Who Seeks Care Where? Utilization of Mental Health and Substance Use Disorder Treatment in Two National Samples of Individuals with Alcohol Use Disorders

MARK J. EDLUND, M.D., PH.D.,[a,*] BRENDA M. BOOTH, PH.D.,[b,c] AND XIAOTONG HAN, M.S.[c,d]

[a]*RTI International, Behavioral Health Epidemiology, Research Triangle Park, North Carolina*

[b]*Health Services Research & Development Center for Mental Healthcare Outcomes and Research, Central Arkansas Veterans Healthcare System, North Little Rock, Arkansas*

[c]*Division of Health Services Research, Department of Psychiatry, College of Medicine, University of Arkansas for Medical Sciences, Little Rock, Arkansas*

[d]*Veterans Affairs South Central Mental Illness Research, Education, and Clinical Center, Central Arkansas Veterans Healthcare System, North Little Rock, Arkansas*

ABSTRACT. Objective: Only a fraction of individuals with alcohol use disorders (AUDs) receive any AUD treatment during a given year. If a substantial proportion of individuals with unmet need for AUD treatment are receiving mental health treatment, accessibility of AUD treatment could potentially be improved by implementing strategies to ensure that individuals receiving mental health care are referred to the AUD sector or by increasing rates of AUD treatment in individuals receiving mental health treatment. **Method:** We assessed patterns and predictors of mental health treatment and AUD treatment among individuals with 12-month AUDs, using secondary data analyses from two national surveys, the National Survey on Drug Use and Health (NSDUH; n = 4,545 individuals with AUDs) and the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC; n = 3,327 individuals with AUDs). **Results:** In both NSDUH and NESARC, 8% of individuals with AUDs reported past-year AUD treatment. Among individuals with AUDs, mental health treatment was more common than AUD treatment, with 20% of NSDUH respondents and 11% of NESARC respondents reporting receiving mental health treatment. Greater mental health morbidity increased the odds of mental health treatment, and AUD severity increased the odds of AUD treatment. Mental health morbidity also increased the odds of AUD treatment, mainly by increasing the odds of receiving the category of both AUD and mental health treatment. **Conclusions:** Because individuals with AUDs are more likely to receive mental health treatment than AUD treatment, a key opportunity to improve the overall accessibility of treatment for AUDs may be to focus on improving AUD treatment among individuals receiving mental health treatment. (*J. Stud. Alcohol Drugs, 73,* 635–646, 2012)

RESEARCH HAS IDENTIFIED A RANGE of effective methods for treating alcohol use disorders (AUDs; abuse and dependence) in primary and specialty care (Babor et al., 1992; Fleming et al., 1997; Miller and Rollnick, 2002; Wallace et al., 1988; Walsh et al., 1992), but only a fraction of individuals with AUDs receive any AUD treatment during a given year (Grant, 1997; Grant et al., 2004; Grella et al., 2009; Wang et al., 2004, 2005a, 2005b). For those receiving treatment, the time between onset of disorder and initial treatment is years, often decades (Wang et al., 2004, 2005a). Reasons for low rates of treatment and, hence, high levels of unmet need are only partially understood.

Although barriers to treatment, both structural (e.g., not covered by insurance, could not afford to pay the bill) and attitudinal (e.g., did not think anyone could help, afraid of what others would think), are frequently discussed in the literature, one recent study using data from a large, nationally representative sample found that these barriers were not endorsed frequently (i.e., less than 10%) (Oleski et al., 2010). However, when stigma is present, it is a strong deterrent to receipt of treatment (Keyes et al., 2010). On the other hand, a major cause of low rates of AUD treatment may be failure to perceive a need for AUD treatment. Only 1 in 10 individuals with an AUD perceives a need for treatment (Edlund et al., 2009; Grant, 1997; Grella et al., 2009). It is unknown to what extent failure to perceive a need for treatment is because individuals (a) do not believe they have a disorder, (b) do not believe treatment is effective, (c) believe they can recover on their own, or (d) simply do not wish to give up alcohol misuse.

Another possible reason for unmet need for AUD treatment is that individuals with these disorders may obtain mental health treatment (e.g., treatment for depression or anxiety) rather than AUD treatment. Among individuals with "pure" AUDs (i.e., an AUD but no mental health disorder), perceived need for mental health treatment is as common as perceived need for AUD treatment (Edlund et al., 2006; Harris and Edlund, 2005). Individuals with AUDs may seek mental health treatment, either in primary care or the spe-

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*Correspondence may be sent to Mark J. Edlund at RTI International, Behavioral Health Epidemiology, 3040 Cornwallis Road, P.O. Box 12194, Research Triangle Park, NC 27709-2194, or via email at: medlund@rti.org.

cialty mental health sector, for several reasons. Their psychiatric issue may be more a mental health problem than an AUD problem, or they may believe this to be the case. This would not be surprising, given that denial is a hallmark of AUDs. Also, rightly or wrongly, individuals with comorbid mental health disorders and AUDs may believe that their alcohol use arises from the need to self-medicate their mental health symptoms (Khantzian, 1997). In this regard, epidemiological data suggest that in individuals with comorbid mental health and substance use disorders, the mental health disorder typically precedes the substance use disorder temporally (Kessler et al., 1996), and self-medication of mental health disorders increases the risk of a subsequent substance use disorder (Robinson et al., 2011). Further, evidence suggests that the large majority of mood and anxiety disorders that occur in the context of substance use are not substance induced (Grant et al., 2004). Also, individuals with AUDs may seek treatment in the mental health sector because they believe they can get adequate treatment for their AUD in this sector; this might be especially common if mental health treatment is geographically or financially more accessible than AUD treatment.

