

Forgetting to Breathe: Opioid Overdose and Young Injecting Drug Users in Perth

Wendy Loxley & Peter Davidson
National Drug Research Institute

ISBN 1-86342-707-4

Forgetting to Breathe: Opioid Overdose and Young Injecting Drug Users in Perth

Wendy Loxley PhD

Senior Research Fellow

Peter Davidson

Project Officer

National Drug Research Institute

(formerly National Centre for Research Into the Prevention of Drug Abuse)

Curtin University, Perth Western Australia

February 1998

Study funded by WA Drug Abuse Strategy Office

Table of Contents

Executive Summary	iii
Recommendations	vi
1. Introduction.....	1
2. Method	3
2.1 Overview.....	3
2.2 Questionnaires and interview guides.....	3
2.3 Recruitment	4
2.4 Data collection.....	4
2.5 Analysis.....	5
3. Results.....	5
3.1 Recruitment and type of interview	5
3.2 Quantitative data.....	5
3.2.1 Description of the sample	5
3.2.2 Drug use	8
3.2.3 Injection	8
3.2.4 Experiences of overdose.....	11
3.2.5 Respondents' most recent own overdose	11
3.2.6 Most recent experience of other's overdose.....	12
3.3 Qualitative data	12
3.3.1 Knowledge and awareness of the causes of overdose.....	12
3.3.2 Buying heroin and other drugs	14
3.3.3 Using heroin and other drugs	17
3.3.4 Knowledge of overdose response strategies and experiences of overdose...20	
3.3.5 Exposure to and opinions about current harm minimisation materials and strategies.....	28
4. Summary and Conclusions.....	30
4.1 The study group	30
4.2 Knowledge and awareness of the causes of overdose	32
4.3 Buying heroin and other drugs.....	32
4.4 Using heroin and other drugs.....	33
4.5 Knowledge of overdose response strategies and experiences of overdose.....	34
4.6 Exposure to and opinions about current harm minimisation materials and strategies	36
4.7 Future research	37
5. Conclusion.....	38
6. Recommendations.....	38
7. References	41

Table and Figures

<i>Table 1: Suburb recruitment and interview type for all respondents (n=40)</i>	5
<i>Figure 1: Distribution of ages (n = 40)</i>	6
<i>Table 2: Employment status of respondents (n = 40)</i>	6
<i>Figure 2: Detention by gender (n = 40)</i>	7
<i>Table 3: Members of respondents' households (n = 40)</i>	8
<i>Table 4: Drugs used and injected (n=40)</i>	9
<i>Figure 3: Subjective dependency on heroin by frequency of injecting (n = 39)</i>	9
<i>Table 5: Others present on last injecting occasion (n = 34)</i>	10
<i>Figure 4: Place of last injection (n = 34)</i>	10
<i>Table 6: Contacts for drug use (n = 40)</i>	11

Executive Summary

The use of heroin by people under the age of 21, and concomitant increase in the number of fatal and non fatal overdoses attributed to use of heroin and/or other opioids, has apparently increased during the previous 2 years although there is, as yet, no objective data to support the trend. Clinical and anecdotal evidence suggests, however, that heroin use has largely replaced amphetamine use as the drug of choice for many teenagers who inject drugs, and that this is supported by (or perhaps a response to) increases in the availability and purity, and decreases in the price, of heroin over the same period.

Clinical accounts notwithstanding, little is known about the phenomenon of heroin use by younger users, and, specifically, the understandings which underlie heroin use in general, and overdose in particular. The interaction of these understandings with the developmental characteristics of youth is of particular interest if harmful practices which may lead to overdose are to be prevented or curtailed.

The study reported here was a preliminary investigation of the knowledge, beliefs and behaviour in relation to heroin use and overdose of some young Perth injecting drug users. Forty young people, most of whom had injected heroin in the previous six months, were recruited to take part in small group or individual interviews in which both quantitative and qualitative data were collected. All participants completed a short self-completion questionnaire with questions about demographics, drug use history, current drug use, experience with own/others' overdose, experience of emergency treatment services, and knowledge of overdose prevention strategies. Qualitative interviews were structured around the following topics:

- knowledge and awareness of the causes of overdose;
- buying heroin and other drugs;
- using heroin and other drugs;
- knowledge of overdose response strategies and experiences of overdose; and
- exposure to and opinions about current harm minimisation materials and strategies.

Respondents were aged between 14 and 21. There were 29 men and 11 women, with more women (64%) than men (31%) aged under 17. Most respondents were living in a flat or house with other people: almost 40% were living with at least one parent (usually their mother) and this trend was more pronounced among younger respondents with 56% of those under 17 and 25% of those over 17 living with their mother.

In the six months prior to interview, almost all respondents had used cannabis, alcohol and/or tobacco; three quarters had used LSD and/or heroin; half had used amphetamines and/or benzodiazepines and all other drugs had been used by a minority of respondents. Only heroin and amphetamines had (ever) been injected by more than 50% of respondents.

Respondents started to inject at an average age of 15.2 years and 30% said that they felt they had a 'heroin habit'. Forty percent claimed to inject daily or more than once a day; 30% less than daily, and 30% did not currently inject. Respondents who injected daily or more frequently were more likely to consider that they had a heroin habit than those who injected less frequently.

Almost all respondents were with other people (usually friends and/or sexual partners) on their last injecting occasion. More than half of the last injections took place on the street or other public space or in friends' homes, but most usually the street or other public space.

Seventy percent of respondents claimed to know or know of at least one person who had died as a result of an overdose. Fifteen (37.5%) respondents had themselves experienced an overdose. Most overdoses took place when others were present, and ambulances were called in almost half of the cases.

The qualitative data fleshed out some of these quantitative findings. In the first place, respondents were asked a range of questions designed to assess their understanding of the pharmacological and physical processes and risk factors involved in opiate overdose. In general, there was little adequate knowledge of the causes and mechanisms of overdose. Failure to understand the risks of mixing drugs was common, as was a failure to understand that not all overdoses occur 'at the point of the needle'.

Most respondents believed that using too much heroin was the major cause of overdose, and none mentioned inconsistencies in the strength of heroin as a factor. There was some awareness that mixing CNS depressants could increase the risk of overdose but this was relatively unformed and the mechanisms unknown. Moreover, some respondents deliberately mixed these drugs in search of specific effects. There was little understanding of the concept of tolerance, or how quickly it could be lost, and equally little understanding that an overdose could occur some hours after heroin had been used.

In terms of buying heroin and other drugs, few respondents were able to buy heroin in less than \$50 deals and benzodiazepines were readily available, cheap, and often legally obtained from prescriptions. Oral morphine was also readily available and relatively cheap, while other opiates appeared to be more expensive and less available. Most respondents bought their drugs from known dealers who sometimes warned about heroin strength, although some respondents recognised that this could be a marketing ploy, and others chose to disregard the warnings.

Using heroin and other drugs in the street or public space was a common practice and it appeared to be those respondents who could not use in their homes because they lived with parents who were most likely to use in public space. Few respondents ever injected when they were alone. There was little or any support among this group for smoking or inhaling heroin and little if any discussion of heroin smoking or inhaling as a overdose risk reduction measure. Most respondents, moreover, although aware that 'use half and wait' was an effective overdose risk reduction measure, did not do so, although the reasons for this were not always clear. Some respondents described mixing heroin with other CNS depressants in order to obtain specific effects, and some used benzodiazepines (specifically) to take the edge off withdrawal or as a substitute for heroin when it was not available.

Respondents were not well versed in recognising the symptoms of overdose, particularly snoring, and there was some confusion between this and the normal being on the nod experienced by heroin users. This seemed to be part of a general failure to appreciate that not all overdoses are instantaneous. Over half of the respondents had had some First Aid training, but only a minority of that had occurred within the previous two years, and a number expressed doubts about their ability to render assistance in the event of an emergency. Few, however, used dubious measures such as injecting with salt water or amphetamines as a way of assisting with overdose, saying that they preferred to call an ambulance.

As noted above, most overdose events occurred in the company of others, and respondents were, on the whole, not reluctant to involve the emergency services (whether by calling an ambulance or going directly to the hospital) if they thought that it was necessary, although this tended to be a last rather than a first response. Approximately half of the respondents were aware that police no longer attended overdoses, and only a few gave fear of police attending as a reason for not calling the ambulance. There were, however, other constraints

against calling an ambulance, including the cost, fear of having to identify themselves when telephoning emergency, and a concern that patients would be taken to hospital when it was not necessary.

Concern about being taken to hospital emerged as a major issue for these young people. This was related to a real or perceived concern that hospitals would inform parents or 'the welfare' if a juvenile was admitted to hospital with a suspected overdose. Concern was also expressed about possible interactions between welfare agencies and the police.

Few respondents had experienced Narcan (Naloxone) and, predictably, those that had did not enjoy the experience. There was little good understanding of what it is or how it works, and a number of respondents had never heard of it, although most thought making it directly available to users was a good idea.

Demonstrations of harm minimisation materials and discussion about them suggested that South Australian overdose materials in use in Western Australia were not appropriate for many in this group. The black West Australian 'Heroin' card seemed to be a much better approach, attested to by the fact that many of the respondents had read and could understand and recall what was said on both sides. Respondents raised some questions, however, about appropriateness of overdose prevention messages currently in use.

A series of recommendations were made and these are appended below. It was concluded that while there were some positive findings in the study (eg that young people were relatively ready to call ambulances in the case of overdoses), there were some matters for concern (eg that very few fully understand about tolerance and/or the dangers of mixing CNS depressants). We also recognise that this report is built around the responses of a small group of young drug users and that we do not know how representative these young people are of their peers. We hope that it will be possible to undertake further research and widen our understanding of the meaning of overdose to young opiate users.

Recommendations

Every attempt should be made to encourage young drug users to make contact with health or welfare agencies who can offer support and advice. Those agencies that are being accessed by young people - such as general practitioners and community pharmacies - should be encouraged to support young drug users and offer information and referral sources which can facilitate a more healthy lifestyle.

Young people who experience dependence on heroin should be encouraged to seek professional help, where their suitability for methadone and/or other programs can be assessed.

Education about the causes and mechanisms of overdose is vital if it is to be prevented. All drug users must be taught about the risks of mixing CNS depressants and that this is the primary cause of overdose; the length of time that should elapse between using different drugs; the approximate period it takes to establish and lose tolerance and the fact that the majority of overdoses are not instantaneous but occur gradually over some hours.

The ready availability of benzodiazepines and oral morphine in pharmaceutical preparations should be investigated and monitored by the appropriate authorities. Doctors should be encouraged not to prescribe these preparations to drug seeking young people, but to make appropriate referrals to drug treatment agencies.

Street and public space injecting by younger drug users, and the risk of overdosing when in a place where help cannot easily be sought is a major - and possible growing - concern. A variety of strategies should be undertaken to address this, from encouraging young people to wait to inject until they get home or to a safe place; suggesting to parents who know that their teenagers use drugs that injecting at home and under supervision is safer than doing so in the public space, and encouraging staff of pubs and cafes to call for ambulances for drug users on the nod, rather than evicting them.

A campaign to encourage smoking or inhaling heroin as an alternative to injecting should be undertaken. This should be accompanied by accurate and simple information on how to smoke or inhale heroin, and might best be undertaken by the WA Substance Users' Association with appropriate funding.

While using drugs alone does not appear to be a particular risk in this age group, materials should continue to emphasise the dangers of solitary use and the value of using in a group and monitoring friends' conditions.

First aid training for drug users is of benefit if it is appropriately directed. Subsidised first aid courses for drug users should be widely available and general first aid for the community should include training in how to respond to a suspected drug overdose.

While messages about the need to call ambulances to suspected overdoses have clearly had an effect, they need to be maintained, and it needs to be stressed that calling an ambulance should be the FIRST not the LAST response. Young people's concerns about the cost of calling ambulances need to be addressed.

The message that police will not attend with ambulances is known and believed by some young users, but not by all. Continued effort to spread this message is needed. Police should be encouraged to respect the ambulance protocol and their responses should be monitored.

The single biggest reason why young people do not utilise emergency services is fear of unwanted intervention by police, parents and/or welfare. Because of this, on site treatment is preferred by most users, and ambulance staff should be encouraged to consider whether treatment can be appropriately delivered at the site without recourse to hospital.

Drug users repeatedly complain about poor treatment at the hands of hospital staff, and it should be clear that users have the same rights to humane and ethical treatment as anyone else. Where users are underage there is a particular problem, in terms of the hospital's duty of care. While it might be appropriate to notify the parents of juveniles with suspected overdoses, it would be helpful to discuss such notification with the young person, particularly if they are aged between 16 and 18. If parents are to be called in, the young person should be informed of this as a matter of course.

If parents are called in, particularly when they have no prior knowledge of the young person's drug use, they should be provided with some information and support so that they can be helped to react in an appropriate and informed manner.

Welfare services in hospitals should be made aware that harassment of juveniles by them reduces the likelihood that the young person will call an ambulance on future emergency occasions.

A variety of education strategies are needed, including materials such as posters and pamphlets, peer education and train the trainer courses for youth workers and treatment agencies. Innovative ways to make contact with young people, such as many of those in this study who were not in touch with standard agencies, should be developed.

There is a need for a range of educational materials from the simple one liner (eg "using pills and heroin within 12 hours of each other is the single largest cause of fatal overdose") through to information intensive leaflets or booklets (covering, for example, symptoms of overdose, what to tell the 000 and ambulance operators, overdose specific resuscitation in detailed steps, etc.)

Materials should reflect local terminology. Direct adoption of materials developed interstate or overseas may be inappropriate and unnecessarily confusing.

It is important that young people are made aware that they CAN prevent overdoses by not mixing drugs. All education/prevention materials that make any mention of the reasons heroin is dangerous must also mention the role of polydrug use.

Polydrug pharmacology is poorly understood. Detailed information about clearance times and other relevant factors should be made available to peer educators, WASUA and others working with drug users.

