Australian Government
Australian Institute of Criminology

Research in Practice

DUMA No. 23 February 2012

Pharmaceutical drug use among police detainees

Simon Ng & Sarah Macgregor

Key findings

- In light of increased concern regarding the illegal use of prescription medication and the extent of the diversion of pharmaceuticals into the black market, the Australian Institute of Criminology (AIC) incorporated a set of new questions into its Drug Use Monitoring in Australia (DUMA) program in 2011.
- Analysis showed that one in three (36%) of 825 adult police detainees self-reported using either buprenorphine, methadone, morphine, benzodiazepines or dexamphetamine at least once in the past 12 months.
- Benzodiazepines were the most commonly used pharmaceutical drug among police detainees (25%), followed by morphine (12%), buprenorphine (8%), methadone (7%) and dexamphetamine (4%).
- Of those detainees who had used pharmaceuticals, as many as two in three (63%) reported obtaining them from at least one of a number of illegitimate sources. This equates to a prevalence of 23 percent across all detainees interviewed.
- A larger proportion of detainees (16%) were classified as illegitimate benzodiazepine users than illegitimate morphine (9%), buprenorphine (5%), methadone or dexamphetamine users (3%, respectively).
- The most common method for obtaining pharmaceutical drugs illegitimately was to receive them from family or friends without paying. Overall 14 percent of all detainees reported doing so at least once in the past 12 months.
- Despite obtaining pharmaceutical drugs predominantly from family or friends, the vast majority of self-reported users said that they were “easy” or “very easy” to obtain on the street (without a prescription). Benzodiazepines were most frequently reported as easy or very easy to obtain on the street (86%), followed by buprenorphine and morphine (76%, respectively).
- More than half of those detainees using buprenorphine (59%) and morphine (53%) knew of someone dealing the drug at the time of their arrest. This was the case for 47 percent of dexamphetamine users, 42 percent of benzodiazepine users and 38 percent of methadone users.

What is DUMA?

Commencing in 1999, the DUMA program is Australia’s largest and longest running data collection system on drugs and offending, and captures information on more than 4,000 alleged offenders (not yet convicted) each year across nine locations throughout the country. DUMA currently operates from sites in New South Wales (Bankstown, Parramatta and Kings Cross), Queensland (Southport and Brisbane), Western Australia (East Perth), South Australia (Adelaide) Victoria (Footscray) and the Northern Territory (Darwin) and is comprised of a two-stage methodology using an interviewer-administered self-report survey, followed by voluntary urine testing. DUMA is unique in this regard, with urinalysis providing a reliable and objective measure of the prevalence of very recent drug use among the police detainee sample. Regular analysis of DUMA data facilitates ongoing monitoring of drug use rates, including the timely provision of data to local law enforcement, health and criminal justice practitioners. For further information about the DUMA program see Gaffney et al. 2010.

Methodology

In light of increased concern regarding the illegal use of prescription medication and the extent of the diversion of pharmaceuticals into the black market, the AIC incorporated a set of new questions into its third quarterly DUMA survey in 2011. These new questions were administered to 825 adult police detainees with the aim of providing updated information about the prevalence of pharmaceutical drug use, the extent to which such drugs are obtained through illegal or illegitimate means, and perceptions of their availability. Five pharmaceutical drug types were included in the survey:

- Buprenorphine (Suboxone or Subutex, or Norspan)
- Methadone
- Benzodiazepines (Valium, Xanax, Temazepam, Serepax, Mogodon or Rohypnol)
- Morphine (MS Contin, MSIR, Avinza, Kadian, Oramorph, Roxanol or Kapanol)
- Dexamphetamine (Ritalin, ADD medication)

The results presented in the remainder of this paper are based on analysis of these five pharmaceutical drug types.

Results

Prevalence of use

Overall, one in three police detainees (36%) self-reported using at least one of the five aforementioned pharmaceutical drugs in the past 12 months. Benzodiazepines were by far the most commonly used (25%), followed by morphine (12%), while less than one in ten detainees had used buprenorphine (8%), methadone (7%) or dexamphetamine (4%) (see Figure 1).

