

# The CBHSQ Report

Short Report

June 20, 2017

## SMOKING AND MENTAL ILLNESS AMONG ADULTS IN THE UNITED STATES

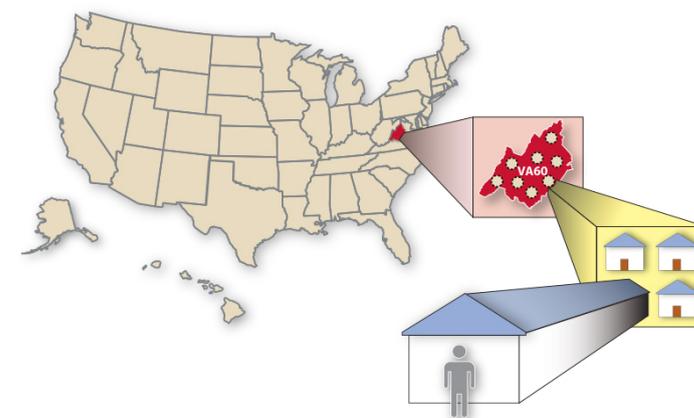
### AUTHORS

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### INTRODUCTION

Tobacco use continues to be the leading cause of preventable death in the United States.<sup>1,2</sup> Despite further evidence provided in the 2010 Surgeon General's Report that cigarette smoking causes disease and that no level of cigarette use is safe,<sup>2</sup> rates of cigarette use among certain groups of Americans remain high. Cigarette use among people with mental illness has garnered attention and concern over the past decade.<sup>3</sup> For example, previous research has shown that people with mental illness are not only more likely to smoke, but they also smoke more frequently than people with no mental illness.<sup>4,5</sup> For example, people with mental illness or a substance use disorder account for 25 percent of the adult population, but they consumed 40 percent of cigarettes sold in the United States.<sup>6</sup> People who are receiving treatment for a mental illness also have lower cessation rates of smoking than those people who are not seeking mental health treatment.<sup>7</sup> This report uses data from the 2012 to 2014 National Surveys on Drug Use and Health (NSDUHs) to provide up-to-date information on the relationship between smoking and mental illness.<sup>8</sup>

NSDUH is the primary source for statistical information on illicit drug use, alcohol use, substance use disorders, and mental health issues for the U.S. civilian, noninstitutionalized population aged 12 or older. One of NSDUH's strengths is the stability in the sample and survey design that allows multiple years of data to be combined to examine the behavioral health of specific subgroups, such as smoking among people with mental illness. NSDUH asks people aged 18 or older if they ever smoked part or all of a cigarette. Respondents who had smoked are asked if they smoked in the past 30 days, the average number of cigarettes they smoked on days they smoked in the past 30 days, and if they ever had smoked daily. NSDUH also has an indicator of having had any mental illness (AMI) in the past year. AMI among adults aged 18 or older is defined as having had a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet diagnostic criteria specified in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* during the year before the survey interview.<sup>9</sup> Estimates of AMI are based on predictive models.<sup>10</sup> An estimated 18.1 percent of adults had AMI in 2014.<sup>11</sup>



### In Brief

- Past month cigarette use was more likely among adults with any mental illness than among adults with no mental illness (33.3 vs. 20.7 percent).
- The average number of cigarettes smoked in the past month was higher among adult smokers with any mental illness than among adult smokers with no mental illness (326 vs. 284 cigarettes).
- Among adults who have been daily smokers, adults with any mental illness were less likely to have quit smoking than adults with no mental illness.
- Of those who had smoked daily at some point in their lifetime, adults with any mental illness were more likely to have smoked in the past 30 days compared with adults with no mental illness (61.6 vs. 47.2 percent).

This issue of *The CBHSQ Report* compares past month cigarette use among adults with past year AMI and among adults with no past year AMI. In this report, adults with no past year AMI are referred to as having no mental illness. The report also includes a comparison of the prevalence of smoking cessation among adults with past year AMI with those with no past year mental illness. The estimates are based on a total combined sample size of about 142,100 adults aged 18 or older, including 28,400 adults with past year AMI. All findings presented in this report are annual averages based on combined 2012 to 2014 NSDUH data. All differences discussed in this report are statistically significant at the .05 level.

