The Rate of Public Shelter Admission among Medicaid-Reimbursed Users of Behavioral Health Services

Dennis P Culhane, University of Pennsylvania
June Mann Averyt, University of Pennsylvania
Trevor R Hadley, University of Pennsylvania
The operation of service systems matters. The full value of the resources that are available for the treatment of homeless mentally ill persons can be realized only to the extent that we can understand and optimize the workings of the service systems through which these resources are deployed.

Acknowledgment
This study was funded under interagency agreement AM3122001A between the Center for Mental Health Services and the Veterans Affairs Northeast Program Evaluation Center.

References
5. Rosenheck RA, Gallup PA, Frisman LK: Service linkage and related costs of an outreach program for homeless mentally ill veterans. Hospital and Community Psychiatry 44:1166-1171, 1993
7. Rosenheck RA, Lam J: Homeless mentally ill clients' and providers' perceptions of service needs and clients' use of services. Psychiatric Services 48:381-386, 1997

The Rate of Public Shelter Admission Among Medicaid-Reimbursed Users of Behavioral Health Services

Dennis P. Culhane, Ph.D.
June M. Averty, M.S.W.
Trevor R. Hadley, Ph.D.

This study examined the rate of admission to public shelters between 1990 and 1992 among persons who received Medicaid-reimbursed inpatient and outpatient psychiatric services and inpatient substance abuse services in Philadelphia between 1985 and 1993. Results show that 7.5 percent of such persons were admitted to public shelters during the three-year period, nearly 2.7 times the rate of shelter use by the general population (2.8 percent). Medicaid recipients treated for serious mental disorders had a three-year rate of shelter use of 8.4 percent. Those receiving inpatient treatment for substance use disorders, including detoxification services, had a three-year rate of shelter admission of 10.2 percent. (Psychiatric Services 48:390-392, 1997)

The epidemiological literature on homelessness and psychiatric and substance use disorders (behavioral health disorders) is based primarily

PSYCHIATRIC SERVICES * March 1997 Vol. 48 No. 3
on measures of the prevalence of behavioral health disorders among the homeless population (1). These measures have been critical in planning programs for people who are homeless. However, these measures do not allow assessment of the relative risk of homelessness among people with behavioral health problems. Such information is needed for planning and prioritizing homelessness prevention services.

Little previous research on the risk of homelessness among people with behavioral health problems has been conducted (2–7). Previous studies examining the rate of homelessness among people with behavioral health disorders are limited by use of cross-sectional samples from single sites and reliance on subjects’ self-reports of homelessness history. The study reported here examined the rate of shelter admission among people being treated for psychiatric and substance use disorders, using longitudinal administrative data on shelter and behavioral health care utilization from the city of Philadelphia.

**Methods**

After duplicate records were eliminated, data for users of Medicaid-reimbursed behavioral health services in the city of Philadelphia from 1985 to 1993 (N = 120,365) were sorted by most frequently occurring diagnosis. Duplicate records were eliminated based on identifiers consisting of first and last names, birth dates, gender, and Medicaid numbers. A comparison of these data against other data sets suggests that despite efforts to eliminate duplication, a 4 percent duplication rate remains (8). Diagnostic groups were based on DSM-III-R codes at the integer level, as shown in Table 1.

Both inpatient and outpatient use of psychiatric services was examined. However, data were not included for persons who received Medicaid-reimbursed outpatient substance abuse services and substance abuse services at agencies funded by the city of Philadelphia. The study included users of Medicaid services who were not treated in a mental health setting and treated in a mental health setting but not treated in Philadelphia.

Table 1 shows the three-year rate of shelter admission among the treated Medicaid population. Overall, 7.5 percent of the Medicaid population receiving treatment for a substance use disorder or a psychiatric disorder between 1985 and 1993 used the public shelter system in the three-year study period. A higher proportion of the Medicaid population with a diagnosis of serious mental illness, 8.4 percent, used the shelter system at
some point between 1990 and 1992. Nearly 10 percent of the Medicaid population treated for schizophrenia between 1985 and 1993 stayed in public shelters between 1990 and 1992. The three-year rate of shelter use was highest among those treated in an inpatient setting for substance use disorder, 10.2 percent. More than 15 percent of the Medicaid population treated for nondependent drug abuse between 1985 and 1993 used the shelter system in the three-year period, the highest of any rate among the treated population.

Among the treated Medicaid population, shelter users were more likely to have a diagnosis of serious mental illness (32.7 percent), particularly schizophrenia (19.2 percent), than those who did not use shelters (28.7 percent for those with serious mental illness and 14.3 percent for those with schizophrenia). In contrast, those who did not use shelters were much more likely to have a diagnosis of adjustment reaction (15.7 percent) or personality disorder (16.4 percent) than the shelter users (8.7 percent and 9.8 percent, respectively). Substance use disorders were a proportionately greater problem among treated shelter users—46.5 percent had a substance-related diagnosis—than among treated Medicaid recipients who did not use shelters, 33 percent of whom had a substance-related diagnosis. Among the treated shelter users, 31 percent had a diagnosis of drug dependence or a drug-induced psychosis; among the treated Medicaid population not using shelters, only 22.2 percent had these diagnoses.

Discussion and conclusions
This study documented the disproportionate rates of homelessness among people with both serious mental illness, particularly schizophrenia, and substance use disorders use public shelters. Previous research based on the Philadelphia data found that 2.8 percent of the general population in Philadelphia was admitted to public shelters between 1990 and 1992 (9). Accordingly, it appears that people with substance use disorders and schizophrenia have a higher relative risk for shelter use, with three-year rates of 10.2 percent and 9.7 percent, respectively.

These estimates are not entirely comparable, because rates for the Medicaid population are cumulative over nine years, while rates for the general population are based on a single point in time. The more inclusive denominator is likely to produce an underestimate of the risk of shelter admission among users of behavioral health services. Nevertheless, these data suggest that people with serious mental disorders or substance use disorders should receive priority for homelessness prevention efforts.

This study is limited in that identification of persons who were homeless and who had behavioral health disorders was based on administrative records. The study excluded homeless people who did not use the public shelter system, such as "street homeless" persons and those who used privately funded shelters, which account for 15 percent of the city's shelter bed capacity. Similarly, those receiving treatment for behavioral health conditions outside the Medicaid system and untreated persons were excluded. As noted, the Medicaid claims files also have a 4 percent duplication rate (8).

Future research should attempt to determine the comparable rates of homelessness among people with treated behavioral health disorders in other locales. Such knowledge may enable investigators to study the service system factors that are associated with the risk for homelessness among people with behavioral health disorders.

Acknowledgments
This research was supported by a grant from the Ittleson Foundation, a contract with the Philadelphia Office of Mental Health, and a contract with the Center for Mental Health Services.

References
9. Calhoun DP, Averyt JM, Hadley TR: The Treated Prevalence of Behavioral Health Disorders Among Adults Admitted to the Philadelphia Shelter System, and the Rate of Shelter Admission Among Users of Behavioral Health Services: Results From the Integration of Longitudinal Data on Shelter and Behavioral Health Service Use. Rockville, MD, Center for Mental Health Services, 1996