Exploration of Outcomes for JDTR Participants

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Purpose of the Presentation

• Do JDTR program participants experience substantive change?
  – Examine in more detail substantive change on key outcomes for JDTR participants

• What drives this change?
  – Explore whether factors from a variety of domains including personal characteristics, resources, or treatment needs are associated with change
  – Explore differences between JDTR grantee sites in population characteristics and key outcomes
  – Explore associations between self reported services and outcomes
Presentation Data

• All data are from client baseline and twelve month interviews (submitted by 3/15/13)
• Sample only includes participants with twelve month interviews
  – sites with less than 10 twelve month interviews were excluded from analysis (n=378)
• Sample numbers vary by site:

<table>
<thead>
<tr>
<th>State</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado</td>
<td>58</td>
</tr>
<tr>
<td>Illinois</td>
<td>24</td>
</tr>
<tr>
<td>Ohio</td>
<td>54</td>
</tr>
<tr>
<td>Connecticut</td>
<td>82</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>37</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>11</td>
</tr>
<tr>
<td>Florida</td>
<td>13</td>
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<tr>
<td>New Mexico</td>
<td>21</td>
</tr>
<tr>
<td>Texas</td>
<td>78</td>
</tr>
</tbody>
</table>
I. Substantive Change

- Examine baseline status of key outcomes and substantive change at 12 months
  - Resources: Income/Employment/Housing
  - Well-being
  - Post Traumatic Stress Disorder (PTSD)
  - Depression
  - Substance Abuse
Change in Resources

• On average modest changes in employment status and income across the sample (ns)

• Substantive Change
  • For Employment defined as changed status (e.g. part to full; unemployed to part/full)
  • For Income defined as change in monthly income of $400 or more

% Respondents with Positive Change

- Employment: 18%
- Income: 34%
Source of Income

More participants receive wages, Vet benefits, disability, public assistance at 12 months (p<.05)
Change in Housing Status

• There is an increase in proportion of clients living in their own home (44% to 53%) and decrease (18% to 5%) in homelessness (p<.001)

• 34% of clients have a positive substantive change in housing status
  – Substantive change defined as improvement in type (e.g. homeless to doubled up or housed; doubled up to own home)

• However- majority of homeless clients are from Texas (68%) – homeless comprise 13% or less of populations in other sites
Change in PTSD

- High prevalence of trauma events- 95%
- At baseline 68% met PCL criteria for PTSD; by twelve months decreased to 43% (p < .001)
- PTSD severity decreased from 54 to 42 (p < .001)
  Range is 17 to 85

Average change in PTSD severity

Interview time point
Change in PTSD

PTSD Substantive change: (1) No longer meet diagnostic criteria (2) 17 point reduction in severity (1 SD/1 point reduction in severity of all symptoms).
Change in Well-being

- Average score increases slightly more than ¼ point from base to 12 month (p < .001)
- Baseline 70% “agree” or “strongly agree” increasing to 86% at twelve month (p<.001)
Change in Depression

• Average decrease in depression 1.8 to 1.2 (p < .001)
• At baseline 43% reported moderate to extreme difficulty; at 12 month only 19% (p < .001)
Substantive Change

- Well-being: 0.5 = half items improved by 1 point (1 SD)
- Depression: 1 point (e.g. moderate - a little difficulty)

% with Positive Change at 12 months

- Well-being: 30%
- Depression: 33%
Change in Substance Abuse

- Change from 1.25 at baseline to 0.75 at twelve month (p<.001)
- Baseline 24% moderate to extreme difficulty; 14% at 12 month (p<.001)
Change in Substance Use

Substance use at baseline and twelve months
(p < .001)

- CAGE 2+
- No Alcohol
- Daily Alcohol
- No Drug
- Daily Drug

Baseline
Twelve Month
Change in Substance Abuse

- Substance Abuse: 1 point (moderate - a little difficulty)
- Alcohol and drug use: change in times used in past month (daily - weekly; once or twice - never)

% with positive change

- Substance Abuse: 30%
- Times used alcohol: 36%
- Times used drugs: 27%
How many participants experienced change?

- Over half (53%) of participants experienced substantive resource change
- Over half (54%) experienced substantive change in mental health
- Over half (57%) experienced substantive change in substance abuse
- 88% experienced substantive change in one or more areas (above plus well-being)
II. What is associated with change?