## PAST MONTH CIGARETTE USE, BY ANY MENTAL ILLNESS

About 54.8 million adults aged 18 or older (23.0 percent) smoked cigarettes in the past month. However, adults with past year AMI were more likely to have smoked in the past month than those with no mental illness (33.3 vs. 20.7 percent) (Table 1). Stated another way, about 1 in 4 adults smoked cigarettes in the past month compared to 1 in 3 adults with past year AMI.

The association between past month cigarette use and mental illness was found for males and females. Adult males with past year AMI were more likely to have smoked in the past month than adult males with no mental illness (37.4 vs. 23.9 percent) (Table 1). Adult females with past year AMI were also more likely to have smoked in the past month than adult females with no mental illness (30.9 vs. 17.5 percent) (Table 1).

**Table 1. Cigarette use among adults aged 18 or older, by past year mental illness and demographic characteristics: 2012 to 2014**

Cigarette use and past year mental illness	Total	Age group			Gender	
		18 to 25	26 to 49	50 or older	Male	Female
Percentage who smoked in the past month: any mental illness	33.3%*	38.0%*	38.2%*	25.2%*	37.4%*	30.9%*
Percentage who smoked in the past month: no mental illness	20.7%	28.4%	24.6%	14.9%	23.9%	17.5%
Percentage of lifetime daily smokers who smoked in the past month: any mental illness	61.6%*	83.5%	69.4%*	45.9%*	61.9%*	61.3%*
Percentage of lifetime daily smokers who smoked in the past month: no mental illness	47.2%	81.8%	60.4%	32.1%	47.3%	47.0%
Number of cigarettes smoked in the past month: any mental illness	326*	189*	335*	396*	341*	315*
Number of cigarettes smoked in the past month: no mental illness	284	164	279	364	299	264

\* Difference between those with any mental illness and those with no mental illness is statistically significant at the .05 level.

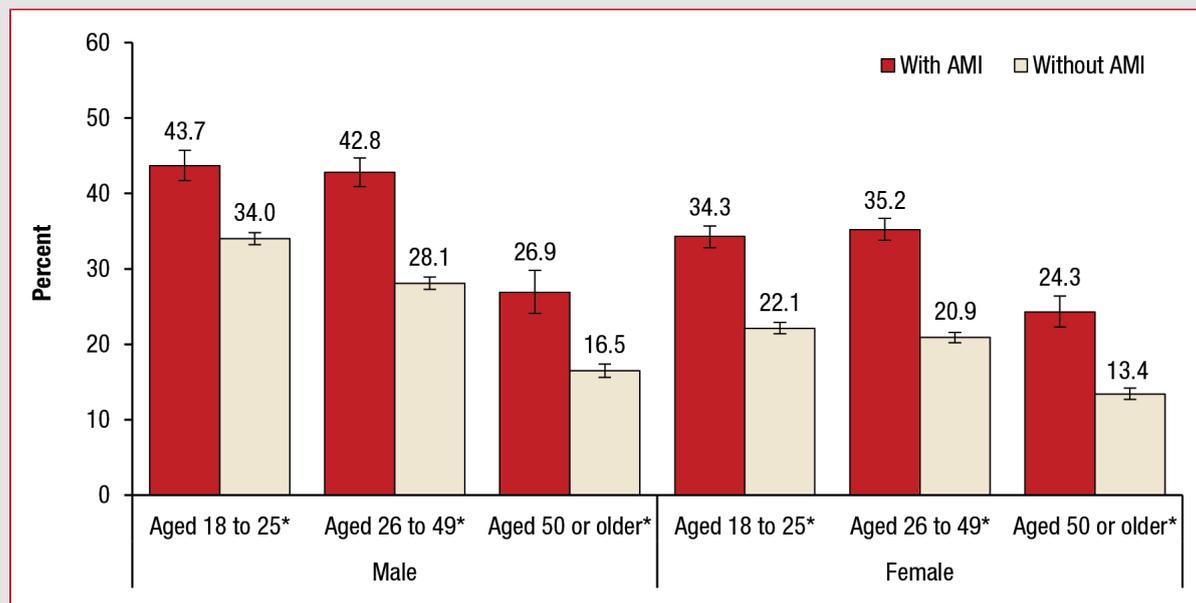
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2012 to 2014.

