Insurance Status, Use of Mental Health Services, and Unmet Need for Mental Health Care in the United States

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Objective: The purpose of this study was to provide updated national estimates and correlates of service use, unmet need, and barriers to mental health treatment among adults with mental disorders.

Methods: The sample included 36,647 adults ages 18–64 (9,723 with any mental illness and 2,608 with serious mental illness) from the 2011 National Survey on Drug Use and Health. Logistic regression models were used to examine predictors of mental health treatment and perceived unmet need.

Results: Substantial numbers of adults with mental illness did not receive treatment (any mental illness, 62%; serious mental illness, 41%) and perceived an unmet need for treatment (any mental illness, 21%; serious mental illness, 41%). Having health insurance was a strong correlate of mental health treatment use (any mental illness: private insurance, adjusted odds ratio [AOR]=1.63, 95% confidence interval [CI]=1.29–2.06; Medicaid, AOR=2.66, CI=2.04–3.46; serious mental illness: private insurance, AOR=1.65, CI=1.12–2.45; Medicaid, AOR=3.37, CI=2.02–5.61) and of lower odds of perceived unmet need (any mental illness: private insurance, AOR=.78, CI=.65–.95; Medicaid, AOR=.70, CI=.54–.92). Among adults with any mental illness and perceived unmet need, 72% reported at least one structural barrier and 47% reported at least one attitudinal barrier. Compared with respondents with insurance, uninsured individuals reported significantly more structural barriers and fewer attitudinal barriers.

Conclusions: Low rates of treatment and high unmet need persist among adults with mental illness. Strategies to reduce both structural barriers, such as cost and insurance coverage, and attitudinal barriers are needed.

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A substantial number of adults with mental disorders do not receive treatment for their condition, despite overall increases in the rates of treatment in the past 20 years (1–4). In the National Comorbidity Survey Replication, for example, only 33% of adults with any mental illness and 41% of adults with serious mental illness reported receiving mental health treatment in the previous year (1). People who are less likely to receive treatment tend to be male (1,5,6), black or Hispanic (1,6–8), younger (1,6,9), uninsured (2,5,10), and of low socioeconomic status (1,4,9,11).

Although rates of mental health service use are increasing, perceived unmet need for mental health treatment also has been rising (12). Barriers to treatment reported by people who perceive an unmet need include structural barriers, such as cost, lack of insurance or insufficient coverage for services, and not knowing where to go for help or not being able to get an appointment, as well as attitudinal barriers, such as perceived stigma and the belief that treatments are ineffective (13–15). From 1997 to 2002, there was a significant increase in the proportion of adults with psychological distress who did not use mental health services and medication because of cost (16). The high uninsurance rate among people with mental disorders contributes to cost as a barrier to treatment (17). Around 20% of people with mental disorders are uninsured, compared with 15% in the U.S. population (2,17,18).

Given the current implementation of the Affordable Care Act (ACA), it is important to have updated data on rates and correlates of mental health treatment. However, most available information on the topic is based on surveys that are now more than a decade old. This study provides updated estimates of treatment use, perceived unmet need, and barriers to mental health treatment among adults with mental disorders. We used data from the National Survey on Drug Use and Health (NSDUH) to examine following questions: What proportion of all adults and adults with mental illness receive mental health treatment and perceive an unmet need for treatment? What factors are associated with receiving mental health treatment and perceiving an unmet need? What barriers

to treatment are encountered by adults with mental illness who report an unmet need for treatment? How do these patterns and barriers differ by insurance status?

METHODS

Sample

NSDUH is an annual survey that provides nationally representative estimates of drug use and mental illness for the civilian, noninstitutionalized U.S. population (14). Respondents include residents of households, civilians living on military bases, and persons in noninstitutional group quarters. Individuals with no fixed address, active-duty military personnel, and residents of institutional facilities are excluded. A representative sample is achieved through a multistage area probability sampling process.

Data are collected through in-person interviews at the participant's residence. Computer-assisted interviewing is utilized to increase participants' willingness to provide sensitive information. The 2011 NSDUH was administered from January to December 2011 and had a weighted response rate of 74.4% for all ages (19).

