

CBHSQ DATA REVIEW

May 2017

Abstract

Research suggests that physical health conditions, particularly asthma and diabetes, may be more common among people with a history of depression. However, studies of the association between depression and physical health conditions among adolescents are rare and tend to use only samples recruited from treatment settings. The purpose of this report is to examine the association between major depressive episode (MDE), self-rated overall health, and selected health conditions (including asthma, bronchitis, pneumonia, obesity, and diabetes) among adolescents in a U.S. nationally representative sample.

Combined data from the 2005 to 2014 National Surveys on Drug Use and Health (NSDUHs) showed worse overall health ratings among those with past year MDE compared with those without past year MDE. Asthma, bronchitis, and pneumonia were more likely among adolescents with past year MDE compared with adolescents without past year MDE. Results were similar by age, gender, race/ethnicity, and poverty status, which showed relatively consistent findings with one notable exception. Past year asthma did not differ significantly among adolescent males with MDE and males without MDE. Female adolescents with MDE had a higher prevalence of obesity and a lower prevalence of normal weight status compared with females without MDE. Lifetime diabetes estimates were higher among female adolescents with MDE compared with those without MDE, among adolescents aged 14 years or older with MDE compared with those without MDE, and among adolescents with MDE among non-Hispanic white and non-Hispanic black adolescents compared with their counterparts without MDE.

Although an association between MDE and these physical health conditions was observed, the cause of these associations cannot be determined using NSDUH data. Because NSDUH is a cross-sectional dataset, temporality cannot be assessed. More research would be needed to determine whether having a physical health condition causes depression or vice versa. However, information in this report on the association between physical health conditions and depression can be used to provide information that can guide prevention, early identification, and treatment of these co-occurring health conditions. These findings may also motivate future research into whether treating depression helps improve physical health conditions and if treating physical health conditions can improve depression. For example, treating depression may improve adolescents' ability to engage in activities needed to monitor and care for chronic conditions like diabetes, and asthma treatment might lead to improved quality of life, which might help reduce depression.

Comparison of Physical Health Conditions among Adolescents Aged 12 to 17 with and without Major Depressive Episode

Authors

SAMHSA: Sarra L. Hedden, Gary Blau, Rachel Lipari, and Lisa Rubenstein; RTI International: Valerie L. Forman-Hoffman and Cristie Glasheen

Highlights

- Data from the National Surveys on Drug Use and Health show that asthma, bronchitis, pneumonia, obesity (in females only), and diabetes are associated with past year major depressive episode (MDE) among adolescents.
- Adolescents with past year MDE were significantly more likely to self-report having fair or poor overall health and were less likely to report having excellent, very good, or good health than those without past year MDE in the past year.
- Estimates of past year and lifetime asthma, bronchitis, and pneumonia were all higher among adolescents with past year MDE compared with those without past year MDE.
- Lifetime diabetes estimates were significantly higher among adolescents with MDE compared with those without MDE.
- Female adolescents with MDE were more likely to be obese than those without MDE. This association did not hold for males.

1. Introduction

Major depressive episodes (MDEs) are characterized by having a period of at least 2 weeks of depressed mood or loss of interest or pleasure in daily activities, with additional symptoms such as difficulties with sleeping, eating, energy, concentration, or self-worth.¹ In 2014, about 11.4 percent of adolescents aged 12 to 17^a experienced an MDE in the past year, and 8.2 percent had an MDE with severe impairment that greatly affected their ability to function well at home, school, or work or to get along with friends or family.² Mental distress and functional impairment are associated with MDE, which can also have substantial consequences for health and well-being, including increased risk of substance use or use disorders, poor academic achievement, impaired social functioning, and suicide.^{3,4} Depression during adolescence has been linked to decreased levels of overall health in young adulthood, even after controlling for current depression levels.^{5,6,7} A growing body of evidence from population-based studies shows that MDE may be associated with other physical health conditions, including asthma, obesity, and diabetes.^{8,9,10,11,12}

