

Health Behaviors and Health Status of Older Women With Schizophrenia

Faith B. Dickerson, Ph.D.

Andrea Pater, B.S.

Andrea E. Origoni, B.A.

The authors interviewed 43 women with schizophrenia who were 40 to 70 years of age about their health status, preventive health care, addictive behaviors, and comorbid medical conditions. Data were compared with those for age-matched samples from the general population. Thirty women in the study sample (71 percent) were overweight or obese, compared with 38 percent in the general population. Twenty-seven (63 percent) smoked cigarettes. Twenty-six women (62 percent) had received a mammogram in the past two years, compared with 86 percent in the general population. Rates of routine physical examinations and Pap tests did not differ markedly between the study sample and the general population. These results highlight the health impairments of older women who have schizophrenia. (*Psychiatric Services* 53:882–884, 2002)

Both men and women who have schizophrenia have higher mortality rates and lower rates of health-promoting behaviors than the rates observed in the general population (1,2). However, the relative risks of suicide and obesity in this patient

group are higher among women than men (3,4). The purpose of this study was to assess health behaviors and health status in a sample of older women with schizophrenia. Data from our sample were compared with those from age-matched samples from the general population.

Methods

The study sample was recruited from outpatient rehabilitation programs affiliated with the Sheppard Pratt Health System in central Maryland. Inclusion criteria were female gender, a documented diagnosis of schizophrenia or schizoaffective disorder, and age of 40 to 70 years.

After providing written informed consent, each participant was interviewed with a survey instrument containing items from the Behavioral Risk Factor Survey (BRFS) (5) to provide information about physical health status, routine and preventive health care, addictive behaviors, and comorbid medical conditions. The interviews were conducted from November 1999 to September 2000. The study was approved by Sheppard Pratt's institutional review board. Responses from the sample were compared with those of reference populations of approximately the same age range as the study sample from the 1999 Maryland BRFS.

Results

About 90 percent of eligible women who were approached about the study agreed to participate. A total of 43 women participated in the study. The mean $\pm$ SD age of the sample was 51.9 $\pm$ 7.5 years; 18 women (42 percent) were 40 to 49 years of age, 17

(40 percent) were 50 to 59 years of age, and eight (19 percent) were 60 to 69 years of age. The sample included 35 Caucasians (82 percent) and eight African Americans (18 percent). Twenty-three women (53 percent) had never been married, four (9 percent) were currently married, and 16 (37 percent) were separated or divorced. The mean number of years of education was 12.6 $\pm$ 2. The modal monthly income was \$500 to \$750. Twenty-five women (58 percent) received Medical Assistance, 21 (49 percent) were covered by Medicare, and 11 (26 percent) were covered by commercial insurance; some women had more than one type of insurance coverage. All the participants were receiving psychiatric rehabilitation services and had received prescriptions for antipsychotic medications.

The data for the study sample and for the Maryland reference sample are summarized in Table 1. On several health indicators, the 95 percent confidence intervals for our patients' responses did not overlap with those for the responses of the reference population, which indicates that the responses in our sample are likely to be significantly different from those of the reference group. The body mass index (BMI; in kilograms per square meter) of the women in our sample was significantly higher than that of Maryland women aged 45 to 54 years from the general population. Thirty of 42 women in our sample (71 percent) were classified as overweight or obese, defined as a BMI greater than 27.3, compared with 38 percent in the comparison sample; 13 (31 percent) were obese, defined as a BMI above 30, including four (10

Dr. Dickerson is director of psychology and Ms. Pater and Ms. Origoni are research technicians at the Sheppard Pratt Health System, 6501 North Charles Street, Baltimore, Maryland 21204 (e-mail, fdickerson@sheppardpratt.org). This paper is one of several in this issue focusing on the health and health care of persons with severe mental illness.

percent) who were morbidly obese (BMI above 40).

The proportion of women in our sample who were current smokers is strikingly high at 63 percent (27 women), compared with 25 percent of Maryland residents aged 45 to 54 years. Our data indicate further that the women in our sample who did smoke were significantly more likely than smokers in the Maryland sample to smoke more than 20 cigarettes a day.

The women in our sample also underused mammography and breast self-examination. Twenty-six women in our sample (62 percent) reported having received a mammogram in the past two years, a rate significantly lower than the 86 percent of women aged 50 to 59 years in the Maryland sample. Also of concern were the eight women (19 percent) who had never had a mammogram; this percentage is significantly higher than the rate of 5 percent in the reference population.

