

An Examination of Recidivism Rates for Offenders with Co-Occurring Disorders:

How Much Do Services Help?

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Program Design: Location & Setting

Arizona State Prison Complex (ASPC) Tucson

- Apx. 3,900 inmates (as of June 2009)
- Variety of educational and occupational opportunities
- Medium custody yard
- Initial housing: shared living space, Modified Therapeutic Community (TC)
- Planned release to Pima or Maricopa County



Program Design: Key Program Components

- Co-occurring clinical team
- Co-occurring informed assessments
- Pre-release co-occurring treatment services and curriculum
- Individualized transitional release planning
- Co-occurring case management
- Subsidized housing
- Re-entry services
- Alumni/relapse prevention support groups



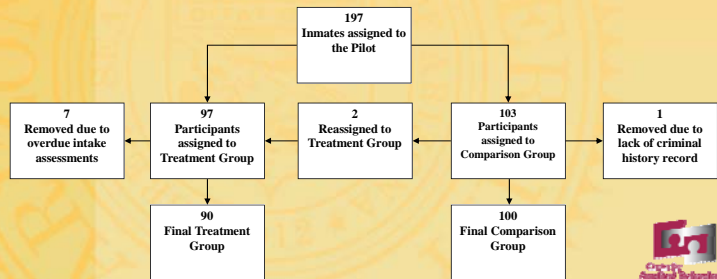
Evaluation Design: Participant Selection

- Medium custody status
- MH and SA treatment needs score of 3+
- 1.5 years remaining on sentence
- Free of exclusionary detainers (i.e. sexual or violent offenses)
- Anticipated release to Pima or Maricopa County



Evaluation Design: Random Assignment

- Participants divided into comparison and treatment group
- Control group received services-as-usual



Evaluation Design: Instruments & Measures for Treatment Group

- Assessments:
 - Brief Psychiatric Rating Scale (BPRS)
 - Addiction Severity Index (ASI)
 - Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES)
- Treatment group assessed at:
 - Intake (within 30 days)
 - Exit/Release (30 days prior to release)
 - Follow-Up (6 months in community)
- Qualitative interview at exit and follow-up

Evaluation Design: Instruments & Measures by Group

Treatment Group

- ADC intake data
- Co-occurring assessments
- Qualitative interviews at exit and follow-up
- Case management data
- Recidivism data

Control Group

- ADC intake data
- Recidivism data

Program Timeline

- Jan. 2006 - Program commenced
- Feb. 2006 - First participant enters program
- Jan. 2007 - First participant released from prison
- Oct. 2007 - Last participant entered program
- Sep. 2008 - In-prison treatment program concludes
- Sep. 2008 - Misc. aftercare services conclude
- Jan. 2009 - Case management services conclude
- Mar. 2009 - Subsidized housing services conclude
- May 2009 - Last participant released

Data collection to continue through September 2009

Programmatic Changes Post-August 2007

Participants split into two cohorts, those enrolled pre- and post-August 2007 to account for changes in program fidelity before and after that time.

Key Changes

- Resignation of key staff members
- Staffing shortages
- Acceptance of volunteer participants
- Policy changes
- Move to a new yard and program building
- Reduction in aftercare services due to budget cuts