Although this research suggests that there may be an association between physical health conditions and MDE, research has been mixed—particularly regarding respiratory health conditions—and only a few studies have begun to explore whether characteristics such as gender or race/ethnicity moderate the associations. Understanding whether these associations differ based on age, gender, or race/ethnicity is important for targeting preventive and clinical initiatives. The purpose of this report is to examine the prevalence of MDE among adolescents with varying levels of self-rated overall health and with and without three respiratory health conditions (asthma, bronchitis, pneumonia), body mass index category (including overweight and obesity), and diabetes using data from a nationally representative household sample, the National Survey on Drug Use and Health (NSDUH). These health

conditions were examined because, based on prior research, they have been shown to be associated with depression. This study also takes the next step of furthering knowledge about whether the associations between depression and physical health conditions differ among particular populations by exploring whether these associations differ by age, gender, race/ethnicity, and poverty status.

The remainder of this report is organized as follows. Chapter 2 presents the methods, including descriptions of the sample, measures, and data analysis. Chapters 3 to 6 present the main results of the study in describing the association between MDE and overall health status (Chapter 3), respiratory health conditions (Chapter 4), body mass index (Chapter 5), and diabetes (Chapter 6). An overview of studies that have examined associations between depression and the outcome of interest is also presented, followed by current study findings among all adolescents, by age, gender, race/ethnicity, and poverty status. Chapter 7 summarizes the overall findings, implications, strengths and limitations, and future directions for this area of research.

2. Methods

2.1 Sample

Data used in these analyses are from the 2005 to 2014 National Surveys on Drug Use and Health (NSDUHs). NSDUH is administered by the Substance Abuse and Mental Health Services Administration (SAMHSA) and is an annual face-to-face household interview survey of the civilian, noninstitutionalized population of the United States aged 12 or older. The annual survey has approximately 65,000 respondents per year, with about 17,000 adolescents aged 12 to 17.

After a screening process that determines eligible households and household members, zero, one, or two residents aged 12 or older are selected for the interview, which is mostly conducted via audio computer-assisted self-interviewing (ACASI) to encourage accurate reporting of potentially sensitive topics such as substance use and mental health. Each respondent reads questions or listens to questions via headphones and answers the questions directly on a laptop computer.

^a The terms “males,” “females,” “adolescent males,” and “adolescent females” used in this report all refer to the NSDUH age group for adolescents aged 12 to 17.

Interviewers collect data that require a lower degree of sensitivity via computer-assisted personal interviewing methods, where interviewers read questions to the respondent and enter the respondent's responses on a laptop computer.

The annual weighted interview response rate for adolescents identified as potential NSDUH participants from 2005 to 2014 ranged from 80.0 to 87.1 percent. Further details about the NSDUH design and methods can be found online at <https://www.samhsa.gov/data/>. Approximately 208,100 adolescents completed the 2005 to 2014 NSDUHs. Because height and weight were not added to the NSDUH questionnaire until 2013, the obesity-depression analyses used combined data from only the 2013 to 2014 NSDUHs, in which there were approximately 35,800 adolescents.

2.2 Measures

2.2.1 Major Depressive Episode

In NSDUH, lifetime major depressive episode (MDE) is assessed using clinical criteria from the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*.¹³ The questions asked in the adolescent module were adapted from the depression section of the National Comorbidity Survey Replication Adolescent Supplement.^b Respondents were assessed for the presence of either of the core depression symptoms (*Have you ever in your life had a period of time lasting several days or longer when most of the day you felt sad, empty, or depressed?* and *Have you ever had a period of time lasting several days or longer when most of the day you felt very discouraged or hopeless about how things were going in your life?*), and then they were given an assessment of the remaining seven symptoms and questions verifying that the duration of 2 weeks or longer was met. Respondents who met criteria for lifetime MDE had at least one core symptom with at least four additional symptoms, present nearly every day, lasting 2 weeks or longer. Past year MDE was assessed among those with lifetime MDE by asking the respondents if they had a period of 2 weeks or longer in the past 12 months where they experienced

the core symptom while experiencing some of the other depression symptoms. No exclusions were made for MDE caused by medical illness, bereavement, or substance use disorders. Specific question wording for the NSDUH depression module can be found in other documentation.¹⁴ This report focuses on past year MDE. The average annual prevalence of past year MDE among adolescents aged 12 to 17 in the 2005 to 2014 NSDUHs was 8.9 percent. Results on overall health, respiratory health conditions, body mass index (BMI), and diabetes by lifetime MDE were similar and are displayed in tables in Appendices A through D.

