The dispensing of pharmaceutical stimulants (PSs) by Australian physicians increased by 87% between 2002 and 2009. While dexamphetamine is the most commonly prescribed PS, this increase is attributed to methylphenidate (Ritalin). In 2014, the WA EDRS data showed the highest ever proportion of participants reporting use of illicit pharmaceuticals (PSs) within the previous 6 months, at 77%. In light of this, we examined trends in recent illicit PS use across WA EDRS samples from 2007-2014.

We used a Generalised Linear Mixed Model (GLMM) to examine reported recent use of illicit PSs in WA EDRS samples over the last eight years (see Table 1 for reported use proportions). The GLMM was significant, $F (7,668) = 4.4, p <.001$, implicating significant changes in the proportion of use over time. Examination of the deviation contrasts suggested a linear upward trend over time (see Fig 1 below).

The results indicate a significant upward trend in reported recent illicit PS use in WA EDRS samples over the last eight years. The proportion of participants recent use of PSs was particularly low in 2007 and particularly high in 2014. Contrary to prescribing trends, the results suggest that, at least for the past two years, increases in illicit PS use among WA EDRS samples is mainly attributable to dexamphetamine rather than methylphenidate. Within the previous two years it also appears that illicit PSs were largely being sourced via others’ diverted prescription medication.

Important caveats exist when interpreting these results. EDRS samples are not randomly selected. The results therefore may not accurately represent patterns of use across time in regular ecstasy and/or psycho-stimulant drug users. Further, due to the lack of data surrounding specific drugs used, motivations for use, and the original drug source prior to 2013, it is not possible to accurately gauge the reasons for the increase over time in WA EDRS samples.

Researchers in other EDRS jurisdictions might consider examining trends in PS use across time to explore any similarities or differences with the WA results. Beyond EDRS, future researchers might also consider examining trends in illicit PS use with representative samples of regular ecstasy users. It has been proposed that US university students are increasingly using illicit PSs to study, with some evidence of this trend in Australia. Future research might therefore explore if the increases in illicit PS use seen in WA EDRS samples across time are mirrored in the general population, or in Australian university students.

References

Acknowledgements
The EDRS is funded by the Australian Government Department of Health under the Substance Misuse Prevention and Service Improvements Grants Fund, and was coordinated by National Drug and Alcohol Research Centre (NDARC). Thank you to the WA EDRS participants, Dr Bob Kane for his statistical advice and Dr Tina Lam for her technical assistance.

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Trends in pharmaceutical stimulant use in WA EDRS samples: 2007-2014
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Introduction
The dispensing of pharmaceutical stimulants (PSs) by Australian physicians increased by 87% between 2002 and 2009. While dexamphetamine is the most commonly prescribed PS, this increase is attributed to methylphenidate (Ritalin). In 2014, the WA EDRS data showed the highest ever proportion of participants reporting use of illicit pharmaceuticals (PSs) within the previous 6 months, at 77%. In light of this, we examined trends in recent illicit PS use across WA EDRS samples from 2007-2014.

Table 1: Reported recent illicit PS use

<table>
<thead>
<tr>
<th>Year</th>
<th>Recent use (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>44</td>
</tr>
<tr>
<td>2008</td>
<td>50</td>
</tr>
<tr>
<td>2009</td>
<td>58</td>
</tr>
<tr>
<td>2010</td>
<td>58</td>
</tr>
<tr>
<td>2011</td>
<td>67.9</td>
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<td>2012</td>
<td>64.4</td>
</tr>
<tr>
<td>2013</td>
<td>62</td>
</tr>
<tr>
<td>2014</td>
<td>77</td>
</tr>
</tbody>
</table>

Discussion

The results indicate a significant upward trend in reported recent illicit PS use in WA EDRS samples over the last eight years. The proportion of participants recent use of PSs was particularly low in 2007 and particularly high in 2014. Contrary to prescribing trends, the results suggest that, at least for the past two years, increases in illicit PS use among WA EDRS samples is mainly attributable to dexamphetamine rather than methylphenidate. Within the previous two years it also appears that illicit PSs were largely being sourced via others’ diverted prescription medication.

Important caveats exist when interpreting these results. EDRS samples are not randomly selected. The results therefore may not accurately represent patterns of use across time in regular ecstasy and/or psycho-stimulant drug users. Further, due to the lack of data surrounding specific drugs used, motivations for use, and the original drug source prior to 2013, it is not possible to accurately gauge the reasons for the increase over time in WA EDRS samples.

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