Opioid Agonist Treatment in Correctional Settings

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Open Society Institute - Baltimore
Treating Heroin-Addicted Prisoners

- Opioid agonist treatment is widely used internationally in jails and prisons
  - Australia, Canada, Europe, Iran and elsewhere (Dolan 2001)

- Most heroin-addicted inmates in the US do not receive such treatment (Rich et al., 2005)

- Re-addiction upon release is common with:
  - Increased criminal activity
  - Re-incarceration
  - Overdose death
  - HIV infection
Potential Candidates for Prison-based Treatment

- Parole Violators who are:
  - in Opioid Treatment Programs (OTPs)
  - addicted to heroin (or other opioids)

- Inmates using heroin in prison

- Inmates who were addicted to heroin at the time of incarceration but are not using heroin in prison
  ✓ for relapse prevention
Methadone Maintenance for Prisoners

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Supported by: NIDA R01DA 021579
Aim: To examine the effectiveness of prison-initiated methadone treatment

Participants were not using opioids while in prison but were heroin-dependent at the time of incarceration

In-prison treatment provided by a community program

Post-release outcomes over 12 months were measured in terms of drug use, criminal behavior and re-incarceration
Inclusion Criteria

- > 1 year of heroin addiction at time of incarceration
- Baltimore address
- 5-9 months remaining on sentence
- Medically stable
- No pending or parole hearings
- Willingness to take methadone
Informed Consent & Enrollment

- Consent & Assessments (Research staff)
  - Individual informed consent
  - Baseline assessment

- Medical Examination (Treatment Program)
  - Screen medical records
  - History, physical exam and labs
  - Random Assignment to 1 of 3 Conditions
Study Conditions

Counseling Only \((n = 70)\)
- ✓ Counseling in prison only
- ✓ Passive referral to treatment in community

Counseling and transfer \((n = 70)\)
- ✓ Counseling in prison
- ✓ Immediate access to methadone upon release

Counseling and Methadone \((n = 71)\)
- ✓ Counseling in prison
- ✓ Start methadone in prison
- ✓ Continue methadone upon release
<table>
<thead>
<tr>
<th>Participant Characteristics</th>
<th>%</th>
<th>Mean</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td>40.3</td>
<td>7.1</td>
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<tr>
<td>Race</td>
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<tr>
<td>African American</td>
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<td></td>
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</tr>
<tr>
<td>Caucasian</td>
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<td></td>
<td></td>
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<tr>
<td>Other</td>
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<td></td>
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<tr>
<td>Education</td>
<td></td>
<td>10.9</td>
<td>1.8</td>
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## Substance Use History

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<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
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<tbody>
<tr>
<td><strong>Age of Onset</strong></td>
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<td></td>
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<tr>
<td>Heroin</td>
<td>18.5</td>
<td>5.0</td>
</tr>
<tr>
<td>Cocaine</td>
<td>21.4</td>
<td>7.4</td>
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<tr>
<td><strong>Past 30 Day Use</strong></td>
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<tr>
<td>Heroin</td>
<td>27.2</td>
<td>5.0</td>
</tr>
<tr>
<td>Cocaine</td>
<td>18.3</td>
<td>13.2</td>
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<tr>
<td><strong>Prior Treatment</strong></td>
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<td></td>
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<tr>
<td>Any</td>
<td>2.9</td>
<td>3.7</td>
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<tr>
<td>Methadone</td>
<td>1.5</td>
<td>.7</td>
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</table>
## Criminal History

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<th>Mean</th>
<th>SD</th>
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<tbody>
<tr>
<td>Age first crime</td>
<td>13.6</td>
<td>4.6</td>
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<tr>
<td>Age first arrest</td>
<td>16.5</td>
<td>4.9</td>
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<tr>
<td>Age first incarceration</td>
<td>20.6</td>
<td>7.5</td>
</tr>
<tr>
<td>Lifetime incarcerations</td>
<td>6.9</td>
<td>4.9</td>
</tr>
<tr>
<td>Past 30 days crime-profit</td>
<td>24.9</td>
<td>10.3</td>
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</tbody>
</table>
Counseling for All Participants