2.2.2 Physical Health Conditions

Selection of the physical health conditions from NSDUH for this report was based on prior research that indicated that these conditions may be associated with depression. Self-rated health (overall health), asthma, bronchitis, pneumonia, diabetes, and obesity (BMI category, including underweight, normal weight, overweight, and obese) were selected for further investigation.

Current overall health is assessed in the ACASI portion of the NSDUH interview using the following text: "This question is about your overall health. Would you say your health in general is excellent, very good, good, fair, or poor?"

Respiratory health conditions and diabetes were assessed as part of a series of questions about several physical health conditions. Respondents were first shown a list of 20 health conditions (including asthma, bronchitis, pneumonia, and diabetes) and asked whether a doctor or other medical professional had ever told them that they had that health condition. They were then given another list to assess whether a doctor or other medical professional had told them that they had these health conditions in the past year. The diabetes question did not differentiate between type 1 diabetes and type 2 diabetes.

^b For details, see <http://www.hcp.med.harvard.edu/ncs/>.

BMI category (including overweight and obese) was assessed by asking each respondent to self-report height and weight. NSDUH did not begin collecting height and weight information until the 2013 survey, so all analyses on BMI category use only 2013 to 2014 data. Categorizations were made by calculating BMI from the height and weight variables (defined as kilograms divided by meters, squared). BMI category corresponded with the BMI-for-age percentiles listed in the 2000 Centers for Disease Control and Prevention growth charts.¹⁵

2.3 Analysis

Four outcome variables were created based on substantive knowledge of the physical health condition, sample size considerations, and sample distributions of a particular condition:

1. Overall health ratings were dichotomized into excellent, very good, and good versus fair and poor.
2. Respiratory health conditions were categorized as no lifetime disorder, lifetime but not past year disorder (herein referred to as “lifetime”), and past year disorder.
3. BMI was categorized into four groups: BMI at or below the 5th percentile = underweight, BMI over the 5th percentile up to the 85th percentile = normal weight, BMI at or above the 85th percentile and below the 95th percentile = overweight, and BMI at or above the 95th percentile = obese.
4. Diabetes was categorized as no lifetime diabetes versus lifetime diabetes because diabetes is a chronic condition (i.e., there are no instances of lifetime but not past year).

Estimates of each outcome were computed by past year MDE status among all adolescents and separately by age group (12 or 13, 14 or 15, and 16 or 17), gender (male and female), race/ethnicity (non-Hispanic white, non-Hispanic black, and Hispanic),^c and poverty status (less than 100 percent of the federal poverty level [FPL], 100 to 199 percent of the FPL, and 200 percent or more of the FPL). Proportions of health outcomes were compared among those with and without MDE overall and among each covariate group (e.g., among males, among females) using t-tests, which reflect the test statistic under finite sample sizes in complex survey data.¹⁶ Multiple logistic regression models were run to confirm that significant bivariate associations between past year MDE and each outcome remained after adjusting for age group, gender, race/ethnicity, and poverty status.

^c Non-Hispanic adolescents of other races were not examined as a separate category because of very small cell sizes.