Method

Past studies have investigated treatment seeking of individuals with comorbid AUDs and mental health disorders (Harris et al., 2005; Havassy et al., 2004, 2009; Wu et al., 2003), generally with the purpose of evaluating whether individuals with comorbid disorders were receiving the combination of mental health and AUD treatment required for their disorders (i.e., both AUD and mental health treatment). In contrast, the purpose of the current study was to investigate the use of mental health treatment among individuals with AUDs who might or might not have a comorbid mental health disorder. In particular, we were interested in assessing what percentage of individuals with AUDs received (a) AUD treatment only, (b) mental health treatment only, (c) both AUD and mental health treatment, or (d) no AUD or mental health treatment; we were also interested in investigating predictors of these patterns of care. This information is useful for understanding and increasing access to AUD treatment. If a substantial fraction of individuals with unmet need (i.e., no AUD treatment) are receiving mental health care, the accessibility of AUD treatment could potentially be improved by implementing strategies to ensure that individuals receiving mental health care are referred to the AUD sector or by better integrating treatment of AUD disorders into mental health settings.

Sample

We used data from two large national surveys, the National Survey on Drug Use and Health (NSDUH) and the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) (Table 1). We used two data sets rather than one because, if results from two data sets are similar, despite methodological differences inherent across surveys, researchers and policy makers can have increased confidence in the validity of results.

National Survey on Drug Use and Health. The annual, face-to-face NSDUH is conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) (Substance and Mental Health Services Administration, 2002, 2004) to provide national data on incidence and prevalence of illicit drug, alcohol, and tobacco use. Respondents were selected by multistage probability sampling to be representative of the U.S. civilian, noninstitutionalized population ages 12 and older. Data from the 2006 survey were used, with 55,279 adults in the public use file (response rate = 74%).

National Epidemiologic Survey on Alcohol and Related Conditions. The NESARC was conducted by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) in 2001–2002 to provide data for the adult U.S. population on alcohol and drug use, abuse, and dependence and associated psychiatric and physical comorbidities (Grant et al., 2004). Potential respondents were selected by multistage probability sampling from the Census 2000/2001 Supplementary Survey and the Census 2000 Group Quarters Inventory. NESARC had a sample size of 43,093 individuals in private residences

Table 1. Overview of NSDUH and NESARC surveys

Variable	NSDUH	NESARC
Sponsor	SAMHSA	NIAAA
Year	2006	2001–2002
Analytical sample	Adults (18 or older) with AUDs	Adults (18 or older) with AUDs
Analytical sample size, *n*	4,545	3,327
Response rate	74%	81%
Interview mode	Face to face	Face to face
Sampling frame	Address lists	Census 2000/2001 Supplemental Survey and Census 2000 Group Quarters inventory

Notes: NSDUH = National Survey on Drug Use and Health; NESARC = National Epidemiologic Survey on Alcohol and Related Conditions; SAMHSA = Substance Abuse and Mental Health Services Administration; NIAAA = National Institute on Alcohol Abuse and Alcoholism; AUD = alcohol use disorder.

and certain group quarters housing, with a response rate of 81%. Interviews were face to face.

To investigate utilization of AUD and mental health treatment among adults with AUDs, we limited our analytical samples to adults (18 years and older) who met the criteria for AUDs (alcohol abuse, alcohol dependence) in the past year (n = 4,545 for NSDUH; n = 3,327 for NESARC).

Measures

Dependent variable. We constructed a multinomial variable with four mutually exclusive treatment categories: AUD treatment only, mental health treatment only, both AUD and mental health treatment, and no AUD or mental health treatment. To do this, we first constructed measures of mental health and AUD treatment as follows.

Alcohol use disorder treatment, National Survey on Drug Use and Health: Respondents were asked whether they received treatment or counseling for use of alcohol in the past 12 months.

Mental health treatment, National Survey on Drug Use and Health: NSDUH asks respondents about three types of mental health treatment: inpatient mental health treatment, "outpatient mental health treatment and counseling," and mental health medications. Respondents were first asked about inpatient treatment: "During the past 12 months, have you stayed overnight or longer in a hospital or other facility to receive treatment or counseling for any problem you were having with your emotions, nerves, or mental health?" They were then queried regarding outpatient treatment: "During the past 12 months, did you receive any outpatient treatment or counseling for any problem you were having with your emotions, nerves, or mental health? Please do not include treatment for alcohol or drug use." Those who answered affirmatively were asked where treatment occurred: (a) an outpatient mental health clinic or center; (b) the office of a private therapist, psychologist, psychiatrist, social worker, or counselor that was not part of a clinic; (c) a doctor's office that was not part of a clinic; (d) an outpatient medical clinic; (e) a partial day hospital or day treatment program; or (f) some other place. Finally, they were asked about mental health medications: "During the past 12 months, did you take any prescription medication that was prescribed for you to treat a mental or emotional condition?" Respondents answering affirmatively to any of these were coded as having received mental health treatment.

Alcohol use disorder treatment, National Epidemiologic Survey on Alcohol and Related Conditions: Respondents were asked if they had gone, in the past 12 months for reasons related to their drinking, to one of the following: Alcoholics Anonymous/Narcotics or Cocaine Anonymous; family services or other social service agency; alcohol or drug detoxification ward or clinic; inpatient ward of a psychiatric or general hospital or community mental health program; outpatient clinic, including outreach programs and day or partial programs; alcohol or drug rehabilitation program; emergency department for any reason related to drinking; halfway house, including therapeutic communities; crisis center for any reason related to drinking; Employee Assistance Program; clergyman, priest, or rabbi for any reason related to substance use; private physician, psychiatrist, psychologist, social worker, or other professional; or any other agency or professional. We chose to define treatment broadly, including both formal and informal (e.g., clergy, self-help groups) treatment. Similar definitions have been used in other studies of AUD treatment from NESARC (Cohen et al., 2007; Keyes et al., 2008; Schmidt et al., 2007).

