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Jail Diversion for Persons with Co-Occurring Disorders

SAMHSA Grant no. 92-230
Final Report

Submitted to

Division of Grants Management, SAMHSA
Rockwall II, Suite 630
5600 Fishers Lane
Rockville, MD 20857

Submitted by

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- Janice Gratton, Principle Investigator, Multnomah County
- Donlon McGovern, Boundary Spanner, Multnomah County
- Gloria Wang, Financial Manager, Multnomah County
- Melinda Howard, Case Manager, Crisis Triage Center
- Danny Rogers, Consumer Advocate

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Executive Summary

Multnomah County's mental health crisis intervention system includes: 1) a pre-booking diversion program based on the Memphis, Tenn., Crisis Intervention Team (CIT) model, 2) a 24-hour community-based mental health crisis center (the Crisis Triage Center), and 3) coordinated statewide and county efforts to integrate community-based treatment services. Enhancements from the SAMHSA initiative were a Case Manager who was hired at the Crisis Triage Center to act as an additional linkage to services and provide short-term follow-through for clients, and a Boundary Spanner who acted as a liaison to criminal justice, mental health, and substance abuse treatment systems. Simultaneously, through GAINS Center trainings and local and state Task Forces, Multnomah County worked to understand the value of an integrated treatment system, examine the current system to determine level of cooperation, coordination, and integration, and create a plan for moving forward on this continuum. The Multnomah County study compared eligible study participants diverted from jail to the Crisis Triage Center, to eligible participants who were arrested and booked into the Multnomah County Inverness Jail.

It had been expected that those who were "diverted" from jail would receive more services and would have lower subsequent negative outcomes than those who were jailed. Parts of this expectation were confirmed and parts were not.

- **Criminal Justice Recidivism:** based on the self-report data the jail group lowered their subsequent instances of arrest while the diverted group did not.
- **Substance Abuse:** At intake, the diversion group was using alcohol and drugs less frequently and drinking fewer servings of alcohol during each episode than the jail group. In the year following intake, there were no significant differences in alcohol consumption (frequency or extent) and the diversion group was using drugs more often than the jail group at the 3-month but not at the 12-month interview. A reason for this finding may be that those in the jail group received more substance abuse treatment, which may have either helped them or forced them to reduce their substance use.
- **Mental Health Functioning:** The diversion group did report significantly higher mental health functioning at the 12-month interview, suggesting that the diversion group experienced positive changes in their mental health functioning that were not experienced by the jail group. One explanation for this finding may be that the diversion group received more mental health services than the jail group both before and after intake.
- **Emergency room utilization:** Neither the diversion nor the jail group was more likely to use the emergency room for mental health and substance abuse problems at the intake, 3-, or 12-month interviews.
- **Inpatient Treatment:** At the 3-month interview, a higher percentage of the diversion group had been hospitalized for at least one night for mental health problems and there were no differences at the 12-month interview. The diversion group was not more likely than the jail group to receive inpatient substance abuse services at the intake, 3-, and 12-month interviews.
- **Outpatient Treatment:** At the 3-month interview, the diversion group was 13 times more likely to have received mental health counseling than the jail group. Raw percentages suggest that the jail group received more outpatient substance abuse services, though after controlling for a number of covariates (arrest charge, MAST and DAST scores, substance abuse counseling at intake), group membership was not a significant predictor.

- **Social support:** Social support remained remarkably stable over the three time points. There were no differences between the diversion and jail groups at the intake, 3-, and 12-month interviews.
- **Homelessness:** One year later, the jail group was more than five times as likely as the diversion group to have a regular place (other than jail) to stay even after controlling for arrest charge at intake, having a regular place to stay at intake, MAST and DAST scores at intake, nights under institutionalized care, mental health functioning at intake (CSI scores), frequency of social support at intake, and overall satisfaction with financial situation. Both groups had an increase in the number of participants who reported having a regular place to stay from intake to the 12-month interview; however, it appears that more participants in the jail group improved their living situation than in the diversion group. Reasons for this finding are unclear, suggesting that more analysis of homelessness is an important step.

This research was limited in two ways. First, Multnomah County had limited services available for clients after they had been evaluated through the Crisis Triage Center. Second, the Multnomah County jail chose to provide services to those with co-occurring disorders so that they often received as many services in jail as they would have had they gone through the CTC.

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Section I. Project Description

- A. *Background and context: Describe history of the project. Put in context of the multisite study, briefly describing the multisite set up and your participation in multisite activities.*

In 1994 an alliance was established in Multnomah County, Oregon, to develop a more effective, compassionate and safe approach to people who were in mental crisis, many of whom also suffered from significant alcohol and drug problems. This change in the county's mental health crisis response system had several components. The Portland Police Bureau, the Multnomah County Behavioral Health system, and the National Alliance for the Mentally Ill (NAMI) organized and implemented *specialized police training* on mental health issues and appropriate responses (based on the Memphis, Tenn., Crisis Intervention Team (CIT) model). This was in response to community concern in preventing injuries and other negative client outcomes for those mentally ill persons who come in contact with law enforcement personnel. The training allowed discretion on the part of the officers to divert persons with serious mental illness and substance abuse disorders from jail and into appropriate community-based care in cases of Misdemeanors or low-level Felony crimes.

The CIT program is made up of volunteer officers from each Uniform Patrol Precinct. These officers complete 40 hours of specialized training, which includes understanding mental illness, the prevalence of co-occurring diagnosis, crisis intervention and assessment skills, suicide prevention training, information about community based services, and on-site visits to treatment programs. Members of the mental health professional community present the training. There are currently 88 CIT trained officers scheduled throughout the five Portland precincts and Gresham and available on every shift. There are an additional 42 CIT trained officers who are not assigned to respond to CIT-related calls (calls relating to incidents involving mental health crisis).

Once the CIT officer has been certified, he or she is flagged in the dispatch system. The officer is dispatched to incidents involving mental health crisis. (It is important to note that all officers in Multnomah County receive some specialized training in how to most effectively and sensitively handle persons with co-occurring disorders.) The police linkage to immediate and long-term services is facilitated by the Crisis Triage Center (described below). These officers are dispatched to the scene through 911 when there is a person in crisis or someone is arrested that exhibits signs of mental illness or substance abuse. The CIT officers worked closely with the Crisis Triage Center staff to coordinate appropriate intervention, including officer backup for the mobile team.

In 1997, Multnomah County envisioned, funded, and opened a 24-hour community-based mental health crisis center, the Crisis Triage Center (CTC). The CTC provided assessment, on-site mental health services, respite care, referrals to hospitalization and community-based treatment providers, 24-hour telephone crisis counseling, an integrated mental health/chemical dependency sub-acute unit, a mobile team, and secure transportation for anyone in the community. Specific arrangements were made for efficient, safe, and effective police transport of diverted individuals.

Simultaneously, the State of Oregon and Multnomah County (the state's most populous) were engaged in coordinated state and county efforts to integrate community-based treatment services for persons with serious mental illness and substance abuse problems.

A challenging aspect of initiatives to integrate treatment was the presence of managed care. The Oregon Health Plan (OHP) is a managed care system that funds mental health treatment and alcohol/drug treatment separately, making integration efforts challenging.

In 1997, SAMHSA funded a 3-year (later expanded to 4 years) Jail Diversion Knowledge Development Application Initiative. The initiative's primary goal was to provide sufficient information to fill research gaps with a systematic examination of differing types of diversion programs in sites throughout the United

States that serve consumers with co-occurring disorders who come into contact with the criminal justice system. Multnomah County was one of nine sites chosen to receive this support.

The Multnomah County pre-booking jail diversion program included the above-mentioned Crisis Intervention Team, Crisis Triage Center, and state and county efforts to integrate mental health treatment and alcohol and drug treatment. In addition, Multnomah County received funding for two program enhancements: hiring a Case Manager at the CTC who was hired to perform as an additional linkage to services and provide short-term follow-through, and a Boundary Spanner who acted as a liaison among all services and facilities. Simultaneously, through GAINS Center trainings and local and state task forces, Multnomah County worked to understand the value of an integrated treatment system, examine the current system to determine the level of cooperation, coordination, or integration, and create a plan for moving forward on this continuum.

As the only West Coast pre-booking site in the national study, Multnomah County has been able to contribute important geographical information, and as one of two Oregon sites (the other is a post-booking program in Eugene), the Multnomah County study is part of an important statewide partnership. As one of three pre-booking jail diversion programs nationwide (involved in this Cooperative Agreement), Multnomah County will provide data of great national significance.

Multnomah County has been an active participant in conceptualizing, developing, and implementing a cross-site research design. The primary components of the design include comparing the intervention group and a comparison group using data collected from: 1) baseline, 3-month follow-up, and 12-month follow-up interviews (outcome study), 2) a process evaluation, 3) a service integration study, and 4) collection of administrative service utilization and criminal justice data 12 months before and 12 months after intervention.

B. List your hypotheses as proposed in your original grant application. What were the final research hypotheses? What is the rationale for any changes made?

The formulation of the questions originally posited in the GFA has not changed, nor have the original outcomes of importance. A few important outcomes have been added, however, including service utilization. The local, cross-site, and national lessons learned over the past 4 years have allowed us to develop specific policy questions within each of the primary questions. These lessons also have helped us to understand the true comparability of both our treatment vs. comparison groups and pre-booking vs. post-booking diversion programs.

Following are the two primary research questions outlined in the original GFA followed by sub-questions:

1. What are the differences in outcomes for non-diverted individuals with co-occurring disorders compared to diverted individuals with co-occurring disorders?

- What are the differences in criminal recidivism (charges, arrest, conviction) for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?
- What are the differences in psychiatric hospitalizations (admissions and length of stay) for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?
- What are the differences in psychiatric status (functioning, symptoms, diagnosis) for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?

- What are the differences in functional status (level of functioning) for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?
- What are the differences in living situation (e.g., homelessness) for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?
- What are the differences in emergency treatment utilization (CTC, emergency room – number of admissions) for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?
- What are the differences in frequency of substance use for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?
- What are the differences in continuity of treatment for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?
- What are the differences in receipt of alcohol and drug treatment, mental health treatment, and/or integrated treatment for non-diverted individuals with co-occurring disorders compared with diverted individuals with co-occurring disorders at 3- and 12-month follow-up?

Question 1 and its sub-questions are answered for this site in the Results section below.

2. What is the relative effectiveness of pre- and post-booking models for individuals with co-occurring disorders?

- Describe the range and characteristics of the continuum of diversion models from pre--booking through post-booking.
- How do pre- and post-booking diversion models compare in terms of cost?
- Describe the range and characteristics of mental health, alcohol and drug, and integrated treatment received at pre-booking sites compared with post-booking sites.

Question 2 and its sub-questions will be answered by the cross-site evaluation team.

