Medical Comorbidity and Receipt of Medical Care by Older Homeless People With Schizophrenia or Depression

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Objective: **Few studies have examined medical comorbidity among middle-aged and older homeless people with schizophrenia. This study compared the number of physical health problems and receipt of physical health care services among older homeless people with schizophrenia and those with major depression.** ***Methods:*** **The study was conducted at St. Vincent de Paul Village, a homeless shelter in San Diego, California, with an on-site free medical and psychiatric clinic. Data from the psychiatric clinic log for a one-year period were used to identify 47 shelter users older than age 45 with schizophrenia and an age- and gender-matched comparison group of 47 shelter users with major depression. A physician reviewed the patients' charts to obtain data for a comparison between groups of the number of clinic visits for medical problems, receipt of various components of the physical examination and preventive screening studies, and number of chronic medical disorders.** ***Results:*** **The patients with schizophrenia had fewer medical visits and fewer documented medical problems than those with depression. They were also less likely to receive a detailed physical examination, cholesterol level screening, and screening for colon cancer. The documented rates of several chronic medical problems, including diabetes, arthritis, and hypertension, were lower among the shelter residents with schizophrenia.** ***Conclusions:*** **Middle-aged and older homeless people with schizophrenia received less primary and preventive health care and were treated for fewer chronic medical problems than a comparison group with depression. (*Psychiatric Services* 53:1456–1460, 2002)**

Access to high-quality medical care is a problem for people with schizophrenia. Patients with chronic mental illness in general (1,2), and those with schizophrenia in particular (3,4), have high rates of underdiagnosed and undertreated medical problems. A recent study indicated that people with schizophrenia who had a physical illness were less likely to be admitted to a hospital during the early, less severe phases of the illness and more likely to be admitted when the disease was more advanced and more severe (5). People with schizophrenia who are hospitalized because of a myocardial infarction are less likely than members of the general population to receive state-of-the-art medical care (6). The number of older people with schizophrenia in the community is increasing (7), and, because medical illnesses become more common and more debilitating with age, the treatment of comorbid medical illnesses among older people with schizophrenia is becoming an important health care issue (8).

Serious mental illnesses, including schizophrenia, are much more common among homeless people than in the general population. Investigations have consistently found higher rates of substance abuse, schizophrenia, bipolar disorder, and major depression among homeless people than in the general population (9–11). Schizophrenia is about ten times more common among homeless individuals than in the general population (12).

Both schizophrenia and homelessness are associated with elevated mortality rates. The age-adjusted mortality rate for people with schizophrenia is about two times that of the

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general population (13–15); cardiovascular disease is the most common cause of death among people with schizophrenia (16,17). Homeless people have been reported to have a mortality rate 3.5 times as high as that of the general population (18). Elevated mortality rates among homeless people have been observed in studies of several large cities (19–21). Among homeless people with schizophrenia, mortality rates 3.7 times as high as in the general population have been reported (19).

We sought to assess the health status of middle-aged and older homeless people with schizophrenia and to document the primary and preventive health care they received. To our knowledge, no published studies have evaluated medical comorbidity in older homeless people with schizophrenia or have reported rates of physical examinations or preventive screening among individuals with schizophrenia. Our study setting was St. Vincent de Paul Village, a homeless services agency and shelter in San Diego, California. We used a systematic review of charts from the shelter's free medical clinic, which also provides psychiatric services, to obtain data on the primary and preventive health care received by shelter residents with schizophrenia. We hypothesized that people with schizophrenia would receive less primary and preventive health care and have fewer documented medical problems than a comparison group treated for major depression.

Methods

Setting

St. Vincent de Paul Village is one of the largest homeless shelters in southern California. It can accommodate 870 homeless people each night and provides comprehensive health care and social services, including a free medical clinic that serves the residents of the facility, other homeless people in San Diego, and uninsured people living nearby. The medical clinic provides both medical and psychiatric care and had more than 28,000 patient visits in 2000, including 2,400 psychiatric visits.

No medical or psychiatric evaluation other than tuberculosis screening is required for people who enter the shelter. Residents can self-refer to the clinic, and shelter staff often help people with known medical or psychiatric illnesses make clinic appointments. About a quarter of the shelter residents are seen in the on-site assessment center when they move from the short-term shelter (up to four months' stay) to the long-term shelter (up to two years' stay). The assessment center refers people with

Table 1

Characteristics of homeless persons with schizophrenia or major depression visited the free medical clinic at the St. Vincent de Paul Village homeless shelter in San Diego

Characteristic	Patients with schizophrenia (N=47)		Patients with depression (N=47)		Test statistic	df	p
	N or mean	%	N or mean	%			
Age (years)[a]	51.5		51.3				
Male gender[a]	25	53	25	53			
Ethnicity					χ^2=11.8	3	.02
Caucasian	33	71	32	68			
African American	10	21	4	9			
Hispanic	2	4	11	23			
Other	2	4	0	0			
Monthly income	$377±370		$318±737		t=.77	92	ns
Number of recorded medical problems	2.2±1.9		3.1±2.1		t=–2.1	92	.04
Months between first and last clinic visit	10.1±10.5		11.7±9.8		t=–.80	92	ns
Number of clinic visits for medical care	3.4±3.9		8.1±8.5		t=–3.5	92	.001
Number of clinic visits for psychiatric care	5.3±4.6		6.8±6.7		t=–1.3	92	ns

[a] Patients were individually matched for age and gender.