Mental health treatment, National Epidemiologic Survey on Alcohol and Related Conditions: Respondents who met the criteria for one of the NESARC mental health disorders at some point in their lives were asked whether for mental health symptoms they went to an emergency room; went to a counselor, a therapist, doctor, or psychologist; stayed overnight in a hospital; or whether a doctor prescribed medication. Only respondents who met the criteria for one of the NESARC mental health disorders—major depression, dysthymia, mania/hypomania, panic disorder (with or without agoraphobia), agoraphobia without panic disorder, generalized anxiety disorder, specific phobia, or social phobia—at some point in their lives were asked about mental health treatment. For those not asked, we assumed no mental health treatment because treatment rates in the National Comorbidity Survey Replication among individuals with no mental health or substance use disorder were relatively low (Druss et al., 2007). A past-year mental health treatment variable was created based on whether the respondent had ever sought mental health treatment, the respondent's age, and age at the most recent mental health treatment. If the respondent had ever sought mental health treatment, and if the difference between these two ages was less than or equal to one, then the subject was defined as having mental health treatment in the past year. Although our measure was intended to measure past-year treatment, in theory, it could measure treatment that happened up to almost 2 years previously. For example, if a respondent at the time of interview was age 25 but almost 26, and the most recent mental health treatment was just after age 24, this person would be coded as having past-year mental health treatment.

Independent variables. Our model is based on Andersen (1995), who posited that access is a function of patient need (e.g., type and severity of disorder), predisposing factors (e.g., attitudes toward care), and enabling factors (e.g., insurance and income). NSDUH and NESARC contain detailed information on alcohol, drug, and mental health symptoms. Predisposing factors are difficult to measure in community surveys, and often race/ethnicity, gender, age, and marital status are used as proxies. Regarding enabling factors,

NSDUH and NESARC contain measures of income and insurance.

Alcohol and drug disorders: NSDUH contains measures for alcohol abuse, alcohol dependence, drug abuse, and drug dependence. Consistent with the hierarchy in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV; American Psychiatric Association, 1994), an individual could have alcohol dependence (a more severe disorder) or alcohol abuse (a less severe disorder) but not both. In our sample, which was defined to include only individuals with an AUD, alcohol dependence and abuse were mutually exclusive and thus perfectly collinear: Each individual had either alcohol dependence or abuse but not both. Because of this, only alcohol abuse or alcohol dependence needed to be included in the model. On the other hand, because many individuals in our sample did not have a drug use disorder, we could include measures of both drug dependence and drug abuse in multivariate models. NESARC uses the NIAAA Alcohol Use Disorder and Associated Disabilities Interview Schedule–DSM-IV Version, a structured interview designed to be administered by lay interviewers. Studies have demonstrated generally good to excellent reliability and validity (Grant et al., 1995, 2003, 2004; Hasin et al., 1997). As in NSDUH analyses, because of hierarchical definitions, NESARC respondents had either alcohol abuse or dependence but not both.

Mental health disorders: NSDUH contains a depression module to measure major depression in the past 12 months. NSDUH also contains the K6, a measure of psychological distress (Kessler et al., 2002, 2003). The K6 includes six questions that measure on a scale of 0 to 4 how frequently respondents experienced symptoms of psychological distress (nervousness, hopelessness, restlessness, depressed, feeling worthless, feeling that everything is an effort) during the month in the past year when they were feeling their worst emotionally. Respondents with scores of 13 and higher are considered to have serious psychological distress (SAMHSA, 2002, 2004).

For NESARC analyses, we used a measure of any anxiety disorder (generalized anxiety disorder, panic disorder with or without agoraphobia, agoraphobia with no history of panic disorder, social phobia, and specific phobia) in the past 12 months and any mood disorder (major depression, dysthymia, manic disorder, and hypomanic disorder) in the past 12 months.

Sociodemographic variables included gender, age, race, income, education, marital status, and insurance status. An urban/rural indicator was dropped from the final model because of nonsignificance.

Analysis

Multinomial logistic regression is useful when the dependent variable consists of more than two unordered, mutually exclusive, nominal outcomes (Hosmer and Lemeshow, 2000). In this study, there were four treatment categories: (a) AUD treatment only, (b) mental health treatment only, (c) both AUD and mental health treatment, and (d) no AUD or mental health treatment as the reference group for the calculation of odds ratios. For each independent variable, this produces three odds ratios. For example, in the case of gender, this models the effect of male (vs. female) in modeling three logits simultaneously: (a) comparing AUD treatment only with no AUD or mental health treatment, (b) comparing mental health treatment only with no AUD or mental health treatment, and (c) comparing both AUD and mental health treatment with no AUD or mental health treatment. SAS 9.2 SURVEYFREQ (SAS Institute Inc., Cary, NC) was used for bivariate analyses and SURVEYLOGISTIC for multinomial regression analyses to accommodate for study design stratifications, clustering, and weights.

Results

National Survey on Drug Use and Health

Descriptive statistics are shown in Table 2. The "total" column reflects the number (unweighted) and percentage (weighted) of individuals with the given characteristics. For example, reflecting the higher prevalence of AUDs in men than women, the sample comprised 2,812 men (66.4%) and 1,733 women (33.6%). The remaining columns describe the percentage and number who received treatment in the different sectors (AUD treatment only, mental health treatment only, both AUD and mental health treatment, and no treatment). For example, among men in the sample, 6.3% (n = 196) received AUD treatment only. In the total sample with AUDs, 75.1% received no treatment at all. Because the treatment categories were mutually exclusive, it is possible to calculate the number receiving AUD treatment by summing the 4.8% who received AUD treatment only with the 3.4% who received both AUD and mental health treatment, for a total of 8.2%. Similarly, 20% received mental health treatment (16.6% received mental health treatment only, 3.4% received both AUD and mental health treatment). As seen in Table 2, mental health treatment was more common than AUD treatment among all subgroups in the sample (e.g., men, women, married, not married).

