Studying Overdose Prevention Programs in Correctional Facilities

Aaron T. Vissman, PhD, MPH
Center for Health and Human Services Research
Talbert House, Cincinnati Ohio

Amber M. Manzo, MS
University of Cincinnati School of Criminal Justice

Tiffany Thomas, BS
Community Correctional Center
Talbert House, Lebanon Ohio
Goal

• Investigate overdose education and naloxone distribution (OEND) programs delivered in secure/locked correctional facilities.
  • E.g., “PEER-OPPs” (Post –Entry –Exit and Recovery Overdose Prevention Programs)

• Help clinicians and managers discuss overdose epidemiology, intervention concepts, staff-feasibility, and effectiveness research;

• Define periods of susceptibility, amplified risk, community-reintegration, and health equity for prisoners and non-prisoners.
Recovery Oriented System of Care

Post –Entry –Exit and Recovery, Overdose Prevention Program[s], “PEER-OPPs”

*Talbert House Mission: To improve social behavior and enhance personal recovery and growth

*SAMHSA (2010) Definition: Health, home, purpose, community
Recovery Oriented System of Care

Talbert House Service Lines
- Youth Behavioral Health
  - School Based Services
  - Regional
  - Community
  - Medical Administration
  - Medical Services
- Adult Behavioral Health
  - Regional
  - Community
  - Medical Administration
  - Medical Services
- Community Care
  - Work Related Services
  - Private Pay and Community Services
  - Center for Health & Human Services Research
  - Food Services
- Court and Corrections
  - Regional
  - Cincinnati
  - Court Treatment
- Housing
  - Residential / Special Needs Housing
  - Transitional Housing
  - Permanent Housing

*Talbert House (513.281CARE)
*Deaconess Health Check
*Ohio Health Departments
*Ohio Legal Aid
*Cincinnati Exchange Program
Workshop Outline

Implementing MAT & OEND

Section 1: Epidemiology
- Intro to Program of Research and Risk Factors
- Surveillance including Correctional Facilities & Staff Preparedness

Section 2: Intervention Concepts and Strategies
- Research & PEER-OPPs

Section 3: Policies and Pilot Programs
- What’s Happening in Facilities (HH & CBCF)
Section 1

Epidemiology
Introduction

• National Epidemic*
  • Age adjusted drug overdose death rate more than doubled in the U.S. from 6.2 per 100,000 in 2000 to 14.7 per 100,000 in 2014
  • Unintentional drug overdose deaths surpassed motor vehicle deaths as the leading cause of injury-related death in 2007
  • 52,404 U.S. deaths in 2015 including 33,091 (63.1%) that involved an opioid

Age-adjusted Death Rates for Drug Poisoning by County: 1999

Age-adjusted Death Rates for Drug Poisoning by County: 2003
Age-adjusted Death Rates for Drug Poisoning by County: 2007
Age-adjusted Death Rates for Drug Poisoning by County: 2011
Age-adjusted Death Rates for Drug Poisoning by County: 2014
Introduction

• In 2015 West Virginia (41.5 per 100,000) Ohio and Kentucky (29.9 per 100,000) ranked first and third in age adjusted overdose death rates*

• Ohio specific features 2013 to 2015**
  • Significant (>20%) increases in deaths
  • Record breaking rates (>20 per 100,000)
  • Significant increases fentanyl- and carfentanil- related deaths***

Ohio, 2015 EpiAid Report

- Risk factors for fentanyl-related overdose deaths:
  - male, white, some college or less education, history of substance abuse problem, age 25-44
  - current mental health problem (e.g., depression, anxiety, or bipolar disorder)

- Additional risk factors:
  - History of high-dose opioid prescription (>=90 morphine milligram equivalents)
  - Recent release from any institution within the last month (e.g. jail, hospital, and treatment facility) OR 2.6 (1.3-5.1)

Program of Research

• Survival Analyses*
  • Globally some of the highest rates of overdose death are among ex-prisoners
  • Most deaths occur 2-4 weeks after prison release in individuals with a history of substance use disorder (SUD)

• Gaps
  • Studies on Correctional-SUD programs have investigated recidivism –not survival or mortality**
  • Studies have not investigated Community Correctional Facilities as distinct elements or units of analysis in the cascade of care for opioid SUD

Examples of CBCF and HH

Community Based Correctional Facility

Halfway House
Cornerstone (HH) Team in Cincinnati
Relative Risk (comparing weeks 1+2 with weeks 3—12)