3. Overall Health

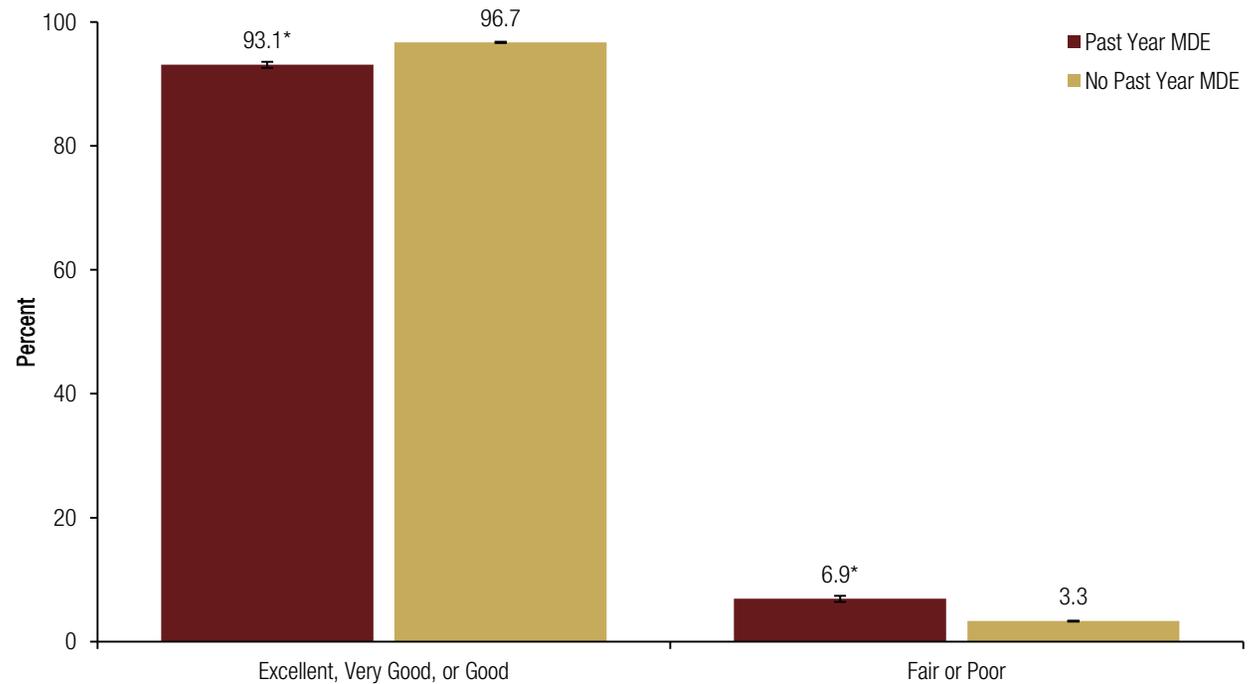
Studies conducted from samples of middle-aged or elderly adults have indicated a significant association between self-rated health and depression^{17,18} independent of physical health status. More recently, Bauldry and colleagues¹⁹ analyzed data from three waves of panel data from the National Longitudinal Study of Adolescent Health (Add Health) to confirm a significant association between self-rated health and depressive symptoms among adolescents initially enrolled in grades 7 to 12 as they transition to young adulthood.

To further explore and update these findings to include associations between self-rated health and depression among adolescents enrolled and not enrolled in school, overall health ratings among adolescents with and without a past year major depressive episode (MDE) were examined. Current overall health status among all adolescents is presented first, followed by estimates specific to age, gender, race/ethnicity, and poverty status, which are factors included in the prior study conducted by Bauldry and colleagues. These factors were also measured in the National Survey on Drug Use and Health (NSDUH) data.¹⁹

All Adolescents

Adolescents with past year MDE were more likely to rate their overall health as fair or poor and were less likely to rate their overall health as excellent, very good, or good than those without past year MDE (Figure 3.1). For example, 6.9 percent of adolescents with past year MDE reported having fair or poor health compared with 3.3 percent of adolescents without past year MDE. Associations between past year MDE and overall health remained significant after adjusting for age group, gender, race/ethnicity, and poverty status (data not shown).

