The Journal of Mental Health Policy and Economics
J. Mental Health Policy Econ. **4**, 35-41 (2001)

Minority Response to Health Insurance Coverage for Mental Health Services

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Abstract

Background: To promote access to mental health services, policy makers have focused on expanding the availability of insurance and the generosity of mental health benefits. Ethnic minority populations are high priority targets for outreach. However, among persons with private insurance, minorities are less likely than whites to seek outpatient mental health treatment. Among those with Medicaid coverage, minorities continue to be less likely than whites to use services.
Aims of the Study: The present study sought to determine if public insurance is as effective in promoting outpatient mental health treatment as private coverage for ethnic minority groups.
Methods: The analysis uses data from the 1987 National Medical Expenditure Survey to model mental health expenditures as a function of minority status and private insurance coverage. An interaction term between the two highlights any differences in response to private and public insurance coverage. The analysis uses a two stage least squares method to account for endogeneity of insurance coverage in the model.
Results: Minorities are less responsive to private insurance than whites in two ways. First, minorities are less responsive to private insurance than to public insurance whereas whites do not show this difference. Second, minorities are less responsive to private insurance than whites are to private insurance.
Discussion: Results suggest that there is a difference in the effectiveness of public and private health insurance to encourage use of mental health services. Among minorities but not among whites, those with private coverage used fewer mental health services than those with public coverage. Minorities were not only less responsive to private insurance than public insurance, but among those who were privately insured, minorities used fewer mental health services than whites. These results imply that insurance may not be as effective a mechanism as hoped to encourage self-initiated treatment seeking particularly among minority and other low income populations.
Implications for Further Research: Areas for further research include the impacts of alternative definitions of mental health services, the dynamics of the substitution of inpatient for outpatient mental health care, elucidation of nonfinancial barriers to care for minorities, and determinants of timely help-seeking among minorities.
Implications of Health Care Provision and Use: These results suggest that increasing private insurance coverage to minority populations will not eliminate racial and ethnic gaps in professional help-seeking for outpatient mental health care. Although the total number of people receiving treatment might increase, these results suggest that whites would seek care in greater numbers than minorities and the size of the minority-white differential might grow.

Received 20 December 2000; accepted 10 July 2001

Introduction

Recent years have witnessed increasing recognition that mental health problems are widespread and can be successfully treated with the timely provision of appropriate care. To promote access, policy makers and advocates have focused on the financing of treatment, especially on expanding the availability of insurance and the generosity of mental health benefits. Legislation prohibiting a lesser coverage for mental health conditions and mandating parity with physical health conditions is a milestone for the United States in this trend. Despite its intent, parity legislation has not had a dramatic impact.[1] It is internationally recognized that most nations have underfunded their systems of mental health services.[2] Consistent with this state, parity was an effort to improve on the system without committing more public funds.

Ethnic minority populations are high priority targets for outreach in the United States. Although all groups do not receive treatment at levels equaling levels of need, minority group members are especially underrepresented: they are less likely than others to receive outpatient care. One paper reported that nationally, African Americans and Latinos were about half as likely as whites to enter outpatient treatment.[3] In the developed nations, immigrants from former colonies comprise minority populations with similar access problems.[4, 5]

Background

Public sources account for a major share of financing for mental health treatment: public programs contributed 33.5% of the 18.1 billion dollars spent for treatment of the non institutionalized population in 1987.[3] About 53.9 % of persons receiving publicly financed care are African American or Hispanic.[6]

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Source of Funding: The work upon which this paper is based was funded in part by NIMH grant # MH 43694-11.

Table 1. Private mental health insurance coverage by race

Insurance Coverage	Percent Population		
	Total	White	Black
Any Private	0.78	0.85	0.54
Mental Health	0.93	0.93	0.93
Inpatient Hospital	0.90	0.90	0.90
Inpatient Physician	0.77	0.78	0.76
Outpatient Physician	0.91	0.91	0.91

1987 National Medical Expenditure Survey, n = 38,446

Examination of the extent of mental health services coverage in private policies shows that most private health insurance policies tend to cover mental health services, and that most tend to be generous in their breadth of coverage.[7] This is also shown in **Table 1**. Ninety-three percent of those with private health insurance also have coverage for mental health services. On average, people pay about 10 percent of their hospital charges, just over 20 percent for inpatient physician services, and just under 10 percent for ambulatory mental health services.