This sample included 36,647 adults ages 18–64 years in the publicly available 2011 NSDUH data set. Among the 36,647 adults, 9,723 (weighted percentage, 21.9%) had any mental illness and 2,608 (weighted percentage, 6.0%) had serious mental illness. Adolescents (12–17 years) were excluded because they were asked different questions about use of mental health services and symptoms (20). Adults 65 years and older were excluded because relatively few were classified as having any mental illness or serious mental illness.

Mental Illness

All NSDUH participants completed the Kessler-6 (K6) scale, which measures psychological distress, and the World Health Organization Disability Assessment Schedule (WHODAS), which assesses functional impairment. The Substance Abuse and Mental Health Services Administration developed prediction models using the K6 and WHODAS to estimate any mental illness and serious mental illness. The resulting variables indicate whether a person has any or serious mental illness. The prediction models were shown to be valid in predicting any mental illness and serious mental illness in a subsample of participants (N=1,506) who completed the Structured Clinical Interview for DSM-IV Axis I Disorders (21,22).

Mental Health Treatment and Perceived Unmet Need

Mental health outpatient and prescription treatment was ascertained from two questions asking whether during the past 12 months respondents received any outpatient treatment or counseling for any problems with emotions, nerves, or mental health and took any prescription medication to treat a mental or emotional condition. To assess perceived unmet need for mental health treatment, respondents were asked whether during the past 12 months there was a time when they needed mental health treatment or counseling but did not get it. Respondents who reported unmet need were prompted to select any reasons for not receiving treatment from a list that included six structural barriers (for example, cost, not knowing where to go, and insurance not paying enough for mental health treatment) and eight attitudinal barriers (for example, could handle problem on own, did not think treatment would help, and concerns about being committed to a psychiatric hospital or taking medication).

Health Insurance

Health insurance was categorized into four mutually exclusive categories: no insurance, private insurance, Medicaid (no private insurance), and other (Medicare, coverage by TRICARE, CHAMPUS, Department of Veterans Affairs or other military health care, or other insurance).

Sociodemographic Correlates

Sociodemographic correlates included age (18–34, 35–49, and 50–64), gender, racial or ethnic group (non-Hispanic white, non-Hispanic black, Hispanic, and other), marital status (married, previously married, and never married), education level (less than high school, high school graduate, some college, and college graduate), employment status (not working and working), family income ($<$\$20,000, \$20,000–\$49,999, \$50,000–\$74,999, and $\geq$\$75,000), and self-rated health (poor or fair and good, very good, or excellent).

Analyses

Because of the complex survey design of the NSDUH, all analyses were adjusted for sampling weights, clustering, and stratification of the data. Data analysis was conducted in IBM SPSS Statistics, version 21, with the complex samples module.

First, summary statistics and Pearson chi square tests were used to describe demographic characteristics and determine patterns of mental health treatment use and unmet need. For all chi square tests, we report p values based on the design-based F statistic. Second, logistic regression models were run to assess the association between the sociodemographic correlates and mental health treatment use or unmet need for treatment. We first entered each correlate separately to obtain unadjusted odd ratios. We then ran adjusted models that included all correlates simultaneously. All logistic regression models were run separately for adults with any mental illness and with serious mental illness. We also performed an exploratory moderation analysis to determine whether there was an interaction effect between race-ethnicity and insurance on treatment use. Finally, we used summary statistics and chi square tests to examine the percentages of participants with any mental illness who reported various barriers to receiving mental health treatment and any variations by insurance type.