This cooperative agreement has evolved over the 4 years of the study. Prior to the beginning of this study, little was known about pre- and post-booking diversion models. Initially, we had hoped to be able to pool data across all nine sites. Fairly early, we realized that the pre-booking models were very different from the post-booking models and combining this data would be of little utility. In the past year, preliminary analyses and experience of the investigators indicate that pooling even within the pre- and post-booking sites must be investigated further.

C. Briefly describe the multisite design (e.g., context of common protocol, assessment points, data submitted to the coordinating center, inter-rater reliability assessments, etc.)

The program design as originally proposed did not change throughout the study. The research design, originally proposed by Multnomah County and NPC Research in 1997, evolved as we became an integral member of the cross-site team. The Steering Committee spent the first months of the cooperative agreement deciding on an evaluation plan that would allow each site to collect common data, on similar samples, using

the same procedures, to allow for comparability. The multisite design proposed to document and assess the impact of pre/post-booking jail diversion program on samples from a population of persons with serious mental illness (diagnosis of major depression, bipolar, or schizophrenia spectrum) and substance abuse problems (as determined by scores on the MAST and DAST). Comparison groups were composed of individuals who met the same criteria but who were not diverted (usually individuals in jail).

The sampling strategy was the biggest change to the original design. Originally, Multnomah County and NPC Research proposed a larger sample (N=600) because the eligibility criteria included all serious mental illness (e.g., PTSD) rather than the four categories we later agreed to for the cross-site (Major Depressive Disorder, Bipolar Disorder, Schizophrenia Spectrum, and Psychosis NOS). This limitation, which we agreed made for a stronger cross-site design, inevitably produced a smaller sample size (N=200).

Multnomah County, through its subcontractor NPC Research, had an excellent record of cooperative and timely data submissions to the Coordinating Center, Research Triangle Institute (RTI), and the GAINS Center. All data submissions from the first one on March 23, 1999, to the most recent (and final) transmission in September 2001 have been on time and accurate. Data received in these transmissions had always been reviewed, cleaned and verified before submission. In addition, the Multnomah County data boast an extremely low error rate based on monthly feedback from RTI. Within one week of receiving feedback from RTI, all errors were always investigated and corrected and the next data submission to RTI contained accurate data. Multnomah County and NPC Research maintain an excellent working relationship with RTI.

D. Describe any unique aspects of your study and/or any aspects of your site specific study that differed from the multisite study. Append a copy of any site specific measures used, and describe their sources (e.g., were they previously tested instruments or did you develop them specifically for this project, and if the latter, how did you develop and test them).

The jail diversion program in Multnomah County has strengths in that it is both unique as well as similar to two other pre-booking sites in Tennessee and Pennsylvania (see Appendix B for Chart explaining similarities and differences in programs). The features of the Multnomah County program include specially trained CIT officers who divert persons with co-occurring disorders from jail and into community-based treatment when they commit a Misdemeanor or Class C Felony crime. This police linkage to immediate and long-term services is facilitated by a Crisis Triage Center (CTC). This center is the primary mental health crisis center in the county and the range of services include assessment and on-site services, case management, referrals to hospitalization and community-based treatment providers, a new integrated MH/CD sub-acute unit, and a mobile team. As an enhancement to this intervention, a Case Manager was hired to do additional linkage to services and provide short-term follow-through. Simultaneously, through GAINS Center trainings and local and state Task Forces, Multnomah County worked hard to understand the value of an integrated treatment system, examine the current system to determine the level of cooperation, coordination, or integration, and create a plan for moving forward on this continuum.

A unique managed care system, the Oregon Health Plan, that funds mental health treatment from a separate pool of money than alcohol and drug treatment also places Oregon in a unique situation. Current efforts are underway to explore braiding these funding streams to help facilitate integrated treatment. As the only West Coast pre-booking site, Multnomah County contributes important geographical information, and as one of two Oregon sites (the other is a post-booking program Eugene), the Multnomah County study is part of an important statewide partnership. We are fortunate to be able to share our model system with other states including California, Washington, and Idaho as they look to develop similar services. Due to its national exposure with regard to its program, it was imperative that the effectiveness of the Multnomah County program be evaluated.

As stated at the beginning of this section, the lessons learned from Multnomah County also contribute significantly to our ability to understand pre-booking diversion programs and the differences between pre-

booking programs and post-booking programs. Multnomah County has conducted a rigorous evaluation and produced accurate, complete, and timely data throughout the study. In addition, we have exceeded our sample size goal of 200 participants (total of 205). Data from these 205 participants are a strong and essential contribution to the cross-site study.

As noted earlier in this report, the outcome study is the primary component of this study, but other components of the study are also crucial and have also contributed to the overall lessons learned. The process study produced a rich, descriptive portrait of the Multnomah County jail diversion program so that it can be replicated in other sites (or effective components can be replicated). The cost study is unique from the RTI-sponsored cost study in that it will allow us to examine cost-offset (Finigan, 1996). We collected 12-month pre- and 12-month post- criminal justice and service utilization data on all participants. The services integration study allowed us to begin to examine the current status of the treatment community in detail, thereby evaluating the effect of the GAINS Center trainings, local and county task forces (where a legal Release of Information Form was developed for use across the criminal justice, mental health, and alcohol and drug treatment systems), and the Boundary Spanner position on improving community-based treatment and developing integrated services. An exceptional accomplishment was the development of the CTC-based integrated mental health/chemical dependency sub-acute unit, which due to financial reasons is now closed.

Another unique characteristic of this site was the interview team that used a comprehensive tracking protocol developed through previous research by the Evaluation Director (Sullivan, Rumpitz, Campbell, Eby, & Davidson, 1996). This protocol involved tracking procedures at three phases including: 1) during study development and baseline data collection (e.g., gather locator information, sign release of information forms, offer fair incentives for participation), 2) calling, visiting, and writing the participant her/himself, and 3) using community-based alternate contacts (e.g., family, friends, case worker, treatment provider, jail, hospital) to locate the participant. At all times, complete confidentiality of the participants was maintained. Data have been collected on the success of these strategies, continuing through the 12-month follow-up period, and were presented by the Evaluation Director and other team members at the American Society of Criminology Conference in San Francisco and the November 2000 American Evaluation Association Conference in Hawaii.

- E. Describe in detail the process by which the subjects were selected for the study conditions — i.e., the selection procedures for identifying treatment and comparison subjects and the interventions themselves. Include a history and results of any fidelity checks made. Describe the availability (with citations) of fidelity assessment instruments and program manuals for your interventions. Append copies of available program manuals and fidelity instruments.*

The target population is adults who have both a diagnosable severe mental illness and a substance use disorder, and who came into contact with the adult criminal justice system.

Specifically, the Multnomah County Site adopted the eligibility criteria required by the original GFA and refined by the Steering Committee for our target population. Our intervention group is composed of individuals who commit a Misdemeanor or Class C Felony crime, are assessed by the police officer as appropriate for CTC (based on mental health status) rather than jail (pre-booking diversion), transported to the CTC, further assessed and treated at the CTC, and referred to appropriate inpatient and/or outpatient care (with some follow-through) provided by the Case Manager). The individuals in our intervention/evaluation sample must have a DSM-IV chart diagnosis of a Schizophrenia Spectrum Disorder, Bipolar Disorder, Major Depressive Disorder (repeated episode within the past 2 years or single episode within the last 6 months), and/or Psychosis NOS (later confirmed). The individuals in our intervention sample must also have a substance abuse problem as determined by MAST/DAST scores and (sometimes) clinical assessment.

Our comparison group is composed of individuals who were arrested for a Misdemeanor or Class C Felony crime within the previous 3 weeks, brought to Inverness Jail, and who meet the above-mentioned mental health and substance abuse diagnosis conditions (determined in the same manner). The counselors at the Inverness Jail have made it possible for interviewers to view classification reports (daily/weekly) that identify individuals who meet the mental health and arrest criteria and use the MAST/DAST to confirm substance abuse problem. Counselors may also refer individuals based on the above criteria using the Referral Form.

All eligible individuals at either the intervention group study site (the Crisis Triage Center/CTC) or the comparison group study site (Inverness Jail) were recruited by study interviewers located at the CTC and the Inverness Jail. Beginning in January 1999, all persons who had a diagnosable severe mental illness and a substance use disorder and who came into contact with the criminal justice system were told about the study and asked to participate. The consent forms and Baseline interview were either administered immediately or postponed if functioning status or competency were impaired. Considering the circumstances surrounding their eligibility (i.e., mental health problems/crisis, alcohol and drug problems, and criminal justice involvement), the number of refusals was extremely low.

F. Describe the collaborations within the site over the past 5 years (e.g., roles and responsibilities of key personnel, including program people, state people, expert consultants, etc.)

The pre-booking jail diversion program is run in cooperation with several different agencies: The Portland Police Bureau (CIT program), Providence Health System (Crisis Triage Center), and the Behavioral Health Division of the Multnomah County Community and Family Services Department. The Behavioral Health Division is the local behavioral health authority. In addition to administration of the state, federal and local funding for behavioral health services, the Behavioral Health Division plays a major role in the management of Medicaid-managed behavioral health care through the Oregon Health Plan, Oregon's Medicaid waiver program.

Over the grant period The Multnomah County Behavioral Health Division assumed the primary responsibility for the conduct of the project, while NPC Research served as the point of contact between SAMHSA (CMHS/CSAT), RTI, GAINS Center, and the other sites. NPC Research assumed the responsibility of the scientific integrity, structure and management of the evaluation project. A team approach to project management and implementation enables NPC to offer clients access to a wealth of experiences and skills.

Our ongoing activities locally to monitor performance include having a local Advisory Committee that met once a month. In addition, the evaluation team met weekly to engage in short- and long-term planning, focusing primarily on data collection, analyses, and dissemination.

Currently the mental health, substance abuse, and criminal justice systems are making multiple efforts to move along the levels of integration continuum as posited by Steadman (1999). Originally the systems had little or no communication. Through the progress of this cooperative agreement, the mental health, substance abuse, and criminal justice systems have made significant strides in terms of information sharing and communication, moderate gains in terms of coordination, and slight gains in terms of collaboration. Examples of progress include implementing and maintaining two Co-Occurring Disorder Task Forces (at both the state and county levels); attempting to braid funds by licensing alcohol and drug treatment providers for mental health treatment and mental health treatment providers for alcohol and drug treatment; and creating a new sub-acute mental health/chemical dependency unit at the CTC.

Another integral way that the criminal justice system cooperates is through an initiative within the Portland Police Bureau. Officers have been asked to apply for a voluntary training program that educates them on how to deal with mentally ill individuals. The Crisis Intervention Team of the Portland Police Bureau responds to people in crisis. CIT Officers are usually called out by 911 dispatch, family members, or the

individual in crisis. The CIT program is made up of volunteer officers from each Uniform Patrol Precinct. Each member of the team has completed a 40-hour training on mental illness. Members of the mental health professional community train the officers. Once the officer is certified, they are flagged in the dispatch system. The officer is dispatched to incidents involving mental health crisis.

