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Connecting Mentally Ill Detainees in Large Urban Jails with Community Care

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Abstract

Large urban jails have become a collection point for many persons with severe mental illness. Connections between jail and community mental health services are needed to assure in-jail care and to promote successful community living following release. This paper addresses this issue for 2,855 individuals with severe mental illness who received community mental health services prior to jail detention in King County (Seattle), Washington over a 5-year time period using a unique linked administrative data source. Logistic regression was used to determine the probability that a detainee with severe mental illness received mental health services while in jail as a function of demographic and clinical characteristics. Overall, 70% of persons with severe mental illness did receive in-jail mental health treatment. Small, but statistically significant sex and race differences were observed in who received treatment in the jail psychiatric unit or from the jail infirmary.

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Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This study uses only secondary sources of data without an individual identifiers. A waiver of consent was obtained for this research.

Findings confirm the jail's central role in mental health treatment and emphasize the need for greater information sharing and collaboration with community mental health agencies to minimize jail use and to facilitate successful community reentry for detainees with severe mental illness.

Keywords

Jail; mental illness; community connections; health disparities

Over the past few decades, people with severe mental illness have become a growing part of jail caseloads. Today, the prevalence of severe mental illness in large urban jails is at least three to four times higher than found in the general population. Specifically, about 4% of the general population has a severe mental illness [1–3] whereas more than 17% of people admitted to jail have a severe mental illness [4]. Moreover, jail detainees with severe mental illness are known to have disproportionately high rates of substance abuse [5–8], poverty [9–11], and chronic medical conditions [5, 12], which make them complex and costly to treat.

Although men (87%) make up the large majority of the jail population, the prevalence of severe mental illness among jail admissions is twice as high among women (31%) than among men (15%). As applied to fiscal year 2011 [13], these percentages indicate that there were about 2 million jail admissions with severe mental illness including about a half-million women. At midyear 2012, nearly 6 in 10 detainees in local jails were racial or ethnic minorities with African Americans constituting about 37% and Hispanics 15% of the total population [14].

Jails have become the default mental health system in communities throughout the U.S. for many people with severe mental illness [15]. Some estimates suggest that approximately three-fourths of detainees with severe mental illness in large urban jails receive acute psychiatric inpatient treatment in the criminal justice system rather than in the mental health system [16]. This trend is of particular concern because there is a profound lack of adequate mental health treatment within all levels of the criminal justice system [17–20].

While much is known about racial, ethnic and gender disparities in receipt of community-based outpatient mental health care [21–25], little is known about whether these same disparities carry-over into jail settings. Some recent studies suggest that racial disparities in mortality rates are smaller in prison populations than in the general community population [26–28], for example, but research has yet to establish whether jails mirror similar racial and gender disparities that exist in community treatment for people with severe mental illness.

In this paper, we address two questions to advance research in this area. First, how many people with severe mental illness who received community-based treatment prior to jail admission also receive treatment in jail? Second, do rates of in-jail treatment vary by race and gender? These questions are particularly important given that jail stays are relatively brief and that comprehensive mental health services in jails are often lacking.

Methods

Study Setting

This study used a unique administrative database that linked detailed information from Medicaid, the county jail, state psychiatric hospitals, and community mental health agency records in King County (Seattle), Washington. The King County jail ranked 34th on the list of largest jail jurisdictions in the United States [29], with an average daily jail census in 2000 of 2,400 and a total number of jail bookings of 60,992. The jail incarceration rate was 138 per 100,000, which was below the U.S. average (226 per 100,000) (see [30] and [31] for more details). Further, the community population in King County was largely white (75.7%); among minorities, there was a larger percentage of Asians (10.8%) as compared to African Americans (5.4%) and Hispanics or Latinos (5.5%).

Sample

The linked data combined random samples drawn from administrative data sources from the community mental health, Medicaid, and jail service sectors over a 5-year period (1993–98). This data source is unique in its ability to track individuals in and out of jail during this time period, and identify the use of several types of mental health services received in the jail. For our study we included adults between 18–64 years of age who were detained at least once during our study period and had previously used the community mental health or state hospital system. We then restricted our sample to those participants who had a diagnosis of severe mental illness (schizophrenia or bipolar disorder) as recorded in community mental health or state hospital records prior to jail entry. Data were collapsed at the person-level to indicate service use over the 5-year period.

