Use of Substance Abuse Services by Young Uninsured American Adults

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Objectives: This study examined the prevalence and correlates of substance abuse service use among uninsured young adults aged 18 to 34 years (N=24,282). Methods: Data were drawn from the 1999 National Household Survey on Drug Abuse. Logistic regression was used to identify correlates of substance abuse service use among persons who met DSM-IV criteria for dependence. Results: Among uninsured young adults (N=5,067), 66 percent lacked any health care coverage for at least one year. In this uninsured group, 72 percent were past-year users of alcohol or drugs (N=2,335). Among past-year alcohol users (N=2,273), 12 percent met criteria for alcohol dependence; among past-year drug users (N=864), 21 percent met dependence criteria. Eighty-seven percent of the uninsured young adults with alcohol or drug dependence did not receive any substance abuse treatment services in the previous year. In the uninsured substance-dependent group, women, blacks, and Hispanics were less likely than men and whites to use substance abuse services. Among those with substance dependence, uninsured persons were more likely than privately insured persons to receive substance abuse services from the self-help or human service (nonmedical) sector. Conclusions: Racial, ethnic, and gender disparities in the use of substance abuse services are notable among young adults who lack health insurance. (Psychiatric Services 56:946–953, 2005)

The substance abuse service needs of the uninsured population deserve greater attention than they have received. In 2001 approximately 46 million Americans lacked health insurance (1). Young adults, persons from racial and ethnic minority groups, and persons in low-income households are more likely than other groups to be uninsured (1–4). For example, of Americans who were under age 65 in 2001, 38 percent of Hispanics and 20 percent of blacks were uninsured, compared with only 15 percent of whites (1).

Compared with privately insured persons, those who are uninsured report poorer physical and mental health (5–7). They also are more likely to have a serious psychiatric problem, including substance abuse or dependence (8–10). Uninsured persons are significantly less likely to receive mental health services (10,11), especially from specialized professionals (11,12). However, one study showed no significant differences between uninsured and privately insured persons in outpatient mental health service use (8).

Studies of mental health service use have typically aggregated substance abuse services with those addressing other psychiatric problems (8,11–14). The specific association between health insurance status and use of substance abuse services is less clear. Investigators have suggested that uninsured persons with substance use problems may be underserved (10,15,16). Young people and persons from racial and ethnic minority groups may either have no access to substance abuse services or receive inadequate treatment because of financial, personal, or cultural barriers (17–19).

In light of the large proportion of young persons from racial and ethnic minority groups in the uninsured population, we examined the prevalence and correlates of substance abuse service use among uninsured adults aged 18 to 34 years. Using data from the 1999 National Household Survey on Drug Abuse (NHSDA) (20), we sought to investigate the prevalence and characteristics of substance abuse service use within this population and differences in service use between those with health insurance and those without it.

Methods

Data sources

Statistical analyses were based on data from the public use file of the 1999 NHSDA (20). The NHSDA is a national survey of the use of alcohol and illicit drugs by Americans aged 12 and older. It uses a multistage area probability sampling method (21) to select civilian, noninstitutionalized populations (that is, household residents, residents of noninstitutionalized group quarters, and civilians living on military installations) for participation in the survey. This design employs a composite size measure methodology.
and a specially designed within-dwelling selection procedure to ensure that desired sample sizes are achieved for all age groups (21).

Respondents were interviewed at their place of residence for about an hour. The 1999 survey used computer-assisted personal interviewing and incorporated procedures to increase the accuracy of respondents’ reporting of drug use behaviors. Audio computer-assisted self-interviewing was used for questions of a sensitive nature, for which the respondent either read the questions silently on the computer screen or listened to them read aloud through headphones and then entered his or her responses directly into the computer.

To ensure the representativeness of the NHSDA sample, analysis weights were developed to adjust for variation in household selection, nonresponse, and poststratification of the selected sample. Weighted response rates were 90 percent for household screening and 69 percent for completed interviews. NHSDA design and data collection procedures have been reported in detail elsewhere (20).