The Boundary Spanner facilitated multi-system cooperation at an individual level, agency level, and systems level (e.g., the Co-Occurring Disorders Workgroup recently developed a Release of Information Form to facilitate multi-system access to client data). The role of the Case Manager for the grant included developing and facilitating mental health/chemical dependence diversion plan for participants in the treatment group. The Case Manager was also responsible for brokering services for these individuals through their first referral and to establish relationships with local mental health and chemical dependency treatment providers.

Several staffs were responsible for various aspects of project performance. Dr. Floyd Martinez, Principal Investigator for the earlier part of the grant and Janice Gratton, Principle Investigator for the later part of the grant, were responsible for project leadership, all aspects of the program, and overseeing the evaluation contract with NPC Research. The Evaluation Director, Dr. Maureen Rumptz, was responsible for all facets of the evaluation. The Co-Evaluator and Cost Analyst, Dr. Michael Finigan, was responsible for analyses and dissemination as well as the cost analysis. The Evaluation Coordinator, Ms. Robbianne Cole, supervised interviewing; quality-checked every interview; closely supervised interviewers and tracking and retention; contributed to report writing, presentations, the process study, and the service integration study; coordinated service utilization and criminal justice data collection; and supervised data management. The Data Manager, Ms. Lisa Lucas, was responsible for all aspects of data management and data submission to RTI.

Throughout the past 4 years, Multnomah County has always adhered to all deadlines. In addition, staffs at Multnomah County have developed relationships with our project officers (Susan Salasin and, currently, Ali Manwar), RTI, GAINS, and the other sites.

Section II. Results

- A. *Enrollment: Specify the dates of the enrollment period, the number of participants contacted, number of baselines attempted, number of baselines completed, number of 3-month follow-ups completed, and number of 12-month follow-ups completed — all arrayed by study condition.*

The enrollment period for participation in the evaluation began January 15, 1999, and ended April 17, 2000. A total of 269 potential participants were approached for an interview. Of those, 205 agreed to participate and were found competent enough to complete the interview. Of the 64 who did not complete the interview, 5 were not actually eligible upon further study, 24 were not reached within 3 weeks of the police contact, 7 were found to have psychosis or their cognitive impairments severe enough to be unable to give consent and present reliable and valid responses to interview questions, and 28 refused. The following table displays these categories by treatment and comparison group.

	Treatment	Comparison
Eligible for the study	93	176
Located	91	155
Located and interviewed	73	133

The recruitment rate for the study was 77%, with 10% refusing to participate and 14% ineligible for other reasons. All eligible individuals at either the intervention group study site (the Crisis Triage Center/CTC) or the comparison group study site (Inverness Jail) were recruited by study interviewers located at the CTC and Inverness Jail. Beginning in January 1999, all persons who had a diagnosable severe mental illness and a substance use disorder and who came into contact with the criminal justice system were told about the study and asked to participate. The consent forms and Baseline interview were either administered immediately or postponed if functioning status or competency were impaired. Considering the circumstances surrounding their eligibility (i.e., mental health problems/crisis, alcohol and drug problems, and criminal justice involvement), the number of refusals was extremely low.

The first Baseline Interview was not conducted until January 15, 1999, due to delays in confidentiality certification experienced by the entire multisite group. The goal of the study was to interview 200 participants before May 10, 2000. On April 17, 2000, the last Baseline Interview was conducted (final N = 205). The Baseline data collection lasted 15 months. (See Appendix F, Table 1.)

At the 3-month follow-up, 175 (85%) agreed to participate and were found competent enough to complete the interview. Of the 30 who did not complete the interview, 26 were not located within the window of eligibility, one was deceased, and 3 refused.

At the 12-month follow-up, 172 (84%) were located and agreed to complete the final interview. Of the 33 who did not complete the interview, 30 were not located within the window of eligibility, one was deceased, and 2 refused.

Participants in the study can be categorized as treatment or comparison based on where the officer brought them during the police contact.

- B. *Provide baseline descriptive statistics for each group separately and for the total combined groups. Include: diagnosis, race/ethnicity, age, education, incident charge arrest, drug/alcohol use, treatment history*

Baseline Differences: Diversion (Treatment) vs. Jail (Comparison) Groups

Demographics

Demographic information collected at intake was analyzed for the entire sample and again to determine baseline differences between the diversion and jail groups.

Gender

Men comprised 69% of the total sample. The diversion group contained a slightly higher percentage of men than the jail group, but the difference was not significant.

Ethnicity

Over half of the total sample was White, with most of the other half comprised of Blacks/African Americans, mixed race people, American Indian/Alaskan Natives, and Hispanics/Latinos. Less than 3% of the total sample contained Asian, Native Hawaiians/Pacific Islanders, and people belonging to other ethnic groups. A configural frequency approach was used to analyze whether assignment to the diversion or jail group depended upon ethnicity. A configural frequency analysis for categorical variables tests whether the number of participants in each cell is greater than or less than the expected frequency for that cell. A common threshold denoting dependence between two variables is a standard residual of +/- 2.0. The analysis showed that assignment to the diversion or jail group was not dependent on the participant's ethnicity; however, there were two notable trends. First, the diversion group contained more American Indian/Alaskan Native participants; second, the jail group contained more mixed race participants.

Age

The average age for the total sample was approximately 35 years old and there were no significant differences in age between the diversion and jail groups.

Education

On average, participants attained 12 years of education. The highest level of education attained by the jail group was 11 years, which was *significantly* lower than the diversion group's 12 years.

Intake Criteria: Criminal History, Mental Health, and Substance Use

Criminal History

Arrest charges analyzed here included both actual arrests (jail group) and arrests that would have been filed if the participant had not been diverted (diversion group). The top arrest charge was a procedural violation, which included various parole and probation violations and violating restraining orders. Committing a crime against another person was the second most common arrest charge. Approximately half of the crimes included in this category were menacing and threatening charges, and the other half was assault and harassment charges. Only one count of sexual assault was included in the crimes against person category. The third most common arrest charge was "other crimes." Half of the crimes comprising this category were public disorder offenses including trespassing, disorderly conduct, and public intoxication. The other half of this category was composed of DUI offenses (approximately 25% of the offenses) and minor violations, such as destruction of property, criminal mischief, and prostitution (approximately 25% of the offenses).

To determine whether assignment to the diversion or jail group was dependent on the participant's arrest charge, a configural frequency analysis was conducted (as described above). The analysis revealed that the two groups differed on initial charge. Although the diverted group was not actually arrested, the attending police officer indicated the charge that they would have received had they been arrested. Typically for the

diverted group these were crimes against persons. Sixty-five percent of the crimes against another person were menacing and threatening offenses, with the other 35% being assault charges. More diverted participants than expected committed “other crimes.” Most of the crimes included in this category were disorderly conduct offenses or minor violations such as criminal mischief and destruction of property.

Among those in the jail group, fewer participants than expected committed crimes against another person (when they did, however, it was mostly Assault IV and one sexual assault). Jailed participants tended to commit procedural violations.

These differences are probably a function of the setting in which they were identified. Those individuals with co-occurring disorders who were identified by CIT officers on the street, drew the attention of the police because they were menacing, threatening or assaulting another person. Those in the jail were identified because they had been brought to jail for procedural violations or for drug or property crimes.

Mental Health Issues

The most common psychiatric diagnosis for the total sample was Bipolar Disorder, followed by Major Depressive Disorder and Schizophrenia. A configural frequency analysis was conducted to determine whether assignment to the diversion or jail groups depended on the participant’s primary psychiatric diagnosis. The analysis suggested that assignment to the diversion or jail group was not dependent on psychiatric diagnosis. Interestingly, the diversion group had somewhat higher rates of Bipolar Disorder and lower rates of Major Depressive Disorder than the jail group. The Colorado Symptom Inventory (CSI) measures mental health symptoms such as depression, difficulty concentrating, hallucinations, paranoia, and anxiety. Higher scores indicate more self-reported symptoms. The overall sample had an average CSI score of 46. The diversion group’s average CSI score was significantly higher than the jail group’s average CSI score, indicating more self-reported mental health problems among diverted participants.

Substance Use Issues

Substance abuse symptomology was assessed using the Michigan Alcohol Screening Test (MAST) and the Drug Abuse Screening Test (DAST). The sample as a whole had an average MAST score of 24.7 (ranged from 0 to 113) and an average DAST score of 11.2 (ranged from 0 to 20). The average MAST score for the diversion group was significantly lower than the average score for the jail group, suggesting that the jail group reported more substance abuse symptoms. Similarly, the average DAST score for the diversion group was lower than the average score for the jail group, indicating more drug abuse problems among those in the jail group. MAST scores higher than four indicate alcohol abuse problems and DAST scores greater than five indicate substance abuse problems. Approximately 92% of the participants had alcohol abuse problems, a percentage that remained constant for the diversion and jail groups. Overall, 82% of the participants had drug abuse problems. The diversion group contained significantly fewer participants who qualified as having problematic drug use (62%) compared with the jail group (92%).

Substance use history was determined by averaging alcohol and other drug consumption in the 2 months before the intake interview. Participants consumed an average of 5 servings of alcohol (beer, wine, or liquor) on an average of 7 days per month. The jail group drank significantly more alcohol on more days per month than the diversion group. Similarly, the total sample used drugs an average of 12 days per month, though the jail group used drugs significantly more often than the diversion group. Almost half of the participants used marijuana in the 3 months before their intake interview, with approximately 40% using cocaine/crack and stimulants. Fewer than 15% of the participants used sedatives, opiates, psychedelics (e.g., LSD), and inhalants. The jail group was more likely to use cocaine/crack, sedatives, and opiates than the diversion group. (See Appendix F, Figure 1, which displays the average days per month in which drugs were used.)

Treatment History

Inpatient

In the 3 months before intake, 17% of the participants spent the night in the hospital for mental health problems and 12% of the participants spent the night in the hospital for substance abuse problems. Though more people in the jail group spent time in the hospital for substance abuse problems, there were no significant differences between the groups on whether individuals received inpatient treatment for either mental health or substance abuse problems. (See Appendix F, Table 2.)

Emergency Services

Emergency services (either emergency room or other types of services, e.g., mobile crisis units) in the 3 months before intake for mental health problems were accessed by 29% of the participants and for substance abuse problems were accessed by 21% of the participants in the 3 months prior to intake. The jail group was more likely to utilize emergency services for substance abuse problems than the diversion group.

Outpatient

In the 3 months before intake, 41% of the participants received outpatient mental health counseling 29% of the participants received outpatient substance abuse counseling. The jail group was more likely to have received outpatient substance abuse counseling.

