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AMONG HOMELESS ADULTS

Sherry Glied  
Christina Hoven  
Robert Moore  
A. Bowen Garrett

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**ABSTRACT**

Expansions of Medicaid eligibility intend to improve access to care, and to shift care from emergency rooms and inpatient hospital care to more appropriate sites. We examine the effect of Medicaid reciprocity on the level and site of medical service utilization using data from 1985 and 1987 surveys of New York City homeless single men and women.

Simple regressions of Medicaid on the use of health services among homeless adults indicate that Medicaid significantly increases the likelihood that these individuals receive services, especially emergency and inpatient hospital services. We test this result in further analyses that control for health status, use instrumental variables procedures, and examine differences between a similar population in 1985 and 1987. These analyses suggest that Medicaid neither increases nor diminishes access to emergency rooms. We find some evidence that suggests that Medicaid does improve access to non-hospital medical care.

Sherry Glied  
School of Public Health  
and Department of Economics  
Columbia University  
600 West 168th Street, 6th Floor  
New York, NY 10032  
and NBER  
sag1@columbia.edu

Christina Hoven  
New York State Psychiatric Institute  
and Columbia School of Public Health  
Unit 43  
722 West 168th Street  
New York, NY 10032

Robert Moore  
New York State Psychiatric Institute  
and Columbia School of Public Health  
Unit 43  
722 West 168th Street  
New York, NY 10032

A. Bowen Garrett  
School of Public Health  
University of California  
Berkeley, CA 94720

## Introduction

While most Americans receive their routine medical care through private physicians, the indigent uninsured frequently lack care altogether or receive care only through hospital emergency rooms. Emergency facilities are not ideal providers of routine care services. They cannot ensure continuity of care from one visit to another and may be more costly than alternative providers (McNamara, Witte, and Koning, 1993; Baker and Baker, 1994). Medicaid, which provides health insurance to those with low income, should remedy the problems of inadequate and inappropriate access.

Homeless adults have been associated with particularly poor access to health care services. One advocate described the importance of Medicaid insurance receipt for this group, noting that "Without Medicaid, homeless people have limited access to the full range of health services. With Medicaid, they can be mainstreamed into the health care system" (Neibacher, 1990; p. 10). Concern about lack of access to mainstream health services among homeless people led Congress to change Medicaid rules in 1986 (OBRA, 1986), permitting those without a legal residence who would otherwise qualify for Medicaid to take part in the program. This paper examines the effect of Medicaid reciprocity on the level and site of medical service utilization using data from two surveys of New York City homeless single men and women conducted in 1987 and 1985 (Struening and Pittman, 1987; Padgett and Struening, 1991).

Previous studies have found that among homeless adults Medicaid reciprocity is associated with improved access to care (Padgett et al., 1990; Hoven, 1987; Padgett and Struening, 1991). These results are similar to those found for recent expansions of Medicaid among poor children (Currie and Gruber, 1996). Studies of both children and homeless adults find marked increases in the use of emergency rooms and inpatient hospital facilities by Medicaid eligibles/recipients (in OLS regressions), suggesting that more generous Medicaid eligibility may not lead to increased efficiency in the pattern of care used by the poor.

From a consumer perspective, emergency rooms and hospitals have some significant advantages as a source of care. Especially in urban areas, hospitals and emergency rooms provide obvious focal

points for the receipt of health care services; they are open at all times; appointments are unnecessary; and hospitals, unlike private physicians' offices, are often located in poor areas. These factors all reduce the information and planning costs associated with this source of care. On the other hand, emergency rooms may charge patients higher fees for routine care than other providers would. Most important, receipt of care through emergency rooms is associated with significant waiting time costs. Time costs have been shown to strongly affect the choice of site of care, especially among those with a high price of time (Coffey, 1983).