RESULTS

The respondents' demographic and health characteristics are summarized in Table 1. Compared with respondents without

TABLE 1. Characteristics of adult participants in the 2011 NSDUH with and without mental illness[a]

Characteristic	No mental illness (unweighted N=26,924)	Any mental illness (unweighted N=9,723)	Serious mental illness (unweighted N=2,608)
Insurance			
None	18.9	22.2	23.4
Private	67.9	54.9	47.1
Medicaid, no private	8.0	14.9	19.1
Other	5.1	8.0	10.3
Racial or ethnic group			
Non-Hispanic white	62.8	68.7	74.0
Non-Hispanic black	12.4	11.1	7.6
Hispanic	17.1	12.7	11.4
Other	7.7	7.5	7.0
Age group			
18–25	16.0	24.2	22.5
26–34	18.6	20.2	22.1
35–49	32.2	30.9	31.4
50–64	33.2	24.6	24.0
Gender			
Female	48.3	60.6	66.4
Male	51.7	39.4	33.6
Marital status			
Married	55.2	40.1	36.0
Previously married	15.8	20.3	24.6
Never married	29.1	39.6	39.4
Education			
Less than high school	12.5	15.3	16.1
High school graduate	29.3	28.8	28.6
Some college	28.1	29.2	32.5
College graduate	31.1	26.7	22.8
Employment status			
Not working	24.6	38.1	44.7
Working	75.4	61.9	55.3
Family income			
<$20,000	16.5	27.8	33.8
$20,000–$49,999	29.7	33.0	34.4
$50,000–$74,999	18.1	14.5	12.6
≥$75,000	35.6	24.7	19.1
Self-rated health			
Fair or poor	8.9	22.3	32.0
Excellent, very good, or good	91.1	77.7	68.0

[a] NSDUH, National Survey on Drug Use and Health. Values are weighted percentages. p<.001 for all comparisons (design-based F test) of respondents with any mental illness and those with no mental illness and of respondents with serious mental illness and those with no serious mental illness

mental illness, those with mental illness were significantly more likely to be uninsured or on Medicaid, non-Hispanic white, younger, female, unmarried, and unemployed and to have less education, a lower family income, and poor health.

In the previous 12 months, 38.1% of adults with any mental illness and 59.1% of those with serious mental illness received outpatient or prescription treatment (Table 2). In addition, 7.9% of adults without mental illness received mental health treatment.

TABLE 2. Rates of 12-month treatment use and perceived unmet need among adult participants in the 2011 NSDUH, by severity of illness and insurance status[a]

Variable	Received mental health treatment (N=5,046)	Perceived unmet need		
		Total (N=2,251)	Did not receive treatment (N=1,277)	Received treatment (N=1,267)
No mental illness	7.9	1.3	.8	6.8
Uninsured	4.5	1.5	1.1	8.0
Private	8.3	1.1	.7	6.2
Medicaid	11.0	1.8	.9	8.9
Other	11.0	1.3	.5	8.2
Any mental illness	38.1	21.3	14.8	32.0
Uninsured	25.2	25.7	17.0	48.7
Private	38.5	19.2	14.3	26.9
Medicaid	48.3	22.6	11.4	34.0
Other	51.8	21.9	12.6	30.6
Serious mental illness	59.1	41.2	35.2	45.4
Uninsured	44.1	46.6	36.8	58.6
Private	57.2	38.0	34.3	40.8
Medicaid	73.0	41.6	28.7	46.3
Other	76.3	43.3	47.1	42.1
Total	14.5	5.7	3.0	21.3

[a] NSDUH, National Survey on Drug Use and Health. Values are weighted percentages. Treatment was defined as outpatient or prescription treatment, or both.

Among persons with mental illness, those with no insurance were significantly less likely to receive treatment than those with any type of health insurance (any mental illness, design-based F=28.85, df=3 and 159, p<.001; serious mental illness, designed-based F=13.73, df=3 and 165, p<.001). Most adults with any mental illness who had private insurance or Medicaid did not receive treatment (61.5% and 51.7%, respectively). In the previous 12 months, 21.3% of adults with any mental illness and 41.2% of adults with serious mental illness reported a perceived unmet need for treatment. Among uninsured adults with any mental illness, a larger proportion reported perceived unmet need compared with insured adults (design-based F=4.78, df=3 and 162, p=.004). A similar trend was found for serious mental illness, although the differences were not significant.