Summary

Demographics. The two groups did not significantly differ on any of the demographic variables except education, which indicated that the diversion group had attained a higher level of education (12th grade) than the jail group (11th grade).

Intake Criteria. The jail group spent significantly more nights in jail than the diversion group during the year before their intake interview. Arrest charges associated with those who were actually arrested and to those who were diverted differed. Participants in the diversion group were picked up for crimes against persons (menacing, threatening, assault) and other crimes (trespassing, disorderly conduct, criminal mischief) more than expected, and for drug crimes, property crimes, and procedural violations less than expected given the sample size. Participants in the jail group were picked up for procedural violations more than expected, and for crimes against persons less than expected.

Overall, the differences between the diversion and jail groups found at intake were not surprising given the recruitment strategies used.

The diversion and jail groups were not significantly different on primary diagnosis (Schizophrenia, Major Depressive Disorder, and Bipolar Disorder), but the diversion group had higher mental health functioning at intake (CSI scores).

The diversion group had lower MAST scores than the jail group, but did not differ from the jail group in the percentage of participants who qualified as “alcoholic” on the MAST scale. Accordingly, the diversion group reported using alcohol significantly less often and consuming fewer servings of alcohol per drinking episode compared with the jail group. Binge drinking was similar among participants in both groups. The diversion group also had lower DAST scores than the jail group and contained fewer participants who qualified as “substance abusers” on the DAST scale. Frequency of drug use was significantly lower for the diversion group than the jail group. The jail group used more cocaine/crack, sedatives, and opiates than expected, given the sample size.

Treatment. There were no significant differences in the number of participants who reported receiving mental health services (outpatient, inpatient, or emergency) or who reported receiving inpatient substance

abuse treatment in the year before their intake interview. A significantly greater number of participants in the jail group reported receiving emergency and outpatient substance abuse treatment services than did participants in the diversion group.

Overall, the differences between the diversion and jail groups found at intake were not surprising given the recruitment strategies used. Those who went to jail had more substance use problems, used drugs such as crack and heroin more often, and were more likely to be picked up for procedural violations, meaning they had been previously and perhaps recently involved with the criminal justice system. When determining the least restrictive environment for a person, it is likely that the jail group's overall profile seemed more criminal. In the same way, the diversion group had higher mental functioning, fewer substance abuse problems, and were more likely to be involved in less serious crimes (i.e., menacing, trespassing, threatening, etc.). This profile may have seemed less criminal to the arresting officer, resulting in the determination that community-based services were more appropriate for addressing their issues. Interestingly, with the exception of some participants in the jail group who received more substance abuse treatment, neither group had received appropriate inpatient, outpatient, or emergency treatment.

C. Describe the key outcomes of the study as they relate to your final hypotheses. Include a description of the statistical analysis methods used.

3- and 12-Month Outcomes

Time Periods Assessed

Participants were initially interviewed (intake interview) within 2 weeks of their contact with the police. Participants were interviewed again 3 months after intake and asked to recall events that took place in the previous 3 months since intake. This period of time is referred to as "at the 3-month interview." The third interview took place 12 months after intake when participants reported on events that took place in the nine months since their 3-month interview. Unless otherwise noted, this period of time is referred to as "at the 12-month interview."

Matching Diversion and Jail Groups

The diversion and jail groups were assessed for significant differences among various demographic variables (age, primary diagnosis, arrest charge at intake, gender, minority status, and education level). The groups significantly differed on two variables: education level and arrest charge at intake (see Baseline Differences) (See Appendix F, Table 3.). In order to address these differences, several alternatives were considered. First, we attempted to match the two groups using propensity scores (using the above demographic variables in a logistic regression). Due to a small sample size, it was impossible to achieve a balanced distribution for all variables included in the model. Second, the propensity score was used as a covariate in the model as a proxy for the demographic variables. Because the propensity score was highly correlated ($r = .70$) to the independent variable, group membership, and it was unclear what exactly was being controlled, this method was rejected.

Third, a stepwise logistic regression was run to determine which demographic variables best discriminated between the diversion and jail groups. As suspected, education and arrest charge at intake were most significant (as mentioned before). The diversion and jail groups were matched on education level, resulting in 15 subjects from the jail group being removed from the overall sample ($N=190$). A t-test or chi-square was run on each outcome variable to assess any systematic biases introduced due to the sample reduction. There were no significant differences between the overall sample and the omitted participants on any of the outcome variables. Because it was impossible to match the groups on arrest charge at intake, this variable was controlled in each of the outcomes analyses.

Analysis Plan

Outcomes measured on an interval or ratio scale were analyzed using analysis of covariance (ANCOVA). Data were screened for normal distributions, homogeneity of covariates (testing for interactions between group membership and each covariate), and homogeneity of variance (using Levene's Test of Equality of Error Variances). All analyses adequately met these assumptions unless noted. Outcomes measured dichotomously were analyzed using logistic regression for binary dependent variables.

Covariates

Many of the variables discussed in the Baseline Differences section of this report were included as covariates in subsequent analyses. Those covariates not included in the baseline analyses are presented in this section.

Arrest Charge at Intake

Though basic descriptives were provided in the Baseline Differences section, the following is a description of how arrest charge at intake, a categorical variable, was used in analyses of variance procedures. The five arrest charge categories (crimes against person, drug crimes, property crimes, procedural violations, and other crimes) were effects coded, which allowed one to determine whether the mean of the dependent variable of interest among participants committing a particular type of arrest charge was significantly different than a grand mean of that dependent variable among all five arrest charges. In doing this, it was possible to control for any dependencies between arrest charge at intake and assignment to the diversion or jail group and to interpret whether different types of arrest charges at intake were also associated with certain outcomes.

Institutionalized Care Nights

Using self-report information, institutionalized care nights was computed by adding together the number of nights spent in jail and the number of nights spent in an inpatient treatment facility during that period of time (3- or 12-month interview). This was used as a proxy for time not at risk in the subsequent analysis. At the 3-month interview, number of nights spent in jail was measured using a 4-point scale: 1 day or less, 2–6 days, 1–4 weeks, and 1–3 months. Number of hospitalized nights was written in and ranged from zero to 93 (3 months) nights. Hospitalized nights were then added to nights spent in jail by finding a category on the 4-point scale that accommodated both. For example, someone who spent 2–6 days in jail and 7 days in the hospital was coded as having 1 to 4 weeks of institutionalized care. The measure serves as a proxy for the amount of time the participant spent off the streets. At the 12-month interview, the number of nights in jail and the number of nights hospitalized for any reason in the past 12 months were written in. Thus, the institutionalized care *nights* variable at the 12-month interview is the number of nights spent in jail added to the number of nights spent in the hospital for any reason. Table 4 contains a description of time spent in institutionalized care. (See Appendix F.)

Previous Arrest History – Self-Report

Participants were asked to report the number of arrests they experienced in their lifetime before their intake interview on a 5-point scale: none, 1 time, 2 to 3 times, 4 to 10 times, and 11 or more times. Fifty-six percent of the participants in the jail group reported being arrested eleven or more times before their intake interview, as compared to 42% of those in the diversion group. Only 8% of the participants in the jail group had been arrested fewer than four times, whereas 40% of the diversion group had been arrested fewer than four times before intake.

Frequency of Social Support

Frequency of social support was computed by averaging responses from two questions at the intake interview: How often do you talk to a family member on phone? and How often do you get together with family members? Responses were along a 5-point scale ranging from zero (no family) to 5 (at least once a day). The diversion and jail groups both had an average score of 3.17 (standard deviations were 1.25 and 1.37, respectively).

Homelessness

Participants were asked whether or not they had a regular place to stay in the months before their intake interview. Sixty-four percent of the participants in the diversion group reported having a regular place to stay, as compared to 68% of those in the jail group.

Outcome Measures: Recidivism

Number of arrests was used as an indicator of recidivism. Participants self-reported how many times they had been arrested between intake and the 3-month interview and in the 12 months after the intake interview. The number of arrests between intake and the 3-month interview ranged from zero to three arrests. Number

The diversion group self-reported that they were arrested more often between intake and their 3-month interview than the jail group.

of arrests in the year after intake was measured on a 5-point scale ranging from 1 (zero) to 5 (eleven or more times). Approximately 55% of the participants reported that they had not been arrested in the 3 months after their intake interview, and 62% reported that they had not been arrested in the year after their intake interview.

ANCOVA was employed to determine which group was arrested more often after controlling for institutionalized care nights, previous arrest history, and arrest charge at intake. (See Appendix F, Table 5, the mean number of arrests (self-report) for each group

at each interview.) Because number of arrests was written in (ratio scale) at the 3-month interview and was measured on a 5-point scale at the 12-month interview, two graphs are presented with the different measurement scales.

3-Month Interview. The diversion group ($n = 53$) self-reported that they were arrested more often between intake and their 3-month interview ($M = 0.50$, $SD = 0.75$) than the jail group ($M = 0.39$, $SD = 0.59$) after controlling for the variables listed above, $F(8,151) = 4.96$, $p < .05$. The institutionalized care nights covariate was marginally significantly associated with number of arrests during this time, $F(8,151) = 3.60$, $p = .06$, suggesting that individuals who spent more time on the street during this time, i.e., those in the diversion group, experienced more arrests. However, the diversion group was arrested more than the jail group even after controlling for the amount of time participants spent on the street.

12-Month Interview. Though the patterns look similar, the diversion group ($n = 55$, $M = .50$, $SD = 0.76$) and the jail group ($M = 0.36$, $SD = 0.74$) did not significantly differ on number of self-reported arrests (measured by the 5-point scale) in the 12 months after intake after controlling for institutionalized care nights, previous arrest history, and arrest charge at intake, $F(8,147) = 2.62$, n.s. Those who had been arrested more often before intake (measured on a 5-point scale) were likely to have been arrested more often in the 12 months after intake ($F(8,147) = 9.52$, $p < .01$).

Outcome Measures: Alcohol Use

Participants were asked to recall the number of days they drank alcohol and the number of servings of alcohol consumed per day in the past 3 months (current month, last month, 2 months ago). Because the current month often did not represent a full month depending upon which day of the month the individual was interviewed,

it was not included in these analyses. Using the self-reports of alcohol consumption from last month and 2 months ago, frequency of alcohol consumption was computed as the average of number of days that the individual used alcohol and extent of alcohol consumption was computed as the average number of servings of alcohol typically consumed in one drinking episode. (See Appendix F, Table 5.)

At both interviews, participants reported drinking anywhere from zero to 31 days per month. On average, individuals reported drinking approximately 3.3 days per month during the time between the intake interview and the 3-month interview. At the 12-month interview, individuals reported drinking 2.9 days per month on average. Due to a highly skewed distribution, extent of alcohol consumption was recoded into a dichotomous variable to indicate “average” drinking (five or fewer servings for men and four or fewer servings for women) and “binge” drinking (more than five servings for men and more than four servings for women). Approximately 82% of the participants were coded as “average” drinkers at both the 3- and 12-month interviews.