**Study sample**

The study reported here was declared exempt from review by the RTI institutional review board because it used an existing public use data file.

The study focused on young adults aged 18 to 34 years, because this age group has a higher rate of recent use of illicit drugs than older adults (20). Of this sample (unweighted N=24,282), 51 percent were females, 46 percent were aged 18 to 25 years, 33 percent were members of nonwhite minority groups, 56 percent reported an annual family income of less than $40,000, and 21 percent lacked any health insurance coverage.

Individuals who were not covered by any private or public programs or sources were categorized as uninsured (22). To exclude individuals with a transient lack of coverage, our analysis of the uninsured group was based on a subsample of the sustained uninsured—that is, those who reported having no health insurance for at least one year (N=3,253). Thus persons who were uninsured for less than a continuous 12-month period were excluded from this group.

**Variables**

Private health insurance refers to insurance obtained through an employer, through a union, or by direct payment of premiums to a private health insurance company or health maintenance organization. Public health insurance included Medicare, Medicaid, CHAMPUS, TRICARE, CHAMPVA, the Department of Veterans Affairs, and military health care.

We examined several demographic characteristics: age, gender, race or ethnicity, education, total family income, and population density. Education was dichotomized into those who had dropped out of school and those who had not because of the association between drug use and school dropout (23). People who had dropped out of school included those who had not completed the 12th grade, reported not being enrolled in school, did not identify themselves as students, and lacked a general educational development certificate (GED).

Past-year dependence on alcohol or an illicit drug was assessed by seven dependence criteria as defined by DSM-IV (24). These questions ask about health and emotional problems, tolerance, attempts to cut down on use, withdrawal, and other symptoms associated with alcohol or drug use (20). Specifically, alcohol dependence referred to individuals who reported at least three alcohol-related dependence symptoms in the previous year. Drug dependence referred to at least three dependence symptoms related to the use of any of the nine classes of drugs: cocaine or crack, marijuana or hashish, inhalants, hallucinogens, heroin, sedatives, tranquilizers, pain relievers, or stimulants. Use-related problems referred to individuals who reported one or two dependence symptoms but did not meet criteria for dependence (that is, three or more symptoms).

We defined substance abuse service use as any use of services specifically related to alcohol or drug use in the previous year. The interviewer asked, “During the past 12 months have you received treatment or counseling for your use of alcohol or any drug, not counting cigarettes?” Pertinent questions addressed the location of services received—hospital, drug or alcohol rehabilitation facility, mental health center or facility, doctor’s office, prison or jail, or a self-help group or other nonmedical setting.

**Data analysis**

Data were analyzed with SUDAAN software (25) that applies a Taylor series linearization method to account for the effects of the complex NHSDA design features, such as clustering and weighting. All percentages reported here are weighted estimates. Because service use was a dichotomized variable (yes or no), we used logistic regression procedures (26) to identify correlates of substance abuse service use among persons who met criteria for dependence. We report both crude and adjusted odds ratios denoting estimated associations between service use and its correlates. The adjusted logistic regression model statistically controlled for variations in some sociodemographic characteristics.

**Results**

**Demographic characteristics of the uninsured group**

Of all civilian, noninstitutionalized Americans aged 18 to 34 years (unweighted N=24,282), 71 percent had health insurance through private
sources, 8 percent received coverage through public programs, and 21 percent were uninsured. As Table 1 shows, higher proportions of uninsured persons were noted among adults aged 18 to 25 years, males, Hispanics, those who had dropped out of school, and persons with lower family incomes.

Among all uninsured young adults (N=5,067), 66 percent lacked any health care coverage for a year or longer. Compared with those who lacked coverage for less than a year, those who lacked coverage for at least 12 months were significantly more likely to be aged 26 to 34 years, to be male, to be Hispanic, to have dropped out of school, and to have a family income of less than $40,000.

