Treating Opiate Addiction in Offender Populations

Kimberly Sperber, Ph.D.
Numbers on the Rise

• Number of people meeting diagnostic criteria for heroin abuse or dependence doubled from 214,000 in 2002 to 467,000 in 2012

• Number of people trying heroin for first time increased from 90,000 in 2006 to 156,000 in 2012
Past Month and Past Year Heroin Use Among Persons Aged 12 or Older: 2002-2012
Not Just Heroin Anymore

• Drug tx admission rates for opioids, excluding heroin, have more than tripled

• Retail pharmacies dispensed 131 million prescriptions for opioids in 2000; increased to 210 million in 2010.
In Ohio

- Increase in number of pill mills
- 3-fold increase in treatment of drug withdrawal in newborns
- 10th highest rate of drug overdose deaths contributed to prescription opioids; exceeds national average.
- 335% increase in accidental overdoses (4 per day)
- More killed by accidental overdose than by car accidents
- Described as “epidemic”
In Colorado

- Heroin overdose deaths rose from 91 in 2012 to 118 in 2013
- 27% increase in number of 18-24 year olds using heroin since 2008
- Number of treatment admissions for opioids not prescribed by a doctor rose from 824 in 2006 to 1715 in 2010
- Number of prescriptions for oxycodone rose 41% from 2001 to 2010.
Connection Between Prescription Drug Use and Heroin

- Research suggests that prescription painkillers may act as a gateway to heroin use
- Nearly half of young people who inject heroin surveyed in 3 recent studies reported abusing prescription opioids before starting to use heroin
  - Cheaper
  - Easier to obtain
Policymaker Responses

- Prescription Drug Monitoring Programs
- Doctor Shopping Laws
- Good Samaritan Laws
- Rescue Drug Laws
- Law Enforcement Task Forces
  - Closing “pill mills”
- Increased Support for Substance Abuse Treatment
  - Medicaid expansion
- Increased Support for Medication-Assisted Treatment (in some jurisdictions)
- Legislation to Minimize Diversion of Opioids to the Street
  - Example – Ohio hospice care organizations to establish procedures to minimize diversion of opioid type controlled substances
Brain Science, Public Health, and Public Safety
How Opiates Work

- Enters the brain and converts to morphine and binds to opioid receptors.
- Users experience euphoria
- Accompanied by warm flushing of skin, dry mouth, heavy feeling in extremities
- After initial effects, become very drowsy for several hours
- Clouded mental function, slowed heart function, severely slow breathing
How Opiates Work

- Opioids can depress breathing by changing neurochemical activity in the brain stem.
- Opioids can increase feelings of pleasure by altering activity in the limbic system.
- Opioids can block pain messages transmitted through the spinal cord from the body.
Impact on the Brain

• Changes physical structure and physiology of the brain over time
  – Long-term neuronal and hormonal imbalances

• Impact is not easily reversed

• Severe withdrawal effects upon desistance
  – Increases potential for relapse
Long-Term Health Impact

• Insomnia
• Constipation
• Lung complications – pneumonia and TB
• Sexual dysfunction
• Irregular menstrual cycles
• Spontaneous abortions
Long-Term Health Impact

• Arthritis and other rheumatologic problems
• Liver and kidney disease
• Infection of heart lining and valves
• Neonatal Abstinence Syndrome (NAS)
Long-Term Health Impact

• For those who snort:
  – Damaged mucosal tissue in the nose
  – Perforated nasal septum

• For those who inject:
  – Collapsed veins
  – Bacterial infections of the veins
  – Hepatitis B, Hepatitis C, and HIV
Relevance to Corrections

- Involvement in criminal activity is substantially higher during active use
  - Implications for public safety if left untreated

- 52% of incarcerated population has experienced heroin addiction compared to 2% of the general population

- Many with addiction histories do not receive treatment while in prison
  - Newly released inmates at substantially higher risk for overdose and death
Effectively Treating Opiate Addiction
What Works to Treat Opiate Addiction?

• Behavioral therapies
  – CBT
  – Contingency Management

• Pharmacotherapy
  – Methadone
  – Buprenorphine
  – Naltrexone

• Better results when used in combination
Outcomes of These Approaches

• Improved treatment retention
• Restoration of normal brain functioning
• Lower risk of HIV
• Reduced substance use
• Increased employment rates
• Decreased criminal activity
Efficacy of MAT with CJ Populations

• Kinlock et al., 2007 and Gordon et al., 2008
  – Prison-initiated and community-initiated MMT were superior to counseling only
  – Looked at 1 month, 3 month, 6 month, and 12 month outcomes post-release
• Fewer positive drug screens, less self-reported criminal activity
Test of Buprenorphine vs Methadone for Jail Inmates