Insurance status had the strongest association with receipt of mental health treatment in the past 12 months compared with the other covariates in the model (Table 3). In the multivariate models, adults with mental illness with any type of health insurance had significantly higher odds of receiving treatment compared with uninsured individuals. Adults with mental illness who had private insurance had over 1.5 times the odds of receiving treatment compared with individuals who were uninsured (any mental illness, adjusted odds ratio [AOR]=1.63; serious mental illness, AOR=1.65) and those with Medicaid had more than two to three times the odds (any mental illness, AOR=2.66; serious mental illness, AOR=3.37).

Among the other significant sociodemographic correlates, adults over age 26 with any mental illness and adults ages 35–49 with serious mental illness had significantly higher odds

of receiving mental health treatment than those ages 18–25, and college graduates had significantly higher odds of receiving mental health treatment than those with who did not complete high school. Non-Hispanic blacks, Hispanics, individuals in the "other" race category (any mental illness only), males, working individuals, and those with good to excellent health (any mental illness only) had lower odds of receiving treatment than their respective comparison groups. We tested the interaction effect between insurance status and race and ethnicity, but the results were not significant.

Insurance status was significantly associated with perceived unmet need for adults with any mental illness (Table 4). In the multivariate models, respondents with private insurance (AOR=.78) or Medicaid (AOR=.70) had lower odds of reporting unmet need than respondents without insurance. In addition, among those with any mental illness, adults ages 26–34 had significantly higher odds of reporting unmet need, and non-Hispanic blacks, Hispanics, adults ages 50–64, males, working individuals, respondents with a family income of $75,000 or more, and people in good to excellent health had lower odds of reporting unmet need. Among people with serious mental illness, adults ages 26–34 had higher odds of reporting unmet need, whereas Hispanics had lower odds of reporting unmet need.

TABLE 3. Correlates of 12-month treatment use among adult participants in the 2011 NSDUH, by severity of illness[a]

Characteristic	Any mental illness			Serious mental illness		
	OR[b]	AOR[c]	95% CI	OR[b]	AOR[c]	95% CI
Insurance (reference: none)						
Private	1.86*	1.63*	1.29–2.06	1.69*	1.65*	1.12–2.45
Medicaid, no private	2.77*	2.66*	2.04–3.46	3.42*	3.37*	2.02–5.61
Other	3.20*	2.85*	1.93–3.98	4.08*	4.10*	2.42–6.97
Racial or ethnic group (reference: non-Hispanic white)						
Non-Hispanic black	.42*	.38*	.30–.49	.51*	.42*	.27–.66
Hispanic	.37*	.40*	.29–.56	.40*	.42*	.26–.69
Other	.45*	.41*	.28–.61	.62	.52	.26–1.04
Age group (reference: 18–25)						
26–34	1.54*	1.43*	1.18–1.73	1.41*	1.13	.80–1.61
35–49	2.04*	1.78*	1.42–2.23	2.46*	1.73*	1.15–2.60
50–64	2.63*	1.88*	1.43–2.47	2.91*	1.62	.83–3.17
Male (reference: female)	.58*	.58*	.49–.70	.72*	.73*	.55–.98
Marital status (reference: married)						
Previously married	1.23	1.05	.83–1.33	1.10	.93	.62–1.41
Never married	.63*	1.02	.81–1.29	.52*	.73	.48–1.12
Education (reference: less than high school						
High school graduate	.98	1.05	.83–1.33	1.01	1.05	.71–1.57
Some college	1.21	1.38	1.07–1.77	1.24	1.54	.98–2.40
College graduate	1.48*	1.72*	1.28–2.33	1.48	1.99*	1.16–3.40
Working (reference: not working)	.65*	.70*	.58–.84	.53*	.57*	.42–.78
Family income (reference: <$20,000)						
$20,000–$49,999	.90	.96	.79–1.18	.79	.93	.66–1.30
$50,000–$74,999	.95	.94	.70–1.25	1.12	1.29	.73–2.90
≥$75,000	.99	.91	.69–1.19	.98	1.04	.57–1.90
Excellent, very good, or good self-reported health (reference: fair or poor)	.58*	.69*	.55–.86	.60*	.84	.61–1.16