Federal law requires that most hospital emergency rooms (those located in hospitals that accept Medicare payment) must evaluate and, if medically necessary, treat any patient who appears, regardless of ability to pay (OBRA 1986, 42 U.S.C.A. § 1395dd).<sup>1</sup> Emergency rooms can, and do, charge patients for their services, but homeless and other indigent patients do not pay these charges. This group, whether or not they are insured, pay only the time costs of emergency room care. To the extent that these time costs are smaller than the information costs of finding an alternative provider, eligibility for Medicaid may not induce this group to change providers. Even if Medicaid eligibility does not result in a change in the locus of care for the indigent, it may still confer important benefits to them. Previous research has shown that the hospital's decision of what services to provide (including inpatient admission and medications) is likely to be affected by a patient's insurance status (Hadley, Steinberg, and Feder, 1991).

From the perspective of hospitals that serve poor populations, Medicaid may be an important benefit. While hospitals receive no direct reimbursement for providing services to the uninsured, they are paid for rendering services to Medicaid patients. As a consequence of this reimbursement, hospitals have a strong incentive to ensure that their Medicaid-eligible uninsured patients get enrolled in the program. Many hospitals have opened on-site Medicaid eligibility to help potential recipients enroll

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<sup>1</sup>. Laws in most States, including New York, imposed this duty on most hospitals well before passage of OBRA.

(U.S. GAO, 1994). Expansions of Medicaid eligibility, through legislation such as the 1986 OBRA provisions, increase the return to hospitals from opening and staffing such offices. Receipt of Medicaid through hospital offices may have little effect on the site and level of service utilization because Medicaid reciprocity will follow service use rather than preceding it.

We focus on homeless adults in New York City for two reasons. First, this group has a very high rate of emergency room use. In 1987, over one-quarter of those sampled had visited an emergency room in the preceding six months. By contrast, only 0.5 percent of the general population aged 18-64 used an emergency room during a two week period in 1988 (tabulation of the National Center for Health Statistics, National Health Interview Survey).

Second, rules of eligibility for Medicaid in New York City are exceptional and particularly well-suited to studying the effects of Medicaid on service use. Homeless single people in most of the country are eligible for Medicaid only if they are also eligible for Supplemental Security Income (SSI) benefits, which depends on disability status.<sup>2</sup> Homeless single people in New York City who are not disabled may be eligible for Medicaid if they are also eligible for New York City Home Relief (NYCRR 360-1.3), a cash welfare program (referred to as HR). The Federal government makes no contribution to Medicaid on behalf of this group; New York State and New York City pay the full costs of the program. Homeless people who are eligible for HR will be automatically enrolled in New York City Medicaid when they are enrolled in HR. Those who meet income eligibility requirements for HR and are shelter residents but have not signed up in Medicaid can also be enrolled in "shelter Medicaid" through hospitals. In the latter case, however, they would not be simultaneously enrolled in SSI or HR. Thus, if we observe an individual who reports receiving Medicaid but does not report receiving SSI or HR benefits (or AFDC), it is likely (though not necessary) that this person was enrolled in Medicaid through a hospital rather than a social service agency.

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<sup>2</sup> A small number of homeless residents of city shelters that serve the single adult population might report that they were receiving Aid for Families with Dependent Children and were eligible for Medicaid through that program (for example, if they had children who were staying with a friend or family member).

## Methods

As the description above suggests, simple estimates of the effect of Medicaid reciprocity on service use may be overestimated. Rather than Medicaid leading to service use, service use may lead to Medicaid reciprocity. Furthermore, hospital incentives to open offices that enroll patients in Medicaid may be related to eligibility requirements. When Medicaid eligibility requirements are generous, hospitals may find it particularly profitable to open such offices.

We use three methods to examine the effects of Medicaid reciprocity on service use. First, we study the effects of controlling for a broad range of measures of health status on the relationship between Medicaid eligibility and service use. If persons in poor health, the group most likely to use health facilities, are also most likely to be enrolled in Medicaid, controlling for health status will reduce the measured effect of Medicaid on service use. Conversely, if Medicaid enrollment is uncorrelated with health status, so that those with a high propensity to use health facilities are no more likely to be Medicaid recipients than others, adding health status to regressions will have no effect on the Medicaid estimates.

