

The Role of Medicaid Enrollment and Outpatient Service Use in Jail Recidivism Among Persons With Severe Mental Illness

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Objective: This study sought to determine whether having Medicaid benefits and receiving behavioral health services are associated with a reduction in recidivism for jail detainees with severe mental illness. **Methods:** A quasi-experimental design with linked administrative data was used. All persons released over a two-year period from jails in King County, Washington (N=5,189), and Pinellas County, Florida (N=2,419), who had severe mental illness were followed for 12 months after jail release. Those who were receiving Medicaid benefits at release and those who were not were compared on three indicators: how many subsequent arrests occurred, how soon the arrest occurred, and how serious the associated offense was. The data were analyzed with negative binomial, Cox proportional hazards models and logistic regression with adjustments for dependent observations. **Results:** In both counties, having Medicaid at release was associated with a 16% reduction in the average number of subsequent detentions ($p<.001$ and $p<.01$, respectively). After the analysis controlled for demographic and clinical variables, more days on Medicaid were associated with a reduced number of subsequent detentions in King County ($p<.001$) and more days in the community before subsequent arrest in both counties ($p<.01$ and $p<.05$, respectively). No association was found between Medicaid status and the seriousness of the subsequent offense in either county. **Conclusions:** Although Medicaid benefits and behavioral health services were associated with fewer rearrests and more time in the community, the observed differences were relatively small. Further research is needed to determine how greater reductions in jail recidivism can be achieved for this target population. (*Psychiatric Services* 58:794–801, 2007)

Current best estimates, adjusted for gender, suggest that about 8% of all jail detainees have a severe mental illness (1–3). With more than 13 million annual admissions to U.S. jails, this means that about one

million bookings of persons with severe mental illness occur each year.

Recently a number of efforts have been made to enhance collaboration between jails and mental health providers. Primers have been devel-

oped to educate the criminal justice community or mental health community about how the other system operates and how collaboration can be improved (4,5). Successful partnerships between the criminal justice and mental health systems have occurred (3,6). Special technical assistance centers have been created to provide guidance to the justice community about co-occurring substance use disorders and mental disorders and programs for jail diversion (7). Collaboration has also occurred among several federal agencies to develop service models and practices that ease transition of offenders with mental illness from prisons and jails to the community (8). However, despite overlapping caseloads, the reality in most communities is that jails and the mental health service system operate independently of one another, and as a result, policies designed for or by one system could negatively affect the other.

One example is the national program sponsored by the Social Security Administration (SSA) in which jails can receive up to \$400 per case to report inmates who have Supplemental Security Income (SSI) while incarcerated (9) so that the benefits of incarcerated persons can be suspended or terminated in order to prevent inappropriate monthly income assistance payments. Although financially rewarding both to SSA in terms of saved expenditures and to local jails in terms of gained revenue, this program may be disadvantageous for detainees with mental illness because

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Medicaid benefits are linked with these disability income programs. Thus, if disability payments are suspended or terminated, so are these health care benefits. Further, without any insurance coverage, individuals with severe mental illness may be deterred from seeking services or have more difficulty locating providers willing to treat them (10).

This article is the third in a series examining Medicaid status, service use, and jail detentions of persons with severe mental illness. Our prior research (10,11) assessed two concerns: first, how often do mentally ill detainees lose Medicaid benefits during jail stays, and second, do those who have Medicaid upon jail release have greater access to and use of mental health services? Our findings indicated that of all detainees with severe mental illness who were booked into two large urban jails over a five-year period, fully 97% were released with their Medicaid benefits intact (11). The 3% who lost their benefits while incarcerated had significantly longer jail stays than those who did not lose their benefits. Further, detainees with severe mental illness who had Medicaid benefits at jail release accessed services more quickly and more often in a 90-day postrelease period than those who were not receiving Medicaid (10).

The findings from our previous studies suggest that having Medicaid at jail release benefits the mental health system in that Medicaid-enrolled detainees with severe mental illness receive more community services and access them more quickly than those without Medicaid. The unanswered question is whether there is a comparable benefit to the criminal justice system. That is, does having Medicaid and receiving community-based mental health services reduce recidivism among jail detainees with severe mental illness? This question cannot be answered from the available literature because there have been no published studies evaluating the effects of Medicaid benefits and mental health services on jail recidivism for persons with severe mental illness.

