Use of Psychiatric Emergency Services and Enrollment Status in a Public Managed Mental Health Care Plan

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Objective: **This study examined the sociodemographic and clinical characteristics of acute-care psychiatric patients who visited the emergency department at a large public hospital in terms of the patients' enrollment status in the region's public managed mental health care plan. The results of the analyses were expected to provide information about the degree and types of access to care for individuals who are and are not enrolled in the plan.** _Methods:_ **Data were collected over a seven-month period for 2,419 patients who visited a large, inner-city crisis triage unit. Patients were grouped according to whether they were currently enrolled, previously enrolled, or never enrolled in the public managed mental health care plan. Univariate and logistic regression models were used to determine differences between the three groups.** _Results:_ **In general, patients who were currently enrolled in the plan had a higher rate of functional psychosis, past use of psychiatric services, and functional disability and lower rates of substance use and homelessness. Previously enrolled patients had a more moderate rate of psychosis but a higher rate of substance use, functional disability, and homelessness. The never-enrolled patients had a lower rate of psychosis, functional disability, and past use of psychiatric services, and moderate substance use.** _Conclusions:_ **The region's public health plan appeared to be succeeding in engaging and keeping the most psychiatrically impaired patients in treatment; however, individuals with moderate psychiatric symptoms and high levels of substance abuse may never have been enrolled in the plan because of Medicaid ineligibility or because they dropped out of treatment. Problematic behavior and history of hospitalization were the best predictors of enrollment status. (**_Psychiatric Services_ **52:1494–1501, 2001)**

$\mathbb{A}$ growing number of states and counties are using managed care to provide mental health services to individuals who receive public funding (1). As the number of public managed care plans increases, so does the need for information about how municipalities engage, enroll, and manage care for patients who are mentally ill. It can be argued that the need for emergency psychiatric care can serve as a proxy for either insufficient access to outpatient treatment or inadequate outpatient care. Thus understanding the characteristics of patients in these plans who need emergency care provides a perspective on the kinds of patients for whom publicly funded managed care plans have increased or decreased access to care.

Many factors are associated with the use of psychiatric emergency room services, including homelessness (2), substance abuse (3), ethnicity (4), disability benefits (5), aggressive behavior (6), and psychosocial issues, such as unmet needs for safety, money, and employment (7). The results of two studies (8,9) indicate that patients' current involvement in outpatient treatment usually can serve as a predictor of their future use of emergency services. However, few studies have examined emergency psychiatric patients in public managed care plans, and no published study has examined a cohort of such patients to determine what proportion are already in treatment and whether those who are in treatment have different service needs than those who are not in treatment.

Our study took place at Harborview Medical Center, a large public hospital in Seattle that is owned by King County and managed and staffed by

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the University of Washington. Patients who present with psychiatric emergencies are seen in the hospital's crisis triage unit, which has 24-hour in-house coverage by attending or resident psychiatrists, nurses, social workers, and addiction professionals. Although the Seattle metropolitan area has a number of other hospitals, this unit handles the majority of acute and emergency psychiatric care.

The Harborview crisis triage unit was designed to be a single portal to multiple programs in the regional support network prepaid managed mental health care plan that provide mental health and substance abuse services. The mission of the regional support network plan is to provide, within the constraints of limited funding, care for individuals who have acute and chronic mental illnesses. Therefore, examining the proportion of crisis triage unit patients who are already enrolled in the managed care network—as well as the characteristics of the entire population presenting to the unit—offered a unique opportunity to understand what kinds of patients are being reached by the regional support network plan and what kinds may be "falling through the cracks."

The regional support network plan in King County is directed by the county mental health department and administered on contract by a private managed behavioral health care company. The plan pays for outpatient treatment on a yearly risk-adjusted case rate basis for enrolled clients, such that individuals with the most severe illnesses are paid for at about three times the rate of those with illnesses of moderate severity and ten times the rate of those with illnesses of milder severity.

We were interested in determining what proportions of patients who visited the crisis triage unit were currently enrolled in the regional support network plan, had been previously enrolled (enrolled during the past five years but not currently enrolled), and had never been enrolled. We also examined the demographic, psychiatric, and substance use characteristics of patients at admission to the unit.