FIGURE 3.1 Estimates of Overall Health among Adolescents Aged 12 to 17, by Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014

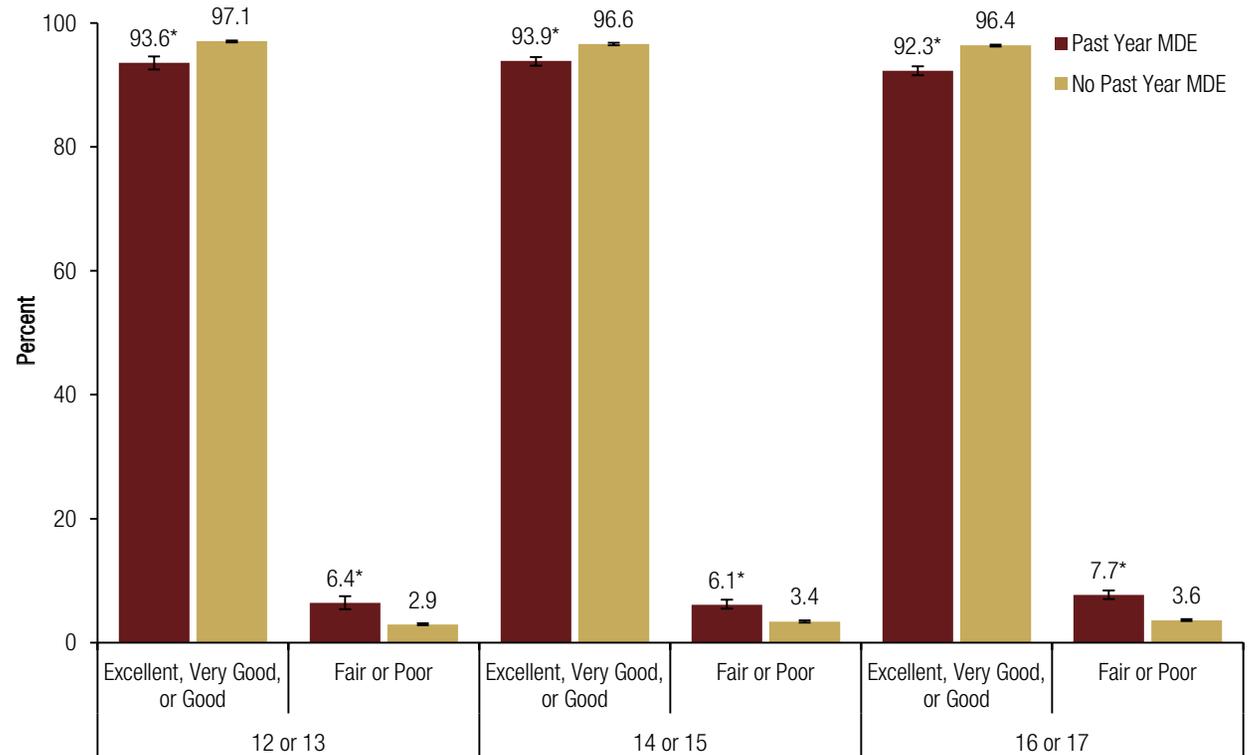


* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Age Group

Adolescents with past year MDE were more likely to have fair or poor overall health ratings and less likely to have excellent, very good, or good overall health ratings than those without past year MDE among all age groups (12 or 13, 14 or 15, and 16 or 17) (Figure 3.2). For example, 6.4 percent of adolescents aged 12 or 13 with past year MDE reported having fair or poor health compared with 2.9 percent of adolescents aged 12 or 13 without past year MDE.

FIGURE 3.2 Estimates of Overall Health among Adolescents Aged 12 to 17, by Age Group and Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014