Second, we exploit the relationship between Medicaid and Home Relief reciprocity to construct instrumental variables estimates of receipt of Medicaid from a non-medical provider. We repeat our analyses of the effect of Medicaid on service use in 1987 using an instrumental variables estimate of Medicaid. These estimates should disentangle the effects of service use on Medicaid reciprocity from those of Medicaid on service use.

Finally, we repeat our one-stage and instrumental variables estimates of the effect of Medicaid using a similar survey of homeless single adults conducted in New York City in 1985. In some respects, Medicaid eligibility for homeless people was eased in 1986 by the passage of Federal legislation eliminating the requirement that Medicaid recipients have a legal residence (OBRA, 1986). This and other Medicaid expansions authorized through OBRA and subsequent legislation may have increased the incentive for hospitals to open and staff Medicaid eligibility

offices.<sup>3</sup> At the same time, State regulations promulgated in 1985 made it more difficult for homeless shelter residents to obtain HR benefits and, thus, to enroll in Medicaid through that program (Hoven, 1988). While shelter residents without outside income (or whose income paid entirely for food and housing in the shelter) would continue to be eligible for so-called shelter Medicaid, a time-limited benefit that did not provide them with Medicaid cards and could be authorized through health providers (NYCRR 360-3.3(a), (b-8)), they were more likely to find it difficult to enroll in HR and Medicaid outside the shelter. Over the same period, a major Robert Wood Johnson Foundation-funded initiative "New York City Health Care for the Homeless", sent teams into homeless shelters to provide residents with direct on-site services and to help them obtain benefits for which they were eligible (Vladeck, 1990). This confluence of program and policy changes suggests that the effects of Medicaid on hospital service use would be less contaminated by simultaneity in 1985 than in 1987 (because enrollment in shelters was easier in 1985 while enrollment in hospitals was relatively easier in 1987), while the association between Medicaid and non-hospital service use would be stronger in 1987 than in 1985 (because of the Robert Wood Johnson Initiative).

#### Data

The data used in this study were collected through the 1985 and 1987 Epidemiological Surveys of Homeless Adults conducted by Elmer Struening and colleagues under contracts to estimate the housing needs of shelter residents (Struening and Pittman, 1987; Padgett and Struening, 1991). The surveys were restricted to "single" adult residents of the New York City public shelter system. In 1985, survey staff met with shelter directors in each of the 26 New York City public shelters to develop a strategy for obtaining a representative sample of the

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<sup>3</sup>. Since 1987, Medicaid eligibility in New York State was further enhanced by a preliminary injunction granted in New York Supreme Court in July 1987 that made it easier for shelter residents to receive Home Relief and, consequently, Medicaid (Thrower v. Perales, 1987, 523 NYS 2d 933).

population. In both waves, the sampling design intentionally over-sampled women and older shelter residents.<sup>4</sup> In most cases, residents were randomly sampled from the shelter bed list. In four shelters, every Nth person in a meal or waiting line was sampled. After three attempts, if the selected individuals could not be located to schedule an appointment, a backup procedure was used to fill the sample.<sup>5</sup>

In 1987, a total of 1360 homeless adults were approached to schedule appointments. Thirty-two residents selected through random sampling were excluded based on the judgment of field supervisors that they manifested extremely unusual or bizarre behavior and could not be safely approached. Of the remaining 1328 homeless shelter residents who were approached, 1260 completed the interview. Interviews were conducted in both English and Spanish.

The interview protocol included a 57-page questionnaire that covered such areas as residential and shelter histories, service needs, medical treatment histories and health status, work and arrest histories, sociodemographic variables, and substance use treatment. The survey also included diagnostic and screening scales for depressive (Center for Epidemiological Studies-Depression Scale) and psychotic conditions (Psychiatric Epidemiology Research Interview). There is an extensive literature documenting the reliability and validity of these scales in assessing mental health (Radloff, 1977; Dohrenwend et al. 1978).<sup>6</sup> For the purposes of this study, mental health scales were compressed into dichotomous indicators of psychosis, depression, and having suicidal thoughts.<sup>7</sup>

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<sup>4</sup> While women constituted approximately twelve percent of the shelter population in 1987, for example, twenty-four percent of the sample subjects were women.

