In Australia, there is a large body of research dedicated to examining the prevalence and harms associated with common illicit substances such as cannabis, opioids and amphetamines (AIHW 2008, 2007a, 2007b; Proudfoot et al. 2006; Stafford & Burns 2010). However, the Australian Institute of Health and Welfare’s National Drug Strategy Household Survey is Australia’s only national population survey with the capacity to provide population estimates for a range of drug types. Discrete data collection programs such as the AIC’s DUMA program and the National Drug and Alcohol Research Centre’s Illicit Drug Reporting System provide supplementary data from key sentinel populations who are likely to be over-represented as drug users but under-represented in national survey samples.

Despite this extensive coverage of some of the most widely used illicit substances, much less is known about newly emerging or less common drugs, such as mephedrone, GHB, Ketamine, and Rohypnol. Where information is available, such as that found in the National Drug Strategy Household Survey, there are concerns that these surveys are likely to under-sample key user groups and therefore underestimate prevalence rates. For the health and drug treatment sector, the absence of recent data on the prevalence and harms associated with these drugs makes responding to those who are using them difficult. For law enforcement agencies, not knowing where the drug is most likely to be used, or how easily available it is, limits their ability to develop targeted interventions or market interdiction/disruption efforts.

Perhaps the most recent example of this difficulty involved mephedrone (4-methylmethcathinone), which became a significant concern in 2010 following several media reports detailing its increased availability on the entertainment scene. Originally marketed as a plant fertiliser, among other things, mephedrone became a significant public health and law enforcement concern after a number of reports about its apparent link to self-mutilation and, in some overseas cases, death (Fleming 2010).

Key findings

• In recognition of the need for ongoing monitoring of new or less common drug types, the Australian Institute of Criminology (AIC), as part of the Drug Use Monitoring in Australia (DUMA) program, interviewed 824 police detainees about their knowledge of and experience with mephedrone, GHB, Ketamine, and Rohypnol.

• Mephedrone was the least known of the four drugs, with only 221 detainees (27%) reporting knowledge of the drug. Only six detainees (<1%) had used the drug in the previous 12 months, while 30 detainees (4%) knew of someone dealing mephedrone at the time they were interviewed. Detainees in East Perth were the most likely to have reported knowledge of mephedrone.

• GHB was known to more than half of all detainees interviewed (53%) and had been used in the 12 months prior to interview by 23 detainees (3%). More detainees had been offered GHB (8%), or knew of a dealer selling GHB (6%), than any of the other four drug types.

• Ketamine was known to 43 percent of detainees and had been used by three percent. The prevalence of Ketamine use was equal with GHB, however, knowledge of a current Ketamine dealer was lower (4%).

• Rohypnol was the most widely known of the four drug types (59%), however, use of the drug in the 12 months prior to interview was lower than for GHB or Ketamine (1%).
Since then, there has been only one detailed study of mephedrone use in Australia, conducted with a sample of 693 regular ecstasy users from all state and territory jurisdictions who participated as part of the Ecstasy and Related Drugs Reporting System, an annual study undertaken to monitor ecstasy and related drug markets across Australia (Matthews & Bruno 2010). In that study, the authors examined lifetime and recent use of mephedrone, concluding that 21 percent of the sample reported having used mephedrone at least once, while 17 percent described using mephedrone in the past six months. Yet, as with all new and emerging drugs, quality information about the availability and source of mephedrone, as well as its potentially lethal psychotropic effects, remains largely unknown. This consequently limits efforts to address the emerging community and public health concerns.

Recognising the need for more comprehensive information about newly emerging or less common drug types, the AIC developed a series of new questions that were later included as an addendum to its DUMA program.

About the study

Using data collected from a sample of 824 police detainees, the present study examined the prevalence of four separate drug types—mephedrone, Rohypnol, GHB and Ketamine—that are not included in the regular DUMA core questionnaire. Specifically, data were collected from alleged offenders who were detained and interviewed (but not yet convicted) as part of the DUMA program during the third quarter of 2010 (August–October) at one of the eight data collection sites (Bankstown, Kings Cross, Brisbane, Southport, East Perth, Adelaide, Footscray and Darwin). For each of the four drug types, detainees were asked the following questions:

• Have you ever heard of a drug called [.........]?
• Has anyone offered to sell or give you [.........] in the last 12 months?
• Do you know of anyone selling [.........] at the moment?
• Have you used [.........] in the last 12 months?