Education materials should be developed to address the issue of tolerance and loss of tolerance. These should be widely available particularly in youth detention centres, prisons, detoxification and rehabilitation centres: ie anywhere where drug users are concentrated and (however temporarily) separated from drugs.

Risk reduction techniques should be couched in positive terms. 'Use half and wait' is less appealing to a young person than 'leave some for when you're coming down' which suggests improved technique and may prove a more fruitful approach.

1. Introduction

Heroin users live a precarious life: longitudinal research has found that they have yearly mortality rates of between 1% and 3%: 6 to 20 times higher than expected among their peers of the same age and gender. In many countries, overdose is the leading cause of mortality, outstripping HIV/AIDS, hepatitis B and C and violence (Darke & Zador, 1996).

The incidence of overdose from heroin is of growing concern to the Australian community, and these concerns are supported by state and national overdose figures. In Australia the incidence of opioid deaths increased by 180% between 1981 and 1990 (Darke & Zador, 1996).

In Western Australia, between 1984 and 1994, there were an average of 27 opioid deaths per annum. This rose to 81 deaths in 1995 and 62 in 1996 (Task Force on Drug Abuse, 1996). A total of 54 suspected illicit opioid deaths occurred in WA in the 8 month period January to August 1997, and 48 were regarded as being heroin related (Swensen, 1997).

In a 1996 review of published literature relating to heroin overdose, Darke and Zador (1996) maintained that: "Contrary to popular belief the 'typical' overdose victim is not a young novice or inexperienced user. Rather, the average age of death reported is in the late twenties and early thirties" (p. 1766). Consistent with this, they found links between rates of overdose, length of drug using career and/or rates of dependency on heroin, such that those who had been using for longer and/or were more dependant were more likely to have experienced (fatal or non-fatal) overdose. Some deaths, however (up to 17% in one study) do occur among recreational heroin users. The investigation of heroin overdose among recreational or non-dependant users does not, however, appear to have attracted any specific research.

Of the 54 illicit opioid deaths in 1997 in Western Australia, almost 40% occurred among people under the age of 25, but only 15% in people aged 15-19 (Swensen, 1997). Thus while the greater association of deaths with more established users appears to hold true in WA, there are still a large number of younger users who die from using illicit opiates.

Darke and Zador (1996) also found that there was little evidence that most heroin overdoses were solely caused by the quantity or quality of heroin ingested. Nor did the contaminants in the heroin appear to contribute much to most overdose cases. They maintained that most 'overdoses' were fatalities due to multiple drug use. These were generally combinations of CNS depressants, most commonly opioids and alcohol and/or benzodiazepines.

Darke and Zador (1996) found that morphine was the only drug found in the bodies in a minority of heroin-related fatalities: from 23% to 48% depending on the study. In WA among the 48 heroin-related fatalities, morphine was the only drug found in the bodies of 35%. Alcohol was found in 27% and benzodiazepines in 42% - but of the latter half involved people in the 15-24 year old age group. Only two of the 48 tested positive for both alcohol and benzodiazepines as well as morphine.

Evidence from a number of studies in different countries suggests that most heroin-related fatalities appear to occur over a period of time, rather than instantaneously (Darke & Zador, 1996). Zador, Sunjic and Darke (1996), for example, estimated that only 14% of cases in 1992 in NSW dies instantaneously, and that 22% were estimated to have died over periods of time longer than 3 hours. The period of time that may elapse between the injection of heroin and death may represent an important opportunity for intervention (Darke & Zador, 1996) but is also relevant to establish whether users understand that these periods of time elapse, or whether it is believed that all death occurs "at the end of a needle".

Whatever the causes of overdose, it is a depressingly familiar experience to injecting drug users (IDUs). In the Australian Study of HIV/AIDS and Injecting Drug Use (ASHIDU), in which the data were collected during 1994 from 872 IDUs recruited in equal numbers from Adelaide, Melbourne, Perth and Sydney, 53% of respondents reported that they had personally experienced at least one overdose and one in four respondents reported having been with a person who had had a fatal overdose. Almost three quarters reported having been with someone who had experienced a non-fatal overdose (Loxley, Carruthers & Bevan, 1995).

The West Australian Opiate Overdose Prevention Strategy (OOPs!), a government-funded initiative, has recently reported on its first three months of operation (Corry & Penna, 1997). They, too, found that overdose was a familiar experience with 80% of users that were contacted reporting that they had been present at least one overdose. Nearly all the heroin users surveyed were aware of the signs of overdose and more than half indicated that they would call an ambulance if they were present at an overdose.

It has been noted that there has been no specific research examining overdose among recreational (and/or younger) heroin users, and that heroin overdose is more common among older and more dependent users. In the WA OOPs! project, for example, where contact was made with both heroin users and non-users, users were significantly older than non-users, and only 23% of users were aged under 21 (Corry & Penna, 1997). The age distribution of overdose may change, however, with the increasing use of heroin by younger drug users. The last National Household Study (Commonwealth Dept. of Health and Family Services, 1996) was based on data collected during 1995, and at that time amphetamine was the preferred drug of younger users. Since that time, however, it has become apparent that heroin has become cheaper, more available, and of a higher purity and that heroin use (and overdose) by younger people has been increasing. Unpublished police laboratory reports of heroin seized in Perth during 1996 puts the purity of some samples as high as 70% (Sen. Sgt. M. Bourke, WA Police Service, personal communication).

An examination of age differences in overdose in the ASHIDU, found that there was little that differentiated younger from older users, other than that younger respondents had had fewer overdoses than older. This was clearly a function of duration of injecting and it appeared that without intervention, younger users could be expected to reach the same rates as older respondents over time (Loxley, Carruthers & Bevan, 1997). The paper concluded that little was known about the experience of younger IDUs and overdose and that there was clearly scope for research which was particularly focused at this sub-population, because more younger IDUs were injecting heroin than were in 1994 when the ASHIDU was conducted.

Because heroin use by young users is a relatively new phenomenon, little is known about the cultural understandings which underlie young people's heroin use in general, and overdose in particular. The only published Australian research that canvasses this issue is an ethnographic study of heroin users undertaken in South West Sydney (Maher, 1996). This was an intensive study of 40 heroin users, average age 21, of whom 38% were Anglo-Australian and the remainder from a variety of ethnic origins. The group was found to be unlike the stereotypical heroin users found in many other studies, particularly in their transitions from smoking to injecting heroin. There was some investigation of overdose, but it was not the central concern of the research.

Maher (1996) described differences in the way in which younger and older heroin users in her study appeared to understand and process overdose deaths, and suggested that perhaps the only way young people could cope with the deaths of their peers was by distancing themselves and their own drug use from that of their deceased friends. The recent OOPs!

project review also supported this concept (Corry & Penna, 1997). It remains to be established whether this is a general trend among young people dealing with issues relating to heroin deaths. If so, it would have considerable implications for prevention strategies.

There have been a number of studies undertaken at this Centre which have used qualitative techniques and analysis to investigate the psychosocial/cultural factors which underlie harmful patterns of drug use by young people (eg Loxley, 1997; Loxley & Ovenden, 1995; Lenton, Boys & Norcross, 1997). These studies have demonstrated that qualitative methods maintain young people's interest and motivation in the research process by allowing for naturalistic conversations, while retaining research rigour. Moreover the method is particularly relevant for allowing for the emergence of ideas and suggestions which have not previously been found in the literature.

The study reported here is a primarily qualitative investigation of overdose among young heroin users in Perth. It was designed as rapid research which could offer the funding body, the WA Drug Abuse Strategy Office, some immediate practical suggestions as to how overdose among young people could be prevented, but has the capacity to serve as a pilot for more detailed research should funding become available.

2. Method

2.1 Overview

Forty young people, 85% of whom had used heroin at least once, were recruited to take part in focus groups or in-depth interviews. Recruitment was within six suburbs known to be associated with overdoses among young drug users. Respondents were offered \$20 for participation, which was anonymous and confidential. Each respondent completed a short self-completion questionnaire prior to the semi-structured interview which was tape recorded. Quantitative data were punched and analysed on SPSS for Windows 6.1.4. Qualitative data were transcribed and analysed for themes.

A project officer, with knowledge and understanding of the population and behaviours of interest, was employed to assist in the development of research instruments, recruit respondents, interview, transcribe data and assist in data analysis and reporting. All processes and methods were approved by the Curtin University Human Research Ethics Committee before the commencement of data collection.

2.2 Questionnaires and interview guides

The interview had two components, a self-completion questionnaire and a semi-structured interview or focus group. Self-completion rather than interviewer administration was used to facilitate group interviews. The questionnaire, which usually took around 5-10 minutes to complete, asked questions about demographics, previous and current drug use, details of last injecting drug use, experiences of own and others' overdose, experiences with emergency services and knowledge of first aid.

The interviews and/or focus groups were conducted immediately after the questionnaires had been completed. These were semi-structured and based on a checklist of approximately 26 questions addressing five broad themes: knowledge and awareness of the causes of overdose; buying heroin and other drugs; using heroin and other drugs; knowledge of appropriate overdose response strategies and experiences of overdose; and exposure to and opinions about current harm minimisation materials and strategies. The interview component took between half an hour and one and a quarter hours to complete.

2.3 Recruitment

Six suburbs were selected as catchment areas for recruitment, and were chosen because they were among the suburbs to which ambulances were most frequently called for overdose. These were Bentley, Fremantle, Balga, Northbridge, Rockingham and Wanneroo. Midland had initially been selected as a catchment area but early investigations suggested that heroin use was limited in the area amongst the target age group and the Bentley / Karawara area was substituted instead.

Respondents were recruited via fliers and posters distributed through non-government agencies working with young people meeting the selection criteria, and through snowballing from early respondents. The WA AIDS Council mobile needle exchange also distributed fliers and in some areas (Rockingham and Wanneroo) permission was sought for and granted to distribute posters in public toilets and tertiary institutes.

The posters and fliers asked “Are you under 21? Have you used heroin more than twice in the last 6 months?” and offered A\$20 in exchange for a hour or so in which an anonymous interview would be conducted “to find out what people know about heroin overdose”. Contact details were listed with the name of the University and a statement to the effect that the study had been approved by the University Human Research Ethics Committee. Respondents calling in response to these advertisements were screened for age and recent heroin use and, if they were willing to proceed, interview locations and times were arranged.

2.4 Data collection

The data were collected between the 14th August 1997 and 23rd October, 1997. At the beginning of the data collection phase, interviews were usually organised for the following business day, but due to a high rate of ‘no-shows’ the project officer began to organise interviews for the same day, frequently interviewing within half an hour of initial phone contact.

The original intention was to organise one focus group of six respondents and conduct two one-on-one interviews in each of the six catchment areas, in order to interview a large number of respondents in a short time, but this became very difficult in practice. The problems experienced in organising one-on-one interviews more than six hours in advance with this target population were exponentially worse when it came to trying to organise six people to meet at one place at the same time. As a consequence, all but two of the groups involved three people or fewer, and these groups consisted of an initial respondent and one or two close friends whom they had brought with them. Of the two groups which did involve six people, one consisted of the regular attendants of a youth drop-in centre who had been recruited and organised by a volunteer worker, and the other consisted of a group of young people on a court-diversion education program who agreed to be interviewed together. Although focus groups are usually conducted with participants who do not know one another, this was impossible to ensure in this study.

Interviews were conducted either in public places (eg parks, coffee shops) or on the premises of the agencies through whom respondents had been recruited. Most interviews were conducted by the project officer (PD), but the senior researcher (WL) attended a number of the group interviews as a co-interviewer.

Informed consent was obtained at the start of each interview by reading out a statement to respondents, and recording their agreement to continue. Interviews were tape recorded after explicit consent to do so had been obtained from each respondent. All respondents were remunerated \$20 for their expenses and time at the end of the interview.

2.5 Analysis

Quantitative data were analysed with SPSS for Windows 6.1.4. Mainly descriptive results are presented. Some bivariate analyses were performed but these were limited by the size of the sample.

It should be noted that there are some inconsistencies in these data. These come about because the questionnaire was self-completed rather than administered, and was intended to be a rapid rather than a detailed quantitative assessment. In many cases, inconsistencies have occurred because respondents have failed to check boxes where a response was required. In other cases where responses appear to contradict each other, it has not been clear which responses are more accurate and so the data have been presented as they are.

The tapes were transcribed and summary tables created from the interview questions. The presentation of qualitative results consists of the consensus and/or range of responses to each of the questions as extracted from these tables and these are indicated.

3. Results

3.1 Recruitment and type of interview

As noted in the Method section above, respondents were recruited to both group and individual interviews within suburbs. Recruitment details are shown in Table 1 below.

Table 1:
Suburb recruitment and interview type for all respondents (n=40)

Suburb	Individual n	Group n	Interviews	Total n
Bentley/Karawara	3	3 groups x 2 = 6	6	9
Fremantle	1	1 group x 3 = 3 1 group x 2 = 2	3	6
Koondoola / Balga	0	1 group x 2 = 2 1 group x 6 = 6	2	8
Northbridge / City	5	2 groups x 2 = 4	7	9
Rockingham	1	1 group x 6 = 6	2	7
Wanneroo	1		1	1
TOTAL	11	29	21	40

3.2 Quantitative data

3.2.1 Description of the sample

There were 40 respondents in the total study group. Twenty nine (73%) were male and 11 (28%) were female. The distribution of ages can be seen in Figure 1. When the age categories were collapsed into two (14-16 and 17-21), 31% of the males, and 64% of the females were under 17, while 69% of the males, and 36% of the females were over 17. The significance of this difference could not be tested due to small cell sizes.

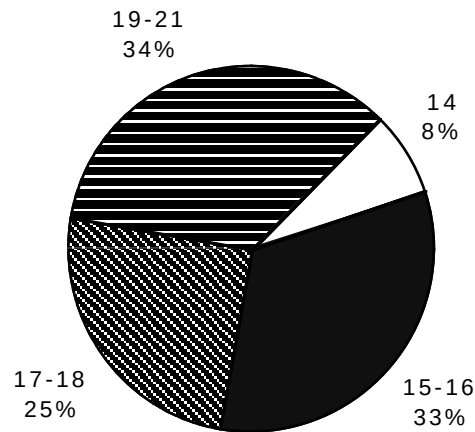


Figure 1:
Distribution of ages (n = 40)

Although respondents were recruited within specific suburbs, they lived in a variety of suburbs, with 14 different postcodes given. Respondents' employment status is shown in Table 2.