Study participants ($n = 2,855$) were predominantly male (68%), White (72%) and, on average, 38 years of age ($SD = 9.5$) (Table 1). Non-whites included African Americans (23%), 3% Asians (3%), and Native Americans (2%). Although Latinos constituted 5% of the overall administrative data files, no Latinos appeared in the estimation sample for this analysis. Participants spent an average of 52.6 days ($SD = 102.9$) in jail. With regard to prior service contacts, 97% of the sample had at least one community-based outpatient mental health encounter and 10% had at least one state psychiatric hospital admission. The mean number of outpatient mental health encounter visits prior to jail detention was 146 ($SD = 210$), ranging from 0 to 1,372 visits.

Measures

Dependent variables.—We identified persons who received mental health services in jail in two ways. First, we created a dichotomous variable measuring whether each person ever was in the jail psychiatric unit. Second, we created another dichotomous variable measuring whether individuals had received any mental health services on an outpatient basis at the jail infirmary staffed by county health department employees or in the general population. Infirmary contacts were recorded in a Public Health Information System (PHIS). Contacts associated with mental health diagnoses or procedure codes were used to identify receipt of an in-jail mental health service. We examined the two components separately and also combined them into a composite measure of jail mental health service receipt.

Demographics.—The available data allowed us to examine differences in the use of jail-based mental health services by sex as well as by four race/ethnic groups: White, African-American, Asian, and Native American. We controlled for age as a continuous variable in quadratic form.

Covariates and independent variables.—Because treatment of mental illness is likely an increasing function of the length of stay in jail, we controlled for the overall number of days in jail. We also controlled for the number of outpatient mental health encounters in the community mental health system prior to jail admission and expenditures on state psychiatric hospital care, as crude measures of severity of illness.

Analysis

We used logistic regression models to examine the association between our covariates and the probability that a detainee received mental health services while in jail. All continuous explanatory variables were entered in quadratic form, which improved model fit. We report the logit coefficients along with the average marginal effects (AMEs) of each covariate on the predicted probability of mental health treatment. Statistical significance was attributed to p -values of .05 or less.

Results

Overall, 70% of study participants received mental health treatment while in jail (Table 1) and this percentage was roughly the same across racial groups (Table 2). Women made up 32% of the total sample; however, women accounted for 41% of those who did not receive mental health services while in jail. Service recipients were just as likely to receive treatment from the jail mental health unit (61%, $n = 1,741$) as from the jail infirmary (61%, $n = 1,752$) and 52% ($n = 1,485$) received services from both sources. Men (74%, $n = 1,492$) were more likely to receive mental health treatment than women (62%, $n = 579$) and this unadjusted difference was consistent for Whites (+11%), African Americans (+11%), Asians (+16%) and Native Americans (+34%).

Logistic regression models examining sex and race differences in receipt of mental health treatment from the jail psychiatric unit, the jail infirmary, or the composite of the two, while controlling for covariates, are presented in Table 3. Across all models, individuals were more likely to receive services if they were older ($p < .01$), had longer jail stays ($p < .01$), had received more community-based outpatient visits prior to jail entry ($p < .05$), and had more state psychiatric hospital costs prior to jail entry ($p < .01$).

Controlling for these differences, the average marginal effects revealed a number of small, but statistically significant differences by race and gender. Across models, women were 4–8% points less likely to receive mental health services as compared to men ($p < .01$). We also found that African Americans were 3%–5% points less likely to receive services across models than Whites ($p < .01$). Asians were 23% points less likely than Whites to receive mental health services from the jail infirmary ($p < .01$) and 10% points less likely than Whites to receive services on the composite service receipt measure ($p < .05$). Finally, we ran additional models interacting African-American race with sex gender (not presented

in tables) and found that African-American men had a lower rate of mental health service receipt than White men both overall and in the jail psychiatric unit, but no differences were detected for women by race in any of the models.

Discussion

In the past, state mental hospitals functioned as the institutions of last resort for the care and confinement of persons with severe mental illness, but increasingly over the past three decades, this role has shifted throughout the U.S. to local jails. Our results indicate that 70% of jail detainees who had severe mental illness and a prior history of mental health service use in the community received mental health services in jail. This statistic underscores the many reports in the literature about jails, by default, having to assume mental health provider roles for their many detainees who have severe mental illness. It also suggests that this jail identified the majority, but not all, inmates with severe mental illness.

