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Use of Substance Abuse Services by Young Uninsured American Adults

Li-Tzy Wu, Sc.D. and Chris Ringwalt, Dr.P.H.

Dr. Wu is affiliated with the behavioral health research division of RTI International, 3040 Cornwallis Road, Research Triangle Park, North Carolina 27709 (e-mail, liwu@rti.org). Dr. Ringwalt is with the Pacific Institute for Research and Evaluation in Chapel Hill, North Carolina.

Abstract

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 His-panics 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.

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 under-served (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 noninstitutional 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 non-white 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 NHS-DA 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 (un-weighted 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; $\chi^2=20.73$, $df=4$, $p<.001$). 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 ($\chi^2=13.06$, $df=4$, $p=.011$).

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.

Substance dependence and service use by health insurance status

To examine use of substance abuse services by health insurance status, we expanded the analysis sample to include all individuals aged 18 to 34 years who were dependent on either alcohol or a drug, regardless of their health insurance coverage (Table 4). When age, 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 computer-assisted self-interviewing for sensitive substance use questions.

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 un-met 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 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 nonelderly, 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.

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References

1. Rhoades JA: The Uninsured in America, 2001. Estimates for the Civilian Noninstitutionalized Population Under Age 65. Rockville, Md, Agency for Healthcare Research and Quality, 2002
2. Centers for Disease Control and Prevention. Age- and state-specific prevalence estimates of insured and uninsured persons, United States, 1995–1996. *Morbidity and Mortality Weekly Report* 1998;47:529–532. [PubMed: 9667826]
3. Health Insurance Status of the Civilian Noninstitutionalized Population: 1998. Rockville, Md, Agency for Health Care Policy and Research, 2000
4. Health Insurance Status of the Civilian Noninstitutionalized Population: 1999. MEPS Research Findings. Rockville, Md, Agency for Health Research and Quality, 2001
5. Short PF, Lair TJ. Health insurance and health status: implications for financing health care reform. *Inquiry* 1995;31:425–437. [PubMed: 7821996]
6. Hahn B, Flood AB. No insurance, public insurance, and private insurance: do these options contribute to differences in general health? *Journal of Health Care of the Poor and Underserved* 1995;6:41–59.
7. Centers for Disease Control and Prevention. Self-assessed health status and selected behavioral risk factors among persons with and without health-care coverage, United States, 1994–1995. *Morbidity and Mortality Weekly Report* 1998;47:176–180. [PubMed: 9518282]
8. Norquist G, Wells K. Mental health needs of the uninsured. *Archives of General Psychiatry* 1991;48:475–478. [PubMed: 2021301]
9. McAlpine DD, Mechanic D. Utilization of specialty mental health care among persons with severe mental illness: the roles of demographics, need, insurance, and risk. *Health Services Research* 2000;35:277–292. [PubMed: 10778815]
10. Wells KB, Sherbourne CD, Sturm R, et al. Alcohol, drug abuse, and mental health care for uninsured and insured adults. *Health Services Research* 2002;37:1055–1066. [PubMed: 12236383]
11. Katz SJ, Kessler RC, Frank RG, et al. Mental health care use, morbidity, and socioeconomic status in the United States and Ontario. *Inquiry* 1997;34:38–49. [PubMed: 9146506]
12. Mojtabai R, Olfson M, Mechanic D. Perceived need and help-seeking in adults with mood, anxiety, or substance use disorders. *Archives of General Psychiatry* 2002;59:77–84. [PubMed: 11779286]
13. Landerman LR, Burns BJ, Swartz MS, et al. The relationship between insurance coverage and psychiatric disorder in predicting use of mental health services. *American Journal of Psychiatry* 1994;151:1785–1790. [PubMed: 7977886]
14. Edlund MJ, Wang PS, Berglund PA, et al. Dropping out of mental health treatment: patterns and predictors among epidemiological survey respondents in the United States and Ontario. *American Journal of Psychiatry* 2002;159:845–851. [PubMed: 11986140]