We addressed this gap by examining the subsequent jail detention ex-

periences of persons with severe mental illness over a 12-month period to answer three research questions: Does the combination of having Medicaid at jail release and receiving community-based mental health services after release reduce recidivism in a 12-month postrelease period for persons with severe mental illness? Does this combination lead to more time in the community for persons with severe mental illness before a subsequent arrest? Does this combination lead to less serious subsequent crimes for persons with severe mental illness?

Methods

Design

A quasi-experimental study using linked administrative data was conducted to examine the association among Medicaid benefits and the utilization of community mental health and substance abuse services on recidivism of jail detainees with severe mental illness. The unit of analysis was jail detentions, not unique persons. Medicaid status can change on a monthly basis, and many people cycle in and out of jail over the course of a year. Someone who has Medicaid at the time of his or her first release from jail may or may not have Medicaid at the time of a subsequent release. Each detention carries with it the possibility of having or not having Medicaid and getting or not getting access to services that may prevent or delay recidivism. Thus using detentions as the unit of analysis allowed us to assess the protective functions of Medicaid vis-à-vis subsequent arrests and detentions each time a release event occurred. As explained below, we used statistical adjustments to control for the interdependency of events within persons.

Study sites

The study was carried out in King County (Seattle) and in Pinellas County (Clearwater–St. Petersburg), Florida. These sites were selected because of the availability of administrative data that could be linked across Medicaid, jail, and mental health agency records. In 2000 the Pinellas County jail ranked 33rd and the King County jail 34th on the list of largest

jail jurisdictions in the United States according to the Bureau of Justice Statistics (12). In King County the average daily jail census was slightly smaller than in Pinellas County (2,400 compared with 2,504), but the total number of jail bookings was about 37% larger (60,992 compared with 44,395). However, the incarceration rate per 100,000 was twice as large in Pinellas County (272 compared with 138).

Participants and data sources

A total of 5,189 jail releases involving 2,095 persons with severe mental illness were identified in King County, and 2,419 releases involving 1,210 persons with severe mental illness were identified in Pinellas County, for an average of 2.48 and 1.99, respectively. A common sampling logic was followed to identify study participants in each county, but data sources and linkage procedures varied somewhat. For Pinellas County, Medicaid claims files were used to identify all individuals with one of the following *DSM-IV* codes: schizophrenia (295), affective disorders (296, excluding 296.2), delusional disorder (297.10), and psychotic disorder not otherwise specified (298.9). The list of persons with severe mental illness obtained from the Medicaid records was linked to a detention file from the Pinellas County Jail to identify all persons with severe mental illness who were detained during the study period.

For King County, county mental health files were used to identify persons with one of the four *DSM-IV* codes above. This list was linked with Medicaid enrollment files and then with King County jail detention files. To identify substance dependence diagnoses, county mental health files were used. To identify substance dependence-related treatment episodes, these data were then linked to the Treatment and Report Generation Tool data information system of the State of Washington's Division of Alcohol and Substance Abuse. Substance dependence was identified by *DSM-IV* diagnosis (codes 303.90, 304.0, and 305.0). Substance dependence, rather than substance abuse, was used to enumerate only individuals with severe and chronic substance use issues.

It is important to note that all study participants were enrolled in Medicaid at some time during the two-year accrual period for the sample and were detained in jail at least once. Thus, for each jail release, Medicaid status was determined on the day of release, and for the purposes of the bivariate analyses described below, the detention was assigned to either the Medicaid or non-Medicaid groups. In doing so, multiple detentions for the same person could have been assigned to the different groups (Medicaid or non-Medicaid). Here, persons without Medicaid at the time of a jail release were those who either lost enrollment or had not yet been enrolled on the date of their jail release. This sampling design attempts to control for Medicaid eligibility and to ensure that the two comparison groups within each county were roughly comparable on disability status and financial need. Consistent with this assumption, a majority of participants—75% in King County and 79% in Pinellas County—were receiving SSI or SSDI at some point during the study interval.

All jail detentions over a two-year period from each county that met study inclusion criteria were identified: January 1, 1996, through December 31, 1997, in King County and October 1, 1998, through September 30, 2000, in Pinellas County. Each detention was then followed prospectively for one year to identify subsequent detentions. Thus the entire study period for both participant accrual and follow-up in each county spanned a total of three years; January 1, 1996, through December 31, 1998, for King County and October 1, 1998, through September 30, 2001, for Pinellas County.