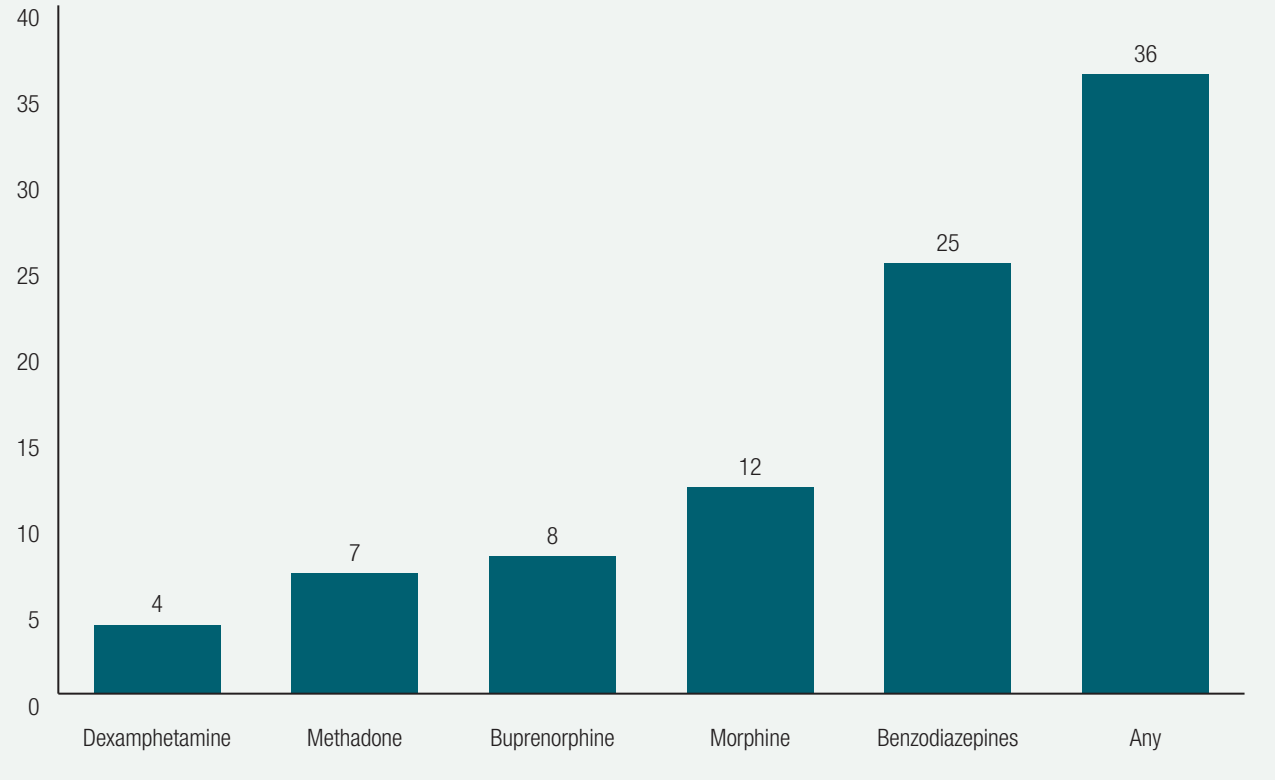
There are three types of pharmaceutical drug users identified in this study:

(1) Legitimate users—those who reported having a doctor's prescription in their own name and who did not report any other illegitimate source for the drug.

(2) Illegitimate users—those who reported sourcing pharmaceutical drugs through one or a number of illegitimate sources, but who did not have a doctor's prescription for the drug in their own name; and

(3) Mixed users—those who reported having a doctor's prescription in their own name, but who also reported supplementing their use with quantities obtained from illegitimate sources.

Figure 1 Prevalence of pharmaceutical drug use (%)[a]



a: N= 825.

