The Role of Practitioner-Driven Science

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The Need for Research-Practice Integration

- Current role of practitioners is largely passive
  - Recipients of research
  - Asked to implement without meaningful involvement in prioritizing what gets studied
- Studies may not have included key measures of practical relevance
  - Focus is often on whether something works rather than how to best make it work

Strengthening the Practitioner Voice

- If practitioners are to be good consumers of research, need to have a role in generating research.
- Unique opportunity to identify research questions of most importance to practitioners and their everyday work
- Potential to ask more nuanced questions
- Stronger opportunity for successful technology transfer
- Research is mission-driven
Development and History of the CHHSR

- History
- Vision
- Infrastructure
  - Advisory Council
- Work Products
  - Knowledge Production and Dissemination
  - Applied Research
  - Product development and testing

FY15 Research Agendas

Criminal Justice
- Objective 1
  - To improve the agency’s ability to tailor program dosage to each individual client’s risk and needs
- Objective 2
  - To improve the agency’s ability to assess and respond to responsivity factors among the correctional population

FY15 Research Agendas

Addiction
- Objective 1
  - To improve the agency’s ability to effectively treat clients with a diagnosis of opiate abuse/dependence
- Objective 2
  - To improve the agency’s knowledge base about effective assessment and treatment of problem gambling
FY15 Research Agendas

Primary Care and Mental Health

• **Objective 1**
  - To improve the agency’s knowledge base about effective treatments for reducing mortality among the severely mentally ill

• **Objective 2**
  - To improve the agency’s ability to engage in primary research in this area

FY15 Research Agendas

Implementation Science

• **Objective**
  - To improve the agency’s ability to effectively execute evidence-based models and practices

Criminal Justice

Sample Projects and Findings
Identifying Effective Dosage Levels in a Community-Based Setting

Sperber, Latessa, & Makarios (2013):
- 100-bed CBCF for adult male felons
- Sample size = 689 clients
- Clients successfully discharged between 8/30/06 and 8/30/09
- Excluded sex offenders
- Dosage defined as number of group hours per client
- Recidivism defined as new sentence to prison
- All offenders out of program minimum of 12 months

Unanswered Questions (Sperber, Makarios, & Latessa, 2013)
1. Defining dosage
2. What counts as dosage?
3. Prioritization of criminogenic needs
4. Counting dosage outside of treatment environments
Unanswered Questions

5. Sequence of dosage
6. Cumulative impact of dosage
7. Impact of program setting
8. Low risk but high risk for specific criminogenic need

9. Nature of dosage for special populations
10. Impact of skill acquisition
11. Identifying moderators of risk-dosage relationship
12. Conditions under which dosage produces minimal or no impact

Treatment Dosage and the Risk Principle: An Extension and Refinement
Makarios, Sperber, and Latessa(2014)

- Methodology
  - 100-bed CBCF for adult male felons
  - Sample size = 980 clients
  - Clients successfully discharged between 8/30/06 and 12/31/10
  - Excluded sex offenders
  - Dosage defined as number of group hours per client
  - Recidivism defined as return to prison
  - All offenders out of program minimum of 12 months
Summary of Findings

- Overall, increased dosage reduces recidivism 
  - But not equally for all categories or risk levels
- Low / Moderate and Moderate 
  - Nonlinear relationship 
    - Matters at the low ends of dosage, but effects taper off and eventually reverse as dosage increases
- High / Moderate 
  - Increases in dosage consistently result in decreases in recidivism, but 
    - Saturation effect at high dosage levels

Limitations

- Single study from a CBCF in Southwestern Ohio
- Male Sample
- Does not consider other potential moderators
- Lack of “0” Dosage comparison group
Treatment Dosage and Personality: Examining the Impact of the Risk-Dosage Relationship on Neurotic Offenders

Sperber, Makarios, and Latessa (under review)

• Research on the risk principle confirms that correctional practitioners should differentiate services by offender risk.
• Research also confirms that these services should be based on a cognitive-behavioral modality.
• At the same time, there is some research to suggest that offenders with certain personality types (e.g. neurotics) are higher risk for re-offending and may not fare as well as other personality types within cognitive behavioral programs.
• If this is true, increasing cognitive behavioral dosage for high risk neurotic offenders may have a detrimental impact on recidivism for those offenders.
• Consequently, this study examines personality type as a moderator of the risk dosage relationship to determine the impact on recidivism.

