Exploration of the benefits of methadone treatment for dual users of heroin and crack who inject or have previously injected drugs

Preliminary findings

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The authors declare no conflicts of interest
This talk

• Background & Aim
• Methods
• Results
• Discussion
• Conclusion
Background & Aim

• Higher doses of MTD - better outcomes
Background & Aim

• Higher doses of MTD - better outcomes

• Dual users (H+C) - more heroin on MTD

• High MTD dose + heroin use → OD risk

• IV use → OD risk and poor health
• Higher doses of MTD - better outcomes

• dual users (H+C) - more heroin on MTD

• high MTD dose + heroin use → OD risk

• IV use → OD risk and poor health

Dual users + IV use + high dose = higher risk of poor health and OD
Background & Aim

To explore the **physical health** and **heroin use** of **IV drug users** in **methadone** treatment by comparing:

- **High** (≥70 mg daily) vs.
- **Low** (<70 mg daily) dose

and **crack** use.
Methods

Sample:
- current/previous IV users of heroin currently in methadone treatment
- two community treatment centres in London, UK
Methods

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- Medical records, n=258
- Heroin-only + dual users
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- Medical records, n=258  
- Heroin-only + dual users

- EQ-3D and in-depth interviews (mixed quantitative/qualitative), n=36  
- Dual users only  
- More accurate data

The study was approved by the Ethics Committee of the London South Bank University and was partially funded by Lifeline Project.
Methods

Sample:
- current/previous IV users of heroin currently in methadone treatment
- two community treatment centres in London, UK

- Medical records, n=258
- Heroin-only + dual users

- EQ-3D and in-depth interviews (mixed quantitative/qualitative), n=36
  - Dual users only
  - More accurate data

Poor health: medium to severe IV-related adverse events such as varicose veins, septic arthritis, septicaemia, DVT, pulmonary embolism, endocarditis, stroke.

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Results – Clinical records n=258

Heroin-only users

High dose - less heroin use for **heroin-only** users
High dose – less people in good health for heroin-only users
Results – Clinical records n=258

Current heroin use

- H: 35% YES, 65% NO
- H+C: 23% YES, 77% NO
- H: 29% YES, 71% NO
- H+C: 17% YES, 83% NO

Physical health

- H: 80% good, 20% poor
- H+C: 57% good, 43% poor
- H: 68% good, 32% poor
- H+C: 46% good, 54% poor

MTD

more heroin users and less in good health regardless of dose (dual users)
Results – Interview study – Dual users only n=36
## Results – Interview study – Dual users only n=36

### Sample differences

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>N=21</th>
<th>N=15</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently using heroin</td>
<td>81</td>
<td>46.7</td>
<td></td>
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<tr>
<td>Poor physical health</td>
<td>38.1</td>
<td>73.3</td>
<td></td>
<td>P&lt;.001</td>
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<tr>
<td>Overdoses (OD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>33.3</td>
<td>33.3</td>
<td></td>
<td>P=.020</td>
</tr>
<tr>
<td>few</td>
<td><strong>42.9</strong></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>many</td>
<td>23.8</td>
<td>46.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-risk injecting sites*</td>
<td>23.8</td>
<td><strong>66.7</strong></td>
<td></td>
<td>P&lt;.001</td>
</tr>
</tbody>
</table>

* groin, neck

High dose – less heroin use but more people in poor health, more frequent OD, more high-risk IV
### Results – Interviews (EQ-3D standardized health measure)

<table>
<thead>
<tr>
<th>%</th>
<th>N=21</th>
<th>N=15</th>
<th>$\chi^2$</th>
</tr>
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<tbody>
<tr>
<td>no probl</td>
<td>70</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>some</td>
<td>20</td>
<td>64.3</td>
<td>P&lt;.001</td>
</tr>
<tr>
<td>a lot</td>
<td>10</td>
<td>21.4</td>
<td></td>
</tr>
<tr>
<td>looking after myself</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>no probl</td>
<td>85</td>
<td>35.7</td>
<td></td>
</tr>
<tr>
<td>some</td>
<td>10</td>
<td>57.1</td>
<td>P&lt;.001</td>
</tr>
<tr>
<td>a lot</td>
<td>5</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>doing usual activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>no probl</td>
<td>55</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>some</td>
<td>35</td>
<td>78.6</td>
<td>P&lt;.001</td>
</tr>
<tr>
<td>a lot</td>
<td>10</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>pain or discomfort</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>none</td>
<td>50</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>some</td>
<td>30</td>
<td>28.6</td>
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<tr>
<td>a lot</td>
<td>20</td>
<td>64.3</td>
<td></td>
</tr>
<tr>
<td>worried, sad, unhappy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>not at all</td>
<td>20</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>a bit</td>
<td>55</td>
<td>71.4</td>
<td>P&lt;.001</td>
</tr>
<tr>
<td>very</td>
<td>25</td>
<td>28.6</td>
<td></td>
</tr>
</tbody>
</table>