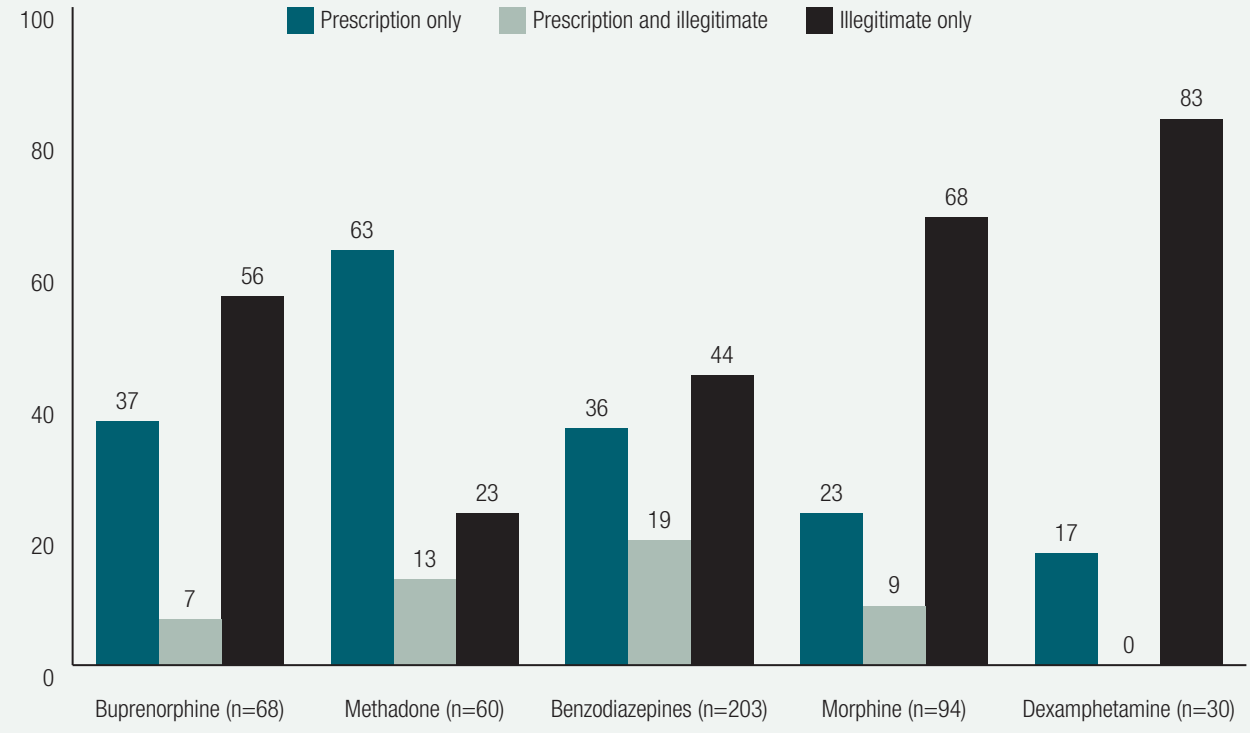
Source: AIC DUMA 2011 [Computer file]

In Figure 2, a summary is provided for each pharmaceutical drug type based on the combination of legitimate and illegitimate sources. It shows that:

- One in three detainees using buprenorphine in the past 12 months (37%) had a prescription in their own name and had not sourced the drug through any other means. The majority (56%), however, did not have a prescription and were using quantities of the drug obtained through illegitimate sources. Finally, seven percent had a prescription in their own name, but had also accessed the drug through illegitimate avenues (including doctor shopping). These detainees represent 17 percent of all those who had a prescription for buprenorphine.
- The majority of methadone using detainees (63%) were using methadone obtained from a doctor's prescription in their own name. They had not sourced the drug through any other illegitimate means. A further 13 percent (17% of those with a prescription) had a prescription in their own name, but also reported sourcing some of the drug through illegitimate means. The remaining 23 percent of methadone users did not have a prescription and were obtaining the drug entirely from illegitimate sources.
- Two in five benzodiazepine users (44%) were illegitimate users with no doctor's prescription in their own name. A further 19 percent (34% of those with a prescription) had a prescription for the drug in their own name but also reported obtaining benzodiazepines from illegitimate sources. The remaining 36 percent of detainees using benzodiazepines were using only that which was legitimately prescribed to them by a doctor.
- The vast majority of detainees using morphine did not have a prescription (67%) and were getting the drug from illegitimate sources. Nine percent had a prescription, but were also sourcing the drug from illegitimate sources, while 23 percent were legitimately using their own script and nothing else.
- Almost all detainees using dexamphetamine were using the drug illegitimately (83%). Only 17 percent had a prescription for the drug and none of these detainees were obtaining additional quantities of the drug from illegitimate sources.

