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Dr. Sheldon Xiaodong Zhang

ASSESSMENT OF IN-PRISON DRUG TREATMENT

Sheldon Zhang, Professor/Chair
School Of Criminology And Justice Studies
University Of Massachusetts Lowell, USA
Email: Sheldon_zhang@uml.edu

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Evaluation Research

- Evaluation research in a nutshell is any systematic assessment to determine if something is of value or worthwhile.
- Just like what the word—"evaluation"—means, it seeks to attach a value to something, be it an object, program, person, service, activity, need, policy, or piece of technology.
- Its goal is to produce knowledge that can be used immediately, or useful feedback. Evaluation research is not meant to discover generalizable knowledge, but to improve or make better use of something in existence.
- The word "research" means systematic endeavors to examine or study, not judgment based on anecdotal stories or some haphazard personal observations or subjective assessment.

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The Fundamental Question

- Nothing mysterious about evaluation research because it uses all the standard research methods in social science. A booming business and employs many people in the West.
- The most fundamental question: does it work?

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Why Bother to Evaluate Your Treatment Program?

- IF you are believer in what you do, you don't need evaluation. Many social service providers and treatment programs that share such this belief.
- If you can appreciate the complexity of human behavior, or have to answer to someone higher up who demands accountability. Then you have to provide effectiveness and/or cost-effectiveness.
- Evaluation research can also be threatening, often mistaken for auditing. Most people do not like to have their work inspected. That's just human nature.
- In general, it is important to bring in the stakeholders early, preferably at the planning stage of any new initiatives or treatment programs.

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How Much Does Evaluation Usually Cost?

- 10% of the total program budget.
- If a new program, a separate evaluation is needed.
- Substance misuse is more than just an addiction disorder. It is supported and enabled by a host of complex social and personal factors, making treatment particularly difficult.
- For instance, naltrexone is an effective blocker to opioid receptors and has been around for three decades. How come such an effective opioid antagonist has not made much dent to the heroin addiction problem in the US or anywhere else in the world?
- The same goes to methadone and buprenorphine. Without psychosocial interventions and other support (familial and peer), pharmacotherapies are not that effective.

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Do You Need Trained Researchers?

- No.
- Evaluation research can be done by trained government staff or prison management.
- The key is to establish an assessment oriented data system to enable on-going feedback for the performance of a treatment program.
- The best approach is to team up with others of similar sizes and pool together resources to enable evaluation of treatment programs.

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Prison Settings Have Unique Advantages for Evaluation Research

- One of the main challenges for evaluation research on substance misusers is the attrition problem—study participants drop out at high rates from the program making the remaining sample biased towards motivated subjects. No in prison.
- Inside the prison, inmates' movements are monitored and any disciplinary problems are recorded. If any contraband drugs are suspected being smuggled into the prison, urine sample can be collected with little resistance.
- What is often cited is the tension between service provider/evaluator and prison management. Because of different occupational mandate, prison officials are most concerned about safety and order of the inmates. Lockdowns due to riots, inmate disruptive behaviors, searches for contrabands or removal of inmates to different cells can all cause disruptions to treatment service delivery and evaluation activities.
- Assessment of in-prison treatment programs inevitably needs to extend beyond the prison walls. Ultimately it is the behavior outside the prison that demonstrates the treatment effects inside the prison. Don't believe the effects you see in prison.

EVALUATION DESIGNS

Basics in Evaluation Research

- **Process evaluation** focuses on the implementation and operation of a treatment program.
- **Outcome evaluation** focuses on the impact of a treatment program.
- **Cost-benefit** analysis looks at the impact of a treatment protocol but also whether it is cost effective.
- **Evaluability** assessment refers to the state of a program that has completed (or nearly completed) its intended design and is ready to produce the intended outcomes.

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Key Performance Indicators--Recidivism

- **Recidivism:** probably the most important outcome indicator that most.
- Recidivism can be defined in different, methodologically valid, ways:
 - re-arrests (irrespective of convictions);
 - severity of new arrests;
 - Convictions (and severity of convicted offenses)
 - Prison movement history/technical violations, etc.
- Sources: official records and self reports
- Self-report data can provide richer information on the spread and frequency of criminal behavior among the offender population. Self-report methods have been shown to be reliable with a remarkable degree of uniformity between self-reported answers and official data. A more recent study of drug dealers that traced self-reports of arrests from interviews through criminal records found about a 80% match between the two data sources. But the remaining 20%?