Table 2:
Employment status of respondents (n = 40)

Employment Status	n	%
Full time	5	12.5
Casual	1	2.5
Self employed	1	2.5
Student	12	30.0
Benefit	21	52.5

The figures in Table 2 should be interpreted with some caution as they do not allow for a precise definition of whether or not respondents were still at school. Because the response categories for this question were mutually exclusive, students who were employed on a casual or part-time basis could have indicated that they were employed, rather than at school. Moreover, we do not know whether the students were at school, or TAFE, or some alternative non-school course such as one to which they had been diverted by the Ministry of Justice.

The largest group of respondents (47.5%) had completed up to Year 10 at school. One respondent claimed to have had no secondary education, while 12 (30%) had completed Year 10, 6 (15%) had proceeded beyond Year 10 and 2 (5%) had undertaken TAFE courses.

The majority of respondents (92.5%) did not consider themselves to be of Aboriginal or Torres Strait Islander origin. No other questions about ethnicity were asked.

Twenty three respondents (57.5%) were single; 13 (32.5%) had a girlfriend or boyfriend, and four (19%) were in de facto relationships.

Respondents were almost equally divided between those who had and those who had not spent all their lives in Perth: of those who had not (52.5%), two thirds had been in Perth for more than five years, and the remainder were almost equally divided between having been in Perth for less than one year, or less than five years.

Eighteen respondents (45%) said they had been in prison or youth detention centre within the previous five years. This was not related to age. Due to the size of the sample, it was not possible to determine whether gender was significantly related to detention, but Figure 2 demonstrates that there appears to be a relationship, and that the males were more likely to have been detained than the females.

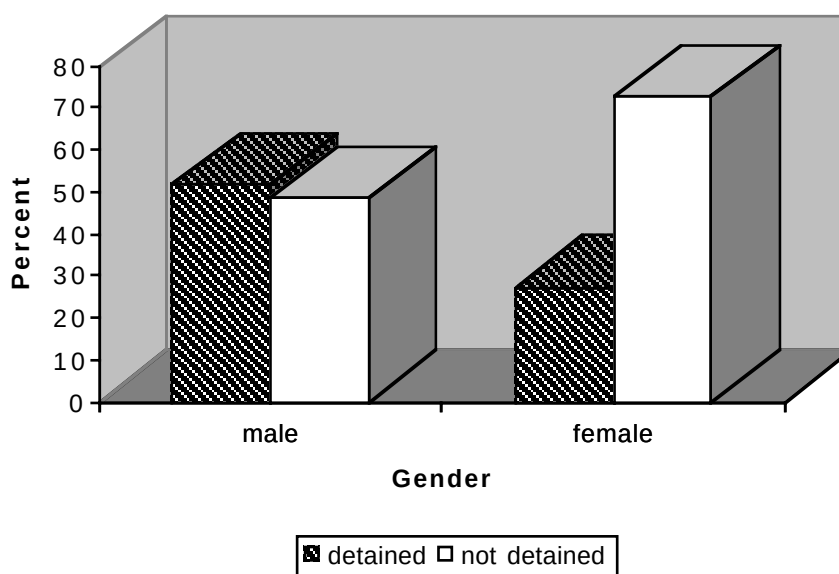


Figure 2:
Detention by gender (n = 40)

Most respondents (82.5%) were living in a flat or a house; 5% had no fixed address, 2.5% were living in a refuge or shelter, and four respondents (10%) were living in other accommodation, usually a hostel. Most (67.5%) had been living in this accommodation for less than one year, but five (12.5%) had been there for less than five years, and eight (20%) had been there for more than five years.

Thirty nine of the 40 respondents gave details about other members of their households. Respondents shared their accommodation with a variety of other people, the details of whom are given in Table 3 below. It should be noted that the responses in Table 3 are multiple responses: that is respondents could nominate as many categories as they wished. Table 3 shows that many of the respondents were either living with their mother or with a sexual partner. Only one respondent was living with both. There was a relationship between age and whether or not respondents lived with their mother, such that 56% of those under 17, but only 25% of those over 17, were living with their mother ($p < .05$).

When the combinations of respondents' household members were explored, 10 of the 16 respondents under the age of 17 were living with a parent and, usually, siblings and/or other

relatives. Two were living with a sexual partner (one also with siblings); two with other young people; one with siblings and one with 'other adults' (unspecified further). Of respondents aged 17 and older, nine of 24 were living with a sexual partner, sometimes with other friends; six were living in the family home with at least one parent, six were living with friends or other young people; one was living with 'other adults' (unspecified) and one was living alone. One did not respond.

Table 3:
Members of respondents' households (n = 40)

	n	%
Mother	15	38.5
Siblings	14	35.9
Sexual partner	12	30.8
Other adults	6	15.4
Father	5	12.8
Friends	5	12.8
Other young people	4	10.3
Stepfather	2	5.1
Other relatives	2	5.1
Other	2	5.1
Grandparents	1	2.6
Alone	1	2.6

3.2.2 Drug use

Respondents were asked to tick boxes to indicate the drugs they had used and injected. Responses are depicted in Table 4, and, again, these are multiple responses.

This table shows that the most frequently used illicit drugs in this study group were cannabis, LSD, heroin, amphetamines and benzodiazepines. No other drugs had been used in the previous six months by more than 30% of the group. Heroin and amphetamines were the most commonly injected drugs, and also the only drugs that had been injected by more than 50% of the group.

3.2.3 Injection

Respondents started to inject at an average age of 15.2 years. Younger respondents (those under 17) started to inject at an average age of 13.9 years, and older respondents (those 17 and older) at an average age of 15.7 years. Twelve respondents (30%) said that they felt they had a 'heroin habit' (subjective dependency); 17 (42.5%) said they did not, and ten (25%) said they no longer had a habit. This appeared to be related to age such that 38% of younger, but 67% of older respondents felt that they currently had, or had recovered from, a heroin habit.

Respondents were asked how frequently they currently injected. Forty percent claimed to inject daily or more than once a day; 30% less than daily, and 30% did not currently inject. The main drug injected by the majority (67.5%) was heroin: 10% mainly injected amphetamines, 2.5% mainly injected other opiates, and 20% said they did not inject.

The relationship between the frequency of injecting and subjective dependency was examined as shown in Figure 3. It should be noted that the cells were too small to allow inferential statistics to be calculated.

Table 4:
Drugs used and injected (n=40)

Drug type	used %	used in last 6 months %	injected %
Cannabis	95.0	95.0	N/A
Alcohol	90.0	85.0	25.0
Tobacco	90.0	82.5	N/A
LSD	87.5	77.5	37.5
Heroin	85.0	75.0	77.5
Amphetamines	70.0	50.0	52.5
Benzodiazepines	70.0	50.0	27.5
Mushrooms	52.5	17.5	N/A
Other opiates	50.0	30.0	22.5
Volatile substances	45.0	15.0	N/A
MDMA	37.5	20.0	20.0
Nitrous oxide	37.5	12.5	N/A
Cocaine/crack	27.5	10.0	15.0
Homebake	20.0	10.0	10.0
Methadone	17.5	10.0	2.5
Barbiturates	15.0	10.0	5.0
Other	10.0	5.0	2.5

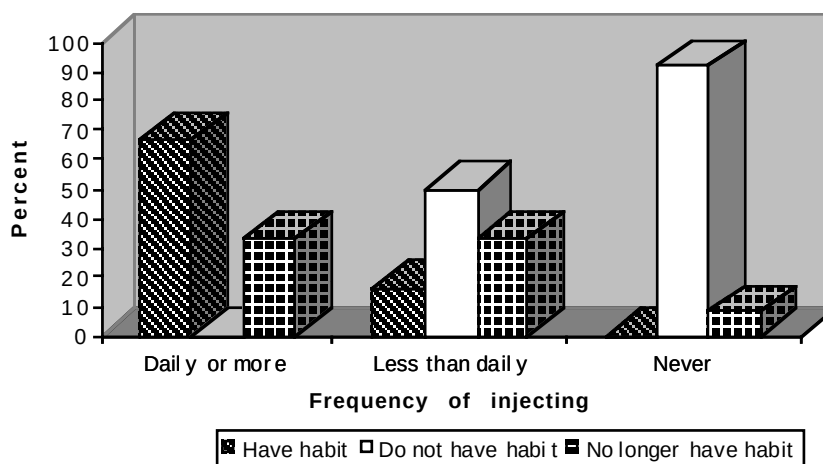


Figure 3:
Subjective dependency on heroin by frequency of injecting (n = 39)

Figure 3 shows that respondents who injected daily or more frequently were more likely to consider that they had a heroin habit than those who injected less frequently, while none of those who were not currently injecting considered that they had a habit.

The majority of respondents (76%) said they injected themselves, but 18% were injected by their sexual partner and 27% by a friend (categories not mutually exclusive). Men were more likely (83%) than women (56%), and older respondents (83%) more likely than younger

(56%) to inject themselves, and women were more likely (56%) to be injected by a sexual partner than men (4%) but the significance of these differences could not be tested due to small cell sizes.

Respondents were asked who was with them on the last injecting occasion. (Multiple) responses are shown in Table 5.

Table 5:
Others present on last injecting occasion (n = 34)

	n	%
Friends	23	67.6
Sexual partner	13	38.2
Other acquaintances	8	23.5
Other strangers	3	8.8
Dealer	3	8.8
No-one	1	2.9

Table 5 shows that almost all respondents were with other people on their last injecting occasion, and that these were most usually friends and/or sexual partners. The place of last injection is shown in Figure 4:

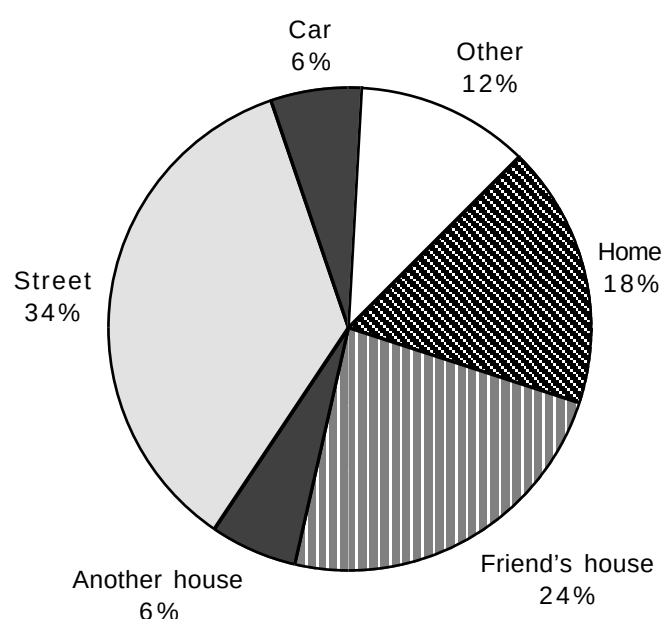


Figure 4:
Place of last injection (n = 34)

Figure 4 shows that more than half of the last injections took place on the street or in friends' homes, but that the single most frequent site was the street[‡]. Age did not appear to be a factor in these responses.

Respondents were asked whether they had had contact with a range of services/professionals because of their drug use. Most respondents (75%) had had at least one contact and 37.5% had had more than one. Responses can be seen in Table 6.

Table 6:
Contacts for drug use (n = 40)

Contact	n	%
Police	20	50.0
Doctor	17	42.5
Treatment agency	11	27.5
Hospital	9	22.5
Emergency accommodation	7	17.5
Detox. unit	3	7.5
Other	3	7.5
None	10	25.0

Table 6 shows that half of the respondents had been in contact with the police because of their drug use, and close to half had been in contact with a 'doctor' (not specified as their General Practitioner). Age and/or gender did not appear to be a significant factor in these findings.

3.2.4 Experiences of overdose

Respondents were asked whether, the last time they used drugs (not specified as heroin), they had had any alcohol to drink in the 6 hours, or taken benzodiazepines in the 12 hours before they scored. Eighteen respondents (45%) said they had drunk alcohol, and 10 (25%) said they had used benzodiazepines.

Just over half (52.5%) of the group had had some First Aid training and around 60% of this training had been within the previous two years.

Seventy percent of respondents knew (or knew of) at least one person who had died as a result of an overdose: 19 respondents (47.5%) claimed to know more than one person who had died. Sixty percent had been present at the overdose (not necessarily fatal) of at least one person, five (12.5%) had been present at two overdoses, and ten respondents (25%) had been present at three or more overdoses.

Twenty six respondents (65%) had not experienced an overdose themselves: of those that had, most had done so only once. Four (10%) said they had overdosed twice, and three (7.5%) said they had overdosed three or more times.

3.2.5 Respondents' most recent own overdose

Fifteen (37.5%) respondents, who claimed to have overdosed at least once, answered the questions in this section.

[‡] In this context 'street' includes public toilets, car parks, parks, bushland and other public spaces.

There was no clear pattern where the last overdose occurred. Responses included home, street (4 responses each); friend's house, car (2 responses each); dealers' house, another house, or some other location (1 response each).

Only one respondent was alone at the time: nine were with friends, six with a sexual partner, three with other acquaintances, two with strangers, one with the dealer and one with some other person (categories not mutually exclusive).

An ambulance was called in seven cases, but three respondents were uncertain whether one was called or not. Ten respondents needed help to recover, and six were taken to hospital - five apparently in the ambulance which had been called. The police were involved in only two cases.

3.2.6 Most recent experience of other's overdose

Twenty four respondents (60%), who had been present on at least one occasion when someone else overdosed, answered the questions in this section.

Again, there was no clear pattern where these overdoses took place. Eight occurred at home (presumably the victim's home); six at a friend's house or in the street; and one each at the dealer's, someone else's house, in a car, or in some other location.