This association of higher estimates of smoking with the presence of AMI was also found across age groups (Table 1), as well as across age groups within both genders (Figure 1). For example, 43.7 percent of males aged 18 to 25 with AMI smoked in the past month compared with 34.0 percent of males aged 18 to 25 with no mental illness. Among females in this age group, 34.3 percent of those with AMI smoked in the past month, compared with 22.1 percent of those with no mental illness. Among males aged 26 to 49 with AMI, 42.8 percent smoked in the past month compared with 28.1 percent of males aged 26 to 49 with no mental illness. Among females in this age group, 35.2 percent of those with

AMI smoked in the past month compared with 20.9 percent of those with no mental illness. For males aged 50 or older with AMI, 26.9 percent smoked in the past month, compared with a lower percentage (16.5 percent) for males aged 50 or older with no mental illness. For females aged 50 or older, 24.3 percent of those with AMI smoked in the past month compared with 13.4 percent of those with no mental illness.

Although the association between past year AMI and smoking was found for both genders and across age groups within both genders, there were notable differences between the genders. Among people aged 18 or older with past year AMI, males (37.4 percent) were more likely than females (30.9 percent) to have smoked cigarettes in the past month (data not shown). As shown in Figure 1, males with AMI were more likely than females with AMI to have smoked in the past month among young adults (43.7 vs. 34.3 percent) and among adults aged 26 to 49 (42.8 vs. 35.2 percent). There was no difference between males and females with AMI for those aged 50 or older (26.9 and 24.3 percent). Among those without AMI, males were more likely than females to have smoked in the past month in the total population and in all three age groups.

**Figure 1. Past month cigarette use among adults aged 18 or older, by past year mental illness status, gender, and age group: 2012 to 2014**



\* Difference between those with any mental illness and those with no mental illness is statistically significant at the .05 level.

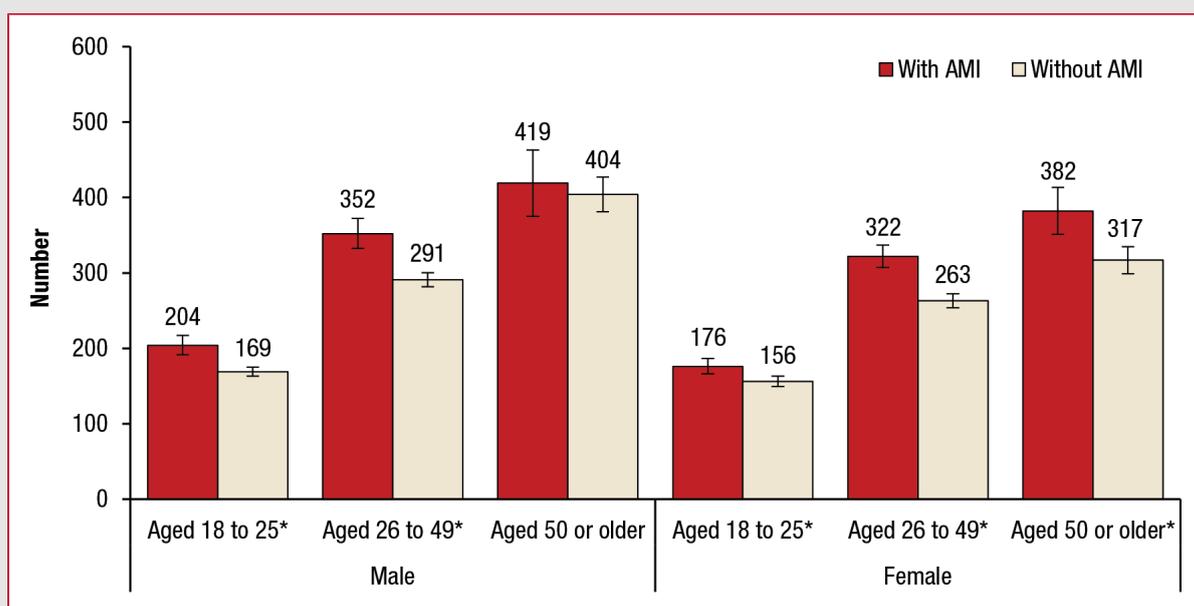
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2012 to 2014.

