by those that had swapped drugs more frequently. They reported doing so to access their preferred drug (n=7), with one individual reporting that they tried not to use the drug they were prescribed (alprazolam) as it made them 'too aggressive', so they traded it for other drugs that had more agreeable effects. One reported trading methadone with others purely in an attempt to stop people from 'hassling' them to divert their prescribed dose.

One-fifth (27%) of the sample reported providing legal or illegal services in order to access drugs in the past month (Table 76). This was predominantly done on a weekly basis or less frequently (n=11/13). The services that participants reported providing were generally related to drug transactions: either receiving drugs in return for providing the transportation to a dealer's location (n=6); travelling to pick up drugs for another person (n=4); or for providing an introduction to a provider (n=1). Other participants reported receiving drugs in lieu of rent, or for doing housework (n=1 respectively). Only a single participant reported being involved in more severe criminal behaviour in return for drugs, with this participant noting that they 'will do what they are asked to when I'm off the show' (i.e. being easily manipulated when intoxicated with morphine in conjunction with alprazolam).

Twenty-eight percent of the current PWID cohort reported providing goods in exchange for drugs in the month prior to interview, most commonly doing so on less than four occasions in this time (n=9/13). Those that had engaged in such an exchange less than once per week typically reported swapping goods that they owned for drugs (n=2), while those doing so more frequently (n=3/13) reported shoplifting goods that they could swap for morphine.

Fraud and scamming

Two-fifths (40%) of the current PWID sample reported 'scamming' others in the month prior to interview. This was defined by respondents as reflecting a situation where they had profited by being less than completely truthful in a given situation, and most of these participants had 'scammed' others once per week or less often in the preceding month (n=13/19, see Table 76). Participants provided examples of the activities they defined as 'scamming', which included: requesting money for food from relatives when it was really to help purchase drugs; behaving like they were withdrawing from opiates so that friends would help them out with accessing drugs; taking money 'off the top' when they purchased drugs for another person from a dealer; or stealing another person's cannabis plants.

Five participants (11% of the current sample) reported involvement in fraudulent activity in the preceding month. All but one of these participants reported doing so on only a single occasion in this time, with this behaviour reported as accessing credit cards or other items to obtain cash to help pay for drugs. The single participant that reported daily involvement in fraudulent activities (Table 76) reported that they had not been completely truthful in their reporting to government allowance agencies.

Sex work

No participants reported engaging in sex work in the month prior to interview.

Violent crime

Five participants reported involvement in violent acts in the month prior to interview (11%), with all but one of these reporting doing so on only a single occasion in this time (Table 76). These participants reported engaging in violence to recover debt (n=1), because they had been 'ripped off' by a provider of drugs (n=1), because their prescription had been stolen (n=1) or that this event was 'not drug related'. The single individual that reported involvement in violence on a weekly basis in the previous month explained that they were stressed from an extended drug binge in this period.

Driving while under the influence of drugs

Almost two-thirds of the current sample reported driving while under the influence of drugs in the month prior to interview. Half of these (32% of the sample) had done so more than once per week, and most of the remainder had done so on a daily basis (21% of the sample) in this time (Table 76). However, when this behaviour was further examined, it was clear that these figures represented an over-estimate of the extent of drug driving among this cohort. A substantial proportion of these individuals (n=12/30) reported themselves as driving while under the influence of drugs but had done so after using their prescribed medication (although many reported administering this medication intravenously rather than orally). Amongst the remainder, all had driven while under the influence of drugs more frequently than weekly in the preceding month, and reported doing so while affected by cannabis (n=3, 6% of the sample), morphine (n=6, 13% of the sample), methamphetamine (n=4, 9% of the sample), or methadone (n=1, 2% of the sample). Interestingly, two participants reported that they had driven while affected by drugs but 'would never drive if over the limit for alcohol'.

Summary of involvement in criminal activity with reference to NDLERF research questions

Is benzodiazepine or pharmaceutical opiate use amongst illicit drug users related to the commission of particular crimes (either to obtain these drugs and/or while under their influence)?

Which drugs from the benzodiazepine group and the pharmaceutical opiate group are most likely to be associated with crime (which is committed either to obtain the drugs and/or while under their influence)?

- Participants reported experiencing uncharacteristic behaviour when intoxicated with benzodiazepines either on their own or in combination with other drugs. In particular, the combination of alprazolam with methadone and/or alcohol was noted by participants as contributing to extremes of uncharacteristic, disinhibited behaviour, including aggression, involvement in theft, bizarre behaviour or being easily suggestible.
- At a group level, the PWID participants reported spending approximately 92% of their legitimate income on the purchase of licit and illicit drugs. Half of the cohort reported receiving some income from illicit sources (predominantly selling of drugs), and when income from those sources was added to income from legitimate sources, at a group level, approximately 70% of income was spent on substance use.
- Half of the current cohort reported recent involvement in property crime, although this was almost exclusively related to shoplifting. This did not relate to use of any pharmaceutical product in particular, and was generally 'not' reported as a means to raise money to purchase drugs.
- Half of the sample had sold drugs in the month prior to interview, although typically not engaging in this on a regular basis or receiving substantial amounts of money via such ventures (the median amount of income reported from provision of drugs was just $150 in the previous fortnight). Reasons provided for engaging in such behaviour were typically related to supporting living expenses and/or to cover the costs of legal and illegal drug use.
- Just over 10% of the current cohort had recently been involved in violent crime in the previous month, typically on a single occasion in this period. Normally, this was reported as being engaged in as a 'problem solving' response to another individual within the PWID community taking advantage of the individual (accruing debt, stealing prescription or being 'ripped off' by a provider).

Summary

The following were the key issues emerging from the Stage four survey of PWID.

Supply sources for diverted pharmaceutical products

Benzodiazepines

- Replicating the findings of the earlier PWID survey, consumer participants reported predominantly receiving benzodiazepines through legitimate prescriptions from a medical practitioner. Access to benzodiazepines from non-legitimate sources was a less prevalent pathway to access, but in these cases PWID tended to receive these drugs as a gift or through trades for other drugs rather than purchasing them from a provider.
- Respondents typically reported seeking out benzodiazepines on the illicit market for functional reasons, such as times of particular stress, to manage sleeping difficulties or withdrawal from opiates, or to replace their own prescription if this had been used up too quickly.

Morphine

- Replicating findings identified in the earlier PWID survey, diverted morphine was predominantly accessed through purchase from a 'dealer', with access by PWID from other sources such as medical practitioners, theft, internet sources or forgery extremely rare or non-existent.
- Participants reported purchasing morphine either due to the demands of addiction, to replace prescribed opiates, for intoxication, or to manage the acute recovery period following methamphetamine use.

Methadone

- Findings from the earlier PWID survey were replicated, with methadone syrup most commonly accessed through legitimate prescription or through trades or purchase from friends, while Physeptone tablets were more commonly purchased from a 'small-time' dealer.

The extent and ease of 'doctor-shopping' to access pharmaceutical products for illicit use

Benzodiazepines

- Again supporting the findings of the earlier survey, PWID participants had good access to legitimate prescriptions for benzodiazepines, predominantly prescribed for legitimate clinical considerations. As such, there was very little use of, or the requirement for, 'doctor-shopping' to obtain these drugs.
- Almost all of those receiving benzodiazepine prescriptions had accessed the drug from a single medical practitioner, with only a single participant receiving prescriptions from more than two doctors in the preceding six months.
- Participants reported seeking benzodiazepine prescriptions from medical practitioners predominantly for issues appropriate to their prescription (sleeping difficulties, anxiety, distress), or having them prescribed without request to support reduction in methadone dosage. PWID participants also reported having their requests refused if the medical practitioner was not the one overseeing their methadone maintenance. If refused prescription, most did not report seeking benzodiazepines from another medical practitioner.

Morphine

- Similar to the results of the earlier study, access to morphine from a medical practitioner, either for legitimate reasons or as a result of feigned symptoms, were virtually non-existent amongst the current cohort.
- Most of those interviewed reported never actually trying to request these drugs from a medical practitioner as they felt it was extremely likely this would be refused.

Methadone

- Reports from PWID respondents suggest that 'doctor-shopping' to obtain prescriptions of Physeptone is not something that is engaged in by local PWID, as most believe that requests for the drug would be unsuccessful if attempted. It also appears that prescribers are extremely reluctant to prescribe these drugs to local PWID, and would be unlikely to acquiesce to such requests if they were made.

Sale of diverted pharmaceutical products by providers of other illicit drugs

Benzodiazepines

- Consistent with the results of the earlier survey, PWID participants predominantly accessed diverted benzodiazepines through friends, with these individuals not selling any other illicit drugs (with the possible exception of cannabis). When the drugs were purchased from 'dealers', these were typically perceived as 'user/dealers' and may have also supplied methamphetamine, cannabis and/or morphine.

Morphine

- Participants reported typically purchasing morphine from 'small-time' dealers or 'user/dealers' that typically also provided drugs such as methamphetamine, morphine and/or cannabis.

Methadone

- Participants reported predominantly accessing diverted methadone syrup from friends receiving these medications legitimately. These individuals tended not to supply any other drugs, with the possible exception of cannabis.
- Physeptone tablets, however, were predominantly purchased from 'small-time' dealers that also tended to provide morphine, cannabis, and/or methamphetamine.

Links between use of pharmaceutical opiates and benzodiazepines and crime

- Participants reported experiencing uncharacteristic behaviour when intoxicated with benzodiazepines either on their own or in combination with other drugs. In particular, the combination of alprazolam with methadone and/or alcohol was noted by participants as contributing to extremes of uncharacteristic, disinhibited behaviour, including aggression, involvement in theft, bizarre behaviour or being easily suggestible.
- At a group level, the PWID participants reported spending approximately 92% of their legitimate income on the purchase of licit and illicit drugs. Half of the cohort reported receiving some income from illicit sources (predominantly selling of drugs), and when income from those sources was added to income from legitimate sources, at a group level, approximately 70% of income was spent on substance use.
- Half of the current cohort reported recent involvement in property crime, although this was almost exclusively related to shoplifting. This did not relate to use of any pharmaceutical product in particular, and was generally 'not' reported as a means to raise money to purchase drugs.

- Half of the sample had sold drugs in the month prior to interview, although typically not engaging in this on a regular basis or receiving substantial amounts of money via such ventures (the median amount of income reported from provision of drugs was just $150 in the previous fortnight). Reasons provided for engaging in such behaviour were typically related to supporting living expenses and/or to cover the costs of legal and illegal drug use.
- Just over 10% of the current cohort had recently been involved in violent crime in the previous month, typically on a single occasion in this period. Most commonly, this was reported as being engaged in as a 'problem solving' response to another individual within the PWID community taking advantage of the individual (accruing debt, stealing prescription or being 'ripped off' by a provider).