**Substance use and sustained lack of coverage**
As shown in Table 2, among uninsured adults who lacked coverage for at least 12 months (N=3,253), 70 percent had drunk alcohol and 25 percent had used illicit drugs or psychotherapeutics for nonmedical purposes in the past year. Seventy-two percent of young adults who lacked coverage for at least 12 months used alcohol or drugs, and 11 percent met criteria for alcohol or drug dependence in the past year. Among all past-year alcohol users (N=2,273), an estimated 12 percent met criteria for alcohol dependence; among all past-year drug users (N=864), 21 percent met drug dependence criteria.

Among the young adults who were dependent on alcohol or any drug (N=2,107), those who had been uninsured for at least 12 months were more likely than those with private insurance to be dependent on both substances (22 percent compared with 13 percent; χ²=20.73, df=4, p<.001). One-fourth of the sustained uninsured group met criteria for dependence on more than one substance, compared with 15 percent of the privately insured group (χ²=13.06, df=4, p=.001).

**Use of substance abuse services**
The prevalence of substance abuse service use increased with the level of substance use. An estimated 5 percent of alcohol users with alcohol use problems (one or two symptoms of dependence) used alcohol-related services, compared with 11 percent of individuals with alcohol dependence. Close to 4 percent of drug users with drug use problems used drug-related services, compared with 15 percent of drug-dependent individuals. Altogether, 13 percent of individuals with either alcohol or drug dependence had received substance abuse services in the previous year.

Correlates of service utilization were examined by using logistic regression procedures that held constant
the influence of other variables in the model (Table 3). Among uninsured persons who were dependent on alcohol or drugs (N=384), blacks and Hispanics were less likely than whites to receive substance abuse services, independent of the influence of age, gender, education, family income, and population density. After these demographic characteristics were held constant, substance-dependent males were about twice as likely as their female counterparts to receive services. Individuals with the highest level of family income ($75,000 or more) were more likely than those with an income of $40,000 to $74,999 to receive services.

Among privately insured individuals who were dependent on alcohol or drugs (N=1,515), educational status was the only variable associated with service use. Those who had dropped out of school were twice as likely to receive services as those who had not dropped out.

### Table 2
Past-year prevalence of alcohol and drug use and dependence in a sample of young adults aged 18 to 34 years who participated in the 1999 National Household Survey on Drug Abuse and who lacked health insurance for at least 12 months (unweighted N=3,253)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Any use</th>
<th>Use with no symptoms of dependence</th>
<th>One or two symptoms of dependence</th>
<th>DSM-IV dependence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>2,273</td>
<td>70.1</td>
<td>1,392</td>
<td>43.8</td>
</tr>
<tr>
<td>Any drug</td>
<td>864</td>
<td>24.5</td>
<td>463</td>
<td>13.3</td>
</tr>
<tr>
<td>Alcohol or any drug</td>
<td>2,335</td>
<td>71.8</td>
<td>1,327</td>
<td>41.8</td>
</tr>
</tbody>
</table>

* Three or more symptoms of dependence

### Table 3
Logistic regression analysis of substance abuse service use in a sample of young adults aged 18 to 34 years who participated in the 1999 National Household Survey on Drug Abuse and who met criteria for alcohol or drug dependence in the past year, by insurance status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Lacked insurance for at least one year (N=384)</th>
<th>Privately insured (N=1,515)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crude OR 95% CI</td>
<td>Crude OR 95% CI</td>
</tr>
<tr>
<td>Age 18 to 25 years (referent, 26 to 34 years)</td>
<td>.7 (.3–1.8)</td>
<td>.9 (.5–1.6)</td>
</tr>
<tr>
<td>Male (referent, female)</td>
<td>1.7 (.7–4.0)</td>
<td>1.0 (.6–1.8)</td>
</tr>
<tr>
<td>Race or ethnicity (referent, white)</td>
<td>Black [.1 (.01–.4**)]</td>
<td>Other b [.7 (.2–2.8)]</td>
</tr>
<tr>
<td></td>
<td>Hispanic [.2 (.1–.7**)]</td>
<td>Hispanic [.9 (.3–2.7)]</td>
</tr>
<tr>
<td>Dropped out of school (referent, did not drop out)</td>
<td>1.0 (.4–2.3)</td>
<td>2.5 (1.1–5.7*)</td>
</tr>
<tr>
<td>Total family income (referent, $75,999 or higher)</td>
<td>.7 (.2–2.4)</td>
<td>.8 (.3–1.9)</td>
</tr>
<tr>
<td>$20,000 to $39,999</td>
<td>1.1 (3–3.7)</td>
<td>.9 (.4–2.2)</td>
</tr>
<tr>
<td>$40,000 to $74,999</td>
<td>.2 (.1–.9*)</td>
<td>.9 (.4–2.3)</td>
</tr>
<tr>
<td>Population density (referent, nonmetro area)</td>
<td>Large metro area [.1 (2–4.4)]</td>
<td>.7 (1.3–1.8)</td>
</tr>
<tr>
<td></td>
<td>Small metro area [1.6 (.4–6.7)]</td>
<td>.9 (.5–1.8)</td>
</tr>
</tbody>
</table>