[a] NSDUH, National Survey on Drug Use and Health
[b] Unadjusted odds ratio. Models include each correlate separately.
[c] Adjusted odds ratio. Model includes all correlates.
*p<.05

Among adults with any mental illness who perceived an unmet need for mental health treatment, 72.2% reported at least one structural barrier and 46.6% reported at least one attitudinal barrier to receiving treatment. Inability to afford the cost of treatment was the most commonly reported structural barrier (50.9%), followed by not knowing where to go (16.2%), not having enough time (14.4%), and insurance not covering enough of the cost (12.2%). The most common attitudinal barrier was respondents' belief that they could handle the problem without treatment (22.9%), followed by the belief that treatment would not help (9.1%), a fear that a neighbor or the community would have a negative opinion of them (8.7%), and a fear of being committed to a psychiatric hospital or having to take medication (8.6%).

Figure 1 shows the differences in barriers by type of health insurance. A significantly greater proportion of uninsured adults who reported unmet need also reported structural barriers (85.7%), compared with adults with private insurance (67.2%), Medicaid (65.6%), or other insurance (71.5%) (design-based F=7.8, df=3 and 164, p<.001). Conversely, a significantly smaller proportion of uninsured adults reported attitudinal barriers (28.6%), compared with adults with private insurance (57.7%), Medicaid (43.4%), or other insurance (43.7%) (design-based F=16.6, df=3 and 156, p<.001).

DISCUSSION

Substantial numbers of adults with mental illness do not receive mental health treatment and perceive an unmet need for treatment. In this study, persons with mental illness were more likely than those without mental illness to be uninsured or on Medicaid and less likely to have private insurance, which is consistent with earlier findings (17,23). The strongest correlates for receiving treatment in the past year

TABLE 4. Correlates of perceived unmet need for mental health treatment in the past 12 months among adult participants in the 2011 NSDUH, by severity of illness[a]

	Any mental illness			Serious mental illness		
Characteristic	OR[b]	AOR[c]	95% CI	OR[b]	AOR[c]	95% CI
Insurance (reference: none)						
Private	.69*	.78*	.65–.95	.70*	.85	.62–1.15
Medicaid, no private	.84	.70*	.54–.92	.81	.73	.47–1.14
Other	.83	.88	.61–1.28	.90	1.08	.63–1.85
Racial or ethnic group (reference: non-Hispanic white						
Non-Hispanic black	.72*	.59*	.45–.76	.92	.82	.52–1.31
Hispanic	.68*	.61*	.47–.79	.59*	.56*	.36–.87
Other	.80	.73	.46–1.15	1.33	1.39	.70–2.76
Age group (reference: 18–25)						
26–34	1.28*	1.34*	1.13–1.59	1.31	1.51*	1.05–2.17
35–49	1.09	1.15	.90–1.47	1.00	1.18	.76–1.82
50–64	.74*	.70*	.52–.94	.85	.91	.55–1.49
Male (reference: female)	.63*	.60*	.49–.75	.78	.73	.51–1.04
Marital status (reference: married)						
Previously married	1.40*	1.19	.90–1.59	1.25	1.10	.74–1.65
Never married	1.33*	1.32	.97–1.79	1.38	1.35	.90–2.04
Education (reference: less than high school)						
High school graduate	.86	.92	.67–1.25	.71	.72	.48–1.12
Some college	1.11	1.21	.95–1.55	.91	.92	.64–1.32
College graduate	.88	1.11	.80–1.55	.70	.78	.48–1.29
Working (reference: not working)	.73*	.77*	.63–.95	.79	.85	.66–1.11
Family income (reference: <$20,000)						
$20,000–$49,999	.83	.88	.70–1.10	.80	.83	.64–1.08
$50,000–$74,999	.80	.91	.69–1.20	.92	.96	.63–1.48
≥$75,000	.59*	.71*	.52–.97	.59	.69	.42–1.13
Excellent, very good, or good self-reported health (reference: fair or poor)	.72*	.69*	.58–.83	.88	.92	.68–1.26

[a] NSDUH, National Survey on Drug Use and Health
[b] Unadjusted odds ratio. Models include each correlate separately.
[c] Adjusted odds ratio. Model includes all correlates.
*p<.05

were insurance status (any mental illness and serious mental illness) and perceived unmet need for treatment (any mental illness only). Over 70% of adults with any mental illness who perceived an unmet need for treatment cited structural barriers, particularly treatment cost, as a reason for not receiving treatment. Furthermore, uninsured adults with any mental illness were more likely than those with insurance to report structural barriers and less likely to report attitudinal barriers.

