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## Indicators of an increase in heroin availability in Western Australia

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### KEY FINDINGS

- Since 2002, heroin has consistently been the preferred drug of choice among the WA IDRS user sample.
- There is evidence that heroin in WA is perceived by users in the IDRS sample being as 'easy' or 'very easy' to obtain.
- The perceptions of users interviewed in the IDRS are that over recent years heroin purity levels have been increasing.
- In recent years there have been increases in the proportion of IDRS respondents reporting recent use of heroin and in increases in the number of days of use of the drug in the previous 6 months.
- This increased level of heroin use has been accompanied by an increased incidence of overdose, including a higher proportion of respondents in the WA IDRS user sample reporting that their most recent overdose had occurred in the last 12 months, and an increased number of narcotic overdose events attended by St John's Ambulance Association.
- Despite the trend in the above indicators, there has not yet been a return to the very high levels of overdose seen in the late 90s. This is probably largely attributable to purity, which although fluctuating and increasing, has not yet reaching the sustained high purity levels seen in the pre-'drought' period.
- However, the data provide no indication of whether there have been increases in new initiates to heroin use in the general community.
- Assuming that the trends in heroin availability and purity continue or increase, it is essential that the training of users and other potential overdose witnesses in overdose prevention and management including naloxone administration is expanded.

### INTRODUCTION

It is well documented that in 2001, the Australian market for illicit drugs experienced a serious disruption to the supply of heroin<sup>1</sup>. This event, colloquially referred to as "the heroin drought" saw a substantial decline in both the availability and purity of heroin, while the price of a gram in Perth rose to \$750, rendering it the most expensive market for heroin in Australia at the time<sup>2</sup>. The market for heroin in Perth has never fully recovered from this. A brief resurgence was observed in the next few years only for the market to collapse a second time in 2006.

Since then indicators collected by the IDRS have continued to suggest trend toward increased heroin use, but with a great deal of fluctuation. The last decade however, has seen most heroin indicators generally trending upwards, suggesting a sustained increase to heroin use as the predominant drug of use among the WA IDRS sample.

This bulletin examines these indicators and considers the implications of a resurgence of heroin use among people who inject drugs (PWID) in Perth.

### METHOD

The Illicit Drug Reporting System (IDRS) has been running in Western Australia since 2000 and serves as a monitoring and early warning system of changes in trends in illicit drug use<sup>3</sup>. In compiling this information, it triangulates data collected from people who regularly (ie: within the last month) inject drugs, key experts who regularly work with users of illicit drugs and secondary indicator data such as police seizures and ambulance callouts.

It needs to be noted that the IDRS is not a representative sample of drug injectors, but rather comprises annual samples of sentinel groups of injectors with similar characteristics, which allow trends among these samples of similar people who inject drugs to be tracked over time.

In 2015, 89 West Australians who injected illicit drugs on an at least monthly basis were interviewed, recruited through user support agencies and snowballing techniques. For the purposes of this bulletin, WA IDRS data from 2000-2015 has been compared with the national IDRS data set. Where this data was not available, data from the NSW IDRS data set has been used as a comparison, being one of the jurisdictions least affected by the 2001 disruption to the Australian heroin supply. Seizure data obtained from the Australian Crime Commission and ambulance callout data from St John's Ambulance Association has also been analysed.

**DEMOGRAPHICS**

The 2015 the WA users sample was broadly similar to that of the previous year. Despite some superficial differences, only an increase in numbers identifying as heterosexual was found to be of statistical significance. This suggests that it is valid to draw comparisons between data obtained from the 2014 and 2015 WA user samples.

Consistent with trends over recent years, the mean age of the sample has continued to increase. The mean age was 44 in 2015, up from 43 in 2014, 42 in 2013 and 41 in 2012. Major demographics are presented in Table 1 below.

**Table 1: Demographic characteristics of the WA 2015 IDRS sample**

	2014 (N=98)	2015 (N=89)	Sig (p)
Mean age	43	44	NS
Male (%)	60	63	NS
English speaking (%)	98	99	NS
ATSI (%)	6	2	-
Heterosexual (%)	85	97	0.01
Mean years of school	10	10	NS
Completed trade/tech (%)	48	62	NS
Completed uni/college (%)	15	12	NS
Unemployment (%)	77	75	NS
Prison history (%)	51	44	NS
In drug treatment (%)	50	36	NS

