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## **Assessing the Effectiveness of Jail Diversion Programs for Persons with Serious Mental Illness and Co-Occurring Substance Use Disorders**

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**In recent years, jail diversion programs for people with serious mental illness and co-occurring substance use disorders have received increasing attention and have rapidly grown in number. Previous studies suggest that jail diversion programs have the potential to achieve positive outcomes. The present study reports findings from 6 jail diversion programs (3 pre-booking and 3 post-booking) participating in a federally-funded research initiative to assess the effectiveness of jail diversion programs for people with co-occurring disorders. Diverted and non-diverted groups were compared on self-reported outcomes at 12 months following diversion. The findings suggest that jail diversion reduces time spent in jail without increasing the public safety risk, while linking participants to community-based services. Jail diversion costs and the implications of these results for jail diversion programs and future research are discussed. Copyright © 2005 John Wiley & Sons, Ltd.**

### **BACKGROUND**

Annually, 11.4 million people are booked into U.S. jails (Stephan, 2001). An estimated seven percent of jail inmates have current symptoms of serious mental illness (Teplin, 1990; Teplin, Abram, & McClelland, 1996). Of these 800,000 people with active symptoms of serious mental illness who are booked into U.S. jails annually, approximately three-quarters have co-occurring substance use disorders (Abram and Teplin, 1991; Abram, Teplin, & McClelland, personal communication).

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Women, who represent 11 per cent of all jail inmates, have nearly twice the rate of serious mental illness of men (12 versus 6.4 per cent) (National GAINS Center, 2002b). Moreover, many women entering jails present multiple problems relating to child rearing, parenting, health, histories of violence, sexual abuse and trauma. As many as 33 per cent of women entering jails have been diagnosed with post-traumatic stress disorder (PTSD) at some point in their lives (Teplin et al., 1996).

Many programs have emerged in recent years to divert individuals with serious mental illness and co-occurring substance use disorders from jail to community-based treatment and support services. In 1992, a national survey of jail diversion programs estimated that only about 52 jails in the U.S. had diversion programs for persons with mental illness (Steadman, Barbera, & Dennis, 1994). Currently, the Technical Assistance and Policy Analysis Center for Jail Diversion (TAPA) lists over 300 operating jail diversion programs nationally (TAPA Center, personal communication). These programs include a variety of pre-booking (programs that divert individuals at initial contact with law enforcement officers before formal charges are brought) and post-booking (programs that divert at some point after arrest and booking, and are either court based or jail based) programs (Steadman, Morris, & Dennis, 1995).

The recent surge in jail diversion programs has been supported in part by federal funding. SAMHSA's Center for Mental Health Services funded 20 jail diversion programs from 2002 to 2004 under its Targeted Capacity Expansion (TCE) Jail Diversion Congressional authorization. In addition, nine other programs were funded in 2001 under its generic TCE authorization. In addition, the Bureau of Justice Assistance has funded 37 Mental Health Courts in 2002 and 2003 (Bureau of Justice Assistance, 2002).

Broad support for jail diversion programs is also evident in the recommendations of two major recent reports: the Council of State Governments' Criminal Justice/Mental Health Consensus Project report (2002) and the President's New Freedom Commission on Mental Health report (New Freedom Commission on Mental Health, 2003). The Consensus Project report calls on change agents to maximize the "use of alternatives to prosecution through pretrial diversion . . ." (Policy Statement No. 9) and "availability and use of dispositional alternatives" (Policy Statement No. 14) in appropriate cases involving people with mental illness. The President's Commission recommended "widely adopting adult criminal justice and juvenile justice diversion . . . strategies to avoid the unnecessary criminalization and extended incarceration of non-violent adult and juvenile offenders with mental illnesses" (pp. 43–44).