Stage four: In-depth key informant interviews

Sources of pharmaceuticals on the illicit market

KI were highly consistent in their reports on what they believed the sources of those pharmaceutical products sold on the local illicit drug market were. With reference to drugs such as pharmaceutical opiates (with the exception of methadone syrup), the clear opinion was that, primarily, these were on-sold by people that were prescribed these medications. Across both health and law enforcement-based KI, it was perceived that these individuals generally received these medications for legitimate health reasons, but for various reasons may be going without some of their medications, be prescribed in excess of their actual level of need for these drugs, or were continuing to access these medications when the original situation requiring their legitimate need had abated. These individuals were generally portrayed as not themselves being 'substance abusers' or PWID, but often being individuals existing on restricted incomes. It was perceived that these individuals may be offered money to divert some or all of their medication by individuals that may then go on to sell these drugs to PWID:

> *'There's the odd ones coming from the burglary of the pharmacies. That seems to have decreased lately I think. The rest of it's coming from irregular traffickers and sellers … we're aware that there's a huge infrastructure of people getting it lawfully, selling it and quite a lot of elderly people either being stood over or giving it up because they want the money. For something they've paid 5 dollars for they're going to get maybe 20 bucks, thinking they're doing well whereas the drug dealer's going to make hundreds.'*

> *'I think that crosses almost the whole gamut of the population, not just restricted to what a lot of people might say are 'druggies'. We've had indications that pensioners and people like that sell a few of their tablets. I think that some people don't see the harm; you know somebody says 'oh look it's only a couple of my pain tablets the doctor prescribed for me, what harm is that going to do?' There can be a lack of understanding in the broader community. I mean we know what goes on, more on the coal face but out there they see it as an extra hundred dollars for my week's living expenses. The other thing too is I think you've also got … environmental factors … in certain communities … older people who legitimately need medication but they've also got younger members associated in the family or relatives that can put pressure on them or pinch or steal medication.'*

While in general it was reported that these individual sources were not providing pharmaceuticals directly to the PWID consumers themselves, there were perceptions among KI that there may be some environmental situations in which family members may be pressured or cajoled to divert some of their medications to others within that family system, or have these taken by other family members. While KI did mention other pathways to these products making their way into the illicit

market, such as pharmacy or home burglaries, these were generally considered to be minor when compared to the extent of access through these legitimate sources.

As a secondary series of pathways of these drugs to PWID consumers, KI also reported that there was a degree of diversion, drug sharing or trading occurring amongst the PWID consumer community, or from individuals working their way out of these groups. Consistent with reports from the two PWID surveys within the current study, KI reported that some individuals – that may be receiving methadone syrup and/or benzodiazepines from legitimate sources – continue use of other illicit drugs such as methamphetamine, with some of these sharing benzodiazepines, for example, with friends and peers, or diverting some of their opiates either in trade for other illicit drugs, due to physical or psychological pressure by others, or as a means to support their income on an irregular basis:

> *'These people aren't criminals, they're just impoverished.'*

As an example of some of the financial forces underlying the temptation to divert methadone syrup, one KI noted that dispensing of methadone alone costs patients $3.80 per day, bringing an annual cost of around $1,300. To individuals receiving minimal government benefits, this is a significant proportion of income (particularly if the costs of daily travel to sometimes distant pharmacies are considered), and some patients may divert one of their three weekly take-away doses of methadone purely to reduce the financial burden of being on the program. Other KI reported that some methadone patients may divert occasional doses to help provide for special items that they may not be able to otherwise afford on government benefits.

As noted in both the earlier PWID surveys, some KI considered that a proportion of the diversion of methadone syrup was due to physical or psychological pressure ('standover tactics') applied to patients of the program to access their take-away doses. Those on the methadone program are known to other PWID consumers and there were reports of these individuals being targeted or hassled both inside, and on the way out of, pharmacies when collecting take-away doses.

In terms of whether the illicit pharmaceutical market involves 'organised crime' groups, not a single KI interviewed felt that this was the case. Commonly, this was perceived as being more of a 'cottage industry' scenario, and, while a number of individuals may be involved in being intermediaries between the diverting sources and the PWID consumers, this was reported as being relatively small in scale and distinct from the organisation seen within, for example, methamphetamine providing groups. While police KI did note seizing an increasing number of pharmaceuticals through the postal system, these were generally only one or two blister packets of pharmaceuticals at a time, and certainly not in quantities that would be supplying the PWID market demand. One KI felt that many of the providers were PWID consumers themselves, so that their 'dealing' of substances was more related to the financial requirements of maintaining addictions rather than connected with organised crime.

With these comments aside, consistent with the reports seen in the PWID surveys that these individuals may be using an array of different substances, KI noted that there were certainly some intersections between pharmaceutical diversion and drugs more connected with 'organised crime' groups, with some of those 'dealing' in these substances selling both diverted pharmaceuticals and illicit drugs such as methamphetamine or cannabis:

> *'It's nothing for us to go to a house and search it and find some benzos, some Valium, probably some MS Contin, some cannabis and some speed. It's common to find 3 or 4 varieties of drugs, there's no defined lines between users. I think it's very grey, they'll swap and change between different things.'*

In summary, the primary sources of pharmaceutical products such as morphine or other opiates in the local illicit drug market were perceived as coming not from PWID consumers themselves, but from individuals on-selling medications that they are receiving for legitimate medical conditions. The intermediaries between these sources and PWID were not regarded as strongly associated with 'organised crime' groups but may instead be consumers themselves. A notable secondary pathway for diverted pharmaceutical products circulating amongst PWID groups was regarded as emanating from PWID who were receiving pharmaceuticals themselves for legitimate reasons who may be providing these drugs to peers either for social or financial reasons, or in response to pressure applied by other consumers.

Doctor-shopping

KI were asked about the extent of 'doctor-shopping' that occurs by PWID in order to access benzodiazepines and pharmaceutical opiates. KI that specialized in the area of 'doctor-shopping' reported that it was not a difficult process in general to engage in:

> *'… it's definitely easy for a person to doctor-shop. It's not illegal for them to doctor-shop, so I've been told, and so I've read. The extent of it in Tasmania – it's nowhere as significant as it is on the mainland … The more pharmacies you have, the more chance people have to prescription shop, or doctor-shop. I think it is definitely easy but I don't think we'll ever change that.'*

However, this was not perceived as the case when referring to PWID groups, or in reference to the sorts of products that they may be requesting. Among KI within the health sector, doctor-shopping, in terms of feigning of symptoms with the aim of accessing prescriptions, was perceived as being very difficult for PWID groups to engage in, and certainly not a common pathway to access of pharmaceutical opiates. These responses are consistent with the self-report data from the two PWID surveys within the current study. There were a number of reasons provided as to why PWID consumers would find 'doctor-shopping' difficult (particularly in comparison to other groups): firstly, given that the majority of PWID sampled in the current studies had limited educational experience, the level of interaction with medical practitioners required in 'doctor-shopping' may prove challenging (one KI spoke of 'class differences' in the potential for doctor-shopping); secondly, there are only a limited number of doctors surgeries that provide bulk-billed consultations, and, as one KI noted, PWID patients are 'memorable', particularly within a small system such as Hobart – as such, there was limited scope for PWID to take advantage of opportunities to 'doctor-shop'. Finally, again due to the smaller nature of Hobart city, there were often good relationships between pharmacies and prescribers, or government Pharmaceutical Services departments, so that, on occasions where pharmacy staff picked up that individuals were receiving prescriptions from multiple medical practitioners, this was often quickly communicated back to the doctors concerned.

When those specializing in the area of 'doctor-shopping' were asked what products were targeted and what the demographic characteristics of those involved in this behaviour were, it was clear that these individuals and products were quite distinct from PWID groups. The medications regarded as most commonly targeted were Panadeine Forte (codeine phosphate) and Valium (diazepam). In regard to the demographics of those engaged in 'doctor-shopping':

> *'I would say it's unfortunately a lot of middle aged women that are obtaining quite large amounts of benzos. A prime example is one lady we reviewed recently who alternates between doctors and pharmacies. So she goes to one doctor and the pharmacy next door and then next week goes to another doctor and the pharmacy next door to them basically, and neither doctor is aware of that, nor are the pharmacies.'*

The general consensus among KI was that those engaged in 'doctor-shopping' were doing so for their own use:

> *'I again think the majority of it would be for personal use. Unfortunately, we haven't been able to prove when it's selling, it's very difficult to prove. So I'd say the majority is for personal use, but it depends on the drug as well: the more expensive the drug the more likely they are to sell it.'*

It should be made clear that the concept of 'doctor-shopping' as defined by agencies such as the Health Insurance Commission, where an individual may visit multiple prescribers in an attempt to access pharmaceuticals in excess of clinical need, is distinct from the behaviour of the sources that were reported as providing the pharmaceuticals diverted into the illicit drug market (individuals receiving medications, generally from a single source, for genuine clinical symptoms). As such, it is unlikely that those individuals providing the source of diverted pharmaceuticals would, or could, be identified by the current compliance procedures within the Health Insurance Commission in relation to 'doctor-shopping'.

Despite being regarded as an uncommon practice amongst PWID groups in Hobart, KI were asked what strategies may be employed by individuals seeking to 'doctor-shop':

> *'The only strategy that seems to work the most successfully is the fact that they appear 'normal', you wouldn't suspect them in any way, shape or form: they come in as if they're the typical family member that's just in a bit of strife and obviously if they're going to alternate doctors or a variety of doctors, one doctor's only going to see them a certain number of times but they put on a façade to make themselves appear just like an everyday person and that's probably the biggest thing we tend to see.'*

In terms of PWID participants seeking prescription of pharmaceutical opiates, with the exception of identifying the rare doctor that may become known as being 'generous' in terms of writing such scripts, KI reported people employing strategies such as targeting locums or new doctors to an area (who might not be aware of personal histories), or using the typical approaches that have been identified as effective by studies in the area (sleeping problems, non-specific pain that may be difficult to investigate immediately such as headache, toothache, backache, stomach ache). Alternatively, in extreme cases, more threatening behaviour may be employed in an attempt to facilitate prescription:

> *'Clients tend to pick really good times that they turn up. It's usually last person at the surgery of a day, quite often the receptionist has gone home, sometimes people can be quite intimidating and I would think there have been situations from an occupational health and safety approach the GPs have written scripts and I think that's probably what you need to do at the end of the day: if you feel that you are not safe then you write the script and you make sure that you never write it again for the same person.'*

While there exists a substantial amount of information on strategies to assist identification of individuals attempting to 'doctor-shop', health-related KI were asked to nominate the behaviours that they found most useful in discerning the potential for such behaviour. These included: rapid increases in dosage; facts that did not match up on investigation; requests being made for specific drug types; changes in behaviour; requests following 'lost prescriptions' or 'lost tablets'; or failure to keep appointments for medical investigations.

