An overview of oxycodone reformulation in NSW

David Mckell and Lucy Burns
David McKell
What is Oxycodone?

- Oxycodone is an opioid analgesic
- Most commonly prescribed for pain relief
- Depressant drug affecting the CNS slowing the messages between the brain and body
- Medical practitioners and health workers intravenous concern
Why was it reformulated?

• Oxycontin® was reformulated from April 1, 2014

• Reduce tampering to prevent unintended use such as injecting and snorting
Key findings comparing NSW and National data

![Graph comparing NSW and National data for Recent Injection (any form) of Oxycodone](chart.png)

- **NSW**: Orange line
- **National**: Green line

**Y-axis**: % of PWID

**X-axis**: Year (2010 to 2014)

**Title**: Recent Injection (any form) of Oxycodone
Some key findings from NSW

- Main brand reported by participants was Oxycontin® (35%).
- Significantly more (p< 0.05) participants in NSW are reporting oxycodone is ‘more difficult’ to obtain than the previous year.
- Nineteen percent report the street price of oxycodone has increased in the last six months.
Key Expert Opinion

• Varying reports from Key Experts (KE’s)

• New challenges for health ‘key experts’ (KE’s) in the management of oxycodone injection/use

• Original Oxycontin® injection/use is becoming less frequent
Summary

• The Oxycontin® reformulation was introduced in April 2014.

• Some clients continue to use the reformulated Oxycontin® intravenously.
Summary (con’t)

• The reformulation of Oxycontin® has altered the nature of injecting advice provided by health KE’s.

• The introduction of reformulated Oxycontin® in April 2014 means any long-term benefits amongst users are not immediately evident.
Crystal MDMA: A Unique Addition to Australian Markets

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A Shift in the Use of Ecstasy Forms

In the EDRS, we distinguish between different forms of ecstasy: pills, powder, crystal MDMA and ecstasy capsules.

Crystal MDMA was introduced as its own category in the 2013 EDRS survey. As shown in Figure 1, there was a significant decline in the proportion of regular psychedelic users (RPU) who reported using ecstasy pills and a significant increase in RPU reporting the use of crystal MDMA from 2013 to 2014.

This increase and the fact that Crystal MDMA accounts for a sizable proportion of the sample (~40%), the current study examined the predictive factors of crystal MDMA users.

We hypothesised that crystal MDMA users present riskier patterns of drug use and lower health outcomes compared to non-crystal MDMA users.

Drug Use Characteristics of Crystal MDMA Users

Ten variables were selected (5 each variables. THe nnumbers) to be included in the Analysis. The Bergen-Hawthorne procedure was used to control the false positive rate.

Only two variables were significant at the univariate level: participants who used crystal MDMA were more likely to have used more than 6 different drugs in the last six months and more likely to have used a new psychoactive substance (NPS).

When placed into a binary logistic regression, these variables remained significant.

Health Concerns

When appropriate critical values were selected, none of the health variables significantly predicted crystal MDMA users (Table 1).

Specifically, crystal MDMA users did not report higher mental health prevalence or higher rates of high psychological distress, risky drinking or stimulant dependence. Furthermore, this user group did not report higher excessive rates of drug use problems.

It is important to remember that the vast majority of RPU in the 2014 EDRS sample were regular ecstasy users (90%) and almost all (98%) had used ecstasy at least once in the 6 months prior to survey. Thus it may be difficult to find health differences in the use of such a similar drug.

State Comparisons

Figure 4: State Distribution of Crystal MDMA users. Percentages represent the proportion of crystal MDMA users in the 2014 survey.

Given the significant increase in the use of crystal MDMA in the 2014 EDRS sample, the current analysis looked at 12 rash and health variables to assess whether there were significant predictive factors for this specific group of users.

Only two variables were predictive of crystal MDMA users. People who use crystal MDMA are more likely to be broader drug users and more likely to have used an NPS.

Crystal MDMA is more potent and more quickly absorbed than pills or powder ecstasy. However, when you have a more experienced sample of ecstasy users, the lifefl effecivaeffects of the drug may not necessarily increase the prevalence of negative health factors.

Acknowledgements

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References

1. Bergen-Hawthorne procedure
2. Crystal MDMA is not currently available in capsules. One capsule typically containing roughly 100mg of crystal.
3. It is unclear what this new form was marketed to Australian markets. However, notable numbers of NAB first reported its use in the 2012 EDRS survey.
4. Unfortunately, there are no available data sources looking at the chemical composition of crystals obtained, thus, it cannot be guaranteed that the substance reported by participants contains only MDMA.

Figure 2: Chemical structure of the MDMA molecule.

As the name suggests, MDMA crystal is the crystalline form of 3,4-dimethoxyphenyl-2-methylamphetaneline and as a result a purer form of ecstasy.

In relation to physiological differences, the absorption of crystals in the digestive system is higher compared to pills or powder MDMA. As a result, users experience a stronger peak effect and longer lasting aftereffects.

As the purity of the crystals is higher than ecstasy pills, users may often report similar measures of crystal MDMA which can potentially lead to overdose.

Anecdotal reports from RPU in the 2014 EDRS suggest that unlike in European countries, MDMA-crystals are most commonly available in capsules, one capsule typically containing roughly 100mg of crystal.
Drugs and Poisons Legislation Amendment
(New Psychoactive and Other Substances)
Bill 2013

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## NSW EDRS Sample

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
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<tbody>
<tr>
<td>Used NPS</td>
<td>59%</td>
<td>40%</td>
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<tr>
<td>Used Synth Cannabinoid</td>
<td>25%</td>
<td>3%</td>
</tr>
<tr>
<td>2C-B</td>
<td>25%</td>
<td>21%</td>
</tr>
<tr>
<td>DMT</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>DXM</td>
<td>7%</td>
<td>NBOMe</td>
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### Perceptions of Legality in NSW 2014

<table>
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<th>Legal</th>
<th>Illegal</th>
<th>Unsure</th>
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<tbody>
<tr>
<td>2C-B</td>
<td>3%</td>
<td>56%</td>
<td>41%</td>
</tr>
<tr>
<td>2C-I</td>
<td>-</td>
<td>37%</td>
<td>63%</td>
</tr>
<tr>
<td>DMT</td>
<td>1%</td>
<td>73%</td>
<td>26%</td>
</tr>
<tr>
<td>Mephedrone</td>
<td>2%</td>
<td>42%</td>
<td>56%</td>
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If all NPS became illegal in the future, would that stop you either using or starting to use them?

- Yes: 2%
- No: 92%
- Unsure: 4%
Summary

• Since the *Drugs and Poisons Legislation Amendment* we have seen a significant decrease in the use of both NPS and synthetic cannabinoids.

• High proportions of people with correct perceptions of their illegality.

• However the majority said they would not stop using these substances based on their criminalisation.