• Scotland, HIV+IDU, 8.0 (1.5-39.1)**
  
• United Kingdom, 7.5 (95% CI: 5.7-9.9)*
• Australia, 4.0 (95% CI: 3.4-4.8)
• Washington State, USA, 8.4 (95% CI: 5.0-14.2)
• New Mexico State, USA, 3.1 (95% CI: 1.3-7.1)

• Comparing weeks 3+4 with 5-12 Pooled RR= 1.7 (95% CI: 1.3-7.1)

2-4-week Amplified Risk and Long-Term Susceptibility

• Basic needs (e.g., nutrition, housing, and health care)*

• Critical 2-4 week post-release period
  • Changes in Addiction and Tolerance
  • Overdose Mortality
  • HCV/HIV
  • Drug-related Crime
  • Social Re-(Dis-)integration

• Overall risk of death from drug-overdose, suicide, injury, and other causes remains elevated for years when comparing ex-prisoners with demographically matched community members

Program of Research

• How can Community Correctional Facilities promote health equity and survival?

• How prevalent are recommended programs among HH and CBCF?
  1. MAT (Medication assisted treatment)
  2. OEND (Overdose Education and Naloxone Distribution)

• What factors are associated with program adoption?
• What facilitates program implementation, and (ex-)prisoner survival?
STUDY 1
Factors Influencing Medication-Assisted Treatment in Ohio Halfway Houses and Community-Based Correctional Facilities
Funder: Ohio Office of Criminal Justice Services
Introduction

• Ohio substance abuse treatment clients with a primary diagnosis of opioid dependence rose >400% from 2001 to 2012*

• Links between opioid dependence, MAT, and crime are well established**

• MAT availability has not been investigated in HH and CBCF ***


*** Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, National Survey of Substance Abuse Treatment Services (N-SSATS), 2014.
Methods

• All ODRC-funded HH and CBCF were asked to participate (N=51)

• Data Collection:
  • In-depth structured, face-to-face interview with key staff (Program Director, Clinical Supervisor, Medical Staff Representative, and >=2 Direct Service Staff)
  • March to November of 2015

• Survey items from Knudsen and colleagues*

Facility Outcome Measure

• MAT access:
  • MAT Provided On-site
  • Off-site Referrals/Treatment Provided
  • No On-Site Provision or Off-site Referrals/Treatment
Results

• 49/51 programs (96%) participated in the study
  • 28 halfway houses (57%)
  • 21 CBCF (43%)
### Sample of Participating Facilities (n=49)

<table>
<thead>
<tr>
<th>Measure</th>
<th>MAT Provided</th>
<th>MAT Referrals</th>
<th>No Provision or Referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facility Type</strong></td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Halfway House</td>
<td>7 (24.1)</td>
<td>15 (51.7)</td>
<td>7 (24.1)</td>
</tr>
<tr>
<td>Community Based Correctional Facility</td>
<td>6 (30.0)</td>
<td>4 (20.0)</td>
<td>10 (50.0)</td>
</tr>
</tbody>
</table>
Sample of Participating Facilities (n=49)

<table>
<thead>
<tr>
<th>Measure</th>
<th>MAT Provision or Referrals</th>
<th>No Provision or Referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Type</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Halfway House</td>
<td>22 (75.9)</td>
<td>7 (24.1)</td>
</tr>
<tr>
<td>Community Based Correctional Facility</td>
<td>10 (50.0)</td>
<td>10 (50.0)*</td>
</tr>
</tbody>
</table>

*Chi-sqaure 3.5 (Df=1) p-value= 0.06 2-tail
### Risk Based Estimates and 95% Confidence Intervals for limited access in Ohio (2015)

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Point Estimates</th>
<th>Confidence Limits</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk in Halfway House</td>
<td>24.1%</td>
<td>(11.95, 42.4)</td>
<td>Taylor Series</td>
</tr>
<tr>
<td>Risk in CBCF</td>
<td>50.0%</td>
<td>(29.9, 70.1)</td>
<td>Taylor Series</td>
</tr>
</tbody>
</table>

*Chi-sqare 3.5 (Df=1) p-value= 0.06
Possible Correlates of MAT Adoption

- Parent Agency
- Sources of Funding and Referral
- Facility Size (# FTE)
- Staff Composition (# Medical; #LCSW; #Other)
- Staff Training and Treatment Philosophy
STUDY 2

Factors Influencing Opioid Overdose Prevention Practices in Substance Abuse and Community Corrections Programs