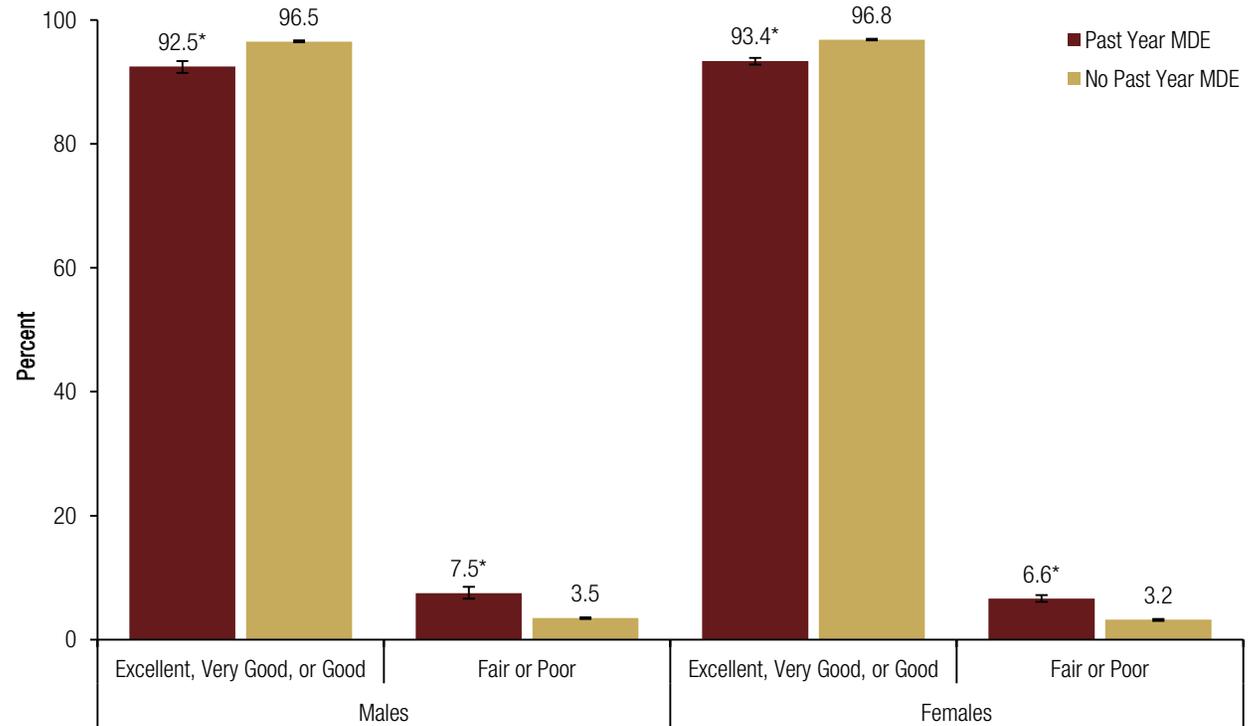


* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Gender

Adolescents with past year MDE were more likely to rate their health as fair or poor and were less likely to rate their health as excellent, very good, or good than those without past year MDE, regardless of gender (Figure 3.3). For example, 7.5 percent of male adolescents with past year MDE reported having fair or poor health compared with 3.5 percent of male adolescents without past year MDE.

FIGURE 3.3 Estimates of Overall Health among Adolescents Aged 12 to 17, by Gender and Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