Twelve percent of individuals with AUDs reported receiving mental health "outpatient treatment or counseling" in the past 12 months, and the most common location was a private therapist's office (Table 3a). Seventeen percent reported taking a prescription medication for mental health conditions. Inpatient mental health treatment was uncommon at 2%. Among those who reported either outpatient treatment or counseling or a prescription medication, 45% reported both, 15% reported only outpatient treatment or counseling, and

TABLE 2. Characteristics of NSDUH respondents with 12-month AUDs (n = 4,545), and percentage receiving various categories of treatment (weighted %, unweighted n)

Variable	Total % (n)	% AUD treatment only % (n)	% Mental health treatment only % (n)	% Both AUD and mental health treatment % (n)	% no treatment % (n)
Total sample	100.0 (4,545)	4.8 (249)	16.6 (672)	3.4 (143)	75.1 (3,481)
Demographic variables					
Sex					
Male	66.4 (2,812)	6.3 (196)	11.3 (240)	3.2 (77)	79.3 (2,299)
Female	33.6 (1,733)	2.0 (53)	27.1 (432)	3.9 (66)	67.0 (1,182)
Marital status					
Married	32.5 (822)	2.2 (25)	17.2 (130)	1.9 (21)	78.7 (646)
Not married	67.5 (3,723)	6.1 (224)	16.3 (542)	4.2 (122)	73.4 (2,835)
Education					
High school graduate or less	48.4 (2,323)	5.7 (164)	13.4 (319)	4.7 (91)	76.2 (1,749)
Some college or more	51.6 (2,222)	4.1 (85)	19.5 (353)	2.2 (52)	74.1 (1,732)
Income, in U.S. $					
<$20,000	24.8 (1,427)	7.2 (95)	14.3 (218)	5.1 (54)	73.5 (1,060)
$20,000–$39,999	33.6 (1,566)	6.2 (94)	17.0 (228)	4.1 (52)	72.8 (1,192)
$40,000–$74,999	15.4 (634)	3.6 (27)	12.0 (79)	2.3 (16)	82.1 (512)
≥$75,000	26.2 (918)	1.6 (33)	20.9 (147)	1.8 (21)	75.7 (717)
Health insurance					
No	24.7 (1,201)	8.0 (83)	11.4 (132)	2.1 (35)	78.5 (951)
Yes	75.3 (3,344)	3.8 (166)	18.3 (540)	3.9 (108)	74.0 (2,530)
Age, in years					
18–25	33.6 (3,143)	5.0 (176)	13.2 (412)	2.6 (80)	79.3 (2,475)
26–34	23.1 (629)	4.9 (29)	15.6 (110)	4.8 (29)	74.6 (461)
≥35	43.3 (773)	4.7 (44)	19.7 (150)	3.4 (34)	72.2 (545)
Race					
White	70.3 (3,155)	3.8 (159)	19.7 (532)	3.4 (100)	73.1 (2,364)
Non-White	29.7 (1,390)	7.3 (90)	9.2 (140)	3.6 (43)	79.8 (1,117)
Other health-related variables					
Alcohol abuse					
No	44.2 (1,990)	6.0 (130)	18.5 (334)	5.7 (107)	69.9 (1,419)
Yes	55.8 (2,555)	3.9 (119)	15.1 (338)	1.7 (36)	79.3 (2,062)
Alcohol dependence					
No	55.8 (2,555)	3.9 (119)	15.1 (338)	1.7 (36)	79.3 (2,062)
Yes	44.2 (1,990)	6.0 (130)	18.5 (334)	5.7 (107)	69.9 (1,419)
Drug abuse					
No	94.9 (4,261)	4.7 (229)	16.7 (635)	3.4 (131)	75.1 (3,266)
Yes	5.1 (284)	7.1 (20)	14.2 (37)	3.5 (12)	75.2 (215)
Drug dependence					
No	89.4 (3,915)	3.8 (182)	15.9 (553)	2.5 (90)	77.8 (3,090)
Yes	10.6 (630)	13.3 (67)	22.1 (119)	11.6 (53)	52.9 (391)
Major depression, last year					
No	82.7 (3,742)	4.7 (212)	10.6 (357)	2.5 (81)	82.2 (3,092)
Yes	17.3 (803)	5.6 (37)	45.3 (315)	7.9 (62)	41.2 (389)
Serious psychological distress score ≥ 13					
No	74.6 (3,257)	5.0 (191)	9.3 (264)	2.2 (61)	83.5 (2,741)
Yes	25.4 (1,288)	4.4 (58)	38.0 (408)	7.1 (82)	50.5 (740)
Self-reported health					
Very good/excellent	60.5 (2,887)	3.6 (132)	15.7 (386)	2.5 (61)	78.2 (2,308)
Poor/fair/good	39.5 (1,658)	6.8 (117)	17.9 (286)	4.9 (82)	70.5 (1,173)

Notes: Percentages may not total 100 because of rounding. NSDUH = National Survey on Drug Use and Health; AUD = alcohol use disorder.

40% reported only taking a prescription mental health medication (results not shown).

Five percent of individuals reported receiving AUD treatment in a self-help group setting (e.g., Alcoholics Anonymous or other 12-step groups), and this was the most common treatment location (Table 3b). As 8% of respondents with an AUD reported some type of AUD treatment, this means that more than half of those receiving AUD treatment attended a self-help group. The frequency of other AUD treatment sites is shown in Table 3b.

National Survey on Drug Use and Health multinomial logistic regression results

Alcohol use disorder treatment only. Factors significantly associated with receiving AUD treatment only (vs. no treatment) were male gender, not married, low income, drug dependence, and poor to good overall health (vs. very good to excellent) (Table 4).