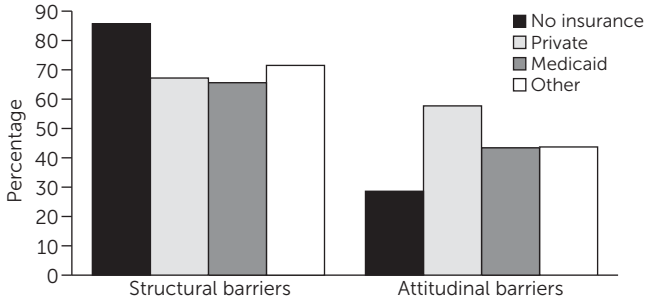
In this study, 75% of uninsured adults with any mental illness and 56% of uninsured adults with serious mental illness did not receive treatment. The ACA, which requires qualified health plans in the exchanges to include coverage for mental health treatment, holds the promise of substantially reducing the numbers of individuals with mental disorders who do not have insurance (24,25). Furthermore, the Mental Health Parity and Addiction Equity Act of 2008 and the final parity regulations issued in 2013 require insurance plans that cover mental health services to provide coverage on par with general medical services (26). Results from the Oregon Health Insurance Experiment, a randomized Medicaid expansion, showed that Medicaid coverage was associated with a reduction in the probability of a positive depression screen, an increase in the probability of a diagnosis of depression, and a reduction in out-of-pocket expenses (27).

Even among persons with insurance in this study, rates of unmet need were quite high. A total of 46.6% of adults with any mental illness who perceived an unmet need reported attitudinal barriers to receiving treatment. Consistent with earlier findings (14,28,29), the most common attitudinal barrier among the NSDUH respondents was the belief that they could handle the problem without treatment. Efforts at changing attitudes toward mental health care will need to target multiple sectors of the population and involve a variety of approaches, such as increasing public education and awareness of mental disorders and effective treatments, addressing social norms and cultural factors, and empowering people with mental disorders to overcome barriers to treatment (28,30). Additional research is needed to identify which programs can effectively reduce attitudinal barriers and improve treatment seeking (31)

Unmet need for treatment was substantial, not only among individuals who did not use mental health services but also among those who received treatment. Among adults with any or serious mental illness who received mental health treatment, 32% and 45%, respectively, perceived an unmet need for services. Efforts to improve access to mental health services also need to be coupled with initiatives to ensure quality of care (8) and the ability to obtain a full range of needed services (24,25).

It is also important to consider subpopulations at risk of not receiving mental health treatment. Our results show that black and Hispanic respondents were less likely than non-Hispanic whites to receive treatment. Although black and Hispanic individuals are more likely to be uninsured than whites (18), in this study insured and uninsured persons from racial-ethnic minority groups had a similar likelihood of receiving treatment. Distrust of health care providers, low

FIGURE 1. Proportion of adults with any mental illness who perceived an unmet need and who reported at least one structural or attitudinal barrier to treatment, by type of health insurance[a]



[a] Structural barriers included 6 options covering cost of treatment, extent of insurance coverage, not knowing where to go for treatment, and barriers to attending appointments. Attitudinal barriers included 8 options covering perceptions about need for treatment and treatment ineffectiveness, the belief that respondents could handle problems on their own, and stigma.

perceived efficacy of treatment, internalized stigma in regard to mental disorders and treatment, and loss of income as a result of taking time off from work to attend appointments are key reasons among minority group members for not seeking mental health treatment (32–35). Culturally tailored interventions may be helpful in overcoming barriers to mental health services use.