- Counseling intake session
- 12 group sessions within Condition
- Pre-release session with referrals to treatment or community services
Methadone Dosing

- Participants were not opioid tolerant
  - Dosing started LOW and went SLOW

- Initial dose 5 mg daily

- Increase by 5 mg per week

- Target was 60 mg

- Well-tolerated except for constipation
Assessments

- Conducted at 1, 3, 6 and 12 months post-release
- Treatment status
- Addiction Severity Index
- Urine drug test
- Official arrest records
Statistical Analysis

• Poisson regression analysis for count variables

• Logistic regression for rates of positive drug testing and for incarceration

• Control variables:
  – Age
  – Age at first crime
  – Prior cocaine use
  – Completed prison treatment
  – Length of baseline incarceration
Prison Treatment Status

Community Treatment Status

- Entered Community Treatment
- Completed 1-year

CO vs. C + M all $ps < .001$; CO vs. C + T all $ps < .019$; C + T vs. C + M all $ps < .04$
Drug Testing 1-Year Post Release

- Opioid positive*
- Cocaine positive**

* Opioid positive CO v. C+M \( p = .001 \); C+T v. C+M \( p = .027 \)

** Cocaine positive CO v. C+M \( p = .0001 \); C+T v. C+M \( p = .023 \)
Drug Testing: Opioid Positive

- CO
- C+T
- C+M
Drug Testing: Cocaine Positive

![Graph showing percentage of cocaine positive drug tests over time]

- CO
- C+T
- C+M

Percentage:
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%

Time Periods:
- 1-month
- 3-month
- 6-month
- 12-month
Self-reported Crime: 1 Yr. Post-Release

No significant differences; no predictor variables significant
No significant differences; older participants < likely to be arrested
Overdose Deaths

None in either Methadone Condition

4 in Counseling Only Condition

• 2 heroin
• 1 fentanyl
• 1 methadone (not in treatment at the time)
Conclusions

- At 12-month follow-up, prison-based methadone treatment was associated with:
  - higher rates of community treatment entry and retention
  - lower rates of opioid and cocaine positive tests
- Prison-based methadone treatment was not associated with reduced arrest rates
- Counseling Only had four overdoses deaths as compared to none for the two methadone conditions
- Prison-based methadone treatment is a promising approach to prevent re-addiction
Buprenorphine Treatment for Pre-release Prisoners in Puerto Rico

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Supported by: NIDA R01DA 021579 supplement
Buprenorphine provided by: Reckitt Benckiser
Buprenorphine for Prisoners
(Albizu-Garcia et al., 2007)

- High rates of heroin use in Puerto Rican Prisons
- 45 pre-release male inmates treated with buprenorphine
  - Over 80% were tolerant to opioids at induction
  - Non-tolerant participants started at low dose (2/.5 mg.)
  - 3 dropped out while in prison
- Referred to physicians in the community upon release
- 78% of participants continued treatment at 1 month post-release follow-up
  - low rate of opioid positive drug tests (25%)
Buprenorphine Treatment for Prisoners

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Buprenorphine for Prisoners

- 300 male and female pre-release prisoners

- Random assignment:
  - Start medication in prison v. community
  - Community treatment in OTP v. Community Health Center

- 12 month post-release follow-up
  - Treatment entry
  - Drug use
  - HIV risk behavior
  - Criminal behavior and arrest
Buprenorphine Dosing

- Participants are non-tolerant
- Dose induction starts LOW and goes SLOW
- 1 mg daily x 7 days
- Increase by 1 mg per week to 4 mg
- Increase by 2 mg per week to 8 mg
- Switch to 16 mg every other day
Summary

- Offer opioid agonist treatment (detoxification or maintenance) to:
  - Parole violators who are addicted to heroin or in treatment at the time of incarceration
  - Inmates using heroin in prison

- Prison-initiated treatment with methadone or buprenorphine is a promising approach to prevent relapse upon discharge