Medicaid Benefits and Recidivism of Mentally Ill Persons Released from Jail

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EXECUTIVE SUMMARY

Does having Medicaid benefits at time of release from jail help detainees who have a severe mental illness avoid returning to jail in the following year? This question is addressed in this report with data on three years of jail detentions in King County, WA (N= 5,189) and Pinellas County, FL (N= 2,419). In both counties, detainees with severe mental illness who had Medicaid upon release had about 16% fewer detentions on average (avg. = 1.9 and 2.1) over the following 12 months than those detainees with severe mental illness who did not have Medicaid at release (avg. = 2.3 and 2.5, $p < .05$ and .001). Those with Medicaid at release in King County also spent more time in the community prior to their next detention (avg. = 102 vs. 93 days, $p < .001$), but there was no significant difference between Medicaid groups for Pinellas County (avg. = 110-111 days). The large majority of subsequent detentions in both counties were for minor, non-violent offenses (about 70%); having or not-having Medicaid did not affect this trend.

This study used administrative data to identify cohorts of jail detainees who had severe mental illness and who were enrolled on Medicaid at some point in time during the three-year study interval. No special interventions were used to increase Medicaid enrollment while in jail or service use once released to the community. Rather, the goal of the study was to find out what happens on an everyday basis under usual circumstances in two large urban public mental health systems. The specific question of interest was: “Do people with severe mental illness who have Medicaid benefits when released from jail have fewer, later, and less serious jail detentions in the following year than persons with severe mental illness who did not have Medicaid benefits at the time of jail release.”

In Pinellas County, files from Medicaid and the county jail were linked to identify all persons with a severe mental illness who were detained in jail between September 1998 and August 2000; upon release, each individual was then followed in the administrative data for a 12-month period to identify service use and reincarcerations. In King County, county mental health records

were used to identify persons with a severe mental illness between January 1996 and December 1998. These files were then linked to Medicaid enrollment and to jail detention files to identify a comparable cohort of individuals with a severe mental illness who were released from jail during the study interval. These individuals were also followed in the administrative data base for 12 months to identify subsequent detentions.

An individual's Medicaid insurance status can fluctuate on and off even when they are living in the community. By selecting only those individuals with severe mental illness who had been enrolled on Medicaid at some point during the study interval, the study design controlled for Medicaid eligibility and allowed us to compare the subsequent experiences of two groups—those who were enrolled on Medicaid at the time of release and those who were not. To deal with enrollment fluctuations, the effects of Medicaid were assessed in two ways—Medicaid status at release (yes/no) and Medicaid rate indicating the proportion of days until next detention that the person was on Medicaid.

Three outcomes related to jail recividism over the 12 months following release were examined—how many detentions, how soon, and how serious—using total detentions rather than persons as the unit of analysis. Multivariate analyses were conducted with the Medicaid rate variable to isolate the effects of Medicaid rate and receipt of outpatient mental health and substance abuse services following release. These analyses used generalized estimating equations (GEE) and hazard models (survival analysis) that corrected parameter estimates and standard errors for repeated events within persons.

Odds ratios (OR) from multivariate analyses suggest that, in both counties, the combination of benefits and services helps to keep people functioning in the community longer (how soon) than those without any or with fewer days of benefits and service use (OR= .33 to .83, $p < .001$). However, Medicaid benefits alone are not enough to keep people with severe mental illness out of jails (how many). Furthermore, given the preponderance of minor offenses (70%) committed by these individuals, Medicaid rate and/or service receipt did not affect the odds of committing a

lesser offense (how serious) at next detention. These multivariate results controlled for group by county variations in age, race, gender, dual mental health and substance abuse diagnoses, and SSI/disability status.

Overall, the findings indicate that keeping detainees with severe mental illness on Medicaid can benefit the criminal justice system as well as the mental health system. Individuals who had Medicaid at release (or who had Medicaid for a greater number of days prior to next arrest) accessed more services and had more days in the community. But Medicaid benefits alone were not enough to keep people with severe mental illness out of jail. The implications are that, in addition to ensuring that individuals with severe mental illness have Medicaid, breaking the cycle of jail recividism for detainees with severe mental illness will require access to effective treatments, stable housing, employment, and other community supports that promote recovery and increase opportunities for successful community living. Further research is needed to assess the effectiveness of these more comprehensive interventions for persons with severe mental illness when they are released from jail.

These conclusions must be tempered by acknowledging that the findings are based on events in only two communities. Results may vary for other communities if jail stays for detainees with severe mental illness consistently exceed the thirty-day Medicaid cut-off and if, as a result, Medicaid benefits are suspended at much higher rates. Differences in the availability and accessibility of post-release services for jail detainees, especially of evidenced-based services for persons with severe mental illness, could also lead to higher rates of service use and lower rates of reincarceration than those reported here. However, there are no national data currently available on such events and the two communities studied have service configurations that are typical for other large urban areas in the US.

Also, the findings reported here only pertain to individuals with severe mental illness in jail who are Medicaid eligible. These findings might not apply to the many mentally ill individuals in jail who have a less serious psychiatric diagnosis or to those persons who might receive a

diagnosis representing severe mental illness if seen by a psychiatrist, but who were either not enrolled in Medicaid or not known to the public mental health system at the time of this study.

Caution must also be exercised in drawing conclusions about state prison populations from the jail data reported here. What is generalizable to mentally ill prisoners from these data is that having Medicaid on the day of release will likely help them obtain needed services in the community just as they helped the jail detainees in this study. Moreover, state prisoners with severe mental illness need access to equally intensive evidence-based treatments as do jail detainees. What is not generalizable to prisons is the high rate of Medicaid enrollment at release for detainees with severe mental illness. Prisons are long stay institutions (the average length of incarceration for prisoners is over five years) so 100% of those who enter prison with Medicaid lose it before they are released. The same is true for SSI benefits and other entitlements. Jails, in contrast, are short stay institutions. Detainees in this study only spent an average of 16-32 days in jail so virtually all those with severe mental illness who had Medicaid at jail entry (about 65-78% in the two counties) also had it upon release.

The implication is that, if prisoners with severe mental illness are to have Medicaid and other benefits at release, then special efforts extending over many months are needed to assist prisoners to re-enroll in entitlement programs. In contrast, jail stays for persons with severe mental illness are so much shorter that most detainees do not lose Medicaid or SSI while in jail. This suggests that the need for the type of special benefit assistance programs that several states are now introducing is much greater in prisons than in jails.

Currently, there are no published data available about the recividism of prisoners with severe mental illness who either have or do not have Medicaid and other benefits. Further research is needed to evaluate the success of current prison-based benefit assistance programs for prisoners who have severe mental illness. Studies along the lines presented in this report could establish whether benefit assistance programs result in high rates of Medicaid

enrollment at release, greater use of community-based services following release, and lower rates of recividism.

Whether talking about jails or prisons, however, it's the quality of treatment services received in the community by persons with a severe mental illness that's likely to make a difference in their functioning and avoidance of recividism. Simply diverting people with severe mental illness to everyday or generic mental health services in the community is unlikely to have a positive impact on their ability to live in the community free of criminal justice entanglements (Steadman and Naples, 2004). Generic services are not intensive enough nor are they attuned enough to the multiple comorbidities of this population. What's needed is diversion to intensive services such as assertive community treatment or dual diagnosis treatment teams that have an evidence base and proven track record of being successful in treating persons with severe mental illness.

Evidence-based treatments that promote recovery and increase opportunities for successful community living offer the best hope for people with a severe mental illness whether they are released from prisons or jails. However, solid research data backing up this assessment for people with severe mental illness in jails or other correctional settings are not currently available. Responding to this gap in the current knowledge base should be a high priority for both the mental health and criminal justice research communities.

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INTRODUCTION

Current best estimates[1] suggest about 8% of all jail detainees have a severe mental illness (Teplin, 1990; Teplin, Abram, & McClleland, 1996; New Freedom Commission, 2004). With over 13 million annual admissions to US jails this means that about 1 million bookings of persons with severe mental illness occur at our nation's local jails each year. Given the sizeable overlap in the caseloads of jails and the mental health service system, one would anticipate that there would be a common goal of keeping mentally ill people out of jail, a sense of shared responsibility for delivering mental health treatment to these persons whether in or out of jail, and a mutual interest in promoting the mental health and public safety of the communities in which these individuals live.