Mental health treatment only. Factors associated with receiving mental health treatment only (vs. no treatment) were

TABLE 3A. NSDUH: Number and percentage of individuals with AUDs receiving mental health treatment (12 months)

Variable	Unwtd. *n*	Wtd. %
Stayed overnight in hospital for mental health treatment, past 12 months	90	1.9
Mental health outpatient treatment or counseling, past 12 months	479	11.7
Outpatient mental health center	132	3.6
Private therapist's office	262	5.8
Nonclinic doctor's office	78	1.8
Outpatient medical clinic	35	1.0
Day treatment program	8	0.2
Other outpatient facility	31	0.6
Took any prescription medication for mental health condition, past 12 months	651	16.8

Notes: NSDUH = National Survey on Drug Use and Health; AUD = alcohol use disorder; unwtd. = unweighted; wtd. = weighted.

TABLE 3B. NSDUH: Number and percentage of individuals with AUDs receiving AUD treatment (12 months)

Variable	Unwtd. *n*	Wtd. %
Hospital	71	1.8
Inpatient rehabilitation facility	83	2.0
Outpatient rehabilitation facility	159	3.2
Mental health	112	2.4
Emergency room	40	0.9
Doctor's office	72	1.5
Prison or jail	50	1.2
Self-help group	218	5.0
Other	105	1.8

Notes: NSDUH = National Survey on Drug Use and Health; AUD = alcohol use disorder; unwtd.= unweighted; wtd. = weighted.

TABLE 4. NSDUH: Characteristics associated with AUD treatment only, mental health treatment only, and both AUD and mental health treatment, among individuals with 12-month AUDs

Variable	AUD treatment only vs. no treatment OR [95% CI]	Mental health treatment only vs. no treatment OR [95% CI]	Both AUD and mental health treatment vs. no treatment OR [95% CI]
Demographic variables			
Sex			
Male	2.72** [1.66, 4.44]	0.46** [0.33, 0.64]	0.83 [0.49, 1.42]
Female	1.00	1.00	1.00
Marital status			
Married	1.00	1.00	1.00
Not married	2.25* [1.03, 4.92]	1.20 [0.79, 1.82]	1.96 [0.91, 4.20]
Education			
High school graduate or less	0.81 [0.51, 1.29]	0.71* [0.54, 0.95]	1.83* [1.04, 3.21]
Some college or more	1.00	1.00	1.00
Income, in U.S. $			
<$20,000	1.00	1.00	1.00
$20,000–$49,999	1.02 [0.60, 1.75]	1.03 [0.69, 1.53]	0.91 [0.52, 1.60]
$50,000–$74,999	0.66 [0.22, 1.98]	0.68 [0.38, 1.22]	0.63 [0.23, 1.71]
≥$75,000	0.35** [0.19, 0.65]	1.46 [0.91, 2.34]	0.61 [0.29, 1.27]
Health insurance			
No	1.00	1.00	1.00
Yes	0.73 [0.44, 1.21]	1.84* [1.16, 2.94]	3.54** [1.81, 6.89]
Age, in years			
18–25	1.00	1.00	1.00
26–34	1.15 [0.72, 1.84]	1.88** [1.30, 2.73]	3.83** [1.88, 7.80]
≥35	1.54 [0.92, 2.57]	2.21** [1.43, 3.41]	2.33** [1.26, 4.31]
Race			
White	0.89 [0.55, 1.43]	2.13** [1.28, 3.57]	1.76* [1.04, 2.96]
Non-White	1.00	1.00	1.00
Other health-related variables			
Alcohol dependence			
No	1.00	1.00	1.00
Yes	1.22 [0.79, 1.89]	1.01 [0.74, 1.39]	2.39** [1.39, 4.12]
Drug abuse			
No	1.00	1.00	1.00
Yes	1.77 [0.73, 4.31]	1.54 [0.56, 4.24]	1.97 [0.70, 5.59]
Drug dependence			
No	1.00	1.00	1.00
Yes	4.01** [2.21, 7.30]	2.31** [1.45, 3.68]	6.06** [3.38, 10.84]
Major depression, last year			
No	1.00	1.00	1.00
Yes	2.07 [0.94, 4.56]	3.87** [2.59, 5.80]	2.98** [1.49, 5.99]
Serious psychological distress score ≥ 13			
No	1.00	1.00	1.00
Yes	0.89 [0.43, 1.87]	3.56** [2.45, 5.13]	2.48** [1.36, 4.52]
Self-reported health			
Very good/excellent	1.00	1.00	1.00
Poor/fair/good	1.72* [1.12, 2.63]	1.28 [0.91, 1.79]	1.33 [0.80, 2.22]

Notes: NSDUH = National Survey on Drug Use and Health; AUD = alcohol use disorder; OR = odds ratio; CI = confidence interval.
*significant at .05; **significant at .01.

female gender, some college or higher, health insurance, older age, White race, drug dependence, major depression, and serious psychological distress.

Both alcohol use disorder and mental health treatment. Factors associated with receiving both AUD and mental health treatment only (vs. no treatment) were high school graduate or less, health insurance, older age, White, alcohol dependence (vs. those with abuse but no dependence), drug dependence, major depression, and serious psychological distress.