Thirty-six of the women in our sample (86 percent) reported that they had made a routine physician's visit in the past year, which compares favorably with the 80 percent of persons aged 45 to 54 years from the Maryland sample. The proportion of women in our sample who reported having recently received a Pap test was also similar to the proportion of women aged 50 to 59 years in the Maryland sample who had recently received a test. The proportion of women in our sample who had comorbid diabetes or high blood pressure was higher than the proportion in the reference sample, although the difference was not significant.

Discussion and conclusions

The most striking health status characteristics among the women in our sample were their high rates of obesity and smoking and their underuse of mammography.

Our BMI data are consistent with those of Allison and colleagues (3), who found that women with schizophrenia have a significant risk of obesity. Like people in the general population, women with schizophrenia who are obese are more likely to develop other serious medical disorders, including hypertension and diabetes.

Table 1

Health behaviors and health status reported by 43 women with schizophrenia and an age-matched general population sample of Maryland residents

Health behavior or status	Study sample			Maryland reference sample	
	N	%	95% CI	%	95% CI
Self-rating of health ^a					
Excellent	6	14	5–28	26	22–30
Very good	10	23	12–39	34	29–38
Good	16	37	23–53	28	24–32
Fair	6	14	5–28	9	6–12
Poor	5	12	4–25	4	2–5
Overweight or obese (N=42) ^a	30	71	55–84	38	33–42
Routine doctor's visit in the past year (N=42) ^a	36	86	71–95	80	76–83
Dental visit in the past year (N=41) ^a	24	58	42–74	76	72–80
Pap test in the past year (N=42) ^a	33	79	63–90	75	69–81
Pap test in the past three years (N=42) ^b	38	90	77–97	90	85–95
Pap test ever ^b	43	100		97	95–99
Mammogram in the past year (N=42) ^b	19	45	30–61	75	69–81
Mammogram in the past two years (N=42) ^b	26	62	46–72	86	82–91
Mammogram never (N=42) ^b	8	19	9–34	5	2–7
Breast examination by a doctor in the past year (N=40) ^b	30	75	59–87	81	76–87
Breast self-examination never (N=42) ^b	15	36	22–52	6	3–9
Current smoker ^{a,c}	27	63	47–77	25	21–28
				19	17–21
If a smoker, smokes no more than 20 cigarettes a day (N=27) ^d	18	67	46–83	93	90–96
High blood pressure ever ^a	16	37	7–53	28	24–31
Diabetes ever ^a	6	14	5–28	8	6–10

^a Reference group is persons aged 45 to 54 years

^b Reference group is women aged 50 to 59 years

^c Reference group is adults of all ages

^d Reference group is women of all ages

Obesity also has potential psychological consequences and may compound the poor self-esteem found among women who have schizophrenia.

The high rate of smoking in our sample is consistent with the documented high prevalence of smoking among outpatients with schizophrenia (6). The rate in our sample was also higher than the rate of 22 percent among women nationwide aged 45 to 64 years in 1999 (5).

Underuse of mammography has been noted in the general population among women who are economically disadvantaged and who are in relatively poor health. These factors may be operative among women with schizophrenia (7,8). Studies of the general population have also found relative underuse of mammography among women who do not use regular health care services (9). The latter factor is unlikely to explain the under-

use of mammography in our sample, because the rate of routine care in the sample did not differ significantly from that in the comparison group.

The data on comorbid health problems in our sample are consistent with previous reports about the higher prevalence of cardiovascular disease and type 2 diabetes among persons with schizophrenia than in the general population (10).

A limitation of this study was that the data were based on self-reports. Also, our sample was not exactly matched in age to the reference groups, which may have affected the comparisons we made. In addition, our sample consisted of women who were engaged in rehabilitation and outpatient care and thus may not be representative of older women with schizophrenia, many of whom do not receive psychiatric services. Our findings may underreport the health

problems and underuse of health care services among older women with schizophrenia. ♦

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Medical Illness and Severe Mental Illness

Receipt of Preventive Medical Services at Psychiatric Visits by Patients With Severe Mental Illness

Gail L. Daumit, M.D., M.H.S.
Rosa M. Crum, M.D., M.H.S.
Eliseo Guallar, M.D., Dr.P.H.
Daniel E. Ford, M.D., M.P.H.