Despite widespread support for diversion programs, there are only seven published empirical outcome studies: two from pre-booking programs and five from post-booking programs. Lamb, Shaner, Elliott, DeCuir, and Foltz (1995) studied how many of 101 consecutive referrals to the Los Angeles SMART emergency outreach teams resulted in the individual being arrested and taken to jail. Of the 101 referrals, 80 were transported to hospitals, of whom 69 were held on a 72-hour mental health hold in an inpatient setting, while only two were jailed. Steadman, Williams Deane, Borum, and Morrissey (2000) found similar results in the Memphis Crisis Intervention Team (CIT) and the Birmingham Community Service Officers (CSO) programs. As compared to the 16 per cent figure found by Sheridan and Teplins (1981) in Chicago for routine police contacts, 2 per cent of CIT contacts in Memphis and 13 per cent of the CSO cases in Birmingham resulted in arrest.

All three court-based diversion programs with outcome data showed similar or better outcomes for diverted individuals than regularly processed persons with mental illness. The experimental design study by Cosden and colleagues' (2003) of a California mental health court found the mental health court clients had greater gains in developing independent living skills and reducing drug problems than the treatment as usual group during the 1-year follow-up period. In a Los Angeles study with a 1-year follow-up, judicially monitored individuals with mental illness had significantly lower proportions with re-arrest, violence, homelessness, and psychiatric hospitalizations than those not monitored by the court (Lamb, Weinberger, & Reston-Parham, 1996). In a mid-size Midwestern city, diverted individuals had substantially less jail time during a 2-month follow-up than non-diverted individuals (Steadman, Cocozza, & Veysey, 1999).

The study by Hoff, Baranosky, Buchanan, Zonana, and Rosenheck (1999) of jail-based diversion in a mid-size New England city found diverted individuals spent less time in jail over a 1-year follow-up period, with an average of 41 days in jail compared with 173 days for non-diverted individuals.

The fifth post-booking program studied was Project Link in Rochester, NY. Its research on 41 participants who completed 1 year in the program showed a drop in the mean number of jail days in the follow-up year as compared with the prior year from 108 to 46. Significant reductions were also noted in average number of arrests per participant (Lamberti et al., 2001). The mean number of hospital days per year dropped from 116 to 7.

One unpublished report comes from a New York City program to divert felony defendants (National GAINS Center, 2002a). The Nathaniel Project had 53 participants in its first year. Comparing participants 12 months pre-diversion with the first 12 months post-diversion showed the number of arrests was reduced from 101 (35 misdemeanors and 66 felonies) to 7 (5 misdemeanors and 2 felonies). The percent housed at intake was 8 per cent and at one year was 79 per cent.

The work being reported here is from the most ambitious jail diversion research study to date (Steadman et al., 1999b). The data reported here by the National GAINS Center are from the six sites that had sufficiently large and reliable datasets.

## METHODOLOGY

From October 1998 to May 2000, sites identified diverted participants meeting study intake eligibility criteria of a serious mental illness co-occurring with a substance use disorder. Participants also had to be 18 or older, competent to give consent and to understand and respond to questions, and willing to receive treatment. This analysis includes three pre-booking programs (Memphis, TN; Montgomery County, PA; and Multnomah County, OR) and three post-booking programs (Phoenix/Tucson, AZ; Hartford, New Haven, and Bridgeport, CT; and Lane County, OR). Comparison (non-diverted) participants for each site meeting eligibility requirements were selected from populations with potentially similar participants.

A quasi-experimental non-equivalent comparison group design was adopted. Research staff interviewed participants at baseline, 3 months, and 12 months using an interview protocol developed by the steering committee. The protocol contained the following major sections: demographics and living arrangements; mental health

and treatment history; substance abuse and treatment history; health problems; social support; employment and finances; and criminal justice involvement and violence. Sites submitted data electronically to the coordinating center, Research Triangle Institute (RTI). The data was shared with the National GAINS Center.