• Explore factors that may be associated with substantive change in outcomes:
  – Personal characteristics (age, race)
  – Resources (employment, income, housing)
  – Experience (military, criminal justice)
  – Behavioral health treatment needs (PTSD, depression, substance abuse)
Personal Characteristics

• Gender – primarily male (91%); no association with outcomes but is association with predictors e.g. females report more sexual trauma

• Age – older participants are more likely to have positive substantive change in housing status (confounded by Texas)

• Race and Ethnicity – no association with outcomes
Education and Resources

- Level of education predicts positive change in employment (p = .04):
  - Less than HS (3%); HS (16%); Some college or more (22%)
- Participants who were more disadvantaged at baseline (looking for work, lower income, homeless):
  - Made more substantive improvement in resources (employment, income, housing; p < .05 or lower)
  - Improvement on some behavioral health measures like depression (p < .05 or lower)
Personal Background

- Fewer years in the military associated with positive change in depression ($p < .01$), employment, well-being, psychosis and PTSD severity ($p < .05$)
  - Other indicators of military experience had limited association with outcomes
- Life-time criminal justice involvement (self-report) is not associated with outcomes
  - Will explore further with secondary arrest data
Treatment Needs

• Participants have many overlapping problems:
  • 94% of those with depression also PTSD
  • 68% of those with PTSD also depression, psychosis, and/or self-harm
  • 49% of those with PTSD also substance abuse
  • 76% of those with substance abuse also PTSD

• To facilitate analysis of treatment needs and outcomes, we developed treatment need groups (e.g. substance use only, co-occurring)
Definitions of Treatment Need Groups

- Mental Health: PCLC criteria for PTSD diagnosis or moderate to extreme difficulty on BASIS 24 Depression, Self Harm, or Psychosis Subscales
- Substance Abuse: BASIS 24 subscale or 2 or more CAGE and heavy or daily alcohol use or daily drug use
- Four Groups: mental health only, substance abuse only, both, or neither
Treatment Need Groups

- Neither: 19%
- SA Only: 9%
- MH Only: 37%
- Both MH/SA: 35%
Change in PTSD outcomes by Treatment Need Groups

% with substantive change in PTSD Symptom Severity (p<.001)

- Neither: 7%
- SA Only: 6%
- MH Only: 36%
- Both: 47%
Change in Mental Health by Treatment Need Groups

% participants with positive substantive change
(p < .001)

- Depression
- Psychosis
- Self Harm

Neither  SA Only  MH Only  Both
Change in Substance Use by Treatment Groups

% with positive substantive change in substance use (p<.001)

- Substance Abuse
- Alcohol Use
- Drug Use

Neither | SA Only | MH Only | Both
---|---|---|---
0% | 10% | 20% | 30% | 40% | 50% | 60% | 70%
Change in Well-Being by Treatment Need Groups

% with positive substantive change in Well-Being (p < .001)

<table>
<thead>
<tr>
<th>Group</th>
<th>% of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neither</td>
<td>17%</td>
</tr>
<tr>
<td>SA Only</td>
<td>24%</td>
</tr>
<tr>
<td>MH Only</td>
<td>23%</td>
</tr>
<tr>
<td>Both</td>
<td>46%</td>
</tr>
</tbody>
</table>
III. Selected Differences Across Sites
# Differences in Personal Characteristics Across Sites

<table>
<thead>
<tr>
<th>Variable</th>
<th>General Range Across Sites</th>
<th>Outliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity</td>
<td>Non-Hispanic White: 69-90%</td>
<td>African American: IL (58%), OH (52%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hispanic: NM (62%), TX (40%)</td>
</tr>
<tr>
<td>Gender</td>
<td>Male: 90-98%</td>
<td>Women: IL (38%), NM (33%), RI (27%)</td>
</tr>
<tr>
<td>Age</td>
<td>Mean: 36-42 years</td>
<td>Older: Texas (48 years)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Younger: CO (30 years)</td>
</tr>
</tbody>
</table>
Differences in Resources

<table>
<thead>
<tr>
<th>Variable</th>
<th>General Range across Sites</th>
<th>Outliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Less than HS degree: 0-10%</td>
<td>Less than HS degree: IL (37%) and RI (36%)</td>
</tr>
</tbody>
</table>
| Income     | ▪ Less than $200 in prior 30 days: 0-15%  
▪ Employed (full or part): 27-40% | ▪ Less than $200: TX (53%), NM (29%), OH (26%)  
▪ Low % employed: NM (19%), TX (18%), IL (13%) |
| Benefits   | ▪ Income from VA benefits: 12-24%  
▪ Income from SSI/SSDI: 17-39% | ▪ High % VA benefits: MA (65%) and CO (36%)  
▪ High % SSI/SSDI: IL (46%), Low % SSI/SSDI: OH (8%) |
### Differences in Housing Across Sites