Relapse and Other Outcome Indicators

- **Relapse:** most important outcome indicator; easy to understand but not always easy to measure. The best way and probably the most valid way is to obtain biological samples such as urine at predetermined intervals or random schedules.
- To use biological samples to ascertain one's drug use, a program administrator needs to have access to qualified laboratory facilities and the money to pay for the analysis of bio-samples (urine, hair, saliva, etc.). These bio-samples also need to be collected frequently over the observation period as some illicit substance passes through the body quickly.
- Self-reports are inexpensive to collect but not very accurate. There are many factors that can influence one's recall accuracy.
- **Other outcome indicators:** prosocial activities, such as job training, gainful employment, school attendance, stable residence, reunification with family and children, and participation in other prosocial activities. These indicators can foretell the prognosis of an offender in his reintegration effort. Relapse and recidivism are indicators of particular events while these prosocial activities can reflect a more stable personal growth and improvement in recovery.
- Program "effectiveness" means a lot of things to different people. Therefore, need to work with stakeholders, treatment participants, and service providers to agree on a set of measures.

Data Collection

- Advantages of prison data management information system:
 - Personal backgrounds
 - Prior criminal records
 - Ongoing in-prison behavioral records
- In-prison service provider service records: In the US and many Western countries, substance misuse treatment services are contracted out to particular agencies specialized in treating substance abuse disorder among the criminal population.
- These treatment providers always maintain records of service utilization, about the numbers of inmates who have used the treatment services, the specific services used, and the outcomes of these service contacts.
- **Observation period:** as a rule of thumb, 6 months following the exit of a treatment episode is the minimum required for outcome evaluation purposes; typically, one year is needed to examine recidivism rate for prison populations.

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Common Designs: Pre-and-Post Test

- A baseline assessment of a cohort of prison inmates at the entry of their treatment program. Then at the end of the treatment or a few months following the completion of the treatment, another assessment is conducted to detect any differences on the main outcome indicators.
- A pre-and-post evaluation design using official and/or self-report methods is an easy way to enter the evaluation research business. Within the prison environment official records are easy to utilize for evaluation purpose, although self-report data may face challenges in validity and reliability.
- While easy to understand and implement, pre-and-post test as an evaluation design has many limitations:
 - Selection bias is very difficult to overcome because one cannot tell if the improvement in the end can be attributed to the motivation factor or the treatment effect itself or some other factors.¹³
 - Without a comparison, there is no way to tell if the treatment protocol has produced anything better than the status quo (or existing) treatment services or no treatment at all.

Randomized Controlled Trial (RCT)

- The most rigorous evaluation design is the use of randomized controlled trial (RCT).
- Its strength lies in the ability of researchers to infer cause – the program caused differences in outcomes rather than preexisting differences. One can infer that groups that are truly equivalent in all aspects going into the interventions have different outcomes only if the interventions have different impacts on the participants.
- Randomized experiments are highly valued because they allow for such causal inferences, but they are not infallible.

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Best Ways to Implement an RCT

- Avoid differential consent: Consent must be obtained **before** random assignment. Those refusing consent will be eliminated from both groups. The comparison groups will be formed from exactly the same pool of consenting inmates. There will be no possibility of differential consent.
- Avoid resentful demoralization of controls: Consent to be assigned to alternative treatment programs can be accomplished without provoking "resentful demoralization of controls" that occurs in some studies. It is important not to suggest in any way that one treatment approach is superior to another, or one treatment protocol is more current than the other. Such value-loaded descriptions of any treatment protocols will unwittingly influence inmates' preference to one treatment program over the other.
- Avoid instrumentation differences: Probably the most common threat to validity in a true RCT design is from instrumentation differences that correspond with group assignment. For example, a prison guard's judgement of an inmate's substance misuse severity may be very different from that rendered by a professional treatment staff.
- Avoid contamination between treatment and control groups: Preventing the re-assignment of inmates from one condition to another or interaction between the two groups.
- Strengthen random equivalence by assigning within key strata. For example, if marital status has a strong influence on outcomes and we know that married inmates are less common than unmarried inmates, it would be desirable to have roughly equal numbers of married inmates receive each treatment without tainting random assignment.

Comparison Group and Case Matching

- When an RCT design is not possible, researchers often fall back on a quasi-experimental design of using other inmates for comparison purposes.
- Case-matching was often done manually.
- Propensity score matching offers the most robust alternative to a true randomized controlled trial because of the sophisticated statistical procedures. In a non-randomized, comparative study, the estimated treatment effect is likely to be biased due to confounding variables.
- One major shortcoming of the case matching method (or propensity score indexing) is that it can only provide some control over descriptive variables (e.g., race, gender, age, and prior incarcerations), known to be related to recidivism or relapse in substance misuse.

CONCLUSION

- Evaluation research is important for developing and improving substance misuse treatment in prison and community. Through evaluation, we continue to see many limitations of existing treatment protocols.
- Two major problems in our assessment of substance misuse treatment inside prison or out in the community.
 - Design weaknesses in most evaluation research have hampered building knowledge on the effective treatment. Most of what we know about treatment comes from meta-analysis.
 - Second, aside from the lack of rigorous designs, many evaluation studies are also plagued by small samples or highly localized populations to assess program effectiveness, making generalization to the larger population difficult.