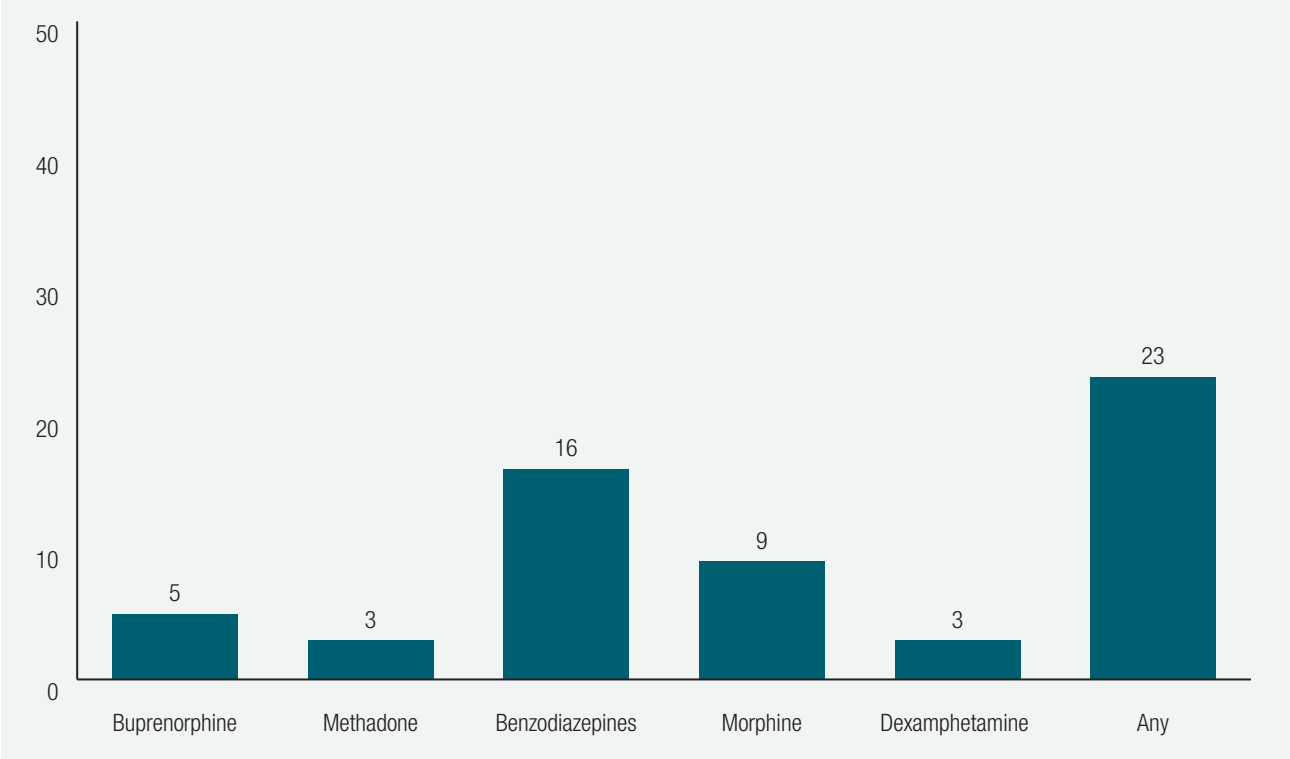
Using data from Figure 2, the overall prevalence of illegal pharmaceutical drug use can be expressed as a proportion of all detainees interviewed throughout the collection period. This takes into account all detainees

Figure 2 Summary of pharmaceutical drug sources among users, by drug type



Source: AIC DUMA 2011 [Computer file]

Figure 3 Overall prevalence of illegitimate pharmaceutical drug use by drug type (%)[a]



a: N=825.

Source: AIC DUMA 2011 [Computer file]

who obtained each drug other than by a prescription in their own name, as well as those with a doctor's prescription obtained fraudulently.

Overall, five percent of police detainees can be classified as illegitimate buprenorphine users, three percent as illegitimate methadone users, 16 percent as illegitimate benzodiazepine users, nine percent as illegitimate morphine users and three percent as illegitimate dexamphetamine users. Combining each drug into a single estimate revealed that approximately one in every four (23%) police detainees interviewed throughout the third quarter of 2011 had used pharmaceutical drugs obtained through illegitimate sources (see Figure 3).