Frequency of Alcohol Consumption

In addition to arrest charge at intake and institutionalized care nights, previous alcohol consumption (average number of days alcohol was used in the months prior to intake) and Michigan Alcohol Screening Test (MAST) scores were included as covariates.

3-Month Interview. There were no significant differences between the diversion ($n = 53$, $M = 4.25$, $SD = 7.77$) and jail groups ($M = 2.96$, $SD = 6.55$) in frequency of alcohol consumption during the 2 months before the 3-month interview, $F(9,150) = 0.37$, n.s. More frequent alcohol consumption in the 2 months before intake was the best unique predictor of more frequent alcohol consumption at the 3-month interview, $F(9,150) = 13.74$, $p < .001$.

12-Month Interview. Group membership was marginally significant ($F(9,142) = 3.71$, $p = .06$) at the 12-month interview; however, the homogeneity of variance assumption was violated (i.e., significantly more variance in the average number of days that alcohol was used for the diversion group). Therefore we conclude that there were no significant differences in frequency of alcohol consumption between the diversion ($n = 53$, $M = 4.0$, $SD = 7.01$) and jail ($M = 2.51$, $SD = 5.61$) groups at the 12-month interview. Again, more frequent alcohol use in the 2 months before intake was the best unique predictor of more frequent alcohol consumption at the 12-month interview, $F(9,142) = 23.07$, $p < .001$.

Extent of Alcohol Consumption

A logistic regression, controlling for arrest charge at intake, institutionalized care nights, MAST scores, and extent of drinking in the 2 months immediately before the intake interview, was employed to analyze whether which group was more likely to engage in binge drinking. (See Appendix F, Figure 2, which

The most reliable predictor of binge drinking at the 12-month interview was binge drinking at intake.

presents the percentage of individuals in each group who reported binge drinking at each interview.)

3-Month Interview. The overall model was not significant ($\chi^2(8, N = 157) = 11.69$, n.s.), suggesting that neither the included covariates nor group membership predicted binge drinking at the 3-month interview. In other words, the diversion ($n = 54$) and the jail groups were as likely to binge drink.

12-Month Interview. Though the overall model was significant ($\chi^2(8, N = 153) = 31.35$, $p < .001$), group membership was not a significant predictor of binge drinking at the 12-month interview. Using the Wald criterion, it was determined that neither the diversion ($n = 56$) nor the jail group was more likely to be engaged in binge drinking during this time ($z = 0.13$, n.s.). The most reliable predictor of binge drinking at the 12-month interview was binge drinking at intake ($z = 11.43$, $p < .01$). Those who engaged in binge drinking at intake were more than four times as likely to binge drink at the 12-month interview. In addition,

those with higher MAST scores at intake ($z = 9.07, p < .01$) were also more likely to engage in binge drinking at the 12-month interview.

Drug Use

Participants were asked to recall the number of days they used drugs in the past 3 months (current month, last month, 2 months ago). Because the current month often did not represent a full month depending upon which day of the month the individual was interviewed, it was not included in this analysis. Using reports of drug use from last month and 2 months ago, frequency of drug use was computed as the average of number of days that the individual used drugs.

At both interviews, participants reported using drugs from zero to 31 days per month. On average, individuals reported using drugs approximately 3.3 days per month during the time between the intake interview and the 3-month interview and 3.8 days per month at the 12-month interview.

Covariates in the model included arrest charge at intake, institutionalized care nights, Drug Abuse Screening Test (DAST) scores, and frequency of drug use in the months before intake (average number of days used drugs per month). (See Appendix F, Figure 3, which presents the average number of days per month that participants used drugs.)

3-Month Interview. In screening the 3-month interview data for homogeneity of covariates, a significant interaction was found between DAST scores and group membership such that higher DAST scores were associated with more frequent drug use among participants in the diversion group and somewhat less frequent drug use among those in the jail group. This finding is likely due to the fact that individuals in jail did not have the opportunity to use drugs.

With caution, the full model described above was run using ANCOVA. The diversion group ($n = 54, M = 4.46, SD = 8.60$) reported using drugs more frequently than the jail ($M = 2.91, SD = 6.61$) group at the 3-month interview, $F(9,151) = 7.48, p < .01$. Several covariates were also significantly related to frequency of drug use. First, those who experienced fewer institutionalized care nights (i.e., more time on the street) used drugs more often, $F(9, 151) = 3.84, p = .05$. Second, those who used drugs more frequently at intake were also likely to use drugs more frequently at the 3-month interview, $F(9,151) = 11.15, p < .01$. Third, participants who were picked up for procedural violations at intake were likely to report more frequent drug use at the 3-month interview than those who had other arrest charges at intake, $F(9,151) = 5.14, p < .05$. This finding is better interpreted knowing that 36% of the participants were picked up for procedural violations and most of them were in the jail group. Participants who were picked up for procedural violations used drugs at least one day a week ($M = 4.86, SD = 9.03$), which was more frequent drug use than participants who were picked up for any other type of crime reported.

12-Month Interview. The homogeneity of covariates violation was discovered when screening the 12-month interview data. More specifically, a significant interaction was found between arrest charge at intake and group membership when predicting frequency of drug use at the 12-month interview. Those in the diversion group who committed drug crimes at intake were more frequent drug users than those in the jail group who committed drug crimes; however, the diversion group only contained two people who committed drug crimes at intake and the jail group contained 23 people.

Despite the violation, the full model including all covariates mentioned above was run and no differences were found between the diversion ($n = 55, M = 3.98, SD = 8.11$) and jail ($M = 4.06, SD = 7.88$) groups, $F(9,147) = 0.57, n.s.$ In order to evaluate the impact of the violations of the homogeneity of covariate assumption, the same model was run without arrest charge as a covariate and the results were the same. Nights of institutionalized care was a significant unique covariate $F(9,147) = 4.21, p < .05$, suggesting that those who were institutionalized more often used drugs less frequently at the 12-month interview.

Mental Health Functioning

Participants completed the 15-item Colorado Symptom Inventory (CSI) at each interview. Responses on a 5-point scale ranged from 1 (at least every day) to 5 (not at all), meaning that higher scores represented better mental health functioning. Scores ranged from 20 (worst) to 75 (best). The average CSI score at the 3-month interview was 52.5 (SD = 12.07), and at the 12-month interview was 56.1 (SD = 12.37).

In order to test for differences between the diversion and jail group in mental health functioning, arrest charge at intake, institutionalized care nights, and previous mental health functioning (CSI score at intake) were controlled. (See Appendix F, Figure 4, which depicts the average CSI scores at the 3- and 12-month interviews.)

The diversion group had significantly higher mental health functioning at the 12-month interview than did the jail group.

3-Month Interview. There were no significant differences between the diversion (n = 49, M = 55.39, SD = 12.92) and jail (M = 51.03, SD = 11.41) groups in CSI scores at the 3-month interview, $F(8,138) = 0.002$, n.s. Higher mental health functioning at intake uniquely predicted higher mental health functioning at the 3-month interview, $F(8,138) = 23.18$, $p < .001$.

12-Month Interview. With caution, the full model, controlling for arrest charge at intake, previous mental health functioning (CSI at intake), and institutionalized care nights, was run. The diversion group (n = 53, M = 60.64, SD = 9.58) had significantly higher mental health functioning at the 12-month interview than did the jail group (M = 53.57, SD = 13.04) as evidenced by higher CSI scores, $F(7,139) = 4.06$, $p < .05$. Higher mental health functioning at intake was also significantly related to higher mental health functioning at the 12-month interview, $F(7,139) = 23.86$, $p < .001$.

When screening the data at the 12-month interview, a significant interaction between CSI scores at intake and group membership emerged. The interaction suggested that CSI scores at the 12-month interview among participants in the jail group tended to mirror their CSI scores at intake, whereas 12-month CSI scores among participants in the diversion group remained relatively high. This interaction could be the product of a ceiling effect such that the CSI scale did not measure improvement for diversion group participants who had higher mental health functioning compared to participants in the jail group. Another explanation may be that the diversion group received more mental health services than the jail group (see Service Utilization — Outpatient Mental Health below), which would lead to higher sustained mental health functioning.

Service Utilization

Emergency Room

Participants were asked to report whether they had used the emergency room for mental health and substance abuse problems at the 3-month interview. At the 12-month interview, participants were asked to supply the number of times they had used the emergency room for mental health and substance abuse problems. These responses were dichotomized into “yes” or “no” in order to match the questions at the 3-month interview. Approximately 80 to 90% of the participants reported that they did not use the emergency room for either mental health or substance abuse issues.

Mental Health. Logistic regression was used to determine whether the diversion or jail group was more likely to use the emergency room for mental health problems at the 3- and 12-month interviews. Covariates in this model included arrest charge at intake, institutionalized care nights, use of emergency room for mental health issues at intake (dichotomized “yes” or “no”), and mental health functioning at intake (CSI scores). (See Appendix F, Figure 5, which presents the percentage of participants in each group who reported using the emergency room to address mental health problems.)

3-Month Interview. Though the overall model was significant ($\chi^2(8, N = 151) = 23.58, p < .01$), group membership was not a reliable predictor of emergency room usage for mental health problems at the 3-month interview. Using the Wald criterion, it was determined that neither the diversion group ($n = 54$) nor the jail group was more likely to use the emergency room for mental health problems during this time ($z = 1.84, n.s.$). The most reliable predictor of emergency room usage for mental health problems at the 3-month interview was arrest charge at intake. Arrest charges were coded to compare all crimes (property, drug, against person, procedural violations) to the “other crimes” category (included trespassing, disorderly conduct, public intoxication, DUI offenses, destruction of property, criminal mischief, and prostitution). Specifically, persons who were picked up for “other crimes” were five to twelve times more likely to use the emergency room for mental health problems during the time between intake and the 3-month interview than those who were picked up for crimes against persons ($z = 4.25, p < .05$), property crimes ($z = 3.80, p < .05$), or for procedural violations ($z = 10.37, p < .01$).

12-Month Interview. The overall model was significant ($\chi^2(8, N = 147) = 15.37, p = .05$), but neither the diversion ($n = 57$) nor the jail group was more likely to use the emergency room for mental health problems at the 12-month interview ($z = 0.24, n.s.$). Those who used the emergency room for mental health problems at intake were more than fifteen times as likely to use the emergency room for mental health problems in the time between the 3- and the 12-month interview ($z = 7.72, p < .01$).

Substance Abuse. Logistic regression was used to evaluate whether the diversion group was more likely to use the emergency room for substance abuse problems than the jail group. Arrest charge at intake, institutionalized care nights, MAST and DAST scores, and emergency room use for substance abuse at intake were controlled. No significant differences emerged.