<table>
<thead>
<tr>
<th>Housing in past 30 days</th>
<th>Groupings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majority in their own home/apartment: 62-76%</td>
<td>CO, MA, FL, RI</td>
</tr>
<tr>
<td>Housing split between own home and doubled up (both combined): 76-87%</td>
<td>CT, NM, OH</td>
</tr>
<tr>
<td>Substantial Homeless Population</td>
<td>TX- 68%</td>
</tr>
<tr>
<td>IL spread across all types: own home, doubled-up, homeless, and institutions (jail, hospital, treatment facility)</td>
<td></td>
</tr>
</tbody>
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## Differences in Backgrounds

<table>
<thead>
<tr>
<th>Variable</th>
<th>General Range across Sites</th>
<th>Outliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior CJ</td>
<td>▪ First time involvement with CJ: 2-12%</td>
<td>▪ First arrest JDTR target arrest: RI (40%)</td>
</tr>
<tr>
<td></td>
<td>▪ First arrest before 18: 26-38%</td>
<td>▪ Low % reporting arrest before 18: FL (15%)</td>
</tr>
<tr>
<td>Txt History</td>
<td>▪ MH Txt History: 70-100%</td>
<td>▪ High% MH Txt: RI (100%)</td>
</tr>
<tr>
<td></td>
<td>▪ SA Txt History: 62%-81%</td>
<td>▪ Lower end OH (70%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Lower % SA txt: RI (54%)</td>
</tr>
<tr>
<td>Non-Military Trauma</td>
<td>▪ Ever experienced: 90-100%</td>
<td>▪ No outliers for overall trauma</td>
</tr>
<tr>
<td></td>
<td>▪ Trauma before 18: 75-100%</td>
<td>▪ Low reported rates of trauma before 18: TX (29%)</td>
</tr>
</tbody>
</table>
## Differences in Military Experiences

<table>
<thead>
<tr>
<th>Variable</th>
<th>General Groupings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military Services</td>
<td>▪ 100% participants served in the military: CT, CO, MA, FL, OH, TX</td>
</tr>
<tr>
<td></td>
<td>▪ Lower % of participants with military service: RI (64%), IL (23%), NM (14%)</td>
</tr>
<tr>
<td>Served in Combat zone</td>
<td>▪ Almost all participants: CO (93%)</td>
</tr>
<tr>
<td></td>
<td>▪ About half or more: 45-62% (CT, MA, FL, OH)</td>
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<tr>
<td></td>
<td>▪ About a third: 29-33% (RI, TX)</td>
</tr>
</tbody>
</table>
## Differences in Clinical Measures Across Sites

<table>
<thead>
<tr>
<th>Variable</th>
<th>General Range</th>
<th>Outliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTSD</td>
<td>Meet PCL-C diagnosis criteria: 50-70%</td>
<td>High %: CO (84%), TX (83%), and MA (81%)</td>
</tr>
<tr>
<td>Mental Health (BASIS 24)</td>
<td>Moderate/Extreme Difficulty with Depression: 30-46%</td>
<td>High %: TX (61%)</td>
</tr>
<tr>
<td>Substance problem (BASIS 24)</td>
<td>Moderate/Extreme Difficulty with Substance Use: 9-24%</td>
<td>Highest %: TX (60%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lowest %: IL (4%)</td>
</tr>
<tr>
<td>Substance Use in past 30 days</td>
<td>Daily alcohol use: 2-15% and Daily illegal drug use: 5-20%</td>
<td>High % daily alcohol: TX (48%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High % daily drug use: MA (35%) and OH (28%)</td>
</tr>
</tbody>
</table>
Treatment Need Groups by Sites

CO (52) IL (24) MA (36) FL (13) NM (21) RI (11) CT (58) OH (54) TX (76)

COD
Only MH
Only SA
Neither
Differences in Substantive Change Across Sites

- There were comparable proportions across sites that had substantive changes in:
  - housing, income, health, wellness/recovery (REE)
- With the exception of Texas which is an outlier
  - larger percentage having substantive increases in income, housing, and wellness/recovery,
  - but lower proportion with improvements in health
# Differences in Behavioral Health Outcomes Across Sites