Sources of illegitimate pharmaceutical use

The analysis presented in Table 1 showed that the sources of supply varied depending on the drug type. For example:

- The most common illegitimate source for dexamphetamine was via family and friends with or without paying cash (28% and 68%, respectively). Only 12 percent of illegitimate users reported buying dexamphetamine from a dealer, while 16 percent reported using a prescription ('script') in someone else's name. No dexamphetamine users reported doctor shopping (visiting multiple doctors or providing false information to obtain a prescription).
- A greater proportion of illegitimate morphine users reported buying from a street dealer (51%) than obtaining it from any other source, although it is interesting to note that cash-free exchanges among family and friends were also commonly reported (38%). Morphine was the pharmaceutical drug type with the highest overall prevalence of purchase from a street dealer or from family or friends (33%). Only one illegitimate morphine user reported doctor shopping to get additional quantities of morphine than would normally be prescribed by a doctor.
- More than half of illegitimate benzodiazepine users reported getting the drug from family or friends without paying cash (58%). This was the most commonly reported illegitimate source of benzodiazepines, followed by those purchasing from family or friends (23%) or a street dealer (24%). Illegitimate benzodiazepine users were second only to illegitimate dexamphetamine users in the extent to which non-cash transactions with family and friends were recorded. In addition, doctor shopping was more prevalent among illegitimate users of benzodiazepine than any other pharmaceutical drug with 12 percent having visited multiple doctors to obtain great quantities of the drug than would normally be prescribed and 10 percent providing false information about their symptoms to one or more medical practitioners.

- Although one in three methadone users reported getting the drug from an illegitimate source, the most common source was via a non-cash transaction with family or friends (41%). Only three methadone users reported visiting multiple doctors to obtain greater quantities of methadone than would normally be prescribed by a single doctor.
- Nearly half of all illegitimate buprenorphine users obtained the drug from family or friends without paying cash (48%). This was the most frequently cited illegitimate source for buprenorphine. Although relatively infrequent, it is interesting to note that users of buprenorphine and methadone were more likely than users of other pharmaceutical drugs to have used someone else's script (23%). Finally, only one buprenorphine user reported visiting multiple doctors and one reported giving false information to one or more doctors in an effort to obtain greater quantities than would normally be prescribed.

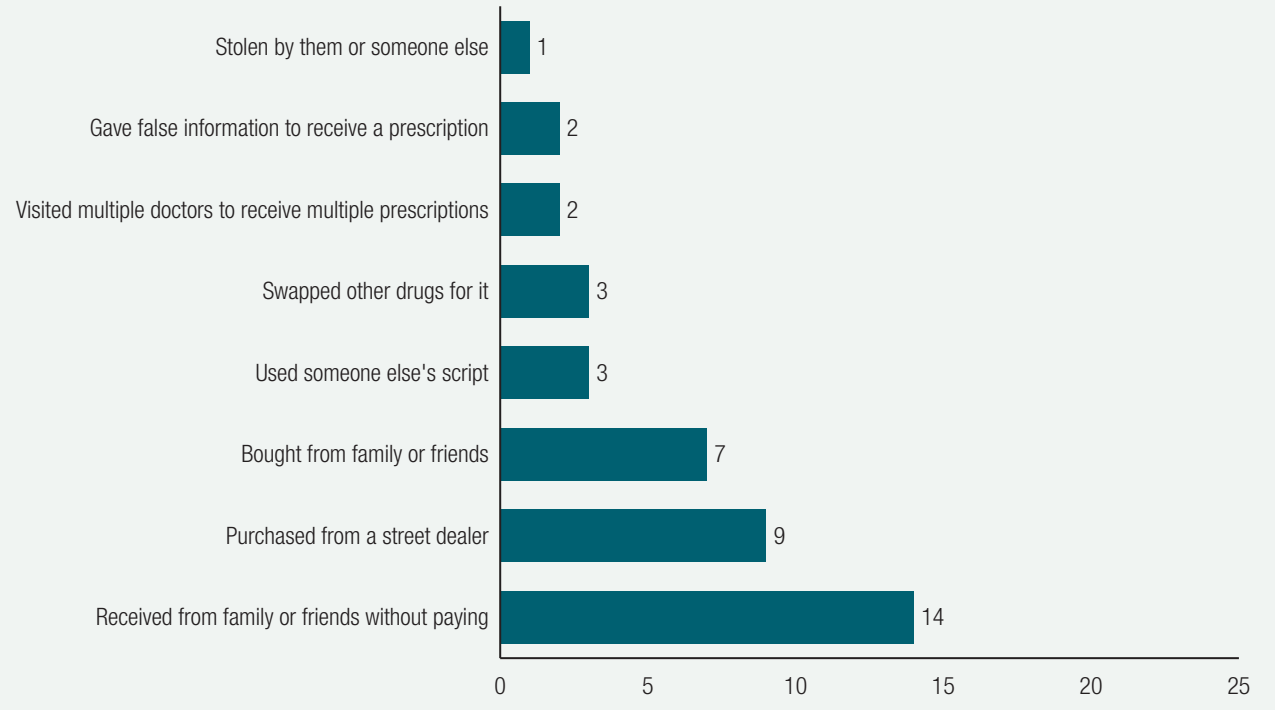
By combining the responses across all five drug types it is possible to calculate the overall prevalence of each illegitimate source for the entire detainee population (n=825). The results, presented in Figure 4, showed that 14 percent of all police detainees were in receipt of at least one pharmaceutical drug from family and friends without paying cash. Overall, non-cash