In four cases, the respondent was the only other person present; in 17 cases other friends; in five cases the victim's sexual partner and/or strangers and in three cases other acquaintances were present.

The victim needed help to recover in 22 cases; the ambulance was called in 11 cases (although one respondent was not sure whether one had been called or not) and six victims were taken to hospital. The police were involved in only two cases, although, again, one respondent was uncertain.

3.3 Qualitative data

3.3.1 Knowledge and awareness of the causes of overdose

Respondents were asked a range of questions designed to assess their understanding of the pharmacological and physical processes and risk factors involved in opiate overdose.

In ten of the 21 interviews (23 people), respondents were asked outright "What do you think is the most common cause of overdose?". Mixing opiates with alcohol and/or benzodiazepines was given as the main cause of overdose by respondents in only two interviews. Mixing was also listed as an afterthought in two other interviews, where respondents had already suggested "*using too much*" was the main cause of overdose. All other respondents (80%) thought "*using too much*" and, to a lesser extent, "*really strong gear*" was the main cause of overdose:

R: There's always too many people out there going "Ohh, yeah, I can handle all this", just like dudes in the pub kind of thing, "I'll drink you under the table!" - it's the same kind of situation.

One of the respondents who suggested that mixing opiates and benzodiazepines was the main cause of death further suggested that the main cause of "*a lot of the OD's that have been happening lately*" was mixing non-heroin opiates (such as morphine) with benzodiazepines, "*and not anything to do with heroin*". At the other extreme, one respondent suggested that

overdose was a strictly psychological phenomena - that people dropping in and out of consciousness after using had to “*want to die*” to actually stop breathing.

A small proportion of respondents (seven interviews) were also asked how long it takes someone to overdose or, more specifically, “How long you should keep an eye on someone after they’ve shot up to make sure they’re going to be all right”. Of these seven interviews, respondents in three said injectors would be fine if they were still OK within 10 to 30 minutes. Respondents in two other groups said they had noticed two types of overdose:

Q: When someone OD’s what usually happens?

R1: There’s two types of OD.

R2: Yeah, like, I’m from over east where the stuff is twice as strong as what it is in WA, and when people OD there they don’t even get the needle out of their arm, they’re just dead, heart stopped. But I’ve noticed since I’ve seen a couple of OD’s over here, it’s like you’re just falling out of consciousness and forgetting to breathe but your heart’s still pumping .. It’s not pure over here.

A third group said specifically that someone could overdose up to 8 hours after shooting up. Finally, one respondent said that he felt that whether or not you overdosed some time after use depended on what sort of activity you did afterwards, suggesting as an example that if you went out to a night-club and got panicked that this might trigger an overdose.

Despite the small number of respondents who were aware that polydrug use was the main cause of overdose, respondents in all but two of the 21 interviews had some degree of awareness that heroin, alcohol and benzodiazepines had combinatorial effects. First hand experience was the most commonly expressed source of information about such effects. When specifically asked if taking benzodiazepines and heroin in combination could make someone more likely to overdose, respondents in nine of the 21 interviews agreed:

Q: What do you reckon about whether if you mix roheys and heroin in combination that’d make you more likely to overdose, or you don’t think it makes any difference?

R: I reckon you’ve got more of a chance of overdosing if you mix it.

Q: Why?

R: ‘Cause it’s just two different drugs .. You know, they’re both downer sort of things, but, you know, I dunno, I reckon, yeah, you’ve got more of a chance of overdosing for sure, because its just, more drugs you’ve got in your system isn’t it?

Clearance times, or the time taken for a drug to wear off to the point where it would not have an effect on the next drug taken, were also discussed in four interviews. In all cases, these respondents suggested times with some approximate link to intoxication times - ie. a minimum of 2 hours for heroin, 4 hours for alcohol and 6 to 24 hours minimum for Rohypnol.

Respondents in at least five interviews said they mixed alcohol, benzodiazepines and/or heroin in search of specific effects:

Q: How long do you reckon should leave it after drinking till the next time you shoot up?

R: When you're starting to sober up, just tipsy, that's the best time because it kicks in just right. But if you take it straight after a bottle of Jack Daniel's, then you're stuffed.

This behaviour seemed independent of knowledge about the danger of polydrug use, and will be discussed further in the section below on drug use patterns.

A line of questioning was pursued with all respondents regarding the time taken to *lose* tolerance to opiates. The specific example was generally expressed as “if you had a pretty reasonable tolerance and were taking, say, \$100 worth a day - could even take \$100 worth in a few hours or at one hit without dropping - and you got locked up or something and could not get any, how long do you reckon it'd be before your tolerance dropped to the point where if you tried to take \$100 worth again that you might overdose because of it?” Unfortunately this line of questioning caused some considerable confusion, which seemed as much to do with a poor understanding of tolerance issues as with the relative complexity and poor phrasing of the question. The answers given to the question were fairly broadly scattered: some respondents said they had absolutely no idea (three interviews); some respondents suggested a couple of months to a year (four interviews); others suggested two to four weeks (three interviews); some suggested about a week (four interviews); and respondents in the final five interviews (most accurately) said that it could take as little as two to three days. In many cases, including amongst those who gave correct answers, respondents stated or admitted that they were merely guessing. It should also be noted that no-one gave ‘reduced tolerance’ as a cause of overdose in response to the question about the most common causes of overdose above. At least two of those who gave accurate answers also indicated that they had had first hand experience of overdosing immediately after release from prison or youth detention centres. Respondents in another two groups who gave accurate answers also stated that they thought it would probably take alcohol or benzodiazepine use in conjunction with the heroin to actually kill someone, even if reduced tolerance did not help.

3.3.2 Buying heroin and other drugs

All respondents were asked what the cheapest possible score for heroin was in Perth at the moment. Most respondents were also asked about the availability and street price of other opiates and benzodiazepines.

All but four respondents stated that \$50 was the normal minimum deal for heroin, although in five of the 21 interviews respondents stated that some dealers would occasionally sell half a packet for \$25, usually as a “*special favour*”. One respondent appeared to buy only in quantities of \$200 or more at a time, although usually to split with other friends. Only two people claimed to have scored \$15 deals (containing enough heroin for a single hit only), although three others also claimed to know of people who had scored such deals. Several other respondents had heard of deals for \$15 or less, but usually through the media and two respondents stated without prompting that stories of \$7 - \$15 deals and ‘kiddie packs’ were “*complete crap*”.

The price and availability of benzodiazepines on the street was discussed in ten of the 21 interviews, with respondents giving price ranges from \$2 to \$6 for tablets of Rohypnol. Valium was also mentioned on one occasion as selling for \$1 - \$2 per tablet. Having said that, it appears that most respondents obtained benzodiazepines either through scripts or from friends who had recently obtained pills on a script. Purchasing benzodiazepines on the street appeared to be a backup strategy - people had done it, but did not seem to regard it as the standard or primary route to obtaining them.

Q: What's the minimum price?

R1: You can only score \$50 or \$100 - you can go halves with someone but dealers will only sell \$50s or \$100s.

Q: Heard anything about ..

R1: \$7 - no, that doesn't exist.

Q: What about benzo prices on the street?

R2: 4 for \$10 or 2 or 3 bucks each, but I get them prescribed and a script costs \$18.

All respondents were asked about the availability of other opiates at the moment. Morphine, almost universally in tablet / oral form, was mentioned as being available by respondents in 13 of the 21 interviews. Only two respondents mentioned cost, which in one case was “\$30 for a bottle” and in the other \$15 for a 30 mg tablet. Pethidine was mentioned as being available by both the Balga interview groups but nowhere else. The cost mentioned by one respondent was \$20 a shot. One of the Balga groups also mentioned that palfium tablets had been available for \$25 each. The sole Wanneroo respondent (interviewed last and several weeks after all other interviewing had finished) also claimed that smoking opium was currently easily available, but no other respondent had seen any for several years. One Northbridge respondent said he knew of somewhere to get methadone on the street, but again, this was a sole response.

In the early stages of the interviewing process, respondents were asked if they thought using alcohol or benzodiazepines ever influenced the decision to score heroin (ie. made it more likely). Most respondents seemed to regard the question as meaningless and it was dropped in later interviews. Only one respondent said he thought drinking made a difference, in that if he was suffering withdrawal symptoms then drinking alcohol “*put an edge on it* [the craving]” and made him more likely to want to score.

Approximately a third of the way through the data gathering phase two people raised the issue of exchanging goods for heroin, and a question about this was then put to most of the remaining respondents. Comments were made in seven interviews about dealers taking goods in exchange for heroin. Most respondents seemed to feel they were getting a reasonable deal out of it - that, for example, goods with a \$100 value at a pawnbrokers would be readily exchanged for \$100 worth of heroin. Some respondents differed, however, and stated that dealers ripped them off when taking goods in exchange for heroin.

Q: Do dealers take stuff you've nicked direct?

R1: Yep. Heaps of clothes - I've got bugger all clothes left at home.

R2: Neither have I. Shoes ..

Q: They give you gear for clothes?

R1: Clothes, jewellery, shoes, stolen goods, everything. For a 68 cm TV we only got a \$50 packet for it because we were that desperate. We said “just give us a fifty for it” because he didn't want to come and pick it up.

One respondent also mentioned a dealer who delivered door-to-door by using a different customer as a driver each day in exchange for shots of heroin along the way.

When respondents were asked if they usually scored off the same dealer, 19 (47.5%) said they had a regular dealer whom they used almost exclusively, and another 16 respondents (40%)

said they dealt mainly with a small circle of two to four dealers, usually with one predominating at any given time. Only three respondents said they dealt with “*anyone we bump into*” but two of these people also added that they normally only dealt with one or two dealers but were between dealers at the moment due to the disappearance of their regular dealer. One respondent said he had a single mobile phone number he called when he wanted to score, but the individual who turned up to make the delivery was not necessarily the same person all the time. When discussing changing dealers, many respondents described a pattern that could be likened to serial monogamy - one regular dealer superseded by the next, superseded by the next and so on as dealers became unavailable or as other dealers became known for better deals.

R: I had about 4 different dealers and I'd work my way through them until I found one. And in the city, everyone knows everyone, so if someone gets good gear everyone will go to him, then the next day someone else will have it and everyone will go to him - word gets around pretty quick.

Respondents were asked whether dealers were providing information about the relative strength of the heroin they were selling. Eleven respondents (27.5%) said dealers were giving consistent information about the relative strength of deals, with another six saying their dealers occasionally provided warnings about increases in strength:

Q: Ever been warned “watch out for this - it's particularly strong” and it has been?

R1: Mmm .. Well, what about that time with _____ ..

R2: Yeah!

R1: She came over and said “Take it easy on this, two people OD'd on it last night” and we thought she was just having us on to make us think it was shit hot gear and then I was mixing up and then R2 was watching the news and came in and said “Oh two people dropped last night!” and I said “Oh no!” and had about \$12.50 worth and woah!, it was insane stuff. There was no way I was going to go \$25 or \$50 worth after I'd heard 2 people had dropped on it.

Twelve respondents (30%) said dealers warned of quality as a selling point more than as an actual indicator of strength, and the remaining nine respondents said dealers never warned of relative strength or provided any other information. Some individuals who dealt with people who gave little or no information were quite scathing about it, suggesting that dealers “*don't give a fuck - all they want is your money*”. Finally, at least one person suggested that being warned of strength by dealers did not necessarily make any difference to use patterns:

R: One dealer in particular was warning me that people had been dropping off it. But I just didn't take notice, you know, like “wicked, good - more it is, more I'm going to be smacked” so, that's the way you think when you're on the stuff, you know .. you don't save a bit for later, you just, [makes hitting up motions] you know.

3.3.3 Using heroin and other drugs

Almost all respondents said they had used/injected in the street or in public space at some time, and that this was a common practice. There were a number of reasons given for drug use in public space, but the major one was that respondents were living at home with their parents, and therefore could not inject in their homes. A secondary, but common, explanation, however, was that respondents wanted to inject as soon as possible after they had scored. either because they did not want to be caught by police when they were holding drugs or, more usually, because they did not want to wait to use the drugs.

While almost all respondents talked of using on the street or in public space (eg public toilets because they were private, out of the wind and contained running water; back alleys and/or bushland or parks) most also indicated that they used in a range of other places including friend's houses and (less usually) cars. Almost no-one used drugs at their dealer's house. Those who were living with friends or partners, rather than parents, tended to use at home, which, for those who could, was preferable to using in public places. One couple who had been living with parents described using in toilets as "just horrible" and said, with relief:

R: Now we're back in ____ we just do it in the comfort of our own room.

To some extent, the place of use was opportunistic and strongly related to the place of scoring. For example, one partner in a Northbridge couple said:

R: When I had my regular dealer we used to pick up and go home and that, but now I'm just scoring on the street and just going in the toilets .. just to get it out of the way, you don't want to be walking around with it.

And another respondent said that he used to use in toilets because they were across the road from the dealer's house. Another respondent described where she and her boyfriend used in the following way:

R: If we go to score we either go to the toilets in the closest shopping centre or sit in the centre of a park where you're behind trees and can see.

Almost all injecting took place in the company of others, and only a few respondents had ever injected alone. Only two respondents indicated a preference for using alone: one because he said that others wanted to use his drugs, and the other because he was concerned about the transmission of blood borne viruses. Several thought that using alone was the sign of dependence:

Q: Do you prefer using with other people around?

R: Yes. It's better. 'Cause by yourself is like .. that's when you know you're a junkie.

Of those who used/injected in the company of others, most said that 'safety' (fear of overdose) was a concern. Many also said, however, that they used with others because the drugs were scored and split between groups of friends, lovers and/or siblings.

Non-injecting routes of administration

Only eight respondents said they had used heroin by non-injecting routes of administration: in most cases this was 'snowconing' (smoking heroin on a bong, with powder sprinkled on top of marijuana: the same approach can be used for smoking other powders, particularly

amphetamines). One respondent said he had “*smoked rocks*” in a bong (it was not clear whether he had used marijuana) and two had ‘chased the dragon’ (inhaled vapour from a strip of foil).