Methods

Subjects

Data were obtained from 2,419 consecutive patients who visited the crisis triage unit between July 1998 and February 1999. Patients were considered to have received outpatient treatment if they were currently enrolled in the regional support network plan, as enrollment occurs only if patients receive care. To be eligible for enrollment, patients must either be receiving or be eligible for Medicaid funding or be severely mentally ill and have a very low income. Although many patients seen in the crisis triage unit receive Medicaid benefits, many others do not because of a short duration of economic needs or low severity of illness.

Patients who are enrolled in the regional support network plan are assigned a severity level or tier according to a structured evaluation of symptoms and function. Tier rankings are 1B, 2, 3A, and 3B (10). These tiers also require a certain level of service to determine the annual payment. We compared the proportion of enrolled patients in the four tiers to determine whether certain kinds of enrolled patients were disproportionately represented among those who were seen in the crisis triage unit.

Assessments

The 2,419 patients had a *DSM-IV* psychiatric diagnosis, as determined by a semistructured interview. The Emergency Trauma Center Assessment Form, which has been found to be valid and reliable (11), was completed during each patient's evaluation and provided scaled ratings for 11 variables. Clinical psychiatric variables included psychosis, depression, anxiety, hostility, uncooperativeness, and suicidality. Substance use ratings included patient intoxication at presentation to the crisis triage unit, current intravenous drug use, severity of substance abuse, and readiness for change. Disability ratings included comorbidity of medical illness, dysfunction in activities of daily living, social role dysfunction, lack of social supports, and functional status based on the Global Assessment of Functioning (GAF).

All of the ratings except the GAF

were made on scales running from 0 to 6 that were modeled after items used in the Psychiatric Symptom Assessment Scale (12) and the Psychiatric Assessment Form (13), in which 0 indicates no problem; 1 to 2, mild symptoms; 3 to 4, moderate symptoms; and 5 to 6, severe symptoms. Each severity rating includes a behaviorally anchored set of descriptors.

Administrative and service variables included the source of the patient's referral to the crisis triage unit, concurrent participation in public substance abuse treatment programs, involvement in outpatient mental health treatment, referral for inpatient hospitalization, a crisis intervention visit within 19 days after the initial visit, time spent in the crisis triage unit, and a discharge against medical advice from the unit. Services history—lifetime and past year—included the number of previous psychiatric hospitalizations, involuntary psychiatric hospitalizations, incarcerations, and episodes of substance abuse treatment.

Statistical analyses

To describe differences among the three groups—currently, previously, or never enrolled in the prepaid health plan—univariate statistical tests were performed on all variables, with an alpha level of .001 or less for statistical significance after a Bonferroni correction. In the event of a significant test result, post hoc t tests were performed to determine which group differences were responsible for the statistical significance. The other p values are presented for descriptive purposes only. Chi square tests were used for discrete variables, and one-way analysis of variance was used for continuous variables. In the event of a significant finding, three planned comparisons were performed to determine which group differences produced the statistical significance, with a Bonferroni correction (p<.001) also applied.

Three logistic regression models were developed to determine the most salient and independent factors that differentiated three pairs of groups: currently enrolled versus previously enrolled, currently enrolled

Table 1

Sociodemographic characteristics of patients who visited a crisis triage unit and their association with the patients' enrollment status in a regional prepaid managed mental health plan

Characteristic	Total sample (N=2,419)		Currently enrolled (N=640)		Previously enrolled (N=378)		Never enrolled (N=1,401)		Test statistic	df	p
	N or mean	%	N or mean	%	N or mean	%	N or mean	%			
Male	1,463	60	376	59	241	64	846	60	χ^2=2.50	2	ns
Ethnicity									χ^2=27.23	10	<.01
Caucasian	1,691	70	470	73	260	69	961	69			
African American	409	17	105	16	77	20	227	16			
Asian	133	6	36	6	10	3	87	6			
Hispanic	82	3	17	3	11	3	54	4			
American Indian	73	3	7	1	16	4	50	4			
Other or unknown	31	1	7	1	4	1	22	1			
Age (mean±SD years)[1]	38.3±12.3		38.9±11.5		40.1±12		37.6±12.7		F=7.59	2, 2,414	<.001
Residential status[2]									χ^2=61.59	4	<.001
Homeless	641	28	152	25	116	33	373	28			
Residential facility	147	6	78	13	19	5	50	4			
Independent	1,518	66	383	62	223	62	912	68			
Employment status[3]									χ^2=187.30	8	<.001
Full-time	483	20	52	9	54	16	332	26			
Part-time	198	9	37	6	17	5	114	11			
Episodic	392	18	70	12	53	15	267	21			
Not employed	1,190	54	435	73	221	64	534	42			
Source of referral[4]									χ^2=23.86	6	<.001
Self	685	35	207	40	125	41	353	31			
Family or friend	279	14	69	13	35	11	175	15			
Police	716	36	162	31	113	37	441	38			
Other	300	15	82	16	35	11	183	16			

