Background

- Global use of opioid analgesic medicines has doubled over the past decade:
  - 96% of use occurred in North America, Western and Central Europe and Oceania (2011-2013)

- In Australia over the past decade (2000-2010):
  - Fourfold increase in the proportion of ANSPS respondents reporting last injecting pharmaceutical opioids (PO): from 4% to 16%¹
  - Among opioid treatment episodes, the proportion where PO were identified as the main drug of concern almost doubled from 19% to 33%²

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² AIHW. Cat no. HSE 128 (2012)
Background: PO injection health-related harms

- IV PO use implicated in recent outbreak of HIV infection among people who inject drugs (PWID) that occurred in Scott County, Indiana, USA
- Increased risk of skin and soft tissue infections and other adverse health outcomes, including pulmonary embolization
- Majority (67%) of accidental opioid overdose deaths in Australia in 2011 were attributed to opioids other than heroin

Methods

- Australian NSP Survey (ANSPS)
- Bio-behavioural sentinel surveillance system:
  - Annually repeated cross sectional survey since 1995
  - Self-administered questionnaire and provision of a capillary dried blood spot for HIV and HCV antibody testing
  - Conducted at ~50 NSPs nationally, including in regional/remote areas
  - Representative of PWID who attend NSPs


1. Topp et al., JAIDS 2008
Methods

• ANSPS data collection in 2014:
  ➢ All POs injected in the last 6 months
  ➢ PO injected most frequently in the last 6 months
  ➢ Heating and filtering prior to injection at last PO injection
  ➢ Type of filter used at last PO injection

• Primary outcome was recent (past six months) injection of PO

• PO defined as any opioid analgesics, excluding OST (methadone, buprenorphine and buprenorphine-naloxone)
Results: Sample

- 2,378 NSP attendees completed the 2014 ANSPS
- Response rate: 48%
- 50 NSP services participated:
  - 20 NSPs from regional and remote areas
  - Contributed ~25% of respondents
- 41% of respondents had recently injected PO
- People who did not answer questions on recent PO injection (n=174) and those who last injected stimulants (n=576) or PIEDS (140) and did not inject PO in the last 6 months were excluded.

Results: Sample characteristics

- 1,488 people were identified as opioid injectors
  - 68% were men
  - 81% identified as heterosexual
  - 85% were born in Australia
  - 14% identified as Indigenous Australians
  - Median age was 40 years
  - Median of 20 years since first injected drugs
  - 46% last injected heroin
  - 57% injected daily or more frequently in the last month
  - 44% currently on OST

1. Topp et al., JAIDS 2008
Results:

Type and main PO injected in the last 6 months

<table>
<thead>
<tr>
<th></th>
<th>Injected last 6 months N (%)</th>
<th>Main PO injected last 6 months N (%)</th>
<th>Exclusively injected this PO N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>100 (12)</td>
<td>42 (5)</td>
<td>29 (3)</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>193 (23)</td>
<td>72 (8)</td>
<td>43 (5)</td>
</tr>
<tr>
<td>Morphine</td>
<td>569 (67)</td>
<td>409 (48)</td>
<td>270 (32)</td>
</tr>
<tr>
<td>Pethidine</td>
<td>27 (3)</td>
<td>3 (&lt;1)</td>
<td>4 (&lt;1)</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>52 (6)</td>
<td>12 (1)</td>
<td>8 (1)</td>
</tr>
<tr>
<td>Oxycontin®</td>
<td>368 (43)</td>
<td>175 (21)</td>
<td>95 (11)</td>
</tr>
<tr>
<td>Targin®</td>
<td>17 (2)</td>
<td>5 (&lt;1)</td>
<td>6 (1)</td>
</tr>
<tr>
<td>Other oxycodone</td>
<td>155 (18)</td>
<td>37 (4)</td>
<td>27 (3)</td>
</tr>
<tr>
<td>More than one</td>
<td>--</td>
<td>91 (11)</td>
<td>366 (43)</td>
</tr>
<tr>
<td>Not reported</td>
<td>--</td>
<td>2 (&lt;1)</td>
<td>--</td>
</tr>
</tbody>
</table>

Factors independently associated with recent PO injection among people who inject opioids

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total sample (N=1,488)</th>
<th>No recent PO injection (N=640)</th>
<th>Recent PO injection (N=848)</th>
<th>Multivariate relationship AOR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Born in Australia (%)</td>
<td>1,264 (85)</td>
<td>523 (82)</td>
<td>741 (87)</td>
<td>1.51 (1.10-2.07)</td>
<td>0.011</td>
</tr>
<tr>
<td>Ever imprisoned (%)</td>
<td>797 (54)</td>
<td>315 (49)</td>
<td>482 (57)</td>
<td>1.34 (1.06-1.69)</td>
<td>0.013</td>
</tr>
<tr>
<td>Daily or more frequent injection last month (%)</td>
<td>844 (57)</td>
<td>300 (47)</td>
<td>544 (64)</td>
<td>1.65 (1.31-2.08)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Used another’s used syringe in last month (%)</td>
<td>247 (17)</td>
<td>67 (10)</td>
<td>180 (21)</td>
<td>2.00 (1.43-2.78)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Used another’s used drug preparation item in last month (%)</td>
<td>460 (31)</td>
<td>153 (24)</td>
<td>307 (36)</td>
<td>1.55 (1.19-2.01)</td>
<td>0.001</td>
</tr>
<tr>
<td>Self-reported overdose in previous 12 months</td>
<td>309 (21)</td>
<td>98 (15)</td>
<td>211 (25)</td>
<td>1.81 (1.36-2.42)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>History of OST (%)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Current (reference)</td>
<td>662 (44)</td>
<td>360 (56)</td>
<td>302 (36)</td>
<td>1.88 (1.45-2.45)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Never</td>
<td>492 (33)</td>
<td>169 (26)</td>
<td>323 (38)</td>
<td>2.23 (1.65-3.01)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Geographic location (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major city (reference)</td>
<td>1,192 (80)</td>
<td>581 (91)</td>
<td>611 (72)</td>
<td>3.27 (2.21-5.23)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Inner Regional</td>
<td>147 (10)</td>
<td>34 (5)</td>
<td>113 (13)</td>
<td>5.50 (3.42-8.84)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Outer regional/remote</td>
<td>149 (10)</td>
<td>25 (4)</td>
<td>124 (15)</td>
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</tbody>
</table>
Results:

Among 1,488 people were identified as opioid injectors

- 60% heated their main PO the last time they injected
- 85% used a filter the last time they injected their main PO:
  - Cigarette filter (37%, n=315)
  - Cotton wool (23%, n=195)
  - Wheel filters (7%, n=58)
  - Combination of filters (14%, n=120)

Summary

- Injection of POs in Australia is:
  - Highly prevalent among Australian PWID
  - Geographically widespread
  - Typically takes place in a context of extensive poly-drug use among people who have significant histories of injection drug use

- People who inject PO are at high risk of:
  - Overdose
  - Injection related injuries and disease
  - BBV infection, including HIV and HCV infection and HCV reinfection/superinfection
Conclusion

- Geographically widespread nature of PO injection requires:
  - High coverage of NSP beyond major cities, especially outer regional/remote areas
  - Access to needles and syringes used to inject PO
  - Assess potential unmet demand for OST in this group

- Harm reduction services must:
  - Deliver health education regarding the specific risk of overdose and the need to adequately filter before injection
  - Ensure that supplies of take home naloxone and specialist pill filters are readily available to this sub-population.

Acknowledgements

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