The reality in most communities, however, is that each of these systems operates independently of the other. As a result, it is not uncommon for local, state, and national policies to contain incompatible incentives—they are intended to improve one system, but end up having negative consequences for the other.

A case in point is the national program sponsored by the Social Security Administration (SSA) in which jails can receive up to $400 dollars per case to report inmates who have Supplemental Security Income (SSI) or Social Security Disability Income (SSDI) while incarcerated (Bazelon Center, 2001). The goal here is to suspend or terminate benefits to prevent inappropriate monthly income assistance payments to individuals while incarcerated.

[1] A widely cited figure for the prevalence of mentally ill persons in jail is 16%, based on a study by Ditton (1999). The Ditton estimate comes from interviews conducted with a representative sample of inmates in local jails in 1996. Respondents were asked if they have a mental or emotional condition and whether they had ever received treatment for a mental or emotional problem, other than treatment related to drug or alcohol abuse. This method is not a reliable way of counting cases of severe mental illness and it is likely biased towards an over-estimate of the true prevalence rate. In contrast, the 8% figure cited in the text is based on Teplin's research on admissions to the Cook County Department of Corrections (Chicago jail) in the early 1980s that used rigorous epidemiological methods and a standardized psychiatric rating scale to identify detainees with a diagnosable psychiatric illness. The 8% figure is a weighted estimate that adjusts for the differences in the Teplin study between males and females who scored positive on symptom profiles associated with severe mental illness.

This program can be financially rewarding both to SSA and to local jails, but it works to the disadvantage of mentally ill detainees/inmates when released from jail. The reason is that Medicaid (via SSI) and Medicare (via SSDI) are linked with these Federal disability income programs so that, if disability payments are suspended or terminated, so are these health care benefits. Without any insurance coverage, particularly low income individuals lack the resources to pay for needed services. Without insurance, they may be deterred from seeking services or have more difficulty locating providers willing to treat their mental illness.

As the subcommittee report from the New Freedom Commission on Mental Health (2004) points out, most persons with SMI who end up in jail are poor, uninsured, and homeless. They often have co-occurring substance abuse disorders. Many continually cycle through the mental health, substance abuse, and criminal justice systems. Absent health benefits upon release, it may be very difficult for persons with SMI to obtain needed health care in a timely way.

Recently, a number of efforts have been made to enhance collaboration between jails and mental health providers. Some have taken the form of primers informing members of the criminal justice community (Council of State Governments, 2004) or mental health community (Messaro, 2004) about how the other system operates and how collaboration can be improved. Others have focused on successful partnerships between the criminal justice and mental health systems (Haimowitz, 2004; New Freedom Commission, 2004). SAMHSA's Center for Mental Health Services has sponsored the National GAINS Center for technical assistance to the justice community about co-occurring substance abuse and mental disorders and the TAPA Center for a national evaluation of the Targeted Capacity Expansion Program for jail diversion (Policy Research Associates, 2004). In addition, several federal agencies under the lead of the National Institute of Justice are sponsoring a Serious and Violent Offender Re-entry Initiative (SVORI) in 68 sites around the country aimed at developing service models and practices that ease transition of violent offenders from prisons and jails to the community. Several of these sites are offering specialized services to mentally ill offenders (Lattimore et al., 2004).

Recognizing the absence of empirical evidence about the role of benefits in promoting access to mental health services following release from jail, the MacArthur Foundation's Mental Health Policy Research Network in collaboration with investigators at the University of North Carolina at Chapel Hill, Policy Research Associates, Inc., and the University of South Florida undertook a study of this issue in two large urban jurisdictions (Morrissey et al., 2004). Findings indicated that detainees with SMI who had Medicaid upon release from the King County (Seattle) or Pinellas County (Clearwater/St. Petersburg) jails were able to access services quicker and significantly more often in the 90-days post release than did released individuals with SMI who were not on Medicaid.

These findings strongly suggest that efforts to disrupt Medicaid benefits while a person with severe mental illness is jailed are shortsighted. Disruptions can delay access to services at a time when people are at their neediest and services can help them adjust to community living. But these findings are silent as to whether there is any gain that accrues to the jail or wider criminal justice system if persons with severe mental illness retain their benefits while incarcerated. Following release, would they stay out of jail longer while committing fewer and less serious offenses?

There has been some research on recidivism of mentally ill offenders (Solomon et al. 1994; Ventura et al., 1998), but there are no empirical studies in the literature evaluating the effects of benefits and services on jail recidivism for persons with severe mental illness. This report addresses this issue by examining the subsequent arrest and jail detention experiences of two cohorts of persons with severe mental illness over a 12-month period, one cohort released from the King County jail and the other from the Pinellas County jail. The following three questions are addressed:

1. How many: Do persons with severe mental illness who are released from jail on Medicaid have fewer jail detentions in the next 12-months than released persons with severe mental illness who are not on Medicaid?

2. How fast: Do persons with severe mental illness who are released from jail on Medicaid have a longer time to jail detention in the next 12-months than released persons with severe mental illness who are not on Medicaid?
3. How serious: If persons with severe mental illness who are released from jail on Medicaid are detained in jail during the next 12-months, do they have less serious charges than released persons with severe mental illness who are not on Medicaid?

METHODS

Study Sites

The study was carried out in Pinellas County (Clearwater/St. Petersburg), Florida and King County (Seattle), Washington. These sites were selected because of the availability of administrative data that could be linked across Medicaid, jails, and mental health agency records.

Table 1: Year 2000 Population and Jail Characteristics for King County and Pinellas County

Indicator	King County	Pinellas County
Total County Population	1,737,034	921,482
% White	75.7	87.3
% Black	5.4	9.1
% Asian	10.8	2.1
% Hispanic/Latino	5.5	4.7
Median Income	$53,157	$37,111
Average Daily Jail Census	2,953	2,504
Total Jail Bookings	60,992	44,395
Jail incarceration rate per 100,000	3,510	4,818

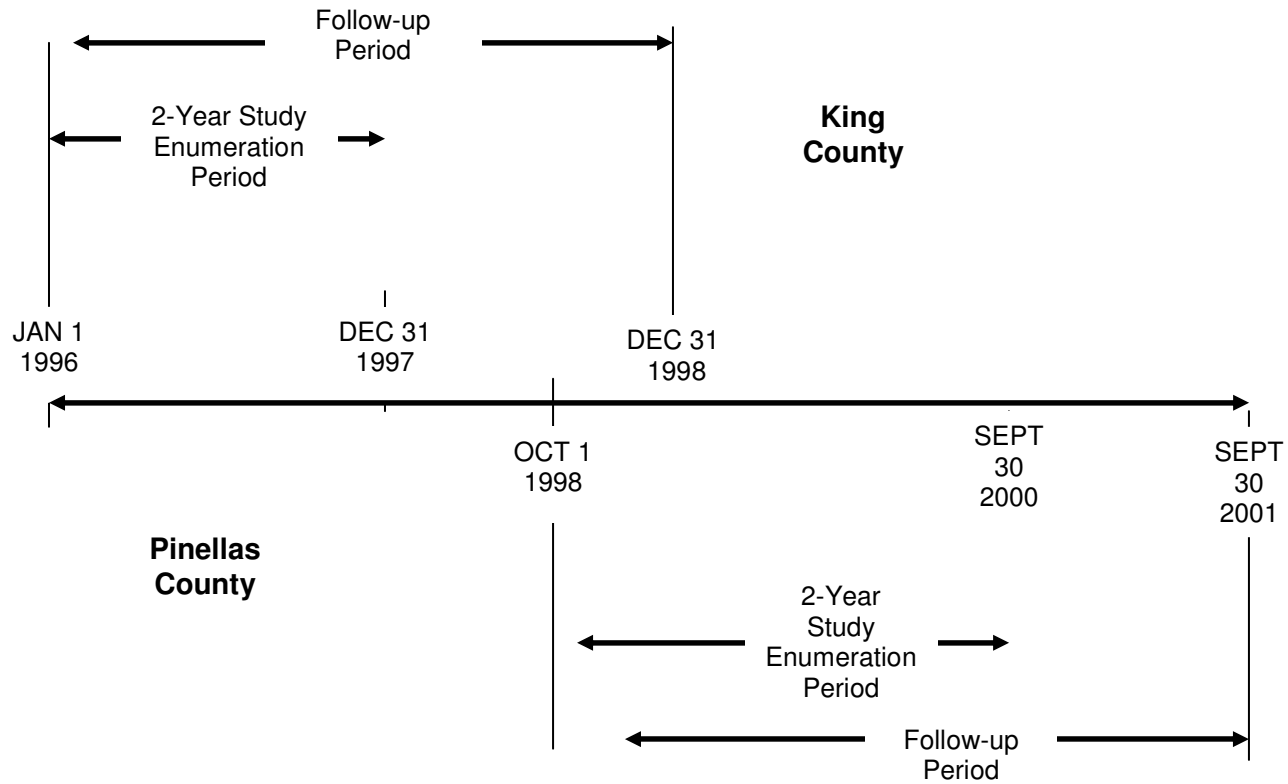
As shown in Table 1, the population of King County in 2000 was nearly twice as large as Pinellas County and it had a 43% higher median income. The population of both counties was mostly white although Pinellas had a somewhat larger black population, fewer Asians, and about the same percent Hispanic/Latino population as King County. According to Bureau of Justice Statistics reports (Beck & Karberg, 2001), the Pinellas County jail in 2000 ranked 33rd