- Magura et al. (2009)
  - RCT comparing the two medications for newly admitted jail inmates in NY City found that buprenorphine recipients were more likely to enter community-based treatment upon release
  - Completion rates were similar for the two groups
Criminal Justice Concerns About Methadone and Buprenorphine

• Evidence that some patients continue to use illicit drugs while on methadone or buprenorphine
• Daily dosing regimen of MMT causes problems with retention and often interferes with employment
• Fear of prolonged withdrawal if detoxed from the medications
• Evidence that some patients divert the medications to the street
  – Abuse potential of the medications
Recent Interest in Vivitrol

- Long-acting injectible form of Naltrexone
- Acts to block effects of opiates and alcohol
- Not viewed as a “replacement drug”
- No potential for abuse, diversion
Research with Offenders

- Coviello, et al. (2012)
  - Multi-site pilot study of extended release Naltrexone with opioid dependent probationers and parolees
  - Recruited 61 participants across 5 locations
  - Provided medication for 6 months
  - Those who completed treatment had significantly fewer positive urine screens and were significantly less likely to be reincarcerated at 6 months
Talbert House Response

SAMPLE PROJECTS
AWOL Focus Review

- Sample of 2055 clients
  - 4 halfway houses, 2 residential drug court programs
- Opiate diagnosis was predictive of AWOL at the regional sites
- More common predictors across sites were risk, age, legal status
- Creation of standardized practices to reduce AWOL, with a specific focus on opiate addicts
SAMHSA and BJA Grant

- Joint grant between Hamilton County Mental Health and Recovery Services Board, Hamilton County Drug Court, and Talbert House
- $1.3 M over 3 years
- Funding used to address opiate addiction and unemployment
  - Complete continuum of substance abuse treatment services to drug court clients (including detoxification services and MAT)
  - Provision of vocational services
- Designed to serve approximately 320 clients over the course of 3 years
- 21 clients targeted for MAT
Talbert House Impact on Correctional Outcomes Study

• N=2321
• 10 Programs:
  – 4 male halfway houses
  – 1 female halfway house
  – 1 male Community-Based Correctional Facility
  – 2 residential drug court programs (1 male, 1 female)
  – 1 male jail-based program
  – 1 female jail-based program
• All clients discharged 7/1/11 – 9/30/12
Current Sample: Preliminary Analyses

- N=1520
- 6 Programs
  - CCC
  - TCC
  - Serenity Hall
  - Spring Grove
  - Cornerstone
  - Pathways
### Table 1: Sample Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1055</td>
<td>69.4</td>
</tr>
<tr>
<td>Non-White</td>
<td>465</td>
<td>30.6</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1387</td>
<td>91.2</td>
</tr>
<tr>
<td>Female</td>
<td>133</td>
<td>8.8</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 – 30</td>
<td>703</td>
<td>46.3</td>
</tr>
<tr>
<td>31 – 40</td>
<td>495</td>
<td>32.6</td>
</tr>
<tr>
<td>41 – 50</td>
<td>303</td>
<td>20.0</td>
</tr>
<tr>
<td>51+</td>
<td>17</td>
<td>1.1</td>
</tr>
<tr>
<td>Mean Age</td>
<td>33.1</td>
<td></td>
</tr>
<tr>
<td>Risk Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>242</td>
<td>16.2</td>
</tr>
<tr>
<td>Moderate</td>
<td>668</td>
<td>44.8</td>
</tr>
<tr>
<td>High/Very High</td>
<td>581</td>
<td>39.0</td>
</tr>
<tr>
<td>Program Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Halfway house</td>
<td>1226</td>
<td>80.7</td>
</tr>
<tr>
<td>CBCF</td>
<td>294</td>
<td>19.3</td>
</tr>
<tr>
<td>Opiate Diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>423</td>
<td>27.8</td>
</tr>
<tr>
<td>No</td>
<td>1097</td>
<td>72.2</td>
</tr>
<tr>
<td>New Charge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>444</td>
<td>29.1</td>
</tr>
<tr>
<td>No</td>
<td>1076</td>
<td>70.8</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td><strong>471.2 (SD= 207.6)</strong></td>
<td><strong>0 - 830</strong></td>
</tr>
</tbody>
</table>
Impact on Outcomes

• Intermediate
  – Successful completion
  – AWOL

• Long-term
  – Recidivism
Intermediate Outcomes

• Successful Discharge
  – Significant predictors included risk, age, and setting
    • High risk, younger, halfway house