Q: When you smoked it, how did you smoke it?

R: Put it on alfoil and spotted it. Chasing the dragon.

Q: Where did you learn to do that?

R: I'd seen someone do it with hash oil first then I read up about it [heroin] that you could smoke it. So I thought “I'm not going to smoke it in my cigarette” - I've done that before - “but I'll just do it like hash”.

One respondent said he had snorted heroin. All but one of those who had used non-injecting routes of administration indicated that this had only been experimental and that they preferred to inject. The one exception was an older male who said smoking had been his initial route to addiction and that he had only shifted to injection after becoming addicted. A few of those who had not smoked or chased said they had heard of it, or seen it done.

The majority, however, had never used or heard of others using non-injecting routes of administration with heroin, and there were a number of comments to the effect that this would be a waste of heroin and/or that the ‘rush’ (only obtainable by injecting) was the effect that was sought. One respondent believed that this was because smoking took “*too long*”:

R: Smoking takes 2 minutes but injecting takes 15 seconds to reach the brain.

Injection risk reduction strategies

The main question here was whether respondents, when injecting, used half of the injection first and waited to feel the effect before using the rest, as an overdose prevention strategy. Some response to this question was given in all but one of the interviews.

Ten respondents said they had used, or would use, half of the shot first and wait a while before having the second half, under certain circumstances. In most cases this would be if they were warned by the dealer that it was really strong heroin, or if they were using a large shots (two respondents mentioned \$100 deals). Others said that they might use half and wait if the strength of the heroin was unknown. The period of time that respondents would wait was, in most cases, unclear.

One respondent, who claimed to inject twice (ie use half and wait) when his dealer warned him of a new strong batch, believed that those who used drugs in public space felt pressured by fear of the police to inject as quickly as possible. He recounted a recent experience when he and others were using a new batch of heroin and the police started to approach them, so people injected rapidly to get rid of it:

R: It was already cooked up and everything, we were fucked otherwise.

In contrast to these, there were a few respondents who typically injected in this way. Two, for example, said they preferred to use half of the heroin and then leave the rest until they were coming down:

R: Myself, I'll normally leave half in the spoon and see how the first half hits me, and if I'm satisfied off that I'll just suck the rest up into the fit and go put it in my room or something for once I start coming down. That way I've got two shots instead of one. So I've never dropped myself which is good.

Although only a minority claimed to use half and wait, most respondents had heard of this as a risk reduction practice, but said they did not do it. A variety of reasons for this were given: the deal was being shared anyway; respondents used the same dealer so that they knew what they were getting; users were “greedy” and wanted to use all the shot at once and so on. One respondent said:

R: I know me limit and I know a fifty's not going to drop me, no matter how good it is.

And another believed that if there were other (users) around:

R: You'd lose out if you mucked about like that.

Finally, respondents in one group said:

R: You should [use half and wait] but you don't - it might be too much for you to handle, but you don't think of that at the time.

Use of heroin with other CNS depressants

Respondents were asked about their use of heroin with benzodiazepines and alcohol. Most respondents used benzodiazepines (Rohypnol or ‘roheys’ were most frequently mentioned). Only six respondents said they never used benzodiazepines.

A number of respondents specified that they did not use benzodiazepines with heroin, because they understood the risks of overdose, although sometimes these risks could not be avoided:

R: If you know you're going to have both [heroin and benzodiazepines] most people would not take the benzos, but if you know you're not going to get on for a while, you'll take some, but you hope they'll have worn off by the time you get your smack.

Four respondents, however, described using benzodiazepines to boost heroin: one, the most extreme case, said Rohypnol made heroin last longer, that he took pills before or after injecting and that he used to use up to ten Rohypnol with heroin, but had recently reduced this to two or three because he had become aware of the dangers.

Most commonly, benzodiazepines were used as a substitute for heroin, to take the edge off withdrawal from heroin or as an intoxicant in their own right - sometimes with alcohol. One man described the violence that could be associated with using benzodiazepines, particularly when they were mixed with alcohol:

R: I remember having alcohol with roheys once. I went bezerk anyone who came near me I'd lash out. I ended up bashing my mate really badly .. That's another reason people take roheys - to pump themselves up.

Others used benzodiazepines to “calm themselves down” or to sleep, and one man, who was in supported accommodation said:

R: Out here I don't know nobody, so I'll go and have a few pills, something like that. It's just to escape reality for a little while, have a few drinks and pull some pills and get off my head and wake up the next day and think “what happened”?

There was little discussion of mixing alcohol and heroin, and of those respondents who mentioned that they knew it was not a good idea, most were not too clear why. One man said the standard practice amongst him and his using peers was to drink bourbon before having the heroin, which he said made them “*feel better afterwards*”. He did not seem to be aware that this could increase the likelihood of overdose.

3.3.4 Knowledge of overdose response strategies and experiences of overdose.

This section is broken into two sub-sections: people's understanding of what to do in an overdose situation; and people's experiences of overdose situations - in particular, people's experiences with emergency services.

Overdose knowledge

Three questions addressed respondents' knowledge of how to recognise that someone was overdosing and what to do about it.

Respondents were asked if they knew of any signs to tell if someone had overdosed rather than just fallen asleep. Of particular interest was knowledge of ‘snoring’, or the gargling sounds that precede cessation of breathing when the central nervous system is sufficiently depressed. Five people (12.5%) said, unprompted, that snoring was a danger sign. Nine others made mention of specific experiences involving snoring once prompted:

Q: Ever heard of someone talking about snoring as a bad sign?

R: No, but now that you mention it, the bloke I lived with [who used], all he ever done was gurgle and snore away - used to spin me out, specially when I was trying to watch telly. I'd punch him in the head - you know, when someone is snoring that usually stops them, but it never stopped him. He just snored so loud.

Other signs that someone had overdosed rather than just fallen asleep were also brought up, including:

R1: Breathing pauses, gasping, mumbling and colour changes, especially fingernails.

R2: Then they go blue and start gargling 'cause their lungs are collapsing.

Mumbling or absence of speech when prompted, eyes rolled back into the head, and absence of breathing or pulse were also mentioned. Some respondents commented on the difficulty of telling the difference between someone who is just ‘on the nod’ and someone who is overdosing:

Q: Has anyone heard any signs people have OD'd rather than just fallen asleep?

R1: No, no, how could you [tell] - you'd think they'd just gone on the nod.

R2: Yeah, you're sitting around with a whole bunch of friends and they're all on smack and they're all nodding, it's not like you're going to go and [mimes violent 'wake up!'] .. You're not going to spoil it for them.

At least one respondent appeared to regard being on the nod as the same thing as overdosing. Respondents in six interviews said they monitored friends who were on the nod by making sure they did not become unconscious, checking pulses regularly and/or squeezing hands and waiting for a response. Couples interviewed were particularly likely to monitor each other in this way.

Respondents were asked in both the quantitative pre-interview questionnaire and during the interview whether they had had first aid training, and if so, how recently. In the interview, 12 respondents (30%) stated that they had received course-based training within the past two years[†]. Only two respondents had had absolutely no training and no idea what to do if someone stopped breathing. Every other respondent had either some training at some point (frequently in school) or had picked up some minimum level of knowledge (eg roll the victim on their side, clear mouth, breath for them) from friends or self education. In at least two cases respondents had self-educated after "*having friends die in my arms*" or similar. However a number of those whose training had occurred more than five years ago expressed doubts as to whether their vague memories of first aid instruction would be good enough to actually be of any use in an emergency situation. In one interview, respondents stated that although they had done first aid as part of the Bronze Medallion in school, they would be reluctant to use that knowledge out of fear that they would make things worse. Although the question was asked of nearly all those with reasonably recent first aid training, no-one had any overdose-specific training.

Anecdotal reports suggest that in at least some parts of Australia street remedies exist for the revival of overdose victims which include injection of the victim with salt water, amphetamines or other agents to 'help' the victim. Respondents were asked if they had heard of "anything you could inject someone who has overdosed with to help them" in an effort to see if such mythologies are present amongst younger users in Perth. Only three people had heard of injecting salt water, but none had actually done it and all were dubious about its efficacy and stated they would rather call an ambulance and/or do regular first aid than "*mucking about trying to work out how much salt to use and that*". Two of these three had come from Sydney recently and said they had heard about it there. In one interview respondents had heard of using amphetamines, but had never done so and again stated they would rather use conventional first aid and call an ambulance before attempting such a measure. Respondents in three groups mentioned injection with adrenalin, but only as a joking reference to the movie *Pulp Fiction*[§].

[†]St Johns Ambulance Senior first aid certificate, a standard course, requires renewing every two years to be regarded as current.

[§]The movie features a black-comic sequence in which a character mistakes a large pile of heroin for cocaine and snorts a huge line of it before passing out. Another character finds her and, in a panic, rushes her to a dealer friend who responds to the emergency by using a monstrous needle to inject adrenalin directly into her heart, successfully reviving her.

Overdose experiences and emergency services

Respondents were asked to describe the last overdose event which they had experienced, whether their own or someone else's. Out of the 21 interviews, two interviews involved people who had no experience of overdose, and in another three no specific overdose event was described. A total of 19 overdose events were described in response to this question by respondents in the remaining 16 interviews. Of those 19 overdose events, an ambulance had been called on 11 (58%) occasions. In four of those 11 cases the victim was taken to hospital, in another three the respondent/s were unsure or did not say if the victim went to hospital, and in the remaining four cases the victim refused to go to hospital:

R: I overdosed outside ____ [retail outlet] and I was just walking on the way back from this dealer's house and I collapsed on the cement. This was the first time I'd seriously OD'd. And this lady called the ambulance and stuff and gave me CPR and mouth to mouth and that and revived me and I was up. The ambulance wanted to take me but I didn't go back with them. I stood up and I was still felt unaware that I was going to go over or drop again but I just wanted to get on the train as quick as possible so I could be around people.

The reasons why people did not want to go with the ambulance are discussed in more detail below. In three of the cases where an ambulance was not called, the respondent/s had driven the victim directly to hospital themselves. In total then, of the 19 overdose events described in response to this question, 14 (74%) involved the victim being attended at some point by emergency services.

The question of at what point an ambulance was called (if at all) is relevant. There is some suggestion in the data that ambulances were called as a later or last resort: that is, if the people witnessing the overdose found that they were not able to assist. For example:

I: How bad would someone need to get before you'd need to call an ambulance

R: If they'd stopped breathing kind of thing. And if, I dunno, you couldn't revive them within five minutes by slapping them around and putting water on them then, definitely, call an ambulance then.

Other respondents said they called ambulances "because no-one knew what to do" whereas in some cases where ambulances were *not* called it was because there was someone present who apparently *did* know what to do. In two of the five cases where no emergency services were involved, the victim had stopped breathing and was revived via mouth-to-mouth. In the remainder the victim had not stopped breathing but required external stimuli such as slapping, being walked about and/or placed under cold water to help them regain consciousness.

Factors which influenced the decision to call (or not call) emergency services to an overdose were of particular interest. Three particular factors discussed with respondents were fear of police attendance; cost of ambulance services; and having to go to hospital.

Respondents were asked if they would be worried about the police showing up if they called an ambulance for someone who had overdosed. Respondents in ten of the 21 interviews were aware that police were no longer supposed to attend overdoses, although respondents in three

of those cases said they were sceptical about it: in at least one case because of first hand experience:

Q: Is there anything you guys think we should know about overdose that we haven't asked you .. Is there anything you'd like to tell the government?

[laughter]

R1: Yeah, I've been told that if there's an overdose and the ambulance goes to it then the police won't go to it, but that's been proved wrong. You do get heroin overdoses and the police do rock up to it ..

R2: I've seen them just like, we were calling an ambulance up the other night at that party, I called the ambulance for that chick, and five minutes later the cops rocked up before even the ambulance got there. They got called up straight away and they go "what's going on here?"

Q: How long ago was that - a couple of months?

R2: Last Friday. [September 1997] We had about 3 cop cars at the house.

Respondents in another three interviews, although unaware of current non-attendance protocols, stated that they were not worried about police attending either because "*I wouldn't be there*" (when the ambulance arrived) or because they were already known to police as users. Respondents in only two interviews stated that they had concerns about police attendance which might influence their calling an ambulance:

Q: What about the cops and that - if you called an ambulance would you be worried about them showing up?

R1: In a way, yeah, .. Yeah, you would be, 'cause you're thinking they'd bust you and ..

R2: Then they're going to ask you where your dealer lives, then they're going to go and bash your dealer up

R1: Yeah, all the questions and shit like that, that's why people think twice about calling ambulances but .. 'Cause they've got the police worry.

Respondents in one group mentioned a concern about having their names attached to an overdose event (through giving their names when calling 000 or through questioning by police) for fear that would later cause them some sort of problems. At the other extreme, respondents in another interview mentioned a recent overdose in a car park in the city where they had called passing police officers over to help, who in turn called an ambulance and, aside from some rudimentary questioning, left the respondents alone.

Respondents in 12 of the 21 interviews discussed the issue of ambulance cost, and in three cases the topic was brought up spontaneously by respondents:

Q: Ever worried about the cops when calling ambos?

R: No, 'cause I know the ambulance isn't supposed to call the police unless someone has died.

Q: Do you remember where you heard that?

R: No. But I never call an ambulance because it's \$295 for somebody .. If the person has stopped breathing I'd call an ambulance, but if they're still breathing I'm not going to worry - I'll save them that money. 'Cause I've had people call an ambulance on me - I was on dexamphetamines and I started hyperventilating real bad so they called an ambulance and that happened three times in one day and it was \$295 times three I had to fork out .. So I wouldn't call an ambulance for anyone unless they really needed it.

Two other respondents made similar comments about not calling an ambulance “on somebody” unless absolutely necessary, due to the cost. Two respondents also commented on the social side-effects of ambulance bills, such as being harassed by parents about their bills. On the other hand, four respondents said they never worried about the cost because they never paid their bills. Some respondents said cost would not stop them calling an ambulance because the person who had overdosed would be the one who had to pay, and it was “*their stupid fault they dropped anyway*”. For most respondents the attitude seemed to be summed up by:

R: I'm not really worried about it, I just don't like it.