and the King County jail 34th on the list of largest jail jurisdictions in the US. The average daily jail census was about 18% larger, and the total number of jail bookings was about 37% larger, in King County than in Pinellas County. However, the incarceration rate per 100,000 was 37% greater in Pinellas County.

Design

This study used administrative data in a prospective cohort design (see Figure 1) to identify jail detainees who had severe mental illness and who were enrolled on Medicaid at some point in time during the three-year study interval. No special interventions were used to increase Medicaid enrollment while in jail or service use once released to the community. Rather, the goal of the study was to find out what happens under usual or everyday circumstances in two large urban public mental health systems.

Figure 1. Three-Year Study Periods Consisting of a 24-Month Enumeration Period and a 12-Month Detention-Specific Follow-Up Period in King County and Pinellas County



All jail releases of persons with severe mental illness in each county over a two-year period were included in the study. In King County the two-year period was January 1, 1996 through December 31, 1997; in Pinellas County it was October 1, 1998 through September 30, 2000. Releases (duplicated count) were treated as the unit of analysis.

Jail detention files were scanned during these two intervals to determine if any of the releasees were re-admitted to the jail, and if so, the date and charges for each subsequent jail detention were noted. Each repeated detention that occurred during the two-year study period for each county was followed in the jail files for 12-months. To address study questions, two subgroups were compared within each county cohort: (1) those releasees with severe mental illness who had Medicaid on the day of jail discharge and (2) those releasees with severe mental illness who did not have Medicaid on the day of jail discharge. Importantly, all of the study subjects were enrolled in Medicaid at some time during the two-year study interval. Releasees in the not-Medicaid group were those who either lost enrollment or had not yet been enrolled on the date of their jail release. The sampling design thereby controls for Medicaid eligibility and assures that the two groups within each county are roughly comparable on disability status and financial need. One confirmation of this comparability is that 76-79 percent of the study subjects (unduplicated count) in both groups in each county were on Supplemental Security Income (SSI) at some time during the study interval.

Subjects and Data Sources

A total of 2,419 releases involving 1,210 persons were identified in Pinellas County; the corresponding numbers were 5,189 releases and 2,095 persons in King County. A common logic was followed at each site to identify study subjects, but data sources and linkage procedures varied somewhat. For Pinellas County, Medicaid claims files during the study interval were searched to identify all individuals with a diagnosis of severe mental illness

identified by way of DSM-IV codes for four primary or secondary conditions: Schizophrenia (295), Affective Disorders (296, excluding 296.2), Delusional Disorder (297.10), and Psychotic Disorder Not Otherwise Specified (NOS) (298.9). Then the list of Medicaid enrollees with severe mental illness was linked to a detention file from the Pinellas County Jail for the same time interval to identify those who had been booked into jail.

For King County, we had access to Medicaid enrollment files, but not to claims data. So persons with a diagnosis of severe mental illness during the study interval were identified from county mental health user files. Next, this list was linked to the Medicaid enrollment files to identify persons with severe mental illness who were on Medicaid during the study interval. Finally, the list of persons with severe mental illness who were Medicaid enrolled at some time during the study interval were linked with a detention file from the King County Jail to identify those who had one or more jail stays over the two-year study period.

The study protocol was reviewed for human subject's protection by Institutional Review Boards at the University of North Carolina at Chapel Hill, the State of Washington's Department of Social and Human Services, and the University of South Florida.

Measures

Three demographic variables were available for analysis: race, age, and gender. For race, two dichotomous variables were used: black (coded 0 for non-black and 1 for black) and other (coded 0 for non-other and 1 for other) with white as the reference group. Gender was coded 0 for female and 1 for male. For age, three dichotomous variables were used, each coded 0 for no and 1 for yes: 18 to 25, 36 to 45, and 46 to 64. The group of individuals ages 26 to 35 was used as the reference category.

Dual mental health/substance abuse diagnoses (coded 0 for no and 1 for yes) and SSI disability status (coded 0 for no and 1 for yes) were also examined. Substance abuse was identified by DSM-IV diagnoses (codes 303.90, 304.0, and 305.0). We used receipt of SSI at

any point during the study interval as a severity marker to confirm that the recorded diagnoses were associated with severe mental illness.

Individuals' Medicaid insurance status can fluctuate on and off even when they are living in the community. Consequently, Medicaid status was measured in two distinct ways—first as a categorical (yes/no) variable based on whether or not the individual was on Medicaid on the date of jail release, and second, as a rate or continuous variable over the number of days to next detention in the 12-month follow-up interval. As noted in the introduction, many advocates stress the importance of having benefits on the day of release to assure service access. The categorical yes/no measure allowed us to address this concern. Our preliminary analyses revealed a similar rate of Medicaid re-enrollment in the two counties with about 50% re-enrolled within the one-year follow-up period (Table 2). Although both counties also had a similar overall rate of disenrollment over the follow-up year, Pinellas County had a much more rapid rate as 49% lost Medicaid within the first 30 days vs. 16% in King County.

Table 2. Patterns of Re-enrollment and Dis-enrollment in Medicaid for Releasees with a Severe Mental Illness: King County (1996-98) and Pinellas County (1998-2001)

Direction and Timing of Changes in Medicaid Status at Release	King County	Pinellas County
Re-Enrollment—from not enrolled in Medicaid at release to enrolled within:		
30 days	8%	9%
60 days	16%	15%
90 days	23%	22%
365 days	46%	51%
Dis-enrollment—from enrolled in Medicaid at release to not enrolled within:		
30 days	16%	49%
60 days	31%	52%
90 days	43%	56%
365 days	57%	62%

Since we were interested in assessing the effects of Medicaid status over a 12-month period we needed a measure that took this on again / off again pattern into account. We did this by

creating a continuous measure or rate for Medicaid that indicates the number of days enrolled in Medicaid until next arrest (if any) divided by the number of days until next arrest.

The primary function of Medicaid insurance is to improve access to health care for enrollees. There is a subset of providers of care who are considered "safety net" providers willing to treat individuals who do not have the means to pay for services. Consequently, in addition to measuring Medicaid status, we also measured the amount of services each individual received post-release. By sequentially controlling for Medicaid enrollment and then for services received we were able to assess whether the primary benefit of Medicaid was in obtaining services or perhaps obtaining a higher caliber service.

Service rates were also used to measure post-release outpatient mental health and outpatient substance abuse service days. The outpatient mental health service rate was calculated as the number of outpatient service days received divided by the number of days eligible for outpatient services. Eligible days were discounted by days spent in jail or hospital. This rate was categorized into Low, Medium, and High categories based upon the frequency distributions for mental health and substance abuse services in each county. This variable was computed in three different ways: until next arrest, 90 days post-release, and 365 days post-release. (In preliminary analyses, the King County frequency distribution was applied to the Pinellas data to see if a uniform LMH categorization would facilitate comparisons between counties. The multivariate results indicated no significant differences, so county-specific categorization was retained in the final analyses.)