National Epidemiologic Survey on Alcohol and Related Conditions

The NESARC sample with AUDs is shown in Table 5, along with the percentage who received treatment in the various categories. Again, reflecting the higher prevalence of AUDs in men than women, 70% of the sample was male. Among NESARC respondents with AUDs, in the past year 84.6% received no AUD or mental health treatment, and mental health treatment was more common (10.6%) than

Table 5. Characteristics of NESARC respondents with 12-month AUDs (n = 3,327), and percentage receiving various categories of treatment (weighted %, unweighted n)

Variable	Total % (n)	% AUD treatment only % (n)	% Mental health treatment only % (n)	% Both AUD and mental health treatment % (n)	% No treatment % (n)
Total sample	100.0 (3,327)	4.8 (161)	7.3 (279)	3.3 (105)	84.6 (2,782)
Demographic variables					
Sex					
Male	70.0 (2,214)	5.7 (127)	3.7 (93)	2.6 (57)	88.0 (1,937)
Female	30.0 (1,113)	2.8 (34)	15.7 (186)	4.8 (48)	76.7 (845)
Marital status					
Married or living as married	44.1 (1,237)	3.2 (40)	6.0 (78)	3.0 (37)	87.7 (1,082)
Widowed/separated/divorced	16.7 (740)	7.2 (49)	11.5 (91)	5.0 (31)	76.4 (569)
Never married	39.2 (1,350)	5.6 (72)	7.0 (110)	2.9 (37)	84.5 (1,131)
Education					
Less than high school	13.0 (461)	7.9 (33)	4.4 (26)	4.5 (24)	83.3 (378)
High school graduate	28.6 (967)	5.2 (50)	6.2 (71)	3.2 (26)	85.5 (820)
Some college or higher	58.4 (1,899)	4.0 (78)	8.5 (182)	3.1 (55)	84.4 (1,584)
Income, in U.S. $					
<$20,000	24.5 (857)	6.7 (60)	8.3 (78)	5.1 (52)	79.9 (667)
$20,000–$34,999	21.2 (769)	6.4 (41)	8.6 (82)	3.5 (18)	81.5 (628)
$35,000–$69,999	30.7 (1,030)	3.8 (39)	6.7 (75)	2.9 (24)	86.7 (892)
≥$70,000	23.6 (671)	2.8 (21)	5.9 (44)	1.8 (11)	89.5 (595)
Health insurance					
No	26.0 (857)	4.9 (54)	6.2 (60)	3.6 (29)	85.3 (714)
Yes	74.0 (2,470)	4.8(107)	7.7 (219)	3.2 (76)	84.3 (2,068)
Age, in years					
18–29	41.8 (1,309)	4.8 (64)	7.5 (115)	2.2 (28)	85.5 (1,102)
30–44	35.5 (1,206)	5.6 (65)	7.5 (107)	4.5 (43)	82.4 (991)
≥45	22.7 (812)	3.5 (32)	6.8 (57)	3.5 (34)	86.2 (689)
Race					
White	74.8 (2,105)	4.4 (99)	7.6 (186)	3.2 (69)	84.9 (1,751)
Non-White	25.2 (1,222)	6.1 (62)	6.5 (93)	3.7 (36)	83.7 (1,031)
Other health-related variables					
Alcohol abuse					
No	45.0 (1,484)	7.2 (111)	9.6 (159)	6.1 (88)	77.0 (1,126)
Yes	55.0 (1,843)	2.9 (50)	5.4 (120)	1.0 (17)	90.8 (1,656)
Alcohol dependence					
No	55.0 (1,843)	2.9 (50)	5.4 (120)	1.0 (17)	90.8 (1,656)
Yes	45.0 (1,484)	7.2 (111)	9.6 (159)	6.1 (88)	77.0 (1,126)
Drug abuse					
No	92.0 (3,065)	4.4 (135)	7.2 (256)	3.2 (92)	85.2 (2,582)
Yes	8.0 (262)	9.4 (26)	8.6 (23)	4.6 (13)	77.4 (200)
Drug dependence					
No	95.0 (3,165)	4.3 (137)	7.1 (257)	2.4 (75)	86.2 (2,696)
Yes	5.0 (162)	14.5 (24)	11.9 (22)	19.7 (30)	54.0 (86)
Mood disorder, past year					
No	80.1 (2,616)	5.1 (133)	2.7 (85)	0.7 (18)	91.5 (2,380)
Yes	19.9 (711)	3.7 (28)	26.0 (194)	13.6 (87)	56.7 (402)
Anxiety disorder, past year					
No	82.7 (2,766)	4.8 (133)	4.9 (148)	1.8 (53)	88.6 (2,432)
Yes	17.3 (561)	5.1 (28)	18.8 (131)	10.6 (52)	65.5 (350)
Self-reported health					
Excellent/very good	88.3 (2,909)	4.5(133)	6.7 (226)	2.6 (69)	86.1 (2,481)
Good/fair/poor	11.7 (418)	6.8 (28)	12.0 (53)	8.4 (36)	72.8 (301)

Notes: NESARC = National Epidemiologic Survey on Alcohol and Related Conditions; AUD = alcohol use disorder.

TABLE 6A. NESARC: Number and percentage of individuals with AUDs receiving mental health treatment (lifetime)

Variable	Unwtd. *n*	Wtd. %
Outpatient therapist, doctor, or psychologist for mental health treatment	670	19.6
Inpatient hospitalization for mental health treatment	241	6.4
Emergency room for mental health treatment	164	4.2
Any prescribed mental health medication	545	15.5

Notes: NESARC = National Epidemiologic Survey on Alcohol and Related Conditions; AUD = alcohol use disorder; unwtd. = unweighted; wtd. = weighted.

TABLE 6B. NESARC: Number and percentage of individuals with AUDs receiving AUD treatment (lifetime)

Variable	Unwtd. *n*	Wtd. %
AA or other 12-step meeting	165	5.1
Family service or other social services agency	58	1.6
Detoxification ward/clinic	71	2.2
Inpatient ward	61	1.8
Outpatient clinic	73	2.3
Rehabilitation program	81	2.7
Emergency department	53	1.7
Halfway house/therapeutic community	15	0.6
Crisis center	14	0.3
Employee Assistance Program	13	0.5
Clergy	50	1.5
Private physician, psychiatrist, psychologist, social work, or other professional	127	3.8
Any other agency or professional	27	0.8

Notes: NESARC = National Epidemiologic Survey on Alcohol and Related Conditions; AUD = alcohol use disorder; unwtd. = unweighted; wtd. = weighted; AA = Alcoholics Anonymous.