* The adjusted model includes all variables listed in the table.

** Includes Native Americans, Asians, Pacific Islanders, Native Hawaiians, and persons reporting more than one race

* *p ≤ .05
** *p ≤ .01
*** *p ≤ .001
Past-year use of substance abuse services in a sample of young adults aged 18 to 34 years who participated in the 1999 National Household Survey on Drug Abuse and who met criteria for alcohol or drug dependence, by insurance status

<table>
<thead>
<tr>
<th>Insurance status</th>
<th>Unweighted N</th>
<th>Any service</th>
<th>Specialty serviceb</th>
<th>Self-help or nonmedical servicec</th>
<th>Jail or court-mandated service</th>
<th>Hospital emergency department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privately insured</td>
<td>1,515</td>
<td>7.0</td>
<td>5.5</td>
<td>3.9</td>
<td>1.1</td>
<td>.6</td>
</tr>
<tr>
<td>Publicly insured</td>
<td>208</td>
<td>19.1</td>
<td>16.4</td>
<td>12.9</td>
<td>2.5</td>
<td>3.9</td>
</tr>
<tr>
<td>Uninsured for at least one year</td>
<td>384</td>
<td>13.4**</td>
<td>8.9*</td>
<td>10.8**</td>
<td>3.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Any uninsuredd</td>
<td>640</td>
<td>12.6**</td>
<td>9.3*</td>
<td>8.6**</td>
<td>3.0</td>
<td>1.5</td>
</tr>
</tbody>
</table>

a Chi square tests for insurance status (private, public, and uninsured) and each specific service setting (yes versus no): *p≤.05; **p≤.01
b Service provided at a hospital, drug or alcohol rehabilitation program or facility, mental health center or facility, or a physician’s office or from a counselor, psychologist, or therapist
c Service or help received from a school counselor, family member or friend, church or religious influence, halfway house, group home, alcohol or drug class, foster care agency, or child and family services
d All uninsured persons aged 18 to 34 years who met criteria for alcohol or drug dependence, regardless of the length of time not covered by insurance

gender, race or ethnicity, education, family income, and population density were controlled for, those who had been uninsured for at least a year were more likely than those who were privately insured to use any substance abuse service, particularly from the self-help or nonmedical sectors (Table 5). A similar pattern of findings was observed when privately insured persons were compared with uninsured persons, including those who lacked insurance for less than one year.

Discussion and conclusions

We found that in 1999 two-thirds of uninsured Americans aged 18 to 34 years lacked health insurance coverage for at least a year. Of this sustained uninsured group, 11 percent met criteria for alcohol or drug dependence in the previous year. Prevalence estimates of drug dependence in the 1999 NHSDA appear to be slightly higher than those in the 1990–1992 National Comorbidity Survey (NCS). Between 2 percent and 3 percent of individuals aged 15 to 34 years in the NCS and between 9 percent and 12 percent of those who used drugs met DSM-III-R criteria for drug dependence in the past year (27). In the 1999 NHSDA, 4 percent of all persons aged 15 to 34 years and 16 percent of all past-year drug users aged 15 to 34 years manifested past-year drug dependence. This difference might be partially attributable to variation in interviewing procedures. For example, the NHSDA used audio

