METelemedicine: A pilot study with rural alcohol users on community supervision

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Acknowledgment

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- The presenters do not have any conflicts of interest.

- Recognize the cooperation and partnership with the Kentucky Department of Corrections, specifically officers and clinicians in Probation and Parole Districts 8, 10, and 11.
This presentation includes the following objectives:

• Provide background on problems associated with hazardous drinking among rural offenders.

• Describe the METelemedicine project in rural Kentucky parole offices.

• Profile the study participants and overview key outcomes.
Background

- Alcohol use in rural areas.
- Rural offenders and the need for alcohol services.
- Need to examine alternative approaches to formal treatment – but feasibility is undetermined.
- Telemedicine as a possible strategy?
Research locations

Kentucky Probation & Parole Supervision Districts
Study recruitment

• Four rural community supervision (probation and parole) offices in Kentucky.

• Targeted offenders referred to an on-site clinician for substance abuse assessment (SSC – Social Service Clinician).

• After meeting with the SSC, the offender met with research study staff for screening.
Screening

• Informed consent and discussion of confidentiality
• Active drinking during the past year on the street
• AUDIT – scores of 8+
• No evidence of cognitive impairment (GAIN)
• No evidence of psychosis or physical withdrawal
Baseline interview

- Face-to-face interview (confidential office)
- Approximately 90 minutes
- Selected areas of focus
  - Alcohol use
  - Other substance use
  - History of treatment (both health and substance use)
  - Treatment motivation
Randomization

Services As Usual

- Participants in this condition received the “usual” referral for alcohol services by the SSC.
- Case management services, assessment, linkages to needed outpatient services in the local communities.
- Crisis intervention services as needed.

MET via Telemedicine

- MET delivered via telemedicine technology in the parole office.
- Initial assessment (Drinker’s Check-Up) and feedback session.
- 3 additional brief intervention sessions scheduled on their report date to their P & P officer.
Why MET?

• Recognized as evidence-based intervention for alcohol users.

• Recognized as an evidenced-based practice for substance users involved in the criminal justice system.

• Manualized therapeutic approach grounded in key principles of motivational interviewing.

• Suggested time frame corresponds with the risky time frame of re-entry (3 months).

• Individualized approach.
How did the intervention work?

- Polycom® V700
- Confidential office
- Located in district probation & parole building
Participant Profile
(N=127)
## Sample demographics

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(N=127)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>32.1 (Range 19-57, SD = 8.8)</td>
</tr>
<tr>
<td>Gender</td>
<td>81% Male</td>
</tr>
<tr>
<td>Race</td>
<td>98% White</td>
</tr>
<tr>
<td>Average number of years of education</td>
<td>10.9</td>
</tr>
<tr>
<td>Self-reported working full-time before incarceration/supervision</td>
<td>49%</td>
</tr>
<tr>
<td>Community supervision status</td>
<td>72.4% parole</td>
</tr>
<tr>
<td></td>
<td>27.6% probation</td>
</tr>
</tbody>
</table>
Baseline alcohol and other drug use

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean or Percentage (N=127)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of days of alcohol use in last 3 months on the street</td>
<td>48.2</td>
</tr>
<tr>
<td></td>
<td>(SD = 34.0, range 0-90)</td>
</tr>
<tr>
<td>Number of drinks per day on average in last 3 months on the street</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td>(SD = 10.7, range 0 – 48)</td>
</tr>
<tr>
<td>Number of days per week on average drinking in last 3 months on the street</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>(SD = 2.5, range 0 – 7)</td>
</tr>
<tr>
<td>Average baseline AUDIT score</td>
<td>23.2</td>
</tr>
<tr>
<td></td>
<td>(SD = 8.8, range 3-40)</td>
</tr>
<tr>
<td>Ever received alcohol treatment?</td>
<td>34.0%</td>
</tr>
<tr>
<td>Percent reporting other substance use in last 3 months on the street?</td>
<td>83.0%</td>
</tr>
</tbody>
</table>
## Randomization and intervention attendance