Methodology

– 100-bed CBCF for adult male felons
– Clients successfully discharged between 8/30/06 and 12/31/10
  • 980 offenders total
  • 257 neurotic offenders
– Excluded sex offenders
– Dosage defined as number of group hours per client
– Recidivism defined as return to prison
– All offenders out of program minimum of 12 months

Personality Types

• Jesness Inventory
• 9 Types collapsed into 4:
  – Aggressives
  – Neurotics
  – Dependents
  – Situationals
Summary

- Pattern for neurotics similar to the overall sample
- Increasing dosage reduces recidivism but not equally for all risk levels
- Largest decrease in recidivism was for the high risk/high dosage group

Limitations

- Single study from a CBCF in Southwestern Ohio
- Limited number of cases in certain categories may have limited power of analysis
- Can’t address issues of service delivery content that may still be relevant for a neurotic population
Examining the Risk-Dosage Relationship in Female Offenders

- Studies on the number of treatment hours necessary to reduce recidivism for high risk offenders are few in number.
- Studies to date have relied on male samples.
- Cannot assume that a standard number of treatment hours necessary to reduce recidivism exists for both men and women.
- Present study examines the impact of varying levels of treatment dosage by risk for female offenders in a halfway house setting.

Methodology

- Sample size = 314 clients
- Clients successfully discharged between 10/1/07 and 2/28/10
- Dosage defined as number of group hours per client
- Recidivism defined as re-arrest
  - Checked Hamilton County and referral/home county websites
  - All offenders out of program minimum of 12 months

Recidivism Rates by Dosage and Risk Level
Summary

- Further evidence of the application of the risk principle to women
  - Over-treating lower risk women can result in recidivism increase
- Findings suggest a non-linear relationship for both risk groups
- Initial increases in dosage have positive impact on recidivism
- Increasing dosage to 101+ hours appears to result in increases in recidivism

Limitations

- Sample drawn from a single halfway house with limited geographical region
- Limited risk distribution
- Limited dosage distribution
- Inclusion of drug court clients in sample
- Reliance on public websites for recidivism checks
  - Limited geographical range for recidivism
  - Doesn’t account for all Ohio counties
  - Doesn’t account for bordering counties of other states

Responsivity

- Increasing responsivity by integrating client strengths into correctional treatment
- Women’s halfway house chosen as study site
- Random assignment to strengths group versus existing life skills group
- Does not replace existing CBT groups
- Does not impact overall dosage
Outcomes of Interest

- Primary Outcome Measures
  - Completion rates
  - Retention rates
  - Urinalysis results
  - Incidents
  - AWOLs

- Secondary Outcome Measures
  - Depression
  - PTSD
  - Self-efficacy

Addiction

Sample Projects and Findings

The Impact of Opiate Addiction on Intermediate and Long-term Outcomes of Correctional Treatment

- Current Sample = 1520
- 6 Programs
  - 5 halfway houses
  - 1 CBCF
- Preliminary analyses
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 2: Cox Regression Predicting New Charge

<table>
<thead>
<tr>
<th>Variable</th>
<th>Slope (b)</th>
<th>SE</th>
<th>Wald</th>
<th>Exp(B)</th>
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<td>Age</td>
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<td>.006</td>
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<td>Moderate Risk</td>
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<td>Successful</td>
<td>-.293**</td>
<td>.103</td>
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<td>Opioid Dx</td>
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</tbody>
</table>

*p<.001  ** p < 0.01  *p<.05

Model X² = 76.35**
Discussion

• 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

Meta-Analysis

Completed
• Effectiveness of Methadone versus Buprenorphine for Treating Opiate Addiction

In Process
• Effectiveness of Medication-Assisted Treatment for Reducing Recidivism
Methadone Vs. Buprenorphine:
Literature Search

- **Databases**

- **Keywords**
  - Buprenorphine, opiate addiction, methadone, heroin, drug treatment maintenance, agonist

Criteria for Inclusion

1. Comparison of methadone and buprenorphine
2. Urinalysis
3. Positive/negative tests
4. Outpatient setting

20 studies were included

Literature Search

- **Restrictions**
  - English
  - 1974

- **Potential articles**
  - 26,618
  - 194
**Results**

**Drug Use**
- 20 studies
- 2984 participants
- Slightly better outcome for methadone but not statistically significant
- Variation between study effect sizes not due to moderators
  - Year
  - Country
  - Male
  - Program Length

**Retention**
- 28 studies
- 4297 participants
- Methadone was associated with significantly higher retention rates
Implementing EPICS

- Implementing EPICS across 11 programs
- Implemented as case management model
- 4 3-day training sessions to train more than 75 staff
- Collecting data on staff involved along with ~1300 clients

Research Questions

- How do case management practices change as a result of training and coaching?
- How does the timing of post-training coaching impact staff fidelity and client outcomes?
- How does the method of post-training coaching impact staff fidelity and client outcomes?
- How does organizational culture impact staff fidelity, therapeutic alliance, and client outcomes?
- How does staff fidelity impact therapeutic alliance?

Discussion
Requirements

• Infrastructure and resources to engage in research
  – Collecting right type of data
  – Ease of data access
  – Understanding data and measurement issues
  – Role of practice data and its importance in helping to shape research questions

Conclusions

• Practitioners have the opportunity to become true partners in research and to begin to drive the research process
• Result is continuous “bidirectional knowledge transfer”
  – Science-based practice
  – Practice-based science
• Practitioner voice is necessary if we hope to achieve collective goal of improving client and community outcomes (mission achievement).

Questions and Answers

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