The authors used data from the National Ambulatory Medical Care Survey from 1992 to 1999 on 3,198 office visits to explore the extent to which psychiatrists provide clinical preventive medical services to patients with severe mental illness. Preventive services were provided during 11

percent of the visits. A multivariate analysis showed that preventive services were more likely to have been provided for patients with a chronic medical condition, for patients who were also seen by a nurse or other health provider during the visit, in rural areas, and during longer visits. Preventive services were less likely to have been provided during visits to health maintenance organizations and visits that took place later in the study period. (*Psychiatric Services* 53:884–887, 2002)

Persons with severe and persistent mental illnesses suffer from high rates of comorbid medical illnesses, some of which may be attributable to

unhealthy behaviors (1,2). Weight gain and other effects of psychotropic medications also contribute to the burden of medical conditions in this population. Because patients who have severe mental illness may face barriers in obtaining primary care services, they may not receive clinical preventive medical services appropriate to their needs, such as blood pressure screening and exercise counseling (1).

The feasibility and acceptability of psychiatrists' providing certain primary care services for their patients with severe mental illness are controversial (3,4). Many psychiatrists are interested in providing medical preventive services but cite lack of training as a major barrier to their delivery of these services (5). On a panel convened to recommend primary care

The authors are affiliated with the School of Medicine and the Bloomberg School of Public Health at Johns Hopkins University. Send correspondence to Dr. Daumit, Johns Hopkins Medical Institutions, 2024 East Monument Street, Suite 2-500, Baltimore, Maryland 21287 (e-mail, gdaumit@jhmi.edu). This paper is one of several in this issue focusing on the health and health care of persons with severe mental illness.

services that could be appropriately delivered by psychiatrists who have some primary care training, a majority agreed that most preventive services could be provided by psychiatrists (6). At least one training program is under way to teach ambulatory care skills to psychiatry residents (7).

We sought to determine the extent to which psychiatrists in the United States provide clinical preventive medical services during office visits by patients with severe mental illness as well as factors associated with providing these services. We hypothesized that preventive counseling would occur more commonly during visits by patients with certain chronic medical conditions.

Methods

Data were obtained from the National Ambulatory Medical Care Survey (NAMCS), an ongoing annual survey of randomly selected U.S. office-based physicians conducted by the National Center for Health Statistics (NCHS) (8). We conducted a cross-sectional analysis of outpatient visits to psychiatrists by persons with severe mental illness from 1992 to 1999. Severe mental illness was defined as an *ICD-9* diagnosis of a psychotic disorder (*ICD-9-CM* codes 295 and 297 to 298.9), bipolar disorder (codes 296.4 to 296.8), or recurrent depression (codes 296.3 and 301). We included visits by patients aged 18 or older who were white, African American, or Hispanic.

The NAMCS includes visits to private offices, freestanding and local government clinics, community health centers, and health maintenance organizations. It excludes visits to hospital outpatient departments, federally employed physicians, and institutional settings such as the Department of Veterans Affairs medical facilities. Response rates ranged from 68 percent to 73 percent for the study period (8). Detailed information about the design of the NAMCS and data collection forms may be found at www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm.

In the survey, physicians record information about their encounters with patients during one randomly assigned week of the year. Information on pa-

tients' sociodemographic characteristics, diagnoses, and treatment and certain characteristics of the practice setting is collected. For independent variables, we used information on patients' age, sex, race or ethnicity, payment source, psychiatric diagnosis, and geographic region as well as whether they visited a practice in a metropolitan or a rural location, whether they had a chronic medical condition, whether the visit was an initial or a follow-up visit, and the amount of time spent with the psychiatrist.

We also examined whether other health care providers saw the patient during that visit. We noted evidence of schizophrenia and related psychotic disorders, bipolar disorder, and depression. A chronic medical condition was defined as documentation of diabetes, obesity, or hypertension, which physicians reported by checking a box. Patients were also considered to have diabetes if diabetic medication was listed. Physicians could also record up to three diagnoses of any type by writing on the visit form.

Our outcome of interest was receipt of any clinical preventive medical service. We defined these services broadly to include counseling for smoking, diet, weight, exercise, cholesterol, sexually transmitted diseases, injury prevention, HIV infection, prenatal care, breast examinations, or skin examinations. We also included measurement of blood pressure and laboratory tests for cholesterol, HIV infection or other sexually transmitted diseases, and prostate-specific antigen. Physicians could record these services by checking a box on the visit form.