Medicaid is more generous still, fully covering acute inpatient services for mental health diagnoses as it does for all other diagnoses. States may, however, place limitations on services received from mental health providers. At a minimum, outpatient services include hospital-based outpatient care; all but a handful of states cover, on an optional basis, medication and outpatient clinic-based treatment. A few states also cover case management and rehabilitative services.

Research on insurance coverage and treatment seeking by minority populations includes several studies of Medicaid. Taube, Kessler, and Burns[8] reported that even among persons with coverage, minorities continued to be less likely than whites to use services. Taube and Rupp[9] found similar results in another national study. Focusing on African Americans, Temkin-Greener and Clark[10] discovered that among Medicaid-eligible persons in Monroe County, New York, race continued to be a strong determinant of ambulatory utilization. Snowden and Thomas[11] reported that African Americans were less likely than whites to have participated in outpatient treatment when privately insured, but participated comparably when covered by Medicaid.

Other investigators have studied private health insurance plans.[12, 13] The findings from these works indicate that African American and Hispanic plan members continue to be less likely than whites to seek outpatient treatment and that African Americans are less responsive than other groups when provided with a more generous level of mental health coverage.

The study of the use of mental health services and insurance is complicated by the possible reciprocal relationship between Medicaid enrollment and use: while Medicaid enrollment promotes use of services, use of services can also lead to Medicaid enrollment. The advantage in price conferred by Medicaid enrollment encourages treatment seeking among those who are contemplating seeking care, but also encourages enrollment among those who have. These incentives apply to the person in distress as well as to financially responsible persons acting on his or her behalf. The latter include programs and providers treating seriously ill persons, of whom many are poor and who require intensive treatment.

Research Questions

The present study sought answers to two related questions, both concerning the effectiveness of insurance coverage in promoting access to mental health care. The first question focuses on a possible difference between public and private coverage and whether public coverage is as effective in promoting outpatient treatment as private coverage. The issue is important to address because although we can see that public coverage plays a major role in financing inpatient mental health services for the severely mentally ill, it is less clear that it facilitates outpatient mental health use.

The second question is whether or not insurance coverage represents an effective way to reach ethnic minority groups, which are important target populations for outreach. The study attempted to estimate the response of minorities to health insurance coverage; if minorities respond differently to health insurance, and this affects their use of mental health services, this would help to explain their relatively low levels of outpatient care. Because of minority overrepresentation in public financing, the study paid special attention to any differences between public and private coverage.

Contribution to Previous Efforts

The study goes beyond previous efforts in several directions. It provides comparative national estimates for whites as well as all ethnic minority groups. It examines a comprehensive array of public financing sources. It focuses on treatment costs which measure intensity and resource consumption.

Another important characteristic of the study takes it further than previous efforts. It addresses the reciprocal relationship between public insurance coverage and utilization: while persons enrolled in public programs such as Medicaid can better afford care and are more likely to seek it, at the same time persons already using care may seek to defray costs by seeking out enrollment. The fact that enrollment in public insurance programs might be an endogenous variable in attempts to explain utilization -an independent variable itself partly explained by the dependent variable- has rarely been accounted for.

This endogeneity problem is especially important in considering the role of insurance coverage in promoting treatment among minorities. Minority persons are covered under public sources of payment more frequently than others. Public financing covers treatment at programs treating clients suffering from severe and persistent forms of mental illness. Such persons are especially likely not to chose treatment for themselves, but to enter at the instigation of community members, significant others, or legal authorities. Public programs are obliged to treat them and subsequently seek out sources of financing to offset their costs.

Under these conditions, participation in treatment brings about coverage. To assume that coverage promotes use without accounting for the opposite possibility is to exaggerate the importance of insurance as a mechanism to encourage self-initiated treatment seeking and to overstate the value of increasing coverage to minority and other low income populations.

