Moving from Principle to Execution

Applications of the Risk-Dosage Relationship

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Today's Session

- Review of the risk principle
- Discussion of ways to operationalize the risk principle
- What does the research say about operationalizing the risk principle into practice?
- What counts as dosage?
- Findings from first Talbert House dosage study
- Building a dosage research agenda
- Questions and practitioner input

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The Risk Principle

- Identify those offenders with higher probability of re-offending
- Target those offenders with higher probability of re-offending
- Targeting lower risk offenders can increase recidivism
- Referred to as the WHO principle

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2002 UC Study of Halfway Houses and CBCFs

Findings on the Risk Principle

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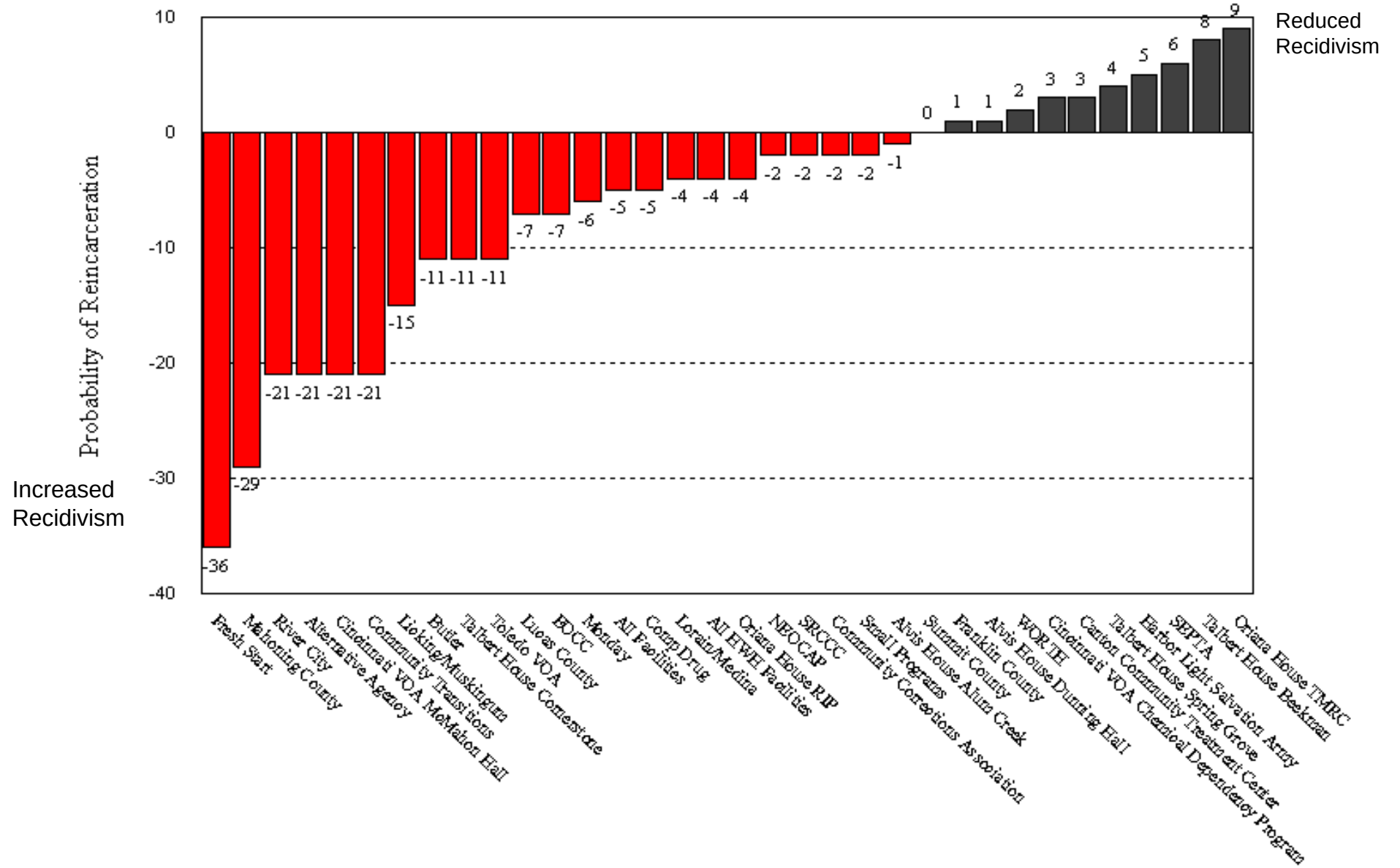
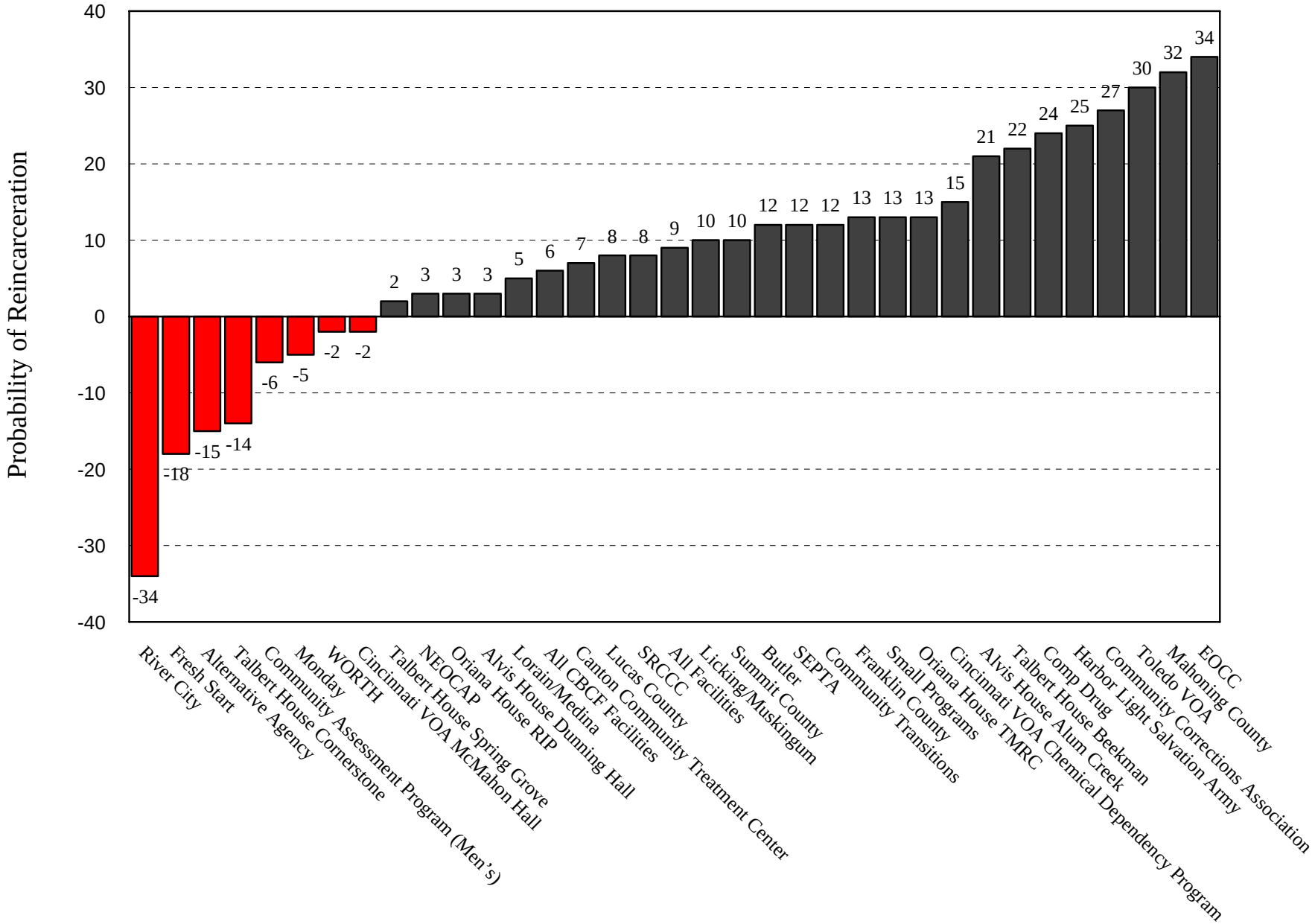
Treatment Effects for Low Risk Offenders