The six sites conducted baseline interviews with 1,612 participants (including 812 diverted participants and 820 non-diverted participants), 3-month follow-up interviews with 1,260 participants (including 635 diverted participants and 625 non-diverted participants), and 12-month interviews with 1,187 participants (with 617 diverted participants and 570 non-diverted participants). The overall study retention rates for these six sites were 78 per cent for the 3-month interview and 74 per cent for the 12-month interview. The following data are drawn from 1,185 completed 12-month interviews. All data are self-report.

## MAJOR FINDINGS

Diverted and non-diverted participants were significantly different on many characteristics at baseline. It is important to recognize that for the purposes of this policy analysis these differences are not problematic. The policy question is whether the outcomes of persons with co-occurring disorders who are diverted are different from those who are not diverted. By definition, they are non-equivalent groups. If they were the same, most of the non-diverted would be diverted. The issue here is not what would happen if equivalent people were diverted. The question is, given the criteria actually in place in the six programs studied, how those people who were diverted did absolutely and relative to other persons with co-occurring disorders identified at the same point in the criminal justice system process, some in the same cities/counties and some in nearby cities/counties, who were not diverted.

Diverted participants were *more likely* to be female; have a primary diagnosis of schizophrenia or a mood disorder with psychotic features; receive Supplemental Security Income or SSDI; have higher Colorado Symptom Inventory scores indicating better mental health; and report higher life satisfaction. The diverted group was *less likely* to live with a spouse or partner; have substance use problems; and have been arrested and spent time in jail. The two groups were similar on measures of physical health, age, race/ethnicity, education level, previous employment, previous treatment, victimization and violent acts.

Table 1 presents a comparison of 12-month outcomes for diverted and non-diverted participants overall and within pre-booking sites and post-booking sites.

The diverted group reported 303 days in the community compared to 245 days among the non-diverted group. Time in the community reflects the number of days not spent incarcerated or in psychiatric hospitals or in residential treatment. The approximate 2-month difference in the number of community days between diverted and non-diverted participants was observed in both the pre-booking and post-booking groups, though the average numbers of community days for diverted and non-diverted participants from pre-booking sites (316 days and 257 days, respectively) was significantly higher than for those from post-booking sites (289 days and 222 days, respectively).

The diverted group reported an average of 1.03 arrests and the non-diverted group an average of 1.20 arrests over the 12-month follow-up period. Taking into

Table 1. Comparison of 12-month outcomes ( $N = 1185$ )

	Pre-booking diverted	Post-booking diverted	Total diverted	Pre-booking not diverted	Post-booking not diverted	Total not diverted
Number of arrests since intake	0.71	1.40	1.03	1.23	1.15	1.20
Community days**	315.9	288.5	303.3	257.3	222.1	245.2
ER use*	31.6%	30.9%	31.3%	25.7%	20.5%	23.9%
Hospitalization**	35.6%	27.1%	31.7%	20.6%	15.1%	18.7%
Any medication*	81.6%	81.8%	81.7%	72.7%	75.5%	73.7%
Any counseling*	57.5%	68.4%	62.6%	55.3%	59.7%	56.8%
Any residential*	8.7%	16.2%	12.2%	16.4%	17.0%	16.6%
Change in CSI	8.88	7.42	8.21	7.09	7.39	7.19

\* $p < 0.05$ , \*\* $p < 0.001$  for overall difference between "diverted" and "non-diverted".

account the number of community days in each group, the average number of arrests per month was 0.11 for the diverted group and 0.15 for the non-diverted group. Both groups experienced a reduction in arrests from the year before intake to the year after intake: the diverted group reduced arrests by 16.6 per cent and the non-diverted group reduced arrests by 42.1 per cent.

Diverted participants are significantly more likely to report receiving three or more counseling sessions, hospitalization, taking prescribed medications, and emergency room visits. The non-diverted group was significantly more likely to report residential treatment for substance abuse problems. None of the individual types of treatment received during the 12-month follow-up period, nor a composite measure, demonstrated a clear relationship with any of the 12-month outcomes.

