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Drug use among police detainees: A comparative analysis of DUMA and the US Arrestee Drug Abuse Monitoring program

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Key findings

- The Arrestee Drug Abuse Monitoring (ADAM II) program operates in 10 cities across the United States and captures drug use information from police detainees using urinalysis procedures comparable to Australia's own Drug Use Monitoring in Australia (DUMA) program.
- Comparative analysis reveals that the overall prevalence of cannabis use among police detainees in 2009 in Australia (46%) and the United States (44%) was similar, despite the fact that the rates of cannabis use in two Australian data collection locations—East Perth (55%) and South East Queensland (48%)—were among the three sites with the highest rates.
- Overall, opiate use among police detainees was marginally higher in Australia (11%) than in the United States (8%). Three Australian locations ranked in the top five for opiate use—Sydney (17%), South East Queensland (14%) and East Perth (12%).
- Rates of cocaine use in the United States (25%) were substantially higher than in Australia (2%). The highest level of cocaine use in Australia, at three Sydney sites (7%), was still lower than the lowest level recorded across all 10 sites in the United States, in Sacramento (CA) (11%).
- Sacramento (CA) recorded the highest rate of amphetamine use (31%) across the combined 15 Australian and US sites—almost twice the rate recorded in East Perth, which in 2009 had the highest prevalence of methamphetamine use across the Australian DUMA sites (16%). Nevertheless, three Australian sites were among the top five of Australian and US combined sites and as a result produced a higher overall prevalence of methamphetamine use (11%) when compared with the United States (6%).

Introduction

Monitoring international trends in drug production and supply has been a key function of the United Nations Office on Drugs and Crime (UNODC); it regularly provides between-country comparative data in the World Drug Report and the Global Illicit Drug Trends Report (UNODC 2011). These data, typically on drug detections and drug-related arrests, are combined with intelligence and assessment reports to provide important insights into the production, transportation and use of illicit drugs across the globe. In particular, the data serve as a timely reminder of the significant transnational dimension of illicit drug markets and the corresponding need for ongoing international cooperation in supply reduction efforts.

In addition, efforts to monitor international drug use trends provide a useful opportunity for better understanding the context and environment in which drug law enforcement and prevention policy is developed and implemented, especially where these policies and ideas are shared on the global stage.

Drug courts are a prime example of a shared prevention policy. The idea was conceived in Dade County, Miami (US) in response to growing concern about local drug-related crime. Since then, drug courts have proliferated both throughout the US and internationally—including in Australia, where drug courts or similar drug diversion options exist in every state and territory (Wundersitz 2007).

This transference of programs and policies from one country to another requires careful consideration of contextual differences likely to impact on their effectiveness—and is true for policies in the criminal justice sector. Knowing to what extent drug use varies

between countries is integral to the success of the policy transference process—ensuring that local responses meet local needs.

The Australian Institute of Criminology's (AIC) Drug Use Monitoring in Australia (DUMA) program offers a unique opportunity to generate data for comparing the use of specific types of drug among criminal justice populations in different countries. DUMA is Australia's largest, ongoing collection of self-report and urinalysis data from alleged offenders who have been detained by the police. It was first established in 1999 under the Australian National Illicit Drug Strategy and operated in three jurisdictions (NSW, QLD and WA). DUMA is part of a global research network known as the International Arrestee Drug Abuse Monitoring (I-ADAM) program, which has comprised a range of countries, including the United States, United Kingdom and Australia (Makkai 1999). Key components of Australia's DUMA program, including both the original survey and urinalysis methodologies, were modelled on the US Arrestee Drug Abuse Monitoring (ADAM) program which, although suspended from 2004 to 2006 (inclusive), has since restarted—renamed ADAM II—with funding from the US National Institute on Drug Abuse (NIDA).

Apart from some methodological differences, the DUMA and ADAM II programs have the same essential design. Both programs survey police detainees (referred to as arrestees in the US) about their lifelong and recent use of illegal and legal drugs, and both conduct voluntary urinalysis to objectively measure very recent drug use; it is in this context that comparative analysis can be undertaken. Unlike drug-related arrest and seizure data, which are likely to be influenced by policing activities and local law enforcement priorities, rates of drug use among police detainees are likely to provide a relatively comparable measure of differences in the extent of illegal drug use among those coming into contact with the criminal justice system.