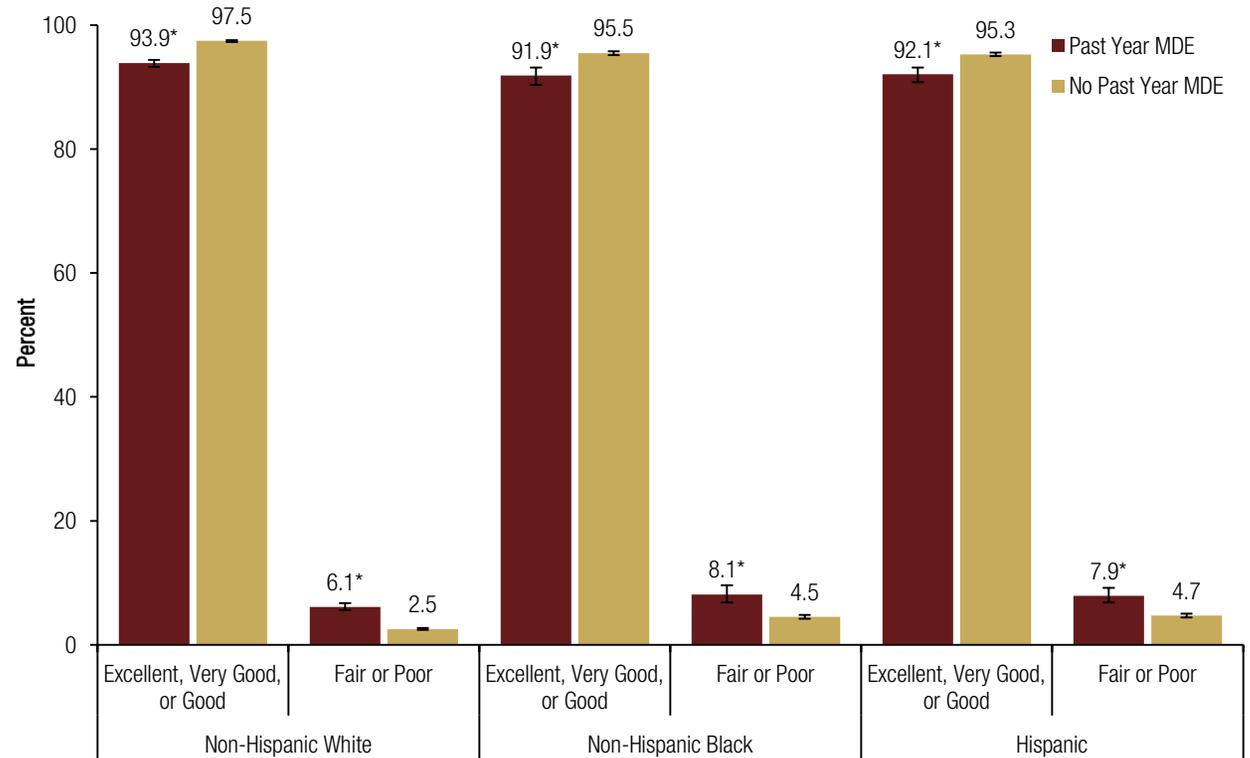
* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Race/Ethnicity

Adolescents with past year MDE were more likely to have fair or poor health ratings and were less likely to have excellent, very good, or good health ratings than those without past year MDE, regardless of race/ethnicity (Figure 3.4). For example, 7.9 percent of Hispanic adolescents with past year MDE reported having fair or poor health compared with 4.7 percent of Hispanic adolescents without past year MDE.

FIGURE 3.4 Estimates of Overall Health among Adolescents Aged 12 to 17, by Race/Ethnicity and Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

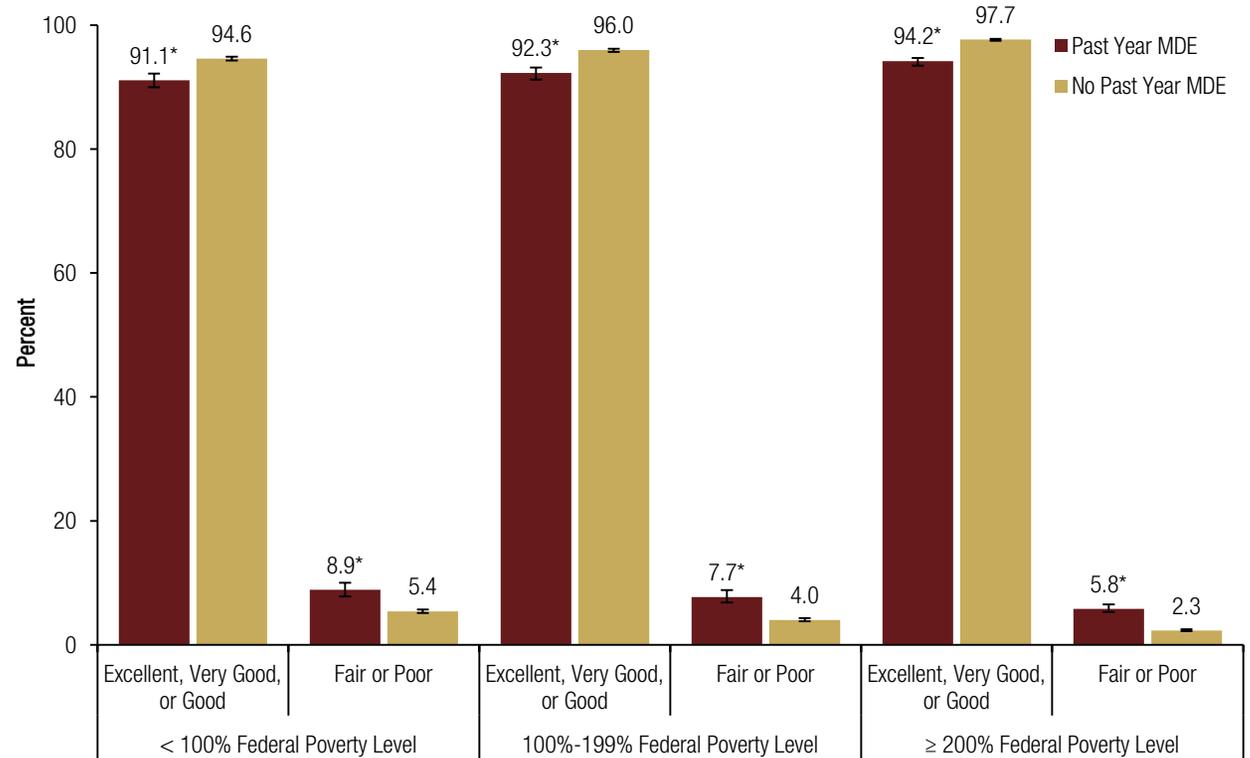
NOTE: Non-Hispanic adolescents who were not white or black were not included in this figure.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Poverty Status