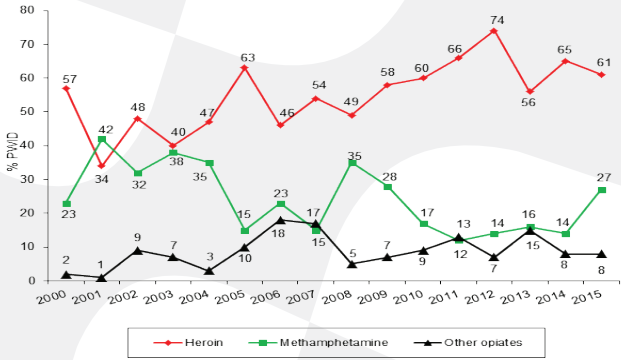
Source: WA IDRS participant interviews  
 NS - Not Significant  
 - Numbers too small to permit testing for statistical significance

**FINDINGS**

Heroin has remained the drug of choice among the WA user sample since the 2001 disruption to the heroin supply. Since 2008 the numbers in the WA IDRS sample nominating heroin as their drug of choice have

generally trended upwards (despite a relative fall in 2013) and for the most part have been in excess of the 57% nominating heroin as their drug of choice prior to 2001 (Figure 1). Similarly, heroin also remained the drug most commonly injected in the month prior to interview (54%) a position it has held since 2009.

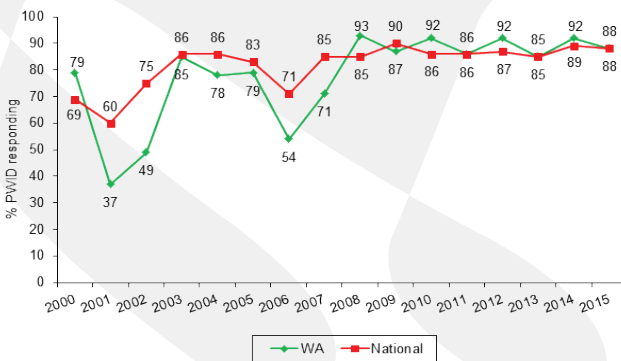
**Figure 1: Drug of choice in the WA and national samples 2000 to 2015**



Source: WA IDRS user survey

Perceived availability of heroin as reported by IDRS samples unsurprisingly declined during both 2001 and 2006, but has since improved and remained relatively stable with the vast majority of WA respondents describing heroin as 'easy' or 'very easy' to obtain. Since 2008, user reports of heroin availability in WA have consistently been higher than that recorded prior to the supply disruption in 2001 and either equal to or exceeding national IDRS figures (Figure 2). It is worth noting however, that this measure has to be treated with some caution. It has been probably shown the least variance in the IDRS data set over the years, only showing marked changes during the heroin shortage in 2001. This is likely because assessments of availability are probably affected by a proximal recall bias where users are likely to recall current availability to availability in recent times and so gradual changes in availability are less easy to detect.

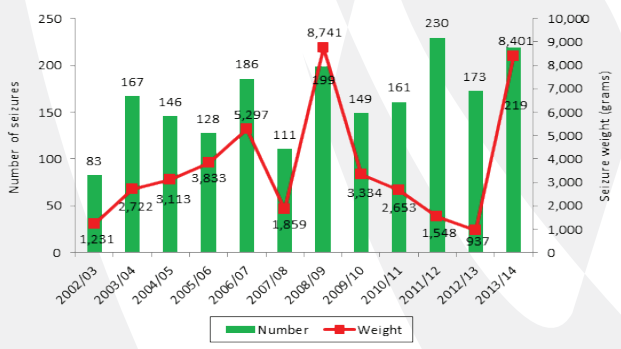
**Figure 2: User perceptions heroin being 'easy' or 'very easy' to obtain WA and National IDRS samples 2000-2015**



Source: WA and national IDRS user surveys

It is interesting to consider the high levels of perceived ease of availability reported by users in the IDRS samples since the post shortage period against available police data. The number of heroin seizures in WA has been variable but showing a gradual increasing trend since the post-shortage period. The ACC reports that compared to other states and territories, in 2013-14 WA reported the largest percentage increase in the number of seizures (26.6 per cent) compared to the previous year's data<sup>4</sup>. Although this is consistent with the hypothesis in this paper that heroin availability is increasing in WA, a caveat here is that with police seizure data it is that the extent to which this reflects gradual increased drug availability or increasing police activity is often unclear. Seizure weight data also shown in Figure 3 shows an almost 8-fold increase from 937 grams in 2012/13 to 8,401 grams in 2013/14, the highest reported since 2008/09. Trends in weights of seizures are often characterised by great availability as they can be greatly affected by small numbers of very large seizures. Figure 3 shows that apart from an outlier year in 2008-9 the weight of heroin seizures by WA had been declining from 2006-7. It is too early to say whether the large weight of heroin seizures seen in the 2013-14 sample is indicative of a increasing trend in these data or will be another outlier.