Treatment Effects For High Risk Offenders



2010 UC Study of Halfway Houses and CBCFs

Findings on the Risk Principle

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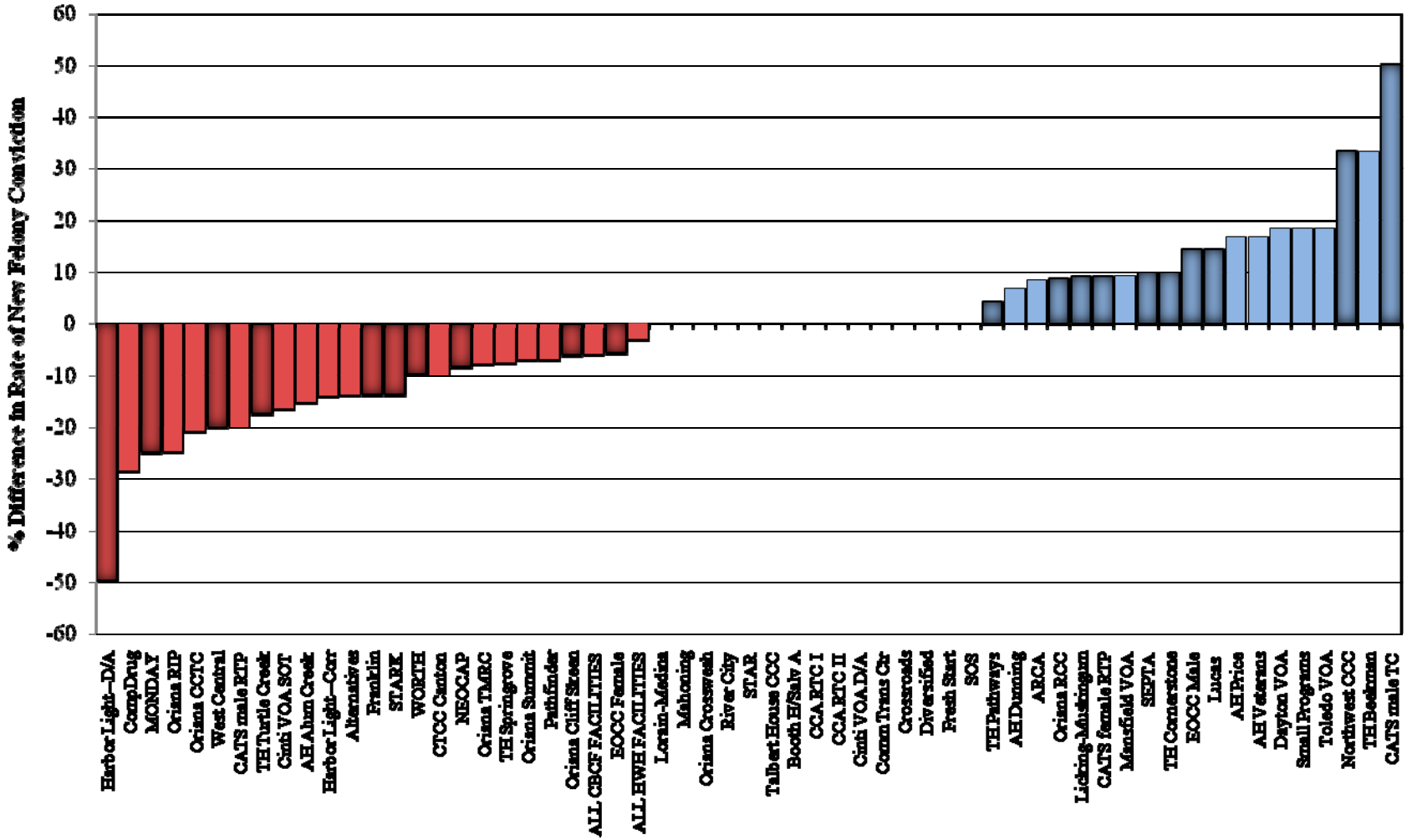
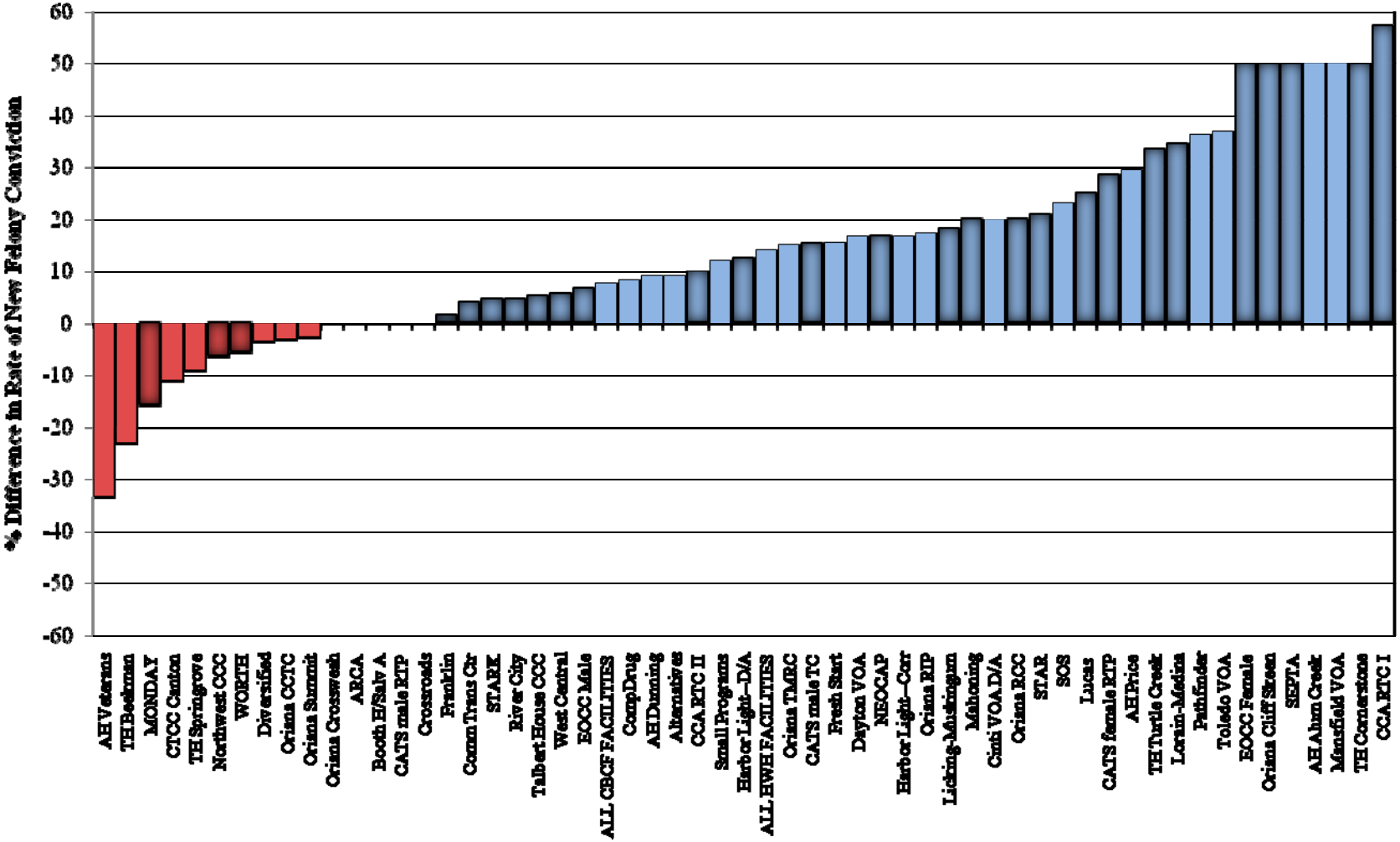
Treatment Effects for Low Risk