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Design Matters

--Here Is an Example

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Why Doing RCTs

- Complexity in assessing program effectiveness
 - Multiple individual characteristics may account for outcomes but difficult to control
 - Motivation—the most difficult confounding factor to measure and control
- RCT is “gold standard”
 - Standard protocol in all medical treatments (large or small)
 - Random assignment evens out individual differences through the odds of probability—achieving equivalence between treatment and control subjects.
- Evaluation research field is changing—higher standards of admitting evidence

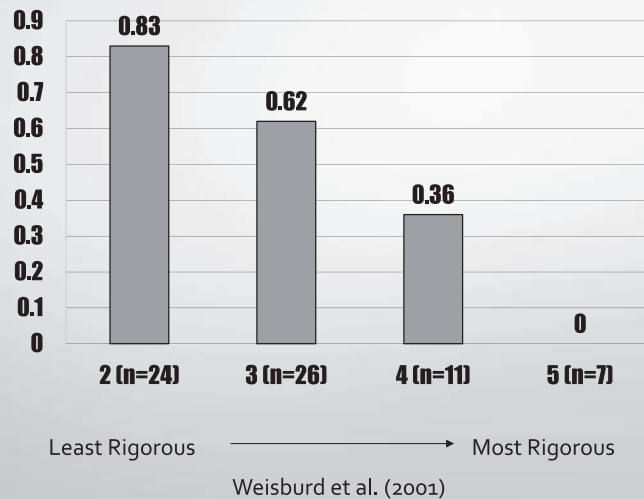
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Obstacles to Doing RCTs

- A priori assumption of effectiveness
- Control subjects mean lost revenue
- “Intent-to-treat design” creates resistance to counting dropouts/no-shows as treatment subjects—cherry-picking subjects
- Expenses in following up on subjects
- Increased rigor → smaller effects

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Study Quality & Effectiveness of Offender Programs (N=68)



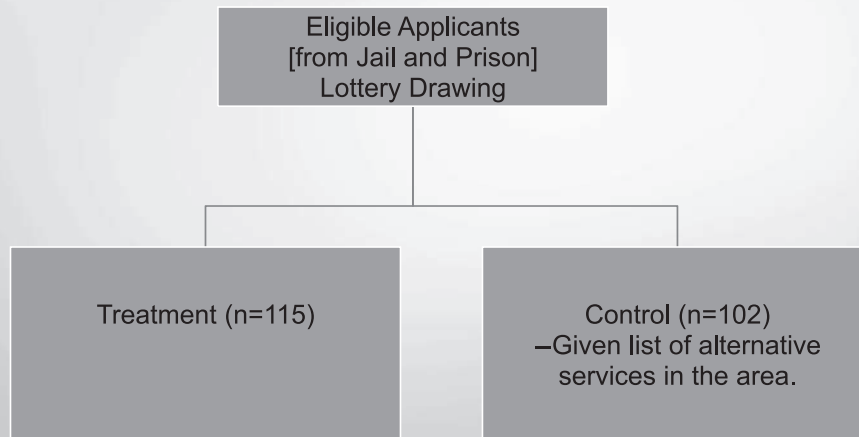
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An Recent Example of An RCT Study

- Combines job readiness training, transitional sober living, mental health services, and case management, directly from the gate of jail or prison for a two-year period.
- Preliminary data and findings show impressive decreases in recidivism (up to 75% reduction) and increases in stable employment among participants.
- The U.S. Senate Committee on Appropriations specifically recommended that the program be expanded and replicated nationally (July 20, 2006; Calendar No. 526, p. 10, par. 2)

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Basic Design



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The “Lottery” Process

- 2 chips--1 red/1 white. Subject makes selection.
 - Replacement (i.e., p of selection always .50)
 - Transparency
 - Involvement (vs. staff drawing, random # table, etc.)

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Chip drawing...