Funder: Ohio Office of Criminal Justice Services
Background

• N-SSATS (National Survey of Substance Abuse Treatment Services)
  • SAMHSA Behavioral Health Facilities (2004 – 2014)
    • 4.9% increase in U.S. facilities (13,454 to 14,152)
    • 1.3% increase in facilities offering MAT (methadone/buprenorphine; 8.0% to 9.3%)
    • 378 facilities in Ohio in 2013 and 2014
    • N-SSATS does not ask about naloxone; excludes correctional-treatment facilities

• HRC (Harm Reduction Coalition)
    • National network of 140 providers (of naloxone kits to lay persons)
    • 66.2% of 136 respondents distributed naloxone vials in 2013

* Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, National Survey of Substance Abuse Treatment Services (N-SSATS), 2014. **Wheeler et.al. (2015) Opioid overdose prevention programs providing naloxone to laypersons –United States, 2014. MMWR, 64(23), 631-635.
Introduction

• Ohio H.B.170 passed in 2014
  • Allowed medical professionals to prescribe naloxone* to friends, family, and others who are in a position to provide assistance to an individual who is at risk of experiencing an opioid overdose
  • Provided “good faith” immunity

Consequently, all staff at substance abuse and corrections facilities could potentially have naloxone to respond to overdoses experienced onsite by clients

*Naloxone (Narcan®) is an opioid antagonist acting on µ-opioid receptors in the central nervous system
STUDY 2 Research Goals

• Document Prevalence of OEND programs in High Opioid Death Counties

• Identify Barriers to ND Program Implementation

• Examine Attitudes of Program Directors and Correlates of Program Adoption

• Examine Staff Attitudes, Preparedness, Treatment Philosophies, and Willingness to Administer Naloxone
Sampling Frame: “High Overdose Death” Counties (2012-2014)

Using Walley (2013) criteria:

66/88 counties had >5 overdose deaths per-capita from 2012 to 2014

(Ohio Department of Health, 2015).

Target Population: Certified Facilities in High Overdose Counties (2012-2014)

Using Ohio published (2015) registries*:
N=850 facilities identified

Excluded (n=202, 24%):
- Duplicates (1%)
- Solo practices (<1%)
- No SA Services (13%)
- Youth Only (5%)
- Facility Closed (3%)

Included (N=648)

*Department of Rehabilitation and Corrections (2015).
Methods

Mechanisms for Data Collection

1. Telephone Interviews
   - CEO/Facility Directors
   - Phone/Email Reminders

2. Mailed Surveys
   - Lists provided by participating CEO/Director
   - Randomly selected staff
   - Postcard reminder
Director Interviews

• Questionnaire Content*
  • Facility Characteristics
    • Staff Resources (#FTE/PTE, #MD/RN, #Counselors)
    • Treatment Model (12-Step/CBT...)
    • Clients (% with Opioid SUD)
  • Program Director Ratings
    • Financial/Staffing/Regulatory Barriers

Director Interviews

• Program Outcomes [Y/N]
  • Does your program provide overdose prevention services?
    • Overdose prevention education
    • Naloxone distribution
  • Does your overdose prevention program provide Naloxone?
    • Overdose kits with naloxone
    • Prescriptions for naloxone
Methods

• Analyses evaluated response distributions, group differences, and preliminary models

• Planned statistical tests included t-tests, chi-square, logistic regression

• HLM for decomposing between and within group effects
Methods

• **Response Distribution:**

  Naloxone (OEND) Program Adoption_{ij} \mid \mu_{ij} \sim \text{BER} (\mu_{ij})

• **Linear Predictor:**

  • **Level 1:** \eta_{ij} = \beta_{0j} + \beta_{1j} \text{Program Type}_{ij} + \beta_{2j} \text{Program Years}_{ij} + \beta_{3j} \text{PTE_FTE}_{ij} + \beta_{4j} \%\text{Medical Staff}_{ij} + \beta_{5j} \%\text{Contract Staff}_{ij} + \beta_{6j} \%\text{Counselors}_{ij} + \beta_{7j} \text{TxApproach}_{ij} + \beta_{8j} \%\text{Opioid SUD}_{ij} + \beta_{9j} \text{H_Affiliation}_{ij} + \beta_{10j} \text{Referral Sources}_{ij} + \beta_{11j} \text{MAT}_{ij}

  • **Level 2:** \beta_{0j} = \gamma_{00} + \gamma_{01} \text{ODD_pc}_{j} + \gamma_{02} \text{Facilities_pc}_{j} + \gamma_{03} \text{Legislative Profile}_{j} + \mu_{0}
Preliminary Results