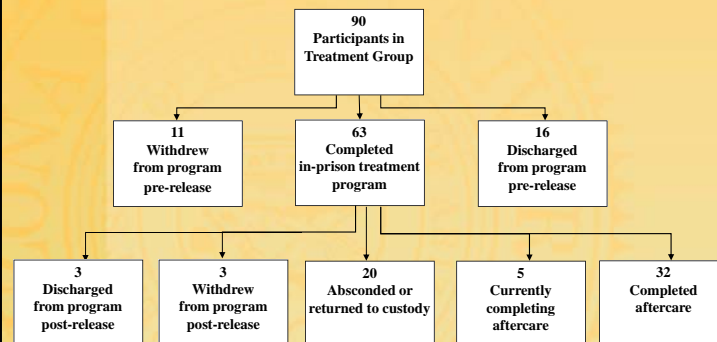


Results: Participant Characteristics

Table 1: Treatment Group		Table 2: Comparison Group	
<i>n</i> = 90		<i>n</i> = 100	
<u>Mean Age</u>	34 years	<u>Mean Age</u>	35 years
<u>Race</u>		<u>Race</u>	
Caucasian	57.8%	Caucasian	50.0%
African-American	18.9%	African-American	20.0%
Native-American	3.3%	Native-American	5.0%
Mexican-American	18.9%	Mexican-American	24.0%
Mexican-National	1.1%	Other	1.0%
<u>Education</u>		<u>Education</u>	
Under 12 years	62.2%	Under 12 years	68.0%
12 years or HS diploma	24.4%	12 years or HS diploma	27.0%
1st year of college	6.7%	1st year of college	3.0%
2nd year of college	3.3%	2nd year of college	0.0%
3rd year of college	3.3%	3rd year of college	2.0%
<u>Prior Adult Felonies</u>	3.3	<u>Prior Adult Felonies</u>	3.1
<u>Prior Adult Misdemeanors</u>	7.2	<u>Prior Adult Misdemeanors</u>	7.4



Results: Outcomes for Treatment Group



Results: Community Services Engagement

Quick Facts



- Participants received an average of 25 phone contacts and 10 in-person meetings with case manager
- 78% enrolled in the Regional Behavioral Health Authority (RBHA) system
- 55% obtained AHCCCS (additional 14% obtained VA or private coverage)
- 62% gained employment
- 76% reunited with family



Challenges and Barriers

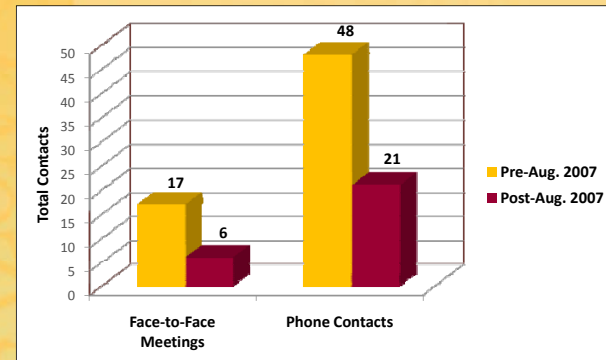
- Continued substance abuse/use by participants
- Inability of some participants to obtain/maintain employment
- Difficulty securing affordable housing
- Staffing problems (see chart below)

Staff Position	2006												2007												2008											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S			
Coordinator																																				
Admin. Assistant																																				
LISAC 1																																				
LISAC 2																																				
Case Manager (TUC)																																				
Case Manager (PHX)																																				
Psychologist																																				
1.5FTE Psychologist																																				

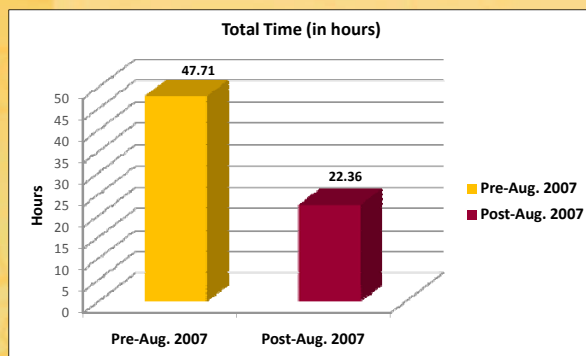
 position filled  position vacant



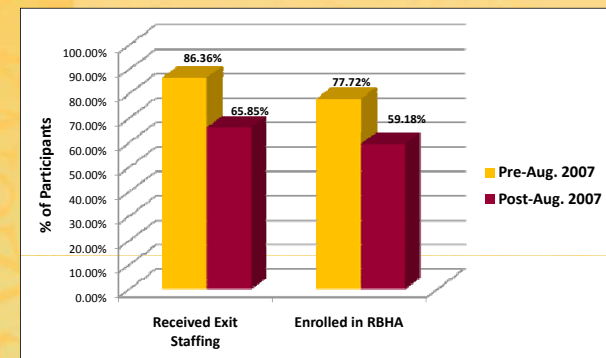
Results: Variations in Case Manager Contact