15. Garcia LM, McGeary KA, Shultz JM, et al. The impact of insurance status on drug abuse treatment completion. *Journal of Health Care Finance* 1999;26:40–47. [PubMed: 10497750]
16. Lundgren LM, Amodeo M, Ferguson F, et al. Racial and ethnic differences in drug treatment entry of injection drug users in Massachusetts. *Journal of Substance Abuse Treatment* 2001;21:145–153. [PubMed: 11728788]
17. Longshore D, Hsieh SC, Anglin MD, et al. Ethnic patterns in drug abuse treatment utilization. *Journal of Mental Health Administration* 1992;19:268–272. [PubMed: 10171332]
18. Longshore D, Hsieh S, Anglin MD. Ethnic and gender differences in drug users' perceived need for treatment. *International Journal of Addiction* 1993;28:539–558.
19. Kline A. Pathways into drug user treatment: the influence of gender and racial/ethnic identity. *Substance Use and Misuse* 1996;31:323–342. [PubMed: 8834265]
20. Office of Applied Studies: Summary of Findings from the 1999 National Household Survey on Drug Abuse. Rockville, Md, Substance Abuse and Mental Health Services Administration, 2000
21. Bowman KR, Penne MA, Chromy JR, et al: 1999 National Household Survey on Drug Abuse, Sample Design Report. Rockville, Md, Substance Abuse and Mental Health Services Administration, 2001
22. The Uninsured in America, 199:. Medical Expenditure Survey. Rockville, Md, Agency for Health Care Policy and Research, 1999
23. Gfroerer JC, Greenblatt JC, Wright DA. Substance use in the US college-age population: differences according to educational status and living arrangement. *American Journal of Public Health* 1997;87:62–65. [PubMed: 9065228]
24. Diagnostic and Statistical Manual of Mental Disorders, 4th ed. Washington, DC, American Psychiatric Association, 1994
25. Shah BV, Barnwell BG, Bieler GS: SUDAAN Software for the Statistical Analysis of Correlated Data. Research Triangle Park, NC, Research Triangle Institute, 1997
26. Hosmer D, Lemeshow S: Applied Logistic Regression. New York, Wiley, 1989
27. Warner LA, Kessler RC, Hughes M, et al. Prevalence and correlates of drug use and dependence in the United States: results from the National Comorbidity Survey. *Archives of General Psychiatry* 1995;52:219–229. [PubMed: 7872850]
28. Grant BF. The influence of comorbid major depression and substance use disorders on alcohol and drug treatment: results of a national survey. *NIDA Research Monograph* 1997;172:4–15. [PubMed: 9154262]
29. Wu LT, Kouzis AC, Leaf PJ. Influence of comorbid alcohol and psychiatric disorders on utilization of mental health services in the National Comorbidity Survey. *American Journal of Psychiatry* 1999;156:1230–1236. [PubMed: 10450265]
30. Kessler RC, Zhao S, Katz SJ, et al. Past-year use of outpatient services for psychiatric problems in the National Comorbidity Survey. *American Journal of Psychiatry* 1999;156:115–123. [PubMed: 9892306]
31. Ross HE, Lin E, Cunningham J. Mental health service use: a comparison of treated and untreated individuals with substance use disorders in Ontario. *Canadian Journal of Psychiatry* 1999;44:570–577.
32. Allen K. Barriers to treatment for addicted African-American women. *Journal of the National Medical Association* 1995;87:751–756. [PubMed: 7473850]
33. Rouse BA, Carter JH, Rodriguez-Andrew S. Race/ethnicity and other sociocultural influences on alcoholism treatment for women. *Recent Developments in Alcoholism* 1995;12:343–367. [PubMed: 7624552]
34. Copeland J. A qualitative study of barriers to formal treatment among women who self-managed change in addictive behaviours. *Journal of Substance Abuse Treatment* 1997;14:183–190. [PubMed: 9258863]
35. Ramlow BE, White AL, Watson DD, et al. The needs of women with substance use problems: an expanded vision for treatment. *Substance Use and Misuse* 1997;32:1395–1404. [PubMed: 9286007]
36. Marsh JC, D'Aunno TA, Smith BD. Increasing access and providing social services to improve drug abuse treatment for women with children. *Addiction* 2000;95:1237–1247. [PubMed: 11092071]