• Facilities Contacted n=648 (100%)
• Non-Response n=414 (64%)
• Participants n=171 (26%)
• Refusals= 63 (10%)

• 73% Cooperation Rate
Sample of Participating Substance Abuse Facilities (N=171)

<table>
<thead>
<tr>
<th>Measure</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facility Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient AOD Clinic</td>
<td>101</td>
<td>59%</td>
</tr>
<tr>
<td>Residential AOD Clinic</td>
<td>13</td>
<td>8%</td>
</tr>
<tr>
<td>Halfway House</td>
<td>27</td>
<td>16%</td>
</tr>
<tr>
<td>Community Based Correctional Facility</td>
<td>20</td>
<td>12%</td>
</tr>
<tr>
<td>Jail-Based Facility</td>
<td>8</td>
<td>5%</td>
</tr>
<tr>
<td>Other*</td>
<td>2</td>
<td>1%</td>
</tr>
</tbody>
</table>

*Uncategorized Clinics (n=1); Diversion Pre-conviction (n=1)
## Facility Characteristics (N=171)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Outpatient Clinic</th>
<th>Residential Clinic</th>
<th>Halfway House</th>
<th>CBCF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean ± SD (range)</td>
<td>mean ± SD (range)</td>
<td>mean ± SD (range)</td>
<td>mean ± SD (range)</td>
</tr>
<tr>
<td><strong>FTE</strong></td>
<td>20.04</td>
<td>21.39</td>
<td>20.73</td>
<td>15.49</td>
</tr>
<tr>
<td></td>
<td>(1-120)</td>
<td>(5-120)</td>
<td>(5-56)</td>
<td>(0-100)</td>
</tr>
<tr>
<td><strong>PTE</strong></td>
<td>3.89</td>
<td>7.07</td>
<td>4.73</td>
<td>4.13</td>
</tr>
<tr>
<td></td>
<td>(0-57)</td>
<td>(0-57)</td>
<td>(0-14)</td>
<td>(0-14)</td>
</tr>
<tr>
<td><strong>Physicians</strong></td>
<td>1.51</td>
<td>2.37</td>
<td>1.25</td>
<td>2.38</td>
</tr>
<tr>
<td></td>
<td>(0-14)</td>
<td>(0-14)</td>
<td>(0-7)</td>
<td>(0-7)</td>
</tr>
<tr>
<td><strong>Nurses</strong></td>
<td>2.32</td>
<td>4.31</td>
<td>4.88</td>
<td>5.54</td>
</tr>
<tr>
<td></td>
<td>(0-30)</td>
<td>(0-30)</td>
<td>(0-14)</td>
<td>(0-14)</td>
</tr>
<tr>
<td><strong>Counselors</strong></td>
<td>8.9</td>
<td>11.7</td>
<td>6.64</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>(0-102)</td>
<td>(0-102)</td>
<td>(2-20)</td>
<td>(2-20)</td>
</tr>
<tr>
<td><strong>Clients</strong></td>
<td>627.76</td>
<td>1061.24</td>
<td>31.1</td>
<td>24.17</td>
</tr>
<tr>
<td></td>
<td>(5-5200)</td>
<td>(5-5200)</td>
<td>(5-78)</td>
<td>(5-78)</td>
</tr>
<tr>
<td><strong>% Opioid SUD</strong></td>
<td>54.94</td>
<td>33.39</td>
<td>64.89</td>
<td>19.88</td>
</tr>
<tr>
<td></td>
<td>(1-100)</td>
<td>(1-100)</td>
<td>(41-95)</td>
<td>(41-95)</td>
</tr>
<tr>
<td><strong>Years in Operation</strong></td>
<td>20.76</td>
<td>19.77</td>
<td>25.4</td>
<td>15.2</td>
</tr>
<tr>
<td></td>
<td>(1-120)</td>
<td>(1-120)</td>
<td>(4-46)</td>
<td>(4-46)</td>
</tr>
</tbody>
</table>


# Treatment Approach & Program Adoption (Within-Type Distributions)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Outpatient Clinic (n=101)</th>
<th>Residential Clinic (n=13)</th>
<th>Halfway House (n=27)</th>
<th>CBCF (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Approach</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-step Model</td>
<td>32</td>
<td>11</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>CBT</td>
<td>89</td>
<td>9</td>
<td>23</td>
<td>19</td>
</tr>
<tr>
<td>MET</td>
<td>41</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>TC</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Eclectic/mixed</td>
<td>68</td>
<td>9</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Program Adoption</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevention Education</td>
<td>76</td>
<td>10</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Kits with Naloxone</td>
<td>16</td>
<td>2</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Prescriptions for Naloxone</td>
<td>10</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>OEND</td>
<td>22</td>
<td>2</td>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>
Conclusion/Next Steps