In terms of reducing 'doctor-shopping', currently the Health Insurance Commission (HIC) is running a Prescription Shopping Project that reviews data received by the organisation to determine whether an individual may be obtaining PBS-subsidised medications in excess of

clinical need. In addition to data normally collected in relation to the number of PBS medications accessed, individuals may be brought to the project's attention by pharmacists or prescribers concerned about a particular person. If that person is assessed as potentially obtaining PBS medication in excess of clinical need, then information about the extent of prescriptions can be provided to the treating medical practitioner(s) with the aim of informing their practice and approach to the patient. This project is one means of alerting doctors to patients that may pose particular problems.

KI were asked their opinions as to possible approaches that may assist the physician in terms of avoiding 'doctor-shopping':

> *'Perhaps [enhanced] communication [between sectors]: if we can show that someone is diverting their medication then to be able to speak to the prescribing doctor and say 'well here you go we've got this information and that's where it's at, perhaps you can change your methods' and have them accept that. [There are privacy issues, of course] and the doctors aren't always willing to listen or they look at it purely from a pain relief point of view, and … that's their job, that's what they need to do. So we have to find some middle ground.'*

> *'[what would make this situation easier for prescribers are] rules that allow them to say no more easily…GPs find themselves prescribing when they're not happy about it but they don't feel [that they have] any other choice, so there are two things that would fix that: 1) having some other choice, an appropriate treatment; and 2) the power, the authority to say no. Doctors feel free to say no when they're not allowed to give something. I've known many of them look much more relaxed when the patient says something that means they can't give them the drug because they can just say no.'*

> *'I know that banning or changing particular formulations of things to reduce harm have made it easier for doctors when they're in that ethical dilemma, they're not crazy about prescribing but are worried about worse things happening if they don't, and when formulations have been changed so that what they're prescribing is safer if it's misused, has made that easier for prescribers. And having the effective proven treatments available, if you've got plenty of withdrawal management available then you can send someone on, [or, if] maintenance therapy is available, you can put people in and out.'*

The issue of police or other organisations liaising with prescribers is discussed in subsequent sections; however, the other themes that were commonly suggested by KI included education in terms of the intersections between pain management and alcohol and drug issues (for example, screening for alcohol and drug issues when prescribing pharmaceutical opiates), alternative pharmacological options for pain management, or particular guidelines around the prescription of drugs known to be potentially divertible. In general, however, the options suggested were more systemic, with several KI suggesting enhancement in the number of non-pharmacological treatment options for pain management or addiction management and withdrawal that are available to medical practitioners to refer patients to, as a way to ease the burden of 'doctor-shopping' or related pressures on prescribers.

In summary, 'doctor-shopping', at least as defined by the HIC, was not regarded as a common pathway to access of pharmaceuticals by PWID, or of pharmaceuticals that are diverted to PWID. A number of barriers were reported by KI as making 'doctor-shopping' difficult for PWID, not the least of which being a reasonably good awareness amongst prescribers of the diversion potential of restricted pharmaceutical products. Professionals specialising in the area of 'doctor-shopping' indicated that the general demographic profile and patterns of pharmaceutical use of those that successfully engaged in this behaviour are clearly distinct from PWID populations.

Pharmaceuticals and criminal activity

KI were asked to consider the relationship between misuse of pharmaceuticals and criminal behaviour. In general, across both health and law enforcement professionals, the responses provided reflected a situation for pharmaceutical opiate addiction that was not substantially different to addiction to non-pharmaceutical opiates. Namely, the financial demands of maintaining a daily use of an expensive illicit substance may push people toward involvement in crime or sex work in order to attain the required income. However, while this was a view espoused by the majority of KI, a number quickly added that the criminal activity and behaviour associated with pharmaceutical opiate use was perhaps less problematic than that associated with regular use of amphetamines, which tended to be more violent.

In terms of crime, particularly associated with regular use of morphine or other pharmaceutical opiates, law enforcement KI associated this in particular with criminal activity within the lower end of property crime, such as opportunistic 'easy option' criminal behaviour, shoplifting or burglaries:

> *'I think because … if you want a tablet today that's going to cost you $50, it's easy to commit a crime today for $50 or a bit more, and then that gets [you] back to the lower end of the scale of burglaries and street robberies, stealing of handbags and things, knocking someone off at an ATM when they might have just taken out $50 or something because tomorrow's a new day for most of these addicts: it's 'get another $50 tomorrow, I'll worry about it tomorrow'. If they took $10,000 today in a burglary, this time tomorrow they probably wouldn't have much of it left anyway … so I think … there's definitely a link between [regular morphine use, and] the minor sort of stuff [property crimes]'*

One law enforcement professional suggested that PWID simply felt that the amount of money required for daily use simply wasn't worth the level of risk associated with higher-profile property crime such as armed hold-ups. There were two notable exceptions to this, however, with the experience of withdrawal having the potential for more stress on the part of the individual, and hence the potential for a more aggressive-type of crime to be committed in order to raise the funds required to ameliorate such withdrawal (although this issue is certainly not restricted to the use of opiates of the pharmaceutical variety). Also, again in a scenario that is not uncommon across all types of illicit drug use and addiction, KI reported anecdotal reports of providers that would allow debts to them for drugs used to mount up, with the purpose of manipulating those individuals into engaging in activities such as the sex industry.

In terms of specific crimes associated with a particular pharmaceutical product, methadone syrup was by far the drug most commonly discussed by KI across both health and law enforcement sectors. Firstly, KI were quick to report that both in their experience and in the considerable literature around methadone maintenance programs the prescription of maintenance opiates on a regular basis helped reduce crime amongst patients, partially by removing the economic imperatives that may otherwise be associated with opiate addiction. Apart from this, the crimes reported to be associated with methadone were crimes committed 'against' those who were enrolled in methadone maintenance programs. This included, for example, physical or psychological intimidation of patients when they collected take-away doses by individuals loitering around dispensing pharmacies seeking to purchase diverted doses. Reports from KI and PWID suggested that this has increased in recent months, with some pharmacies even going to the extent of hiring security staff on days where the volume of take-away dispensing is highest. Law enforcement KI also noted that the homes of individuals on the methadone program may be broken into in an attempt to access these doses, and there have been PWID and KI reports of snatching of peoples' bags as they emerge from dosing pharmacies. KI noted also that the lives of individuals that were receiving methadone maintenance, but that had not yet stabilised, were somewhat chaotic which rendered these individuals more vulnerable to being taken advantage of:

'… I've got a [group of patients] that haven't stabilised that are on methadone but they're not well. They're using and they're using dangerously and they use their take-aways, but they use their take-aways in conjunction with benzos to get a real hit. Most of the people that don't stabilise and inject their take-aways are pretty disorganised so any crime they did wouldn't be particularly efficient, so they tend, it tends to be silly things like driving without a licence, you know, ridiculous things, so I don't think the methadone patients and injecting the methadone has any impact on crime in the community, but I think in terms of their well-being it makes them vulnerable because they're seen as somebody who will sell their drugs and therefore people that aren't on methadone that, [or] would perhaps like to get on methadone that aren't, or have been kicked off, hover around and can endanger these rather vulnerable disorganised people.'

As reported in the PWID interviews, KI noted that benzodiazepine intoxication, in particular when fast-acting formulations such as alprazolam were used in combination with other opiates, could lead to uncharacteristic behaviour due to the disinhibitive effects of the drug. For example, individuals that were not normally aggressive may become so, or behaviour may just be bizarre and hence unpredictable. KI working on the 'coal face' in drug and alcohol services, however, had not noticed any recent increases in such behaviour.

In summary, KI commenting on the associations between misuse of pharmaceutical products and crime reported that the behaviours associated with addiction to pharmaceutical opiates were not substantially different to those associated with illicit opiates. However, due to the relatively low daily cost of addictions amongst local PWID, crimes associated with addiction to morphine or other opiates were generally related to the lower end of the property crime spectrum, such as opportunistic, 'soft target' theft or shoplifting. Crimes associated with methadone syrup were more commonly those committed 'against' people receiving this medication legitimately for maintenance reasons, with intimidative tactics applied to these individuals by some seeking to access these drugs illicitly. Benzodiazepine intoxication was perceived as being associated more closely with disinhibitive or unpredictable behaviour.

Opportunities for interventions

Policing interventions

Law enforcement professional KI were asked about any specific strategies they had recently employed that had shown to be particularly successful. One strategy in particular was noted, that of a more 'community policing' type role in response to the increasing issue of targeting of methadone maintenance clients:

'Because of the methadone problems with the robberies and the hassling for money and that sort of thing … we've noticed that a Friday, because of the take-aways, they tend to be more prevalent … so we ran some operations [in an area around a pharmacy that dispenses methadone syrup to a large number of patients]. We're quite overt about it, we're not trying to be covert, we'll go around and we'll speak to the users and we tell them who we are and why we're there and they're quite grateful for it … we found [patients] coming up to us [saying] 'we heard … the drug squad was in the area in the last few weeks so we've travelled from Sorrell to be here to get our gear so we can get back to the car safely', so we saw a direct result of people travelling some distance to come into what they considered to be a safe environment to collect their drugs. [Also] it's decreased the crime rate, particularly in [that] area, that decrease of crime rate in [this] area on a Friday, hugely.'

'The first couple of times we went up there, and they thought we were actually targeting them, obviously there was a bit of animosity there, but once we broke down the barrier and said 'look we know you're here to get it legitimately, don't abuse it and we'll look after you', they started actually approaching us and having a chat and some of them will give you a little bit of information here and there, so it's a two way street.'

It would appear that this approach had benefits both in terms of crime reduction and supporting individuals receiving methadone maintenance treatment, as well as facilitating relationships between PWID consumers and police.

In terms of policing other diverted pharmaceuticals, all law enforcement KI noted that there were particular challenges in such a task. Responses were similar to those issues raised by police in the earlier (Stage one) interviews within the current study; namely the difficulty in identifying individuals that may be providing diverted pharmaceuticals for sale on the illicit market due to these individuals often having legitimate prescriptions themselves, or that they often had a fluctuating or limited supply of these pharmaceuticals at any one time (as opposed to cannabis or methamphetamine providers that may have more substantial stockpiles of these drugs when selling), making interventions or operations particularly time-critical.

Law enforcement KI were very aware of the difficult balance involved in policing the supply of these pharmaceutical products:

'Unless you more strictly control the amount people get, I don't think we'll ever see a reduction in the availability of [diverted pharmaceutical opiates] being a merchant/dealers market, and it's not fair I suppose either to say that somebody has to come back to the doctor every two days to get a script for two tablets or something … because probably the majority are doing the right thing.'

When law enforcement KI were asked about possible strategies to assist them in their role of policing the diversion of pharmaceutical products, two suggestions were made. Interestingly, both involved the enhancement of relationships across health and justice sectors.