## NUMBER OF CIGARETTES SMOKED IN THE PAST MONTH, BY MENTAL ILLNESS STATUS

Another way to assess whether smoking differs by mental health status is to examine the average number of cigarettes smoked among past month smokers for those with and without mental illness. In this report, “current smokers” refers to people who engaged in past month cigarette use. Overall, the average number of cigarettes smoked in the past month among current smokers was higher among adults aged 18 or older with past year AMI than among those with no mental illness (326 vs. 284 cigarettes) (Table 1). Among current smokers, adults with past year AMI smoked about 2 more packs of cigarettes per month than adults with no mental illness (16.3 vs. 14.2 packs of cigarettes).<sup>12</sup> For both genders, the number of cigarettes smoked among current smokers was greater among those with AMI than among those with no mental illness. For example, adult male smokers with past year AMI smoked more cigarettes in the past month than adult male smokers with no mental illness (341 vs. 299 cigarettes) (Table 1). Stated another way, adult male smokers with past year AMI smoked about 2 packs of cigarettes more per month than adult male smokers with no mental illness (17.1 vs. 15.0 packs of cigarettes). Adult female smokers with past year AMI also smoked more cigarettes in the past month than adult female smokers with no mental illness (315 vs. 264 cigarettes) (Table 1). Stated another way, adult female smokers with past year AMI smoked almost 3 packs more per month than adult female smokers with no mental illness (15.8 vs. 13.2 packs of cigarettes) (Table 1).

A clear pattern among adults overall and for adult male and female smokers shows that the average number of cigarettes smoked was greater among those with AMI than among those with no mental illness (Table 1). A similar pattern of higher average numbers of cigarettes being smoked among current smokers with AMI than among current smokers with no mental illness was also generally seen for age groups within both genders (Figure 2). For example, male smokers aged 18 to 25 with AMI smoked a greater number of cigarettes in the past month than those with no mental illness (204 vs. 169 cigarettes). In the same age group, female smokers with AMI smoked an average of 176 cigarettes per month, whereas those with no mental illness smoked an average of 156 cigarettes per month. The single exception to this pattern was among male smokers aged 50 or older; for this group, the average number of cigarettes smoked was similar for current smokers with and without AMI.

**Figure 2. Average number of cigarettes smoked in the past month among past month smokers aged 18 or older, by past year mental illness status, gender, and age group: 2012 to 2014**



\* Difference between those with any mental illness and those with no mental illness is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2012 to 2014.

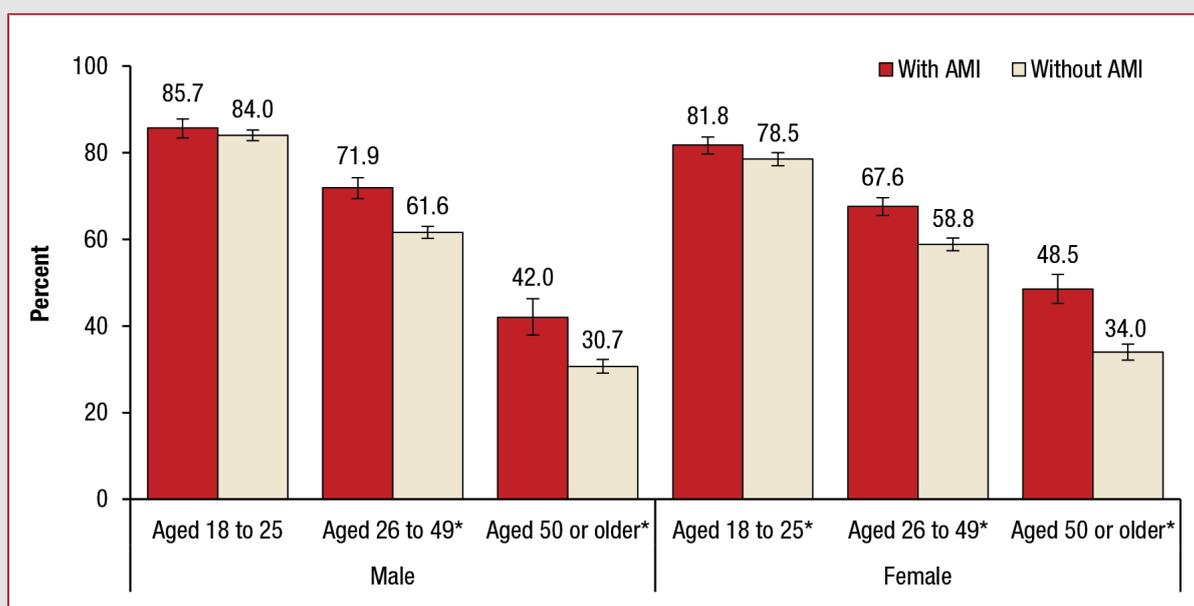
## SMOKING CESSATION, BY MENTAL ILLNESS STATUS