### Table 4

Logistic regression analyses of substance abuse service use in a sample of young adults aged 18 to 34 years who participated in the 1999 National Household Survey on Drug Abuse and who met criteria for alcohol or drug dependence in the past year, by insurance status

<table>
<thead>
<tr>
<th>Insurance status</th>
<th>Any service</th>
<th>Specialty serviceb</th>
<th>Self-help or nonmedical servicec</th>
<th>Jail or court-mandated service</th>
<th>Hospital emergency department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Unweighted N=2,107)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uninsured for at least one year</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Privately insured</td>
<td>.5**</td>
<td>.3–.8</td>
<td>.5</td>
<td>.3–1.1</td>
<td>.3**</td>
</tr>
<tr>
<td>Publicly insured</td>
<td>1.8</td>
<td>.8–3.6</td>
<td>2.3*</td>
<td>1.0–5.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Adjusted model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Unweighted N=2,363)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uninsured for any period</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Privately insured</td>
<td>.5**</td>
<td>.3–.8</td>
<td>.5</td>
<td>.3–9</td>
<td>.4**</td>
</tr>
<tr>
<td>Publicly insured</td>
<td>1.9</td>
<td>1.0–3.7</td>
<td>2.2*</td>
<td>1.0–4.8</td>
<td>1.8</td>
</tr>
</tbody>
</table>

a The adjusted model controlled for age, gender, race or ethnicity, education, total family income, and population density.
b Service provided at a hospital, drug or alcohol rehabilitation program or facility, mental health center or facility, or a physician’s office or from a counselor, psychologist, or therapist
c Service or help received from a school counselor, family member or friend, church or religious influence, halfway house, group home, alcohol or drug class, foster care agency, or child and family services

*p ≤.05
**p ≤.01
A majority of people with alcohol or drug use disorders do not receive substance abuse services (28–31). The National Longitudinal Alcohol Epidemiologic Survey found that 10 percent of Americans aged 18 years or older who had alcohol abuse or dependence in the past year received alcohol abuse services, and 9 percent of those reporting drug abuse or dependence received drug abuse services (28). In our uninsured sample, 11 percent of alcohol-dependent individuals used alcohol abuse services and 15 percent of drug-dependent individuals used drug abuse services.

Our findings suggest that young uninsured women who are alcohol or drug dependent are less likely than their uninsured male counterparts to use substance abuse services. Studies have suggested that child care, domestic responsibilities, and social stigma have constrained women’s use of such services and that available treatment programs may tend to address men’s needs more adequately than those of women (32–36).

Uninsured Hispanics and blacks also may underutilize substance abuse services. Studies have revealed a lower rate of service use among Hispanics and blacks compared with whites (17,37–40). Compared with whites with substance abuse or mental health service needs, blacks have less access to care and a greater unmet need for care (38). Among those in need of substance abuse or mental health services, Hispanics are more likely than whites to report a delay in receiving care, lower satisfaction with care, and lower rates of receiving active treatment (38).

Some culture-related factors may explain these findings, at least in part. Hispanic drug users appear to be more likely than white users to say that they do not seek drug abuse treatment because they do not perceive a treatment need, because of their reluctance to acknowledge their addictions, or because of their discomfort with the prospect of being separated from their families (17–19). Black drug users are more likely than white users to have an unfavorable view of addiction treatment and to perceive that they have no need for it (17,18).

Contrary to other studies, our study found that uninsured persons had a higher rate of use of any substance abuse service than privately insured persons, particularly services from the self-help and nonmedical sectors. Wells and colleagues (10) found that uninsured persons had a lower rate of use of any substance abuse or mental health service than privately insured persons and those with Medicaid. Differences in study designs may account for this discrepancy. In other studies, service utilization was measured as any visit for either a substance use problem or a mental health problem (8,10,13). We defined the use of a substance abuse service as any visit for either a substance abuse problem or any service specifically for problems related to alcohol or drug abuse.