Inpatient Treatment

Participants were asked to report the number of nights they had spent in the hospital or residential treatment for either mental health or substance abuse issues at the 3- and 12-month interviews. Because the distributions of responses were highly skewed, number of nights was dichotomized into “inpatient” or “no inpatient” categories. Approximately 20% of the participants at the 3-month and 14% of the participants at the 12-month interviews were hospitalized for mental health problems. Only 5% of the participants at the 3-month and 1% of the participants at the 12-month interviews spent at least one night in the hospital or other residential care for substance abuse problems.

Mental Health. Logistic regression was employed to determine which group was more likely to have received inpatient treatment for mental health problems at the 3- and 12-month interviews. The variables controlled for included arrest charge at intake, time spent in the hospital for mental health issues before intake (“yes” or “no”), nights of institutionalized care, and mental health functioning at intake (CSI scores). (Appendix F, Figure 6, graphically represents the percentage of participants who received inpatient mental health treatment in each group at each interview.)

3-Month Interview. The overall model was significant, indicating that group membership and the chosen covariates reliably predicted whether participants received inpatient treatment for mental health problems, $\chi^2(8, N = 150) = 29.92, p < .001$. Using the Wald criterion, it was determined that the diversion group was more than five times as likely to have received inpatient mental health treatment than the jail group ($z = 5.87, p < .05$). Not surprisingly, those who spent more time in institutionalized care were also almost twice as likely to have received inpatient mental health treatment at the 3-month interview ($z = 5.49, p < .05$). In addition, those who had been hospitalized for mental health problems prior to intake were more than four times as likely to have been hospitalized for mental health problems at the 3-month interview.

12-Month Interview. Though the overall model was significant, $\chi^2(8, N = 147) = 15.34, p < .05$, neither the diversion ($n = 56$) nor the jail group was more likely to have received inpatient mental health treatment at the 12-month interview. As indicated by the Wald criterion, the most reliable predictor was previous mental health hospitalization ($z = 5.68, p < .05$) such that those who had been hospitalized for mental health

problems prior to intake were more than 12 times as likely to have been hospitalized for mental health problems at the 12-month interview.

Substance Abuse. Logistic regression was used to evaluate which group was more likely to have received inpatient treatment for substance abuse at the 3- and 12-month interviews. The variables controlled for included arrest charge at intake, time spent in the hospital or residential care for substance abuse before intake (“yes” or “no”), nights of institutionalized care, and MAST and DAST scores.

3-Month Interview. The overall model used to predict whether participants received inpatient treatment for substance abuse problems at the 3-month interview was not significant, $\chi^2(9, N = 161) = 4.45$, n.s. Thus, neither the diversion ($n = 54$) nor the jail group was more likely to have been hospitalized for substance abuse problems at the 3-month interview. This finding is likely due to the small number of participants who actually received these services (see Figure 6).

12-Month Interview. Though the overall model was significant, $\chi^2(9, N = 157) = 17.36$, $p < .05$, no single variable uniquely predicted inpatient substance use treatment at the 12-month interview. Further, the diversion group ($n = 56$) was not more likely than the jail group to receive these services. Again, these findings can be explained by the small number of participants (no participants in the diversion group) who received inpatient services for substance abuse problems.

Outpatient Treatment

At the 3-month interview, participants were asked whether or not they had received outpatient counseling mental health and for substance abuse issues in the past 3 months. Approximately 53% of the participants had received mental health counseling and 38% had received substance abuse counseling. At the 12-month interview, participants were asked to report the number of counseling sessions they had attended for either mental health or substance abuse in the 6 months before their 12-month interview. They were then asked to identify the primary issues on which the treatment was focused: mental health, substance abuse, or both. The number of counseling sessions for mental health and for substance abuse were dichotomized into “counseling” and “no counseling” categories. Approximately 16% of the participants reported engaging in outpatient mental health counseling and 11% reported involvement in outpatient substance abuse counseling in the 6 months preceding their 12-month interview.

Mental Health. Logistic regression was used to evaluate whether the diversion group was more likely to receive mental health outpatient counseling than the jail group. Arrest charge at intake, institutionalized care nights, mental health functioning at intake (CSI), and mental health counseling received before intake were controlled. (See Appendix F, Figure 7, which presents the percentage of participants in each group who reported receiving mental health and substance abuse counseling at each interview.)

3-Month Interview. The overall model was significant, $\chi^2(8, N = 84) = 19.28$, $p < .05$, suggesting that the covariates and group membership variables reliably predicted whether participants received mental health counseling at the 3-month interview. Using the Wald criterion, it was determined that the diversion group was 13 times more likely to have received outpatient mental health counseling than the jail group ($z = 8.46$, $p < .01$). Additionally, those who had received mental health counseling prior to intake were more than nine times more likely to have received mental health counseling at the 3-month interview ($z = 8.38$, $p < .01$).

12-Month Interview. Group membership and the identified covariates did not reliably predict whether or not participants received mental health counseling at the 12-month interview, $\chi^2(8, N = 78) = 6.92$, n.s. Thus, neither the diversion ($n = 53$) nor the jail group was more likely to receive mental health counseling in the year after intake.

Substance Abuse. Logistic regression was used to determine whether the diversion group was more likely to receive outpatient counseling for substance abuse. Arrest charge at intake, institutionalized care nights, MAST and DAST scores, and substance abuse counseling received before intake were controlled. (Figure 7)

3-Month Interview. Though the overall model was significant, $\chi^2(9, N = 161) = 33.35, p < .001$, group membership (diversion group $n = 54$) was not a reliable predictor of whether participants received substance abuse counseling at the 3-month interview. However, those who were picked up for committing “other crimes” (i.e., trespassing, criminal mischief, disturbing the peace) were four times more likely to have received substance abuse counseling at the 3-month interview as compared to those who were picked up for committing crimes against other persons (using Wald criterion, $z = 3.93, p < .05$).

12-Month Interview. Together, group membership (diversion group $n = 53$) and the identified covariates reliably predicted whether participants received substance abuse counseling at the 12-month interview, as evidenced by a significant model, $\chi^2(9, N = 145) = 19.73, p < .05$. There were no uniquely significant predictors of substance abuse counseling at the 12-month interview.

Social Support

Frequency of social support was computed by averaging responses from two questions at each interview: How often do you talk to a family member on phone? and How often do you get together with family members? Responses were along a 5-point scale ranging from zero (no family) to 5 (at least once a day). The average frequency of social support received during the 3 months after intake was 3.3 and during the nine months before the 12-month interview was 3.1, which means that participants had phone or personal contact with friends and family members approximately once or twice a month. (Appendix F, Figure 8, shows the average scores for frequency of social support for each group at each interview.)

Using ANCOVA, differences between the diversion and jail groups were examined after controlling for arrest charge at intake, institutionalized care nights, homelessness (whether individual had a regular place to stay), frequency of social support at intake, MAST and DAST scores at intake, and mental health functioning at intake (CSI scores).

3-Month Interview. There were no differences between the diversion ($n = 49, M = 3.39, SD = 1.15$) and jail ($M = 3.29, SD = 1.24$) groups in the frequency of social support received at the 3-month interview ($F(12,130) = 0.03, n.s.$). Those with more frequent social support prior to intake ($F(12,130) = 23.40, p < .001$) and those who had a regular place to stay at intake ($F(12,130) = 5.49, p < .05$) were also more likely have more frequent social support at the 3-month interview. Additionally, those who were picked up for procedural violations were more likely to have had more frequent social support at the 3-month interview than those who were picked up for any other crime ($F(12,130) = 3.77, p = .05$). As discussed in the section of frequency of drug use, 36% of the participants were picked up for procedural violations. The larger number of participants combined with the somewhat higher scores on frequency of social support are likely reasons for this finding.

12-Month Interview. No differences were found between the diversion ($n = 56, M = 3.29, SD = 1.25$) and the jail ($M = 3.06, SD = 1.28$) at the 12-month interview ($F(12,129) = 0.21, n.s.$). Again, more frequent social support ($F(12,129) = 24.47, p < .001$) and having a regular place to stay ($F(12,129) = 5.00, p < .05$) at intake were significantly related to more frequent social support at the 12-month interview. In addition, those who spent less time under institutionalized care received social support more frequently at the 12-month interview ($F(12,129) = 4.89, p < .05$).

Homelessness

Participants were asked whether or not they had a regular place to stay at the 12-month interview. Approximately 83% of the participants reported having a regular place to stay in the year following intake.

A logistic regression was run, which controlled for arrest charge at intake, having a regular place to stay at intake, MAST and DAST scores at intake, nights under institutionalized care, mental health functioning at intake (CSI scores), frequency of social support at intake, and overall satisfaction with financial situation, in order to determine which group was more likely to have a regular place to stay at the 12-month interview.

12-Month Interview. Group membership and the chosen covariates reliably predicted whether a participants would have a regular place to stay at the 12-month interview, $\chi^2(12, N = 142) = 23.54, p < .05$. Using the Wald criterion, it was found that the jail group (85%) was more than five times as likely as the diversion group (79%) to have a regular place to stay even after controlling for the above variables ($z = 5.18, p < .05$). Furthermore, those who had a regular place to stay before intake were almost four times more likely to have a regular place to stay at the 12-month interview ($z = 4.99, p < .05$). Those who spent fewer nights under institutionalized care were also more likely to have a regular place to stay ($z = 5.89, p < .05$).

Summary

Recidivism

Even though participants in the diversion group were arrested less often than the jail group before intake, they were arrested more often than the jail group in the year after intake (according to self-reports). One explanation is the fact that the diversion group's average number of arrests did not increase, but that the jail group's average self-reported number of arrests decreased from intake to the 12-month interview. Fewer nights of institutionalized care (i.e., time in the community) and more previous arrests were each associated with more arrests in the year after intake, but did not completely control for the differences between the groups. In other words, beyond not having the opportunity to be arrested and having a more extensive arrest history, participants in the jail group either did not get caught or were somehow deterred from committing acts that warrant arrest. This conclusion appears to support the efficacy of jail in preventing crime; however, it is impossible to know how jail would have impacted a group of people who were arguably less criminal. Furthermore, it is important to note that a floor effect may have affected these findings such that it is difficult to show reductions in number of arrests when that number is already relatively low.

Substance Use

At intake, the diversion group was using alcohol and drugs less frequently and drinking fewer servings of alcohol during each episode than the jail group. In the year following intake, there were no significant differences in alcohol consumption (frequency or extent) and the diversion group was using drugs more often than the jail group at the 3-month but not at the 12-month interview. Again, the purpose of the analyses was to detect changes in consumption patterns. Thus, participants in the jail group likely reduced their substance use as a result of being in jail. Another reason for this finding may be that those in the jail group received more substance abuse treatment, which may have either helped them or forced them to reduce their substance use. Further evidence for these explanations is the fact that frequency of drug use appears to increase between the 3- and 12-month interviews for the jail group but remain stable for the diversion group. If this pattern continued, it is likely that the jail group's substance use would again exceed the diversion group's substance use in the future. Regardless, the most reliable predictor of substance use during the year after intake was previous substance use patterns.