• AWOL
  – Based on halfway house clients only
  – Significant predictors were risk and legal status
    • High risk, probation
<table>
<thead>
<tr>
<th>Variable</th>
<th>Slope (b)</th>
<th>SE</th>
<th>Wald</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.016**</td>
<td>.006</td>
<td>8.021</td>
<td>.984</td>
</tr>
<tr>
<td>Race</td>
<td>.615***</td>
<td>.109</td>
<td>31.948</td>
<td>1.850</td>
</tr>
<tr>
<td>Moderate Risk</td>
<td>.343*</td>
<td>.169</td>
<td>4.148</td>
<td>1.409</td>
</tr>
<tr>
<td>High Risk</td>
<td>.282***</td>
<td>.084</td>
<td>11.189</td>
<td>1.325</td>
</tr>
<tr>
<td>Successful</td>
<td>-.293**</td>
<td>.103</td>
<td>8.095</td>
<td>.746</td>
</tr>
<tr>
<td>Opioid Dx</td>
<td>.260*</td>
<td>.118</td>
<td>4.884</td>
<td>1.298</td>
</tr>
</tbody>
</table>

***p<.001 ** p < 0.01 *p<.05
Model $X^2 = 76.35$***
Implications

• Opiate addiction may have impact on recidivism independent of risk and independent of correctional treatment completion.

• May have implications for current AOD treatment practices within traditional correctional facilities
  – Integration of MAT
  – Increased capacity for dosage
Limitations

• Drug of choice categories not mutually exclusive due to poly drug use
• Reliance on public websites for arrest data
• Limited geographic region
Next Steps

• Add cases from jail-based programs and residential drug court programs
• Examine influence of treatment dosage
• Examine influence of program setting
Implementing Naloxone (Narcan)

- Naloxone is an opiate antidote
- Prescription medication that blocks the effects of opioids and reverses an overdose
- Cannot be used to get high
- Talbert House secured a grant to train correctional program staff and clients to administer Naloxone
Implementation Considerations

- Available prescriber
- Adequate site protocols
  - Referrals
  - Assessment
  - Informed consent
  - Securing/storing kits
  - Emergency procedures
- Recruiting and educating clients
- Training of end users
- Price of kits
Preliminary Results

• At least 10 “saves” to date

• Anecdotal evidence that availability of Narcan increases staff confidence in handling overdose situations
Addressing Concerns about Narcan

• Providing Narcan kits to opiate addicts will serve to increase opiate consumption
  – At least 2 studies of naloxone distribution programs that demonstrated reduced use by participants.

• Enabling addicts to reverse an overdose without being admitted to a hospital and facing negative consequences delays entry into treatment
  – No evidence to demonstrate this; those who die from the overdose not able to enter treatment at all.
Addressing Concerns about Narcan

• Providing addicts with Narcan kits will reduce the chances that emergency services will be called.
  – Some data exists to show that this may not be a major concern; one study found that 74% of participants called emergency services after administering Narcan.

• Overdose is a serious medical issue and should only be handled by medical professionals.
  – Research has shown that opiate addicts are capable, with adequate training, of recognizing and responding to overdose situation.
  – Precedent already exists for training lay people in life saving techniques (e.g., CPR, AED, Heimlich Maneuver)
Proposal for RCT of Naltrexone in 2 Halfway Houses

• Partnership with UC Researchers and ODRC
• 3 study arms
  – CBT only during treatment, Vivitrol injection upon release
  – CBT plus oral naltrexone during treatment, injection upon release
  – CBT plus injections during treatment, injection upon release
  – All eligible to receive at least 2 additional injections post-release
Enhancing Discharge Protocols for Opioid Dependent Jail Inmates

- Collaboration between Talbert House, UC Criminal Justice, UC Medical, UC Pharmacy and Psychiatry, county Sheriff’s Department
- Focus on opioid overdose prevention, HIV, and hepatitis C
- Scheduled to begin in July
Assessing Factors that Influence Adoption of MAT in Ohio Halfway Houses and CBCFs

- Funded by OCJS
- Staff surveys and staff interviews
- Sample variables:
  - organizational structure, organizational resources, dominant treatment philosophy and types of services offered, availability of medical personnel, funding sources, exposure to and understanding of MAT research findings, referral source support for MAT, staff support for MAT, concerns associated with providing MAT to offenders, community linkages to MAT services, client characteristics
Conclusions

- Conclusions from NIDA:
  - Addiction is a chronic disease
  - Like many other chronic diseases, it can be treated.
  - Medications are available to treat heroin addiction while reducing drug cravings and withdrawal symptoms, improving the odds of achieving abstinence.
  - There are now a variety of medications that can be tailored to a person’s recovery needs while taking into account co-occurring health conditions.
  - Medication combined with behavioral therapy is particularly effective
- Practitioners need to be aware of latest scientific evidence regarding what works best for treating opiate addiction
- We need to be delivering evidence-based treatments to the extent that they are available
- Research can be used to advocate for our clients to the extent that evidence-based treatments are not available
Questions and Answers

For further information, contact:
Kim Sperber
kimberly.sperber@talberthouse.org