Several limitations must be considered. First, the NSDUH is a cross-sectional survey. Therefore, we cannot rule out the possibility of selection into, or out of, insurance on the basis of the presence of a mental illness, which could bias the estimated relationship. For instance, people who expect to use more services or more activated patients—those who have the willingness, knowledge, and ability to manage their health—may be more likely to obtain insurance and to use services (36,37). Second, although rates of any mental illness and serious mental illness were estimated by valid and robust prediction models (21), the survey did not include structured diagnostic interviews that would have enabled identification of specific disorders or to identify individuals with disorders whose symptoms were in remission. Third, mental health treatment use and unmet need were self-reported, and the NSDUH does not include provider-level information about the extent or quality of treatment. Fourth, having a diagnosis of a mental illness does not necessarily mean that treatment is needed, and many common disorders may remit even in the absence of treatment (38). Finally, although the survey response rate was high, response was not complete; it is possible that nonrespondents may have had different rates of mental illness than respondents.

CONCLUSIONS

Efforts to improve access to mental health care will need to address structural barriers, such as cost and uninsurance, as well as attitudinal barriers, such as stigma about mental disorders and their treatment and misconceptions about the effectiveness of treatments. Additional attention will also be needed to ensure quality of care among individuals once they enter the mental health treatment system.

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REFERENCES

1. Kessler RC, Demler O, Frank RG, et al: Prevalence and treatment of mental disorders, 1990 to 2003. New England Journal of Medicine 352:2515–2523, 2005
2. 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 35:277–292, 2000
3. Shim RS, Baltrus P, Ye J, et al: Prevalence, treatment, and control of depressive symptoms in the United States: results from the National Health and Nutrition Examination Survey (NHANES), 2005–2008. Journal of the American Board of Family Medicine 24: 33–38, 2011
4. Wang PS, Angermeyer M, Borges G, et al: Delay and failure in treatment seeking after first onset of mental disorders in the World Health Organization's World Mental Health Survey Initiative. World Psychiatry 6:177–185, 2007
5. Cooper-Patrick L, Gallo JJ, Powe NR, et al: Mental health service utilization by African Americans and Whites: the Baltimore Epidemiologic Catchment Area Follow-Up. Medical Care 37:1034–1045, 1999
6. Narrow WE, Regier DA, Norquist G, et al: Mental health service use by Americans with severe mental illnesses. Social Psychiatry and Psychiatric Epidemiology 35:147–155, 2000
7. Alegría M, Canino G, Ríos R, et al: Inequalities in use of specialty mental health services among Latinos, African Americans, and non-Latino whites. Psychiatric Services 53:1547–1555, 2002
8. Wang PS, Lane M, Olfson M, et al: Twelve-month use of mental health services in the United States: results from the National Comorbidity Survey Replication. Archives of General Psychiatry 62:629–640, 2005
9. Neighbors HW, Caldwell C, Williams DR, et al: Race, ethnicity, and the use of services for mental disorders: results from the National Survey of American Life. Archives of General Psychiatry 64:485–494, 2007
10. Druss BG, Hoff RA, Rosenheck RA: Underuse of antidepressants in major depression: prevalence and correlates in a national sample of young adults. Journal of Clinical Psychiatry 61:234–237, 2000
11. Donisi V, Tedeschi F, Percudani M, et al: Prediction of community mental health service utilization by individual and ecological level socio-economic factors. Psychiatry Research 209:691–698, 2013
12. Roll JM, Kennedy J, Tran M, et al: Disparities in unmet need for mental health services in the United States, 1997–2010. Psychiatric Services 64:80–82, 2013
13. Mojtabai R: Unmet need for treatment of major depression in the United States. Psychiatric Services 60:297–305, 2009