Current cigarette use<sup>13</sup> among those who had smoked daily at some time in their lives (hereafter referred to as "lifetime daily smokers") is an indicator of smoking cessation. Cessation refers to temporarily or completely stopping cigarette smoking. High proportions of current cigarette use among lifetime daily smokers in specific population groups indicate that few people in those groups have quit smoking.

Combined 2012 to 2014 NSDUH data indicate that about 6 out of 10 (61.6 percent) lifetime daily smokers with past year AMI were current smokers, compared with slightly less than half (47.2 percent) of lifetime daily smokers with no mental illness (Table 1). The association between current cigarette use among lifetime daily smokers and AMI was found for both genders. Adult male lifetime daily smokers with AMI were more likely to be current smokers than adult male lifetime daily smokers with no mental illness (61.9 vs. 47.3 percent) (Table 1). Adult female lifetime daily smokers with AMI were more likely to be current smokers than adult female lifetime daily smokers with no mental illness (61.3 vs. 47.0 percent) (Table 1). Stated another way, among those adults who have been daily smokers at some point in their lives, slightly more than half of adults with no mental illness appear to have quit smoking, whereas only about 40 percent of adults with past year AMI appear to have quit.

The association between current cigarette use among lifetime daily smokers and mental illness was found among both genders and among those aged 26 to 49 and those aged 50 or older. With one exception, this pattern was also found among both age groups within both genders (Figure 3). For example, 71.9 percent of male lifetime daily smokers aged 26 to 49 with AMI were current smokers compared with 61.6 percent of same-aged male lifetime daily smokers with no mental illness. Among females in this age group, 67.6 percent of those with AMI were current smokers compared with 58.8 percent of those with no mental illness. The single exception to this pattern was found among males aged 18 to 25; in this age group, male lifetime smokers with and without AMI were equally likely to be current smokers. In contrast, female lifetime smokers aged 18 to 25 with AMI were more likely to be current smokers (81.8 percent) when compared with lifetime smokers with no mental illness (78.5 percent).

**Figure 3. Past month cigarette use among lifetime daily smokers aged 18 or older, by past year mental illness status, gender, and age group: 2012 to 2014**



\* Difference between those with any mental illness and those with no mental illness is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2012 to 2014.

## DISCUSSION

National and state smoking cessation campaigns appear to have resulted in significant reductions in the number of Americans who smoke.<sup>14</sup> Although smoking has decreased, certain groups, such as people with mental illness, have higher rates of smoking than the general population.<sup>1</sup> The NSDUH data indicate that adults with past year AMI are more likely to be current smokers and less likely to have stopped smoking than adults who did not experience mental illness in the past year. Likewise, current smokers with past year mental illness smoked more cigarettes, on average, than those without past year mental illness. The association between current cigarette use among lifetime daily smokers and mental illness was found regardless of age groups and gender. Policymakers, mental health practitioners, and public health service providers can use this information to better understand and address the needs of people with mental illness to make progress in lowering the rates of smoking among them. For more information on behavioral health and smoking, please see <http://www.samhsa.gov/atod/tobacco> or [http://www.samhsa.gov/sites/default/files/topics/alcohol\\_tobacco\\_drugs/tobacco-behavioral-health-issue-resources.pdf](http://www.samhsa.gov/sites/default/files/topics/alcohol_tobacco_drugs/tobacco-behavioral-health-issue-resources.pdf).