[1] Significant difference between previously enrolled and never enrolled (p<.001)

[2] Significant difference between currently enrolled and previously enrolled and between currently enrolled and never enrolled (p<.001)

[3] Significant difference between currently enrolled and previously enrolled (p<.01), between currently enrolled and never enrolled (p<.001), and between previously enrolled and never enrolled (p<.001)

[4] Significant difference between currently enrolled and never enrolled and between previously enrolled and never enrolled (p<.01)

versus never enrolled, and previously enrolled versus never enrolled. The models were created by using both stepwise and backward elimination techniques. For each model, only the variables that differed between the three paired groups at a significance level of .001 or less were included as potential discriminators. The final models for each pair of groups contained only significant variables. The purpose of these analyses was not to predict group membership but rather to determine the factors that independently differentiated the three groups.

Results

Of the 2,419 patients seen in the crisis triage unit during the study period, 640 (26 percent) were currently enrolled in the regional support network plan, 378 (16 percent) were previously enrolled, and 1,401 (58 percent) were never enrolled. Significantly more 3A and 3B patients—that is, more seriously ill patients—were seen (χ^2=256, df=6, p<.001).

The sociodemographic characteristics of the three patient groups and the associations between characteristics and groups are summarized in Table 1. The previously enrolled group was older on average than the never enrolled group. Because enrollment in the prepaid health plan is required for placement in residential treatment, patients in the currently enrolled group were more likely than those in the other two groups to live in a residential facility. Patients in the never-enrolled group were more likely than those in the other groups to be employed, again reflecting the requirements for enrollment in the prepaid health plan—that is, receipt of Medicaid benefits and a very low income.

The three groups differed significantly in the proportion of patients with various primary psychiatric diagnoses (Table 2). The currently en-rolled group had the greatest proportion of patients with psychotic disorders—schizophrenia, schizoaffective disorder, or psychosis not otherwise specified—and bipolar disorders (65 percent combined) and the lowest proportion of patients with substance use disorders (7 percent). Conversely, the never-enrolled group had the greatest proportion of patients with unipolar depression and substance use disorders (60 percent combined) and the lowest proportion of patients with psychotic or bipolar disorders (26 percent combined). Patients in the previously enrolled group occupied an intermediate position, with 48 percent having psychotic and bipolar disorders and 45 percent having unipolar depression and substance use disorders.

On the basis of patients' severity of symptoms on admission and substance use (Table 2), those in the currently enrolled group were rated as most psychotic, followed by those in

Table 2

Diagnoses and indicators of illness severity of patients who visited a crisis triage unit and their association with the patients' enrollment status in a regional prepaid managed mental health plan