Table 2

Components of the physical examination and medical screening tests received by homeless persons with schizophrenia or major depression who visited the free medical clinic at the St. Vincent de Paul Village homeless shelter in San Diego

Physical examination component or screening test	Patients with schizophrenia (N=47)		Patients with depression (N=47)		$\chi^{2\dagger}$
	N	%	N	%	
Examinations of body systems					
Head, eye, ear, nose, and throat	22	46.8	41	87.2	17.4*
Cardiac system	28	59.6	42	89.4	11.0*
Lungs	30	63.8	41	87.2	7.0*
Abdomen	23	48.9	38	80.9	10.5*
Nervous system	9	19.1	16	34.0	2.6
Extremities	22	46.8	31	66.0	3.5
Pelvic examination (for women)	10	45.4	11	50.0	.1
Mammogram (for women)	9	40.9	8	36.4	.1
Occult fecal blood screening	2	4.2	13	27.6	9.6*
Cholesterol level screening	26	55.3	38	80.9	7.1*

* p<.01, two-tailed test
† df=1

Table 3

Chronic medical illnesses reported in the charts of homeless persons with schizophrenia or major depression who visited the free medical clinic at the St. Vincent de Paul Village homeless shelter in San Diego[a]

Illness	Patients with schizophrenia (N=47)		Patients with depression (N=47)		
	N	%	N	%	$\chi^{2\dagger}$
Diabetes	2	4.3	9	19.1	5.0*
Arthritis	8	17.0	18	38.3	5.3*
Hypertension	5	10.6	18	38.3	9.7**
Gastrointestinal problems	3	6.4	6	12.8	1.1
Hypothyroidism	5	10.6	5	10.6	0
Skin problems	11	23.4	7	14.9	1.1
Asthma or chronic obstructive pulmonary disease	10	21.3	8	17.0	.28
Alcohol abuse	14	29.7	13	27.7	.1
Drug abuse	17	36.2	7	14.9	5.8*

[a] Illnesses that were found for fewer than 10 percent of patients in either group are not shown.
* p<.05, two-tailed test
** p<.01, two-tailed test
† df=1

medical or psychiatric illnesses to the clinic for further evaluation.

Data collection and analysis

The clinic visit log for the one-year period from September 1999 through August 2000 was reviewed. All charts of people older than 45 years who lived at the shelter and were seen by a psychiatrist were screened. A total of 47 shelter users with a diagnosis of schizophrenia or schizoaffective disorder were identified. For each person with schizophrenia, a comparison patient of the same gender and age (within two years) who had been treated for major depression was selected. For each patient with schizophrenia, we identified about five matched patients with depression, and the comparison patient was chosen randomly from among the eligible matched patients. Shelter residents with depression were chosen as the comparison group because we wanted to identify both study groups by using the same mechanism of reviewing the psychiatric clinic log. In addition, previous studies have compared medical illnesses between people with schizophrenia and those with depression (20,21). Psychiatric diagnoses were based on *DSM-IV* (22) criteria and were made by senior psychiatric residents or faculty psychiatrists from the University of California, San Diego.

A physician dually trained in psychiatry and family medicine systematically reviewed each patient's chart and recorded demographic characteristics, the number of medical and psychiatric visits in the preceding 12 months, documented medical problems, and documented provision of major components of physical examinations and preventive screening studies, including tests for occult fecal blood and cholesterol level and, for women, pelvic examinations and mammography. Chi square analyses were used to compare categorical data, and t tests were used for continuous data. All tests were two-tailed, and the significance level was set at .05.

Results

Table 1 summarizes the characteristics of the two age- and gender-matched groups. The two groups differed in ethnic composition. Shelter residents who received treatment for schizophrenia were more likely to be African American, and those treated for depression were more likely to be Hispanic. The number of psychiatric visits and the duration of treatment at the clinic were also similar. However, patients with schizophrenia had fewer documented medical problems and fewer medical visits. No differences in mean income were noted between the two groups.

Patients with schizophrenia were less likely than those with depression to receive most components of the physical examination, including examination of the head, eyes, ears, nose, and throat and cardiac, lung, and abdominal examinations (Table 2). For women, there was no difference between groups in the rates of pelvic examination or mammogram. Screening tests for colon cancer and cholesterol levels were documented less often for people with schizophrenia.

Patients with schizophrenia were less likely to have recorded chart diagnoses of diabetes, arthritis, and hypertension (Table 3). The frequency of several other common chronic medical conditions, including asthma or chronic obstructive pulmonary disease, skin problems, and hypothyroidism, was similar for the two groups. Problems that were uncommon in either group—found for fewer than 10 percent of either group—are not listed in Table 3. The rates of drug abuse were higher among patients with schizophrenia. The rates of alcohol abuse were similar for the two groups.