Treatment Effects for High Risk



Generalizability

- To whom does the risk principle apply?
  - Adults
  - Juveniles
  - Males
  - Females
  - Sex Offenders
  - Violent Offenders

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Operationalizing the Risk Principle

- Separate living quarters
- Separate groups
- Risk-specific caseloads
- Varying dosage by risk
- Varying length of stay by risk

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What Does the Prior Research Say?

- Lipsey (1999)
  - Meta-analysis of 200 studies on serious juvenile delinquents
  - Minimum length of stay of 6 months
  - Approximately 100 hours

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What Does the Prior Research Say?

- Bourgon and Armstrong (2005)
  - 620 incarcerated males
  - 12 months recidivism rates
  - 100 hours to reduce recidivism for moderate risk OR few needs
    - 100 hours not enough for high risk
  - 200 hours for high risk OR multiple needs
  - 300+ hours for high risk AND multiple needs

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First Talbert House Dosage Study

Sperber, Latessa, & Makarios (forthcoming):

- Conceptual understanding of the risk principle versus operationalization of the risk principle in real world setting to achieve maximum outcome

- "Can we quantify how much more service to provide high risk offenders?"

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The Program

- 100-bed CBCF for adult male felons
- Prison diversion program
- Average length of stay = 4 months
- Serves 3 rural counties
- Cognitive-behavioral treatment modality

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Community Correctional Center
Risk Level Structure Guide

	High	Medium High	Medium	Low/ Moderate	Low
LSI Score Range	34+	31-33	24-30	19-23	0-18
Length of Stay Target (days)	147	133	119	105	60
Corrective Thinking	200	180	132	92	52
AOD	62	54	46	38	28
Individualized Relapse Prevention					21
Anger Management	24	24	24	24	if needed
Domestic Violence	24	15	15	15	if needed
Vocational*	15	15	15	15	8
Life Skills*	16	16	16	16	8
Personal Development*	10	10	10	10	if needed
*not counted in dosage total					
Total hours available:	351	314	258	210	117

Methodology

- Sample size = 689 clients
- Clients successfully discharged between 8/30/06 and 8/30/09
  - 300 clients pre-implementation
  - 123 clients during implementation
  - 266 clients post-implementation
- Excluded sex offenders
- Dosage defined as number of group hours per client
- Multiple measures of recidivism – arrest, conviction, reincarceration
  - All offenders out of program minimum of 12 months