About this study

This study provides a comparative analysis of drug use among police detainees surveyed as part of the DUMA (Australia) and ADAM II (US) research programs. Urinalysis results are presented for four different drug types: cannabis, opiates, methamphetamine and cocaine. Data for the ADAM II program are taken from the 2009 annual report (ONDCP 2010) and presented separately for 10 cities.

- Chicago, IL
- Minneapolis, MN
- Portland, OR
- Charlotte, IL
- Sacramento, CA
- Indianapolis, IN
- New York, NY
- Washington, DC
- Atlanta, GA
- Denver, CO

For consistency, DUMA data are also presented for 2009, either for single sites in the city centre that act as central police lockups or, where possible, as the combined average of sites within the same geographical city region. The Footscray site in Melbourne (Victoria) has been excluded because of concerns about how well it represents any broader geographical region. Australian estimates are presented for:

- Sydney (Bankstown, Parramatta and Kings Cross), NSW
- South East Queensland (Brisbane and Southport), QLD
- Darwin, NT
- East Perth, WA
- Adelaide, SA.

Regional aggregation in Sydney and South East Queensland were important for comparative purposes. In the US, for example, the ADAM II program is conducted either at a single arrestee intake facility that services the entire city or, where no such facility exists, at multiple data collection locations across the city. The intention is that for each city the ADAM II program obtains a sample that is largely representative of the city-wide detainee population. Accordingly, ADAM II does not interview detainees solely in known drug hot spots (like DUMA's Footscray site), where drug use rates among police detainees are likely to be higher than the city average; nor does it interview only in outer suburban areas (like Bankstown in NSW), where drug use rates may be lower than average. Where possible, aggregating some Australian sites ensures that estimates are for a larger cross-section of the local detainee population and will help to minimise any individual site bias.

Although there are similarities, there are also methodological differences between DUMA and ADAM II:

- ADAM II interviews only male detainees, whereas DUMA includes female detainees. For comparative purposes, the analysis in this report for DUMA has been restricted to male detainees.
- ADAM II samples detainees using probabilistic random sampling across each 24-hour period over 14 days. The interview periods are based on expected detainee flow numbers. DUMA operates during peak flow periods over 28 days, but during these times all available detainees are approached for interview.
- Detainees in the ADAM II program that refuse to be interviewed are replaced with their 'nearest neighbour', who is identified according to the time at which they were booked into custody. Since DUMA interviews all available detainees, nearest neighbour selection for refusals is not warranted.

- Urinalysis results for the ADAM II program include probabilistic imputation of missing values. This means that detainees who refuse to provide a urine sample are indicated as having tested positive or negative based on statistical predictions that factor the information they provided in the self-report survey. No such imputation occurs in DUMA. Instead, urinalysis results are presented as a percentage of those who provided a valid sample.

Results

Cannabis

The rate of cannabis use was similar in Australia (46%) and the US (44%), although two Australian locations—East Perth and South East Queensland—were among the top five of all 15 sites combined. At the bottom end, Charlotte (IL) recorded the lowest rate (36%, which is 4% percentage points lower than the lowest Australian estimate in Sydney).