<table>
<thead>
<tr>
<th>Variable</th>
<th>General Range across Sites</th>
<th>Outliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTSD Diagnosis</td>
<td>% clients with change to no diagnosis: 25-32%</td>
<td>Highest % in: TX (43%), Lowest % in NM: (14%)</td>
</tr>
<tr>
<td>PTSD Severity</td>
<td>% clients with substantive reduction in severity: 17-32%</td>
<td>Highest % in: IL (52%), TX (47%), OH (41%)</td>
</tr>
<tr>
<td>Depression (BASIS 24)</td>
<td>% clients with substantive change: 19-32%</td>
<td>High % in: TX (48%), OH (42%), IL (42%)</td>
</tr>
<tr>
<td>Substance problem (BASIS 24)</td>
<td>% clients with substantive Change: 19-30%</td>
<td>Highest % : TX (53%), Lowest %: IL (13%)</td>
</tr>
</tbody>
</table>
IV. Services and Outcomes

• Did participants receive services? At 12 months 95% of participants reported receiving some type of service

• Were services associated with change?
  – Initial exploration relationship between self-reported services and selected outcomes
    • Post Traumatic Stress Disorder (PTSD)
    • Depression
    • Substance Abuse
Types of Services Received

Self Reported Services at 12-month interview (N=378)

- OP MH: 77%
- Case Mgmt: 69%
- Meds: 65%
- Peer/Self Help: 54%
- OP SA: 52%
- Trauma: 49%
- Voc/Rehab: 32%
- Housing: 31%
% participants with improvement in PTSD severity (p<.05 or lower)

- MH OP: 34%
- Trauma: 37%
- SA OP: 38%
- Voc/Reh: 44%
- Housing: 41%

Legend:
- Received Service
- No Service
Services and Change in Depression

% participants with improvement in Depression (p<.05 or lower)

- Trauma: 38%
- SA OP: 39%
- CM: 37%
- Peer/Self: 39%
- Voc/Reh: 47%

Received Service
No Service
Services and Change in Substance Abuse

% with positive change in Substance Abuse (BASIS 24) (p<.05 or lower)

- OP SA: 40%
- Trauma: 37%
- Peer/Self: 37%
- CM: 23%
- Voc/Reh: 44%
- Housing: 39%

Received Service
No Service
# Differences in Reported Services Across Sites

<table>
<thead>
<tr>
<th>Service</th>
<th>General Range across Sites</th>
<th>Outliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP SA</td>
<td>▪ 1/3 or fewer clients reporting SA services across most sites</td>
<td>▪ TX (90%), CO (64%), OH (50%)</td>
</tr>
<tr>
<td>Trauma</td>
<td>▪ 15-30% of clients at most sites reported receiving trauma services</td>
<td>▪ TX (97%), RI (91%), CO (77%)</td>
</tr>
<tr>
<td>CM</td>
<td>▪ 45-82% reported CM services</td>
<td>▪ TX and FL both 100%</td>
</tr>
<tr>
<td>Voc. Rehab</td>
<td>▪ % clients reported receiving: 10-20%</td>
<td>▪ TX (70%)</td>
</tr>
<tr>
<td>Peer</td>
<td>▪ Approx. 1/3 reported peer services (RI, NM, IL, CT)</td>
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</tr>
<tr>
<td></td>
<td>▪ Approx. 50% reported peer services (FL, OH, CO, NM)</td>
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</tr>
<tr>
<td></td>
<td>▪ TX (100%)</td>
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</tbody>
</table>
Putting it all together

How are programs making a difference?

- Participants are receiving services
- Participants are becoming attached to Veteran benefits, disability, housing
- Participants are reporting substantive change in resources, behavioral health and well-being

What drives client changes?

- **Services:** Participants who report receiving services have more improvement in outcomes
- **Need:** Disadvantage and multiple behavioral health treatment needs predicts greater change
- **Site Differences:** There are some clustering of sites, which needs further exploration
Next steps

• Examine secondary services data to get a richer picture of the relationship between services and outcomes

• Analyze secondary arrest data to look at:
  – Criminal justice outcomes
  – Differences in criminal justice involvement

• Further examine site differences (characteristics and service mix) to better pool data