Prevalence of naloxone education and distribution varies across facilities:

• Overdose Prevention Education (35%-80%)
• Naloxone Kits (5%-30%)
• Naloxone Prescriptions (5%-15%)
• OEND (10%-30%)

Financial/staffing barriers were highly-ranked impediments
Directors *not* providing OE or ND (n=129) rated agreement with 14 barriers

<table>
<thead>
<tr>
<th>Ranked barriers</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Our primary sources of funding will not reimburse the cost of physician time</td>
<td>2.97</td>
<td>1.36</td>
</tr>
<tr>
<td>2. i. Our clients cannot afford to pay for naloxone</td>
<td>2.67</td>
<td>0.97</td>
</tr>
<tr>
<td>3. Our primary sources of funding will not pay for the costs of purchasing naloxone</td>
<td>2.88</td>
<td>1.26</td>
</tr>
<tr>
<td>4. Our primary sources of funding will not pay for the costs of purchasing naloxone kits.</td>
<td>2.87</td>
<td>1.24</td>
</tr>
<tr>
<td>5. a. State regulations prohibit us from prescribing naloxone because our program lacks medical staff</td>
<td>2.55</td>
<td>1.29</td>
</tr>
<tr>
<td>14. e. Opioid prevention medication is inconsistent with this center's treatment philosophy</td>
<td>1.52</td>
<td>0.78</td>
</tr>
</tbody>
</table>
Staff Willingness to Carry Naloxone

• Endorsing positive naloxone attitudes, AOR 1.626 (1.101, 2.401)
• Endorsing naloxone concerns, AOR .469 (.290, 7.57)
• Ability to administer naloxone, AOR 1.661 (1.089, 2.532)
• Length of employment, AOR .996 (.993, .999)
Conclusion/Next Steps

Given potentially high levels of OEND: are standardized programs:

(1) Necessary, feasible/prioritized in HH and CBCFs?
(2) Effective in reducing mortality?
Section 2

Intervention Concepts and Strategies
STUDY 3

A Quasi-Experimental Comparison of Opioid Overdose Prevention Programs Delivered in Southern Ohio Correctional Facilities

Funded: Ohio Office of Criminal Justice Services
Post-Entry-Exit and Recovery (PEER) OPPs in 3 Phases

- **Entry**
  - Criminal Justice-Treatment Facility

- **Exit**
  - Pre-Discharge Planning

- **Recovery**
  - Health & Wellness
Needs Assessment: Partner Organization
Needs Assessment: Known Risk Factors

Risks for Opioid Overdose Death

1. Abstinence: release from incarceration; and/or completion of detoxification
2. Opioid Dose and Changes in Purity (e.g., adulteration with fentanyl)
3. Addiction History
4. Previous Overdose
5. Chronic Medical Illness: lung, liver, and kidney
6. Polypharmacy
7. Social Isolation (using alone)
Needs Assessment: Associated Risk Factors

Prison-Related Risk Factors (mortality)*

1. Unsafe Injection and other Drug Administration Practices
2. Access to Basic Needs
   - Housing, employment, nutrition, medicine
3. Legal Status
   - Including knowledge of ‘Good Samaritan’ provisions and related Rights