Table 1 Sources of illegitimate pharmaceutical use, by drug type

	Buprenorphine (n=44)		Methadone (n=22)		Benzodiazepines (n=129)		Morphine (n=73)		Dexamphetamine (n=25)	
	n	%	n	%	n	%	n	%	n	%
Illegitimate sources										
Visited multiple doctors to receive multiple prescriptions	1	2	3	14	16	12	1	1	0	0
Gave false information to receive a prescription	1	2	0	0	13	10	1	1	0	0
Used someone else's script	10	23	5	23	16	12	8	11	4	16
Purchased from a street dealer	17	39	6	27	31	24	37	51	3	12
Bought from family or friends	8	18	6	27	30	23	24	33	7	28
Received from family or friends without paying	21	48	9	41	75	58	28	38	17	68
Swapped other drugs for it	6	14	3	14	14	11	13	18	2	8
Stolen by them or someone else	2	5	1	5	6	5	4	5	1	4
Other	3	7	1	5	4	3	0	0	1	4

Source: AIC DUMA 2011 [Computer file]

Figure 4 Overall prevalence[a] of illegitimate sourcing of at least one pharmaceutical drug (%)



a: Base is all adult detainees interviewed (n=825).

Source: AIC DUMA 2011 [Computer file]

transactions among family and friends were the most frequently recorded means of distribution. Nearly one in 10 detainees reported buying pharmaceuticals from a street dealer (9%), while seven percent reported buying from family and friends. Doctor shopping was relatively infrequent, with only two percent of detainees saying that they had visited multiple doctors or provided false information about their symptoms in an effort to obtain more drugs than would otherwise be prescribed to them on a single occasion.

Perceptions of illegitimate availability

Detainees who had used each pharmaceutical drug were asked to indicate their view of its availability through illegitimate sources (i.e. not via prescription from a doctor). The majority (greater than 60% in each case) reported each drug to be "easy" or "very easy" to obtain (see Table 2). By drug type, benzodiazepine users were the most likely to rate the drug as "easy" or "very easy" to obtain (86%), followed by buprenorphine (76%) morphine (76%) and dexamphetamine (71%). Methadone was less often than other drug types to be reported as "easy" (61%) and more often reported as "very difficult" to obtain (20%).

The extent to which users had knowledge of a drug dealer selling each drug type varied (see Figure 5). Buprenorphine users, for example, were the most likely to have knowledge of someone selling the drug (59%), followed by morphine (53%), dexamphetamine (47%), benzodiazepines (42%) and methadone (38%). It is interesting to note that while benzodiazepines were, according to users, the easiest to obtain illegitimately, they were not the drug for which users were most likely to have knowledge of a current dealer. This is partly explained by results presented above, that showed the vast majority of illegitimate benzodiazepine users obtained the drug from family and friends.