We also found small, but statistically significant sex and racial differences after adjusting for covariates. Women with severe mental illness were less likely than their male counterparts to receive mental health services while detained in jail. Further, this difference between males and females was consistent across racial groups. Women are a minority in male-dominated jail populations and their particular needs are often not addressed [32–35]. We also observed racial differences in the locus of services receipt. African Americans differed from Whites in a lower likelihood of receiving jail psychiatric unit services whereas Asians differed from Whites in their greater receipt of infirmary versus psychiatric unit services. Most of these differences are smaller than the sex-race disparities observed in community settings suggesting that jail mental health services such as those in King County can mitigate some of the social inequities that occur in less controlled community settings.

Several limitations of this study need to be acknowledged. Our administrative dataset does not provide clinical information on the levels of functional disability associated with psychiatric diagnoses. Consequently, we were unable to determine whether detainees most in need of treatment actually received it. Also, we are unable to say whether the 30% of the sample who did not receive treatment were in need of mental health treatment during their jail stay.

These limitations are partially offset by several strengths. It is rare in this research area to have studies based upon a large, multi-year, population-based sample of jail detainees with severe mental illness. Further, study participants' severe mental illness was established by chart diagnoses at community agencies prior to jail entry and thus was independent of any detection bias that might exist in identification by jail authorities [36].

Ideally, a large epidemiological study on a cohort of detainees using a measure of mental health status based upon psychiatric rating scales rather than chart diagnoses would be most useful in determining the extent of racial and gender disparities in who is identified and treated in jail or other criminal justice settings. Clearly, further research along these lines would provide a firmer foundation for intervention efforts to enhance necessary mental

health care for detainees with severe mental illness while in jail as well as efforts to connect them to community services upon release.

It has long been recognized that the jail is a public health outpost where high-risk individuals are concentrated for brief periods of time and thus amenable to interventions that otherwise are difficult to implement given their mobile and chaotic lives in the community [37]. The findings from this study suggest that we need to think of the jail as a mental health outpost as well.

Despite a range of moral arguments that jail detention amounts to criminalization of the mentally ill [38–39], jails today are de facto mental health way-stations for significant numbers of people with severe mental illness. As a result, more attention has to focus on efforts to prevent detention and foster successful community reentry after detention. Our data did not include the reentry phase for this study cohort but it is clear that community transition requires further collaboration and information sharing between community and correctional authorities. Continuity of care and treatment for very disabled individuals with severe mental illness has to occur both at the front door of the jail prior to entry and at its back door upon release to the community to interrupt the revolving door experience that many of these individuals encounter.

Numerous efforts have been directed at diversion of mentally ill detainees from jail with mixed success [38, 40–41]. Part of the problem lies with the low quality and intensity of the community services to which diverted individuals are referred. Although virtually all (97%) participants in this study received community mental health services prior to arrest and jail entry (Table 1), those treatment experiences did not deter their jail stays. The implication is that much more than simply connecting these individuals to routine community mental health services is needed to change their criminal justice trajectories. New approaches are needed to figure out how to keep people with severe mental illness out of the criminal justice system and to provide appropriate services to those who end-up detained.

The expansion of Medicaid in many states as part of the Affordable Care Act holds great promise for improving these circumstances [42–45]. Large numbers of those released from the criminal justice system will be newly eligible for expanded Medicaid services [46]. With an influx of dollars from new Medicaid revenue streams both community and criminal justice authorities will have the opportunity to implement more targeted interventions aimed at improving the lives of the many thousands of individuals with severe mental illness who now repeatedly cycle through jails and other parts of the criminal justice system.

Conclusion

Urban jails end up serving large numbers of detainees with severe mental illness. Findings from this study indicate that small but statistically significant differences in who received in-jail mental health services occurred along sex and race lines but these differences are smaller than those often reported for receipt of community-based services. New efforts are needed to link-up these jails with community-based services both at the point of detention

and release to promote continuity of care for the many thousands of persons with severe mental illness who are detained in these settings across the US.