<sup>5</sup> We did not use sampling weights in our analyses of these data because we were testing behavioral relationships rather than making population estimates (Doumouchel and Duncan, 1983).

<sup>6</sup> As a final check on the accuracy of the survey responses, interviewers were asked to complete a questionnaire assessing their subjective evaluation of the respondents reliability in reporting their history of mental illness.

<sup>7</sup> Nine observations had extreme values (for age, emergency room use, and mental hospital use). These were recoded as missing. The treatment of these (nine) observations did not affect the results reported below.



In the final part of our analysis, we compare results for the 1987 data with a similar sample collected through the Housing Needs Assessment Study in 1985, also by Elmer Struening and colleagues (Padgett et al., 1990; Hoven, 1987). The total 1985 sample consisted of 1084 shelter residents, sampled in the same manner as in 1987. Fewer questions about service use and health status were asked in the earlier survey and some of the questions were not identical.

Table 1 describes the 1987 and 1985 data. The average age of the shelter residents interviewed in both years was 35.5. Only 2% were over 65. About 4% of the population reported having been told that they had epilepsy, tuberculosis, or diabetes, while approximately 11% in 1987 had had pneumonia. The instruments for measuring emotional problems were changed slightly between interviews. In 1987, 19.3% of the surveyed population showed some signs of psychosis while 10.5% showed signs of depression, and 3.0% experienced suicidal thoughts. In 1985, fewer respondents reported signs of psychosis or suicidal thoughts, while more reported signs of depression.

Most of those surveyed had attended high school or received a high school diploma. Over 20 percent reported having at least some college education. The average length of time spent in the shelter where the interview took place was substantially higher in 1985 than in 1987. In 1987, half of the sample had spent fewer than six months in the shelter where the interview took place. In 1985, over 80 percent had spent more than six months in the shelter where the interview took place.<sup>8</sup>

The principal health insurance benefit available to the non-elderly homeless is Medicaid. Residents of New York City who were receiving public assistance (AFDC or Home Relief) and those who received SSI benefits were eligible for Medicaid. Residents who met the eligibility requirements of these programs had the option of applying for Medicaid without applying for

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<sup>8</sup>. Between 1985 and 1987, New York City expanded shelter options and the rate of turnover among shelter residents rose substantially.

welfare benefits. Shelter residents could apply for Medicaid at three designated Medicaid centers (one each in Manhattan, the Bronx, and Brooklyn), through city employees in each shelter, and through outreach workers. Hospitals and emergency rooms could also assist the homeless in obtaining Medicaid benefits.

The eligibility descriptions above suggest that a very large fraction of the homeless population should have been eligible for at least some benefits. Nonetheless, most of those surveyed assert that they do not receive any benefits. In many cases, administrative and other access barriers may impede eligible individuals from obtaining benefits to which they are entitled. SSI reciprocity requires periodic disability tests (Hoven, 1988). Proving income and providing other documentation may be impossible for a homeless person. Finally, maintaining eligibility requires frequent interactions with the social welfare bureaucracy, which many homeless people may not want to do. Medicaid was the most common benefit reported in the samples. In 1987, thirteen percent of those surveyed reported that they were currently on Medicaid. Almost eight percent of the population reported receiving HR or AFDC and 5.4 percent reported receiving SSI or SSDI (Social Security Disability Income). In 1985, the percentage receiving SSI or SSDI and the percentage reported receiving Medicaid were both about twice as high.

Shelter residents appear to use hospital emergency rooms as their primary source of medical care. This may be a consequence of their difficulty in gaining access to other places (such as hotel lobbies or public facilities). In 1987, twenty-eight percent of the study population reported using an emergency room in the previous six months. In both 1985 and 1987, the sampled population also reported high rates (over 15 percent) of hospital use (medical or mental hospitalization in the preceding six months). In both surveys, about 14 percent of those sampled has spoken to someone outside the shelter system about help with an emotional problem, while almost one-quarter had spoken to someone outside the shelter system about help with a medical

problem. These latter questions were part of a series on the use of services outside the shelter and responses were quite different in format from those about hospital and emergency room use.