There are a number of limitations that should be considered when interpreting these results. In particular, it is important to note that DUMA is a voluntary self-report survey of alleged offenders detained by the police and as with all self-report surveys, the quality of the data hinges on the truthfulness and reliability of the respondents. Please see Drug Use Monitoring in Australia: 2008 Annual Report on Drug Use Among Police Detainees (Gaffney et al. 2010) for further methodological information about the DUMA program.

Results

Mephedrone

Mephedrone is a synthetic drug with both stimulant and hallucinogenic properties (Matthews & Bruno 2010). Common psychological effects include euphoria, increased energy levels, anxiety and in some cases, visual hallucinations. Physical effects include blurred vision, hot flushes, erratic heart rate and skin rash (Australian Drug Foundation 2010). Mephedrone is also known by a number of alternative street names, including meow meow, 4-MMC, drone and MCAT.

Of the 824 detainees included in this study, 221 (27%) had heard of the drug mephedrone (see Table 1). This included those detainees who knew the drug by one of its alternative street names. Of those who had heard of mephedrone:

• fifteen percent had been offered it, for sale or otherwise, on at least one occasion in the 12 months prior to interview (4% of all detainees interviewed);
...
By site, as can be seen in Table 2, detainees in Brisbane and Kings Cross were most likely to have heard of GHB (both 67%, respectively), followed by those in Southport (60%), Footscray and Adelaide (both 59%, respectively). Fewer detainees in Darwin had heard of GHB than in any other location (20%). Of the detainees who had heard of GHB, in both Kings Cross and Brisbane, one-fifth reported that they were offered GHB in the past 12 months. Furthermore, approximately 20 percent of detainees in both NSW sites (Bankstown and Kings Cross) who had heard of GHB also reported knowing someone currently dealing this substance.

The self-reported use of GHB in the 12 months prior to interview was relatively low across all sites, although, despite the small numbers, some locations had higher rates than others. In Kings Cross for example, 11 percent (n=4) of detainees had used GHB in the past 12 months. This compares with nine percent in Adelaide, seven percent in Southport and five percent in Brisbane.

**Ketamine**

Ketamine, commonly known as *special K*, *vitamin K* or *K*, is a dissociative anaesthetic (Lankenau & Sanders 2007). Physical effects include drowsiness, numbness and nausea. Psychological effects include altered perception, disorientation and hallucinations (DHA 2010).

Two out of every five detainees interviewed (n=353, 43%) had heard of the drug Ketamine (see Table 3). Of these:

- fifteen percent had been offered Ketamine, for sale or otherwise, on at least one occasion in the 12 months prior to interview (6% of all detainees interviewed);
- seven percent reported using Ketamine on at least one occasion in the past 12 months (3% of all detainees); and
- nine percent had knowledge of at least one person selling Ketamine at the time of interview (4% of all detainees).

By site, detainees in Kings Cross were most likely to have heard of Ketamine (61%), followed by those in Footscray (50%), Adelaide (48%) and Southport (47%). Bankstown and Darwin were the two locations where detainees had the least knowledge of Ketamine (30% and 15%, respectively).

**Rohypnol**

Rohypnol, colloquially known as *roofies*, *circles or the date rape drug*, is a sedative commonly used to provide short-term relief from insomnia. Ingestion of Rohypnol has the following effects—sedation, muscle relaxation, reduced anxiety and reduced arousal. Rohypnol also can cause partial amnesia. Due to its prominent sedative properties and tendency to cause partial amnesia, it has historically been used as a date rape drug (American Council for Drug Education nd).

More than half of the 824 detainees interviewed had heard of Rohypnol (n=482, 59%). Yet, despite being the most well-known of the four drugs included in this research, recent knowledge of a dealer and the personal use of Rohypnol were comparatively low. For example, of the 482 detainees who had heard of Rohypnol:

- six percent had been offered Rohypnol, for sale or otherwise, on at least one occasion in the 12 months prior to interview (4% of all detainees interviewed);
- nine (2%) detainees reported using Rohypnol on at least one occasion in the past 12 months (1% of all detainees); and
- six percent had knowledge of at least one person selling Rohypnol at the time of interview (4% of all detainees).