<table>
<thead>
<tr>
<th></th>
<th>Mean or Percentage (N=127)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Randomization</strong></td>
<td>48% Motivational Enhancement Therapy via Telemedicine (MET) 52% Services as Usual (SAU)</td>
</tr>
<tr>
<td><strong>Mean number of sessions completed for MET group</strong></td>
<td>2.0 (SD = 1.9, range 0 – 5)</td>
</tr>
<tr>
<td><strong>Sessions attended</strong></td>
<td>37.7% - 0 sessions 24.6% - 1-2 sessions 37.7% - 3-5 sessions</td>
</tr>
</tbody>
</table>

(62% of those randomized engaged in MET sessions)
3-month Follow-up Analysis
(N=111)
Follow-up

• Research staff achieved a 90% follow-up rate by utilizing locating and tracking methods to find eligible participants for follow-up interviews.

• Participants who completed the follow-up interview did not significantly differ from the larger sample on demographics or other primary study variables.
Intent-to-treat analysis

No significant differences on primary alcohol outcomes at 3 months between participants randomized to intervention and comparison groups including:

• Number of days drinking
• Number of days drinking to intoxication
• Number of drinks per day
• Number of days experiencing alcohol problems
Per-protocol analysis: Dose effects

- The per-protocol analysis allowed for an examination of dose effects, particularly among those who completed the intervention compared to those who did not.

- Specifically, Sessions 1 and 2 were focused on assessment and feedback, while Sessions 3-5 focused on change plans and behavioral change, consistent with MET.
### Per-protocol analysis: Dose effects

<table>
<thead>
<tr>
<th>Dose</th>
<th>Any Alcohol Use</th>
<th>Days of Drinking</th>
<th>Drinks Per Week</th>
<th>Days Experiencing Alcohol Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.97 (0.55-7.04)</td>
<td>2.30 (0.47-11.19)</td>
<td>1.01 (0.21-4.84)</td>
<td>0.47 (0.02-8.72)</td>
</tr>
<tr>
<td>3-5</td>
<td>0.28 (0.08-0.97)&lt;sup&gt;*&lt;/sup&gt;</td>
<td>0.19 (0.05-0.75)&lt;sup&gt;*&lt;/sup&gt;</td>
<td>0.09 (0.02-0.42)&lt;sup&gt;**&lt;/sup&gt;</td>
<td>0.04 (0.00-0.52)&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>AUDIT</td>
<td>1.10 (1.05-1.17)</td>
<td>1.13 (1.05-1.22)</td>
<td>1.14 (1.06-1.22)</td>
<td>1.20 (1.03-1.39)</td>
</tr>
<tr>
<td>R²</td>
<td>0.13</td>
<td>0.03</td>
<td>0.05</td>
<td>0.04</td>
</tr>
</tbody>
</table>

<sup>a</sup>Referent group – 0 sessions (dose)

* P < .05, ** P < .01 = 0, reference group
Conclusions and implications

- Findings showed that despite considerable at-risk drinking patterns at baseline, only about one-third of this sample of rural offenders reported engaging in treatment.

- Nearly two-thirds of this sample engaged in METelemedicine sessions in a non-therapeutic environment (community supervision office).

- Higher doses of METelemedicine was associated with promising outcomes at 3 months.

- These findings suggest that use of telemedicine can be a viable way to deliver interventions in “real world” settings where services are limited.
Limitations

- Small follow-up sample size which limits complex multivariate modeling.

- It is possible that the community supervision office could be considered a threatening environment for the intervention sessions.

- The study sample included primarily Caucasian males.

- Findings based on self-report data.
Lessons learned

• Confidential space is critical.

• Using this form of technology requires adequate bandwidth.

• Telemedicine set-up can present challenges.

• Important to maintain contact with host agency on study focus.

• Winter months provide interesting challenges for recruitment and intervention.
For more information:


Questions?