One suggestion involved a system set up similar to the Tasmania Police 'Crime Stoppers' program specifically for pharmaceutical diversion-related issues. One possible design might see a password protected internet site specifically for health professionals, where de-identified information could be provided to police, for example, if there had been a drug-related overdose, attempted doctor-shopping or the like. There was a concern that the current 'Crime Stoppers' program may not be perceived by health professionals in the community as an appropriate medium to relay such issues to police, and that a simple, quick, secure method specifically for these issues may help address such a perception.

Law enforcement KI also reported that they had attained excellent results through fostering close relationships with agencies in the health sector. For example, in the situation that they had identified, a particular individual that was 'dealing' opiates supplied to them, and when police officers had attempted to provide such information to a prescribing medical practitioner, the information had, historically, not been particularly well received. Police had reported substantially improved outcomes when such information was relayed to prescribing doctors through other health sector bodies, such as Pharmaceutical Services within the Department of Health and Human Services. KI noted that these relationships across services were developed thanks to the nature of the personalities of the individuals in the respective agencies, and, as such, had the potential to falter if current staff within either agency left their positions. As such, the formalisation of such relationships across agencies through the use of a Memorandum of Understanding would allow a more resilient association across agencies. It was also suggested that these sort of

partnerships could be further expanded to include other agencies within the health sector; for example, in the case of illicit drug-related overdoses, which currently are relatively uncommon in Tasmania, it may be beneficial for information relating to the particular drug or drug combinations identified as factors to be quickly circulated to frontline health workers in the government and non-government sectors as well as police, to increase awareness of potential problem drugs/drug combinations amongst the PWID community and to allow timely responses to be made.

Interventions within the health system

KI from both health and law enforcement sectors recognised that potentially the most effective route for intervening to reduce supply of these pharmaceuticals on the illicit market would be through working with the prescribers themselves. As one KI suggested, 'if prescriptions are not written to people that don't need them, then there will be no diversion.' While it was recognised that these medications form an important part of the armamentarium for the amelioration of pain and related issues, one opportunity for intervention could be to help prescribers with their initial diagnosis of patients, before they are prescribed opiates. This could take the form of enhancing awareness of alternative medications, how to screen for drug-related issues, support for making diagnoses when the presenting situation is unclear, or increasing the availability of specialist services to refer patients to:

> *'I've heard some doctors say the patients come to me and they've asked me for this so I have to give it to them, but I think that the general practitioners need to learn there are other drugs to treat pain and chronic pain and there's a whole stack of education around that and support of re-prescribing. [For example] how do you change someone who's been on MS Contin 30mg twice a day for the last 6 months to Gabapentin? There's that kind of work that really needs to be followed through. I know the GPs have this information, so it's [a question of] how do you follow it through without disrupting your relationship with the patient too much and making it untenable … the other thing is I think more general practitioners need to be able to feel comfortable about prescribing methadone for opiate dependent patients because of its nature as being a chronic relapsing condition. It's no different from things like other medical conditions like diabetes …'*

> *'I think the prescribers need assistance in their ability to be able to make a decision to prescribe narcotics. Resources around opiate pain treatment, more pain management services to be able to refer patients to, because it's very hard in a GP consultation to actually assess the level of pain that the patient's reporting to have. To assess whether it is real or significant, they need to not only to have resources, but to be able to refer those patients forward for assessment. This helps to ensure their clinical decision is more soundly based. Pain clinic resources, specialist resources, things like that would assist …'*

> *'I think you've got a lot of prescribers who are really there to help the patient but they find it very hard to make a decision that the patient is not quite as sick as they portray, or doesn't need it as much, it's a very hard call, so assistance in that [might be useful in reducing supply]. Handling these sort of people, recognising some of the tactics maybe, [to] assist in education to look for things like track marks … Assistance in, and a greater ability to have a referral to an alcohol and drug service. Also I think you've got other doctors who can be intimidated, so assistance to manage in the intimidation [might play a role].'*

It was clear to the KI that, for such interventions with the prescribers to be successful, there needed to be other support at the level of the health system (in terms of alternative treatment options for pain, support for addiction management and withdrawal, and support for counselling) as well as at the community level:

> *'[If] we … reduce the supply of [these pharmaceuticals] we [must] supply adequate alternatives. To reduce supply without doing anything else would just result in a change of use. Some people would not necessarily consider [it] that bad if a whole bunch of users [of pharmaceuticals] went to drinking far too much alcohol … but it would not be good for the hospital or the individuals or society.'*

> *'I think we need a drug summit in Tasmania … we need a huge amount of information generated and put in the media, that is true and appropriate; we need an acknowledgment that there is a public sector methadone program that works really hard and treats people on the methadone program, that there are prescribers in the community, these things are not acknowledged by your normal kind of voter, they don't know these things. I think it needs to just come out, the issues need to be aired and the fears of methadone, that irrational thing people respond to [adequately addressed] …'*

Harm reduction

A number of suggestions were made by KI in regard to possible interventions to reduce the harms associated with use of pharmaceutical products.

Many suggestions were made in terms of reducing the harms associated with intravenous administration of these products. Many of the tablet preparations contain talc and cellulose as inactive ingredients, which may be harmful if injected, and cause health problems over time if particulate matter is built up in the lungs, liver or central nervous system. To combat these issues, providing pills or biological filters within the state's Needle Availability Program was suggested, as well as focused education amongst PWID groups using these drugs about the risks and approaches to reducing these. While somewhat unrealistic – given the best practice guidelines around pain management – some KI suggested that it may reduce the harm around injection of pharmaceutical opiates if injectable opiate preparations were more available rather than tablet preparations. Suggestions were also made to reduce the harms associated with the injection of methadone syrup, for example, in terms of acknowledging that some people on the program will administer the doses they receive as 'take-aways' intravenously, and providing biodone rather than traditional methadone syrup (which does not include sorbitol or other agents known to be irritants to venous systems), not diluting these doses, or at least diluting such doses with sterile solutions rather than unfiltered tap water. Others suggested that following the example of the United Kingdom in terms of provision of injectable methadone within the maintenance program may reduce some of the harms associated with injection of the currently provided diluted methadone syrup.

Other interventions suggested focused on systemic changes within the health sector which may help reduce the harms associated with misuse of pharmaceutical products. Primarily, these focused on enhancing the range and availability of services available to consumers of these products such as detoxification, withdrawal management and pharmacological maintenance programs. Others suggested that an enhanced focus on the therapeutic relationship and support for people receiving pharmacological maintenance may help individuals remain engaged in the program, reduce the potential for diversion, and reduce the potential for intravenous administration of prescribed maintenance pharmaceuticals.

Others suggested the potential for peer education interventions to help reduce the risks associated with overdose of these preparations, utilising education models developed in other jurisdictions:

> *'There's a National Heroin Overdose Strategy and … we could do some projects here, we're talking about basic stuff like peer education, what to do in an overdose. You don't give them a form that says 'here, this is how you put a person if they drop'. Peer education for opiate overdose prevention always works, they've done research on this in Western Australia with a program called Opiate Overdose Prevention Strategy, called OOPS, and that has some really good findings and some good outcomes from the peer education side of it. It involved a lot of the ambos and frontline paramedics, learning how to deal with opiate overdose people, the people around them, and there's some very interesting strategies for harm minimisation. I think we could up our ante, we could be a bit more proactive …'*

In summary, it was clear to KI from both sectors that policing of diverted pharmaceuticals and the issue of supply reduction is particularly challenging, as consideration needs to be made of the need to avoid reducing the access to effective pain management for individuals that have a legitimate need. Experience in policing in this area has suggested that improved outcomes can come through the fostering of close relationships between health and law enforcement sectors so that if problems in prescription or diversion are identified there is a dialog in place to help achieve the best outcome for both sectors. It was recognised too that an appropriate intervention point for supply reduction may be in further supporting medical practitioners in regard to patient assessment and identifying multiple options for treatment so that the best match could be made between patient need and treatment. In terms of reducing the harms associated with the use of diverted pharmaceutical products by PWID, a number of practical responses could be made, including peer education programs, provision of filtering equipment through Needle Availability Programs, and changes to the formulation of take-away doses of methadone syrup to acknowledge the fact that some patients of the program do administer these medications intravenously. Interventions to reduce the harms associated with use of diverted pharmaceutical products could be further supported by increasing the availability and range of treatment and support services available for the individuals using these drugs illicitly.

Possible impacts of supply reduction

KI were asked to consider the potential impacts of more effective supply reduction of diverted pharmaceutical opiates. While many of these possibilities remain simply hypotheses, it is important to consider the range of possible unintended negative consequences of such a change.

Firstly, if there was a substantial reduction in the availability of diverted pharmaceutical opiates, and addicted consumers remained in the market, KI noted that it would be likely that, with stable demand and diminishing supply, then the price of these drugs on the illicit market would increase. If PWID continued to seek the same amount of the drug, then KI suggested that, due to the financial pressures of maintaining an addiction, the likelihood that consumers would engage in crime or sex work may increase. Another possible impact noted by some KI may be a substantial increase in targeting or intimidation applied to individuals receiving methadone maintenance by those seeking to access diverted doses. Some also noted that the potential for theft from pharmacies, hospitals or doctor's surgeries may increase as well.

In terms of the impact of such a decreased availability of these products on the health system, KI noted that there may be a substantial increase in the number of people seeking detoxification, withdrawal management or pharmacological maintenance therapies. Within Hobart, each of these programs currently has some degree of a waiting list for access to treatment even at the current level of demand, and, as such, without additional financial support to these programs it would be

unlikely that such an increased need would be able to be met. Depending on the approach taken to supply reduction, some KI noted that if prescribing practices were strongly targeted for change, then this ran the risk of 'collateral damage' in terms of depriving some people that legitimately need these medications from appropriate medical treatment. Either possibility, KI suggested, had the potential to lead to negative health consequences for the individuals affected.

The third theme emerging among KI reports as a potential impact of substantially reduced availability of illicit pharmaceutical opiates in Tasmania was the possibility of PWID groups shifting their predominant drug use from pharmaceutical opiates to other drugs that may have substantially greater potential harms. Given that – consistently across both the PWID surveys among the current study and the local IDRS studies – a high preference is shown for heroin amongst these groups, many KI across both health and law enforcement sectors feared the development of an environment conducive to the establishment of a heroin market:

> *'I think the only reason heroin's not here is because these opiates and benzos are filling that gap of those users; [if we substantially reduced supply of these drugs] I think that we would see a creation perhaps of a heroin market, which we don't have [currently].'*

> *'If we make it harder for people to access prescription drugs then we may suddenly develop a market; that someone from the mainland could then come over here … if we suddenly get a lot of Tasmanian injecting drug users who are gagging for something, some sort of opiate in particular, if the prescription opiate market dries up they're going to want something – that may be the time that heroin arrives here.'*

Given the existing high degree of polysubstance use amongst PWID groups (as noted again in the current study and the local IDRS surveys), KI also noted that, aside from heroin, PWID may shift their use in any of multiple directions: possibly to increased methamphetamine use; use of opium poppy preparations; or possibly increased cannabis or alcohol consumption. KI noted as evidence for the potential for such substance use 'shifts' the impact of the reduced availability of temazepam gel capsules. While a proportion of PWID did indeed stop injecting benzodiazepines when these formulations became more difficult to access, KI noted a substantial (and continuing) increase in the injection of alprazolam tablets. KI noted that whatever shift there was in the types of drugs used by PWID groups, there would be a particular set of health and behaviour benefits and harms that would need to be addressed.