<table>
<thead>
<tr>
<th>Facility</th>
<th>Sex</th>
<th>N</th>
<th>Age Mean (SD)</th>
<th>Race % non-white</th>
<th>Education Mean (SD)</th>
<th>Opioid % SUD</th>
<th>LOS -days Mean (SD)</th>
<th>% Success</th>
<th>% AWOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended (1617 men)</td>
<td>Male</td>
<td>151</td>
<td>32.09 (9.65)</td>
<td>25.3</td>
<td>11.58 (1.50)</td>
<td>59.6</td>
<td>81.01 (38.16)</td>
<td>78.0</td>
<td>1.3</td>
</tr>
<tr>
<td>CCC</td>
<td>Male</td>
<td>171</td>
<td>31.55 (8.71)</td>
<td>15.8</td>
<td>11.59 (1.53)</td>
<td>29.6</td>
<td>117.22 (39.35)</td>
<td>77.2</td>
<td>.6</td>
</tr>
<tr>
<td>TCC</td>
<td>Male</td>
<td>144</td>
<td>34.22 (8.39)</td>
<td>14.0</td>
<td>11.72 (1.27)</td>
<td>28.3</td>
<td>98.40 (578.74)</td>
<td>69.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Serenity</td>
<td>Male</td>
<td>75</td>
<td>35.46 (10.29)</td>
<td>21.3</td>
<td>11.80 (1.37)</td>
<td>21.3</td>
<td>97.21 (52.75)</td>
<td>56.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Rewards Jail Intervention</td>
<td>Female</td>
<td>142</td>
<td>32.38 (9.20)</td>
<td>21.7</td>
<td>11.72 (2.21)</td>
<td>69.9</td>
<td>69.42 (31.23)</td>
<td>78.3</td>
<td>0.7</td>
</tr>
<tr>
<td>(1617 Women)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring Grove</td>
<td>Male</td>
<td>211</td>
<td>32.99 (8.81)</td>
<td>43.6</td>
<td>11.63 (1.29)</td>
<td>26.1</td>
<td>97.69 (60.30)</td>
<td>52.1</td>
<td>24.2</td>
</tr>
<tr>
<td>Adapt Men</td>
<td>Male</td>
<td>76</td>
<td>29.44 (7.21)</td>
<td>10.5</td>
<td>12.31 (1.92)</td>
<td>69.7</td>
<td>80.14 (55.01)</td>
<td>71.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Adapt Women</td>
<td>Female</td>
<td>39</td>
<td>32.85 (9.07)</td>
<td>2.6</td>
<td>12.69 (1.85)</td>
<td>69.2</td>
<td>65.76 (44.50)</td>
<td>76.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Turning Point</td>
<td>Male</td>
<td>125</td>
<td>36.53 (11.76)</td>
<td>27.3</td>
<td>12.15 (1.76)</td>
<td>38.9</td>
<td>114.11 (58.36)</td>
<td>83.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Pathways</td>
<td>Female</td>
<td>211</td>
<td>33.01 (7.77)</td>
<td>12.4</td>
<td>11.9 (1.67)</td>
<td>68.7</td>
<td>95.62 (46.22)</td>
<td>67.8</td>
<td>19.9</td>
</tr>
</tbody>
</table>
# Theory Based Curricula Development

<table>
<thead>
<tr>
<th>Video</th>
<th>Group (Subgroup)</th>
<th>Title</th>
<th>Time</th>
<th>Link</th>
<th>Agency/Contact Info</th>
<th>Objectives/Topics</th>
<th>Themes/Style/Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Service Agency (Health and Correctional)</td>
<td>Opioid Overdose Recognition and Response: Preventing Deaths from Opioid Overdose Using Narcan®</td>
<td>(11:38)</td>
<td>/<em>Corporate Access</em>/T:\Public\Narcan Training Video Dec 16</td>
<td>Talbert House [Mark Gilbert and Lisa Connor] E-mail: <a href="mailto:Lisa.Connor@talberthouse.org">Lisa.Connor@talberthouse.org</a></td>
<td>[NARCAN TRAINING VIDEO] Performance-part1 ODE-female [2:30min]</td>
<td>2-5min dramatized OD-response scenario; and 7-10min “Talbert House and Gateways” ppt with voice-over.</td>
</tr>
<tr>
<td>2</td>
<td>School of Medicine (CME)</td>
<td>Overdose Prevention and Naloxone Rescue Kits for Prescribers and Pharmacists: Delegate Training Video.</td>
<td>(60:48)</td>
<td><a href="http://www.opioidprescribing.com/naloxone_module_1-landing">http://www.opioidprescribing.com/naloxone_module_1-landing</a></td>
<td>Boston University School of Medicine. Continuing Medical Education (CME). E-mail: <a href="mailto:cme@bu.edu">cme@bu.edu</a>. Phone: 617-638-4605</td>
<td>Explains the risk factors for an overdose.</td>
<td>Webinar slide presentation. Informative style intended to provide information in a very straightforward manner.</td>
</tr>
<tr>
<td>3</td>
<td>News Agency (Local)</td>
<td>Fentanyl-laced heroin deaths on the rise.</td>
<td>(2:02)</td>
<td><a href="https://www.youtube.com/watch?v=oTDAe5UF5kE">https://www.youtube.com/watch?v=oTDAe5UF5kE</a></td>
<td>WCPO Cincinnati. E-mail: <a href="mailto:newsdesk@wcpo.com">newsdesk@wcpo.com</a>. Phone: 513-721-7717</td>
<td>Provides discussion of the rise and dangers of Fentanyl heroin death.</td>
<td>Local news story with interviews. Interview coroner. Share story about mother who lost child to Fentanyl.</td>
</tr>
<tr>
<td>6</td>
<td>Pharmaceutical Agency (Manufacturer)</td>
<td>How to Use Narcan (naloxone HCI) Nasal Spray</td>
<td>(7:26)</td>
<td><a href="https://www.youtube.com/watch?v=SVGsO1oxpg">https://www.youtube.com/watch?v=SVGsO1oxpg</a></td>
<td>Narcan Corporation.</td>
<td>Explains how to test for a possible overdose.</td>
<td>Demonstrative how-to video with actors showing the steps with additional slide presentation.</td>
</tr>
</tbody>
</table>
## Abbreviated PEER-OPPs logic model