The study protocol was reviewed for human subjects' protection by institutional review boards at the State of Washington's Department of Social and Human Services, the University of North Carolina at Chapel Hill, and at the University of South Florida

Measures

Three demographic variables were available for analysis: race (coded white, black, or other), age, and gender. In the multivariate analyses de-

scribed below, white was used as the reference category. Age was coded as follows: 18 to 25, 26 to 35, 36 to 45, and 46 to 64 years. Individuals aged 26 to 35 were designated as the reference category. Dual mental health–substance dependence diagnosis (coded 0 for no and 1 for yes) and SSI-SSDI disability status (coded 0 for no and 1 for yes) were also examined.

Because Medicaid enrollment can fluctuate regardless of living situation (either in jail or in the community), Medicaid status was measured in two ways—first as a dichotomous (yes-no) variable based on whether or not a jail detainee had Medicaid at the time of release and second as a rate variable. Specifically, Medicaid rates after each detention were calculated as the number of postrelease Medicaid-enrolled days divided by the number of postrelease Medicaid-eligible days until the next detention, if any, or until the end of the study period. For example, an individual who was released without Medicaid, was enrolled in Medicaid at 30 days postrelease, and was rearrested at 60 days postrelease would have a Medicaid rate of .5 (30 days enrolled divided by 60 days eligible).

Using the same logic, outpatient mental health service rates were calculated as the number of postrelease outpatient service days received divided by the number of days eligible for outpatient services. Days hospitalized were subtracted from the count of eligible days. A day in which any direct (face-to-face) or indirect behavioral health service was received was counted as a service day, and these services may have included but were not limited to telephone contacts, advocacy and linkage, individual or group counseling sessions, and medication checks. The outpatient mental health service rate was categorized into low-, medium-, and high-use categories on the basis of frequency distributions for mental health services in each county. In preliminary analyses, the King County frequency distribution was applied to the Pinellas data to determine whether a uniform rate categorization made a difference in any of the results. The multivariate results indicated no significant differences, so county-specific scoring was retained in the final analyses.

Because of the low use of outpatient substance abuse services, a dichotomous variable (coded 1 for any services received in the time until next arrest—or 365 days postrelease—and 0 for no services received during that period) was created.

With respect to dependent variables, to examine the first question (How many detentions occurred in the postrelease period?), a variable enumerating the number of subsequent detentions (detentions occurring after release from jail) was coded 0 for none, 1 for one or two, and 2 for three or more for the bivariate analyses described below. Also, this variable was treated as a count variable (that is, count of the number of subsequent detentions) for the multivariate analyses described below. For the second research question (How soon before a subsequent detention?), a continuous variable measuring time to next detention in days was created, and this variable had a potential range of 1 to 365. And, for the third research question (How serious is the subsequent offense?), state criminal codes and National Crime Index Codes were used to categorize crimes as felonies and nonfelonies and as violent or nonviolent offenses.

Separate variables were then created to measure any intensification in seriousness (for example, graduating from a nonfelony to a felony crime) and violence (for example, graduating from a nonviolent to a violent crime) from a previous crime to a subsequent crime (coded 0 for no change in intensity and 1 for an increase in intensity). In instances in which multiple offenses or charges were listed for a particular detention, the most serious offense was used.

Data analysis

As noted above, all data analyses were carried out with detentions as the unit of analysis. The data were analyzed separately by county, because our data use agreement with the Pinellas County Data Collaborative prevented pooled analyses. Bivariate analyses using the dichotomous Medicaid measure and multivariate analyses using the Medicaid and outpatient mental health and substance abuse service rates are reported. All statisti-

cal analyses were implemented using SAS/STAT 9.1 (13).

Bivariate analyses. To examine the first research question (How many?), a chi square test was conducted with group status (coded 0 for non-Medicaid and 1 for Medicaid) as the independent variable and number of subsequent detentions (coded 0 for none, 1 for one or two, and 2 for three or more) as the dependent variable. To examine the second research question (How soon?), an independent-groups *t* test was conducted with group status as the independent variable and days to next detention as the continuous dependent variable. To examine the third research question (How serious?), chi square tests were conducted with group status as the independent variable and crime intensity and violence as the dependent variables in separate tests.