In summary then, KI reported that a substantial reduction in the availability of pharmaceutical opiates on the illicit market may have a range of possible unanticipated consequences that may need to be considered. Chief among these were the potential for increased crime in response to increased drug cost on the illicit market, the possibility of increased demand on an already stretched health sector, and the possibility of PWID groups simply shifting to use of other drugs that may carry a different, and possibly more problematic, set of health and social harms.

Data collection systems

KI also noted two main avenues for improvement in the use of existing data collection systems that could provide some practical benefits for both the health and law enforcement sectors. Firstly, this related to more detailed reporting/analysis and communication of existing data sources, and secondly, extension of, or better communication between, existing monitoring systems that are currently in place.

In terms of more precise data collection, KI suggested that changes could be made to the data collected through the state's Needle Availability Program, for example to collect longitudinal data to follow changes in individuals over time, but perhaps more useful may be changes in the

questions asked of clients to collect precise information about the drugs that individuals had last injected (rather than the substantially broader current question asked of patients, which is 'what drug do you mostly inject'), as this would allow continual monitoring of changes in substances used by PWID if data were analysed at the unit level. If this data was provided back to stakeholders, then more proactive and timely health intervention programs could be delivered in response to changes in substances used. A similar improvement to precision and reporting was suggested for hospitals:

> *'There's no adequate system at the Royal Hobart Hospital to identify whether [deaths are] … drug-related overdose death or whether the person on methadone … died in a car accident … we're not looking at things like, for example, [that] the person was injecting illicit non-prescribed Xanax into their arm which caused [an] abscess that was untreated [and] that became a cellulitic arm which caused compartment syndrome, and that was the reason the arm had to be amputated etc. So we don't have that coordinated linking of cause and effect …'*

As noted above, in concert with that improved identification of drug-related health problems and overdose, law enforcement KI suggested that it would be useful for emergency service workers and frontline alcohol and drug agencies to take part in an 'alert system'. Where, if there are a series of overdoses or reports of substantial changes in drug purity, this information could be quickly communicated to such services around the state so that this information could be conveyed to consumers, potentially avoiding further health harms. Currently, processes similar to this were occurring on an ad hoc basis, but KI felt that formalised relationships and processes may lead to enhanced outcomes.

In terms of monitoring of prescription of pharmaceutical products, there currently exist two independent monitoring systems relevant to the drugs used by PWID groups, each with limitations to their information collection that, if linked or enhanced, could lead to improved health outcomes or reduction in diversion of supply.

One system is overseen by Pharmaceutical Services within the state Department of Health and Human Services, and relates to the prescription of Schedule 8 pharmaceutical opiates: Section 20 of the *Alcohol and Drug Dependency Act* requires that an authorisation is needed to prescribe any such drugs to an individual identified as 'drug dependent' or where such drugs are to be prescribed to any individual for a period of longer than two months. Applications for such authorities, which are accompanied by clinical information, are examined by a Clinical Advisory Committee to ensure that the prescriptions meet current best practice standards for the presenting clinical issue. As part of this process, Pharmaceutical Services receive information in regard to the dispensing of these Schedule 8 pharmaceuticals. For individuals identified as 'drug dependant' (i.e. those receiving methadone or buprenorphine maintenance therapy) there are also restrictions applied to the prescription of certain Schedule 4 pharmaceuticals (those specified as Schedule 4D) such as benzodiazepines, which can only be prescribed by clinicians named in the authority approval under Section 20. However, given the high volume of prescription of S4D pharmaceuticals, these are not monitored by Pharmaceutical Services. As such, it is possible, in theory, for an individual receiving methadone maintenance or other pharmaceutical opiates to visit a different medical practitioner, and potentially access S4D pharmaceuticals, or even, in the short term, S8 pharmaceutical opiates, without this coming to the rapid attention of Pharmaceutical Services, particularly if the individual visited separate pharmacies for the dispensing of the S8 and S4D prescriptions.

KI noted that improvements could be made to monitoring under this system if it was possible for medical practitioners, pharmacists, and other relevant health professionals to access information in regard to authorities immediately, for example, through an internet access system. This has the potential to avoid the situation described above, where individuals could potentially access restricted pharmaceuticals from different doctors without their knowledge. Other KI noted that access to such information may also be helpful in enhancing clinical assessments for detoxification requirements and the like.

Other KI noted that there may be benefits in linking this system with the second monitoring system, that overseen by the Health Insurance Commission. This records prescriptions of pharmaceuticals subsidised through the Pharmaceutical Benefits Scheme to identify individuals that may be obtaining prescriptions in excess of clinical need. As this data collection would monitor all S4 and S8 prescriptions that are subsidised by the PBS, it may more quickly identify individuals that are receiving prescriptions from multiple sources, were this information available to dispensing pharmacists. However, KI expert in 'doctor-shopping' issues noted that the major failing of this monitoring system is that it does not capture information on prescriptions that are not subsidised by the PBS. As such, as noted by one KI, 'the first thing that people do to avoid detection is to simply ask their doctor for a private prescription and then no one is able to trace the patient as easily.' Extension of such prescription monitoring to include private prescriptions, in conjunction to expanding the access to this information by prescribers and pharmacists in real time, may more readily identify individuals receiving prescriptions in excess of clinical requirements.

KI acknowledged that there existed substantial ethical and privacy issues raised by any changes to such monitoring systems; however, these potential changes were suggested as options for improving clinical outcomes or because they had experienced other such approaches operating in other jurisdictions.

In summary, KI suggested a range of options for enhancing existing data collection systems in order to provide additional practical benefits for both the health and law enforcement sectors. Major options included more careful analysis of existing indicators of drug-related problems and the establishment of formal agreements to share this information across key stakeholder organisations in a timely manner; and enhancing the communication between existing systems monitoring the prescription of restricted pharmaceutical products, or the ability of prescribers and/or pharmacists to access these to help guide clinical decision making.

Summary

With reference to the key themes present within the NDLERF research questions, the KI raised the following points.

Diversion of pharmaceuticals

The primary sources of pharmaceutical products such as morphine or other opiates in the local illicit drug market were perceived as coming not from PWID consumers themselves, but from individuals on-selling medications that they are receiving for legitimate medical conditions. The intermediaries between these sources and PWID were not regarded as strongly associated with 'organised crime' groups but may instead be consumers themselves. A notable secondary pathway for diverted pharmaceutical products circulating amongst PWID groups was regarded as emanating from PWID who were receiving pharmaceuticals themselves for legitimate reasons. This group may be providing these drugs to peers either for social or financial reasons or in response to pressure applied by other consumers.

Doctor-shopping

'Doctor-shopping', at least as it is defined by the HIC, was not regarded as a common pathway to access of pharmaceuticals by PWID, or of pharmaceuticals that are diverted to PWID. A number of barriers were reported by KI as making 'doctor-shopping' difficult for PWID, not the least of which being a reasonably good awareness amongst prescribers of the diversion potential of restricted pharmaceutical products. Professionals specialising in the area of 'doctor-shopping' indicated that the general demographic profile and patterns of pharmaceutical use of those that successfully engaged in this behaviour locally are clearly distinct from PWID populations.

Links between illicit use of pharmaceuticals and crime

KI commenting on the associations between misuse of pharmaceutical products and crime reported that the behaviours associated with addiction to pharmaceutical opiates were not substantially different to those associated with illicit opiates. However, due to the relatively low daily cost of addictions amongst local PWID, crimes associated with addiction to morphine or other opiates were generally related to the lower end of the property crime spectrum, such as opportunistic, 'soft target' theft or shoplifting. Crimes associated with methadone syrup were more commonly those committed 'against' people receiving this medication legitimately for maintenance reasons, with intimidative tactics applied to these individuals by some seeking to access these drugs illicitly. Benzodiazepine intoxication was perceived as being associated more closely with disinhibitive or unpredictable behaviour.

Opportunities for interventions

It was clear to KI from both sectors that policing of diverted pharmaceuticals and the issue of supply reduction is particularly challenging as consideration needs to be made of the need to avoid reducing the access to effective pain management for individuals that have a legitimate need. Experience in policing in this area has suggested that improved outcomes can come through the fostering of close relationships between health and law enforcement sectors so that if problems in prescription or diversion are identified there is a dialog in place to help achieve the best outcome for both sectors. It was recognised too that an appropriate intervention point for supply reduction may come through further supporting medical practitioners in regard to patient assessment and identifying multiple options for treatment so that the best match could be made between patient need and the treatment provided. In terms of reducing the harms associated with the use of diverted pharmaceutical products by PWID, a number of practical responses could be made, including peer education programs, provision of filtering equipment through Needle Availability Programs, and changes to the formulation of take-away doses of methadone syrup to acknowledge the fact that some patients of the program do administer these medications intravenously. Interventions to reduce the harms associated with use of diverted pharmaceutical products could be further supported by increasing the availability and range of treatment and support services available for the individuals using these drugs illicitly.

Possible impacts of supply reduction

KI reported that a substantial reduction in the availability of pharmaceutical opiates on the illicit market may have a range of possible unanticipated consequences that may need to be considered. Chief among these were the potential for increased crime in response to increased drug cost on the illicit market, the possibility of increased demand on an already stretched health sector, and the possibility of PWID groups simply shifting to use of other drugs that may carry a different, and possibly more problematic, set of health and social harms.

Enhancements to existing data collection systems

KI suggested a range of options for enhancing existing data collection systems in order to provide additional practical benefits for both the health and law enforcement sectors. Major options included more careful analysis of existing indicators of drug-related problems and the establishment of formal agreements to share this information across key stakeholder organisations in a timely manner; and enhancing the communication between existing systems that monitor the prescription of restricted pharmaceutical products, or the ability of prescribers and/or pharmacists to access these to help guide clinical decision making.