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Sample Characteristics

- 88.8% White
- Average age 33
- 59.7% single, never married
- 43.2% less than high school education
- 95.5% Felony 3 or higher
  - Almost half Felony 5
- 80% moderate risk or higher
- 88% have probability of substance abuse per SASSI

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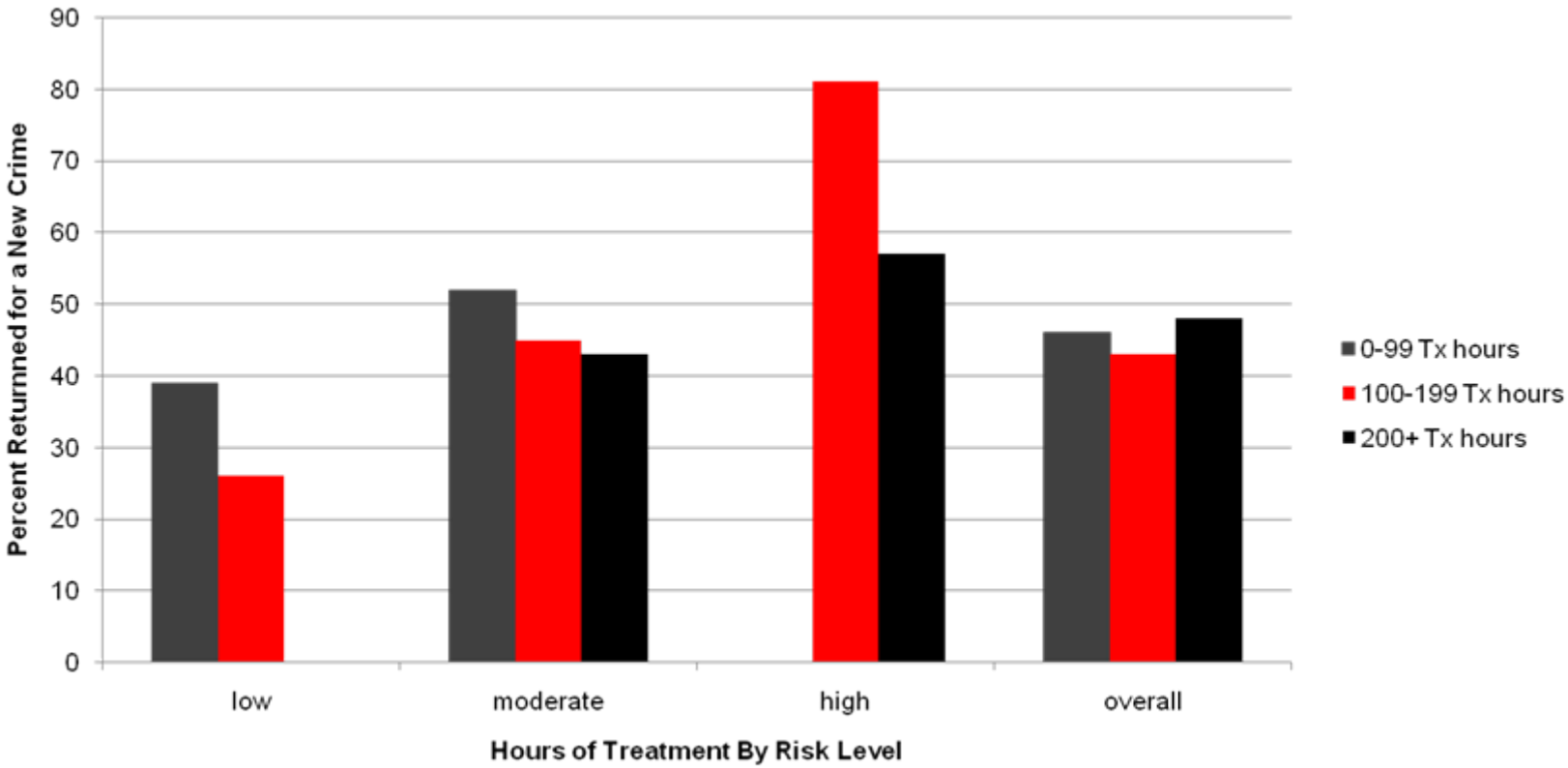
Recidivism Rates by Treatment Intensity and Risk Levels



	low	moderate	high	overall
0-99 Tx hours	39	52		46
100-199 Tx hours	26	45	81	43
200+ Tx hours		43	57	48

Average low=78, Moderate= 155 High =241

Unanswered Questions

- Is there a saturation effect?
  - What is maximum return on investment?
- What counts as dosage?
- Does dosage requirement vary by setting?
  - Halfway house versus CBCF
- What is the impact of sequencing of dosage?