In addition, we focused on a young, uninsured subpopulation that may include a subgroup of more severe substance abusers who need treatment, whereas other studies have examined individuals across different age groups (10,13,41). The prevalence of a recent substance use disorder and serious mental illness is highest among young adults aged 18 to 25 years (42). Uninsured persons have been found to be more likely than those with insurance to have substance abuse problems and other psychiatric disorders (8–10,41). Our finding of a higher prevalence rate of service use among uninsured persons may be partly explained by characteristics of our sample: more uninsured persons than privately insured persons were dependent on both alcohol and at least one drug. Studies have identified the severity of substance abuse and its related social consequences, such as involvement in the criminal justice system, as important correlates of service utilization (43–45). Our data suggest that uninsured persons may be more likely than those with private insurance to receive substance abuse services through the criminal justice system or an emergency department. However, the small number of service users in our sample might have limited the power to detect the difference. Further investigations of variations in substance abuse service use by insurance status within key age groups are warranted.

Furthermore, many substance abusers resist treatment, probably because of the stigma associated with substance abuse (46,47). Privately insured individuals may not use treatment services covered by their employer-based insurance plans, because they want to handle the problem on their own or they deny having substance use problems or treatment needs because they fear potential negative consequences. Studies of health insurance claims data have found that surprisingly few privately insured individuals use substance abuse services (48,49). Schoenbaum and colleagues (48) reported that only about 3 percent of 617,133 members covered by a private, employer-sponsored, managed behavioral health care plan used any substance abuse services, whereas 17 times as many members used mental health services. We found that privately insured persons were less likely than uninsured persons to use services from the self-help sector. Clearly, there is a need to better understand factors that explain the very low rate of service use by the privately insured population (49).
One recent study found that privately insured persons were less likely than uninsured persons to enter alcohol treatment (44). Privately insured problem drinkers appear to enter treatment at the point at which their alcohol-related medical problems become sufficiently prominent that their physicians intervene (44). Our findings also are consistent with those of other studies showing that a majority of clients in substance abuse treatment facilities do not have private insurance as the expected source of payment (15,50–52). Data from these facilities show that treatment participation is significantly associated with initiation of drug use at an early age and with use of multiple drugs, dependence, and involvement in the criminal justice system (43,52). For many substance abusers, treatment initiation typically is facilitated by social institutions or social service agencies (43,51,52).

Data for this study were from a cross-sectional survey and depended on respondents’ self-reports, which may reflect some subtle biases, such as underreporting or recall bias, that confounded our results. Second, these findings should not be generalized to subgroups that are not covered by the NHSDA, including homeless individuals and those living in institutional group quarters. Third, the lack of assessment of the quality, timeliness, and patterns of substance abuse care obtained precludes further examination of these issues.

Despite these limitations, our findings have important implications for policy making and delivery of substance abuse services. Lack of health insurance is not a temporary condition to many nonetheless, uninsured Americans (41,53). Among persons who need treatment, those who are uninsured are less likely than those who are insured to report satisfaction with substance abuse care (10), to maintain their treatment regimens (15), and to receive treatment in residential programs that provide continuing support for their abstinence and recovery (16).

Only a small number of the young, uninsured, substance-dependent persons in our study received any substance abuse service within a 12-month period. Underutilization of substance abuse services by Hispanics, blacks, and women is particularly deserving of attention from policy makers and researchers. Our findings highlight the importance of the self-help and nonmedical sectors in the delivery of substance abuse services for the uninsured population (54) and suggest the need to better understand the adequacy of services provided in these sectors. Publicly funded programs play an important role in the provision of substance abuse and mental health care to socially and economically disadvantaged subgroups (8,9,51). Expanding public insurance coverage to the young and uninsured population, or restructuring the means by which these services are supported, is likely to improve access to substance abuse services among substance-dependent young adults.

Acknowledgments

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