**Figure 3: Number and weight of heroin seizures by police in WA 2002/03-2013/14**



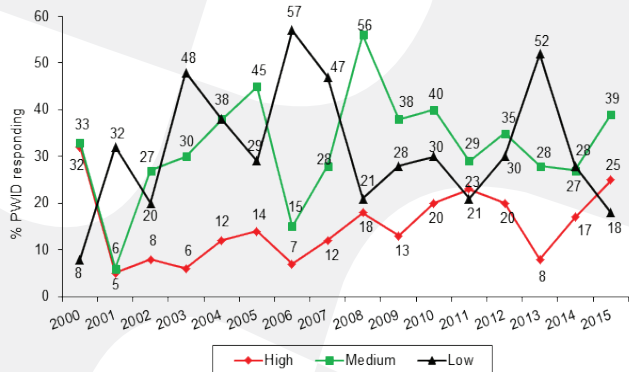
Source: Illicit Drug Data Reports 2002/03-2013/14 (Australian Crime Commission)

In 2015 IDRS samples perceptions of purity had increased from the previous year with an increased proportion of users surveyed describing it as 'high' or 'medium' while numbers describing it as 'low' fell for the second year running. While 'low' purity was the most common response in 2013, by 2015, it had the least number of users reporting it in any year since 2000 (Figure 4).

The proportion of WA users reporting heroin purity as 'high' has been consistently higher than the national figures for most years since 2005. In 2015, not only was the proportion of WA respondents describing the purity of heroin as 'high' the largest it had been

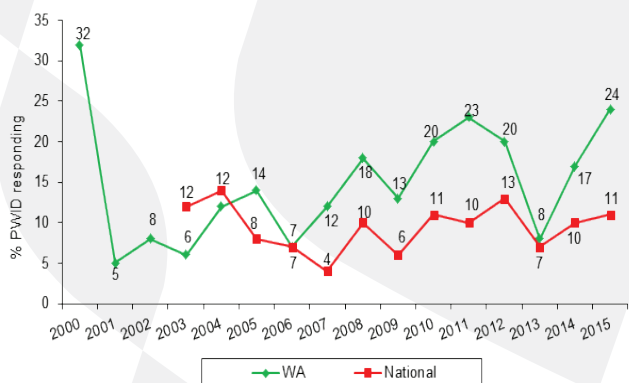
since 2000, but was also the highest reported in any Australian jurisdiction (Figure 5). It should be noted however, that user perceptions of purity may be quite subjective, and also likely to be affected by a proximal recall bias.

**Figure 4: User perceptions of heroin purity among the WA user sample 2000 - 2015**



Source: WA IDRS user surveys

**Figure 5: User perceptions of heroin purity as 'high' in the WA and national user samples**



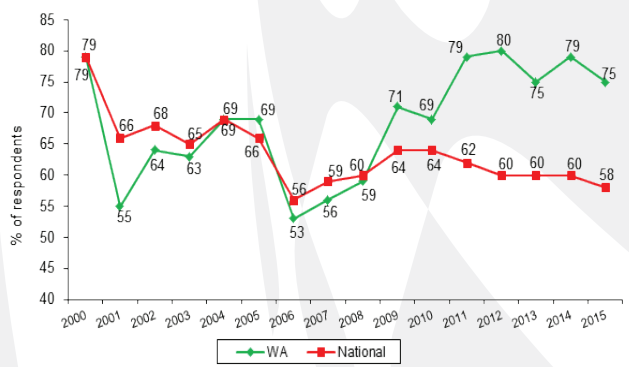
Source: WA and national IDRS user surveys  
 Note: National figures of user perceptions of purity were not reported prior to 2003.

Police seizure data reported by the Australian Crime Commission (ACC) seems to suggest that for the last few years that WA has the highest purity of heroin seizures in the country<sup>4</sup>. However, these data should be treated with caution. Whereas Victoria, for example, analyses all seizures for purity, in WA only a very small number of seizures are analysed for purity, usually where there is a prosecutorial reason for doing so. Thus in 2013/14 the ACC purity data is based on only eight street-level seizures of heroin.