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**Table 3** Indicators of Ketamine use and availability by site, Quarter 3 2010

<table>
<thead>
<tr>
<th></th>
<th>Heard of Ketamine</th>
<th>Offered Ketamine in the past 12 months</th>
<th>Know of anyone selling Ketamine</th>
<th>Used Ketamine in the past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Bankstown</td>
<td>21</td>
<td>30</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>Kings Cross</td>
<td>35</td>
<td>61</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td>Southport</td>
<td>56</td>
<td>47</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Brisbane</td>
<td>58</td>
<td>41</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Footscray</td>
<td>37</td>
<td>50</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Adelaide</td>
<td>57</td>
<td>48</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Darwin</td>
<td>9</td>
<td>15</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>East Perth</td>
<td>80</td>
<td>44</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>All sites</td>
<td>353</td>
<td>43</td>
<td>54</td>
<td>15</td>
</tr>
</tbody>
</table>

* a: Of those who had heard of Ketamine

Source: AIC 2010 DUMA Collection [computer file]

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Overall, a substantial proportion of detainees reported having heard of GHB, Rohypnol and Ketamine, suggesting that these illicit substances are well-known among offender populations. However, the prevalence of use in the 12 months prior to interview, as well as knowledge of a current dealer was low (less than 6% for each of the 3 drug types). Mephedrone, by contrast, was the least well-known of the four drug types; reported as being known by only one-quarter of detainees, with few detainees reporting having used the drug in the 12 months prior to interview (<1%). Despite this low level of recognition and use, a similar proportion of detainees reported knowing a current dealer of mephedrone (4%) compared with the other drug types.

As can be seen in Table 4, by site, detainees in Brisbane were most likely to have heard of Rohypnol (69%), followed by those in East Perth (64%), Adelaide (64%) and Kings Cross (61%). Bankstown and Darwin were the two sites where detainees had the least knowledge of Rohypnol (35% and 33% respectively).

Recent knowledge of a person selling Rohypnol was reported by approximately one in five (20%) detainees in Kings Cross—substantially higher than the national average (6%) and twice as high as East Perth (8%), the site with the second highest result. Interestingly, although Brisbane was the site with the highest overall awareness of Rohypnol, only two detainees reported knowing a person selling Rohypnol at the time of interview.

**Discussion**

Developing an evidence base and monitoring trends in illicit drug use is critical to ensuring that health and law enforcement responses are adequately and appropriately targeted. In particular, it is important to ensure that policymakers and practitioners are sufficiently equipped with current and reliable information about some of Australia’s least researched drug types—including the newly emerging as well as less commonly used drugs.

In recognition of this, the AIC, through its DUMA program interviewed 824 police detainees about their knowledge and experience using mephedrone, GHB, Ketamine and Rohypnol. The DUMA program complements existing data sources through its sampling of police detainees—those more likely to be involved in drug use, but less likely to be included in national prevalence surveys.

<table>
<thead>
<tr>
<th>Heard of Rohypnol</th>
<th>Offered Rohypnol in the past 12 months</th>
<th>Know of anyone selling Rohypnol</th>
<th>Used Rohypnol in the past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Bankstown</td>
<td>25</td>
<td>35</td>
<td>1</td>
</tr>
<tr>
<td>Kings Cross</td>
<td>35</td>
<td>61</td>
<td>6</td>
</tr>
<tr>
<td>Southport</td>
<td>68</td>
<td>57</td>
<td>4</td>
</tr>
<tr>
<td>Brisbane</td>
<td>97</td>
<td>69</td>
<td>4</td>
</tr>
<tr>
<td>Footscray</td>
<td>44</td>
<td>59</td>
<td>3</td>
</tr>
<tr>
<td>Adelaide</td>
<td>76</td>
<td>64</td>
<td>1</td>
</tr>
<tr>
<td>Darwin</td>
<td>20</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td>East Perth</td>
<td>117</td>
<td>64</td>
<td>8</td>
</tr>
<tr>
<td>All sites</td>
<td>482</td>
<td>59</td>
<td>27</td>
</tr>
</tbody>
</table>

a: Of those who had heard of Rohypnol

Source: AIC 2010 DUMA Collection [computer file]

Although the numbers are small in this study, analysis by location revealed some notable patterns. In particular, detainees in East Perth were most likely to report having heard of mephedrone, whereas knowledge of GHB, Ketamine and Rohypnol was more frequently reported by detainees at DUMA sites on the east coast (in particular, Brisbane and Kings Cross). Knowledge of a current GHB or Ketamine dealer was highest in Bankstown and Kings Cross, while knowledge of Rohypnol was highest in Brisbane.

This study is the first to use a large sample of Australian police detainees to investigate both the knowledge and prevalence of use for newly emerging and less commonly used drugs such as mephedrone, GHB, Ketamine and Rohypnol. While the findings indicate a relatively low level of use, there nevertheless remains a need for ongoing assessment to identify changing trends and patterns of use that can be responded to accordingly.
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