## Results

The first column of Table 2 presents the marginal effects of Medicaid on service use from simple probit regressions that also control for age, sex, education, and the package of entitlements associated with being over 65.<sup>9</sup> Medicaid has a significant effect on the order of about 10% on the use of each service. In addition, age has a significant positive effect on hospitalization and speaking to someone outside the shelter about a medical problem (not reported in table). Women are significantly more likely to use emergency room services than men. Education variables have a jointly significant positive effect on hospitalization and seeking help for a medical problem, perhaps indicating a greater recognition of an existing health problem or a better knowledge of available services among the educated.

## Adding Health Variables

One reason that Medicaid might appear to affect the use of services is that those in poor health are more likely to seek Medicaid or to be enrolled through a visit to a health facility. If Medicaid and health status are uncorrelated among homeless shelter residents, adding health status variables to the Medicaid regressions reported in Table 2 should have no effect on these coefficients. Conversely, if those in poor health are both more likely to be using services and to be receiving Medicaid, the estimated effect of Medicaid will decline. To test for this possibility, we supplement the regressions in column 1 with measures of physical health (diabetes, epilepsy, tuberculosis, and pneumonia) and mental health (psychosis, depression, and suicidal thoughts).

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<sup>9</sup>. Probit marginal effects were evaluated at the mean of the independent variables for continuous variables. For binary variables,  $X_i$ , the marginal effect is evaluated using the difference in the cumulative densities at  $X_i=1$  and  $X_i=0$  and at the mean of  $X_j$  ( $j \neq i$ ).

We also control for receipt of SSI or SSDI because eligibility for these benefits is tied to disability status.

Column 2 of Table 2 reports the results of these analyses. Controlling for health status variables leads to very small, statistically insignificant changes on the estimated effect of Medicaid on most types of service use, but it significantly reduces the effect of Medicaid on receipt of psychotropic and antidepressant medications. The point estimates for hospital use and seeking help for emotional problems also decline, although by statistically insignificant amounts. Health variables are always statistically significant determinants of service use. These results provide some indication that estimates of the effect of Medicaid receipt may be biased by a correlation with individual health characteristics that have an independent effect on service use.

#### Instrumental Variables Estimation

The health status questions included above are unlikely to completely control for the effects of health status and related service utilization, on the receipt of Medicaid. To address this problem, we sought an instrument that would be correlated with receipt of Medicaid, but uncorrelated with contemporaneous service use or health status. This sequence is most likely to happen if a social service worker (rather than a hospital or other medical care provider) enrolled an individual in Medicaid. The rules for Medicaid eligibility in New York make all Home Relief and AFDC recipients automatically eligible for Medicaid. Eligibility for these benefits would be determined by a social service worker, rather than by hospital staff. We use reciprocity of Home Relief or AFDC as an instrument to predict Medicaid status. Results of the Medicaid prediction regression are reported in Appendix Table 1. More highly educated people and women are more

likely to receive Medicaid than others. SSI/SSDI reciprocity is strongly correlated with Medicaid receipt.<sup>10</sup>

Column 3 of Table 2 reports the results of probit IV maximum likelihood estimates of the effect of Medicaid on service use. The second-stage standard errors of the reported marginal effects are adjusted using the method suggested by Murphy and Topel (1985). This adjustment makes very little difference to the estimates. In all but one case, the point estimates of the marginal effects of Medicaid are substantially smaller than in the simple analyses in Column 1. The effect of Medicaid on emergency room use disappears almost entirely and the effect of Medicaid on hospital use drops almost by half and loses its statistical significance. While these results do not suggest that eligibility for Medicaid reduces the use of emergency rooms or hospitals by homeless adults, it does suggest that Medicaid has little positive effect on the use of these services.