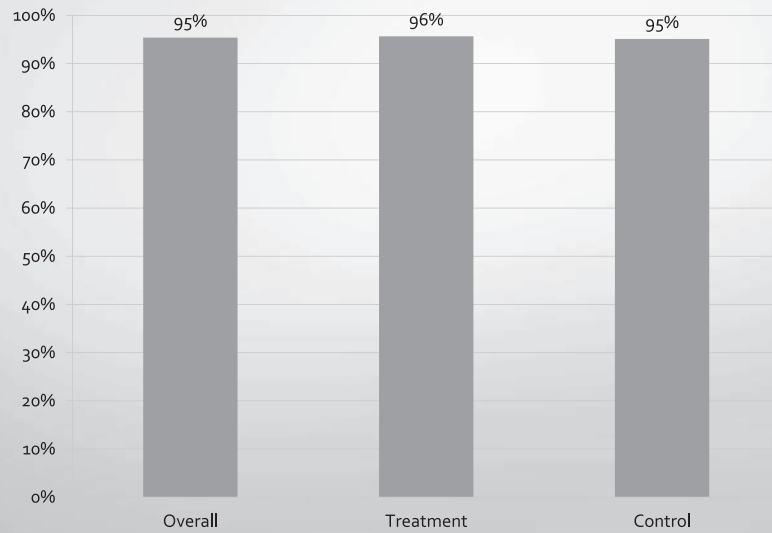
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Sample Demographics (condensed)

	Control (N=102)		Treatment (N=115)	
	Frequency	Percent	Frequency	Percent
Male	89	87.3	90	78.3
Female	13	12.7	25	21.7
Race				
African Am.	20	19.7	28	24.3
Hispanic	35	34.3	40	34.8
White	34	33.3	34	29.6
Other	13	12.7	13	11.3
Age (Mean, SD)	35.0 (SD=10.1)		35.8 (SD=10.8)	
Never Married	64	62.7	76	66.1
Married/Cohabiting	11	10.8	16	13.9
Divorced/Separated	27	26.5	23	20.0
Education				
Less than H.S.	50	49.0	55	48.4
High Sch.	32	31.4	36	31.3
More than H.S.	20	19.6	24	20.3

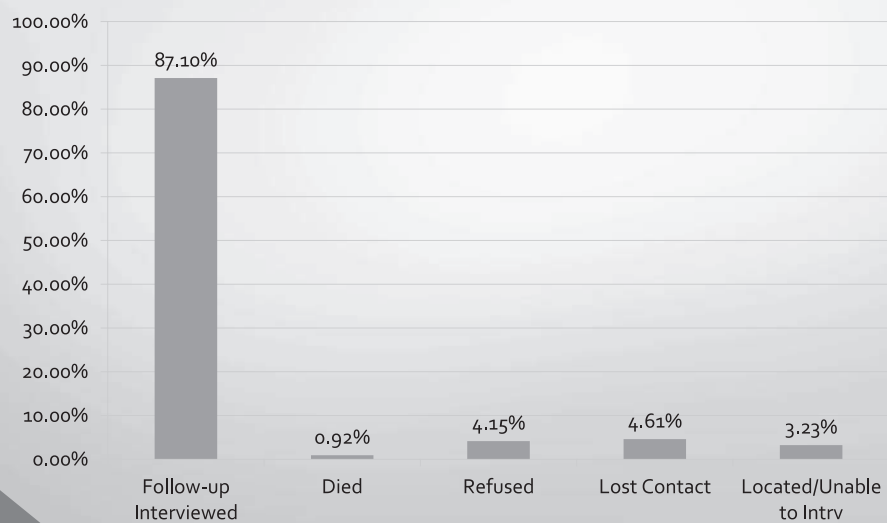
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12-Month Successful Locating Rate



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Follow-up Interview Rate



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Employment Status

	Control		Treatment	
<u><i>In Past 30 Days</i></u>				
1. Full/Part-time Employed	28	32.9	40	38.5
2. Unemployed or Other	57	67.1	64	61.6
<u><i>Since Last Interview (12 months)</i></u>				
1. Full/Part-time Employment	31	36.5	44	42.3
3. Unemployed or Other	54	63.5	60	57.7
<i>Total</i>	85	100.0	104	100.0

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Arrest/Incarceration

	Control		Treatment	
<u><i>Arrests in Past 12 Months*</i></u>				
1. No Arrest	43	50.6	57	54.8
2. Arrested	42	49.4	47	45.2
<u><i>Incarceration in Past 12 Months</i></u>				
1. No incarceration	44	51.8	55	52.9
2. Jailed/Incarcerated	41	48.2	49	47.1
<i>Total</i>	85	100.0	104	100.0

*12 months since baseline interview.

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Residential Stability

	Control		Treatment	
1. Shelter/Institution	22	25.9	32	30.8
2. Homeless/Street	5	5.9	4	3.8
3. Apartment/House	58	68.2	68	65.4
<i>Total</i>	<i>85</i>	<i>100.0</i>	<i>104</i>	<i>100.0</i>

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Illicit Drug Use

	Control		Treatment	
1. No Illicit Drug Use	45	68.2	58	69.9
2. Used Illicit Drugs	21	31.8	25	30.1
<i>Total*</i>	<i>66</i>	<i>100.0</i>	<i>83</i>	<i>100.0</i>

*Effective sample size. Participants incarcerated were not asked this question.

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Questions?

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