Mental Health Functioning

The diversion group reported higher mental health functioning at intake than the jail group. There were no significant changes in mental health functioning as a result of being diverted or jailed at the 3-month interview (i.e., after controlling for mental health functioning at intake). The diversion group did report significantly higher mental health functioning at the 12-month interview, suggesting that the diversion group experienced positive changes in their mental health functioning that were not experienced by the jail group. One explanation for this finding may be that the diversion group received more mental health services than the jail group both before and after intake.

Service Utilization

Emergency Room. Neither the diversion nor the jail group was more likely to use the emergency room for mental health and substance abuse problems at the intake, 3-, or 12-month interviews. An exception to this is that the jail group was more likely than the diversion group to have received emergency room services for substance use in the 3 months before intake. One reason for this finding is the relatively low number of participants in this sample who utilized emergency room services. It seems that a percentage of the participants had a history of using emergency services for mental health problems and continued to do so in the year following intake. In addition, it appears that participants in both groups reduced their use of the emergency room over the year following intake.

Also associated with emergency room usage for mental health was arrest charge. Those who were picked up for “other crimes” (e.g., trespassing, criminal mischief, public disorder, etc.) at intake were more likely to use the emergency room for mental health problems. One possible explanation for this finding is that the types of crimes included in the “other” category may be associated with more severe mental health problems. Mental health functioning scores (CSI at intake) were compared between those who were picked up for other crimes at intake and those picked up for all other arrest charges. Participants who were picked up for other crimes had significantly higher mental health functioning at intake ($t(175) = -2.76, p < .01$), suggesting that emergency room usage may be something accessed by people who are higher functioning. Further analysis is required to determine the explanation for the association between arrest charge and emergency room usage.

Inpatient. At intake, there were no differences in the percentage of participants from each group who received inpatient mental health treatment. At the 3-month interview, a higher percentage of the diversion group had been hospitalized for at least one night for mental health problems and there were no differences at the 12-month interview. A previous hospitalization was a strong predictor of subsequent hospitalizations for mental health problems. The diversion group was not more likely than the jail group to receive inpatient substance abuse services at the intake, 3-, and 12-month interviews. These findings are likely due to the small number of participants who actually received these services.

Outpatient. At intake, the diversion group was not more likely than the jail group to receive mental health counseling. At the 3-month interview, the diversion group was thirteen times more likely to have received mental health counseling than the jail group. The number of participants who attended mental health counseling sessions increased at the 3-month interview, while the number of participants who received such services in the jail group remained the same. In addition, those who received mental health counseling prior to intake were more than nine times more likely to have received mental health counseling at the 3-month interview. These differences disappeared at the 12-month interview, as evidenced by the drop in the percentage of participants who received mental health counseling during that time. It appears that those in the diversion group either continued to receive mental health counseling or were connected with such services in the short-term, but were unable to maintain attendance over the 12 months after intake. Despite seeming short-term successes, it is likely that incarceration, hospitalizations, homelessness, mental instability, or other stressors interrupt counseling relationships over time.

The jail group was more likely to receive substance abuse counseling at the intake interview, though no differences were found at the 3- and 12-month interviews. Raw percentages suggest that the jail group received more outpatient substance abuse services, though after controlling for a number of covariates (arrest charge, MAST and DAST scores, substance abuse counseling at intake), group membership was not a significant predictor. The combination of factors, including all of the covariates and group membership, played a role in determining who received outpatient substance abuse treatment, but no one factor was uniquely significant. Further investigation is warranted.

Social Support

Social support remained remarkably stable over the three time points. There were no differences between the diversion and jail groups at the intake, 3-, and 12-month interviews. Those who had a regular place to stay and more frequent social support at intake were more likely to have more frequent subsequent social support. Multiple covariates were included in this model in order to isolate changes in social support between interviews, which may have explained any variations present. More analysis is needed to determine why certain individuals, beyond having a stable residence, enjoy more frequent social support than others.

Homelessness

There were no differences in the percentage of participants in each group who had a regular place to stay at intake. One year later, the jail group was more than five times as likely as the diversion group to have a regular place (other than jail) to stay even after controlling for arrest charge at intake, having a regular place to stay at intake, MAST and DAST scores at intake, nights under institutionalized care, mental health functioning at intake (CSI scores), frequency of social support at intake, and overall satisfaction with financial situation. Both groups had an increase in the number of participants who reported having a regular place to stay from intake to the 12-month interview; however, it appears that more participants in the jail group improved their living situation than in the diversion group. Reasons for this finding are unclear, suggesting that more analysis of homelessness is an important step.

Section III. Conclusions and Impact

A. *Describe your overall conclusions and learnings from the project. Describe the limitations of the study and these conclusions.*

It had been expected that those who were “diverted” from jail would receive more services and would have lower subsequent negative outcomes than those who were jailed. Parts of this expectation were confirmed and parts were not.

- **Criminal Justice Recidivism:** based on the self-report data the jail group lowered their subsequent instances of arrest while the diverted group did not.
- **Substance Abuse:** At intake, the diversion group was using alcohol and drugs less frequently and drinking fewer servings of alcohol during each episode than the jail group. In the year following intake, there were no significant differences in alcohol consumption (frequency or extent) and the diversion group was using drugs more often than the jail group at the 3-month but not at the 12-month interview. A reason for this finding may be that those in the jail group received more substance abuse treatment, which may have either helped them or forced them to reduce their substance use.
- **Mental Health Functioning:** The diversion group did report significantly higher mental health functioning at the 12-month interview, suggesting that this group experienced positive changes in their mental health functioning that were not experienced by the jail group. One explanation for this finding may be that the diversion group received more mental health services than the jail group both before and after intake.
- **Emergency room utilization:** Neither the diversion nor the jail group was more likely to use the emergency room for mental health and substance abuse problems at the intake, 3-, or 12-month interviews.
- **Inpatient Treatment:** At the 3-month interview, a higher percentage of the diversion group had been hospitalized for at least one night for mental health problems and there were no differences at the 12-month interview. The diversion group was not more likely than the jail group to receive inpatient substance abuse services at the intake, 3-, and 12-month interviews.
- **Outpatient Treatment:** At the 3-month interview, the diversion group was thirteen times more likely to have received mental health counseling than the jail group. Raw percentages suggest that the jail group received more outpatient substance abuse services, though after controlling for a number of covariates (arrest charge, MAST and DAST scores, substance abuse counseling at intake), group membership was not a significant predictor.
- **Social support:** Social support remained remarkably stable over the three time points. There were no differences between the diversion and jail groups at the intake, 3-, and 12-month interviews.
- **Homelessness:** One year later, the jail group was more than five times as likely as the diversion group to have a regular place (other than jail) to stay even after controlling for arrest charge at intake, having a regular place to stay at intake, MAST and DAST scores at intake, nights under institutionalized care, mental health functioning at intake (CSI scores), frequency of social support at intake, and overall satisfaction with financial situation. Both groups had an increase in the number of participants who reported having a regular place to stay from intake to the 12-month interview; however, it appears that more participants in the jail group improved their living situation than in the diversion group. Reasons for this finding are unclear, suggesting that more analysis of homelessness is an important step.

This research was limited in two ways. First, Multnomah County had limited services available for clients after they had been evaluated through the Crisis Triage Center. Second, the Multnomah County jail chose to provide services to those with co-occurring disorders so that they often received as much services in jail as they would have had they gone through the CTC.

B. *Describe any problems, difficulties, or controversies that had a significant impact on the direction of the project or your ability to implement it. Assess how this affected final project accomplishments.*

In 1994 an alliance was established in Multnomah County, Oregon to develop a more effective, compassionate and safe approach to people who are in mental crisis. Due to the groundwork laid by the alliance of The Portland Police Bureau, the Multnomah County Behavioral Health system, and the National Alliance for the Mentally Ill (NAMI) to create a specialized mental health crisis unit challenges in starting up the project were limited. When the project began support for the diversion program was evident: the CIT program had momentum and support from the community and political leaders, multiple agencies bid to house the Crisis Triage Center which would triage the individuals brought in by police, and both the mental health and substance abuse treatment communities were very supportive and excited. Challenges began with the implementation of the program and specifically with the Crisis Triage Center, some unforeseeable and others innate problems with a deteriorating county mental health system.

While there are always minor hurdles to overcome when creating system-wide change the major challenges faced upon implementation were *funding* (political/community support and also payments for services rendered), *diminishing community confidence* in the quality and management of the mental health system, and the introduction of *the Oregon Health Plan (OHP)* also known as managed Medicare.

Funding/payment – The CTC (the Crisis Triage Center - our acute care center) was financially overburdened. There are several reasons for this, first, citizens from other counties who were diverted to the center by Portland police (or police from other cities/towns) received services and due to different police bureau policies among counties there was often no recourse for collecting money for the services provided. Second, the state mandated that the OHP cover 100% of services for individuals below the poverty line (this is described in more detail below) causing another strain on the finances of the CTC due to slow paperwork and billing issues. Even more, some individuals that were eligible under OHP had not been signed up before treatment.

Redesign of the Multnomah County Mental Health System – Community confidence in the quality and management of the Multnomah County mental health system was diminishing around the same time as the Multnomah County Criminal Justice Diversion Program began. In 1995 a Mental Health Task Force was created by Oregon HB3445 to study and make recommendations in specified mental health areas. In December of 1999 the Multnomah County Mental Health Task Force (MCMHTF) presented a preliminary report to the Board of County Commissioners (BCC) that included a “map” of the mental health system’s dynamics and dilemmas. In March of 2000 the MCMHTF issued a report to the BCC identifying significant problems with the County’s mental health system and made recommendations for an overhaul of the system. In May 2000 the Board of County Commissioners passed Resolution 00-063 creating a Mental Health Design Team to work with county, state, and community personnel to develop short and long-term action plans to improve Multnomah County mental health services. In September the Board of County Commissioners passed Resolution 00-161 adopting a vision statement for a consumer and family-centered mental health system based on the recommendations of the Design Team. In 2001 the *Initial Draft Report Mental Health System Redesign – An Action Plan for Multnomah County – Phase I* was presented to the Mental Health Coordinating Council. On August 1, 2001 the Crisis Triage Center (CTC) closed and officers were directed to bring individuals to the geographically closest emergency departments

The Oregon Health Plan (OHP) – In 1995 Oregon instituted managed care, with the OHP now covering individuals 100% below the poverty line (approximately 13 insurance companies providing coverage to OHP

recipients). In 1996-1997 Oregon created 20 “demonstration” counties to begin the OHP and Medicaid-covered outpatient and acute inpatient services were contracted through managed care organizations under OHP. For individuals ineligible for Medicaid, Community Mental Health Programs continued to deliver mental health services prioritized according to statutorily mandated criteria based on risk of hospitalization and dangerousness. Oregon lawmaker’s expanded Medicaid eligibility criteria twice since OHP’s inception, increasing the number of Oregonians eligible for Medicaid approximately 80%.