The sole exception to this pattern of declining coefficients occurs in the case of help for medical problems. In the IV estimates, the marginal effect of Medicaid on service use is almost twice as large as the probit effect. To the extent that this measure describes the use of routine medical services received outside the shelter, the increase in the coefficient suggests that “real” Medicaid, obtained in conjunction with other benefits and through a social service worker, may lead to improved access to regular medical care.<sup>11</sup>

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<sup>10</sup>. A good instrumental variable should be uncorrelated with the error term of the equation in which it is used. As a weak test of the validity of our instruments, we added HR/AFDC reciprocity to the service use equations. Their point estimates are insignificant and Medicaid remains significant in all equations. A good instrument should also be strongly correlated with the variable it replaces (Nelson and Startz, 1990). The marginal effect of receipt of HR or AFDC benefits on Medicaid receipt is large (.66) and highly significant.

<sup>11</sup>. We tested our instrumental variables estimates for correlation with unobserved health characteristics by repeating the first experiment (omitting and then adding back health status variables) in the IV estimation. Including or omitting health-related variables (as described above) had virtually no effect on the point estimates of Medicaid in the instrumental variables regressions (no marginal effect changed by more than .01).

### Comparison with the 1985 Sample

As the descriptive statistics (Table 1) suggest, the sample surveyed in 1985 differed in some important respects from those surveyed in 1987. The population in 1985 consisted of longer term shelter residents, more of whom were receiving public assistance. In New York City as a whole, the number of HR beneficiaries declined almost 10 percent between 1985 and 1987 (New York State Statistical Yearbook). Meanwhile, the overall shelter population increased markedly (Hoven, 1987). Changes in eligibility rules made it more difficult for shelter residents to obtain HR benefits in 1987 than in 1985 and may have increased the incentive of medical providers to enroll patients in Medicaid at the hospital. Other factors, such as New York State regulatory requirements, bed certifications, and general competitiveness among New York City Hospitals may also have contributed to the change.

The questionnaire and coding procedures used in the 1985 and 1987 surveys were somewhat different. In particular, the 1985 survey did not ask about emergency room use and the medications questions were asked differently. We restrict our analysis of the 1985 data to hospitalizations and seeking help outside the shelter for an emotional or medical problem.

Table 3 reports the marginal effects of Medicaid on service use in the 1985 sample. As in Table 2, the first column reports results controlling for demographic characteristics only, the second column adds health status indicators (a narrower set than in 1987), while the third column reports IV estimates. The results in Table 3 suggest that the relationships between health status and Medicaid and between receipt of other benefits and Medicaid that were apparent in the 1987 sample were not important in 1985. The IV estimates of the marginal effect of Medicaid on service use remain significant for all three types of service use. The point estimates for hospital services and speaking to someone about a medical problem are very close to the corresponding IV point estimates for 1987. Appendix Table 3 reports the results of the Medicaid prediction regressions for 1985. The rules that made those eligible for SSI or HR simultaneously eligible

for Medicaid did not change between 1985 and 1987. Consistent with this stable policy, the effect of receiving other benefits (SSI/SSDI or HR) on Medicaid participation was almost exactly the same in 1985 as in 1987.

### Conclusions

Urban homeless adults, who are served by local public and voluntary hospital emergency rooms and outpatient clinics, have high rates of service use even without enrolling in Medicaid.

Expanding Medicaid to these groups may have little direct effect on their level of service use. Similarly, such expansions may not change the site of care for those with relatively low time costs. Instead, Medicaid may be most useful in helping hospitals that care for the poor, by providing them with a stream of reimbursement. According to some commentators, a desire to help hospitals was a principal motivation for the recent expansion of presumptive eligibility for Medicaid to pregnant women (Brazda, 1991).

Improving the financial viability of hospitals that serve the poor may not affect service use by any particular Medicaid recipient. Nonetheless, improving the health of hospitals is likely to have long-term benefits for poor populations that use them, including both new Medicaid recipients and those who remain uninsured. By keeping hospitals and emergency rooms funded, equipped, and staffed, Medicaid may have very important effects on the health of the homeless and other vulnerable populations.