Due to the low rate of use of outpatient substance abuse services, a dichotomous variable was created. This was coded 1 for any services received in the time until next arrest (or 365 days post-release) and 0 for no services received during those time periods.

Three measures were created for subsequent detentions—first, the number of detentions (coded 0 for none, 1 for one or two, and 2 for three or more); second, the time-to-first-detention (if any) during the follow-up period (coded as number of days ranging from 0 to 365); and third,

the seriousness of offense coded separately as a felony and as a violent offense (each coded 0 for no and 1 for yes). Offenses in each county were first coded according to state codes and then into National Crime Index Codes. In instances were multiple offenses/charges were listed, the most serious offense was used.

Data Analyses

All data analyses were carried out at the detention-level with 2,419 detentions recorded for Pinellas County and 5,189 detentions for King County. Bivariate analyses using the categorical Medicaid measure and multivariate analyses using the Medicaid rate measure are reported. All statistical analyses were implemented using SAS/STAT 9.1 (SAS Institute, 2004).

Generalized Estimating Equations (GEE) were used to model the frequency of subsequent jail detentions (how often?) and seriousness of next offense (how serious?). GEE's sandwich estimating techniques were used to correct for downward bias among the standard errors and to accommodate multiple observations within subjects. Preliminary analyses also explored a negative binominal count model to analyze the number of subsequent offenses, but there were no significant differences from the GEE results reported here with offenses categorized as 0, 1-2, 3 or more.

Survival analysis was used to address days to next detention (how soon?). To correct for the dependence of multiple observations for a single individual, a WLW (Wei, Lin, and Weissfeld, 1989) hazard model was used. This model provides dependence-corrected coefficient estimates and standard errors.

The policy variables of interest in these multivariate analyses are Medicaid rate and service use rates. We wanted to isolate the effects on subsequent detentions that can be uniquely attributed to having Medicaid and avoid attributing to this variable effects that can be more parsimoniously explained by demographic, clinical, and disability variables. We did this in four sequential steps for each of three outcomes—number of subsequent detentions, time to next

detention, and seriousness of next charge: first, introducing demographic (age, race, gender) and clinical variables (dual MH/SA diagnoses) as an initial set of controls (Model 1); second, then introducing the SSI variable to assess its direct effects controlling for the demographic and clinical variables (Model 2); third, then introducing the Medicaid rate variable to assess its direct effects when controlling for the other demographic, clinical, and disability variables in the model (Model 3); and fourth, then introducing the mental health and substance abuse variables to assess their net effects on the outcomes when controlling for all of the other variables in the model (Model 4). Summary findings from these analyses are presented in the Results section (below) with detailed tables placed in the Appendix.

A number of other robustness tests were conducted to assess the sensitivity of findings to particular subgroupings. Separate analyses were run on misdemeanors (yes/no), SSI (yes/no), 295 diagnoses (yes/no), and 296 diagnoses (yes/no). None of these partitions had a significant effect on the overall findings presented below.

RESULTS

Medicaid Status at Time of Release

The first issue we addressed was the relationship between having Medicaid at the time of release from jail and the likelihood of receiving services and of jail recividism. Two-thirds of the releasees with severe mental illness in King County (65%) and over three-fourths of releasees with severe mental illness in Pinellas County (78%) had Medicaid on the day they left jail (Table 3).

There are some notable similarities and differences between counties in demographic, diagnosis, and disability characteristics of the Medicaid and not-Medicaid groups (Table 3). Irrespective of Medicaid status, in both counties the majority of the releasees with severe mental illness were white, male, and in their mid-30s, with a diagnosis of schizophrenia or mood disorder. However, there were proportionately more blacks and more individuals with a dual

mental health/substance abuse disorder in King County, and proportionately more whites and more women in the Pinellas County study group. Within county, the not-Medicaid category on average tended to be slightly younger, more white, and male.

Table 3: Demographic and Diagnosis Profiles of Jail Releasees with a Severe Mental Illness in King County (1996-98) and Pinellas County (1998-01) by Medicaid Status at Time of Release

	King County (N = 5,189)		Pinellas County (N = 2,419)	
Demographic, Diagnosis, and Disability Variables	Medicaid 65% (3346)	No Medicaid 35% (1843)	Medicaid 78% (1877)	No Medicaid 22% (542)
Race				
White	57% (1905)	64% (1173)	67% (1256)	73% (398)
Black	39% (1294)	31% (567)	23% (430)	19% (104)
Other	4% (147)	6% (103)	10% (191)	7% (40)
Gender				
Male	64% (2141)	73% (1352)	57% (1070)	61% (333)
Female	36% (1205)	27% (491)	42% (807)	39% (209)
Age (M (SD))	35 (8.9)	34 (9.3)	36 (9.5)	35 (9.1)
Diagnosis*				
Schizophrenia	40% (1332)	32% (585)	46% (867)	40% (214)
Mood Disorder	64% (2142)	66% (1208)	71% (1341)	65% (351)
Delusional Disorder	1% (40)	1% (25)	<1% (10)	1% (4)
Psychotic Disorder NOS	10% (328)	15% (280)	14% (270)	10% (53)
Dual MH/SA Diagnosis	58% (1928)	57% (1048)	42% (791)	38% (207)
SSI disability	71% (2,362)	43% (798)	84% (1,582)	68% (369)

Note: * Percentages are greater than 100% due to multiple diagnoses. Sample sizes are in parentheses following percentages except for age which lists average and standard deviation.

The diagnosis distribution indicates that mood disorder was the predominate diagnosis (64-71%) for both groups in each county. About half of the sample had a diagnosis associated with other psychoses (schizophrenia and psychotic disorder NOS). The two groups in King County (about 58%) had a much higher rate of dual mental health and substance abuse diagnoses than Pinellas County (about 40%). The majority (approximately 70%) of the releasees in both King and Pinellas counties met SSI disability criteria at some point during the three-year study interval.

With regard to service use (Table 4), there is a clear advantage for those who had Medicaid at the time of jail release in King County, but not in Pinellas County. In King County, releasees with Medicaid received significantly more total days (46 vs. 28) of outpatient services and used mental health services at twice the rate (10% vs. 5%) as those who did not have Medicaid at release. The overall rates of substance abuse services were extremely low (less than 1% on average), but the Medicaid advantage for releasees in King County is evident even though substance abuse is not a covered benefit in the Washington State Medicaid program.

Table 4: Post-Release Outpatient Service Days and Service Rates for Releasees with a Severe Mental Illness in King County (1996-1998) and Pinellas County (1998-2001) by Medicaid Status at Time of Release

	King County (N = 5,189)		Pinellas County (N = 2,419)	
Service Use	Medicaid 65% (3346)	No Medicaid 35% (1843)	Medicaid 78% (1877)	No Medicaid 22% (542)
Total Service Days (M (SD))	46 (61.1)	29 (47.4) ***	18 (38.5)	19 (48.0)
Substance Abuse Service Rate	0.73%	0.55% *	.27%	.25%
Outpatient Mental Health Service Rate	10%	5% ***	6.0%	5%

Note: * $p < .05$, ** $p < .01$, *** $p < .001$ testing differences between Medicaid and non-Medicaid groups within each county.

In Pinellas County, the amount and rate of service use is basically the same for both groups indicating that there is no significant advantage favoring those released with Medicaid. Both groups on average, received around 18 total days of service, used outpatient mental health services at a 5-6% rate over the course of the follow-up year, and a small fractional rate of

substance abuse services at less than 1%. These average rates of use for both groups in Pinellas County are about half as large as the corresponding rates in King County.

Table 5 presents the relevant data about the core question in this study: Does having Medicaid upon release lead to reductions in subsequent jail detentions for persons with severe mental illness? Data are presented for the three outcomes of interest—the number, timing, and seriousness of subsequent detentions—for two groups of releasees in each county who had severe mental illness: (1) those with Medicaid at release and (2) those without Medicaid at release.