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Table 1

Sample Characteristics of King County Jail Detainees with Severe Mental Illness (n = 2,855)

Variable	<i>n</i>	%
Gender		
Male	1,926	67.5
Female	929	32.5
Race/ethnicity		
White	2,058	72.1
Male	1,395	67.8
Female	663	32.2
African American	649	22.7
Male	432	66.6
Female	217	33.4
Asian	82	2.9
Male	64	78.0
Female	18	22.2
Native American	66	2.3
Male	35	53.0
Female	31	47.0
State hospital use prior to jail detention	284	9.9
Outpatient mental health encounters prior to jail detention	2766	96.9
Average of outpatient mental health encounter visits prior to jail detention [<i>mean</i> (SD)]	146 (210)	
Jail days [<i>mean</i> (SD)]	52.6 (102.9)	
Indicator of jail mental health service use		
Stay in jail psychiatric unit (JPU)	1,741	61.0
Jail infirmary contact (JIC)	1,752	61.4
Either JPU or JIC	2,008	70.3
Treatment from both JPU and JIC	1,485	52.0
No mental health service use	847	29.7

Note. JIC refers to an out-patient mental health service contact with the jail infirmary.

Table 2
Mental Health Service Receipt by Gender and Race/Ethnicity While in Jail (n = 2,855)

Variable	Mental health service either JPU or JIC		Stay in jail psychiatric unit (JPU)		Jail infirmatory contact for mental health (JIC)		No receipt of mental health services in jail	
	n	%	n	%	n	%	n	%
Gender								
Male	1,429	71.7	1,275	73.2	1,262	72.0	497	58.7
Female	579	28.8	466	26.8	490	28.0	350	41.3
Mental health service by race/ethnicity								
White	1,439	71.7	1,251	71.9	1,252	71.5	619	73.1
Male	1,026	71.3	914	73.1	903	72.1	369	59.6
Female	413	28.7	337	26.9	349	27.9	250	40.4
African American	471	23.5	402	23.1	423	24.1	178	21.0
Male	330	70.1	294	73.1	300	70.9	102	57.3
Female	141	29.1	108	26.9	123	29.1	76	42.7
Asian	52	2.6	51	2.9	36	2.1	30	3.5
Male	43	82.7	42	82.4	30	83.3	21	70.0
Female	9	17.3	9	17.7	6	16.7	9	30.0
Native American	46	2.3	37	2.1	41	2.3	20	2.4
Male	30	65.2	25	67.6	29	70.7	5	25.0
Female	16	34.8	12	32.4	12	29.3	15	75.0

Table 3
 Logistic Regression Model Results for Probability of Mental Health Service Receipt in Jail (n = 2,855)

Variables	Stay in jail psychiatric unit (JPU)		Jail infirm contact for mental health (JIC)		Service receipt from either JPU or JIC	
	β (S.E.)	AME	β (S.E.)	AME	β (S.E.)	AME
Female	-.43** (.09)	-.08** (.0)	-.30** (.09)	-.06** (.02)	-.26** (.09)	-.04** (.02)
Race (White = referent)						
African American	-.27* (.11)	-.05* (.02)	-.14 (.11)	-.03 (.02)	-.22* (.11)	-.04* (.02)
Native American	.13 (.27)	.02 (.05)	.31 (.27)	.06 (.06)	.29 (.29)	.05 (.05)
Asian	-.15 (.26)	-.03 (.05)	-1.13** (.27)	-.23** (.053)	-.58 (.27)	-.10* (.05)
Age	.12** (.030)	.002** (.0009)	.09** (.03)	.003** (.0009)	.11** (.031)	.004** (.0008)
Age squared	-.001** (.0004)		-.001** (.0004)		-.001** (.0004)	
Length of jail stay	.01** (.001)	.002** (.0002)	.02** (.001)	.003** (.0002)	.02** (.002)	.003** (.0003)
Jail days squared	-9.31e-06* (1.56e-06)		-1.63e-05** (2.68e-06)		-1.53e-05** (1.87e-06)	
Outpatient mental health encounter days	.004* (.0006)	.0007** (.00008)	.004* (.0005)	5.38e-04** (7.69e-05)	.004** (.0006)	.0006** (.00008)
Outpatient mental health encounter days squared	-3.07e-06** (6.60e-07)		-3.11e-06** (6.16e-07)		-3.17e-06** (7.02e-07)	
State psychiatric hospital costs	.03** (.005)	.006** (.0009)	.008** (.002)	.002** (.0004)	.03** (.006)	.005** (.001)
State psychiatric hospital costs squared	-4.45e-05** (8.09e-06)		-1.07e-05* (4.35e-06)		-4.37e-05** (9.63e-06)	

* *p* .05;

** *p* .01