Social factors surrounding the act of calling an ambulance were mentioned by respondents in several interviews. One respondent said he felt it was the responsibility of the person whose house it was to make the call - if it was your house, you should call, but if it was someone else's house “*you don't want to step out of line*” by bringing attention on the place, and it should be their choice whether to make the call or not. Having said that, he added that if it was a close friend he would call the ambulance regardless. Two respondents said they would be scared about their parents finding out about their use (or association with users) if an ambulance was called. The role of emergency services in attracting other kinds of intervention will be discussed further below. Finally, and at the other extreme, respondents in one interview mentioned people they knew who had been socially ostracised for *not* calling an ambulance for someone who had overdosed and then died (in one case leaving the body and not telling anyone about it for 12 hours). Several respondents commented, when asked about the relevance of cost or police attendance, “*who cares when it's life or death?*” even if they later qualified their remarks by saying they would leave as soon as the ambulance arrived.

Respondents with first hand experience of ambulance attendances generally had positive things to say about ambulance officers, but several complained that ambulance officers were “*always just in this big rush to drag people off to hospital*” instead of assisting people on the spot.

Only five of the 40 respondents (12.5%) had been to hospital as a consequence of an overdose, with respondents in another three groups having some comments to make as a consequence of relatives', lovers' and friends' experiences. *All* comments made about hospital experiences were negative. Some respondents complained that hospital staff (particularly security staff) “*treat junkies like shit*”, and one respondent complained of

‘unnecessary’ administration of Narcan, but most complaints revolved around the connection between hospital treatment and other forms of intervention. The involvement of parents was mentioned by several respondents:

R1: 'Cause the first thing is, “we’ve got your son here, he’s OD’d, blah blah blah”

R2: My father almost killed me. After I got out of hospital, I went round to my dad’s and I didn’t know that he already knew. He grabbed me by the back of the hair, straight into the wall. “Aww .. What as that for?” - my nose was pissing out with the blood. He picked me up, threw me across the patio, picked me up again, threw me into the pool. “Do that shit again I swear to God you won’t be doing anything for the rest of your life!” My old man is a big bloke too.

Q: Do you reckon they should change the way they do stuff at the hospital, so they won’t tell your family about it?

R1: Yeah!

Another young respondent brought up welfare intervention:

Q: [Talking about Narcan] .. which they administer on the way to hospital

R: Yeah, and when you get to hospital welfare starts talking to you and they start involving the cops and everything.

Q: Tell us a bit more about that.

R: Um, well, my boyfriend went to hospital for OD’ing and I went with him, or, went with his mum the day after and he was sitting in the room talking to welfare and they were threatening they were going to involve the police and stuff. That if he didn’t say something ..

Q: How old is he? Or how old was he then? Sixteen then?

R: Well, he’s, it was just, not long ago, early this year and stuff like that.

Q: What did they want him to say that they were ..

R: Oh, I don’t know really, because it was just like, they were saying “oh”, like, “where do you get it” and stuff like that, they want to know where you get it, how much you buy it for and stuff like that .. And they want to know about the sex and stuff and ..

Q: And if he wasn’t going to tell them they were going to call the cops in on him?

R: Yeah. And because they asked him if he uses at home and he said yeah and no, and that’s when they started threatening him with the cops.

Q: Did you say his mother was with him at the time?

R: Ah, yeah, she come up the next day.

Q: Oh, she wasn’t there at time when welfare were talking to him?

R: No. Well, he was with some friends in ____ [southern suburb], and then he went to .. Perth .. Hospital? Children's ward .. yeah. And then me and his mum [indistinct] his mum, and we went up there together.

Q: What did, did welfare and that hassle his mum when she came up?

R: No, she just told them where to go.

Q: OK. But they didn't start talking about his ..

R: Ah, they started talking about it, saying he was too young and everything, and his whole life ahead of him and stuff like that and just saying if they've got any worries, or if she's got any fears that, you know, going to OD again, just ring 'em.

Respondents in at least three interview groups said they would far prefer to be treated on the spot by ambulance crews than be taken to hospital. This included the use of on-the-spot Narcan. Several respondents made comments that seemed to indicate that they felt that there was little or no point dragging someone off to hospital once they had regained consciousness. In general then, respondents seemed to dislike going to hospital unless absolutely necessary because: it was inconvenient and “blew the night”; because hospital staff were perceived as being likely to administer unnecessary treatment (such as Narcan) and to have little regard for respondents’ human dignity (as users); and, most overtly, because they were concerned about the possibility of attracting unwanted attention and/or intervention, be it from police, welfare or parents.

Respondents were asked what they knew about and what their experiences of Narcan were, as well as what they thought about the idea that Narcan should be available over the counter. Only two respondents had been injected with Narcan. Neither particularly enjoyed the experience:

Q: You said you'd been taken off to hospital - is that something you prefer not to do?

R: Yeah, or, well, it depends on how serious the overdose is. If I regain consciousness I prefer not to go because I prefer not being given Narcan, I don't like it. [Like, the first time I got Narcaned], all I remember is waking up, they [the ambos] were ripping my shirt open, my brand new Champion shirt, and putting all these things on my chest and I'm like “what's that, what's that?” - this is the first time I OD'd right. And they go “we'll just give you something to wake you up a bit” and said “I'm still going to be stoned, right?” And they didn't say nothing, they just pushed it in and I felt this full on rush coming and got up out of bed but I was strapped down and shit and I was just “this is horrible shit, what is it, it's making me feel warm and yukky, what is it?” It felt like I was on speed or something.

Q: And that was Narcan?

R: Yeah.

Some respondents complained that ambulance officers and hospital staff were overusing Narcan, and felt that it should not be administered to those who were still more or less

conscious. Aside from those with first-hand experience of Narcan, respondents in another three interviews knew people who had been injected with Narcan and respondents in nine interviews had at least heard of it although they had varying degrees of understanding about what it did. Surprisingly, respondents in the remaining seven interviews said they had never even heard of Narcan. All respondents with first hand or good second hand knowledge of Narcan agreed that people did not like having Narcan administered because of the loss of the high. When told that the effects of Narcan wear off in 30 to 45 minutes, some respondents seemed to regard this as being beside the point, and one respondent flat out refused to believe it:

Q: Do you know it wears off in about half an hour and you get some of the high back?

R: Uh .. do you?

Q: Yes

R: Are you sure? .. How do you know that?

Q: Because that's what the ambulance people tell me

R: Well I don't believe that. I'm not saying you're a liar, but I've just got no .. just that everyone I've seen who's been done never come back stoned.

Despite this, almost all respondents thought the idea of having access to Narcan over the counter or distributed like FitPacks was a great idea. Of the five people who expressed reservations, one suggested you would need to provide good information with it, three said it was stupid because “*you can't Narcan yourself, can you*”, and one felt that it was better to leave it to the emergency services than to get users to do it.

Finally, respondents were asked if they had any ideas for improving services so that people would be more willing to use them. Two respondents mentioned the cost of ambulances:

R: Instead of charging you [for ambulance attendance] they should just put it on your health care card. 'Cause we pay our taxes, so they should cover us, you know.

Respondents in six groups said that they just wanted the police not to show up. Respondents in two groups said it would be better if ambulances did what was necessary on the spot rather than taking people to hospital all the time. Another respondent said Narcan should be used as a last resort rather than a first resort by ambulance officers. One respondent (who had no first hand experience of Narcan) said ambulance officers should be able to administer Narcan intravenously rather than just subcutaneously or intramuscularly. Finally, one respondent recently from Sydney said there should be more detoxification facilities:

R: Because in Sydney there's a lot of places where you can go and you can just like you know, they don't pay, ask you for money or and anything like that and you can just go there and like when you're hanging out you find it hard to eat and sleep and all that sort of shit but .. They do have beds and food there, and showers and stuff like that and .. there should just be more places like that where people can just go and shit because .. when I was hanging out last time I was on the street and, jeez .. You just feel like robbing someone, so .. but you can't run so .. [laughs] you give that a miss ..

3.3.5 Exposure to and opinions about current harm minimisation materials and strategies

Respondents were shown a series of education materials including the Western Australian 'Horse and Hammer' postcard and posters and the black 'Heroin' card, and the South Australian postcards, posters and fridge magnets. The black card was very popular with those who had not seen it, and respondents often asked to keep them (although probably more for the face than for the reverse side). The South Australian materials were less popular although some respondents said they were attractive (perhaps more for the design than the content). Disposable resuscitation shields were demonstrated and distributed, and were very popular.

Most respondents had seen both the 'Horse and Hammer' cards and/or posters and the black 'Heroin' postcard. The South Australian materials were less well known: 11 respondents (27.5%) had seen some or all of them. Only one person said she had the fridge magnets in her house.

Not all respondents discussed the comprehensibility of the materials they had seen. There was some specific discussion by 11 respondents about the term 'slow it' used in the South Australian materials (as in "Don't slow it alone"): only three had understood that this was a reference to heroin, although one commented that this was not slang used in Western Australia. Others thought that it might be a reference to 'going slower' (ie not using drugs too quickly) or something to do with Narcan. Other comments about the comprehensibility of the South Australian materials included a failure to understand the slogan "It's rarely just the H", and some respondents mentioned their perception that there was confusion amongst younger people about the correct emergency number to ring (ie 911 as in American TV shows rather than 000).

There were some positive comments about the educational materials as a whole, including that they were useful, good to keep around for emergencies or a good idea for those who did not how to do CPR. One respondent said she had learnt to check for vomit or obstructions in mouth/throat before tilting the head back for mouth to mouth from one of the cards, and she believed that lots of people had similarly picked up specific tips from the cards.

Less positive responses included comments that the materials were not specific enough to show someone who did not know what to do how to resuscitate someone; that while the cards had been seen, they had not been read; that most people knew most of the information on the cards already, that people paid little attention to materials such as these, and that they were not useful as an information source. One respondent commented that postcards were too small and that posters were preferable.

One group of three respondents said that the black card was "*deceptive*" because deaths were blamed on the strength of heroin:

R1: I want to know who printed that [the black Heroin card] and why?

R2: So junkies can stick it on their wall!

R3: But it's not just heroin killing people, it's people mixing alcohol and Valiums and temazepams, lots of them, and then having heroin too.

In terms of the current (at the time) television campaign, which consisted of two advertisements, one showing the black 'Heroin' message, similar to the black card (although the black card was designed independently of this campaign) and one showing a young woman

lying on a slab in the morgue, comments were made in 12 of the 21 interviews. Most comments were negative, in that the commercials were thought to be ineffective in stopping young people already using heroin from doing so. These included comments that they did not present information not already known to the using community; that the body did not look real; that the only people likely to be influenced were little children or people who would not use heroin anyway; that the body in the morgue was “*pretty funny*”; and that the message was not strong enough and needed to show injecting or needles.

One long comment, quoted below, referred to the advertisements on trains taken from this campaign:

R: I don't like them .. I see it on the trains as well, where they have "Heroin on our streets is twice as deadly" - no it's not! It hasn't got any better. I think, when I look at it, it's just such a dark, deathly thing to just have out on the streets - in a way it's good I suppose because it's showing people what really is out there, but there's people, little kids and stuff, that shouldn't have to look at that. And that girl in the morgue - I dunno, I have mixed feelings about it. I think it would have a lot more effect if they showed the before and after if you didn't use and if you didn't use what a person would look like - that would work with me. People see a person dead in a morgue, they think its like rape or something "oh, that's never going to happen to me" but if you're using, everyone looks like this in the end

A similar comment was:

R: Have [a TV advertisement] of someone throwing up with a photo of their vomit in the air throwing up. Do things like that, not things that try and shock you, because it's bullshit. Because the ads on TV saying "the heroin on the streets is twice as deadly" blah blah blah, because it's not - it's not at all. A couple of years ago the heroin was so much better. The heroin is not twice as deadly or good now. It's just bullshit.

There was also discussion with some respondents about the ‘dob in a dealer’ aspect of the current campaign. One respondent thought that it would lead to violence as users got beaten up under suspicion of having doxed other users in, and another argued that the message did not differentiate between dealers who used and dealers who sold drugs for money alone, or between dealers who would sell to anyone compared to dealers who would not sell to young children.

A final comment about the TV commercials were that the corpse shown was a women, while the majority of those who were dying were men[†].

To close the interview, respondents were asked to suggest ways or messages to assist young people to avoid overdose. Most interpreted this as an opportunity to present their own overdose prevention strategy. In the first place, there were a series of comments about the need to persuade young people not to start using drugs in the first place, or to stop using,

[†] One might also add that the corpse shown was a young woman, while the majority of those that are dying are men older than 29.

including one comment that primary prevention materials should emphasise the power of addiction involved: “*It’s powerful, not like dope or something*”.

A second group of suggestions contained practical advice for avoiding overdose:

R: Just tell them like, stuff, you know, if you get a whole lot of it, just take half at a time. You know, see, take a bit, see what it’s like. Then you save a bit for when you’re coming down, you know. ‘Cause that’s the best way. ‘Cause that way when you’re coming down, you just have another lot then you’re just back up again .. Got no chance of overdosing then.

Other comments along these lines included advice to take the “*right amount*” for body weight and tolerance, and not to take large doses, and suggestions about not mixing drugs:

R: Don’t pop pills or take anything else with it. If you are going to take pills, have the smack first and see how you go then only take one or two pills at a pop to see how they go before taking more.

Other respondents wanted to see educational materials with better resuscitation instructions, or called for the introduction of a test kit that users could use on the street to establish the strength of their heroin.

The Rockingham group made some comments which suggested that they thought there was little that could be done to stop young people from initiating drug use, and that people had to work it out for themselves, although novices could be encouraged to look after their mates.

4. Summary and Conclusions

The final section of this report has been structured as follows. First the quantitative and qualitative data are summarised and, where appropriate, related to the literature on overdose. One or more recommendations are made at the end of each summary section. The summaries are followed by a more general statement about what has been learned from doing the research, and recommendations for further investigation. The report ends with a re-statement of all recommendations.