The 2012 sample contained the highest proportion of recent heroin users ever recorded by the WA IDRS. In 2015 this returned to levels seen in 2013, but still remains much higher than the low of 2006. It has also consistently remained higher than the national figures with 75% of WA IDRS respondents reporting use of

heroin in the past six months in 2015, compared to just 58% in the national sample (Figure 6). It must be considered however, that this proportion remains lower than those seen in the 2015 samples in NSW (91%), the 2015 ACT (79%) and was approximately equal to that in the Victorian 2015 sample (74%). Furthermore, whilst the data suggest that a greater proportion of the WA IDRS sample have recently used heroin, it is not clear whether this is reflective of a broader trend in heroin use in the general community or changes in the drug use patterns of the IDRS sample itself, which as we have cautioned previously, is not representative of use in the wider injecting community.

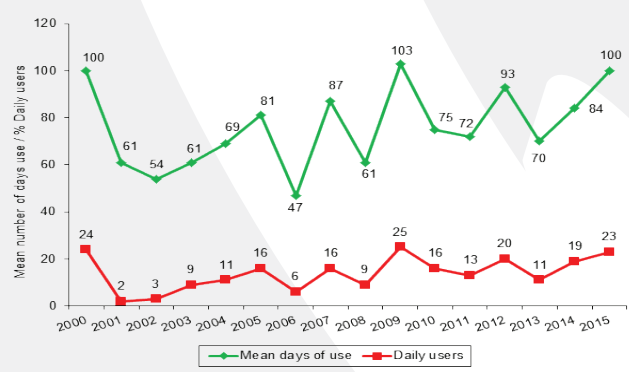
**Figure 6: Recent (last six months) use of heroin in the WA and national user samples 2000-2015**



Source: WA and national IDRS user surveys

Furthermore, Figure 7 shows that for the second year running there has been a substantial increase in the mean days of heroin use, resulting in one of the highest levels recorded by the WA IDRS. Numbers of respondents using on a daily basis has also increased for the second year running and is now the highest it has been since 2009.

**Figure 7: Mean days of use & daily users of heroin in the WA IDRS sample**

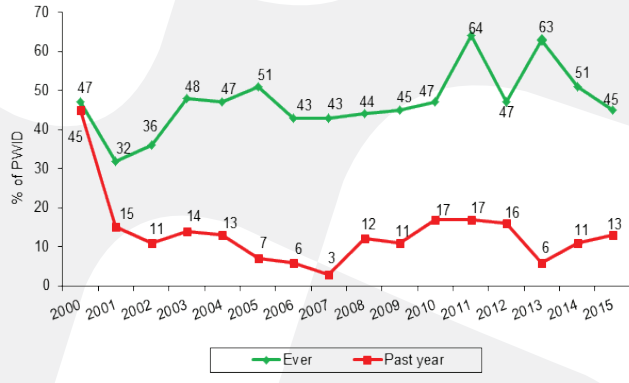


Source: WA IDRS user surveys

One of the strongest indicators of increasing heroin availability and use is overdose rates. Figure 8 shows self-reported lifetime and past year rates of overdose among the IDRS samples. This shows that over this

period among those who had ever experienced a heroin overdose, roughly 10% had had their most recent overdose in the past year in 2013, 22% in 2014 and rising to 29% in 2015. That is to say, those with a history of overdose are increasingly more likely to have experienced their most recent one very recently, likely a reflection of continuing ready availability, and increasing or variable purity and levels of use.

**Figure 8: Life time and recent history of opiate overdoses among the WA PWID sample, 2000-2015**



Source: WA IDRS user surveys

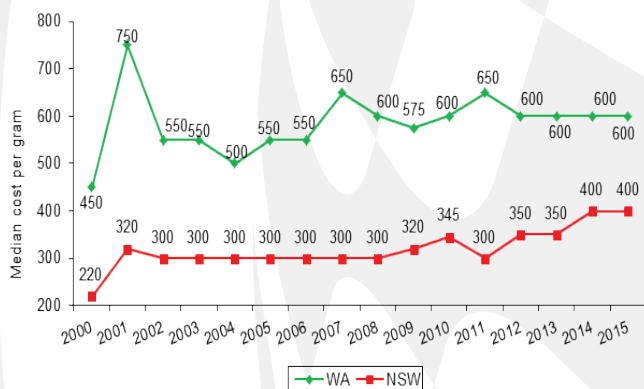
Similar patterns are observed with regard to ambulance callouts to narcotic overdoses reported by the ambulance service in WA, with numbers in 2014/2015 being the highest observed in the state since 1999/2000 (Figure 9). It is also of note that in 2013/14, St John's Ambulance data for the first time distinguished between overdose incidents directly attributable to heroin and those caused by narcotics more generally. Of these overdose callouts in 2014/15, 75% (n=530) were directly attributed to heroin, thereby exceeding the total number of ambulance callouts for any narcotic overdose during 2013/14.