Multivariate analyses. To address the first research question (How many?), a negative binomial regression model was used to examine the associations between the number of subsequent detentions after a prior detention (treated as a count variable) and the Medicaid and service utilization rate variables, and the analysis controlled for race, gender, age, dual substance dependence and mental health diagnosis, and SSI-SSDI. Generalized estimating equations (GEEs) were then used to adjust the standard errors to account for the correlations among repeated measures (that is, multiple events within persons) so that correct inferences could be made (14).

To address the second research question (How soon?), a Cox proportional hazards model was estimated to examine the associations among the dependent variable (days to next detention) and the Medicaid and service utilization rate variables, and the analysis controlled for race, gender, age, dual substance abuse and mental health diagnosis, and SSI-SSDI. Again, to account for the dependency among observations, a special hazards model was used to produce robust variance estimates for dependent observations, coefficient estimates, and adjusted standard errors (15).

To address the third research question (How serious?), separate logistic regression models were estimated to

examine the associations among each dependent variable (crime intensity and violence) and the Medicaid and service utilization rate variables, and the analysis controlled for race, gender, age, dual substance dependence and mental health diagnosis, and SSI-SSDI. GEE was again used to adjust for the dependency among observations.

The policy variables of interest in these multivariate models are the Medicaid and outpatient mental health and substance abuse service use rates. To examine the unique associations among the policy variables and subsequent detentions, the covariates and policy variables were modeled hierarchically in each analysis. First, demographic variables (race, gender, and age) and clinical variables (dual mental health and substance dependence disorders) were entered into the equation (model 1); second, the SSI-SSDI indicator was entered (model 2); third, the Medicaid rate variable was entered (model 3); and fourth, the outpatient mental health and substance abuse service rate variables were entered (model 4). This sequential analysis approach allowed us to isolate the full and partial associations of Medicaid and services on recidivism for jail detainees with severe mental illness who were released from jail. Because of space limitations, however, only results from models 3 and 4 are shown. [Full model results are available in an online supplement to this article at ps.psychiatryonline.org.]

Finally, a number of sensitivity tests were conducted to assess the sensitivity of findings to particular partitions of the data. For example, the exact basis of disability (psychiatric or other) from the available Medicaid files could not be determined. Therefore, all of the multivariate models described above were estimated for participants aged 55 or younger (whose disability was more likely due to psychiatric reasons), persons committing misdemeanors only, SSI-SSDI only, persons with diagnoses of schizophrenia only, and persons with diagnoses of affective disorders only were examined. None of these partitions had significant effects on the overall findings presented below. In addition, preliminary models controlled for se-

riousness of previous crimes (such as violent felony and nonviolent non-felony) and pre-detention levels of behavioral health care use. These variables did not contribute to the significance of any of the models and were omitted.

Results

Bivariate results

Table 1 shows the results of the bivariate analyses used to examine each research question. With regard to the first question (How many?), 68.9% of the King County detentions (3,579 of 5,189 detentions) and 67.5% of the Pinellas County detentions (1,632 of 2,419 detentions) were followed by a subsequent detention within the 365-day follow-up period. However, in each county, the mean number of detentions with Medicaid at release that were followed by a subsequent detention in the follow-up period was slightly lower than for detentions without Medicaid at release (for King County 1.9 compared with 2.3, $p=.001$, and for Pinellas County 2.1 compared with 2.5, $p=.01$), which represents a 16% reduction in detentions in each county.

In regard to the second question (How soon?), in King County, individuals with Medicaid at jail release remained in the community slightly longer than those without Medicaid (102 compared with 93 days, $p=.007$), whereas there was no such advantage in Pinellas County (110 and 112 days, respectively).

Regarding the third question (How serious?), a large majority of offenses in each county were for minor, nonviolent crimes. Only 31%–35% of the offenses were felonies, and only 18%–23% were associated with a violent crime. Having Medicaid at release did not lead to an advantage in having less serious or less violent charges at the next detention.