4.1 The study group

This is a group of predominantly white, male young people. Their non-Aboriginality should be noted. Although data were not collected on ethnicity other than Aboriginal or Torres Strait Islander origin, fewer than five respondents appeared to be from any other than an Anglo-Celtic background. Around half of the group were unemployed and many of the rest were still at school.

There were apparently high rates of detention, particularly among the males. However, there may have been misunderstandings about the wording of the question “Have you been in prison (or youth detention centre) within the last five years?” with some of the young people who were enrolled in Ministry of Justice Court Diversion or other programs, or had been in a police lock-up overnight for some minor offence, ticking the yes box. More research is needed to establish the proportion of young drug users who have been incarcerated in juvenile or adult detention centres.

As in our 1991/92 study of young illicit drug users (Loxley, 1997) the majority of respondents in the present study were not 'street kids'. Indeed more than 60% of respondents under 17 were living in the family home with at least one parent, as were 25% of older respondents.

The drug use patterns of the group should be understood in terms of the selection criteria of the study: it should have been the case that only people who had used heroin in the last six months were interviewed, but obviously there were a few respondents who did not meet the selection criteria. What is of interest, however, is the range of drugs other than heroin that was also being used. As well as alcohol, cannabis and tobacco, the majority of respondents had used LSD, amphetamines, benzodiazepines and/or psychoactive mushrooms at some time, and half had used opiates other than heroin.

More than half of the group either felt they had a 'heroin habit' or that they had had such a habit at some time in the past. This was particularly the case among older respondents, two thirds of whom felt they were or had been dependent on heroin. This is somewhat unexpected, given the age of respondents and the fact that fewer than one in three had had contact with a drug treatment agency. Again, however, further research is needed to establish exactly what respondents had in mind when they said they had a 'heroin habit', but the relationship of this to frequency of injecting would seem to suggest that it shared one important characteristic with clinically accepted notions of dependence.

Although there had been minimal contact between respondents and drug treatment agencies, half had been in contact with the police, and close to half with a doctor because of their drug use. These findings replicate those in other studies (Loxley, 1997; Lenton & Tan-Quigley, 1997) where it has been found that doctors (usually general practitioners) are the health professionals with whom drug users are most likely to have contact. The high rate of contact between respondents and the police should be a matter for concern, although, as with the question about detention, the nature of the contact has been unspecified. It is equally of concern that 25% of the group had not had contact with any service provider, although it is possible that they accessed health information through their pharmacy or mobile needle exchange van when they purchased needles. Questions about needle access were not asked in this study, and establishing whether needle provision agencies are a useful resource for young people would be a fruitful area for future research. In earlier research (Loxley, 1997) it appeared that pharmacists were not as 'user-friendly' as they might have been expected to be and it would be useful to establish whether this had changed.

The rates at which respondents had experienced overdose - either personally or in other people - can be compared in some respects to those found in the 1994 ASHIDU. In the present study, 60% had been present at least one overdose: in ASHIDU 63% of younger respondents (under 25) had been present at least one non-fatal overdose. We found that 35% of respondents claimed to have overdosed at least once: in ASHIDU 44% of younger respondents said they had done so (Loxley, Carruthers & Bevan, 1997). The similarity of these figures, bearing in mind that the WA respondents were younger than the ASHIDU respondents, demonstrates that involvement in the heroin lifestyle is almost immediately risky.

- *Every attempt should be made to encourage young drug users to make contact with health or welfare agencies who can offer support and advice. Those agencies that are being accessed by young people - such as general practitioners and community pharmacies - should be encouraged to support young drug users and offer information and referral sources which can facilitate a more healthy lifestyle.*

- *Young people who experience dependence on heroin should be encouraged to seek professional help, where their suitability for methadone and/or other programs can be assessed.*

4.2 Knowledge and awareness of the causes of overdose

Darke and Zador (1996) found that most ‘overdoses’ were fatalities due to multiple drug use: generally combinations of CNS depressants such as opioids and alcohol and/or benzodiazepines. Many drug users, however, believe that overdoses are more to do with the strength or quantity of heroin than with polydrug use, and our data confirm that trend. Most of our respondents believed that using too much heroin was the major cause of overdose: to some extent this view was tempered by a belief that ‘really strong’ heroin was the cause, but this, of course, amounts to the same thing. None of the respondents mentioned inconsistencies in the strength of heroin as a factor in overdose (indeed there was a strong view that most of the heroin that they bought was not strong, and did not vary much in strength). There was some awareness that mixing CNS depressants could increase the risk of overdose but this was relatively unformed and the mechanisms unknown. Moreover, some respondents deliberately mixed these drugs in search of specific effects.

There was little understanding of the concept of tolerance, or how quickly it could be lost, and equally little understanding that an overdose could occur some hours after heroin had been used. Although a few respondents talked about ‘two sorts of overdose’ the general impression was that most respondents thought that if a user had not ‘dropped’ after up to 30 minutes, s/he was not going to (see also comments below on snoring). This contrasts strongly with what is known from research: ie that the majority of overdose deaths occur some time after the last dose: most up to and including three hours later, but some even later still. .

In general, then, there was little adequate knowledge of the causes and mechanisms of overdose. In particular, failure to understand the risks of mixing drugs was common, as was a failure to understand that not all overdoses occur ‘at the point of the needle’.

- *Education about the causes and mechanisms of overdose is vital if it is to be prevented. All drug users must be taught about the risks of mixing CNS depressants and that this is a primary cause of overdose; the length of time that should elapse between using different drugs; the approximate period it takes to establish and lose tolerance and the fact that the majority of overdoses are not instantaneous but occur gradually over some hours.*

Specific recommendations for education materials and practices to address these concerns will be made in a later section.

4.3 Buying heroin and other drugs

Few respondents were able to buy heroin in less than \$50 deals, and reports of \$15 ‘kiddie packs’ appeared - to this group at least - to be largely a media fantasy.

Benzodiazepines were readily available and cheap, and often legally obtained from prescriptions. Oral morphine was also readily available and relatively cheap, while other opiates appeared to be more expensive and less available.

Most respondents bought their drugs from known dealers who sometimes warned about heroin strength, although some respondents recognised that this could be a marketing ploy, and others chose to disregard the warnings.

- ***The ready availability of benzodiazepines and oral morphine in pharmaceutical preparations should be investigated and monitored by the appropriate authorities. Doctors should be encouraged not to prescribe these preparations to drug seeking young people, but to make appropriate referrals to drug treatment agencies.***

4.4 Using heroin and other drugs

The questionnaire data revealed that over a third of the most recent injecting occasions took place on the street or in public space. In the interviews respondents also said that using/injecting in the street or public space was a common practice. Earlier research with older and more established users in Perth has demonstrated that injection in public space is relatively uncommon (Bevan, Loxley & Carruthers, 1996; Lenton & Tan-Quigley, 1997) and we surmise that it is a characteristic of younger users. Indeed, it appeared to be those respondents who could not use in their homes because they lived with parents who were most likely to use in public space. There are clear risks associated with such use in terms of the pressure to inject as rapidly as possible to avoid detection; lack of aids to hygienic use such as sterile water, and lack of telephones if there should be a problem. It was also clear that some respondents would have preferred not to have to use drugs in public space, but could not see any alternative.

Anecdotal information received during the commission of the study suggested that some drug users go to public places such as pubs and cafes immediately after using heroin, so that they will be noticed, and help sought, if they overdose. However, they are more likely to be evicted by apprehensive staff who do not want to be associated with drug use or users.

The quantitative and qualitative data both support the finding that few respondents ever injected when they were alone: this may be a characteristic of the sociability of adolescents and/or a function of scoring and therefore using with other people. Similar tendencies were found in the 1991/92 study, when most young injectors were using amphetamines (Loxley, 1997): it is interesting that the social arrangements of young people injecting drugs do not seem to vary with the drug.

There was little or any support among this group for smoking or inhaling heroin. Most respondents could not countenance the view that the primary use of heroin should be by any route other than injection and there was little if any discussion of heroin smoking or inhaling as an overdose risk reduction measure. Most respondents, moreover, although aware that 'use half and wait' was an effective overdose risk reduction measure, did not do so. The reasons given for this varied, and it appears to be an area where more research is needed. Specifically, we need to know what drug effect is being sought by young users, and how that can be obtained in the safest way.

The questionnaire data showed that almost half of the respondents had drunk alcohol, and a quarter had used benzodiazepines in the six and 12 hours respectively before their last use of heroin. As noted above, some respondents said they mixed heroin with other CNS depressants in order to obtain specific effects, and some used benzodiazepines (specifically) to take the edge off withdrawal or as a substitute for heroin when it was not available. In general, the use of benzodiazepines was widespread and, as has already been noted, they were both widely available and cheap. The concomitant use of benzodiazepines with powder drugs has been noted in the literature as giving rise to a variety of problems (Darke, 1994) and their casual use by so many young heroin users should be cause for considerable concern, apart from their specific potential to increase the risk of overdose.

- ***Street and public space injecting by younger drug users, and the risk of overdosing when in a place where help cannot easily be sought is a major - and possibly growing - concern. A variety of strategies should be undertaken to address this, from encouraging young***

people to wait to inject until they get home or to a safe place; suggesting to parents who know that their teenagers use drugs that injecting at home and under supervision is safer than doing so in public space, and encouraging staff of pubs and cafes to call for ambulances for drug users on the nod, rather than evicting them.

- *A campaign to encourage smoking or inhaling heroin as an alternative to injecting should be undertaken. This should be accompanied by accurate and simple information on how to smoke or inhale heroin, and might best be undertaken by the WA Substance Users' Association with appropriate funding.*

4.5 Knowledge of overdose response strategies and experiences of overdose

Respondents were not well versed in recognising the symptoms of overdose, particularly snoring, and there was some confusion between this and the normal being on the nod experienced by heroin users. This seems to be part of a general failure to appreciate that not all overdoses are instantaneous. However, it was also clear from the descriptions of ways in which some respondents did monitor their friends, that there was considerable scope to teach young users ways in which they could look after each other when they were using.

Over half of the respondents claimed in the questionnaire to have had some First Aid training, and this seems reassuring, but only a minority of that training had occurred within the previous two years, and a number expressed doubts about their ability to render assistance in the event of an emergency. On a more positive note, few of our respondents used dubious measures such as injecting with salt water or amphetamines as a way of assisting with overdose, saying that they preferred to call an ambulance.

The descriptions in the questionnaire data of respondents' overdose experiences, whether their own or someone else's, are confirmed by the interview data. It is clear that most of these events took place in the company of others, and that respondents were, on the whole, not reluctant to involve the emergency services (whether by calling an ambulance or going directly to the hospital) if they thought that it was necessary. The finding that 74% of the events described in the interviews involved emergency services, is in marked contrast to most of the literature which suggests that many overdoses are not reported. In the 1994 ASHIDU, in Perth, for example, 34% of last overdoses involved hospital, ambulance or medical service: this was lower than the national average which was 48% (Loxley et al, 1997). It may be that the willingness of Perth IDU to call for help in the event of an emergency has improved since 1994: and this is consistent with the finding in the OOPs! report that 57% of respondents who had been present at an overdose had called an ambulance (Corry & Penna, 1997). It may also be that younger drug users who have started using heroin at a time when there is considerable interest in overdose, have different, and in this respect better, strategies than older and more experienced users.

There remains, however, a concern about the point at which ambulances were called: often, it seems, after other attempts at resuscitation had failed. It could be argued that what is needed, is for drug users (and, indeed, the rest of the community) to respond to suspected overdoses in the same way as they do to motor vehicle accidents: that is, call an ambulance first, and then continue first aid until one arrives.

The other major issue is whether fear of the police attending prevented some respondents from calling an ambulance, as is suggested by the literature. Around half of our respondents, however, were aware that police no longer attended overdoses, although some scepticism was expressed, and only a few respondents gave fear of police attending as a reason for not calling

the ambulance. There were, however, other constraints against calling an ambulance, including the cost, fear of having to identify themselves when telephoning emergency, and a concern that patients would be taken to hospital when it was not necessary.

Concern about being taken to hospital emerged as a major issue for our respondents. To a very large extent, this was related to a real or perceived concern that hospitals would inform parents or 'the welfare' if a juvenile was admitted to hospital with a suspected overdose. Concern was also expressed about possible interactions between welfare agencies and the police. One horror story (surely too real to have been invented) about the way a father reacted when told by the hospital that his son had had a heroin overdose is a graphic illustration of how a well meaning intervention can have an appalling impact. At the very least, that young man should have been told by hospital staff that his father had been informed about his admission.

Finally, on the issue of Narcan: its use by ambulance staff is so recent in Perth that few of our respondents had experienced it, although it has been used in hospitals for years. Predictably, they did not enjoy the experience. There was little good understanding of what it is or how it works, and a number of respondents had never heard of it, although most thought making it directly available to users would be a good idea.