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Building a Dosage Research Agenda

- Treatment Dosage and Risk: An Extension and Refinement of the Appropriate Levels of Dosage by Risk Level
  - Makarios, Sperber, & Latessa (in process)
- Treatment Dosage and Personality: Examining the Impact of Personality on the Dosage Recidivism Relationship
  - Latessa, Makarios, & Sperber (in process)
- Examining the Dosage Recidivism Relationship in Female Offenders
  - Spiegel & Sperber (in process)
- Frontloading Treatment Dosage and the Impact on Recidivism
  - Sperber and Smith (in process)

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Treatment Dosage and Risk: An Extension and Refinement of the Appropriate Levels of Dosage by Risk Level

- The limited research available on dosage indicates a broad range of treatment hours from a minimum of 200 hours to more than 300 hours of programming for high risk offenders.

- Consequently, this study seeks to refine the existing extant knowledge about tailoring dosage to offender risk by testing the impact of more narrowly defined categories of dosage on recidivism for moderate and high risk offenders.

- No findings yet; just recently secured recidivism data.

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Treatment Dosage and Personality: Examining the Impact of Personality on the Dosage Recidivism Relationship

- 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.

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Personality Types

- Jesness Inventory
- 9 Types collapsed into 4:
  - Aggressives
  - Neurotics
  - Dependents
  - Situationals

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Preliminary Findings

- Bivariate Results:
  - Risk positively correlated to dosage
  - Risk positively correlated to recidivism
  - Risk positively correlated to neurotic personality
  - Risk negatively correlated to dependent personality
  - Age negatively correlated to risk and to recidivism
  - Age positively correlated to neurotic personality and negatively correlated to aggressive personality

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What Does This Mean?

- Higher risk offenders received more dosage
- Higher risk offenders more likely to re-offend
- Younger offenders higher risk and more likely to re-offend
- Neurotics more likely to be higher risk and to be older
- Aggressives more likely to be younger
- Dependents more likely to be low risk

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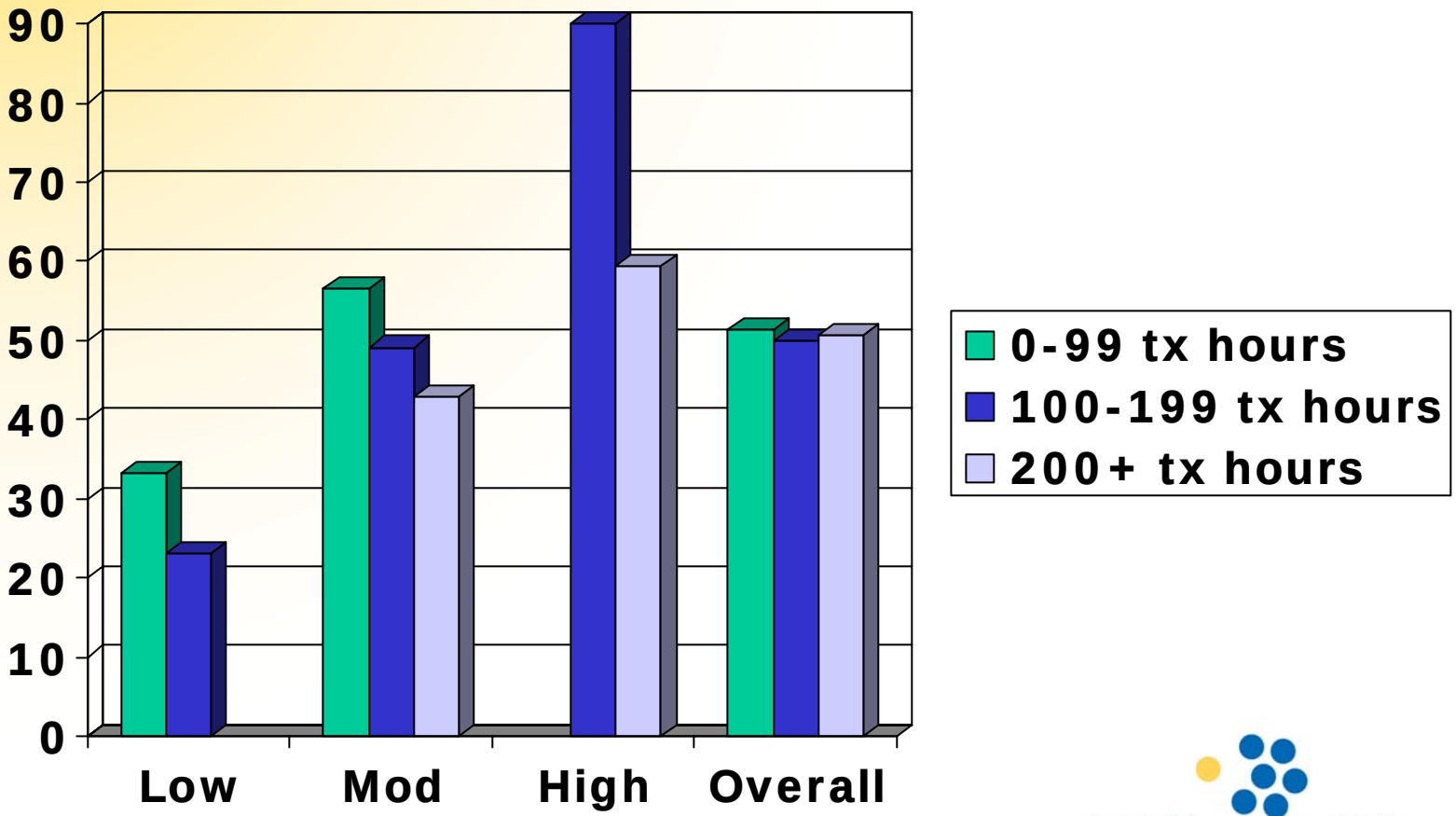
Percent Returned to Prison by Risk and Dosage