**Figure 9: Ambulance call-outs to narcotic overdoses 1999/2000 -2014/2015** Source: St John's Ambulance Association



Whilst noting the above trends, one indicator which has remained relatively stable since the ‘drought’ has been the price of a gram of heroin as reported by the WA IDRS sample. Although the median price of a gram of heroin in WA has declined from the high of \$750 immediately following the ‘drought’, and having stabilised at \$600 across the last four years, the drug still remains relatively expensive when compared to the NSW 2015 figure of just \$400 per gram (Figure 8).

**Figure 10: Median price of a gram of heroin**



Source: WA and NSW IDRS user surveys  
 Note: NSW data has been used due to national data on median price not being reported prior to 2011

A number of Australian jurisdictions including WA are currently operating take-home-naloxone (Narcan®) programs to assist in the prevention of opioid overdose morbidity and mortality<sup>5, 6</sup>. In WA some 150 potential overdose witnesses (drug users, their family and friends) had completed the WA program at time of writing. In the 2015 WA user sample, 11 (12%) reported having completed such a course, and four of these had since used naloxone to revive between two and 10 individuals who had overdosed. Further, of those respondents whose primary drug of choice was heroin, but had not completed the course, 50% (n=27) indicated that they would be willing to participate, 46% (n=25) said that they would be willing to carry naloxone on their person and 50% (n=27) that they would be willing to administer naloxone to someone experiencing a narcotic overdose.

## SUMMARY & IMPLICATIONS

Considering the above trends as a whole it seems that, notwithstanding the second relative collapse in the market in 2006, since the heroin shortage of 2000-2001 the illicit drugs market in WA has experienced a gradual increase in heroin availability. Apart from 2006, heroin has remained the drug of choice of the WA IDRS sample since 2003, and the most injected drug since 2009. WA IDRS participants reporting recent use of the drug in the last six months has trended upwards since 2006, as has the mean days of use to the point

where both these indicators are now very similar to pre-‘drought’ levels of 2000. IDRS participant reports of availability have stabilised since 2008 with over 85% of those responding to the survey consistently describing heroin as either ‘easy’ or ‘very easy’ to obtain. Reported purity of heroin has undergone considerable fluctuations, but the 2015 sample saw both the highest number of respondents describing it as ‘high’, and the least number describing it as ‘low’ since 2000. The WA ambulance overdose callout figures are also consistent with the trends within the IDRS user interview sample.

## CONCLUSION

The majority of IDRS indicators are consistent with the view that the illicit drug market in Perth has experienced a slow but sustained increase in heroin availability which is evident among this sentinel sample of people who inject drugs. That there has not yet been a return to the very high levels of overdose seen in the late 90s is probably largely attributable to purity, although fluctuating and increasing, not yet reaching the sustained high purity levels seen in the pre-‘drought’ period. While the data provide no indication of whether there have been increases in new initiates to heroin use in the general community, it reinforces the need to continue to enhance and expand the strategies which have been put in place to prevent and manage opioid overdose among current users. These include the training of users and other potential overdose witnesses in overdose prevention and management including Basic Life Support, emphasizing the importance of calling an ambulance as part of an emergency response to overdose and continued provision of peer training in the use of naloxone. Responses from IDRS participants suggest that peer-driven education in the use of naloxone as a part of narcotic overdose management has widespread acceptability to WA heroin users which supports its further promotion and expansion as a viable and valuable strategy to address the risk of opioid overdose in the community.

## REFERENCES

1. Degenhardt L, Day C, Gilmour S, Hall W. The “lessons” of the Australian “heroin shortage”. Substance Abuse Treatment, Prevention, and Policy 2006; 1(1): 11.
2. Fetherston J, Lenton S. West Australian Drug Trends 2002. Sydney: National Drug and Alcohol Research Centre, 2003.
3. Stafford J, Burns L. Australian Drug Trends: Findings from the Illicit Drug Reporting System (IDRS). Sydney: NDARC, 2014.

4. Australian Crime Commission. Illicit Drug Data report 2013-14. Canberra: Commonwealth of Australia, 2015.
5. Lenton S, Dietze P. Explainer: what is naloxone and how can it help save drug users who overdose? The Conversation, November 4 2015, 2015. <https://theconversation.com/explainer-what-is-naloxone-and-how-can-it-help-save-drug-users-who-overdose-48812>.
6. Lenton S, Dietze P, Olsen A, Wiggins N, McDonald D, Fowlie C. Working together: Expanding the availability of naloxone for peer administration to prevent opioid overdose deaths in the Australian Capital Territory and beyond. Drug Alcohol Rev 2015; 34: 404-11.

### SUGGESTED CITATION

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