Characteristic	Total sample (N=2,419)		Currently enrolled (N=640)		Previously enrolled (N=378)		Never enrolled (N=1,401)		Test statistic	df	p
	N or mean	%	N or mean	%	N or mean	%	N or mean	%			
Primary diagnosis[1]									χ^2=314.78	16	<.001
Unipolar depression	662	30	133	22	86	24	443	35			
Functional psychosis	576	26	272	44	101	29	203	16			
Substance use disorder	442	20	43	7	76	21	323	25			
Bipolar disorder	322	14	126	21	67	19	129	10			
Adjustment disorder	99	4	14	2	3	1	82	6			
Anxiety disorder	75	3	16	3	10	3	49	4			
Dementia	33	2	4	<1	7	2	22	2			
Other	27	1	3	<1	3	1	21	2			
Severity of symptoms at admission[2]											
Psychosis[1]	.9±1.2		1.4±1.2		1.1±1.2		.7±1.1		F=92.90	2, 2,224	<.001
Depression	2.5±2.0		2.3±2.0		2.5±2.0		2.6±2.0		F=6.10	2, 2,216	<.01
Anxiety	1.8±1.8		2.0±1.9		1.8±1.8		1.7±1.8		F=5.07	2, 2,042	<.01
Suicidality	1.7±2.0		1.7±2.0		1.8±1.8		1.7±2.0		F=.50	2, 2,162	ns
Homicidality	.3±1.1		.4±1.2		.4±1.2		.3±1.0		F=3.47	2, 2,042	<.05
Uncooperativeness[3]	1.3±1.8		1.5±2.0		1.7±2.0		1.1±1.6		F=20.12	2, 2,214	<.001
Hostility[3]	1.1±1.6		1.2±1.8		1.4±1.8		.9±1.5		F=14.83	2, 2,232	<.001
Substance use at presentation[4]									χ^2=31.65	4	<.001
Currently intoxicated	456	34	84	27	73	36	299	36			
Currently in withdrawal	183	14	24	8	30	15	129	16			
Neither	699	52	206	65	101	49	392	48			
Current intravenous drug use	126	11	20	7	22	13	84	12		χ^2=5.91	2	<.05
Drug or alcohol problem[4]									χ^2=49.91	6	<.001
None	719	39	238	50	96	34	385	35			
Mild	226	12	61	13	24	9	141	13			
Abuse	392	21	93	20	61	22	238	22			
Dependence	500	27	82	17	97	35	321	30			
Readiness for change[5]									χ^2=28.15	6	<.001
Not applicable	443	28	145	38	59	24	239	25			
Action	207	13	45	12	31	13	131	14			
Contemplation	439	28	81	21	69	28	289	30			
Precontemplation	493	31	112	29	85	35	296	31			

[1] Significant differences between all three groups (p<.001)

[2] Possible scores range from 0 to 6, with higher scores indicating higher severity of symptoms.

[3] Significant difference between currently enrolled and never enrolled and between previously enrolled and never enrolled (p<.001)

[4] Significant difference between currently enrolled and previously enrolled and between currently enrolled and never enrolled (p<.001)

[5] Significant difference between currently enrolled and previously enrolled (p<.01) and between currently enrolled and never enrolled (p<.001)

the previously enrolled and never-enrolled groups. Patients in both the currently and previously enrolled groups were more uncooperative and hostile. Those in the currently enrolled group were less likely to have been intoxicated or in withdrawal on admission, less likely to have severe drug or alcohol problems, and more ready for change.

The groups also differed in number of lifetime psychiatric hospitalizations and incarcerations and in disability (Table 3). The lifetime number of psychiatric hospitalizations and involuntary hospitalizations decreased linearly from the currently to the previously to the never-enrolled groups; for the previous year, patients in both the current and the previously enrolled groups had more inpatient psychiatric hospitalizations and involuntary hospitalizations. In contrast, the previously enrolled group had the greatest proportion of patients with three or more episodes of substance abuse treatment.

In terms of disability, patients in both the currently enrolled group and the previously enrolled group were rated as significantly more dysfunctional than those in the never-enrolled group in terms of activities of daily living, role functioning, and social supports.

Table 4 lists the service use variables for the three groups. Patients in the never-enrolled group were less likely than those in the previously enrolled group to be enrolled in the state's public alcohol and drug treatment program. The currently enrolled group had the greatest proportion of patients participating in the state's department of developmental disability program. Patients in this group were highly unlikely to have had an appointment for outpatient

Table 3

Psychiatric and incarceration history and disability of patients who visited a crisis triage unit and their association with the patients' enrollment status in a regional prepaid managed mental health plan