Overall, about 70% of the releasees with severe mental illness in King County and 60% of those in Pinellas County were detained at least once during the 12-month follow-up period. However, in both counties, those released on Medicaid (1.9 and 2.1, respectively) had significantly fewer detentions on average during the following year than did those not on Medicaid (2.3 and 2.5, respectively; $p < .05$ - $.001$). This statistical difference means that, on average, detainees with severe mental illness who had Medicaid at release had about 16% fewer detentions in the following year than did detainees with severe mental illness who didn't have Medicaid benefits on the day of release from jail.

Differences between King and Pinellas counties also are evident in time to next detention (Table 5). In King County, releasees with severe mental illness who had Medicaid at release remained in the community 10 days longer on average (102 vs. 93 days) than those who did not have Medicaid at release ($p<.01$). This Medicaid advantage results in a 3-5% difference at each of the 30, 60, 90, 365 time intervals ($p< .001$-$.05$). In Pinellas County, the difference between groups in total days in the community (110 vs.111) is not statistically significant. However, at 365 days there is a small statistically significant difference in the percent detained (71% vs. 66%) that favors those released with Medicaid ($p< .05$).

With regard to seriousness of next offense (Table 5), the large majority of offenses in each county were for minor, non-violent crimes. Only 31-35% of the offenses are felonies and only

18-23% is associated with a violent crime. Having Medicaid at release does not lead to an advantage in having less serious charges at next detention. The demographic and diagnosis profiles of offense types were consistent within Medicaid groups (see Appendix Tables A1 and A2).

Table 5. Characteristics of Jail Detentions with a Severe Mental Illness in King County (1996-98) and Pinellas County (1998-01) by Medicaid Status at Time of Release

	King County (N = 5,189)		Pinellas County (N = 2,419)	
Detention Characteristics	Medicaid 65% (3,346)	No Medicaid 35% (1,843)	Medicaid 78% (1,877)	No Medicaid 22% (542)
Number of Subsequent Detentions				
None	32%	29%	43%	40%
One or two	40%	38%	42%	40%
Three or more	28%	33%	16%	20%
Average (M, SD)	1.9 (2.26)	2.3 (2.63)***	2.1 (2.78)	2.5(3.05)*
Time to Next Detention				
Within 30 days	21%	24%**	16%	17%
Within 60 days	32%	36%**	25%	25%
Within 90 days	39%	44%***	32%	33%
Within 365 days	68%	71%*	66%	71%*
Average days (M, SD)	102 (95.2)	93 (92.2)**	110 (99.3)	111 (100.4)
Seriousness of Subsequent Offense				
Violent	18%	18%	23%	22%
Felony	31%	33%	35%	33%
Days in Jail for Subsequent Detentions (M, SD)	17 (32.1)	20 (38.4)**	25 (46.2)	32 (70.4)*

Note: * $p < .05$, ** $p < .01$, *** $p < .001$ testing differences between Medicaid and non-Medicaid groups within each county.

Finally, the Medicaid advantage reappears in the average length of incarceration for those who were detained during the follow-up period (Table 5). Here, the advantage occurs in both counties. In King County, detainees with a severe mental illness who were on Medicaid at

release spent three fewer days in jail (17 vs. 20, $p < .01$) on average than those without Medicaid at release. In Pinellas County, there was a seven-day advantage (25 vs. 32 days, $p < .01$) favoring those who were on Medicaid at release.

These length of incarcerations help to explain why the rates of Medicaid at release are so high in these two counties (65% in King and 78% in Pinellas, see Table 5). The Social Security Administration (SSA) has a 30-day rule for suspension of SSI benefits for individuals in jails and other public institutions (Bazelon Center, 2001). Most adult males with severe mental illness who have Medicaid qualify through SSA disability provisions which authorize Medicaid coverage for all SSI recipients. With the exception of the not-Medicaid group in Pinellas County, the average length of jail stay for these cohorts does not exceed this cut-off point.

Consequently, only a very small percentage of the detainees who had a severe mental illness lost their Medicaid enrollment while they were in jail. Those who did lose their Medicaid benefits in both counties were a relatively small number of outliers who stayed in jail for many months. Otherwise, detainees with severe mental illness who entered jail with Medicaid also exited jail with their Medicaid benefits intact.

Medicaid Rate and Subsequent Detentions

We now turn to the multivariate analyses that treat Medicaid as a continuous variable measuring the proportion of days on Medicaid prior to the next detention (if any) that occurred within the 12-month follow-up period. These multivariate analyses allow us to control for other variables in assessing the effects of Medicaid on the likelihood of subsequent detentions for releasees with severe mental illness.

To simplify the presentation of these findings we use odds ratios to identify variables that are making a significant contribution to each of the three primary questions of interest about subsequent detentions—how many, how often, and how serious. An odds ratio (OR) is readily interpretable—a value of 1.0 means that the variable has no effect on the odds of an outcome

event occurring, a value less than 1.0 means that the variable decreases the odds of an event occurring, and a value greater than 1.0 means that the variable increases the odds of an event occurring. The magnitude of the effect is greater the further the odds ratio is away from 1.0 in either direction.

We follow the logic of the sequential analysis (described in Methods section above) to isolate the full and net effects of the Medicaid policy variable. The full effects of Medicaid are estimated after controlling for other demographic, diagnosis, and disability variables (see Models 2 and 3 in Appendix Table A3-A10). The net (unique) effects of Medicaid are estimated after controlling for the mental health and substance abuse service variables as well as the demographics, diagnosis, and disability variables (see Model 4 in Appendix Tables A3-A10).

The full effects in Table 6 indicate that, after controlling for the three Ds (demographics, diagnosis, and disability), the Medicaid rate variable decreases the odds on three of the four outcomes in King County. In other words, these results suggest that having more days on Medicaid during the follow-up year led to fewer detentions, more days in the community prior to next detention, and non-felony charges upon next detention. The odds ratio for violent offenses in King County is in the same direction, but it's not significant. For Pinellas County, the full effects Medicaid rate variable only has a significant reduction for the timing of next offense (how soon); the other odds ratios are not significant.

In the net effects model for King County, the Medicaid rate variable continues to exert a strong influence in decreasing the odds for subsequent detentions (how often). But for days in the community (how soon) and seriousness of charges (felony), the effect sizes for the Medicaid variable remain relatively stable but are no longer statistically significant. Here, the effect of Medicaid appears to be in the individual's greater access to services. Higher rates of mental health and substance abuse service use led to more days in the community prior to next detention (ORs= .53 and .83, $p < .001$) and higher rates of mental health service use decreased

the odds of having felony charges (OR= .79, p< .05). Contrary to expectations, mental health service use increased the odds of having a violent next offense (OR= 1.32, p< .05).

Table 6. Odds Ratios from Full Effects and Net Effects Multivariate Models of How Often, How Soon, and How Serious the Next Detention(s) over 12-month Follow Up Were for Releasees with Severe Mental Illness in King County (1996-98) and Pinellas County (1998-01)

	King County [a/]				Pinellas County [a/]			
			How Serious?				*How Serious?*	
Predictor	*How Often?*	*How Soon?*	*Felony*	*Violent*	*How Often?*	*How Soon?*	*Felony*	*Violent*
Full effects [b/]								
Medicaid Rate	.57***	.86*	.84*	.95	.91	.84*	1.32	1.30
Net Effects [b/]								
Medicaid Rate	.56***	.93	.84	.94	.85	1.08	1.35	1.26
MH Service Rate (M)	.95	.53***	.79*	1.16	1.36*	.33***	.84	.94
MH Service Rate (H)	1.17	.83***	1.13	1.32*	1.25	.56***	.91	1.21
SA Service Rate	.86	.61***	1.03	.94	1.2	.98	1.04	1.04

Note: * p < .05, ** p < .01, *** p < .001 testing differences from 1.0 (no effect) for each predictor variable within each county.
a/ Odds ratios for 'how soon' are based on only those individuals who had a subsequent detention, whereas the odds ratios for 'how often' and 'how serious' are based on the total sample (those with and without subsequent detentions).
b/ All odds ratios control for race, gender, age, dual MH/SA diagnosis, and SSI/disability.