Multivariate results

In regard to the question of how many detentions occurred in the follow-up period, as shown in Table 2, an increase in the Medicaid rate variable was associated with a decrease in the odds of having a subsequent detention in King County (odds ratio [OR]=.66, $p<.001$, model 3). Also, for

Table 1

Characteristics of subsequent jail detentions of persons with severe mental illness released from jails in King County and Pinellas County, by Medicaid status at time of release

Characteristic	King County (N=5,189)							Pinellas County (N=2,419)						
	Medicaid (N=3,346; 65%)		No Medicaid (N=1,843; 35%)		Test statistic	df	p	Medicaid (N=1,877; 78%)		No Medicaid (N=542; 22%)		Test statistic	df	p
	N	%	N	%				N	%	N	%			
Subsequent detentions														
0	1,079	32.3	531	28.8	$\chi^2=6.56$	1	.01	631	33.6	156	28.8	$\chi^2=4.48$	1	.03
1 or 2	1,341	40.1	706	38.3	$\chi^2=1.56$	1	.21	702	37.4	202	37.3	$\chi^2=.00$	1	.96
3 or more	926	27.7	606	32.9	$\chi^2=15.48$	1	.001	544	29.0	184	34.0	$\chi^2=4.93$	1	.03
M±SD	1.90± 2.26		2.27± 2.63		t=5.07	3,339	.001	2.07± 2.78		2.45± 3.05		t=2.60	818	.01
Time to next detention														
Within 30 days	687	20.5	441	23.9	$\chi^2=8.06$	1	.005	290	15.5	93	17.2	$\chi^2=.92$	1	.34
Within 60 days	1,059	31.7	658	35.7	$\chi^2=8.82$	1	.003	473	25.2	137	25.3	$\chi^2=.00$	1	.97
Within 90 days	1,295	38.7	814	44.2	$\chi^2=14.71$	1	.001	598	31.9	177	32.7	$\chi^2=.12$	1	.73
Within 365 days	2,267	67.8	1,312	71.2	$\chi^2=6.56$	1	.01	1,075	57.3	323	59.6	$\chi^2=.93$	1	.34
M±SD	102.16± 95.23		93.39± 92.20		t=-2.68	3,577	.007	109.81± 99.26		111.60± 100.36		t=.28	1,396	.78
Seriousness of subsequent crime														
Violent	611	18.3	323	17.5	$\chi^2=.43$	1	.51	434	23.1	121	22.3	$\chi^2=.15$	1	.70
Felony	1,035	30.9	601	32.6	$\chi^2=1.55$	1	.21	650	34.6	176	32.5	$\chi^2=.87$	1	.35

King County, when the service rate variables were added (model 4), the Medicaid rate variable continued to be associated with decreasing odds of subsequent detentions (OR=.65, $p<.001$), but the mental health and substance abuse service rate variables did not have significant relationships with subsequent detentions. For Pinellas County, the Medicaid rate variable was not statistically significant (al-

though its sign indicated that Medicaid was associated with an increase in subsequent detentions) in either model 3 or 4. The mental health and substance abuse service rate variables did not have significant relationships with subsequent detentions.

How soon does a subsequent detention occur? As shown in Table 3, after the analysis controlled for the demographic and clinical covariates, an in-

creasing Medicaid rate was associated with a longer period of time in the community before a subsequent detention for both King County and Pinellas County (OR=.84, $p<.001$, and OR=.79, $p<.05$, respectively). Also, higher rates of mental health and substance abuse service use were associated with longer time to subsequent arrest (that is, more days in the community before subsequent detention)

Table 2

Predictors of frequency of subsequent detentions within 365 days after jail release of persons with severe mental illness in King County and Pinellas County^a

Variable	King County (N=5,189)						Pinellas County (N=2,419)					
	Model 3			Model 4			Model 3			Model 4		
	B	SE	OR	B	SE	OR	B	SE	OR	B	SE	OR
Medicaid rate	-.41	.09	.66*	-.43	.09	.65*	.20	.16	1.22	.14	.16	1.15
Outpatient substance abuse				-.17	.11	.84				.11	.13	1.12
Outpatient mental health												
Moderate use				-.01	.07	.99				.16	.11	1.17
High use				.14	.10	1.15				.18	.16	1.20

^a All odds ratios control for race, gender, age, dual mental health and substance abuse diagnosis and for receipt of Supplemental Security Income and Social Security Disability Insurance. Multinomial logit models with generalized estimating equations were used in these analyses.