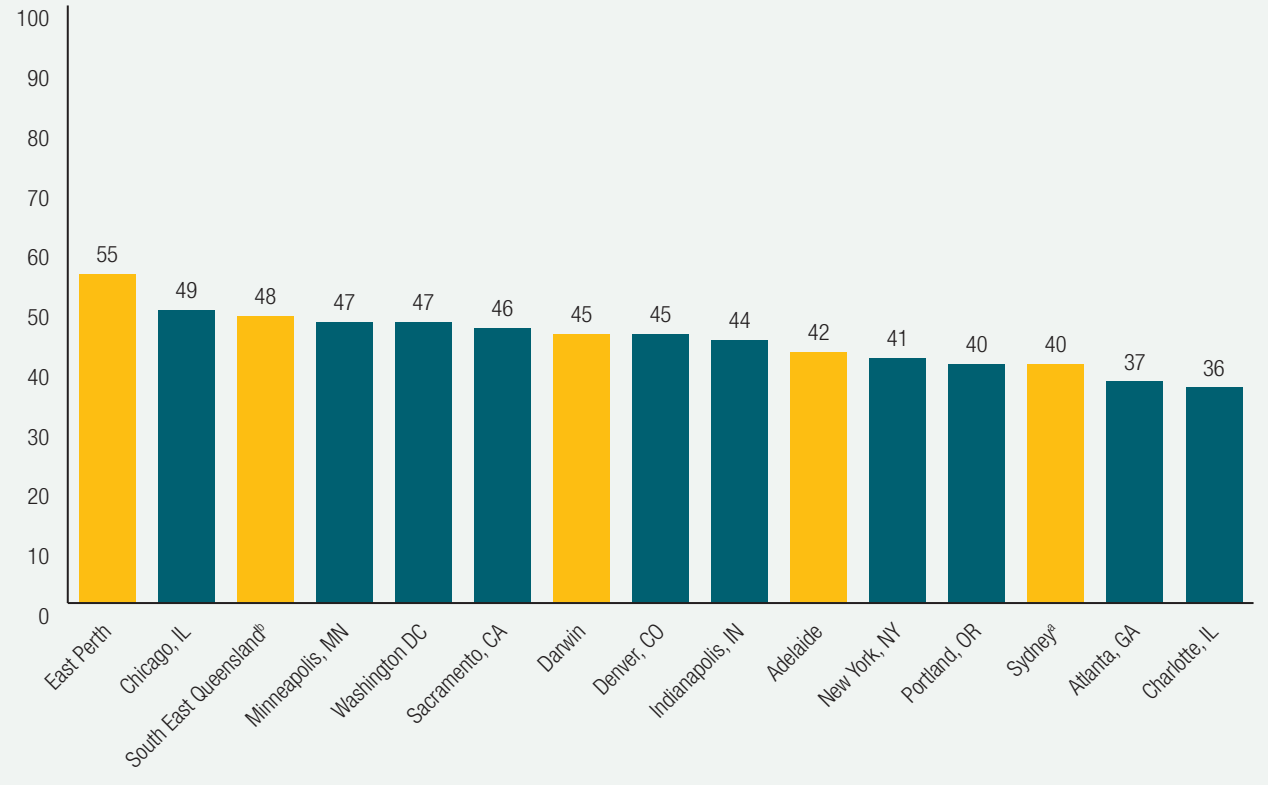
In 2009, East Perth recorded a rate of 55 per cent of police detainees testing positive to cannabis and the highest rate of recent cannabis use—followed by South East Queensland (48%), Darwin (45%), Adelaide (42%) and Sydney (40%). In the US, Chicago (IL) recorded the highest rate of cannabis use among police detainees (49%), followed by Minneapolis (MN) (47%), Washington, DC (47%) and Sacramento (CA) (46%).

Opiates

Averaged across all locations, Australian DUMA sites registered a higher overall rate of opiate use (11%) compared with ADAM II locations in the US (8%). Although Chicago (IL) recorded the highest rate of any single site (18%), Australia registered three of the top five test positive results across all 15 Australian and US locations. Darwin, on the other hand, recorded the third lowest test positive result for opiates in 2009.

According to the Australian DUMA data, prevalence of opiate use varied by site: Sydney had the highest (17%), followed by South East Queensland (14%), East Perth (12%) and Adelaide (10%). Darwin in the Northern Territory recorded a substantially lower rate of opiate use compared to other Australian sites (4%). In the US, Chicago (IL) recorded the highest prevalence of recent opiate use among police arrestees (18%), followed by Washington, DC (15%), Portland (OR) (10%) and New York (NY) (9%). Charlotte (IL) recorded the lowest prevalence of opiate use across the US: only two percent of detainees tested positive throughout 2009.