The difference between ethnic groups in psychiatric diagnoses was unexpected. However, ethnic differences in rates of mental disorders were not the focus of this study. Additional studies with larger samples are needed to determine whether this finding is valid. Because of the difference in ethnicity between the two groups, the statistical comparisons were repeated with data from only the Caucasian patients (33 patients in the schizophrenia group and 32 in the major depression group). This reanalysis showed no changes in the direction of the differences between the groups, although the smaller sample reduced the level of statistical significance for some variables. The p values for the comparisons of rates of cardiac and abdominal examinations and of a diagnosis of hypertension changed from <.01 to <.05. The p values for the comparisons of rates of lung examination and of a diagnosis of substance abuse changed from <.05 to <.1. Finally, the differences in the rates of diabetes and arthritis, in the number of medical problems, and in the rate of cholesterol screening became nonsignificant.

Discussion

In this chart review study of middle-aged and older homeless people living in St. Vincent de Paul homeless shelter in San Diego, shelter residents with schizophrenia received less primary and preventive health care than an age- and gender-matched comparison group with major depression. The patients with schizophrenia also had fewer documented chronic medical illnesses. This finding is interesting in light of the fact that no differences between groups were found in the number of psychiatric visits or the duration of treatment.

Our findings of less primary and preventive health care and fewer documented medical problems among older homeless people with schizophrenia are consistent with earlier reports of high rates of undiagnosed medical illnesses among people with schizophrenia (20,21). Taken together, the findings of fewer documented medical problems, less health care, and higher rates of mortality strongly suggest that all people with schizophrenia, not just those who are homeless, are at risk of underdiagnosis and undertreatment of medical illnesses.

The elevated mortality rates from cardiovascular disease among people with schizophrenia also suggest that this group is less likely to receive primary and preventive health care in the early and silent stages of a disease (16,17). For example, the rate of hypertension has been reported to be 40 percent lower among people with schizophrenia than in the general population, but the reported rates of admission for end-stage complications of hypertension, including cardiomyopathy and pulmonary edema, are 1.8 and 1.5 times greater, respectively (5).

There are several possible explanations for why people with schizophrenia receive less health care. People with schizophrenia may have problems describing their medical symptoms to primary care physicians. Physicians may be uncomfortable treating people with schizophrenia (23), possibly reflecting stigmatization of people with this disorder. Likewise, psychiatrists may not feel comfortable providing primary and preventive health care for their patients (24). Finally, the health care system may treat people with schizophrenia differently than others. A pair of recent studies found that people with schizophrenia who have a myocardial infarction are less likely to receive cardiac catheterization and have a mortality rate 34 percent higher than that of people in the general population who suffer a myocardial infarction (6,25).

The findings of this study are supported by the inclusion of comparison patients who were matched for age and gender with the patients with schizophrenia. In addition, all patients were identified by the same mechanism—a review of the psychiatric clinic log. In addition, a single physician reviewed all the charts.

Among the limitations of this study are its retrospective design and its reliance on patients' reporting their symptoms and medical history and on the treating physicians' recording this information in the chart. The physician reviewing the charts was not blind to psychiatric diagnoses and had provided care to a small proportion (less than 20 percent) of the patients in the study. The homeless people in this study were living at the St. Vincent de Paul shelter, which provides a comprehensive array of medical and psychiatric services that are not available in many other homeless shelters. The health status and use of services by homeless people in shelters may be different from those among homeless people who do not use shelters.

The patients in the comparison group had a diagnosis of major depression. People with this diagnosis have been reported to have higher levels of health care utilization, higher health care costs (26), and worse health outcomes (27) than the general population. Another study found that patients with depression treated in a health maintenance organization had higher general medical costs than patients with bipolar disorder or no mental illness (28). Thus the inclusion of patients with major depression as the comparison group in our study may have resulted in larger differences between groups in the amount of health care received than we would have observed with a comparison group of persons with no mental illness.

Several of the differences we found, including fewer medical visits and fewer diagnosed medical illnesses among patients with schizophrenia, probably reflect both less use of medical care by patients with schizophrenia and greater use by patients with depression. On the other hand, other measures we used, including whether a patient received specific components of the physical examination or laboratory screening tests, are likely to be less sensitive to greater use of health care services.

Future research on primary and preventive health care for people with schizophrenia should include comparison groups with no mental illness in addition to those with major depression. The samples were relatively small, and type I error due to multiple comparisons cannot be ruled out. Finally, some patients may have received health care at another clinic, although this is unlikely, given that the clinic at St. Vincent de Paul Village is free of charge, open during regular hours every day, and located within the shelter itself.

The current U.S. health care system can be difficult to navigate for the average person, and this difficulty is magnified for people with schizophrenia. Clearly, better methods of providing primary and preventive health care for people with schizophrenia need to be developed, studied, and implemented. ♦

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