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**Table 1: Descriptive Statistics**  
**Homeless Adults in New York City Shelters: 1987 and 1985**  
(in percent except where indicated)

	1987	1985
age (in years)	35.5	35.5
over 65	2.1	2.2
female	24.2	27.7
shelter resident over 6 months	47.6	83.4
primary school only	8.2	13.0
secondary school only	35.5	34.0
high school diploma	35.2	32.4
some college	21.1	20.6
depression symptoms	10.5	16.9
psychotic ideation	19.3	7.6
suicidal thoughts	3.0	2.1
diabetes history	3.0	3.5
epilepsy history	4.2	3.2
tb history	3.6	3.1
pneumonia history	11.3	
SSI	3.2	6.5
SSDI	2.6	3.9
SSI or SSDI	5.4	10.1
AFDC	0.2	0.3
Home Relief	7.5	8.1
Medicaid	12.9	24.6
Emergency Use	28.4	
Hospital Use	17.3	15.6
Medications	5.4	
Emotional Help Outside Shelter	13.7	14.8
Medical Help Outside Shelter	22.2	24.3
N	1251	1084

Table 2: Marginal Effects of Medicaid on Service Use Among New York City Homeless Adult Shelter Residents in 1987  
(n=1251)

	Demographics	Health	Probit I.V.
Emergency Room	.11*	.10*	.02
s.e.	(.04)	(.04)	(.08)
Hospital	.14*	.10*	.08
s.e.	(.04)	(.04)	(.06)
Medications for Emotional Problems	.09*	.03	.02
s.e.	(.03)	(.02)	(.03)
Help outside shelter Emotional Problems	.11*	.06**	.04
s.e.	(.04)	(.03)	(.05)
Help outside shelter for Medical Problems	.17*	.16*	.29*
s.e.	(.04)	(.04)	(.07)

Notes: Probit IV Standard Errors are using corrected covariance matrix (Murphy and Topel, 1985). Demographics regressions include age, over 65 dummy, female, six months in shelter, and 3 levels of education. Health regressions add current depression, psychosis, suicidal thoughts, and history of diabetes, epilepsy, tuberculosis, and pneumonia, and current receipt of SSI or SSDI. IV regressions include all the preceding variables but use an instrument for Medicaid reciprocity.

Table 3: Marginal Effects of Medicaid on Service Use Among New York City Homeless Adult Shelter Residents in 1985  
(n=1060)

	Demographics	Health	Probit I.V.
Hospital s.e.	.08* (.03)	.06* (.03)	.09** (.05)
Help outside Shelter for Emotional Problems s.e.	.14* (.03)	.09* (.03)	.11* (.05)
Help outside Shelter for Medical Problems s.e.	.16* (.03)	.14* (.04)	.23* (.07)

Notes: Probit IV Standard Errors are using corrected covariance matrix (Murphy and Topel, 1985). Demographics regressions include age, female, six months in shelter, and 3 levels of education. Health regressions add current depression, psychosis, suicidal thoughts, and history of diabetes, epilepsy, and tuberculosis, and current receipt of SSI or SSD. IV regressions include all the preceding variables but use an instrument for Medicaid reciprocity.

Appendix Table 1: Predicting Medicaid Recipiency among New York City Homeless Adult Shelter Residents, 1987

	marginal effect	s.e.
Age	0.001	0.001
Age>65	.08	.08
Female	.04**	.02
Depression	.03	.03
Psychotic Ideation	.02	.02
Suicidal Thoughts	0.0	.04
Diabetes	.02	.05
Epilepsy	.07	.05
Tuberculosis	-.06*	.02
Pneumonia	.04	.03
Shelter> 6 months	.02	.02
Less than High School	0.0	.03
High School	.02	.02
College	.06*	.03
SSI	.69*	.08
SSD	.30*	.09
Public	.66*	.05
Constant	.08	.02
Pseudo R <sup>2</sup>	37.2	

Regressions also include age, over 65 dummy, six months in shelter, current depression, psychosis, suicidal thoughts, and history of diabetes, epilepsy, tuberculosis, and pneumonia.

\*= significant at 5 percent. \*\* = significant at 10 percent.