Hypotheses

We expect those with more generous insurance coverage and lower out of pocket costs will use more mental health services, other things being equal. Although private health insurance appears to be relatively generous in its coverage of mental health services, Medicaid covers these costs more generously. In addition, we expect there may be a mediating effect of cultural competency, with public Medicaid coverage more likely reflect cultural competency. Therefore, we expect that people covered by private health insurance will use fewer mental health services than those covered by Medicaid.

Substitutes, incentives and barriers to care may also affect the impact of insurance coverage and other measures of access to mental health care. Some of these are directly related to the type of health insurance coverage. For example, private health insurance is typically obtained through employment. Employment itself however, may provide a social support network that may substitute for formal mental health care. Also, work responsibilities may preclude taking the time needed to use mental health services. Medicaid coverage brings a unique set of substitutes, incentives and barriers to use of care. There may often be long waits for care and cumbersome paperwork involved. On the other hand, researchers have demonstrated improved access for minorities at minority-oriented programs.[14-16] Availability of public transportation can also play a role for the eligible population.

Despite efforts of control for extraneous factors, work continues to show that minorities show a different response to insurance coverage than whites.[12,17] This may be due to the interference of substitutes, incentives and barriers unique to the individual. For example, cultural substitutes to care may modify the economic impacts of insurance coverage. Supportive social networks of friends or church may ameliorate the need for mental health services.

Altogether then, evidence suggests that minorities will use fewer mental health services than whites. Controlling for substitutes or barriers to care may explain some of the differences of minorities and lessen that effect. In any case, people with higher out of pocket costs for care, those covered under private insurance, should use fewer mental health services than those who have access to free care through coverage under Medicaid or other public sources.

Methods

Data for the analysis are from the 1987 National Medical Expenditure Survey.[18,19] This survey was conducted by the Agency for Health Care Policy and Research. The analysis uses two components of the National Medical Expenditure Survey, the Household Survey, and the Health Insurance Plans Survey. The Household Survey sample is representative of the civilian non-institutionalized population of the U.S. in 1987. It is a stratified multistage area probability design of individuals within households, with a sample of 38,446 people. The sample includes 22,322 insured adults, 18,857 of whom completed a supplemental health status questionnaire in which appeared selected variables used in the present study. Population groups of special interest were oversampled, including African Americans and Hispanics. The Health Insurance Plans Survey was designed to verify health insurance status and to collect detailed information about the private health insurance coverage of the Household Survey respondents. Data were collected from employers, unions, insurance companies and other sources of private health insurance about each health insurance policy held by Household Survey respondents.

Families participating in the household survey were interviewed four times over 16 months beginning in early 1987. At the baseline interview, data were collected on household composition, employment and insurance, and the information was updated at subsequent interviews. Additional information was collected on illness, use of health and mental health services, and expenditures. The data were collected through face-to-face questioning, from calendars and diaries of medical events, and from self-administered questionnaires completed by respondents between rounds of interviewing. Data obtained from the household survey were supplemented with data from surveys of the medical providers of respondents reporting on the Medical Provider Survey as well as the insurance plans of respondents on the Health Insurance Plans Survey. This set of survey instruments allows the National Medical Survey to describe individuals and how and why they use and pay for medical care.

The 1987 National Medical Expenditure Survey provides a rich and unique source of information on mental health services utilization, expenditures, and insurance coverage. It distinguishes mental health services from other types of care, and it provides detailed information on insurance coverage and out of pocket costs for mental and other health services. Public use data from the subsequent wave of this survey series, the 1996 Medical Expenditure Panel Survey, no longer provide this level of detail on insurance coverage.

Complete data were available for an analysis of 11,826 adults insured under private health insurance or Medicaid or other public sources. This approach focuses the analysis on differences between the effects of private insurance and public insurance. The uninsured are not included in the sample. Reported statistics and regressions were weighted to adjust for nonresponse and survey design effects. Complementary analyses correcting for the complex sample design indicate that the probability levels of the reported t tests are not underestimated to an extent large enough to alter an interpretation of the results, alpha = 0.01.