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## ENDNOTES

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10. This report is an update to a similar report that was published in 2013. In the interim, SAMHSA has made improvements in methods for estimating mental illness; the improvements resulted in more accurate estimates of mental illness. For information on the re-estimation of mental illness, see <http://www.samhsa.gov/data/sites/default/files/NSDUH148/NSDUH148/sr148-mental-illness-estimates.pdf>.
11. Center for Behavioral Health Statistics and Quality. (2015). *Behavioral health trends in the United States: Results from the 2014 National Survey on Drug Use and Health* (HHS Publication No. SMA 15-4927, NSDUH Series H-50). Retrieved from: <http://samhsa.gov/data/>
12. In this report, consumption of a "pack" of cigarette is calculated based on self-report of number of cigarettes smoked. For this calculation, a "pack" is defined as containing 20 cigarettes.
13. In this report, "current" cigarette use refers to past month cigarette use.
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## SUGGESTED CITATION

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Lipari, R.N. and Van Horn, S.L. *Smoking and mental illness among adults in the United States*. The CBHSQ Report: March 30, 2017. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD.

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## SUMMARY

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**Background:** Tobacco use continues to be the leading cause of preventable death in the United States. Some subgroups, such as people with mental illness, have different patterns of cigarette use and successful smoking cessation. **Method:** This report uses data from the 2012 to 2014 National Surveys on Drug Use and Health (NSDUHs) to provide up-to-date information on the relationship between smoking and mental illness. This report compares past month cigarette use among adults with past year any mental illness (AMI) to cigarette use among those without AMI. The report also includes a comparison of smoking cessation among adults with past year AMI with those without past year AMI. **Results:** Findings in this report indicate that past month cigarette use was more likely among adults with mental illness than among those without AMI (33.3 vs. 20.7 percent). Among adults with mental illness who had ever smoked daily in their lifetime, two-thirds (61.6 percent) smoked in the past 30 days compared with less than half (47.2 percent) of adults without AMI who had ever smoked daily in their lifetime. The average number of cigarettes smoked in the past month was higher among adult smokers with AMI than among smokers without AMI (326 vs. 284 cigarettes). **Conclusion:** The associations between mental illness and both past month cigarette use and smoking cessation were found across age groups and across genders. Policymakers, mental health practitioners, and public health service providers can use this information to better understand and address the needs of people with mental illness to make progress in lowering the rates of smoking among them.

**Keywords:** mental illness, National Survey on Drug Use and Health, NSDUH, smoking

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## KEYWORDS

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Age Group, Gender, Short Report, Population Data, 2012, 2013, 2014, Prevention Professionals, Mental Illness, People with Mental Health Problems as Population Group, Tobacco, All US States Only

The Substance Abuse and Mental Health Services Administration (SAMHSA) is the agency within the U.S. Department of Health and Human Services that leads public health efforts to advance the behavioral health of the nation. SAMHSA's mission is to reduce the impact of substance abuse and mental illness on America's communities.

The National Survey on Drug Use and Health (NSDUH) is an annual survey sponsored by SAMHSA. The data used in this report are based on 2012 to 2014 NSDUH information obtained from 142,100 adults aged 18 or older, including 28,400 with past year any mental illness. NSDUH collects data by administering questionnaires to a representative sample of the population through face-to-face interviews at their place of residence.

*The CBHSQ Report* is prepared by the Center for Behavioral Health Statistics and Quality (CBHSQ), SAMHSA, and by RTI International in Research Triangle Park, North Carolina. (RTI International is a registered trademark and a trade name of Research Triangle Institute.)

Information on the most recent NSDUH is available in the following publication:

Center for Behavioral Health Statistics and Quality. (2016). *Key substance use and mental health indicators in the United States: Results from the 2015 National Survey on Drug Use and Health* (HHS Publication No. SMA 16-4984, NSDUH Series H-51). Retrieved from <http://samhsa.gov/data/>

Also available online at <http://www.samhsa.gov/data/population-data-nsduh>.



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