Chapter four: Summary

Methodological issues and directions for future research

The current research focused much of its primary data collection toward individuals that regularly inject pharmaceutical products. This approach has been shown to produce reliable and useful data on patterns of illicit drug use, particularly when interpreted in combination with other data sources, such as the KI study and examination of extant indicator data used within the Illicit Drug Reporting System series of projects and the current study (Hando et al. 1997; Darke, Hall & Topp 2001; Thurman 2001). The tacit assumption of such a focus on individuals that regularly inject these products is that these individuals represent the most chaotic and visible (to health and law enforcement services) end of the continua of those misusing pharmaceutical products, and hence will provide the most methodologically economic approach to examining the particular research questions which were the focus of the current study.

However, it is apparent from KI reports that there exists a substantial proportion of people that misuse benzodiazepines and/or pharmaceutical opiates. This group may be orally ingesting these drugs and may or may not be coming to the attention of police or health agencies. For example, reports from the Health Insurance Commission suggest that individuals that 'doctor-shop' for benzodiazepines represent a demographic distinct from local injecting drug users. Similarly, this population is hinted at in accidental overdose statistics within Tasmania (Bruno 2002)[12]. Such individuals form an important part of the overall 'picture' of benzodiazepine and pharmaceutical misuse. However, as these are a substantially more covert population than PWID groups, and apparently less strongly associated with crime or health disruption, they were not targeted for examination within the current study. Future research examining patterns of use, modes of access, underlying factors leading to use, as well as the level of problematic or criminal behaviour by these individuals may be warranted to determine a more holistic examination of the issue of the impacts of benzodiazepine and pharmaceutical opiate misuse within Tasmania.

Also, prediction of future behaviour is particularly challenging. A number of possible consequences (detailed below) of behaviour that PWID may 'possibly' engage in, should there be a substantial supply reduction of pharmaceutical opiates within the local market, emerged from the current study. Clearly, whether individuals faced with such a scenario continue their drug use, seek other substitute drugs, increase or begin involvement in criminal activity, or seek treatment for substance use is multi-determined and difficult to make general inferences about. Existing natural 'experiments' within the recent Australian context show that PWID responses as a group to substantial market changes in the availability of a primary drug may take any of these forms (for example, the increase in gel capsule temazepam use during the 'heroin drought' in Victoria (Fry & Bruno 2002; Miller, Fry & Dietze 2001; Jenkinson, Miller & Fry 2004; Smith, Miller & O'Keefe 2004), or the increased criminal activity following the Health Insurance Commission investigation into morphine prescription in the Northern Territory (O'Reilly et al. in press). Indeed this may be particularly difficult to predict on the basis of a pure medical approach (for example, the increase in daily use of cocaine amongst primary heroin users in Sydney in response to the 'heroin drought' which would not have been predictable on the basis of the pharmacological actions of these drugs (Rouen et al. 2001; Breen et al. 2003). This being noted, while some logical inferences can be made about potential consequences for PWID, health and law enforcement sectors in the face of substantial market change on the basis of such natural 'experiments', it is clear that the

[12] This report remains an internal Tasmanian Department of Health and Human Services document and could not be released for consideration within the current report.

Tasmanian illicit drug market is highly distinct from those in other jurisdictions (e.g. Breen et al. 2004) and may, accordingly, follow an idiosyncratic response to a substantial market change in illicit availability of a particular pharmaceutical product. As such, Tasmanian specific longitudinal studies, using mixed qualitative and quantitative approaches to determine the 'natural history' of benzodiazepine and pharmaceutical opiate misuse in a diverse cohort of local PWID may prove a useful approach to help facilitate such inference making.

Summary

The following represents a summary of the key findings across each stage of the current study. A more detailed discussion of the implications of these issues for law enforcement and health services, within the larger national context, can be found in the companion National Report to this study (Fry et al. in press).

Use of pharmaceutical products among local people who inject drugs

Benzodiazepine use was almost ubiquitous among both PWID cohorts surveyed. Most commonly used benzodiazepines were diazepam (Valium, Antenex, Ducene), alprazolam (Xanax, Kalma), oxazepam (Serepax), nitrazepam (Mogadon) and temazepam (Temaze). Pharmaceutical opiates most commonly accessed by PWID included morphine sulphate (MS Contin, Kapanol), methadone (syrup, Physeptone), and oxycodone (OxyContin). Data from the state's Needle Availability Program suggests that injection of pharmaceutical opiates comprises almost half of all transactions from non-pharmacy outlets, with methadone (syrup or tablets) becoming increasingly predominant over morphine.

PWID participants interviewed were clearly very flexible in the types of drugs that they used, with individuals that used one pharmaceutical opiate type typically also using other types as well (for example, those recently accessing diverted methadone syrup were also commonly using Physeptone, morphine and benzodiazepines as well). Such a pattern of use means that these PWID consumers are very resilient and easily able to change in response to availability of any one product in particular. However, while these participants were generally predominantly consumers of licit or illicit pharmaceutical opiates, there was a very high use of methamphetamine in both cohorts, and, as such, this 'flexibility' in use of pharmaceutical opiates may simply reflect the polydrug consuming nature of the cohorts.

Sources on the illicit market

PWID respondents most commonly reported purchasing morphine, Physeptone and oxycodone from individuals engaged in small to medium-level 'dealing' in these drugs along with methamphetamine and/or cannabis. This study has provided evidence to help dispel the conception that these drugs may be accessed through 'doctor-shopping' by the PWID consumers themselves. In fact, both KI and PWID noted that there were significant systemic and social barriers in place that rendered it particularly difficult for such individuals to access drugs in this manner, and, moreover, that medical practitioners were very reluctant to prescribe pharmaceutical opiates to this group. Local prescribers in the main appear to be very adept at screening PWID patients, as PWID themselves very rarely reported trying to access benzodiazepines or pharmaceutical opiates through feigned symptoms from one or more prescribers, with most suggesting that they did not even bother trying because they expected to be refused if such a request was made. Finally, reports from KI specialising in the issue of 'doctor-shopping' suggested that the demographic characteristics and types of prescriptions accessed by those engaging in such activity were clearly distinct from those seen in PWID groups.

Theft of pharmaceuticals from pharmacies or forging prescriptions was virtually non-existent among PWID, although a substantial proportion of PWID receiving legitimate prescriptions had recently experienced having these drugs stolen from them, with methadone syrup and alprazolam being most commonly targeted for such access. Data from Tasmania Police suggest that pharmacy burglaries are not common and high-value pharmaceutical opiates are not often accessed in these events due to the secure storage of these products in floor safes and the like, as required by legislation.

Reports from KI suggest that morphine, Physeptone and oxycodone are predominantly diverted by individuals who are receiving prescriptions for these drugs for legitimate medical reasons, by on-selling some or all of these prescriptions. Those diverting the drugs may be over-prescribed or under-dosing but were not generally regarded as attending multiple prescribers in an attempt to access these drugs for diversion. Moreover the authority processes currently in place for the prescription of Schedule 8 pharmaceutical opiates for periods of time longer than two months render 'doctor-shopping' to access these medications particularly difficult. Those initially diverting these pharmaceuticals are regarded as not typically selling these directly to PWID, but instead providing to an intermediary, with these intermediary sources then selling the drugs on to PWID.

Methadone syrup was reported by those surveyed as typically purchased directly from 'friends' or others who were receiving methadone maintenance treatment. These individuals typically reported diverting such doses for financial reasons (such as covering the costs of daily methadone dispensing or other bills), to purchase or trade for other illicit drugs, or as a consequence of threats and intimidation by individuals seeking to access methadone. Both PWID and KI noted recent increases in hassling of methadone maintenance patients in and around dispensing points by individuals seeking the drug.

Benzodiazepines, however, were predominantly accessed through legitimate prescriptions from a medical practitioner by PWID, and it was rare for these individuals to have recently accessed these drugs from any more than two prescribers. Access to these drugs from non-legitimate sources was clearly a secondary and substantially less prevalent pathway to access of benzodiazepines, and it was more common for people to receive them as gifts or through trades for other drugs than it was for these to be purchased from a 'dealer'. PWID reported typically seeking diverted benzodiazepines if their legitimate prescription had been used up early, to help manage withdrawal symptoms, or to self-medicate during stressful periods.

Links between use of pharmaceutical opiates or benzodiazepines and crime

A minority of PWID subjects suggested that their recent pharmaceutical drug use had contributed to them being involved in some form of criminal behaviour; however, these reports did not appear to differ according to the pharmaceutical drug class that participants were referring to (benzodiazepine or pharmaceutical opiates), nor was there any substantial difference between criminal behaviour reported as associated with general 'use' or 'withdrawal' from these drugs. While in general, the level of involvement in criminal activity appeared to not be substantially different from that associated with any other substance addiction, there were some reports of particular behaviour associated with the different pharmaceutical drug classes.

Involvement in property crime was associated with the degree of dependence on morphine, with use of prescribed methadone syrup emerging as a factor protective against such involvement. Law enforcement KI suggested that use of morphine was associated with the lower end of the spectrum of property crime, such as opportunistic, 'soft target' theft or shoplifting, which was consistent with the data emerging from the PWID interviews. Police suggested that this may be due to the fact that the majority of PWID maintained daily use levels requiring $50-100 per day, which meant that higher profile criminal acts were less likely to be considered.

Prescribed methadone syrup, while a protective factor against involvement in property crime, was associated with the experience of theft, threats or assault 'against' those receiving this drug legitimately, according to responses from both KI and consumers. Both PWID and KI noted recent increases in hassling of methadone maintenance patients in and around dispensing points by individuals seeking the drug.

While benzodiazepine use was not associated with any crime in particular, PWID consumers reported experiencing extremely disinhibited behaviour when intoxicated by these drugs, particularly when potent benzodiazepines such as alprazolam were combined with methadone and/or alcohol. Individuals thus intoxicated reported uncharacteristic and bizarre behaviour. KI were aware that use of alprazolam and methadone in combination had been increasing in recent months and were concerned with this in terms of the increased overdose risk of such an activity, but there were no reports of particular recent problems with the associated disinibited behaviour.

Implications of benzodiazepine and pharmaceutical opiate use for health workers

KI reported, and data from consumers demonstrated, that intravenous administration of pharmaceutical opiates not designed for such use carries a degree of health harms. Two main themes of opportunities for health intervention were proposed. Firstly, some KI suggested primary prevention interventions, such as developing peer education programs built around demonstrating the harms associated with intravenous administration of tablets, using graphic demonstrations of images such as lungs riddled with particulate matter from years of injection, similar to the approaches used in anti-smoking campaigns. These campaigns, however, were noted by these same individuals as potentially having limited success, as evidenced by the particularly high rate of tobacco smoking among PWID groups.

KI more commonly suggested secondary health interventions, such as distribution of pill and biological filters through the Needle Availability Program to reduce the health harms, and the future burden on the public health system, from continued introduction of particulate matter in the circulatory system from regular injection of these pharmaceuticals. Additionally, acknowledgement that some individuals receiving methadone maintenance treatment will continue to administer 'take-away' doses of this drug intravenously, and taking steps to reduce the harm of this (such as not diluting these doses, or changing the formulation of these doses to Biodone or injectable methadone), was suggested by many KI.