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Next Steps

- Address limitations
  - Only have 190 cases total
  - Results is that many of the categories have very few people (e.g., high risk/high dosage/recidivated = 19)
  - Add a new cohort of clients to increase number of neurotic clients
  - Re-run analyses with larger sample and compare findings

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Examining the Dosage Recidivism 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.
- Consequently, present study examines the impact of varying levels of treatment dosage by risk for female offenders in a halfway house setting.

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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 in
  - Checked Hamilton County and referral/home county websites
  - All offenders out of program minimum of 12 months

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Sample Characteristics

- 71% White
- 82.8% single
- Average age is 36
- 52.9% previous mental health history
- 95.5% moderate risk or below
  - 53.8% low or low-moderate risk
- 23.2% re-offended
- Average time at risk was 3 years; max was 4.5 years

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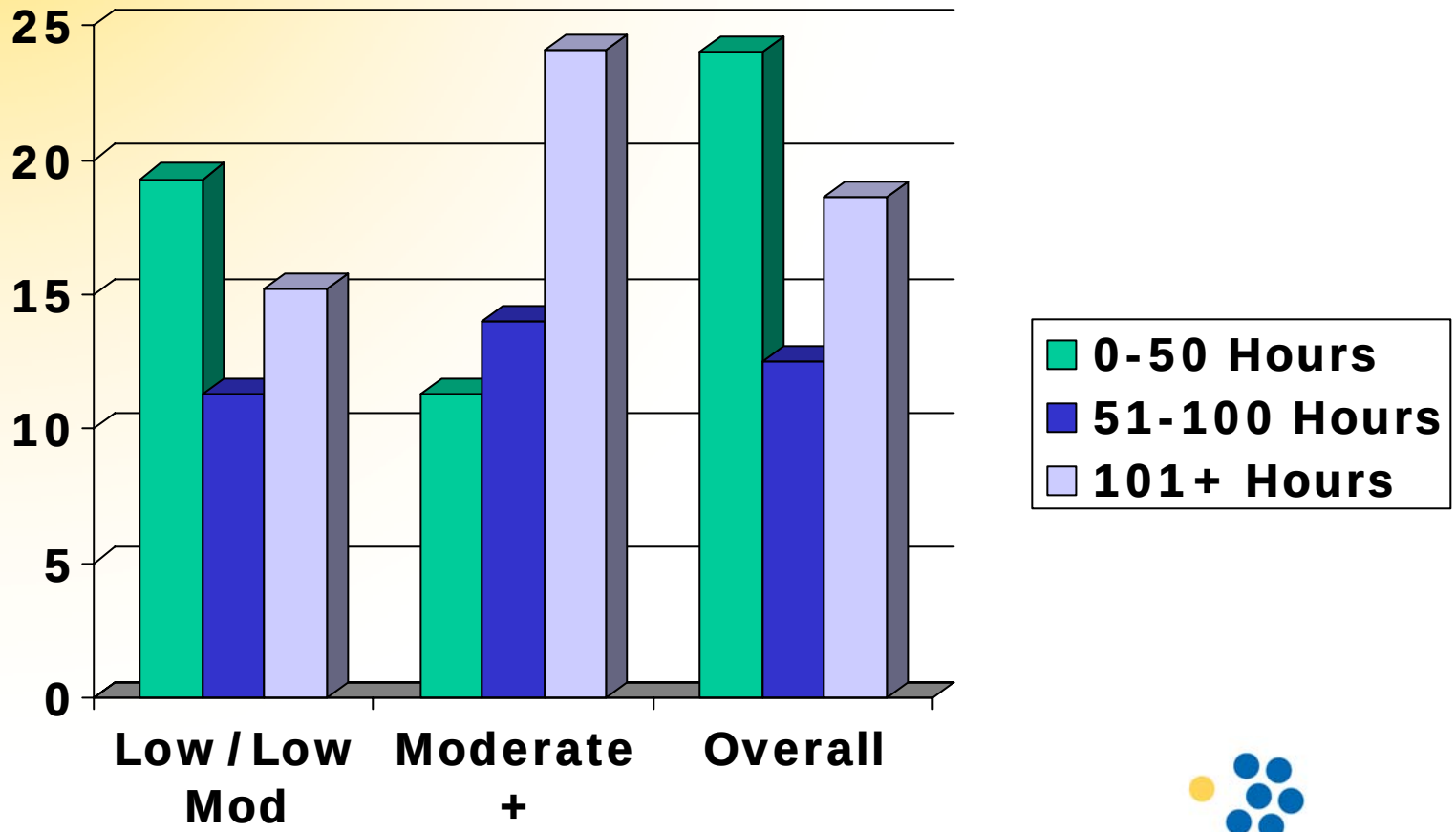
Dosage and Recidivism by Risk