In Pinellas County, the Medicaid rate variable only has a significant main effect on days in the community (OR= .84, p< .05). Similar to King County, high rates of mental health service use led to more community days (ORs= .33 and .56, p< .001). One anomaly in the Pinellas County results is that the number of detentions (how often) was greater for those who used mental health services. There were no significant effects for Medicaid rate or any of the service variables on violent offenses in Pinellas County.

DISCUSSION

The overall findings reported here provide clear evidence that Medicaid benefits have positive effects both for the mental health and for the criminal justice systems. Although the

findings for King and Pinellas counties do not align perfectly they do agree that, while the combination of Medicaid benefits and service use does not prevent jail recividism, they do help to keep people with severe mental illness out of jail for longer periods of time than those who either don't have benefits or have them for fewer days. Our earlier report documented mental health system gains from having persons with severe mental illness on Medicaid following jail release (Morrissey et al., 2004). The findings reported in this paper show that jails gain from having mentally ill offenders on Medicaid as well. Strategies where both systems can work together to have offenders with severe mental illness access and retain Medicaid would work to the advantage of both systems.

Another important finding that is consistent across these two counties is that people with a severe mental illness commit mostly minor crimes. Nearly 70% of the offenses that led to jail detention of people with a severe mental illness were for non-violent misdemeanors. This number is much more reliable than other reports in the literature as it is based on population data from two large urban counties over a three-year time period. It underscores the fact that public perceptions of mentally ill persons as dangerous and violence-prone are grossly exaggerated and misleading (Swanson et al., 1990; Steadman et al., 1998).

What's troubling in these data is the fact that about 70% of the cohort of people with severe mental illness in these two counties were re-arrested and detained in jail at least once and 17-30% for three or more times during a 12-month follow-up period. These findings confirm the revolving door experience that many people with severe mental illness have with jails on a regular basis. In one instance, we found an individual with severe mental illness who had been admitted to the county jail 52 times in a single year!

Limitations

These observations must be tempered by acknowledging that the findings are based on events in only two communities. Results may vary for other communities if jail stays for

detainees with severe mental illness consistently exceed the thirty-day Medicaid cut-off and if, as a result, Medicaid benefits are suspended at a higher rate. Differences in the availability and accessibility of post-release services for jail detainees, especially of evidenced-based services for persons with severe mental illness, could also lead to higher rates of service use and lower rates of reincarceration than those reported here. However, there are no national data available on such events and the two communities studied have service configurations that are typical for other large urban areas in the US. So these findings are the best estimates now available.

Another limitation is that the findings reported here only pertain to individuals with severe mental illness in jail who are Medicaid eligible. They might not apply to the many mentally ill individuals in jail who have a less serious psychiatric diagnosis or to those persons who might receive a diagnosis representing severe mental illness if seen by a psychiatrist, but who were either not enrolled in Medicaid or not known to the public mental health system at the time of this study.

Caution must also be exercised in drawing conclusions about state prison populations from the jail data reported here. What is generalizable to mentally ill prisoners from these data is that having Medicaid on the day of release will likely help them obtain needed services in the community just as they helped the jail detainees in this study. Moreover, state prisoners with severe mental illness need access to equally intensive evidence-based treatments as do jail detainees. What is not generalizable to prisons is the high rate of Medicaid enrollment at release for detainees with severe mental illness. Prisons are long stay institutions (the average length of incarceration for prisoners is over five years) so 100% of those who enter prison with Medicaid lose it before they are released. The same is true for SSI benefits and other entitlements. Jails, in contrast, are short stay institutions. Detainees in this study only spent an average of 16-32 days in jail so virtually all those with severe mental illness who had Medicaid at jail entry (about 65-78% in the two counties) also had it upon release.

Conclusions

One implication of the above discussion is that, if prisoners with severe mental illness are to have Medicaid and other benefits at release, then special efforts extending over many months are needed to assist prisoners to re-enroll in entitlement programs. In contrast, jail stays for persons with severe mental illness are so much shorter that most detainees do not lose Medicaid or SSI while in jail. This suggests that the need for the type of special benefit assistance programs that several states are now introducing is much greater in prisons than in jails.

Currently, there are no published data available about the recividism of prisoners with severe mental illness who either have or do not have Medicaid and other benefits. Further research is needed to evaluate the success of current prison-based benefit assistance programs for prisoners who have severe mental illness. Studies along the lines presented in this report could establish whether benefit assistance programs result in high rates of Medicaid enrollment at release, greater use of community-based services following release, and lower rates of recividism.

Whether talking about jails or prisons, however, it's the quality of treatment services received by persons with a severe mental illness that's likely to make a difference in their functioning and avoidance of recividism. Simply diverting people with severe mental illness to everyday or generic mental health services in the community is unlikely to have a positive impact on their ability to live in the community free of criminal justice involvements (Steadman and Naples, 2004). Generic services are not intensive enough nor are they attuned enough to the multiple comorbidities of this population. What's needed is diversion to intensive services such as assertive community treatment or dual diagnosis treatment teams that have an evidence base and proven track record of being successful in treating persons with severe mental illness.

Evidence-based treatments that promote recovery and increase opportunities for successful community living offer the best hope for people with a severe mental illness whether they are released from prisons or jails. However, solid research data backing up this assessment for people with severe mental illness in jails or other correctional settings are not currently available. Responding to this gap in the current knowledge base should be a high priority both for the mental health and criminal justice research communities.

APPENDIX TABLES

Table A1: Demographics and Diagnoses by Crime Status (Violent and Non-Violent) For Jail Detentions with a Severe Mental Illness in King County (1996-98) and Pinellas County (1998-01)

	King County (N = 5,189)		Pinellas County (N = 2,419)	
Demographic and Diagnosis Variables	Violent 18.0% (934)	Non-Violent 82.0% (4255)	Violent 22.9% (555)	Non-Violent 77.1% (1864)
Race				
White	58.1%	59.6%	63.2%	69.9%
Black	35.1%	36.0%	26.7%	20.7%
Other	6.8%	4.4%	10.1%	9.4%
Gender				
Male	67.2%	67.3%	63.1%	56.5%
Female	32.8%	32.7%	36.9%	43.5%
Age (M(SD))	34.7 (9.1)	34.9 (9.0)	36.1 (9.4)	34.3 (9.7)
Diagnosis*				
Schizophrenia	42.6%	35.7%	49.4%	43.3%
Mood disorders	60.4%	65.5%	66.1%	71.1%
Delusional Disorders	1.5%	1.2%	0.7%	0.5%
Psychotic Disorder NOS	13.8%	11.3%	13.3%	13.4%
Dual MH/SA Diagnosis	49.7%	59.0%	33.2%	43.8%

Note: * Percentages are greater than 100% due to overlap.

Table A2. Demographics and Diagnoses by Crime Status (Felony and Non-Felony) For Jail Detentions with a Severe Mental Illness in King County (1996-98) and Pinellas County (1998-01)

	King County (N = 5,189)		Pinellas County (N = 2,419)	
Demographic and Diagnosis Variables	Felony 31.5% (1636)	Non-Felony 68.5% (3553)	Felony 34.1% (826)	Non-Felony 65.9% (1593)
Race				
White	56.3%	60.7%	61.7%	71.8%
Black	38.3%	34.7%	28.5%	18.8%
Other	5.4%	4.6%	9.8%	9.4%
Gender				
Male	71.6%	65.3%	56.3%	58.9%
Female	28.4%	34.7%	43.7%	41.1%
Age (M(SD))	34.9 (9.1)	34.8 (9.0)	34.5 (8.8)	36.4 (9.7)
Diagnosis*				
Schizophrenia	40.3%	35.4%	43.7%	45.2%
Mood disorders	61.9%	65.8%	67.0%	71.5%
Delusional Disorders	1.6%	1.1%	.7%	.5%
Psychotic Disorder NOS	13.6%	10.8%	9.0%	15.6%
Dual Diagnosis.	59.5%	56.4%	38.5%	42.7%

Note: * Percentages are greater than 100% due to overlap.