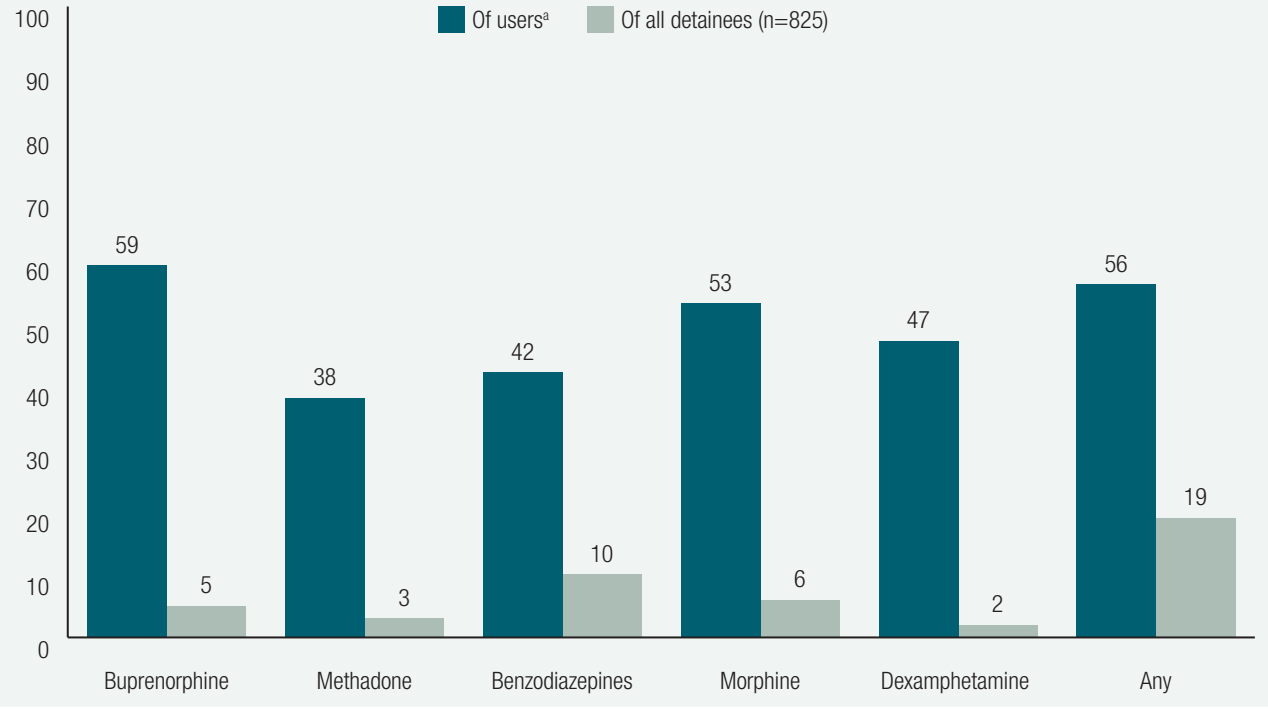
Table 2 Perceptions and knowledge of pharmaceutical drug availability of those who had used[a]

	Buprenorphine		Methadone		Benzodiazepines		Morphine		Dexamphetamine	
Perception of availability:	n	%	n	%	n	%	n	%	n	%
Very Difficult	9	16	8	20	5	4	8	11	3	11
Difficult	5	9	8	20	14	10	9	13	5	18
Easy	15	26	7	18	40	30	20	29	11	39
Very Easy	29	50	17	43	75	56	33	47	9	32

a: Estimates exclude those who had no knowledge of the street market for each drug type.

Source: AIC DUMA 2011 [Computer file]

Figure 5 Self-reported knowledge of a street dealer, by drug type (%)



a: Base for each drug type is the number of users of that drug type

Source: AIC DUMA 2011 [Computer file]

Aggregated across all pharmaceutical drug types and calculated for all detainees interviewed during the quarter, DUMA data show that, at the time of their arrest, one in five (19%) police detainees had knowledge of someone illegally selling at least one pharmaceutical drug.