37. Swartz MS, Wagner HR, Swanson JW, et al. Administrative update: utilization of services: I. comparing use of public and private mental health services: the enduring barriers of race and age. *Community Mental Health Journal* 1998;34:133–144. [PubMed: 9620158]
38. Wells K, Klap R, Koike A, et al. Ethnic disparities in unmet need for alcoholism, drug abuse, and mental health care. *American Journal of Psychiatry* 2001;158:2027–2032. [PubMed: 11729020]
39. Kataoka SH, Zhang L, Wells KB. Unmet need for mental health care among US children: variation by ethnicity and insurance status. *American Journal of Psychiatry* 2002;159:1548–1555. [PubMed: 12202276]
40. Wu P, Hoven CW, Tiet Q, et al. Factors associated with adolescent utilization of alcohol treatment services. *American Journal of Drug and Alcohol Abuse* 2002;28:353–369. [PubMed: 12014820]
41. Wu LT, Kouzis AC, Schlenger WE. Substance use, dependence, and service utilization among the US uninsured nonelderly population. *American Journal of Public Health* 2003;93:2079–2085. [PubMed: 14652338]
42. Results From the 2001 National Household Survey on Drug Abuse, Vol I: Summary of National Findings. Rockville, Md, Substance Abuse and Mental Health Services Administration, 2002
43. Grella CE, Joshi V. Gender differences in drug treatment careers among clients in the national Drug Abuse Treatment Outcome Study. *American Journal of Drug and Alcohol Abuse* 1999;25:385–406. [PubMed: 10473004]
44. Weisner C, Matzger H. A prospective study of the factors influencing entry to alcohol and drug treatment. *Journal of Behavioral Health Service Research* 2002;29:126–137.
45. Weisner C, Matzger H, Tam T, et al. Who goes to alcohol and drug treatment? Understanding utilization within the context of insurance. *Journal of Studies on Alcohol* 2002;63:673–682. [PubMed: 12529067]
46. Cunningham JA, Sobell LC, Sobell MB, et al. Barriers to treatment: why alcohol and drug abusers delay or never seek treatment. *Addictive Behaviors* 1993;18:347–353. [PubMed: 8393611]
47. Grant BF. Barriers to alcoholism treatment: reasons for not seeking treatment in a general population sample. *Journal of Studies on Alcohol* 1997;58:365–371. [PubMed: 9203117]
48. Schoenbaum M, Zhang W, Sturm R. Costs and utilization of substance abuse care in a privately insured population under managed care. *Psychiatric Services* 1998;49:1573–1578. [PubMed: 9856619]
49. Stein BD, Zhang W. Drug and alcohol treatment among privately insured patients: rate of specialty substance abuse treatment and association with cost-sharing. *Drug and Alcohol Dependence* 2003;71:153–159. [PubMed: 12927653]
50. Amaro H, Beckman LJ, Mays VM. A comparison of black and white women entering alcoholism treatment. *Journal of Studies on Alcohol* 1987;48:220–228. [PubMed: 3657163]
51. Horgan CM, Reif S, Ritter GA, et al. Organizational and financial issues in the delivery of substance abuse treatment services. *Recent Development in Alcoholism* 2001;15:9–26.
52. Craddock SG, Rounds-Bryant JL, Flynn PM, et al. Characteristics and pretreatment behaviors of clients entering drug abuse treatment, 1969 to 1993. *American Journal of Drug and Alcohol Abuse* 1997;23:43–59. [PubMed: 9048146]
53. Stability and Changes in Health Insurance Status: New Estimates From the 1996 MEPS. Rockville, Md, Agency for Health Research and Quality, 2001
54. Horgan C: Need and access to drug abuse treatment, in *Treating Drug Abuse Effectively*. Edited by Egertson JA, Fox DM, Leshner AI. New York, Blackwell and Mil-bank Memorial Fund, 1997

Table 1

Demographic characteristics of a sample of young adults aged 18 to 34 years who participated in the 1999 National Household Survey on Drug Abuse, by insurance status

Characteristic	All adults aged 18 to 34 years (unweighted N=24,282)				Uninsured adults aged 18 to 34 years (unweighted N=5,067) ^a			
	Insured	Uninsured	χ^2	df	p ^b	Uninsured for <1 year	Uninsured for ≥1 year	p ^b
Age (years)								
18 to 25	75.7	24.3	70.7	1	<.001	37.1	62.9	15.1
26 to 34	81.8	18.2				29.8	70.2	1
Gender								
Male	76.8	23.2	37.1	1	<.001	29.0	71.1	31.1
Female	81.1	18.9				39.1	60.9	1
Race or ethnicity								
White	83.1	17.0	247.0	3	<.001	39.3	60.7	79.1
Black	77.1	22.9				38.3	61.7	3
Hispanic	59.2	40.9				19.9	80.1	<.001
Other ^c	84.6	15.4				34.3	65.7	
Education								
Dropped out	52.9	47.1	287.5	1	<.001	24.8	75.2	33.8
Did not drop out	82.4	17.6				36.7	63.3	1
Family income								
\$0 to \$19,999	65.3	34.8	588.3	3	<.001	30.4	69.6	25.2
\$20,000 to \$39,999	76.0	24.0				33.2	67.8	3
\$40,000 to \$74,999	87.7	12.3				39.3	60.7	<.001
\$75,000 or higher	92.0	8.0				50.1	49.9	
Population density								
Large metro area	78.8	21.2	1.6	2	>.05	32.1	67.9	1.8
Small metro area	80.0	20.4				35.2	64.8	2
Nonmetro area	78.3	21.7				34.6	65.4	>.05

^a A total of 157 uninsured persons who did not report their length of time without health insurance are not included in the analysis.