A3: Predictors of Frequency of Subsequent Detentions within 365 Days Post Jail Release for Persons with a Severe Mental Illness, King County (1996-98): Full Sample (N = 5,189)

	Model 1			*Model 2*			*Model 3*			*Model 4*		
Predictor Variables	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*
Black vs. White	0.58	0.11	1.79***	0.58	0.11	1.79***	0.61	0.11	1.84***	0.61	0.11	1.84***
Other Race vs. White	0.04	0.22	1.04	0.04	0.22	1.04	0.03	0.21	1.03	0.02	0.21	1.02
Male vs. Female	0.03	0.11	1.03	0.02	0.11	1.02	-0.04	0.11	0.96	-0.05	0.11	0.95
Age 18_25 vs. 26_35	0.14	0.14	1.15	0.15	0.14	1.16	0.11	0.14	1.12	0.10	0.14	1.11
Age 36_45 vs. 26_35	-0.15	0.12	0.86	-0.16	0.12	0.85	-0.15	0.12	0.86	-0.17	0.11	0.84
Age 46_64 vs. 26_35	-0.30	0.16	0.74	-0.31	0.16	0.73	-0.31	0.16	0.73	-0.33	0.16	0.72*
Dual Diagnosis vs. SMI[1]Only	0.53	0.10	1.70***	0.53	0.10	1.70***	0.53	0.10	1.70***	0.54	0.10	1.72***
SSI				0.10	0.12	1.11	0.25	0.12	1.28**	0.20	0.12	1.28
Medicaid Rate							-0.57	0.13	0.57***	-0.58	0.13	0.56***
Outpatient Substance Abuse										-0.15	0.12	0.86
Outpatient Mental Health (M)										-0.05	0.09	0.95
Outpatient Mental Heath (H)										0.16	0.11	1.17

Note: * p < .05, ** p < .01, *** p < .001 testing differences from 1.0 (no effect) for each predictor variable within each county. The full sample in these analyses includes releases that had subsequent detentions in the one-year follow-up period and releases that did not have subsequent detentions in the one-year follow-up period. [1]SMI= severe mental illness.

A4: Predictors of Frequency of Subsequent Detentions within 365 Days Post Jail Release for Persons with a Severe Mental Illness, Pinellas County (1998-01): Full Sample (N = 2,419)

	Model 1			*Model 2*			*Model 3*			*Model 4*		
Predictor Variables	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*
Black vs. White	0.19	0.15	1.21	0.20	0.15	1.22	0.20	0.15	1.22	0.22	0.15	1.25
Other Race vs. White	-0.12	0.20	0.89	-0.10	0.21	0.90	-0.10	0.21	0.90	-0.09	0.21	0.91
Male vs. Female	0.42	0.12	1.52***	0.44	0.12	1.55***	0.44	0.13	1.55***	0.43	0.13	1.54***
Age 18_25 vs. 26_35	-0.13	0.18	0.88	-0.14	0.19	0.87	-0.13	0.19	0.88	-0.12	0.19	0.89
Age 36_45 vs. 26_35	-0.34	0.14	0.71*	-0.34	0.15	0.71*	-0.34	0.15	0.71*	-0.34	0.15	0.71*
Age 46_64 vs. 26_35	-0.63	0.21	0.53**	-0.62	0.21	0.54**	-0.62	0.21	0.54**	-0.66	0.22	0.52**
Dual Diagnosis vs. SMI Only	0.66	0.13	1.93***	0.67	0.13	1.95***	0.67	0.13	1.95***	0.60	0.14	1.82***
SSI				-0.10	0.16	0.90	-0.08	0.17	0.92	-0.08	0.17	0.92
Medicaid Rate							-0.09	0.18	0.91	-0.16	0.18	0.85
Outpatient Substance Abuse										0.20	0.18	1.22
Outpatient Mental Health (M)										0.31	0.14	1.36*
Outpatient Mental Heath (H)										0.22	0.14	1.25

Note: * p < .05, ** p < .01, *** p < .001 testing differences from 1.0 (no effect) for each predictor variable within each county. The full sample in these analyses include releases that had subsequent detentions in the one-year follow-up period and releases that did not have subsequent detentions in the one-year follow-up period.

A5: Predictors of Time to Subsequent Detention for Jail Releasees with Severe Mental Illness in King County (1996-98): Detained Sample Only (N = 3,579)

	Model 1			*Model 2*			*Model 3*			*Model 4*		
Predictor Variables	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*
Black vs. White	0.07	0.04	1.07	0.07	0.04	1.07	0.08	0.04	1.08	0.07	0.04	1.07
Other Race vs. White	0.26	0.08	1.30***	0.26	0.08	1.30***	0.25	0.08	1.28***	0.23	0.09	1.26**
Male vs. Female	-0.02	0.04	0.98	-0.02	0.04	0.98	-0.04	0.04	0.96	-0.06	0.04	0.94
Age 18_25 vs. 26_35	0.05	0.05	1.05	0.05	0.05	1.05	0.05	0.06	1.05	0.01	0.06	1.01
Age 36_45 vs. 26_35	-0.05	0.05	0.95	-0.03	0.05	0.97	-0.04	0.05	0.96	-0.06	0.05	0.94
Age 46_64 vs. 26_35	0.03	0.06	1.03	0.01	0.06	1.01	0.00	0.06	1.00	0.01	0.06	1.01
Dual Diagnosis vs. SMI Only	0.03	0.04	1.03	0.03	0.04	1.03	0.03	0.04	1.03	0.03	0.04	1.03
SSI				0.05	0.05	1.05	0.09	0.05	1.09	0.09	0.05	1.09
Medicaid Rate							-0.15	0.05	0.86*	-0.07	0.05	0.93
Outpatient Substance Abuse										-0.50	0.06	0.61***
Outpatient Mental Health (M)										-0.63	0.04	0.53***
Outpatient Mental Heath (H)										-0.19	0.05	0.83***

Note: * $p < .05$, ** $p < .01$, *** $p < .001$ testing differences from 1.0 (no effect) for each predictor variable within each county. The detained sample in these analyses contains only those releases that had a subsequent detention. Releases that did not have a subsequent detention in the one-year follow-up period were excluded from these analyses.

A6: Predictors of Time to Subsequent Detentions for Jail Releasees with Severe Mental Illness in Pinellas County (1998-01): Detained Sample Only (N = 1,398)

	Model 1			*Model 2*			*Model 3*			*Model 4*		
Predictor Variables	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*
Black vs. White	-0.04	0.07	0.96	-0.05	0.07	0.95	-0.05	0.07	0.95	-0.10	0.08	0.90
Other Race vs. White	0.05	0.08	1.05	-0.01	0.08	0.99	-0.02	0.08	0.98	-0.01	0.09	0.99
Male vs. Female	0.09	0.06	1.09	0.05	0.06	1.05	0.02	0.07	1.02	0.07	0.07	1.07
Age 18_25 vs. 26_35	-0.24	0.09	0.79**	-0.24	0.09	0.79**	-0.23	0.09	0.79**	-0.25	0.09	0.78**
Age 36_45 vs. 26_35	-0.12	0.07	0.89	-0.13	0.07	0.88	-0.11	0.07	0.90	-0.00	0.08	1.00
Age 46_64 vs. 26_35	-0.01	0.11	0.99	0.05	0.11	1.05	0.07	0.11	1.07	0.11	0.12	1.12
Dual Diagnosis vs. SMI Only	-0.02	0.06	0.98	-0.03	0.06	0.97	-0.01	0.06	0.99	0.05	0.07	1.05
SSI				0.16	0.09	1.17*	0.25	0.09	1.28**	0.29	0.09	1.34**
Medicaid Rate							-0.18	0.08	0.84*	0.08	0.09	1.08
Outpatient Substance Abuse										-0.02	0.11	0.98
Outpatient Mental Health (M)										-1.10	0.11	0.33***
Outpatient Mental Heath (H)										-0.58	0.13	0.56***

Note: * p < .05, ** p < .01, *** p < .001 testing differences from 1.0 (no effect) for each predictor variable within each county. The detained sample in these analyses contains only those releases that had a subsequent detention. Releases that did not have a subsequent detention in the one-year follow-up period were excluded from these analyses.