We conducted chi square tests to investigate whether patient characteristics and characteristics of the practice setting varied by receipt of clinical preventive medical services. We developed logistic regression models to examine associations between these factors and receipt of preventive services.

The NAMCS is based on complex multistage sampling designs. However, for confidentiality reasons the NCHS does not release the primary sampling units for most years of the survey. Because our analysis tested a hypothesis of an association, we re-

port results based on unweighted data (9). We performed sensitivity analyses to approximate the complex survey designs of the NAMCS by using the survey weights in the analysis and the strata of geographic region and urban or rural designation as a proxy for primary sampling units. These results were essentially similar to those obtained through logistic regression models using unweighted data.

Results

From 1992 to 1999, there were 3,198 visits to office-based psychiatrists for patients who met the criteria for severe mental illness. Demographic and clinical characteristics of these patients' visits are summarized in Table 1. More than half of the visits (54.2 percent) were for patients between the ages of 31 and 50 years; 60.7 percent were for women, and 89.7 percent were for whites. Almost 90 percent of the visits took place in metropolitan areas, and about 30 percent of the visits were covered by Medicaid or Medicare.

We identified 354 visits (11 percent) during which any clinical preventive medical service was provided. For 58 percent of these visits, one preventive service was reported; for 21 percent of visits, two preventive services; and for 20 percent of visits, at least three preventive services. Preventive counseling was provided during most (83 percent) visits that involved preventive services. Measurement of blood pressure was the most common type of physical examination recorded for visits during which preventive services were provided (28 percent); other physical examinations and laboratory measures were rare.

The adjusted and unadjusted odds ratios for receipt of preventive services are also listed in Table 1. The odds of receipt of preventive services were 1.45 times as high for visits to practices in rural areas as for visits to practices in metropolitan areas, although when the odds ratio was adjusted for potential confounding factors, the confidence interval included 1. The odds of preventive services were 2.5 times as high for visits for which diabetes, hypertension, or obesity was

Table 1

Characteristics of patients and practice settings for psychiatric visits by patients with severe mental illness, frequency of preventive services, and odds of receiving general preventive services

Characteristic	All visits (N=3,198)		Visits including any pre- ventive service (N=354)		Odds ratio	95% CI	Adjusted odds ratio ^a	95% CI
	N	%	N	%				
Age group								
18 to 30	459	14.4	48	10.5	1.00		1.00	
31 to 50	1,734	54.2	195	11.3	1.15	.88–1.52	1.07	.80–1.42
51 or older	666	20.8	80	12.0	1.24	.89–1.73	1.19	.85–1.67
Sex								
Men	1,257	39.3	135	10.7	1.00		1.00	
Women	1,941	60.7	219	11.3	1.06	.84–1.33	.97	.76–1.23
Race or ethnicity								
White	2,869	89.7	310	10.8	1.00		1.00	
Nonwhite	329	10.3	44	13.4	1.27	.91–1.79	1.22	.85–1.74
Geographic region								
Northeast	904	28.3	105	11.6	1.00		1.00	
South	760	23.8	81	10.7	.91	.67–1.23	.86	.62–1.18
Midwest	699	21.9	74	10.6	.90	.66–1.24	.78	.55–1.08
West	835	26.1	94	11.3	.98	.72–1.30	.89	.66–1.21
Metropolitan area	2,795	87.4	295	10.6	1.00		1.00	
Rural area	403	12.6	59	14.6	1.45	1.08–1.96	1.37	1.00–1.88
Chronic medical condition recorded ^b								
No	2,851	89.2	269	9.4	1.00		1.00	
Yes	347	10.9	85	24.5	3.11	2.37–4.10	2.52	1.89–3.36
Psychiatric diagnosis								
Psychotic disorder	1,183	37.0	129	10.9	1.00		1.00	
Bipolar disorder	1,038	32.5	136	13.1	1.23	.95–1.59	1.28	.97–1.70
Depression	977	30.6	89	9.11	.82	.62–1.09	.88	.65–1.20
Payment source ^c								
Private fee-for-service	1,210	37.8	147	12.2	1.00		1.00	
HMO	379	11.9	19	5.0	.38	.23–.63	.46	.28–.77
Medicaid	510	16.0	73	14.3	1.21	.89–1.63	1.25	.90–1.74
Medicare	458	14.3	44	9.6	.77	.54–1.10	.91	.62–1.31
Self-pay or no charge	641	20.0	71	11.1	.90	.67–1.22	.95	.69–1.29
Initial visit	262	8.2	25	9.5	1.00		1.00	
Follow-up visit	2,936	91.8	329	11.2	1.12	.78–1.84	1.20	.78–1.87
Year of visit								
1992 to 1994	1,330	41.6	196	14.7	1.00		1.00	
1995 to 1999	1,868	58.4	159	8.5	.54	.43–.68	.63	.50–.80
Time spent with psychiatrist								
Less than 30 minutes	1,002	31.3	76	7.6	1.00		1.00	
At least 30 minutes	2,196	68.7	279	12.7	1.77	1.35–2.30	1.81	1.37–2.40