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Preliminary Findings

- Bivariate Relationships:
  - LSI scores positively correlated to recidivism
  - LSI scores negatively correlated to dosage
    - Lower risk = higher dosage
    - Influence of IOP drug court clients residing in the halfway house
  - Significant positive relationship between mental health history and recidivism
  - Bivariate results suggest that increasing dosage over 100 hours for lower risk population may lead to higher recidivism rates
    - Still need to conduct multiple regression, however

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Next Steps

- Investigate adding additional clients to the sample to increase variation in both risk and recidivism
- Eliminate dosage outliers to determine impact
- Eliminate drug court clients from the sample to use pure halfway house sample
- Re-run recidivism checks in 9/12 to increase variation in recidivism
- Attempt multivariate analyses at that time

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Frontloading Treatment Dosage and the Impact on Recidivism

- The emerging literature suggests that high risk offenders require at least 200 hours of service to reduce recidivism.
- Dosage studies conducted to date have focused on offenders residing in secure residential environments.
- Little attention paid to the infrastructural barriers to providing adequate dosage in halfway houses and other non-secure settings.
- In environments such as these, achieving 200 hours of dosage often may not be feasible. Consequently, some community programs load treatment hours into the beginning of programming before allowing offenders to begin employment in the community.
- This study seeks to examine the impact of this practice on post-release recidivism in a sample of adult male halfway house participants.

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Methodology

- Sample size = 345 clients
- Clients successfully discharged between 7/1/08 – 6/30/10
- Dosage defined as number of group hours per client
- Recidivism defined as re-arrest in
  - Checked Hamilton County and referral/home county websites
  - All offenders out of program minimum of 12 months

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Defining Frontloading

- Percentage of treatment hours received prior to first employment
- Difference between hours received during first half of treatment and second half of treatment
- Whether 60% or more of hours were received prior to employment
- Whether 70% or more of hours were received prior to employment

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Sample Characteristics

- 80.8% White
- 63.5% High School/GED or above
- 80.6% Single
- 61.7% moderate risk or higher
- 28.4% re-offended

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Preliminary Results

- Bivariate Results:
  - Risk positively correlated to recidivism.
  - Risk positively correlated to overall dosage.
  - Risk significantly correlated to frontloaded dosage.
  - Age negatively correlated to recidivism.
- Summary:
  - Higher risk more likely to re-offend, receive more treatment, and to receive more hours of treatment prior to employment
  - Younger offenders more likely to re-offend

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Impact of Frontloading

	Lower Risk 70% Frontloaded		Higher Risk 70% Frontloaded	
	Yes	No	Yes	No
Rearrest	17.6%	31.25%	40%	38.5%
No Rearrest	82.4%	68.75%	60%	61.5%

Does Frontloading Work?

- No clear support provided
- However
  - Limited risk distribution
  - Limited overall dosage
    - Average was 35.5 hours
    - Majority received between 20 and 50 hours
  - Frontloading did not significantly change the way in which service delivery occurred
- More studies needed

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Questions and Answers

Practitioner Input

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