^b Bonferroni adjusted

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

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 (un-weighted N=3,253)

Table 2

Substance	Any use		Use with no symptoms of dependence		One or two symptoms of dependence		DSM-IV dependence ^a	
	N	%	N	%	N	%	N	%
Alcohol	2,273	70.1	1,392	43.8	600	18.0	281	8.4
Any drug	864	24.5	463	13.3	224	6.5	177	5.2
Alcohol or any drug	2,335	71.8	1,327	41.8	624	18.9	384	11.1

^aThree 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^a

Variable	Lacked insurance for at least one year (N=384)			Privately insured (N=1,515)		
	Crude OR	95% CI	Adjusted OR	95% CI	Adjusted OR	95% CI
Age 18 to 25 years (referent, 26 to 34 years)	.7	.3–1.8	.6	.2–1.4	.9	.5–1.7
Male (referent, female)	1.7	.7–4.0	2.5	1.1–5.7*	1.0	.6–1.8
Race or ethnicity (referent, white)						
Black	.1	.01–.4**	.04	.01–.3***	1.0	.3–2.9
Other ^b	.7	.2–2.8	.5	.1–2.5	.5	.2–1.4
Hispanic	.2	.1–.7**	.1	.03–.4***	.9	.3–2.8
Dropped out of school (referent, did not drop out)	1.0	.4–2.3	2.3	.92–5.53	2.5	1.1–5.7*
Total family income (referent, \$75,000 or higher)						
\$0 to \$19,999	.7	.2–2.4	.7	.2–2.7	.8	.3–1.6
\$20,000 to \$39,999	1.1	.3–3.7	1.1	.3–4.5*	.9	.3–1.9
\$40,000 to \$74,999	.2	.1–.9*	.2	.03–.8*	.9	.3–2.0
Population density (referent, nonmetro area)						
Large metro area	1.01	.2–4.4	2.2	.5–1.6	.7	.3–1.2
Small metro area	1.6	.4–6.7	3.0	.7–12.3	1.0	.5–1.8

^aThe adjusted model includes all variables listed in the table.

^bIncludes Native Americans, Asians, Pacific Islanders, Native Hawaiians, and persons reporting more than one race

* p ≤ .05

** p ≤ .01

*** p ≤ .001

Table 4
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^a

Insurance status	Unweighted N	Any service	Specialty service ^b	Self-help or nonmedical service ^c	Jail or court-mandated service	Hospital emergency department
Privately insured	1,515	7.0	5.5	3.9	1.1	.6
Publicly insured	208	19.1	16.4	12.9	2.5	3.9
Uninsured for at least one year	384	13.4**	8.9*	10.8**	3.5	1.8
Any uninsured ^d	640	12.6**	9.3*	8.6**	3.0	1.5

^a Chi square tests for insurance status (private, public, and uninsured) and each specific service setting (yes versus no):

* $p \leq .05$;

** $p \leq .01$

^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

Table 5

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^a

Insurance status	Any service		Specialty service ^b		Self-help or non-medical service ^c		Jail- or court-mandated service		Hospital emergency department	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Adjusted model 1 (Unweighted N=2,107)										
Uninsured for at least one year	1.0		1.0		1.0		1.0		1.0	
Privately insured	.5**	.3-.8	.5	.3-1.1	.3**	.2-.7	.4	.1-1.4	.3	.1-1.1
Publicly insured	1.8	.8-3.6	2.3*	1.0-5.4	1.4	.6-3.5	.8	.1-4.0	2.2	.5-9.4
Adjusted model 2 (Unweighted N=2,363)										
Uninsured for any period	1.0		1.0		1.0		1.0		1.0	
Privately insured	.5**	.3-.8	.5*	.3-.9	.4**	.2-.8	.5	.1-1.4	.3	.1-1.1
Publicly insured	1.9	1.0-3.7	2.2*	1.0-4.8	1.8	.8-4.2	.9	.2-4.4	3.0	.8-10.7

^aThe adjusted model controlled for age, gender, race or ethnicity, education, total family income, and population density.

^bService 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

^cService 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