Opportunities for interventions

The patterns of sourcing of diverted pharmaceuticals by providers and the modes of access to these drugs from PWID consumers create particular challenges for policing and limited points for intervention in these systems. The original sources of these diverted products appear to be typically receiving these medications for legitimate reasons, and as such there would be substantial barriers to reducing supply at this juncture. Those selling the products directly to PWID appear to have little connection with 'organised crime groups' and may themselves be consumers or only trafficking small amounts of these drugs. As such, experience in policing in this area suggested that the establishment of close relationships between health and law enforcement sectors helped support good outcomes for both sectors. For example, where problems with prescription or diversion were identified by police, historically prescribers had been more responsive to interventions made by agencies overseeing prescription (Pharmaceutical Services) than those made by police directly.

KI further suggested that an appropriate point for supply reduction may be in further supporting medical practitioners in regard to patient assessment and identifying multiple options for treatment so that the best match could be made between patient need and the treatment provided. Increasing access to specialist pain management and drug withdrawal or maintenance programs may assist in such processes.

Possible impacts of supply reduction of diverted pharmaceutical opiates

Reports from KI and PWID surveys suggested that a substantial reduction in the availability of diverted pharmaceutical products may have a range of possible unanticipated consequences that need to be considered.

Given that surveys of local PWID consumers consistently suggest that many are using pharmaceutical opiates in the place of heroin (due to its poor availability on the local market), it is possible that such a reduction in availability of diverted pharmaceutical opiates may produce an environment conducive to the establishment of a local heroin market. However, as it was shown that PWID consumers were particularly flexible in their patterns of use of pharmaceutical opiates, it may be that reducing the supply of one opiate form may simply lead to an increase in use of an alternative product. This appears to have been the case in response to the removal of gel capsules of temazepam from the market, with use of alprazolam among local PWID groups increasing. Alternatively, there were suggestions that a proportion of PWID may shift from regular pharmaceutical opiate use to regular use of stolen opium poppies or methamphetamine if these supplies reduced, both of which would carry particular health and policing issues that may be more demanding than the current scenario.

Alternatively, data from PWID consumers suggested that some consumers may increase their involvement in criminal activity if there were to be a reduction in the availability of diverted pharmaceutical opiates in order to pay the increased purchase price of these products. Similarly, there were suggestions that there may be increased targeting and intimidation of those receiving pharmaceutical products legitimately, as has been seen toward individuals receiving methadone maintenance in recent months.

KI also noted that increased regulation on prescription of these medications or on the dispensing of these drugs also had the potential to unnecessarily burden those who have legitimate need of treatment with these medications, and may lead to reduced health outcomes for these individuals. Finally, KI noted (with PWID data supporting these reports) that substantial supply reduction of these drugs on the illicit market had the potential to produce a sizeable increase in demand for treatment services such as pharmacological maintenance therapy, pain management, detoxification or withdrawal management. These services within Tasmania are already significantly stretched, with notable waiting lists for treatment common. Additional demand on these services would be unlikely to be able to be met in the current climate, with this scenario producing reduced health outcomes for those within, and attempting to access, such services.

Such issues merit careful consideration prior to any major intervention strategy. Either way, it would appear that the greatest scope for changing such patterns of use of diverted pharmaceuticals could be made through interventions within the health system. While medical practitioners appear to be particularly cautious with avoiding 'doctor-shopping' or prescription of pharmaceutical opiates to PWID, the sources of these products on the illicit market appears to be individuals receiving these drugs legitimately, but potentially not receiving the optimal level of pharmacological treatment for their level of need. Enhancing support to prescribers when assessing non-injecting users of pharmaceutical opiates, and increasing the availability of other specialist pain management or addiction management options may offer some benefits in terms of establishing the best match between treatment and patient need, and hence reduce the likelihood that any prescriptions will be diverted.

REFERENCES

Australian Bureau of Criminal Intelligence (ABCI) (1997). *Australian Illicit Drug Report 1995-96*. Canberra: Commonwealth of Australia.

Australian Bureau of Criminal Intelligence (ABCI) (1998). *Australian Illicit Drug Report 1996-97*. Canberra: Commonwealth of Australia.

Australian Bureau of Criminal Intelligence (ABCI) (1999). *Australian Illicit Drug Report 1997-98*. Canberra: Commonwealth of Australia.

Australian Bureau of Criminal Intelligence (ABCI) (2000). *Australian Illicit Drug Report 1998-99*. Canberra: Commonwealth of Australia.

Australian Bureau of Criminal Intelligence (ABCI) (2001). *Australian Illicit Drug Report 1999-00*. Canberra: Commonwealth of Australia.

Australian Bureau of Criminal Intelligence (ABCI) (2002). *Australian Illicit Drug Report 2000-01*. Canberra: Commonwealth of Australia.

Australian Crime Commission (ACC) (2003) *Australian Illicit Drug Report 2001-02*. Canberra: Commonwealth of Australia.

Australian Crime Commission (ACC) (2004) *Australian Illicit Drug Report 2002-03*. Canberra: Commonwealth of Australia.

Australian Institute of Health and Welfare (AIHW) (1999). *1998 National Drug Strategy Household survey: First Results*. AIHW cat. no. PHE 15. Canberra: AIHW (Drug Statistics Series), Australian Department of Health and Ageing.

Australian Institute of Health and Welfare (AIHW) (2002). *2001 National Drug Strategy Household survey: First Results*. AIHW cat. no. PHE 35. Canberra: AIHW (Drug Statistics Series), Australian Department of Health and Ageing.

Australian Institute of Health and Welfare (AIHW) (2002). *2001 National Drug Strategy Household survey: State and Territory Supplement*. AIHW cat. no. PHE 37. Canberra: AIHW (Drug Statistics Series), Australian Department of Health and Ageing.

Australian Medical Association (AMA) (2004). *Calls for introduction of prescription shopper line*. Australian Medical Association.

Bonn, D. & Bonn, J. (1998). Anxious times for the treatment of anxiety. *The Lancet 352(October 3),* 1,126.

Breen, C., Degenhardt, L., Roxburgh, A., Bruno, R., Duquemin, A., Fetherston, J., Fischer, J., Jenkinson, R., Kinner, S., Longo, M. & Rushforth, C. (2003). *Australian drug trends 2002. Findings from the illicit drug reporting system (IDRS)*. Sydney, National Drug and Alcohol Research Centre (NDARC), University of New South Wales.

Breen, C., Degenhardt, L., Roxburgh, A., Bruno, R., Fetherston, J., Jenkinson, R., Kinner, S., Moon, C., Proudfoot, P., Ward, J. & Weekley, J. (2004). *Australian Drug Trends 2003: Findings from the Illicit Drug Reporting System (IDRS)*. Sydney, National Drug and Alcohol Research Centre (NDARC), University of New South Wales.

Bruno, R. & McLean, S. (2000). *Tasmanian Drug Trends 1999: Findings From the Illicit Drug Reporting System (IDRS)*. National Drug and Alcohol Research Centre, (NDARC) Technical Report No. 84. Sydney: University of New South Wales.

Bruno, R. & McLean, S. (2001). *Tasmanian Drug Trends 2000: Findings from the Illicit Drug Reporting System (IDRS)*. National Drug and Alcohol Research Centre, (NDARC) Technical Report No. 109. Sydney: University of New South Wales.

Bruno, R. & McLean, S. (2002). *Tasmanian Drug Trends 2001: Findings from the Illicit Drug Reporting System (IDRS)*. National Drug and Alcohol Research Centre (NDARC) Technical Report No. 135. Sydney: University of New South Wales.

Bruno, R. & McLean, S. (2003). *Tasmanian Drug Trends 2002: Findings from the Illicit Drug Reporting System (IDRS)*. National Drug and Alcohol Research Centre (NDARC) Technical Report No. 148. Sydney: University of New South Wales.

Bruno, R. & McLean, S. (2004). *Tasmanian Drug Trends 2003. Findings from the Illicit Drug Reporting System (IDRS)*. National Drug and Alcohol Research Centre (NDARC) Technical Report No. 178. Sydney: University of New South Wales.

Bruno, R. (2002). *Ambulance Attendances to Cases of Overdose in Tasmania, January-June 2001*. Department of Health and Human Services.

Buddle, M., Zhou, J. & MacDonald, M. (2003). *Prevalence of HIV, HCV and injecting and sexual behaviour among IDU at Needle and Syringe Programs: Australian NSP survey national data report 1995-2002*. National Centre in HIV Epidemiology and Clinical Research. Sydney: University of New South Wales.

Darke, S., Hall, W. & Topp, L. (2001). *The illicit drug reporting system (IDRS) 1996-2000. Technical Report.* National Drug and Alcohol Research Centre (NDARC) Technical Report No. 101. Sydney: University of New South Wales.

Degenhardt, L. (2001). *Opioid Overdose Deaths in Australia.* Sydney: National Drug and Alcohol Research Centre (NDARC), University of New South Wales.

Degenhardt, L. (2002). *Opioid Overdose Deaths in Australia.* Sydney: National Drug and Alcohol Research Centre (NDARC), University of New South Wales.

Degenhardt, L. (2003). *Opioid Overdose Deaths in Australia.* Sydney: National Drug and Alcohol Research Centre (NDARC), University of New South Wales.

Department of Health and Human Services (2003a). *Tasmanian Needle Availability Program Data*. Hobart: Sexual Health, Tasmanian Department of Health and Human Services.

Department of Health and Human Services (2003b). *Tasmanian Pharmacotherapy Program Statistics*. Hobart: Pharmaceutical Services, Tasmanian Department of Health and Human Services.

Dobbin, M. (2001). *Temazepam injecting in Victoria 2001.* Melbourne: Victorian Department of Human Services.

French, M. T., McGeary, K.A., Chitwood, D.D., McCoy, C.B., Inciardi, J. & McBride, D. (2000). Chronic drug use and crime. *Substance Abuse and Crime 21(2),* 95 - 109.

Fry, C., Smith, B., Bruno, R., O'Keefe, B. & Miller, P. (in press). *Benzodiazepine and Pharmaceutical Opiate Misuse and their Relationship to Crime: An Examination of Illicit Prescription Drug Markets in Melbourne, Hobart and Darwin – National Overview Report.* Fitzroy: Turning Point Alcohol & Drug Centre.

Fry, C. & Bruno, R. (2002). Recent trends in benzodiazepine use among injecting drug users in Victoria and Tasmania. *Drug and Alcohol Review, 21(4)*, 363-367.

Gossop, M., Darke, S., Griffiths, P., Hando, J., Powis, B., Hall, W. & Strang, J. (1995). The Severity of Dependence Scale (SDS): Psychometric properties of the SDS in English and Australian sample of heroin, cocaine and amphetamine users. *Addiction, 90*, 607-614.