Figure 1 Test positive rates cannabis, Australia versus the United States, 2009 (%)

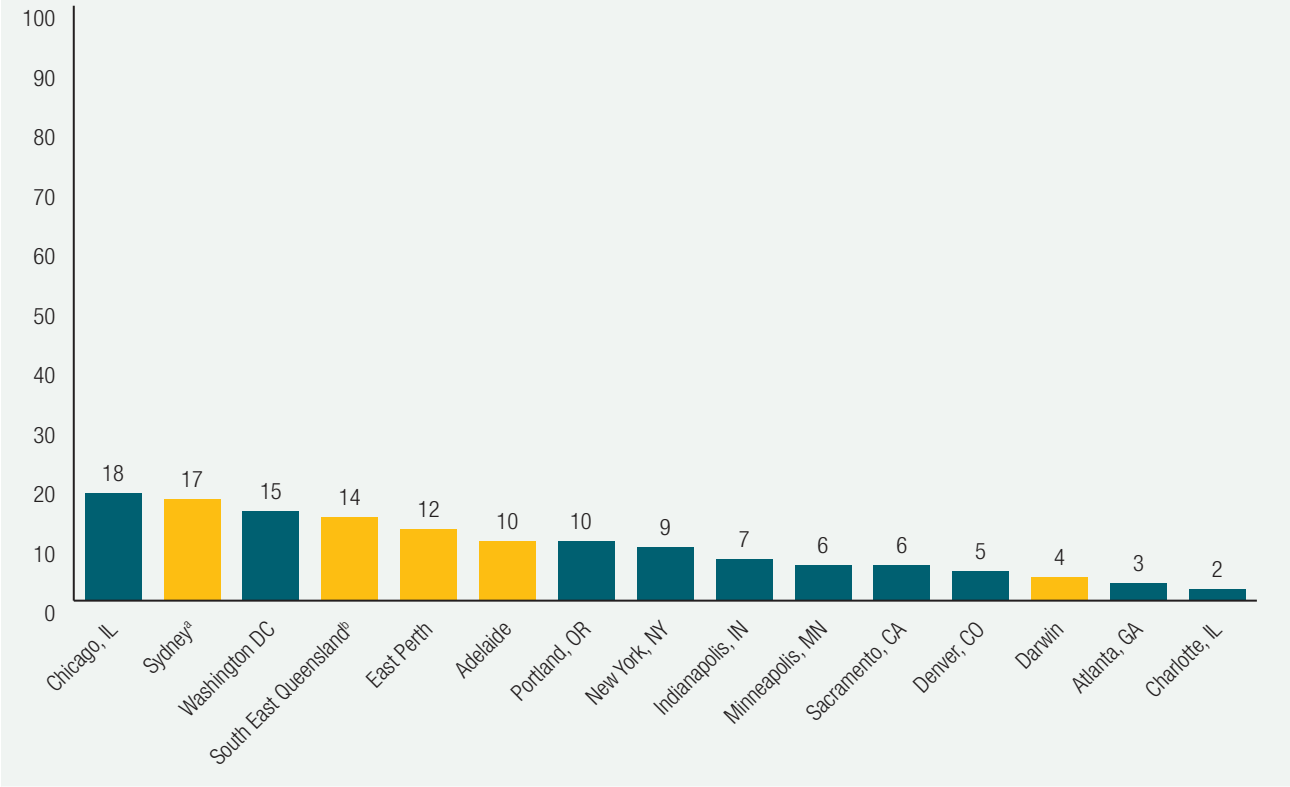


a: Sydney includes sites in Bankstown, Kings Cross, and Parramatta

b: South East Queensland includes sites in Southport and Brisbane City

Source: AIC 2009 DUMA Collection [computer file] & ONDCP 2010

Figure 2 Test positive rates opiates, Australia versus the United States, 2009 (%)



a: Sydney includes sites in Bankstown, Kings Cross, and Parramatta

b: South East Queensland includes sites in Southport and Brisbane City

Source: AIC 2010 DUMA Collection [computer file] & ONDCP 2010

Cocaine

It is widely acknowledged that cocaine—in particular, crack cocaine—is significantly more prevalent in the US than in Australia (NDARC factsheet). This conclusion is supported by data from DUMA and ADAM II. Comparing averages for the US and Australia shows that in Australia detainees are significantly less likely to be using cocaine (2% *c/f* 25%). In fact, even Sydney—the site with Australia's highest rate of cocaine use—did not exceed the lowest estimate from all 10 sites throughout the US.