AUD treatment (8.1%). Although NESARC data do not allow us to determine where mental health treatment was received in the past year, they do allow us to determine lifetime locations of treatment. Seeing an outpatient counselor, therapist, doctor, or psychologist was the most common (19.6% lifetime); receiving a mental health medication was also common (15.5% lifetime) (Table 6a). As in NSDUH, self-help groups were the most common sites of AUD treatment (5.1%; Table 6b).

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Alcohol use disorder treatment only. Factors significantly associated with receiving AUD treatment only (vs. no treatment) were male gender, widowed/separated/divorced, low income, health insurance, age 30–44, alcohol dependence, drug abuse, drug dependence, and no mood disorder in the past year (Table 7).

Mental health treatment only. Factors associated with receiving mental health treatment only (vs. no treatment) were female gender, widowed/separated/divorced, married/living as married, some college or higher, health insurance, age 30–44, alcohol dependence, drug abuse, drug dependence, mood disorder in the past year, anxiety disorder in the past year, and poor to good self-reported health (vs. excellent to very good).

Both alcohol use disorder and mental health treatment. Factors associated with receiving both AUD and mental health treatment only (vs. no treatment) were female gender, some college or higher, low income, older age, alcohol dependence, drug abuse, drug dependence, mood disorder in the past year, and anxiety disorder in the past year.

Discussion

Despite methodological differences between NSDUH and NESARC, patterns of results from the two surveys were strikingly similar, suggesting robustness of findings. In both surveys, 8% of individuals with AUDs reported past-year AUD treatment. This is consistent with other studies finding high rates of unmet need for AUD treatment (Grant et al., 2004; Wang et al., 2005b; Wells et al., 2001). Even among those with the most severe AUD—alcohol dependence—only 12% in NSDUH and 13% in NESARC reported any AUD treatment (either AUD treatment only or both AUD and mental health treatment).

In both surveys, among individuals with AUDs, mental health treatment was more common than AUD treatment, with 20% of NSDUH respondents with AUDs and 11% of NESARC respondents with AUDs reporting past-year mental health treatment. This occurred despite all respondents in the analytical samples meeting the criteria for a past-year AUD but not necessarily meeting the criteria for a past-year mental health disorder and despite our using a broad definition of AUD "treatment" that included self-help programs (by far the most common type of treatment) and clergy. Among respondents with a mental health disorder, the differences between rates of mental health and AUD treatment were even larger. For example, among NSDUH respondents with major depression and an AUD, 53% received mental health treatment, whereas 14% received AUD treatment.

Regarding the mental health received, in our 12-month NSDUH data, among individuals who received medications and/or outpatient treatment or counseling, the plurality (45%) received both medications and outpatient treatment or counseling. However, it is likely that many of the mental health medications were received in primary care rather than specialty because 40% of the individuals receiving mental health medications did not endorse receiving outpatient treatment or counseling, and common psychiatric medications, such as antidepressants, are more often received in primary care than specialty care (Mark et al., 2009).

TABLE 7. NESARC: Characteristics associated with AUD treatment only, mental health treatment only, and both AUD and mental health treatment, among individuals with 12-month AUDs

Variable	AUD treatment only vs. no treatment OR [95% CI]	Mental health treatment only vs. no treatment OR [95% CI]	Both AUD and mental health treatment vs. no treatment OR [95% CI]
Demographic variables			
Sex			
Male	1.75** [1.48, 2.06]	0.30** [0.26, 0.36]	0.65** [0.49, 0.87]
Female	1.00	1.00	1.00
Marital status			
Married or living as married	1.00	1.00	1.00
Widowed/separated/divorced	1.96** [1.47, 2.60]	1.30* [1.002, 1.68]	0.79 [0.48, 1.31]
Never married	1.42 [0.98, 2.06]	0.81* [0.68, 0.96]	0.72 [0.44, 1.18]
Education			
Less than high school	1.44 [0.95, 2.18]	0.30** [0.21, 0.44]	0.50** [0.32, 0.79]
High school graduate	1.07 [0.90, 1.28]	0.56** [0.46, 0.68]	0.71* [0.52, 0.98]
Some college or higher	1.00	1.00	1.00
Income, in U.S. $			
<$20,000	1.00	1.00	1.00
$20,000–$34,999	1.07 [0.86, 1.35]	1.08 [0.86, 1.34]	0.68 [0.44, 1.05]
$35,000–$69,999	0.65** [0.47, 0.89]	0.89 [0.71, 1.11]	0.70 [0.43, 1.14]
≥$70,000	0.56** [0.37, 0.86]	0.81 [0.65, 1.02]	0.50* [0.28, 0.87]
Health insurance			
No	1.00	1.00	1.00
Yes	1.61** [1.27, 2.06]	1.37* [1.07, 1.76]	1.29 [0.84, 1.97]
Age, in years			
18–29	1.00	1.00	1.00
30–44	1.92** [1.46, 2.51]	1.30* [1.02, 1.66]	4.43** [2.68, 7.31]
≥45	1.11 [0.80, 1.53]	1.25 [0.98, 1.60]	3.43** [1.91, 6.15]
Race			
White	0.87 [0.73, 1.02]	1.12 [0.97, 1.28]	1.07 [0.76, 1.53]
Non-White	1.00	1.00	1.00
Other health-related variables			
Alcohol dependence			
No	1.00	1.00	1.00
Yes	2.40** [1.88, 3.07]	1.27* [1.06, 1.52]	3.46** [2.22, 5.38]
Drug abuse			
No	1.00	1.00	1.00
Yes	2.38** [1.76, 3.22]	1.44* [1.03, 2.01]	2.53** [1.66, 3.84]
Drug dependence			
No	1.00	1.00	1.00
Yes	4.49** [3.27, 6.15]	1.57** [1.23, 2.01]	5.70** [3.61, 9.01]
Mood disorder, past year			
No	1.00	1.00	1.00
Yes	0.73** [0.60, 0.89]	11.53** [9.97, 13.34]	16.24** [10.93, 24.14]
Anxiety disorder, past year			
No	1.00	1.00	1.00
Yes	1.14 [0.91, 1.42]	2.30** [1.91, 2.78]	2.82** [1.98, 4.03]
Self-reported health			
Excellent/very good	1.00	1.00	1.00
Good/fair/poor	1.22 [0.95, 1.56]	1.77** [1.41, 2.23]	1.52 [0.89, 2.59]