14. Mojtabai R, Olfson M, Sampson NA, et al: Barriers to mental health treatment: results from the National Comorbidity Survey Replication. Psychological Medicine 41:1751–1761, 2011
15. Sareen J, Jagdeo A, Cox BJ, et al: Perceived barriers to mental health service utilization in the United States, Ontario, and the Netherlands. Psychiatric Services 58:357–364, 2007
16. Mojtabai R: Trends in contacts with mental health professionals and cost barriers to mental health care among adults with significant psychological distress in the United States: 1997–2002. American Journal of Public Health 95:2009–2014, 2005
17. Rowan K, McAlpine DD, Blewett LA: Access and cost barriers to mental health care, by insurance status, 1999–2010. Health Affairs 32:1723–1730, 2013
18. DeNavas-Walt C, Proctor BD, Smith JC: Income, Poverty, and Health Insurance Coverage in the United States, 2012. Washington, DC, US Census Bureau, 2013
19. Results From the 2011 National Survey on Drug Use and Health: Summary of National Findings. Rockville, Md, Substance Abuse and Mental Health Services Administration, 2012
20. Results From the 2011 National Survey on Drug Use and Health: Mental Health Findings. Rockville, Md, Substance Abuse and Mental Health Services Administration, 2012
21. Aldworth J, Colpe LJ, Gfroerer JC, et al: The National Survey on Drug Use and Health Mental Health Surveillance Study: calibration analysis. International Journal of Methods in Psychiatric Research 19(suppl 1):61–87, 2010
22. Liao D, Aldworth J, Yu F, et al: Mental Health Surveillance Study: Design and Estimation Report. Prepared by RTI International for the US Department of Health and Human Services. Rockville, Md, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, 2012
23. Garfield RL, Zuvekas SH, Lave JR, et al: The impact of national health care reform on adults with severe mental disorders. American Journal of Psychiatry 168:486–494, 2011
24. Beronio K, Glied S, Frank R: How the Affordable Care Act and Mental Health Parity and Addiction Equity Act greatly expand coverage of behavioral health care. Journal of Behavioral Health Services and Research 41:410–428, 2014
25. Garfield RL, Lave JR, Donohue JM: Health reform and the scope of benefits for mental health and substance use disorder services. Psychiatric Services 61:1081–1086, 2010
26. Final rules under the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008; technical amendment to external review for multi-state plan program. Washington, DC. Federal Register 78:68240–68296, 2013
27. Baicker K, Taubman SL, Allen HL, et al: The Oregon Experiment—effects of Medicaid on clinical outcomes. New England Journal of Medicine 368:1713–1722, 2013
28. Andrade LH, Alonso J, Mneimneh Z, et al: Barriers to mental health treatment: results from the WHO World Mental Health surveys. Psychological Medicine 44:1303–1317, 2014
29. van Beljouw I, Verhaak P, Prins M, et al: Reasons and determinants for not receiving treatment for common mental disorders. Psychiatric Services 61:250–257, 2010
30. Mechanic D: Removing barriers to care among persons with psychiatric symptoms. Health Affairs 21(3):137–147, 2002
31. Clement S, Lassman F, Barley E, et al: Mass media interventions for reducing mental health-related stigma. Cochrane Database of Systematic Reviews 7:CD009453, 2013
32. Conner KO, Koeske G, Brown C: Racial differences in attitudes toward professional mental health treatment: the mediating effect of stigma. Journal of Gerontological Social Work 52:695–712, 2009
33. Gonzalez JM, Alegría M, Prihoda TJ, et al: How the relationship of attitudes toward mental health treatment and service use differs by age, gender, ethnicity/race and education. Social Psychiatry and Psychiatric Epidemiology 46:45–57, 2011
34. Ojeda VD, McGuire TG: Gender and racial/ethnic differences in use of outpatient mental health and substance use services by depressed adults. Psychiatric Quarterly 77:211–222, 2006
35. Waite R, Killian P: Health beliefs about depression among African American women. Perspectives in Psychiatric Care 44:185–195, 2008
36. Frank RG, McGuire TG, Bae JP, et al: Solutions for adverse selection in behavioral health care. Health Care Financing Review 18:109–122, 1997
37. Hibbard J, Greene J: What the evidence shows about patient activation: better health outcomes and care experiences; fewer data on costs. Health Affairs 32:207–214, 2013
38. Sareen J, Henriksen CA, Stein MB, et al: Common mental disorder diagnosis and need for treatment are not the same: findings from a population-based longitudinal survey. Psychological Medicine 43: 1941–1951, 2013