Characteristic	Total sample (N=2,419) N or mean	%	Currently enrolled (N=640) N or mean	%	Previously enrolled (N=378) N or mean	%	Never enrolled (N=1,401) N or mean	%	Test statistic	df	p
Lifetime occurrence											
Psychiatric hospitalizations[1]									$\chi^2=575.81$	6	<.001
None	928	45	74	13	85	26	769	64			
One or two	502	24	130	24	98	31	274	23			
Three or four	240	12	110	20	54	17	76	6			
Five or more	404	19	235	43	84	26	85	7			
Involuntary hospitalizations[2]									$\chi^2=323.04$	6	<.001
None	1,500	80	256	57	186	69	1,058	92			
One or two	207	11	91	20	47	17	69	6			
Three or four	68	4	46	10	14	5	8	<1			
Five or more	90	5	59	13	24	9	7	<1			
Incarcerations[3]									$\chi^2=24.64$	6	<.001
None	1,226	73	284	67	148	66	794	77			
One or two	285	17	84	20	48	21	153	15			
Three or four	82	5	29	7	16	7	37	4			
Five or more	91	5	28	6	14	6	49	4			
Substance abuse treatment[4]									$\chi^2=22.87$	6	<.001
None	1,158	63	295	65	114	54	719	64			
One or two	465	25	105	23	68	26	292	26			
Three or four	109	6	28	6	20	8	61	5			
Five or more	116	6	24	6	32	12	60	5			
Psychiatric hospitalizations in past year[2]									$\chi^2=154.39$	6	<.001
None	1,035	74	182	53	134	65	719	85			
One	289	21	118	35	62	30	109	13			
Two	61	4	39	11	8	4	14	2			
Three or more	6	<1	2	<1	1	<1	3	<1			
Involuntary hospitalizations in past year[5]									$\chi^2=58.08$	6	<.001
None	1,286	93	251	85	170	90	865	97			
One	79	6	33	11	16	8	30	3			
Two	13	1	10	3	1	<1	2	0			
Three or more	2	<1	1	<1	1	<1	0	0			
Incarcerations in past year									$\chi^2=4.43$	6	ns
None	1,068	89	256	87	132	87	680	90			
One	113	9	33	11	18	12	62	8			
Two	13	1	3	1	2	1	8	1			
Three or more	5	<1	1	<1	0	0	4	<1			
Substance abuse treatment in past year									$\chi^2=2.80$	6	ns
None	1,119	88	283	88	154	88	682	88			
One	143	11	38	12	20	11	85	11			
Two	3	<1	0	0	1	<1	2	<1			
Three or more	5	<1	1	<1	0	0	4	<1			
Moderate to severe medical comorbidity	240	11	66	12	35	11	139	11	$\chi^2=.27$	2	ns
Moderate to severe dysfunction in activities of daily living[6]	499	24	146	26	96	30	257	21	$\chi^2=13.95$	2	<.001
Moderate to severe role dysfunction[5]	1,232	65	342	71	202	74	688	60	$\chi^2=31.42$	2	<.001
Moderate to severe lack of social supports[7]	1,182	59	320	61	210	69	652	55	$\chi^2=20.73$	2	<.001
Axis V Global Assessment of Functioning (mean±SD)	31.5±15.8		32.7±15.9		29.8±14.9		30.8±16		F=.97	3, 2,414	ns

[1] Significant differences between all three groups (p<.001)
[2] Significant difference between currently enrolled and previously enrolled (p<.01), between currently enrolled and never enrolled (p<.001), and between previously enrolled and never enrolled (p<.001)
[3] Significant difference between previously enrolled and never enrolled (p<.01)
[4] Significant differences between currently enrolled and previously enrolled (p<.01) and between previously enrolled and never enrolled (p<.001)
[5] Significant difference between currently enrolled and previously enrolled and between previously enrolled and never enrolled (p<.001)
[6] Significant difference between currently enrolled and never enrolled (p<.05) and between previously enrolled and never enrolled (p<.001)
[7] Significant differences between currently enrolled and previously enrolled, between currently enrolled and never enrolled (p<.05), and between previously enrolled and never enrolled (p<.001)

Table 4

Types of service use by patients who visited a crisis triage unit and their association with the patients' enrollment status in a regional prepaid managed mental health plan

Characteristic	Total sample (N=2,419) N	%	Currently enrolled (N=640) N	%	Previously enrolled (N=378) N	%	Never enrolled (N=1,401) N	%	Test statistic	df	p<
Currently in the public alcohol and drug treatment program[1]	170	11	47	14	37	18	86	9	χ^2=15.42	2	.001
Currently in the department of developmental disability program[2]	38	2	22	5	5	2	11	1	χ^2=24.67	2	.001
Involvement in outpatient treatment[3]									χ^2=171.66	6	.001
Completely compliant	516	31	128	25	61	23	327	38			
Nearly fully compliant	284	17	132	25	39	15	113	13			
Partially compliant	400	24	194	37	59	22	147	17			
No involvement	448	27	67	13	105	40	276	32			
Inpatient hospitalization									χ^2=12.63	4	.01
Not hospitalized	1,648	68	414	65	248	66	984	70			
Voluntary	448	19	134	21	64	17	250	18			
Involuntary	325	13	92	14	66	18	167	12			
Visit in a crisis intervention service setting within 19 days[4]	218	9	6	1	45	12	168	12	χ^2=60.22	2	.001