Notes: NESARC = National Epidemiologic Survey on Alcohol and Related Conditions; AUD = alcohol use disorder; OR = odds ratio; CI = 95% confidence interval.
*significant at .05; **significant at .01.

What are the policy implications? In our data, individuals with AUDs were more likely to make contact with the mental health or primary care sector than the AUD sector, suggesting that these sectors may actually be key components of the AUD treatment sector. The trend toward AUD treatment in primary care is likely to accelerate with the introduction of the Affordable Care Act, which seeks to integrate AUD treatment into primary care (Buck, 2011). This is generally consistent with treatment guidelines. U.S. Preventive Services Task Force guidelines recommend screening for AUDs in primary care (U.S. Preventive Services Task Force, 1996), and AUD treatment guidelines recommend that individuals with less severe alcohol problems receive brief interventions in primary care, at least initially (Babor et al., 1992; U.S. Preventive Services Task Force, 1996; Veterans Health Administration and Department of Defense, 2001). Further, individuals with AUDs are frequently seen in primary care settings (Cherpitel and Ye, 2008). Demand for AUD services may be close to, or already have exceeded, the capacity of the AUD treatment sector (McLellan et al., 2003). Thus,

a key opportunity to improve the accessibility of AUD treatment may be to focus on improving AUD treatment in individuals receiving mental health treatment, whether in specialty or primary care. But there are difficulties with such an approach. Although most mental health and primary care clinicians have likely had some training in substance use disorders, the training might be superficial; these clinicians might be uncomfortable treating AUDs; and perhaps most importantly, they have competing demands, and thus any attempts to increase access will require a commensurate increase in resources (O'Connor, 2011).

Recent legislation and policy changes (e.g., parity laws, the Affordable Care Act, Medicare reimbursement for alcohol screening) are designed to increase access to behavioral healthcare in general, and substance-related treatment in particular. However, improving access to AUD treatment is not necessarily tantamount to improving quality. A recent report from the Institute of Medicine (2006) suggests that treatment for both AUD and mental health disorders is often not guideline concordant, wherever it is received. Thus, efforts to improve access are necessary but not sufficient for decreasing unmet need for appropriate AUD treatment.

Although mental health treatment was more common than AUD treatment, the clinical factors predicting receipt of mental health or AUD treatment were consistent with expectations. Greater mental health morbidity increased the odds of mental health treatment, and AUD severity (i.e., alcohol dependence rather than alcohol abuse) increased the odds of AUD treatment. Mental health morbidity also increased the odds of AUD treatment, mainly by increasing the odds of receiving the category of both AUD and mental health treatment.

Consistent with past studies (Weisner and Schmidt, 1992), men were more likely to receive AUD treatment and women more likely to receive mental health treatment. Although common mental health disorders, such as depression and anxiety, occur more frequently in women, and AUDs are more common in men, we controlled for mental health status in our regression models. This suggests that women may have a relative preference for mental health treatment and men a relative preference for AUD treatment. Or, because of gender differences in prevalence rates, busy clinicians might be more apt to detect, monitor, and treat mental health disorders in women and AUDs in men. Further, there is frequently diagnostic uncertainty in disentangling mental health disorders and AUDs, and because of epidemiological patterns, clinicians might be more likely to direct men to AUD treatment and women to mental health treatment.

Other sociodemographic patterns were less clear. Some of our results suggested that the disadvantaged (e.g., lower incomes, lower level of education) were more likely to receive AUD treatment and the more advantaged more likely to receive mental health treatment. Our data do not allow us to directly investigate reasons for these patterns, but we can speculate. Income may be less important for receiving treatment for AUDs versus mental health disorders because the percentage of AUD treatment that is publicly funded is larger than the percentage of mental health treatment publicly funded (Levit et al., 2008). Further, some AUD treatment (e.g., self-help groups) is free to the patient. Individuals with higher education levels might have a relative preference for mental health treatment over AUD treatment; be more likely to believe that their problem is a mental health, rather than an AUD, problem; or feel greater stigma toward AUD treatment.

Limitations

In NESARC, only individuals with lifetime mental health disorders were queried about mental health treatment; for those not asked, we assumed no mental health treatment because treatment rates in the National Comorbidity Survey Replication among individuals with no mental health or substance use disorder were relatively low (Druss et al., 2007). On the one hand, to the extent that individuals with no lifetime mental health disorder did receive mental health treatment, our NESARC estimates of mental health treatment would be biased downward. On the other hand, because our measure of past-year mental health treatment was constructed from current age and age at most recent use (as described above), in theory, our measure could capture mental health treatment that occurred up to almost 2 years previously, which would cause NESARC estimates to be biased upward. Our analyses focused on rates of any treatment and not the quality, quantity, or content of treatment. Data were retrospective, not longitudinal. Although our work describes patterns and predictors of AUD and mental health treatment received, it does not allow us to directly investigate reasons for these patterns.

Conclusion

Among individuals with AUDs, mental health treatment is more common than AUD treatment. Treatment in the mental health and primary care sector represents an opportunity for improving AUD treatment access, although such efforts may prove difficult.

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