- *While using drugs alone does not appear to be a particular risk in this age group, materials should continue to emphasise the dangers of solitary use and the value of using in a group and monitoring friends' conditions.*
- *First aid training for drug users is of benefit if it is appropriately directed. Subsidised first aid courses for drug users should be widely available and general first aid for the community should include training in how to respond to a suspected drug overdose.*
- *While messages about the need to call ambulances to suspected overdoses have clearly had an effect, they need to be maintained, and it needs to be stressed that calling an ambulance should be the FIRST not the LAST response. Young people's concerns about the cost of calling ambulances need to be addressed.*
- *The message that police will not attend with ambulances is known and believed by some young users, but not by all. Continued effort to spread this message is needed. Police should be encouraged to respect the ambulance protocol and their responses should be monitored.*
- *The single biggest reason why young people do not utilise emergency services is fear of unwanted intervention by police, parents and/or welfare. Because of this, on site treatment is preferred by most users, and ambulance staff should be encouraged to consider whether treatment can be appropriately delivered at the site without recourse to hospital.*
- *Drug users repeatedly complain about poor treatment at the hands of hospital staff, and it should be clear that users have the same rights to humane and ethical treatment as anyone else. Where users are underage there is a particular problem, in terms of the hospital's duty of care. While it might be appropriate to notify the parents of juveniles with suspected overdoses, it would be helpful to discuss such notification with the young person, particularly if they are aged between 16 and 18. If parents are to be called in, the young person should be informed of this as a matter of course.*
- *If parents are called in, particularly when they have no prior knowledge of the young person's drug use, they should be provided with some information and support so that they can be helped to react in an appropriate and informed manner.*

- *Welfare services in hospitals should be made aware that harassment of juveniles by them reduces the likelihood that the young person will call an ambulance on future emergency occasions.*

4.6 Exposure to and opinions about current harm minimisation materials and strategies

Demonstrations of harm minimisation materials and discussion about them suggested that the South Australian materials were not appropriate for many in this group and, presumably, other young users like them. The postcards and fridge magnets were too esoteric, too abstract and the print too detailed and small to hold their attention, although the bright colours and attractive designs were appealing. The “Horse and Hammer” series rated very little mention, and the black West Australian ‘Heroin’ card seemed to be a much better approach, attested to by the fact that many of the respondents had read and could understand and recall what was said on both sides. Slogans from the TV and poster campaign were also recalled.

Despite that, there is still a question about the nature of the information that should be conveyed by these approaches. The strongly worded negative response by some respondents to the message on the reverse side of the black ‘Heroin’ card and to the TV and poster campaign, leaves one in no doubt that it is not possible to fool drug users with messages that their experience with drugs refute. And while it might be argued that the card and the campaign were aimed more at the general community than at users, users are part of the community and they see and experience the same messages. This is particularly the case with posters in railway stations with which young people without their own cars are very familiar. The message on the poster, however, contradicts both what is known about heroin overdose and young users’ experiences. For young users at the bottom of the heroin ‘food chain’ the heroin is *not* “Twice as strong and twice as deadly” especially as it is likely to have been of a similar strength for the relatively short time they have been using.

- *A variety of education strategies are needed, including materials such as posters and pamphlets, peer education and train the trainer courses for youth workers and treatment agencies. Innovative ways, such as the OOPs! project, to make contact with those young people who are not in touch with standard agencies should be maintained and expanded.*
- *There is a need for a range of educational materials from the simple one liner (eg. “Using pills and heroin within 12 hours of each other is the single largest cause of fatal overdose”) through to information intensive leaflets or booklets (covering, for example, symptoms of overdose, what to tell the 000 and ambulance operators, overdose specific resuscitation in detailed steps, etc.)*
- *Materials should reflect local terminology. Direct adoption of materials developed interstate or overseas may be inappropriate and unnecessarily confusing.*
- *It is important that young people are made aware that they CAN prevent overdoses by not mixing drugs. All education/prevention materials that make any mention of the reasons heroin is dangerous must also mention the role of polydrug use.*
- *Polydrug pharmacology is poorly understood. Detailed information about clearance times and other relevant factors should be made available to peer educators, WASUA and others working with drug users.*

- *Education materials should be developed to address the issue of tolerance and loss of tolerance. These should be widely available particularly in youth detention centres, prisons, detoxification and rehabilitation centres: ie anywhere where drug users are concentrated and (however temporarily) separated from drugs.*
- *Risk reduction techniques should be couched in positive terms. 'Use half and wait' is less appealing to a young person than 'leave some for when you're coming down' which suggests improved technique and may prove a more fruitful approach.*

4.7 Future research

This study, although small and rapid, has demonstrated the value of investigating overdose among young drug users. The major aim was to explore the cultural understandings which underlie young people's heroin use in general, and overdose in particular: although the first part of that objective could barely be touched upon in a preliminary investigation such as this one, we have addressed young people's understandings of overdose in some detail and the recommendations above attest to the fact that much that is of practical benefit has emerged. It is also important to note the similarity of findings and recommendations between this study and the report of the OOPs! project, even though the latter was not focussed at teenagers. These similarities attest to the reliability of our findings.

At the time of writing we have been informed that the external funding sought to extend this study will not be forthcoming. Despite that, we have included recommendations for further study in the hope that we, or some other research team, will be able at some time to expand the research.

Methodologically we have learnt, again, the difficulty of doing research - particularly focus group research - with young drug users. In the event only two focus groups were held: this might be just as well since we observed (both researchers were present at both focus groups) that the format allowed some respondents to be very vocal and others very silent. Our recommendation for more detailed research with young people is that it should only be done in small groups with respondents who know each other well, or face to face with a single respondent.

The collection of quantitative data was also difficult in the group format which necessitated self completion questionnaires, albeit with assistance. The questionnaires were badly completed in some cases, and we would recommend that all such data should be collected through the interviewer administration of a questionnaire, which should be as short as possible.

Maher (1996) suggested that perhaps the only way young people could cope with the deaths of their peers was by distancing themselves and their own drug use from that of their deceased friends. Although not too many of our respondents had deceased friends, many had friends who had overdosed but there did not appear to be too much distancing. On the contrary, our respondents seemed to take overdose as a given and some seemed almost resigned to it. Whether that resignation is indicative of low self efficacy with regard to overdose prevention remains to be established in further research, but it is clearly important in terms of preparedness to change behaviour in response to prevention campaigns.

The detailed findings of the study have thrown up some specific questions that should be investigated in future research:

1. What proportion of young drug users have been incarcerated in juvenile or adult detention centres?

2. How do young users define a 'heroin habit'? When do they consider that a 'habit' warrants clinical attention?
3. How can young people who use drugs be brought into contact with health or welfare agencies that can support them?
4. How can young people with heroin dependency be attracted into treatment?
5. How useful are needle distribution agencies (particularly pharmacies) as a health resource for young drug users?
6. What effects are young people seeking from opiates and how are these obtained? How can risky practices such as rapid injection of an entire hit, or mixing opiates with benzodiazepines and/or alcohol be minimised in a way which still allows young people to obtain the effect they are seeking?

5. Conclusion

This report contains both good and bad news. We should take heart from the good news (eg that young drug users are not reluctant to call ambulances) but not allow it to lull us into a false sense of security. We should learn from the bad news (eg that very few fully understand about tolerance and/or the dangers of mixing CNS depressants) and develop materials to address these issues. Importantly, however, we must maintain an awareness that this report is built around the responses of a small group of young drug users and that we do not know how representative these young people are of their peers. Hopefully, it will be possible to undertake further research and widen our understanding of the meaning of overdose to young opiate users.

6. Recommendations

- *Every attempt should be made to encourage young drug users to make contact with health or welfare agencies who can offer support and advice. Those agencies that are being accessed by young people - such as general practitioners and community pharmacies - should be encouraged to support young drug users and offer information and referral sources which can facilitate a more healthy lifestyle.*
- *Young people who experience dependence on heroin should be encouraged to seek professional help, where their suitability for methadone and/or other programs can be assessed.*
- *Education about the causes and mechanisms of overdose is vital if it is to be prevented. All drug users must be taught about the risks of mixing CNS depressants and that this is the primary cause of overdose; the length of time that should elapse between using different drugs; the approximate period it takes to establish and lose tolerance and the fact that the majority of overdoses are not instantaneous but occur gradually over some hours.*
- *The ready availability of benzodiazepines and oral morphine in pharmaceutical preparations should be investigated and monitored by the appropriate authorities. Doctors should be encouraged not to prescribe these preparations to drug seeking young people, but to make appropriate referrals to drug treatment agencies.*
- *Street and public space injecting by younger drug users, and the risk of overdosing when in a place where help cannot easily be sought is a major - and possible growing - concern. A variety of strategies should be undertaken to address this, from encouraging young people to wait to inject until they get home or to a safe place; suggesting to parents who know that their teenagers use drugs that injecting at home and under supervision is safer*

than doing so in the public space, and encouraging staff of pubs and cafes to call for ambulances for drug users on the nod, rather than evicting them.

- A campaign to encourage smoking or inhaling heroin as an alternative to injecting should be undertaken. This should be accompanied by accurate and simple information on how to smoke or inhale heroin, and might best be undertaken by the WA Substance Users' Association with appropriate funding.*
- While using drugs alone does not appear to be a particular risk in this age group, materials should continue to emphasise the dangers of solitary use and the value of using in a group and monitoring friends' conditions.*
- First aid training for drug users is of benefit if it is appropriately directed. Subsidised first aid courses for drug users should be widely available and general first aid for the community should include training in how to respond to a suspected drug overdose.*
- While messages about the need to call ambulances to suspected overdoses have clearly had an effect, they need to be maintained, and it needs to be stressed that calling an ambulance should be the FIRST not the LAST response. Young people's concerns about the cost of calling ambulances need to be addressed.*
- The message that police will not attend with ambulances is known and believed by some young users, but not by all. Continued effort to spread this message is needed. Police should be encouraged to respect the ambulance protocol and their responses should be monitored.*
- The single biggest reason why young people do not utilise emergency services is fear of unwanted intervention by police, parents and/or welfare. Because of this, on site treatment is preferred by most users, and ambulance staff should be encouraged to consider whether treatment can be appropriately delivered at the site without recourse to hospital.*
- Drug users repeatedly complain about poor treatment at the hands of hospital staff, and it should be clear that users have the same rights to humane and ethical treatment as anyone else. Where users are underage there is a particular problem, in terms of the hospital's duty of care. While it might be appropriate to notify the parents of juveniles with suspected overdoses, it would be helpful to discuss such notification with the young person, particularly if they are aged between 16 and 18. If parents are to be called in, the young person should be informed of this as a matter of course.*
- If parents are called in, particularly when they have no prior knowledge of the young person's drug use, they should be provided with some information and support so that they can be helped to react in an appropriate and informed manner.*
- Welfare services in hospitals should be made aware that harassment of juveniles by them reduces the likelihood that the young person will call an ambulance on future emergency occasions.*
- A variety of education strategies are needed, including materials such as posters and pamphlets, peer education and train the trainer courses for youth workers and treatment agencies. Innovative ways to make contact with young people, such as many of those in this study who were not in touch with standard agencies, should be developed.*
- There is a need for a range of educational materials from the simple one liner (eg. "Using pills and heroin within 12 hours of each other is the single largest cause of fatal*

overdose”) through to information intensive leaflets or booklets (covering, for example, symptoms of overdose, what to tell the 000 and ambulance operators, overdose specific resuscitation in detailed steps, etc.)

- *Materials should reflect local terminology. Direct adoption of materials developed interstate or overseas may be inappropriate and unnecessarily confusing.*
- *It is important that young people are made aware that they CAN prevent overdoses by not mixing drugs. All education / prevention materials that make any mention of the reasons heroin is dangerous must also mention the role of polydrug use.*
- *Polydrug pharmacology is poorly understood. Detailed information about clearance times and other relevant factors should be made available to peer educators, WASUA and others working with drug users.*
- *Education materials should be developed to address the issue of tolerance and loss of tolerance. These should be widely available particularly in youth detention centres, prisons, detoxification and rehabilitation centres: ie anywhere where drug users are concentrated and (however temporarily) separated from drugs.*
- *Risk reduction techniques should be couched in positive terms. ‘Use half and wait’ is less appealing to a young person than ‘leave some for when you’re coming down’ which suggests improved technique and may prove a more fruitful approach.*

7. References

- Bevan, J., Loxley, W., and Carruthers, S. (1996) *Getting on and getting off in Perth, 1994. Report of the Australian Study Of HIV and Injecting Drug Use (ASHIDU)*. Perth: Curtin University of Technology, National Centre For Research Into The Prevention of Drug Abuse.
- Commonwealth Department of Health and Family Services (1996) *National Drug Strategy: household survey. Survey report 1995*. Canberra: AGPS.
- Corry, A. & Penna, F. (1997) *Review of the Opiate Overdose Prevention Strategy Project: June - August, 1997*. Perth: Murdoch University.
- Darke S. (1994) Benzodiazepine use among injecting drug users: problems and implications. *Addiction*, 89 (4), 379 - 382.
- Darke, S. & Zador, D. (1996) Fatal heroin 'overdose' A review. *Addiction*, 91(12), 1765 - 1772.
- Lenton, S. & Tan-Quigley, A. (1997) *The FitPack study: a survey of 'hidden' drug injectors with minimal drug treatment experience*. Perth: Curtin University of Technology, National Centre For Research Into The Prevention of Drug Abuse.
- Lenton, S., Boys, A. & Norcross, K. (1997) Raves, drugs and experience: A study of drug use among a sample of people who attend raves in Western Australia. *Addiction*, 92 (10), 1327-1337.
- Loxley, W. (1997). *At risk and unprotected: findings from the Youth, AIDS and Drugs (YAD) Study*. Perth: Curtin University of Technology, National Centre for Research Into the Prevention of Drug Abuse.
- Loxley, W. & Ovenden, C. (1995) Friends and lovers: needle sharing in young people in Western Australia. *AIDS Care*, 7 (3), 337 - 351.
- Loxley, W., Carruthers, S. & Bevan, J. (1995) *In the same vein: First report of the Australian study of HIV and injecting drug use (ASHIDU)*. Perth: Curtin University of Technology, National Centre for Research Into the Prevention of Drug Abuse.
- Loxley, W., Carruthers, S. & Bevan, J. (1997) Overdose among Australian injecting drug users: findings from the Australian Study of HIV and Injecting Drug Use (ASHIDU). *Paper presented at the International Opioid Overdose Symposium*, 14th August, Sydney.
- Maher, L. (1996) *Illicit Drug Reporting System (IDRS) trial: The ethnographic monitoring component*. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.
- Swensen, G. (1997) *Overview of opioid related deaths, WA January - August 1997*. Unpublished paper, WA Drug Abuse Strategy Office.
- Task Force on Drug Abuse (1996) Mortality caused by opioids Western Australia 1995. *Statistical Bulletin* Number 2, August.
- Zador, D., Sunjic, S. & Darke, S. (1996). Heroin-related deaths in New South Wales, 1992: toxicological findings and circumstances. *Medical Journal of Australia*, 164, 204-207.