[1] Significant difference between currently enrolled and never enrolled (p<.05) and between previously enrolled and never enrolled (p<.001)

[2] Significant difference between currently enrolled and previously enrolled (p<.05) and between currently enrolled and never enrolled (p<.001)

[3] Significant differences between all three groups

[4] Significant difference between currently enrolled and previously enrolled and between currently enrolled and never enrolled (p<.001)

crisis intervention service at a mental health center in the 19 days after their visit to the crisis triage unit, again reflecting their involvement in ongoing treatment in the regional support network plan.

Table 5 presents the results of the logistic regression analyses. The three groups differed significantly on five variables: lifetime number of psychiatric inpatient hospitalizations, type of residence, psychiatric diagnosis, lifetime number of involuntary inpatient hospitalizations, and employment status. In all three models, the odds of being enrolled in the regional support network plan increased with the number of inpatient psychiatric hospitalizations. Currently enrolled patients were more likely to live in residential facilities and less likely to be homeless. Compared with patients who had functional psychoses, patients with substance use disorders were less likely to be enrolled in the plan. The probability of being in the plan greatly increased with the number of lifetime involuntary hospitalizations. Currently enrolled patients were more likely to be unemployed. We noted with interest that the three groups did not

differ significantly in the symptom severity or disability factors that were measured on presentation at the crisis triage unit.

Discussion

During the seven-month study period, only a quarter of the visits to the crisis triage unit were by patients who were currently enrolled in the regional support network plan. Indeed, on an average monthly basis, these 640 patients represented less than 1 percent of the more than 14,000 adults who were served by the county plan. These patients accounted for about 90 visits a month to the unit. They had greater levels of illness severity, as defined by diagnostic criteria (schizophrenia and bipolar disorder) and symptom severity (psychosis), and greater levels of service use, as defined by their tier level.

Because these patients would be expected to have more severe and chronic symptoms, it is probably unrealistic to expect that outpatient treatment could fully prevent periodic decompensation and the need for emergency care. However, a comparison of the characteristics of

these patients with those of patients who were currently enrolled in the regional support network plan but who did not present to the crisis triage unit would be required to guide decisions about how to identify, prevent, or better manage outpatient crises and reduce the need for emergency care. The absence of data for the latter patient group is a limitation of this study.

A relatively small proportion of our sample (16 percent) had been previously enrolled in the regional support network plan. Patients in this group were found to be highly dysfunctional in multiple areas, with high rates of unemployment, involvement with the criminal justice system, substance use problems, lack of social support, and homelessness—characteristics that are often associated with treatment noncompliance and that may have caused these patients to discontinue outpatient treatment on their own. It is also possible that these patients were discharged from the regional support network plan because of loss of Medicaid funding. They may have earned higher incomes, obtained private insurance, or experienced

Table 5

Logistic regression models for groups of patients who visited a crisis triage unit, by enrollment status in a regional prepaid managed mental health plan

Discriminating variable	Currently versus previously enrolled[1]			Currently versus never enrolled[1]			Previously versus never enrolled[2]		
	β	Odds ratio	95% CI	β[†]	Odds ratio	95% CI	β	Odds ratio	95% CI
Lifetime psychiatric hospitalizations (compared with no hospitalizations)									
One or two	.28	1.32	.84–2.06	1.26***	3.52	2.37–5.23	.95***	2.58	1.79–3.73
Three or four	.69**	1.99	1.20–3.27	2.01***	7.45	4.58–12.10	1.32***	3.74	2.25–6.24
Five or more	.95***	2.59	1.64–4.10	2.21***	9.09	5.58–14.80	1.31***	3.70	2.20–6.23
Type of residence (compared with independent living)									
Residential facility	1.04**	2.83	1.44–5.57	1.40***	4.04	2.11–7.74			
Homeless	.29	1.34	.95–1.88	.56**	1.76	1.22–2.54			
Psychiatric diagnosis (compared with functional psychoses)									
Unipolar depression	–.41*	.67	.44–.99	–.62**	.54	.35–.81			
Bipolar depression	–.44*	.64	.42–.98	–.26	.77	.48–1.24			
Substance use disorder	–1.09***	.34	.20–.56	–1.03***	.36	.21–.59			
Other	–.21	.81	.42–1.57	–.65*	.52	.30–.91			
Lifetime involuntary hospitalizations (compared with none)									
One or two				.74***	2.09	1.37–3.20	.61**	1.84	1.15–2.93
Three or more				1.67***	5.34	2.64–10.80	1.67***	5.34	2.53–11.30
Employment status (compared with full-time employment)									
Part-time				.44	1.55	.82–2.92	–.48	.62	.30–1.24
Episodic				.43	1.53	.88–2.66	.10	1.11	.68–1.82
Unemployed				1.03***	2.80	1.75–4.49	.57**	1.76	1.17–2.66