Table 2. Use and expenditures for mental health services Insured adults analysis sample

	Any Mental Health Use	Mean Expenditures
White		
MHI-5 <= 15	0.04 (0.20)	21 (251)
MHI-5 > 15	0.11 (0.33)	116 (834)
Minority		
MHI-5 <= 15	0.01 (0.09)	6 (90)
MHI-5 > 15	0.08 (0.22)	145 (1094)

1987 National Medical Expenditure Survey, n = 11,826

Table 2 indicates the extent of mental health use and expenditures by minority status and need, as measured by the Mental Health Inventory 5, in the analysis sample. Those scoring above the 80th percentile were considered in need of mental health services.

The data are used to estimate a model of the use of mental health services in order to estimate the response of minorities to private and public health insurance coverage for such services. The dependent variable, mental health services, are those provided through an ambulatory medical care visit. The dependent variable measures the log of expenditures for these mental health services.

Predictors of primary interest are dummy variables for minority status and private insurance coverage. An interaction term between the two allows the impact of insurance status to differ by minority status. This leaves a reference category of whites with public insurance. **Table 3** provides a complete list of predictors and a description of the analysis sample.

The variable identifying those who are socially active attempts to capture possible substitutes for professional care. The use of social activity for this purpose is justified by a literature describing "voluntary support networks", and documenting the role of family, friends, and voluntary associations as widely used sources of assistance for mental health problems.[20] The indicator used in the study refers to frequency of social interaction with family and friends through visits, phone calls and outings.

Table 3. Insured adults analysis sample

Variable	Mean
Log mental health expenditures	0.24
Minority	0.14
Private Insurance	0.95
Minority with Private Insurance	0.12
Socially active (24 point scale)	16
MHI-5 (30 point scale)	11
Female	0.54
Married	0.65
Lives in the south	0.31
Employed all year	0.63
Completed high school	0.99
Lives in poverty	0.06
Lives in a large SMSA	0.27

1987 National Medical Expenditure Survey, n = 11,826

Need for mental health care was assessed by means of the Mental Health Inventory 5, a brief version of the 18-item Mental Health Inventory 18, itself a shortened version of a 38-item measure used as the principle mental health assessment instrument in the Rand Health Insurance Experiment.[21] This study used a variable measuring the frequency of the negative feelings 'nervous' or 'down' and the positive feelings (scored in reverse) 'happy', 'calm', or 'peaceful'. In psychometric studies the Mental Health Inventory 5 has been shown to have good reliability and validity, including sensitivity and specificity in predicting lifetime diagnoses as assessed from the Diagnostic Interview Schedule.[22]

Control variables describe other predisposing characteristics. Dummy variables identifying those who are female, married and living in the south attempt to capture characteristics predisposing people to use mental health services.

Data Analytic Procedures

The goals of this analysis bring two challenges: one is to model the non-normal dependent variable, mental health expenditures; the other is to appropriately model the endogenous relationship between those mental health expenditures and health insurance coverage. The statistical technique needs to meet both these challenges as best as possible.

Conceptually, the dependent variable is demand for mental health services. When demand is measured with utilization, we only see positive utilization when demand has passed some threshold level necessary to impel a person into the doctor's office. That means that the measure of utilization is censored at zero; all those individuals with demand below the threshold show zero utilization. Statistically, the utilization variable has a censored, nonnormal distribution. In this study, 91 percent of the weighted sample had zero utilization, and mental health expenditures had a skew of 33.

As a first approach to this challenge, we used a logit to estimate the probability of mental health services use, exploring the impacts of race and insurance status and their interaction.[23] The present study develops this initial approach in several ways. First, we use a continuous dependent variable. This allows us to study factors impacting use of mental health services along a continuum rather than only the choice whether or not to use these services. Second, we account for the endogeneity of health insurance coverage. Finally, we include additional predictors in an effort to control for racial differences in help-seeking implied in the first analysis.