A7: Predictors of Felony/Non-Felony Subsequent Detentions for Persons with Severe Mental Illness in King County (1996-98): Detained Sample Only (N = 3,579)

	Model 1			*Model 2*			*Model 3*			*Model 4*		
Predictor Variables	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*
Black vs. White	0.19	0.09	1.21**	0.18	0.10	1.20*	0.20	0.10	1.22*	0.20	0.10	1.22*
Other Race vs. White	0.36	0.21	1.43*	0.35	0.21	1.42	0.35	0.21	1.42	0.35	0.21	1.42
Male vs. Female	0.32	0.10	1.38***	0.30	0.10	1.35**	0.29	0.11	1.34	0.29	0.11	1.34**
Age 18_25 vs. 26_35	-0.19	0.13	0.83	-0.18	0.13	0.84	-0.19	0.13	0.83	-0.19	0.13	0.83
Age 36_45 vs. 26_35	-0.16	0.11	0.85	-0.18	0.11	0.84	-0.17	0.11	0.84	-0.19	0.11	0.83
Age 46_64 vs. 26_35	-0.05	0.15	0.95	-0.07	0.15	0.93	-0.08	0.15	0.92	-0.09	0.15	0.91
Dual Diagnosis vs. SMI Only	0.13	0.09	1.14	0.13	0.09	1.14	0.13	0.09	1.14	0.11	0.09	1.12
SSI				0.20	0.12	1.22	0.25	0.12	1.28**	0.23	0.12	1.26*
Medicaid Rate							-0.17	0.10	0.84*	-0.18	0.10	0.84
Outpatient Substance Abuse										0.03	0.16	1.03
Outpatient Mental Health (M)										-0.23	0.11	0.79*
Outpatient Mental Heath (H)										0.12	0.11	1.13

Note: * p < .05, ** p < .01, *** p < .001 testing differences from 1.0 (no effect) for each predictor variable within each county. The detained sample in these analyses contains only those releases that had a subsequent detention. Releases that did not have a subsequent detention in the one-year follow-up period were excluded from these analyses.

A8: Predictors of Felony/Non-Felony Subsequent Detentions for Persons with Severe Mental Illness in Pinellas County (1998-01): Detained Sample Only (N = 1,398)

	Model 1			*Model 2*			*Model 3*			*Model 4*		
Predictor Variables	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*
Black vs. White	0.61	0.20	1.84**	0.60	0.20	1.82**	0.60	0.20	1.82**	0.59	0.20	1.80**
Other Race vs. White	0.11	0.25	1.12	0.09	0.25	1.09	0.09	0.25	1.09	0.08	0.25	1.08
Male vs. Female	-0.11	0.16	0.90	-0.14	0.17	0.87	-0.11	0.17	0.90	-0.12	0.17	0.89
Age 18_25 vs. 26_35	0.01	0.25	1.01	0.01	0.25	1.01	0.02	0.25	1.02	-0.02	0.26	0.98
Age 36_45 vs. 26_35	-0.16	0.20	0.85	-0.17	0.20	0.84	-0.19	0.20	0.83	-0.17	0.20	0.84
Age 46_64 vs. 26_35	-0.92	0.29	0.40***	-0.91	0.29	0.40***	-0.95	0.29	0.39***	-0.95	0.29	0.39***
Dual Diagnosis vs. SMI Only	-0.30	0.17	0.74	-0.30	0.17	0.74	-0.31	0.17	0.73	-0.31	0.17	0.73
SSI				0.10	0.21	1.11	0.04	0.21	1.04	0.05	0.21	1.05
Medicaid Rate							0.28	0.21	1.32	0.30	0.22	1.35
Outpatient Substance Abuse										0.04	0.31	1.04
Outpatient Mental Health (M)										-0.18	0.30	0.84
Outpatient Mental Heath (H)										-0.09	0.34	0.91

Note: * p < .05, ** p < .01, *** p < .001 testing differences from 1.0 (no effect) for each predictor variable within each county. The detained sample in these analyses contains only those releases that had a subsequent detention. Releases that did not have a subsequent detention in the one-year follow-up period were excluded from these analyses.

A9: Predictors of Violent/Non-Violent Subsequent Detentions for Jail Releasees with Severe Mental Illness in King County (1996-98): Detained Sample Only (N = 3,579)

	Model 1			*Model 2*			*Model 3*			*Model 4*		
Predictor Variables	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*
Black vs. White	0.08	0.12	1.08	0.08	0.13	1.08	0.08	0.13	1.08	0.09	0.13	1.09
Other Race vs. White	0.38	0.26	1.46	0.38	0.26	1.46	0.38	0.26	1.46	0.39	0.26	1.48
Male vs. Female	0.24	0.14	1.27	0.23	0.14	1.26	0.22	0.16	1.25	0.22	0.15	1.25
Age 18_25 vs. 26_35	-0.01	0.16	0.99	-0.00	0.16	1.00	-0.01	0.16	0.99	0.00	0.16	1.00
Age 36_45 vs. 26_35	-0.03	0.15	0.97	-0.04	0.15	0.96	-0.04	0.15	0.96	-0.06	0.15	0.94
Age 46_64 vs. 26_35	-0.09	0.19	0.91	-0.22	0.20	0.80	-0.22	0.20	0.80	-0.23	0.20	0.79
Dual Diagnosis vs. SMI Only	-0.22	0.12	0.80	-0.22	0.12	0.80	-0.22	0.12	0.80	-0.22	0.12	0.80
SSI				0.17	0.16	1.19	0.18	0.16	1.20	0.14	0.16	1.15
Medicaid Rate							-0.05	0.13	0.95	-0.11	0.13	0.90
Outpatient Substance Abuse										-0.06	0.22	0.94
Outpatient Mental Health (M)										0.15	0.13	1.16
Outpatient Mental Heath (H)										0.28	0.14	1.32*

Note: * p < .05, ** p < .01, *** p < .001 testing differences from 1.0 (no effect) for each predictor variable within each county. The detained sample in these analyses contains only those releases that had a subsequent detention. Releases that did not have a subsequent detention in the one-year follow-up period were excluded from these analyses.

A10: Predictors of Violent/Non-Violent Subsequent Detentions for Jail Releasees with Severe Mental Illness in Pinellas County (1998-01): Detained Sample Only (N = 1,398)

	Model 1			*Model 2*			*Model 3*			*Model 4*		
Predictor Variables	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*	*B*	*SE B*	*OR*
Black vs. White	0.49	0.25	1.63*	0.51	0.24	1.67*	0.51	0.24	1.67*	0.48	0.25	1.62*
Other Race vs. White	0.18	0.31	1.20	0.23	0.31	1.26	0.23	0.31	1.26	0.23	0.31	1.26
Male vs. Female	0.41	0.21	1.51*	0.47	0.21	1.60*	0.50	0.22	1.65*	0.47	0.22	1.60*
Age 18_25 vs. 26_35	-0.07	0.29	0.93	-0.07	0.29	0.93	-0.10	0.30	0.90	-0.10	0.30	0.90
Age 36_45 vs. 26_35	-0.58	0.24	0.56*	-0.57	0.24	0.57*	-0.59	0.24	0.55**	-0.59	0.24	0.55**
Age 46_64 vs. 26_35	-0.61	0.31	0.54*	-0.63	0.32	0.53*	-0.66	0.32	0.52*	-0.67	0.33	0.51*
Dual Diagnosis vs. SMI Only	-0.59	0.21	0.55**	-0.58	0.21	0.56**	-0.58	0.21	0.56**	-0.60	0.21	0.55**
SSI				-0.23	0.26	0.79	-0.28	0.26	0.76	-0.31	0.26	0.73
Medicaid Rate							0.26	0.24	1.30	0.23	0.25	1.26
Outpatient Substance Abuse										0.04	0.39	1.04
Outpatient Mental Health (M)										-0.06	0.39	0.94
Outpatient Mental Heath (H)										0.19	0.43	1.21

Note: * p < .05, ** p < .01, *** p < .001 testing differences from 1.0 (no effect) for each predictor variable within each county. The detained sample in these analyses contains only those releases that had a subsequent detention. Releases that did not have a subsequent detention in the one-year follow-up period were excluded from these analyses.

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