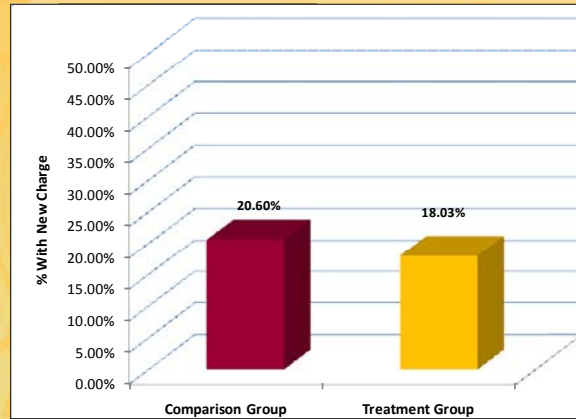
Results: Variations in Case Manager Contact Time



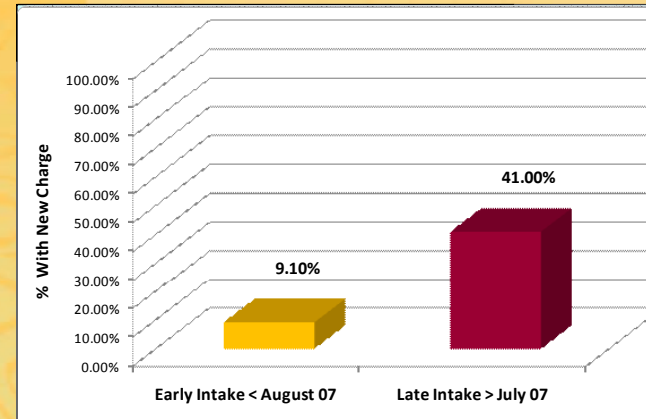
Results: Variations in RBHA Enrollment and Exit Staffings



Results: Rates of Recidivism (new charges only) at 6 Months



Results: Rates of Recidivism (new charges only) at 6 Months



Results: Changes in Assessment Scores

Mean ASI Scores			
	Intake	Exit	Follow-Up
	<i>n</i> = 83	<i>n</i> = 56	<i>n</i> = 31
Medical	3.39	3.07	2.61
Employment	5.69	4.25	2.16
Alcohol	5.61	5.30	1.81
Drugs	7.19	6.50	2.84
Legal	5.23	4.13	1.81
Family/Social	6.10	4.63	2.58
Psychological	6.76	5.50	4.06

Results: Changes in Assessment Scores

Changes in Mean ASI Scores from Intake to Exit			
	Intake Mean	Exit Mean	Significance
<i>n</i> = 54			
Medical	3.39	3.07	0.31
Employment	5.69	4.25	0.00**
Alcohol	5.61	5.30	0.57
Drugs	7.19	6.50	0.01**
Legal	5.23	4.13	0.02**
Family/Social	6.10	4.63	0.01**
Psychological	6.76	5.50	0.00**

* $p < .05$, ** $p < .01$

Results: Changes in Assessment Scores

Changes in Mean ASI Scores from Exit to Follow-UP			
	Exit	Follow-UP	Significance
N = 28			
Medical	3.07	2.61	0.04*
Employment	4.25	2.16	0.00**
Alcohol	5.30	1.81	0.00**
Drugs	6.50	2.84	0.00**
Legal	4.13	1.81	0.00**
Family/Social	4.63	2.58	0.00**
Psychological	5.50	4.06	0.03*