* $p<.001$, for differences from 1.0 (no effect) for each predictor variable within each county

Table 3

Predictors of time to subsequent detention for persons with severe mental illness released from jails in King County and Pinellas County^a

Variable	King County (N=5,189)						Pinellas County (N=2,419)					
	Model 3			Model 4			Model 3			Model 4		
	B	SE	OR	B	SE	OR	B	SE	OR	B	SE	OR
Medicaid rate	-.17	.06	.84**	-.01	.06	.99	-.23	.10	.79*	-.36	.10	.70**
Outpatient substance abuse				-.70	.07	.50**				-.08	.10	.92
Outpatient mental health												
Moderate use				-.88	.05	.41**				.59	.11	1.80**
High use				-.43	.05	.65**				.97	.12	2.64**

^a All odds ratios control for race, gender, age, dual mental health and substance dependence diagnosis and for receipt of Supplemental Security Income and Social Security Disability Insurance. A WLW (Wei, Lin, and Weissfeld) survival model was used for this analysis.

* $p < .05$, testing differences from 1.0 (no effect) for each predictor variable within each county

** $p < .001$, testing differences from 1.0 (no effect) for each predictor variable within each county

in King County (model 4); however, after the analysis controlled for service use, the Medicaid rate variable no longer had a significant association with time to subsequent detention. In Pinellas County, the Medicaid rate variable was associated with more time spent in the community, and this relationship remained significant after the analysis controlled for the service variables ($OR = .70$, $p < .001$). However, the mental health service variables were inversely related to time to subsequent detention ($OR = 1.80$ and 2.64 , respectively, $p < .001$).

How serious was the offense at the subsequent detention? Although data are not shown here, higher rates of mental health service use decreased the odds of having felony charges ($OR = .79$, $p < .05$) in King County; however, higher rates of mental health service use increased the odds of having a violent next offense ($OR = 1.32$, $p < .05$). There were no significant associations for Medicaid or any of the service variables on the seriousness or violence of subsequent offenses in Pinellas County.

Discussion

Although not perfectly aligned, the findings for King County and Pinellas County suggest that the combination of Medicaid benefits and behavioral health service use is associated with some improvement in criminal justice outcomes for people with severe mental illness. Persons with severe mental illness who were

enrolled in Medicaid at jail release had 16% fewer detentions and stayed out of jail longer, on average, than those who either did not have benefits or had them for a shorter time. Thus, in combination with our earlier work, the findings reported here suggest that Medicaid is associated with positive gains for the mental health system in keeping people engaged in services and for the criminal justice system in reducing recidivism.

Some of the findings were unexpected. For example, in Pinellas County, higher levels of outpatient mental health service use were associated with a decrease in the amount of time spent in the community before a subsequent detention. One explanation for this finding is that those most at risk for reincarceration in Pinellas County were being targeted to receive more services, but this explanation is purely speculative. On the other hand, most health services researchers are familiar with the problem of having either no association or a negative association between services receipt and improvement; unless one can adequately control for severity, it will often appear that services are somehow harmful. As noted above, we did not have an independent measure of mental health status, so we had only weak controls for severity.

Similarly, in King County, higher rates of mental health service use were associated with increased odds

of having a violent next offense. Possibly, this finding reflects the tendency reported in the literature for service providers who are in regular contact with the judicial system (such as diversion services, probation officers, and judges) to use the leverage of re-arrest for technical violations to encourage treatment compliance (16). Alternatively, it might simply reflect the tendency of providers to target services to individuals whom they perceive as having a greater likelihood for violent behavior.

Several caveats and limitations of this research should be acknowledged. The extent to which these findings can be generalized to other counties and jail jurisdictions is unknown. Furthermore, the sample had already been jailed at the start of this study; the main question examined was whether Medicaid and service use affected subsequent detention patterns. Therefore, the arrest and detention rates reported here should not be generalized to the whole population of persons with severe mental illness. In addition, the study relied on administrative data from two separate counties, which limited the number and range of control variables considered. In particular, as noted above, there was no independent measure of mental health status or severity for participants from either county, and it is unknown whether the service utilization rates reflect appropriate levels of service for these persons.

Moreover, there is a long history of research on the relationship between mental illness and criminal behavior that identifies variables such as symptom severity, social functioning, education, and social connectedness that influence criminal behavior (17–20). Possibly one or more of these or other unmeasured variables that are correlated with Medicaid status might more parsimoniously account for the associations attributed here to Medicaid status. Also, Medicaid status might be a proxy variable for something else that influences retention on Medicaid, such as having a fixed address or family support. In addition, because Medicaid often accompanies SSI, it is possible that the findings presented here are driven by income support rather than Medicaid benefits. However, arguably, access to and utilization of mental health services is governed by insurance status more so than income, especially for the population that is the subject of this study. The influence of income most likely manifests itself in ways that are important but unmeasured here, such as housing and access to transportation to keep appointments.