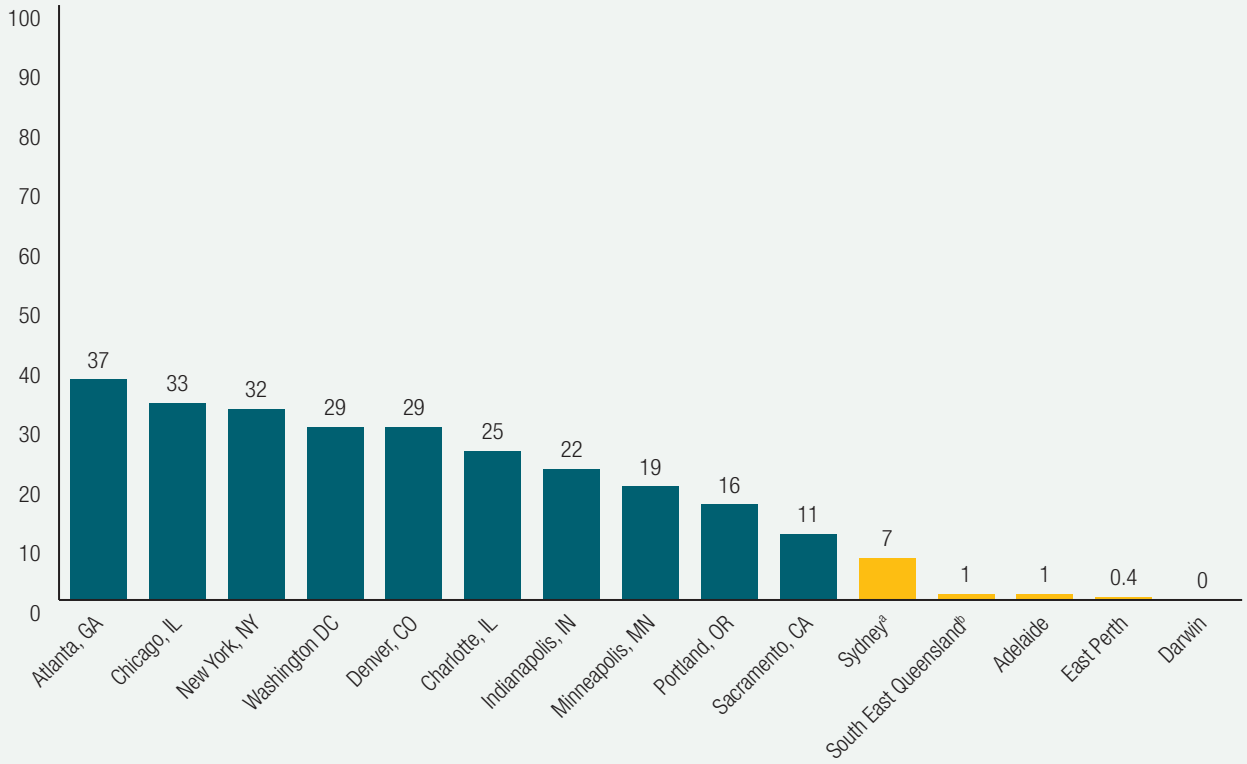
As previously stated, within Australia, Sydney recorded the highest prevalence of cocaine use among police detainees (7%) in 2009—considerably higher than in Adelaide (1%), South East Queensland (1%), East Perth (0.4%) and Darwin, where no detainees tested positive throughout 2009. In the US, on the other hand, Atlanta recorded the highest prevalence of cocaine use (37%), followed by Chicago (IL) (33%), New York (NY) (32%), Washington, DC and Denver (CO) (both 29%). The lowest recorded rate of cocaine use in the US was in Sacramento (CA), where 11 percent of detainees tested positive.