^a Adjusted for age, sex, race or ethnicity, geographic region, metropolitan or rural location, chronic medical condition, psychiatric diagnosis, payment source, initial versus follow-up visit, year of visit, and time spent with the psychiatrist

^b Includes diabetes, hypertension, and obesity

^c Medicare category includes Medicare HMO, and Medicaid category includes Medicaid HMO.

documented as for visits for which these chronic medical conditions were not recorded (adjusted odds ratio). Spending at least 30 minutes with the psychiatrist was also independently associated with receiving a preventive service compared with spending less than 30 minutes (adjusted odds ratio=1.8).

In a separate model we examined the subset of visits for which types of health care providers were documented. Visits that involved another type of provider—for example, a nurse or a

medical assistant—had almost three times the odds of including a preventive service (OR=2.75, 95 percent confidence interval=1.66 to 4.57).

Certain variables were associated with lower odds of receiving a preventive service. For visits in health maintenance organizations, the adjusted odds of receiving a preventive service was less than half that for visits covered by private fee-for-service insurance. The adjusted odds of receiving a preventive service was almost 40 percent lower in the later

part of the study period than in the period of 1992 to 1994.

Discussion and conclusions

In this random sample of visits to psychiatrists' offices by persons with severe mental illness in the 1990s, we identified characteristics associated with provision of clinical preventive medical services. Psychiatrists provided preventive services—principally counseling—during only 11 percent of visits by members of this vulnerable population.

Lifestyle counseling is especially indicated for the chronic medical conditions diabetes, obesity, and hypertension. It is reassuring that visits for which these high-risk conditions were documented were more likely to involve preventive services. However, it is possible that psychiatrists who were more likely to provide preventive services were also more likely to identify these chronic medical conditions. The higher frequency of preventive services for patients who saw another health provider in addition to the physician suggests that these services are more likely to be provided when the psychiatric office staff functions as a team. The higher odds of preventive services being provided by psychiatrists in rural areas than in metropolitan areas is consistent with the results of other studies, which have suggested that psychiatrists in rural practices serve an important primary care role for their patients with chronic mental illness (10).

The fact that preventive services were less likely to have been provided during visits in health maintenance organizations than during visits covered by private fee-for-service insurance could reflect greater administrative pressures in managed care settings and disincentives to provide services outside the traditional scope of psychiatry. However, this finding also is consistent with the fact that patients in health maintenance organizations have a primary care physician who is likely to be responsible for providing preventive care. The lower rate of provision of preventive services in the latter part of the study period, even after adjustment for payment source and visit length, could reflect increasing administrative pressures in psychiatric practice in the latter part of the decade. This trend needs to be monitored carefully.

Although psychiatrists who provide care for patients with severe mental illness may not have sufficient time or training to deliver preventive medical services, they may facilitate receipt of preventive care by ensuring that their patients have access to primary care physicians, helping to coordinate care, and enhancing the quality of communication between patients and their primary care physicians. This

detailed information about physicians' behavior is not available from the NAMCS.

The survey data have other limitations. Patients with severe mental illness may make multiple visits to a psychiatrist, but the visit-based design of the NAMCS does not allow for assessment of the amount of preventive services provided over time to an individual. In addition, we used diagnostic and medication codes to classify severe mental illness, but we did not have information on degree of impairment. Because the survey does not include visits to hospital outpatient departments or Department of Veterans Affairs medical facilities, our findings may not be generalizable to these settings.

This analysis showed that persons who have severe mental illnesses received clinical preventive medical services in a small minority of office visits to psychiatrists. Even during visits with characteristics associated with a greater likelihood of provision of preventive services, the rate of provision of these services was relatively low. The need for clinical preventive services, especially lifestyle counseling, in this population is high. More research on effective and practical solutions to ensure that people with severe mental illness receive appropriate preventive medical care is warranted. ♦

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