Outcomes of cocaine dependence treatment: what we know, what we need to know

Prof Michael Gossop
National Addiction Centre
Maudsley Hospital/Institute of Psychiatry
King’s College London
Major National Treatment Outcome Studies

DARP      (Simpson and Sells, Texas)
TOPS      (Hubbard et al., N.Carolina)
DATOS     (Multicentre, USA)
NTORS     (Gossop et al., London)
• Longitudinal studies of outcomes
• Drug users admitted to treatment
• Multi-site studies
• Existing services in day-to-day conditions
THREE DIMENSIONS OF DRUG USE

- Consumption behaviour
- Problems
- Dependence
Multiple substance use prior to treatment

Number of substances used

- 1
- 2
- 3
- 4
- 5
- 6+

%
Patterns of multiple drug misuse: I. Frequency of use prior to treatment.
Patterns of multiple drug misuse: II.
Frequency of use prior to treatment.
Patterns of multiple drug misuse: III. Frequency of use prior to treatment.

![Bar chart showing frequency of use prior to treatment for different drugs: Op, Stim, Benz, Alc. The chart indicates that Stim has the highest frequency, followed by Op, Benz, and Alc.]
Patterns of multiple drug misuse: IV. Frequency of use prior to treatment.

![Bar chart showing frequency of use for different drugs]
Cocaine powder and crack cocaine use: treatment samples in England, Germany and Italy

Prinzleve et al., 2004
Casemix issues

Drug misusers in residential treatment tend to have:

• Longer histories of drug use
• More polydrug use (eg cocaine, alcohol)
• Wider range of problems
• More serious problems
• More criminal involvement

Gossop et al., 1998
Abstinence from drugs after residential treatment
(1 year follow-up: n=408)

Gossop et al., 1999
## Stimulant use at intake (n=637)

<table>
<thead>
<tr>
<th>Treatment Modality</th>
<th>Residential</th>
<th>Methadone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used amphetamines</td>
<td>46%</td>
<td>37%</td>
</tr>
<tr>
<td>Used cocaine powder</td>
<td>34%</td>
<td>26%</td>
</tr>
<tr>
<td>Used crack cocaine</td>
<td>52%</td>
<td>65%</td>
</tr>
<tr>
<td>Stimulants as main drug</td>
<td>25%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Frequency of stimulant use
1 year after treatment
(n=637)
Frequency of stimulant use during 5 years after treatment

Days:

- Intake: High rate
- 1 Year: Low rate
- 2 Years: Low rate
- 4-5 Years: Low rate

Legend:
- Low rate
- High rate
- Main drug
## Route of administration and drug type

<table>
<thead>
<tr>
<th>Route</th>
<th>Cocaine powder</th>
<th>Crack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intranasal</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Injection</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Smoked</td>
<td>×</td>
<td>✓</td>
</tr>
</tbody>
</table>
Injecting and sharing before & after residential treatment

- **Intake**: Approximately 70% injecting, 20% sharing
- **1 Year**: 50% injecting, 10% sharing
- **2 Years**: 40% injecting, 10% sharing
- **4-5 Years**: 30% injecting, 5% sharing

Legend:
- **Sharing**: Light yellow
- **Injecting**: Dark red
Years since 1st injection and positive hepatitis serostatus (Noble et al., 2000)
Alcohol: frequency of drinking

Days

Intake 1 Year 2 Years 4-5 Years

Residential* Community

[Bar chart showing comparison of days of alcohol consumption in different settings over time]
Alcohol: drinking quantity/day

Intake 1 Year 2 Years 4-5 Years

Units

Residential* Community

0 5 10 15

intake

1 year

2 years

4-5 years
Acquisitive crime: outcomes for residential clients
Selling drugs: outcomes for residential clients

![Bar chart showing the percentage of clients selling drugs at different times after intake.](chart.png)
Summary and recommendations

- Single-substance focus is out-dated and misleading
- Substantial reductions in illicit drug use after treatment
- Reductions in injecting risk behaviour
- Reductions in crime
- Relatively little change in drinking problems
Summary and recommendations

• Little is known about impact of multiple treatment episodes or about effective patient placement

• Time in treatment linked to better outcomes for both methadone and residential treatments

• Improved treatment effectiveness through improved rates of retention?