Methamphetamine

Australian detainees were on average more likely in 2009 to have been using methamphetamine than their American counterparts (11% *c/f* 6%), despite the US site of Sacramento (CA) (31%) having the highest prevalence of use across all 15 Australian and US locations. Australia has three of the top five sites with the highest methamphetamine use rates: East Perth, Adelaide and South East Queensland. Further, while it appears that Sacramento (CA) and, to a lesser extent, Portland (OR) are significant outliers compared with the remaining data collection sites in the US, the Australian sites are not as notably disparate.

Throughout Australia in 2009, East Perth recorded the highest prevalence of methamphetamine use (16%), followed by Adelaide (13%), South East Queensland (11%) and Sydney (10%). Consistent with its rating for all other drug types, Darwin recorded the lowest rate of methamphetamine use: only five percent of detainees tested positive. A greater proportion of police detainees in Sacramento (CA), tested positive to methamphetamine than in any other location in the US (31%). The rate in Sacramento (CA) was twice that recorded for Portland (OR), which had the second highest rate across the US in 2009 (13%), followed by Denver (CO) (4%), Minneapolis (MN) (4%), Indianapolis (IN) (1%) and Chicago (IL) (1%). No detainees in New York (NY) tested positive to methamphetamine during 2009.

Figure 3 Test positive rates cocaine, Australia versus the United States, 2009 (%)

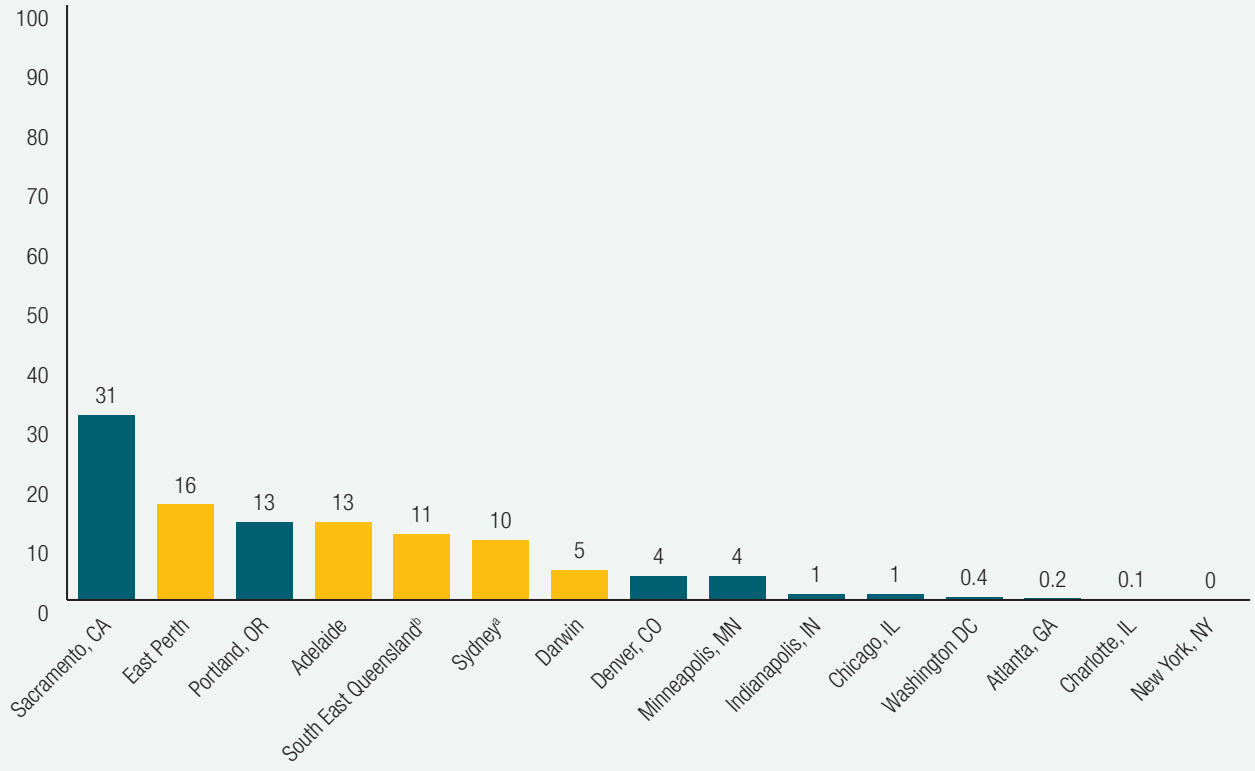


(a) Sydney includes sites in Bankstown, Kings Cross, and Parramatta

(b) South East Queensland includes sites in Southport and Brisbane City

Source: AIC 2009 DUMA Collection [computer file] & ONDCP 2010

Figure 4 Test positive rates methamphetamine, Australia versus the United States, 2009 (%)