Finally, it is important to emphasize that these data refer to jails, not prisons. Currently, there are no published data available about the recidivism of released prisoners with severe mental illness. Despite these limitations, the data reported here are the best currently available to answer questions about the role of Medicaid benefits and use of community services in keeping people with severe mental illness out of jail.

The findings reported here suggest that Medicaid works by facilitating access to mental health and substance abuse services and that the combination of benefits and services helps to keep people functioning in the community longer. Yet 68% to 69% of the detentions in these two counties had at least one reincarceration during the 12-month follow-up period. These findings confirm the revolving-door experience that many persons with severe mental illness have with jails. The findings also raise questions about what more can be done beyond Medicaid enroll-

ment to stem and reverse the tide of incarcerating persons with mental illness in jail. One possibility is to enact legislation that prohibits these detentions; another is to increase the intensity of community-based treatment services. Both options are discussed below.

It is noteworthy that people with severe mental illness are jailed mostly on misdemeanor charges involving minor offenses, such as dining and dashing, disturbing the peace, or aggressive panhandling. Over 65% of the charges in King County and Pinellas County were for minor offenses of this sort, and less than 25% were for violent offenses. One strategy that would dramatically reduce the number of persons with mental illness in jail is to ban the incarceration of persons with severe mental illness who have committed only minor offenses. A bill to this effect (SB5533) is now working its way through the legislature in Washington State (21). Supporters of this bill include the Washington Association of Sheriffs and Police Chiefs and the state chapter of the National Alliance on Mental Illness (NAMI). Their goal is to avoid the criminalization of mental illness by diverting offenders to alternative mental health treatments.

However, the success of a legislative ban would depend on the availability and effectiveness of the treatment services to which people are diverted. Diversion to routine, everyday, or “usual care” services may not be effective for many people with severe mental illness. The Jail Diversion Initiative sponsored by the Substance Abuse and Mental Health Services Administration, for example, found that the services associated with usual community care did not improve either mental health outcomes (no fewer psychiatric symptoms) or public safety outcomes (no fewer arrests) among persons with mental illness who were diverted from jail compared with those who were not diverted (22). In the study presented here, most of the reported service contacts in each county were to usual community care. So it is not surprising that the use of these services did not result in far lower reincar-

ceration rates than the ones observed in this study.

Would more intensive, evidence-based interventions, such as assertive community treatment (23), integrated dual diagnosis treatment teams (24), or supported employment (25), work better at keeping people with severe mental illness out of jail? Although intensive evidence-based treatments may be necessary to stabilize severe psychiatric conditions, current evidence suggests that they are not sufficient to keep many people with severe mental illness from being arrested and placed in jail. A review of randomized clinical trials of assertive community treatment interventions shows that, in seven of ten trials, it was no more effective than usual care in keeping people out of jail (26). Recent randomized controlled studies of assertive community (27) and integrated dual diagnosis treatment teams (28,29) report similar results. These studies suggest that something in addition to intensive community-based treatment is needed if we are to stop the revolving door of repeated jail detentions (30). One promising area for further exploration is targeting behaviors that often lead to arrest with interventions such as moral reconnection therapy and modified therapeutic communities (31,32).

It is likely that a comprehensive jail diversion strategy for people with mental illness will require a layered approach. Less intensive case management and treatment programs would be targeted to those with less severe disorders, whereas the most intensive and costly services, such as assertive community treatment, would be reserved for those with the most severe disorders who are at imminent risk of repeated jail detentions and hospitalizations. Research to show the cost-effectiveness of such layered arrangements has yet to be undertaken. There remains a great need for community mental health and criminal justice systems to collaborate on solutions for developing, financing, delivering, and evaluating services that will help keep persons with mental illness out of jail and functioning in the community.

Conclusions

In this study, having Medicaid at jail release was associated with lower rates of reincarceration and fewer jail days, and in previous studies it was associated with greater access to community-based services. However, these advantages were rather small. Furthermore, receipt of community-based mental health and substance abuse services of the caliber routinely available in most communities does not keep people with severe mental illness from cycling in and out of jail. Whether Medicaid benefits in combination with more intensive, evidence-based services would work better is an important question to answer for both behavioral health practitioners and jail administrators seeking to provide appropriate care for people with mental illness who are involved with the criminal justice system.

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