In order to model a continuous dependent variable, we logged the dependent variable. This normalized, to an extent, the distribution of mental health expenditures. Using the log of mental health expenditures as our normalized dependent variable, freed us to use the two stage least squares approach to estimate an instrument for health insurance coverage. Individuals who use a great deal of mental heath services over time are likely to become disconnected from employment and employer purchased private health insurance, and instead enroll in Medicaid. This makes the private insurance variable

endogenous to the system. Estimation using an endogenous predictor yields inconsistent results. The two stage least squares method estimates an instrument for private insurance using the remaining exogenous predictors and an additional set which is also described in **Table 3** (employed all year, completed high school, living in poverty, and living in a large urban area (Standard Metropolitan Statistical Area)). The final model of interest uses the instrument for private insurance which is exogenous to the system; interpretation of the coefficient is not different from ordinary least squares.[24, 25]

Results

Results of the two stage least squares estimation suggest that the model explains a significant amount of variation according to a likelihood ratio test (with 8 degrees of freedom, alpha = 0.05). Coefficient estimates show that the impact of private insurance on minorities is not strong: the minority variable is positive and significant, while its interaction with private insurance is negative and significant (alphas = 0.05). **Table 4** shows these results.

Table 5 provides an interpretation of the implied relationships between this set of dummy variables and their reference category, whites with public health insurance. Results suggest that minorities with private health insurance use fewer mental health services than whites with private health insurance. Minorities with private health insurance also use fewer mental health services than minorities with public insurance. In contrast, results suggest that whites use similar amounts of mental health services under either private or public coverage. These results suggest that minorities are less sensitive to private health insurance than whites in two ways. First, minorities are less sensitive to private insurance than to public insurance whereas whites do not show this difference. Second, minorities are less sensitive to private insurance than whites are to private insurance.

The variable identifying people who were socially active was included to control for a variety of possible substitutes for mental health care. These results also suggest that being socially active decreases use of mental health services. Including social activity in the model did not, however, decrease the significance of the minority variable.

Table 4. Minority sensitivity to private insurance in use of mental health services (two stage least squares regression)

Variable	Coefficient
Minority	0.69 *
Private Insurance	0.08
Minority w/ Private Insurance	-0.95 *
Socially active	-0.01 **
MHI-5	0.04 **
Female	0.02
Married	-0.11 **
Lives in the south	-0.08 **

1987 National Medical Expenditure Survey, n = 11,826
* alpha <0.05, ** alpha < 0.01
Overall fit significant according to likelihood ratio test, alpha < 0.01

Table 5. Relative use of mental health services
Implications from regression

Use of Mental Health Compared to Whites with Private Insurance	
Minority with Private Insurance	Less
Minority with Public Insurance	More
White with Public Insurance	Not Different
Use of Mental Health, Privately Insured Compared to Publicly Insured	
Minority	Less
White	Not different
Use of Mental Health among Minorities Compared to Whites	
Privately Insured	Less
Publicly Insured	More

2 stage least squares regression of mental health expenditures
1987 National Medical Expenditure Survey, n = 11,826

Need for mental health services was measured with the Mental Health Inventory 5. The results show that having a high score on the Mental Health Inventory 5 increased expenditures for mental health services.

The remaining predictors of mental health use control for characteristics predisposing people to use mental health care. Those who are married and those living in the south use fewer mental health services than others. Being female did not have a significant impact on use.

Conclusions

To summarize, results suggest that there is a difference in the effectiveness of private and public health insurance to encourage use of mental health services. Among minorities but not among whites, those with private coverage used fewer mental health services than those with public coverage. In addition, minorities were not only less sensitive to private insurance than public insurance, but among those who were privately insured, minorities used fewer mental health services than whites. These results imply that insurance may not be as effective a mechanism as hoped to encourage self-initiated treatment seeking particularly among minority and other low income populations.

The National Medical Expenditure Survey is ideally suited for this analysis in several ways: it is a national probability sample, over sampled among minorities, with detailed information in the areas of interest. Nonetheless, only 3 percent of the adults in the National Medical Expenditure Survey used mental health services; only 0.5 percent of minorities. Using a sample of 11,826 adults, this yielded only 67 minority users of mental health services. Exploration of the distributions of additional variables of interest indicated that the regression of mental health use could handle roughly 7 predictors, at most. Further research would benefit from a more fully specified equation.