C. Describe the impact that your project has had (or that you anticipate it having) on local, state, or federal mental health policy and practice. Provide as many specific examples as possible.

Federal and State

The primary goal of the SAMHSA Jail Diversion Knowledge Development Application Initiative is to provide sufficient information to fill research gaps with a systematic examination of differing types of diversion programs in sites throughout the United States that serve consumers with co-occurring disorders who come into contact with the criminal justice system. As one of the nine sites chosen to receive this support, Multnomah County has conducted a thorough research and evaluation of its Jail Diversion program/process.

Oregon is in a unique situation where the Oregon Health Plan, a managed care system, funds mental health treatment and alcohol/drug treatment separately. Current efforts are underway to explore a possible merging of these funding streams to help facilitate integrated treatment. As the only West Coast pre-booking site in the national study, Multnomah County contributes important geographical information and as one of two Oregon sites (the other is a post-booking program in Eugene), the Multnomah County study is part of an important statewide partnership. We have shared our model system with other states including California, Washington, and Idaho as they look to develop similar services.

Local

Multnomah County’s pre-booking Jail Diversion Program is unique in that the criminal justice intervention and the treatment system are separate. Because the CIT program is separate from the clinical program (e.g. treatment, clinical intervention services, detox, etc.) they are not only housed in different agencies (separate funding) but they are also perceived as different programs.

On first glance it would seem that our Criminal Justice Diversion Program had little impact on mental health policy due to the fact that the clinical program came and went within the program period. But, it is actually the opposite if this. When the Criminal Justice Diversion Program began in Multnomah County the CIT program had recently been initiated (1995). With the January of 1997 opening of the pre-booking Crisis Triage Center (CTC), Multnomah County was ready for, and accepting a mental health policy change. While it was running the total population served by this center was estimated to be about 9,000 mentally ill individuals per year. The existence of the CTC itself was imperative for individuals that used it, but was also an example to Multnomah County and its surrounding communities of the need for acute care crisis services. Even though the CTC has closed the, it has become a Multnomah County resolution to create a network of acute crisis care facilities.

Other ways that the Project has impacted our system locally is through the enhancements provided by the SAMHSA initiative to this intervention. These enhancements included, a Case Manager who was hired to perform as an additional linkage to services and provide short-term follow-through, and a Boundary Spanner who acted as a liaison among all services and facilities. Simultaneously, through GAINS Center trainings and local and state Task Forces, Multnomah County worked to understand the value of an integrated treatment system, examine the current system to determine the level of cooperation, coordination, or integration, and create a plan for moving forward on this continuum. The programming and work done by all local people through these enhancements are felt throughout the system.

We have been involved with many different groups and individuals locally that are interested in our reports and analyses. We plan on disseminating information to these groups and individuals over the next few months. Multnomah County and NPC Research will use a variety of audience-appropriate methods to disseminate the descriptions and results of this study to five primary audiences: 1) all of the individuals in the sample, 2) advocacy groups for persons with co-occurring disorders and criminal justice involvement (e.g., NAMI), 3) criminal justice, mental health, alcohol and drug and other community-based agencies (e.g., Inverness Jail, hospitals, and all local treatment programs), 4) key stakeholders and officials with Multnomah County and, more broadly, the State of Oregon (e.g., Multnomah County Task Force, State of Oregon Task Force), and 5) nationally.

We will be developing a one-page fact sheet on data collection and retention. We will ensure the results reach a national audience by writing articles for publication in academic journals and through oral presentations at local and national meetings and conferences. Finally, we will work toward our company goal of maximizing availability of research results for policy making by sending reports of findings to county councilpersons and state legislators.

D. Append any published and unpublished articles resulting from the project (either more general or specialized interest publications, as well as journal articles). What are you considering for the future?

As stated in the supplemental 4th year of funding application, Multnomah County will meet the minimum dissemination that includes preparing at least one manuscript for submission to a professional publication, and presenting these findings to at least two professional meetings.

In general, Multnomah County and NPC Research are committed to developing tangible products of maximum benefit to criminal justice, mental health, and alcohol and drug professionals, researchers, and policymakers as well as delivering information of practical utility to law enforcement officials, prosecutors, judges, corrections officers, treatment providers, and Federal, State, county, and local elected officials.

NPC Research will post all data collection instruments and reports on its website, www.npcresearch.com with appropriate links to other relevant materials and websites. NPC Research has found this method of dissemination to be especially effective for all audiences. Ting Mintz, consumer advocate for this initiative and communications expert, fully supported this dissemination method as an excellent way to reach consumers.

To date, Multnomah County has engaged in numerous dissemination efforts. As the Project Director for the first 2.5 years of the project, Cathy Horey coauthored a pre-booking publication which is currently under review at Psychiatric Services (see Appendix C). In addition, Ms. Horey co-authored a GAINS publication. Cathy Horey published a locally based newsletter about the Criminal Justice Diversion Program in Multnomah County entitled "The Initiative" published by the Department of Community and Family Services. As part of a GAINS Center training, the Multnomah County site developed a contact list of Cooperative or Integrated Treatment Agencies in the Multnomah County area. In addition, Dr. Rumptz and her staff have prepared two site visit reports (one for Pam Lattimore at RTI and one for Susan Salasin at CMHS) and prepare quarterly evaluation reports for Multnomah County.

Multnomah County has also been active in terms of meeting and conference presentations. The Evaluation team presented preliminary findings from the Multnomah County site at the Memphis, Tennessee Steering Committee Meeting (October 1999). Dr. Rumptz presented as part of a panel called, "Integrated Services for Clients with Co-Occurring Disorders: How to Assess Local Service Delivery Arrangements" at the GAINS Conference in Miami Florida (April 2000). Dr. Rumptz participated in an invited panel at the American Society for Criminology (November 2000) presenting a paper entitled, "Designing Research Studies for Persons with Co-Occurring Disorders and Criminal Justice Involvement: Recruitment, Interviewing, and Tracking." Members of the evaluation team presented a poster at the American Evaluation Association (AEA) meeting in Hawaii (November 2000) on, "Demonstration of a Successful

Comprehensive Tracking Protocol for Locating Persons with Co-Occurring Disorders and Criminal Justice Involvement.” Dr. Rumpitz, Ms. Cole, and Ms. Lucas brought their experience collecting administrative criminal justice data to bear in another AEA presentation entitled, “Examining Confidential and Sensitive Data: Making Connections with Criminal and Juvenile Justice Agencies for Program Evaluation.”

Multnomah County and NPC Research are beginning the process of preparing several articles for publication. Current ideas include: 1) service utilization patterns for a diverted/jail co-occurring disorders population, 2) successful tracking strategies for locating a mobile population in a longitudinal study, 3) the impact of managed care on service utilization, and 4) Multnomah County-specific paper on major study outcomes including: criminal recidivism, psychiatric hospitalizations, psychiatric status, functional status, homelessness, emergency treatment utilization, frequency of substance use, and continuity of treatment. Multnomah County and NPC Research are also committed to disseminating the findings presented in these papers through conference presentations at APA, AEA, ASC, APHA, and the Community Psychology Conference. Finally, we are currently planning to reorganize our process study to submit as an article for publication.

E. *In the Appendix, provide 2 case examples for each exemplary intervention (those interventions that you would offer as a model for others to replicate) that best illustrate the delivery and success of the intervention for specific clients.*

Two case examples from the Multnomah County Criminal Justice Diversion Program that profile exemplary intervention and that best illustrate the delivery and success of the intervention for specific clients have been appended to this report. (see Appendix D)

Section IV. Future Directions

- A. *Describe what happened to the project services and clients when the project resources ran out or/if prior arrangements had been made for continued support of services*

As previously mentioned, when the project resources ran out there was no support for the Crisis Triage Center due to the controversy over the Multnomah County Mental Health Services. The CIT program has continued and the diverted individuals are generally brought to one of three local urgent walk-in clinics. The Board of County Commissioners of Multnomah County has approved a resolution (Resolution No. 01-109) that addresses the urgent need to implement alternative crisis and acute care inpatient services. The Board indicates that the Acute Care Services Plan is transitional and that they require the “competitive procurement processes for the long-term purchase of clinically appropriate Acute Care Crisis Service components” to be conducted no later than July 1, 2002.

- B. *Describe your plans for further analyzing and publishing your site-specific data. Include a list of preliminary hypotheses/paper topics and rough estimates for when you hope to submit various papers for publication.*

We are allocating staff time to continue to analyze this data set. We feel that there is a great deal of information still to be gleaned from this data. Specifically, we will exam the following topics.

- The relationship between the self-report data and our administrative data, particularly on recidivism.
- The relationship between receiving substance abuse treatment services and/or mental health services and outcome measures regardless of whether the person was located on the street or in jail.
- The relative cost effectiveness for the Multnomah County Criminal Justice system of the pre-booking intervention versus jail intervention.
- Using the data to help Multnomah County plan changes in their service delivery system to those with co-occurring disorders.

We have not yet developed publication dates for these topics.

- C. *Describe your plans for continued participation in collaborative writing of mulisite papers with the JD Steering Committee up until December of 2001.*

We will continue to cooperate to the best of our ability through the end of December of 2001.

- D. *Suggest future directions for work in the diversion field (e.g., what recommendations can be made to improve the interventions tested, what types of systems change should be pursued, what further research is required).*

This research was limited in two ways. First, Multnomah County had limited services available for clients after they had been evaluated through the Crisis Triage Center. Second, the Multnomah County jail chose to provide services to those with co-occurring disorders so that they often received as much services in jail as they would have had they gone through the CTC. It may also be true that any pre-booking evaluation will be hampered by the fact that few immediate services may be available to those identified in this manner. A longer-term study would have the value of following this population over a variety of services. In addition,

a study that focused simply on the advantages of identifying individuals on the street and getting them into “appropriate” services more quickly might be better than one that tried to assess the longer-term impacts.

- E. *Please append a signed statement that you will continue to monitor JD Steering Committee activities through the listserv and that you will continue to honor agreements of the Steering Committee, including the Publication Policy, until the multisite analyses are completed.*

See Appendix E

Section V. References

Finigan, M.W. (1996). *Societal outcomes and cost savings of drug and alcohol treatment in the State of Oregon*. Unpublished report to the Office of Alcohol and Drug Abuse Programs. Salem, Oregon.

Steadman, H.J. (1999). *What are integrated services and why do them?* Unpublished presentation.

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