Discussion

The Australian Institute of Criminology analysed self-report data from a sample of 825 police detainees interviewed as part of the DUMA program. This paper follows an earlier paper on prescription drug use released by the AIC (McGregor et al. 2011). Overall the results indicated that 36 percent of detainees reported using at least one of five different pharmaceutical drug types in the past 12 months. One in three of these detainees (or 13% of all detainees) had access to the drug via a legitimate prescription given to them by a doctor; while the remaining two thirds of users (or 23% of all detainees) had sourced at least some of their pharmaceutical drugs through illegitimate means. The prevalence of illegitimate pharmaceutical drug use varied across the drug types; the highest being for benzodiazepines (16% of all detainees were using benzodiazepines obtained illegitimately). Morphine on the other hand had fewer illegitimate users in total (9%), but unlike benzodiazepines, illegitimate use outnumbered prescription use by 3:1.

While approximately half of all pharmaceutical drug users knew of someone selling the drug on the street, relatively few reported sourcing pharmaceutical drugs from a street dealer. Instead, the most common illegitimate source was via family and friends without paying—a finding that is consistent with results from the 2007 National Drug Strategy Household Survey, which found that recent users of tranquilisers among the general population most commonly reported obtaining the drugs through 'friends and acquaintances' (AIHW 2008).

The comparative size of the informal market for pharmaceutical drugs between friends and family raises a number of complex issues for policy makers and practitioners in the public health and law enforcement arena. In particular, informal drug markets are perhaps among the hardest to police with much of the activity within the market hidden from the reach of traditional law enforcement approaches. For public health practitioners, the challenge is to ensure that those who are legitimately prescribed pharmaceuticals clearly understand their obligations with regard to the illegality of their re-distribution, as well as educating users and others about the personal health risks of using pharmaceuticals not otherwise prescribed to them.

When pharmaceutical drugs are distributed among friends/family and used against medical advice, or without proper medical supervision, they carry many of the same risks of addiction and overdose as do illegal drug types. The results can be devastating with, for example, the Western Australia Police estimating that between January to November 2011, 52 (44%) of the 118 suspected overdoses in WA were likely to have resulted from abuse of pharmaceutical drugs (WA Police 2011). Research has also identified other harms associated with non-medical use of pharmaceutical drugs; for example, injecting crushed tablets prescribed for oral use can lead to complications such as infection, limb ischaemia (caused by a lack of blood flow to a limb) and in some cases amputation (Partanen et al. 2009). A study on drug users in Melbourne found that those who were injecting pharmaceutical drugs meant for oral use such as buprenorphine had little awareness of the risks associated with doing so (Horyniak 2007).

These data serve as a reminder about some of the issues surrounding the black market for prescription pharmaceuticals. As there is very little information available on the extent and nature of diversion of pharmaceutical drugs occurring within Australia, this study provides unique findings that can help to inform programs and initiatives focused on tracking the misuse of pharmaceutical drugs and reducing their diversion to the illicit drug market.

References

Australian Institute of Health and Welfare (AIHW) 2008. 2007 National Drug Strategy Household Survey report. *Drug statistics series* no. 22. Canberra: AIHW. http://www.aihw.gov.au/publication-detail/?id=6442468195&tab=2

Gaffney A, Jones W, Sweeney J & Payne J 2010. *Drug Use Monitoring in Australia: 2008 annual report on drug use among police detainees*, Monitoring report no. 09. Canberra: Australian Institute of Criminology. http://www.aic.gov.au/publications/current%20series/mr/1-20/09.aspx

Horyniak D, Armstrong S, Higgs P, Wain D & Campbell A 2007. Poor Man's Smack: A qualitative study of buprenorphine injecting in Melbourne, Australia. *Contemporary Drug Problems* 34(3): 525.

McGregor C, Gately N & Fleming J. Prescription drug use among detainees: Prevalence, sources and links to crime. *Trends & Issues in Crime and Criminal Justice no*. 423. http://www.aic.gov.au/publications/current%20series/tandi/421-440/tandi423.aspx

Partanen TA, Vikatmaa P, Tukiainen Tukiainen E, Lepantalo M & Vuola J 2009. Outcome after injections of crushed tablets in intravenous drug abusers in the Helsinki University Central Hospital. *European Journal of Vascular and Endovascular Surgery* 37(6): 704-11.

Western Australia Police 2011. Community awareness: Illicit drug overdose deaths. *WA Police News Release* 18 November 2011. http://www.police.wa.gov.au/LinkClick.aspx?fileticket=1SXQ4U7MS1Y%3d&tabid=1489&mid=1983