* p<.05, **p<.01

Results: Changes in Assessment Scores

Changes in Mean ASI Scores from Intake to Follow-Up			
	Intake Mean	Follow-Up Mean	Significance
n = 29			
Medical	3.39	2.61	0.02*
Employment	5.69	2.16	0.00**
Alcohol	5.61	1.81	0.00**
Drugs	7.19	2.84	0.00**
Legal	5.23	1.81	0.00**
Family/Social	6.10	2.58	0.00**
Psychological	6.76	4.56	0.00**

* p<.05, **p<.01

Results: Changes in Assessment Scores

Mean BPRS Scores (Self-Report Items)			
	Entrance n = 84	Exit n = 55	Follow-Up n = 30
Somatic Concern	2.52	3.00	2.13
Anxiety	3.58	3.58	2.43
Depression	3.51	2.78	2.13
Suicidality	1.61	1.51	1.30
Guilt	3.18	2.91	1.93
Hostility	2.17	2.35	1.57
Elevated Mood	1.98	1.68	1.33
Grandiosity	1.41	1.19	1.07
Suspiciousness	2.30	2.15	1.20
Unusual Thought Content	2.22	1.66	1.37
Hallucinations	2.22	1.40	1.00
Bizarre Behavior	1.46	1.09	1.17
Self-neglect	1.40	1.06	1.20
Disorientation	1.10	1.02	1.00

Results: Changes in Assessment Scores

Mean BPRS Scores (Observation Items)			
	Entrance n = 84	Exit n = 55	Follow-Up n = 30
Conceptual Disorganization	1.36	1.02	1.07
Blunted Affect	1.25	1.20	1.37
Emotional Withdrawal	1.09	1.30	1.27
Motor Retardation	1.73	1.11	1.00
Tension	1.19	1.87	1.47
Uncooperativeness	1.32	1.19	1.17
Excitement	1.54	1.47	1.10
Distractability	1.53	1.42	1.23
Motor Hyperactivity	1.04	1.43	1.17
Mannerisms and Posturing	3.00	1.02	1.13

Results: Changes in Assessment Scores

Changes in Mean BPRS Scores from Intake to Exit (Self-Report Items)			
	Intake <i>n</i> = 84	Exit <i>n</i> = 55	Significance
Somatic Concern	2.52	3.00	0.19
Anxiety	3.58	3.58	0.62
Depression	3.51	2.78	0.00**
Suicidality	1.61	1.51	0.12
Guilt	3.18	2.91	0.04*
Hostility	2.17	2.35	0.53
Elevated Mood	1.98	1.68	0.43
Grandiosity	1.41	1.19	0.30
Suspiciousness	2.30	2.15	0.26
Hallucinations	2.22	1.40	0.00**
Unusual Thought Content	2.22	1.66	0.31
Bizarre Behavior	1.46	1.09	0.04*
Self-Neglect	1.40	1.06	0.23
Disorientation	1.10	1.02	0.26

**p* < .05, ** *p* < .01

Results: Changes in Assessment Scores

Change in Mean BPRS Scores (Observation Items) Intake to Exit			
	Intake <i>n</i> = 84	Exit <i>n</i> = 55	Significance
Conceptual Disorganization	1.36	1.02	0.42
Blunted Affect	1.25	1.20	0.04*
Emotional Withdrawal	1.09	1.30	0.53
Motor Retardation	1.73	1.11	0.79
Tension	1.19	1.87	0.83
Uncooperativeness	1.32	1.19	0.40
Excitement	1.54	1.47	0.72
Distractability	1.53	1.42	0.59
Motor Hyperactivity	1.04	1.43	0.42
Mannerisms and Posturing	3.00	1.02	0.42

Results: Changes in Assessment Scores

Changes in Mean BPRS Scores from Exit to Follow-Up (Self-Report Items)			
	Exit <i>n</i> = 55	Follow-Up <i>n</i> = 30	Significance
Somatic Concern	3.00	2.13	0.00**
Anxiety	3.58	2.43	0.01**
Depression	2.78	2.13	0.06
Suicidality	1.51	1.30	0.36
Guilt	2.91	1.93	0.01**
Hostility	2.35	1.57	0.00
Elevated Mood	1.68	1.33	0.02*
Grandiosity	1.19	1.07	0.08
Suspiciousness	2.15	1.20	0.01**
Hallucinations	1.66	1.37	0.53
Unusual Thought Content	1.40	1.00	0.16
Bizarre Behavior	1.09	1.17	0.43
Self-Neglect	1.06	1.20	1.00
Disorientation	1.02	1.00	-