**Health today**

- 65.0 % ± 13.0
- 46.3 % ± 20.6

**High dose – lower ratings on all E3-QD items**

p=0.007
### Results – Interview study – Dual users only n=36

<table>
<thead>
<tr>
<th>Methadone dose</th>
<th>OR</th>
<th>95% CI</th>
<th>p value</th>
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</thead>
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<tr>
<td></td>
<td>0.18</td>
<td>0.04-0.78</td>
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**Bivariate associations with physical health**

High dose – poor health
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<td>0.17</td>
</tr>
<tr>
<td>Duration of crack use</td>
<td>1.01</td>
<td>0.93-1.09</td>
<td>0.849</td>
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<tr>
<td>Duration of treatment</td>
<td>0.86</td>
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Duration of treatment but not of drug use – poor health
### Results – Interview study – Dual users only n=36

#### Bivariate associations with physical health

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<td>Duration of IV use</td>
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<td>0.1</td>
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<td><strong>0.004</strong></td>
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Duration of IV use ON but not OFF treatment – poor health
### Results – Interview study – Dual users only n=36

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<td><strong>0.004</strong></td>
</tr>
<tr>
<td>Cardiovascular risk</td>
<td>0.97</td>
<td>0.92-1.02</td>
<td>0.237</td>
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<td>Injecting technique</td>
<td>1</td>
<td>0.93-1.08</td>
<td>0.957</td>
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<tr>
<td>Ever street homeless</td>
<td>2.53</td>
<td>0.57-11.26</td>
<td>0.224</td>
</tr>
</tbody>
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High dose, treatment and IV duration, high-risk IV – poor health
Results – Interview study – Dual users only n=36

Qualitative data – most frequent reason to stop IV use
Results – Interview study – Dual users only n=36

Qualitative data – most frequent reason to stop IV use

• severe health complication ± no veins at a high-risk site
Results – Interview study – Dual users only n=36

Qualitative data – most frequent reason to stop IV use

- severe health complication ± no veins at a high-risk site
- switch to smoking when no veins at lower-risk sites
  - high-risk sites = 'no go'

Not the MTD but choices motivated by personal circumstances and beliefs
Discussion

High MTD dose

Longer times on MTD

Longer IV use on MTD

High-risk IV sites
Discussion

High MTD dose

Longer times on MTD

Longer IV use on MTD

High-risk IV sites

What does this mean?
Possible scenario

MTD

- Stability, better quality of life
- Better conditions for safer IV use
- IV use cessation/Less frequent IV use
- More health care access
Possible scenario

MTD

- Stability, better quality of life
- Better conditions for safer IV use
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Vein damage can be a long-term process

How veins collapse
www.exchangesupplies.org
Possible scenario

MTD

- Stability, better quality of life
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Vein damage can be a long-term process

How veins collapse
www.exchangesupplies.org

For people who continue injecting:

MTD minimizes acute IV complications
### Possible scenario

**MTD**

- Stability, better quality of life
- Better conditions for safer IV use
- IV use cessation/Less frequent IV use
- More health care access

Vein damage can be a long-term process

<p>| | | | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tbody>
</table>

How veins collapse

www.exchangesupplies.org

For people who continue injecting:

- **MTD minimizes acute IV complications**
- Doesn't stop chronic vein damage and associated severe CV events
Possible scenario – why the dose difference?
Possible scenario – why the dose difference?

• some dual users might have stopped injecting drugs and preserved a good health on a high dose of methadone, gradually reduced the medication and been successfully discharged from treatment

• our results give a detailed description of users long-term in treatment, who might be ambivalent about their drug use
Possible scenario – why the dose difference?

MTD – stops the withdrawals but does not give people the same 'high'
Possible scenario – why the dose difference?

MTD – stops the withdrawals but does not give people the same 'high'

- lower tolerance

- find easier to switch to smoking because smoking $\rightarrow$ 'high'
Possible scenario – why the dose difference?

MTD – stops the withdrawals but does not give people the same 'high'

- lower tolerance

- find easier to switch to smoking because smoking → 'high'

- Higher tolerance

- IV use → 'high'
  → physical health deterioration
What about the crack/cocaine?
What about the crack?

Clinical records n=258

Physical health

<table>
<thead>
<tr>
<th></th>
<th>H</th>
<th>H+C</th>
<th>H</th>
<th>H+C</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>20%</td>
<td>43%</td>
<td>32%</td>
<td>54%</td>
</tr>
<tr>
<td>50%</td>
<td>80%</td>
<td>57%</td>
<td>68%</td>
<td>46%</td>
</tr>
</tbody>
</table>
Any crack use but particularly IV use is linked to poor health
What about the crack?

Clinical records n=258

DIRECT:
IV Crack use = more IV use
Crack use → less safe IV use

INDIRECT:
Crack use → more heroin use
= more IV use

IV use → physical health deterioration

Any crack use but particularly IV use is linked to poor health
Conclusions

For dual users, especially when on high dose of methadone, if there is:
- no change in IV, or
- even progression to high-risk sites:

- the risk of overdose needs to be reconsidered
- IV use and crack use need to be addressed to prevent further health deterioration.
Acknowledgements

- Mary Bell MacLeod
- Recovery Teams in Southwark and Waltham Forest
- Jean Pender
- *Lifeline Project* for partially funding this research
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More on my research:

Posters 82 and 266, Poster Session 21, Thursday 12.45

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