Diverted participants improved Colorado Symptom Index scores (a measure of psychological symptomatology, Shern et al., 1994) from baseline to 12 months by an average 8.21 points, compared to a 7.19 point improvement by non-diverted participants. This difference is not statistically significant.

### Cost Data

RTI researchers analyzed costs and benefits of jail diversion for four sites: Lane County, OR; Memphis, TN; New York, NY; and Tucson, AZ (Cowell, Stewart, & Ng, 2002a, 2002b, 2002c, 2002d). Researchers collected cost and utilization data for criminal justice processing and treatment services for mental health and substance abuse to answer the following questions: (1) how different are the costs of the jail diversion program for the average participant from the costs of the traditional criminal justice system?; and (2) if the jail diversion programs have an effect on outcomes (self-reported measures of criminal behavior, quality of life, substance use and mental health status), at what cost?

The results were mixed. In Lane County, OR, and Tucson, AZ, there was no significant overall cost difference between being diverted and not being diverted. In New York, diversion resulted in a net cost savings (\$6,260 = average additional savings) due to the high jail costs for the non-diverted group. In Memphis, TN, the cost of diversion was significantly higher (\$5,855 = average additional cost), because the diverted group tended to incur higher inpatient treatment costs following

diversion, which outweighed the higher criminal justice costs for the non-diverted group. In general, the diverted group incurred higher community-based treatment costs, and the non-diverted group incurred higher jail costs.

In relating outcomes to costs, few statistically significant differences were observed. In each of the sites, diversion was associated with differences in only one of the outcomes. In Lane County, OR, diversion reduced the probability of drug use by 80 per cent at no greater net cost. In Tucson, AZ, diversion raised the Colorado Symptom Inventory scores by 4.5 points at a cost of \$190 per point of improvement (a non-statistically significant difference). In New York, diversion reduced the odds of nonviolent victimization by nearly 70 per cent. In Memphis, TN, diversion raised the Colorado Symptom Inventory scores by 2.4 points at three months at a cost of \$1,236 per point of improvement.

## CONCLUSION

Data from the six sites in the SAMHSA Jail Diversion Initiative suggest the following: (1) jail diversion “works” in terms of reducing time spent in jail, as evidenced by diverted participants spending an average of 2 months more in the community; (2) jail diversion does not increase public safety risk: despite more days in the community, diverted participants had comparable re-arrest rates in the 12-month follow-up period; (3) jail diversion programs link divertees to community-based services, although it is not clear from the data whether individuals receive the type, amount, and mix of services, including evidence-based practices, they need to improve outcomes, such as mental health symptoms; and (4) in general, jail diversion results in lower criminal justice costs and greater treatment costs, as diverted participants receive more treatment than those not diverted. This additional treatment cost is often higher than the criminal justice savings in the short run.

Taken together with the findings from previous studies on jail diversion, the results from these six sites provide mounting evidence that jail diversion results in positive outcomes for individuals, systems, and communities. Future research should focus on exactly what treatment, including evidence-based practices, diverted individuals receive, and what impact these services have on outcomes. Specifically, it is critical to recognize that the clinical profile of the diverted subjects included serious mental illness, high rates of co-occurring substance use disorders, and fragmented lives. For these conditions, Assertive Community Treatment (ACT), psychotropic medications, and integrated programs for co-occurring substance use disorders would have been indicated. In few U.S. jail diversion programs do clients have sufficient access to integrated treatment and ACT. The blunt instruments used for both diverted and comparison subjects are usually medication and “counseling”. The array of community-based services clinically indicated is rarely provided. Nonetheless, in this study, diversion, even with usual treatment, produced fewer jail days and no increase in arrests and, often, reduced arrests compared to the subject’s prior history. Presumably, with evidence-based practice services, there would be relationships between increased receipt of services and both symptom and functioning measures and traditional criminal justice outcome measures of reduced arrest, violence, and incarceration, but this awaits the next generation of research.

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