[1] Odds for currently enrolled group
[2] Odds for previously enrolled group
[†] Significance was evaluated by using Wald's t for significance of the term in the model in the presence of the other terms.
*p<.05
**p<.01
***p<.001

transient improvement in their symptoms. Nonetheless, they were by no means relieved of their mental illness or their symptoms, as evidenced by their emergency presentation to the crisis triage unit.

The findings for this group of patients have implications for the planning and development of mental health treatment programs and financial mechanisms. Although the previously enrolled patients might be viewed as treatment failures, they did represent the smallest patient group in the study (16 percent), and although they demonstrated significant symptom severity and levels of dysfunction, they were less likely to have a diagnosis of a psychotic disorder, they had fewer lifetime or past-year psychiatric hospitalizations, and they were somewhat more likely to be employed than patients in the

currently enrolled group. Thus, despite their high rate of homelessness and substance abuse, at least some of them were either less ill in the first place or had been at least partially stabilized. Nonetheless, many of these patients need at least episodic care, if not ongoing care, especially for symptoms and behavior that lead to social dysfunction.

King County sponsors many programs that target patients who are not enrolled in the regional support network plan (14,15). Other programs in the county serve mentally ill persons who are homeless, and the county also has a mental health court. However, the prominent social dysfunction, legal problems, substance use, and uncooperativeness of patients who previously have dropped out of care may prevent them from using these resources.

The largest proportion of patients in our study (58 percent) had never been enrolled in the regional support network plan. Although some of these patients may have had private insurance, their relatively low rate of full-time employment suggests that this would not have been the norm. Furthermore, many of those who were employed may represent the "working poor," who often have no insurance but because they are not eligible for Medicaid would probably not have been financially eligible for network plan services. Hence the psychiatric emergency room may have been their only treatment option.

Although never-enrolled patients were less compromised psychiatrically and less disabled than patients in the other two groups, their significant rates of substance abuse suggests that many—perhaps half—may

have needed primary addiction or dual diagnosis services rather than primary mental health services. In fact, their lower rates of psychiatric hospitalization and the types of symptoms they were most likely to experience—depression, anxiety, and suicidality—indicate that many of their mental health problems may have been substance induced. Furthermore, among those with mild to moderate comorbid psychiatric illness, substance use may have impaired insight about the need for mental health treatment and reduced follow-through for the treatment opportunities that were available.

Although there has been research in the area of mental health Medicaid managed care penetration (1,16–21), direct comparisons of the performance of the regional support network plan in our study and other similar programs are problematic because of organizational, regional, and methodological issues. Despite the lack of comparative data, our results indicate that the plan is succeeding in identifying high users of inpatient treatment, obtaining Medicaid coverage for them when they are eligible, enrolling them in outpatient programs, and keeping most of them—99 percent—out of emergency care, except for those with the most severe conditions. However, behavior and clinical history rather than symptom severity were the best predictors of whether a patient who presented to the crisis triage unit was currently, previously, or never involved in the regional support network plan.

Conclusions

Although the regional support network plan appeared to be doing a good job with the patients it was directed to enroll—that is, moderately to severely mentally ill individuals who qualify for Medicaid—almost three-quarters of the patients who sought emergency psychiatric services were not currently enrolled in the plan. A huge gap exists between people who are insured or can afford to pay out of pocket and people who qualify for Medicaid—primarily the working poor—and those whose symptoms are primarily substance induced and who do not qualify for

Medicaid or have insurance. The latter patient group could be better served by increasing the availability of primary substance abuse services and integrated dual diagnosis service systems and by facilitating access to clinical care (22,23). In the meantime, emergency psychiatric services are the only available care for this group. ♦

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