Management of behavioral health benefits has expanded greatly since 1986. By the late 1990s most insured people in the U.S. had behavioral health services that were managed.[26] This has important implications for the ability of private and public insurance to improve access to mental health care. The two major goals of managed care, to reduce costs and to

provide quality care through coordination of benefits, should have opposing impacts on access to care. In fact, managed care efforts to reduce costs have lead to decreased psychiatric inpatient care,[27] in some instances decreased access to outpatient services,[28] and the shifting of responsibility for payment to the public sector.[27, 28] There is not strong evidence that managed behavioral health care has lead to a shift from inpatient to outpatient care, but instead, an overall decrease in care.[29] In the face of the emphasis on cost reduction, coordination of benefits to extend appropriate mental health services has been difficult.[30] Even when people are covered through a managed care organization, in fact, most behavioral health benefits are covered through carve-outs, where the managed care organization contracts with a specialty organization to manage the behavioral health benefits. Behavioral health benefits remain organizationally separate from general health care even though they are both managed.[30]

These trends suggest a reduction in the generosity of private insurance coverage of behavioral health benefits. The Mental Health Parity Act, which went into effect in 1998 has not significantly altered this trend.[1] Of particular note for this paper, minorities continue to experience more barriers to care than others under managed care.[31] Managed behavioral health has come to the public sector as well; the majority of U.S. states use some managed care in their Medicaid programs. Although results are mixed, the literature suggests that Medicaid managed care has not significantly limited access to outpatient mental health services.[32-34] These trends suggest that the expansion in managed care arrangements would not appear to have altered the results of this study, but future work should evaluate further the impact of managed care on access to care by race.

Further research is needed to understand better the dynamics of the differences in use of mental health services that were observed here. It may be that a broader definition of mental health use is required to fully characterize people's use. For example, people may be obtaining more mental health services from general medical practitioners who may prescribe psychotropic drugs.

The interplay between ambulatory and inpatient mental health use may be important also. If ambulatory care prevents inpatient care, then the greater presence of African and Native Americans in inpatient settings might at least help to explain their lesser use of outpatient care. On the other hand, the lower minority-white gap under public insurance which, like private insurance, finances inpatient stays, weakens this possibility.

More research is needed also on barriers to care for minorities apart from those related to financing. Personal and family beliefs, including attitudes toward mental illness and beliefs about the appropriateness and effectiveness of treatment, might help to explain differences in help seeking from professional caregivers. The structure of the mental health system also needs to be examined, especially access to understanding treatment personnel, who are aware of the beliefs and practices of minorities and are welcoming of them as patients. This could well be even more problematic in countries where the dominant culture comprises a larger and more homogenious proportion of the population than in the United States. For example, in Sweden, the mental health system relies on the initiative of the needy person to access services, which is at best unrealistic for the mentally ill with additionally barriers for those of minority cultures.[5] These are hypotheses to be explored as we seek to understand why minorities do not respond as much as whites to private insurance coverage when seeking treatment for mental health problems.

Theorists have argued that minorities seek assistance from friends, family members and culturally sanctioned providers of care, who address mental health needs in ways acceptable to indigenous communities. The research indicates that family and friends of minorities do provide help after a mental health problem has been acknowledged and treatment has begun, but they do not provide alternative care during earlier stages in the process.[20] It is generally recognized, both in the United States and abroad, that increased patient and family involvement in the plan of care may help to ameliorate cultural obstacles and thereby increase adherence to the plan as well.[5,35,36]

Policy makers must learn better what the barriers and facilitators are for professional help-seeking for outpatient mental health care and how those vary by race and ethnicity. Although historically, Medicaid had a great impact on equalizing access to health care services, we can not, at this point, continue to rely simply on financing to equalize access.[37] The results of this analysis suggest that increasing private insurance coverage to minority populations will not eliminate racial and ethnic gaps in professional help-seeking for outpatient mental health care. Indeed, although the total number of people receiving treatment might increase, whites would seek care in greater numbers than minorities and the size of the minority-white differential might grow.

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