<table>
<thead>
<tr>
<th>Behavioral Determinants</th>
<th>Activities</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factors that affect risk and protective behaviors</strong></td>
<td><strong>To address behavioral determinants</strong></td>
<td><strong>Expected changes as a result of activities targeting behavioral determinants</strong></td>
</tr>
<tr>
<td>Staff/peer communication skills, self-efficacy, &amp; community</td>
<td>Activities correspond to determinants 1, 2, 3, 4 &amp; 5.</td>
<td></td>
</tr>
<tr>
<td>1) Social Isolation (Roles)</td>
<td>Module 1: Bystanders and actors. Activities: Role/Cause Discussion</td>
<td>Increased responsibility for overdose victims</td>
</tr>
<tr>
<td>2) Opioid Dose and Changes in Purity</td>
<td>Module 2: Epidemiology and Relative Risk. Activities: CDC Map Slideshow; VIDEO: Regional News Coverage</td>
<td>Increased awareness of fentanyl and related drugs</td>
</tr>
<tr>
<td>3) History of Addiction</td>
<td>Module 3: Practical Skills in OD-EMERGENCY Activities: Staff-Client OEND training VIDEO</td>
<td>Increased awareness of naloxone policies and procedures</td>
</tr>
<tr>
<td>4) Social Isolation (Actions)</td>
<td>Module 4: Defining Addiction Activities: Top-10 Icebreakers</td>
<td>Increased knowledge of addiction and responsibility for overdose victims</td>
</tr>
<tr>
<td>5) Ex-prisoner Release</td>
<td>Module 5: Roles in Addiction-Recovery Activities: Distribute Assist Cards</td>
<td>Decreased addiction stigma</td>
</tr>
<tr>
<td>6) Opioid Dose and Changes in Purity</td>
<td>Module 6: Protecting Yourself and Your Friends</td>
<td>Increased role responsibility and knowledge of services</td>
</tr>
</tbody>
</table>
MODULE 1 ACTIVITY

• *How many group members have known a victim of drug overdose? [show of hands]*

• *Has anyone been a bystander during a drug overdose? In what neighborhood?*

• *Do you know what drugs caused the overdose event, in any given case, [in most cases]?
Research Goals and Power

• Test whether the enhanced OPPs are associated with greater knowledge and self-efficacy (during facility residence)*
• Assess acceptability and feasibility of standard and enhanced OPPs
  • Focus Groups: Residents, Staff, Clinicians, and Managers
• Explore whether enhanced OOPPs are associated with better intermediate (1-month), and long-term (12-month) outcomes
  • Self-rated Health Status; Use of Naloxone*
  • Mortality (National Death Index) **

FOCUS GROUP (example items)

• *(Communicating Dose; Module 2)*
• Take a few moments to view the image.
• What kinds of things do you think about when you see this image?
FOCUS GROUP (example items)

• *Communicating Dose; Module 2*
• Take a few moments to view the image.
• What kinds of things do you think about when you see this image?
FOCUS GROUP (example items)

{Affecting Intentions and Intuitions; Modules 3, 4, & 5}

Intentions / Consequentialist Beliefs & Expectations

• What resources/assets make OD more difficult (immediate, intermediate, long –term)?

• What resources/assets facilitate OD (immediate, intermediate, long –term)?

Intuitions / Moral Cognitive Beliefs & Explanations

• What are some of the judgments we make about drug overdoses? How do we explain those?