**p* < .05, ** *p* < .01

Results: Changes in Assessment Scores

Change in Mean BPRS Scores (Observation Items) Exit to Follow-Up			
	Exit <i>n</i> = 55	Follow-Up <i>n</i> = 30	Significance
Conceptual Disorganization	1.02	1.07	0.33
Blunted Affect	1.20	1.37	0.05*
Emotional Withdrawal	1.30	1.27	0.33
Motor Retardation	1.11	1.00	0.16
Tension	1.87	1.47	0.04*
Uncooperativeness	1.19	1.17	0.77
Excitement	1.47	1.10	0.03*
Distractability	1.42	1.23	0.80
Motor Hyperactivity	1.43	1.17	0.27
Mannerisms and Posturing	1.02	1.13	0.10

Results: Changes in Assessment Scores

Changes in Mean BPRS Scores (Self-Report Items) from Intake to Follow-Up			
	Intake	Follow-Up	Significance
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Hostility	2.17	1.57	0.00**
Elevated Mood	1.98	1.33	0.11
Grandiosity	1.41	1.07	0.00**
Suspiciousness	2.30	1.20	0.00**
Hallucinations	2.22	1.00	0.00**
Unusual Thought Content	2.22	1.37	0.05*
Bizarre Behavior	1.46	1.17	0.13
Self-Neglect	1.40	1.20	1.00
Diorientation	1.10	1.00	0.19

* p <.05, ** p <.01

Results: Changes in Assessment Scores

Change in Mean BPRS Scores (Observation Modules) Intake to Follow-Up			
	Intake	Follow-Up	Significance
	n = 84	n = 30	
Conceptual Disorganization	1.36	1.07	0.33
Blunted Affect	1.25	1.37	1.00
Emotional Withdrawal	1.09	1.27	0.26
Motor Retardation	1.73	1.00	0.33
Tension	1.19	1.47	0.61
Uncooperativeness	1.32	1.17	0.81
Excitement	1.54	1.10	0.06
Distractability	1.53	1.23	0.25
Motor Hyperactivity	1.04	1.17	0.52
Mannerisms and Posturing	3.00	1.13	0.10

* p <.05, ** p <.01

Change Assessment Scores: SOCRATES

- SOCRATES was administered to each participant at Intake, Exit, and Follow-Up
- Reliability and Validity concerns regarding follow-up scores due to how participants respond to certain questions

Summary of Findings: Recidivism

- No significant differences in recidivism between treatment and comparison groups at 6 months post-release
- There was a significant difference in recidivism when comparing enrollment in the program pre- and post-August 2007
- Implementation fidelity appears to be paramount in program's success

Summary of Findings: Change Scores

- For most items on the ASI and BPRS participants appeared to improve over time
- For the ASI, substance use and psychological functioning notably improve
- Changes noted on BPRS are less pronounced, yet many symptoms improve
- Follow-up SOCRATES scores found to not be an accurate representation of a participant's success in their aftercare

Study Limitations

- Diminished program fidelity
- Limited data for control group
- No measure of control for changes in substance abuse and mental health symptomology
- Limited funding for tracking participants who withdrew, were discharged, or returned to custody
- Limited measurements for treatment dosage

Policy Implications

- Need for more employment assistance
- Need for equal or greater emphasis on aftercare vs. prison-based treatment
- Importance of maintaining program fidelity
- Greater collaboration with the RBHAs

Future Research

- Need for greater understanding of Co-Occurring disorders with corrections populations
- Additional research on community functioning after criminal involvement for those suffering from substance/psychological disorders