Hando, J., O'Brien, S., Darke, S., Maher, L. & Hall, W. (1997). *The Illicit Drug Reporting System Trial: Final Report.* National Drug and Alcohol Research Centre (NDARC) Monograph. Sydney: University of New South Wales.

Health Insurance Commission. (2003a). *About doctor-shopping*. Health Insurance Commission.

Health Insurance Commission. (2003b). *Doctor-shopping*. Health Insurance Commission.

Health Insurance Commission. (2003c*).* Prescription shopping project determination 2003. *Commonwealth of Australia Gazette 2003(GNI13),* 1,071-1,076.

Jenkinson, R., Miller, P. & Fry, C. (2004). *Victorian drug trends 2003: Findings from the illicit drug reporting system (IDRS).* National Drug and Alcohol Research Centre (NDARC) Technical Report No. 175. Sydney: University of New South Wales.

Kamien, M. (2004). 'Doctor-shoppers': At risk by any other name. *Medical Journal of Australia 180*(5), 204-205.

Makkai, T. (2002). Illicit drugs and crime. In A. Graycar & P. Grabosky (Eds). *The Cambridge Handbook of Australian Criminology* (pp 110 - 125). Cambridge: Cambridge University Press.

Marshall, B., & Longnecker, D. (1992). General anesthetics. In A. Goodman Gilman, A. Nies, & P. Taylor (Eds.). *Goodman & Gilman's The Pharmacological Basis of Therapeutics,* New York: McGraw-Hill Inc. Vol. 1(pp 285 - 310).

Miller, P., Fry, C. & Dietze, P. (2001). *A study of the impact of the heroin 'drought' in Melbourne: Results of the Drug Availability Monitoring Project (DAMP).* Melbourne: Turning Point Alcohol & Drug Centre.

National Centre in HIV Epidemiology and Clinical Research (2002). *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia: Annual Surveillance Report 2002.* Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

O'Reilly, B., Leibrick, F., Huxtable, D. & Chenhall, R. (in press) *Benzodiazepine and Pharmaceutical Opiate Misuse and their Relationship to Crime: An Examination of Illicit Prescription Drug Markets in the Northern Territory.* Jurisdiction Technical Report. Melbourne: Turning Point Alcohol and Drug Centre.

Rouen, S., Dolan, K., Day, C., Topp, L., Darke, S. & Hall, W. (2001*). Changes in heroin availability in Sydney, Australia, in early 2001*, National Drug and Alcohol Research Centre (NDARC).

Smith, B., Miller, P. & O'Keefe, B. (in press). *Benzodiazepine and Pharmaceutical Opiate Misuse and their Relationship to Crime: An Examination Of Illicit Prescription Drug Markets In Melbourne, Hobart And Darwin.* Melbourne: Turning Point Alcohol & Drug Centre, Inc.

SPSS Inc. (2001). *SPSS for Windows, Release 10.1.4, Standard Version*.

Thurman, V. A. (2001). The point of triangulation. *Journal of Nursing Scholarship, 33* (3), 253-258.

Treaties and Monitoring Team, Office of Chemical Safety, Therapeutic Goods Administration (2003). DRUMS data.

Warner-Smith, M., Lynskey, M., Darke, S. & Hall, W. (2000). *Heroin overdose: Prevalence, correlates, consequences and interventions.* National Drug and Alcohol Research Centre (NDARC) Monograph No. 46. Sydney: University of New South Wales.

Williams, P. & Morris, L. (2002). *Drug use careers of offenders (DUCO): Tasmanian sample final report.* Canberra: Australian Institute of Criminology.

APPENDICES

Appendix A: NDLERF research questions: responses from all 12 key informants

	Questions	Not at all important	A Little Important	Moderately Important	Very Important	Extremely Important
1	Knowledge about the types of crimes committed by illicit drug users to obtain prescription drugs?	0	0	7	4	1
2	Knowledge about the types of crimes committed by illicit drug users while under the influence of prescription drugs?	0	0	8	4	0
3	Knowledge about the types of crimes committed by illicit drug users while withdrawing from prescription drugs?	0	1	7	4	0
4	Knowledge about the routes of administration of prescription drugs by illicit drug users?	0	4	5	3	0
5	Knowledge about the localities/settings targeted by people to obtain prescription drugs?	0	0	5	6	1
6	Knowledge about the localities/settings targeted by people if committing crimes while under the influence of prescription drugs?	0	1	5	5	1
7	Knowledge about groups other than illicit drug users who may be committing crimes to obtain prescription drugs?	0	4	4	3	1
8	The implications of prescription drug misuse for police?	0	1	3	7	1
9	The implications of prescription drug misuse for accident and emergency staff?	1	1	1	7	2
10	The implications of prescription drug misuse for ambulance officers?	1	1	1	7	2
11	The implications of prescription drug misuse for health/ youth workers?	1	1	3	5	2
12	Knowledge about the types of benzodiazepines/ pharmaceutical opiates targeted by the illicit market?	0	2	0	10	0
13	Black market dealing patterns for benzodiazepines/ pharmaceutical opiates in general illicit markets?	0	2	3	6	1
14	Cost of types of benzodiazepines in the illicit market place?	0	2	8	1	1
15	Cost of pharmaceutical opiates in the illicit market place?	0	1	9	1	1
16	The potential impact of shifts in other parts of the illicit drug market on rates of benzodiazepine use?	0	1	6	5	0

	…Questions, continued	Not at all important	A Little Important	Moderately Important	Very Important	Extremely Important
17	The potential impact of shifts in other parts of the illicit drug market on rates of pharmaceutical opiate use?	0	1	6	5	0
18	Information about other drugs used by benzodiazepine users?	0	3	7	2	0
19	Information about other drugs used by pharmaceutical opiate users?	0	3	7	2	0
20	How benzodiazepines are obtained on the illicit market?	0	1	4	6	1
21	How pharmaceutical opiates are obtained on the illicit market?	0	1	5	5	1
22	Information about the extent and ease of doctor-shopping to obtain benzodiazepines and pharmaceutical opiates?	0	1	6	4	1
23	Information about current measures in place to identify individuals engaged in doctor-shopping?	0	3	6	3	0
24	Information about the limitations of existing Health Insurance Commission (HIC) processes?	2	3	5	1	1
25	Information about the potential impact of rescheduling of drugs by the PBS on misuse and associated crime?	2	2	7	1	0
26	Enhanced surveillance measures to reduce doctor-shopping?	2	2	1	7	0
27	Opportunities for the law enforcement sector to maximize impact on reducing the supply of illicit benzodiazepines and pharmaceutical opiates?	1	1	5	4	1
28	Opportunities for the health sector to maximize impact on reducing the supply of illicit benzodiazepines and pharmaceutical opiates?	1	1	4	5	1
29	Information about the factors contributing to the practice of inappropriate prescribing?	1	2	6	3	0
30	Understanding of the impact that an increase in benzodiazepine/pharmaceutical opiate use might have on the rates of benzodiazepine/pharmaceutical opiate-related crime?	0	2	5	5	0
31	Understanding of the impact that an increase in benzodiazepine/pharmaceutical opiate use might have on the extent and profile of crime in general?	0	1	5	6	0
32	Knowledge about the impact on crime of more effective supply reduction of benzodiazepines and pharmaceutical opiates?	0	1	8	2	1
33	Information about how existing data systems can be better used to enhance the understanding of the nature of the illicit benzodiazepine and pharmaceutical opiate market and its impact on crime?	0	1	8	2	1

Appendix B: NDLERF research questions: responses from all 12 key informants, prioritised by order of interest

Q	Descending order of interest	Sum	Mode
5	Knowledge about the localities/settings targeted by people to obtain prescription drugs?	44	4
8	The implications of prescription drug misuse for police?	44	4
9	The implications of prescription drug misuse for accident and emergency staff?	44	4
10	The implications of prescription drug misuse for ambulance officers?	44	4
12	Knowledge about the types of benzodiazepines/pharmaceutical opiates targeted by the illicit market?	44	4
20	How benzodiazepines are obtained on the illicit market?	43	4
1	Knowledge about the types of crimes committed by illicit drug users to obtain prescription drugs?	42	3
6	Knowledge about the localities/settings targeted by people if committing crimes while under the influence of prescription drugs?	42	3
11	The implications of prescription drug misuse for health/youth workers?	42	4
13	Black market dealing patterns for benzodiazepines/pharmaceutical opiates in general illicit markets?	42	4
21	How pharmaceutical opiates are obtained on the illicit market?	42	3
22	Information about the extent and ease of doctor-shopping to obtain benzodiazepines and pharmaceutical opiates?	41	3
31	Understanding of the impact that an increase in benzodiazepine/ pharmaceutical opiate use might have on the extent and profile of crime in general?	41	4
2	Knowledge about the types of crimes committed by illicit drug users while under the influence of prescription drugs?	40	3
16	The potential impact of shifts in other parts of the illicit drug market on rates of benzodiazepine use?	40	3
17	The potential impact of shifts in other parts of the illicit drug market on rates of pharmaceutical opiate use?	40	3
28	Opportunities for the health sector to maximize impact on reducing the supply of illicit benzodiazepines and pharmaceutical opiates?	40	4
3	Knowledge about the types of crimes committed by illicit drug users while withdrawing from prescription drugs?	39	3
27	Opportunities for the law enforcement sector to maximize impact on reducing the supply of illicit benzodiazepines and pharmaceutical opiates?	39	3
30	Understanding of the impact that an increase in benzodiazepine/ pharmaceutical opiate use might have on the rates of benzodiazepine/ pharmaceutical opiate-related crime?	39	3

Q	...Descending order of interest, continued	Sum	Mode
32	Knowledge about the impact on crime of more effective supply reduction of benzodiazepines and pharmaceutical opiates?	39	3
33	Information about how existing data systems can be better used to enhance the understanding of the nature of the illicit benzodiazepine and pharmaceutical opiate market and its impact on crime?	39	3
15	Cost of pharmaceutical opiates in the illicit market place?	38	3
7	Knowledge about groups other than illicit drug users who may be committing crimes to obtain prescription drugs?	37	2
14	Cost of types of benzodiazepines in the illicit market place?	37	3
26	Enhanced surveillance measures to reduce doctor-shopping?	37	4
23	Information about current measures in place to identify individuals engaged in doctor-shopping?	36	3
4	Knowledge about the routes of administration of prescription drugs by illicit drug users?	35	3
18	Information about other drugs used by benzodiazepine users?	35	3
19	Information about other drugs used by pharmaceutical opiate users?	35	3
29	Information about the factors contributing to the practice of inappropriate prescribing?	35	3
24	Information about the limitations of existing Health Insurance Commission (HIC) processes?	32	3
25	Information about the potential impact of rescheduling of drugs by the PBS on misuse and associated crime?	31	3