• What are some of the judgments we make about use of naloxone to reverse a drug overdose? How do we explain those?
Non-Randomized Cohort Group Design and 18-Month Timeline

<table>
<thead>
<tr>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
<th>M6</th>
<th>M7</th>
<th>M8</th>
<th>…</th>
<th>M15</th>
<th>M16</th>
<th>M17</th>
<th>M18</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR</td>
<td>O1</td>
<td>X</td>
<td>O2</td>
<td>O3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O1</td>
<td>XE</td>
<td>O2</td>
<td>O3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>O1</td>
<td>XE</td>
<td>O2</td>
<td>O3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 3

Policies and Pilot Programs
Emerging Policy Intervention(s)

Agency wide or site specific:

- Semi-Annual Site-Specific Delegate Retraining
- Mock Overdose-Naloxone Drills at each Facility
- Major Unusual Incident Reporting and Morbidity-Mortality Conferences
- MUI Debriefing Forms (for all M-M incidents)
  - EAP services by Liberty Mutual
- Client-Resident Awareness Form (Contract)
- Reentry of Overdose Victims to Residential Facilities
- Urinalysis Policy
- Transportation to Scheduled Appointments with Deaconess-Health-Check
Emerging Policy Interventions

External Partnership Activities

• Cincinnati Heroin Coalition: Community Training Events
• Cincinnati Heroin Coalition: Quick Response Teams
What’s Happening in Facilities (HH & CBCF)?

• Naloxone personal carry kits and facility kits
  • Tracking and updating kits
• Staff and client education and training
  • New employee orientation, role-play, delegate trainers, etc.
• Overdose Drills

• What are differences in facility characteristics [from the trainer perspective] and approaches to OEND?
QUESTIONS / ACKNOWLEDGEMENTS / THANKS!

• PI/Co-I: Kim Sperber PhD / Erin Winstanley PhD
• Ohio Office of Criminal Justice Services,
  • Edward Byrne Memorial Justice Assistance Grant (JAG) Program
• Josh Arnold (VP Court and Corrections at Talbert House)
• Tom Bach, MA (Director of Court and Corrections at Talbert House)

• Karen Ludwig, Ph.D. (CHHSR staff at Talbert House)

• Michael Topmiller, Ph.D. (HealthLandscape Division, American Academy of Family Physicians)

• Collaboration Board Members
  • Judith Feinberg, M.D. (West Virginia University)
  • Edward Latessa, Ph.D. (University of Cincinnati)
  • Ann Barnum (Interact for Health)
  • Linda Gallagher (Hamilton County Mental Health and Recovery Services Board)
  • Josh Arnold (Talbert House)
SUPPLEMENTAL SLIDES
Study 2 Sample

Facility Size Based on Number of FTEs

- Small (1-10)
- Medium (11-30)
- Large (31+)

Facility Size:
- Halfway House: 15 FTEs
- CBCF: 10 FTEs
- Residential AOD: 5 FTEs
- Outpatient AOD: 40 FTEs
- Jail Based: 10 FTEs
- Other: 1 FTE
Overdose Events (N=23; CY 2015) in one Facility (Halfway House) by Time of Day
STUDY 2 Limitations/Strengths

• Low response rate
  • No compensation for interviewee time
  • Sample insufficient for MLM

• Laws have changed since inception of study design
  • Facilities shift from prescribed \textit{personal-carry-kits} to \textit{public-(CPR-AED-naloxone)-kits}.
  • Clients can access kits at local pharmacies, often without prescriptions, if they have funds

Including facilities not captured in N-SSATS (2014); achieving a sample size in Ohio comparable to HRC (2013) national study
STUDY 3 Limitations/Strengths

• No compensation for participation
• Sampling limited to Talbert House
  • IRB: HIPAA waiver not requested
    • Consent required to access mortality records

Accessing high-risk population, during periods of amplified risk, personal susceptibility, and community-reintegration
Definition of Prisoners, when enrolled in research:

- Any individual involuntarily confined or detained in a penal institution. The term is intended to encompass individuals
  - Sentenced to such an institution under a criminal or civil statute
  - Detained in other facilities by virtue of statutes or commitment procedures which provide alternatives to criminal prosecution or incarceration in a penal institution, and
  - Detained pending arraignment, trial or sentencing.
- Minimal risk is the probability and magnitude of physical or psychological harm that is normally encountered in the daily lives, or in the routine medical, dental or psychological examination of healthy persons.
Needs Assessment: Legal Status Variables

• (Non)Federal
• Probationer
  • Release of an offender from detention, subject to a period of good behavior under supervision
• Parolee
  • Prison 1\textsuperscript{st}; provisional release of an individual from prison
• Drug Court
  • Treatment in lieu of; charged with low-level, nonviolent offense
• Transitional Control
  • Prison 1\textsuperscript{st}; non-violent offender; final 180 days of sentence
• Treatment Transfer
  • Prison 1\textsuperscript{st}; non-violent drug offender