(a) Sydney includes sites in Bankstown, Kings Cross, and Parramatta

(b) South East Queensland includes sites in Southport and Brisbane City

Source: AIC 2009 DUMA Collection [computer file] & ONDCP 2010

Discussion

Comparative analysis of 2009 data from Australia's DUMA and the US's ADAM II program provides a valuable insight into the differences in the drug use of police detainees between the two countries. Although some methodological differences exist, the projects' similarities in design (the use of urinalysis and self-report) and sampling selection techniques (within 48 hours of detainees' arrest) provide the opportunity for a robust comparative examination of one of the few transnational data sources.

The results reveal a number of notable similarities and differences. First, overall estimates of cannabis use from the DUMA (46%) and ADAM II (44%) projects were almost identical—although Australia's East Perth site produced the highest proportion (55%) of positive test results of the combined Australian and US sites. DUMA's Sydney sites ranked third last in the overall test positive urinalysis results for cannabis (40%). Second, opiate use was marginally higher overall across Australia (11%) than in the US (8%), with Australia having three of the top five results. Third, the prevalence of cocaine use in the US (25%) was substantially higher than in Australia (2%); all Australian DUMA sites had a lower prevalence of cocaine use than all US sites individually and combined. Finally, although methamphetamine use was highest in Sacramento (CA) (31%), Australia had an overall prevalence of methamphetamine use (11%) that was higher than all ADAM II sites combined (6%). Three DUMA data collection locations were ranked in the top five of the combined 15 sites.

The substantial differences between the rates of cocaine and methamphetamine use between US and Australian detainees may be attributable to the respective supply chain of each drug. Cocaine for example, is primarily produced in South America (UNDOC 2011), which has a notably shorter supply chain to the US compared Australia. In fact, the US is considered to have one of the largest cocaine markets globally, and in 2009 accounted for 15 percent of all global cocaine seizures compared to the Oceania region (including Australia), which accounted for just 0.04 percent of global cocaine seizures (UNDOC 2011). The manufacture of methamphetamine, on the other hand, is not restricted geographically and is produced in laboratories worldwide, with Australia among the countries reporting the largest number of clandestine laboratories (UNDOC 2011). Although the US has a high number of small-scale methamphetamine laboratories, the drug's availability in the US is reliant upon production trends in Mexico, which remains the primary source of the US's methamphetamine supply (NDIC 2011, 2010).

Identifying these international comparative differences in drug use among police detainees is a reminder of the differences and similarities in the varying contexts in which drug law enforcement, prevention and treatment programs are delivered internationally. In addition, the trend towards enhanced international academic cooperation and the increasing transference/appropriation of programs and policies, such as drug courts, from one country to the next will benefit from the ongoing monitoring of these differences. Policy makers and practitioners looking to the international literature on best practice should be cognisant of these differences and their likely impact on the effectiveness of policy or program implementation.

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All URLs were correct at 28 October 2011.

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What is DUMA?

DUMA is Australia's only nationwide survey of drug use and criminal offending among police detainees. Funded by the Australian Government, DUMA uses a detailed self-report survey and voluntary urinalysis to provide timely data on drug use and local drug markets. DUMA is an important source of information for local and national law enforcement agencies in the development of strategic responses to new and emerging drug/crime issues.

DUMA data collection occurs every quarter at eight of the nine available sites across the country and operates on a rotating basis. The program operates as a successful partnership between the AIC and state and territory police agencies.

For more information about DUMA, or to access DUMA data and publications, please visit: http://www.aic.gov.au/about_aic/ research_programs/nmp/duma.aspx or email us at: duma@aic.gov.au