Adolescents with past year MDE were less likely to be in excellent, very good, or good health than those without past year MDE, regardless of poverty status (Figure 3.5). For example, 8.9 percent of adolescents in families with incomes less than 100 percent of the federal poverty level with past year MDE reported having fair or poor health compared with 5.4 percent of adolescents in families with incomes less than 100 percent of the federal poverty level without past year MDE.

FIGURE 3.5 Estimates of Overall Health among Adolescents Aged 12 to 17, by Poverty Status and Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

4. Respiratory Health Conditions

This chapter describes associations between depression and respiratory conditions, including asthma, bronchitis, and pneumonia.

Several studies have indicated associations between asthma and depression. A literature review that focused on eight recent population-based studies among adolescents that examined asthma and depression symptoms found that estimates of depression symptoms were double among adolescents with asthma compared with those without.²⁰ Also, the likelihood of adolescents with asthma developing depression symptoms was twice as high as that for adolescents without asthma. In the literature review, the association between asthma and depression symptoms was stronger among non-Hispanic white adolescents compared with adolescents of other races/ethnicities.^{11,21} In another population-based study of almost 6,000 Dutch adolescents, the study authors found that adolescents with asthma had more feelings of depression compared with those without asthma and that depression symptoms increased as asthma severity increased.²²

Not all studies consistently found an association between asthma and major depressive episode (MDE) or other depression-related outcomes among adolescents. For example, the Canadian Community Health Survey showed a positive association between asthma and depression in females aged 12 to 19 but a negative association (i.e., asthma was associated with lower odds of depression) among males in this age group.⁸ Another study of adolescents aged 11 to 17 found a significant association between major depression and asthma, but after adjusting for other characteristics, the association was no longer statistically significant. This suggests that the association between depression and asthma may be due to other shared factors.²³ Similarly, a study of middle school students aged 10 to 13 in Italy found that depressive mood was not associated with asthma.²⁴

Bronchitis is a respiratory health condition that may be associated with depression. The three forms of bronchitis are acute, asthmatic (a complication of asthma), and chronic. Although there is ample evidence that depression is related to chronic bronchitis in adults,²⁵ there is less research on the relationship between depression and having experienced one or more episodes of bronchitis among adolescents. The only identified study conducted among adolescents was the Canadian Community Health Survey, which found that chronic bronchitis is significantly associated with depression in males and females aged 11 to 17.⁸ That study found that adolescents with bronchitis had higher estimates of depression than their counterparts without bronchitis (a 73.0 percent higher estimate for males and a 32.0 percent higher estimate for females).

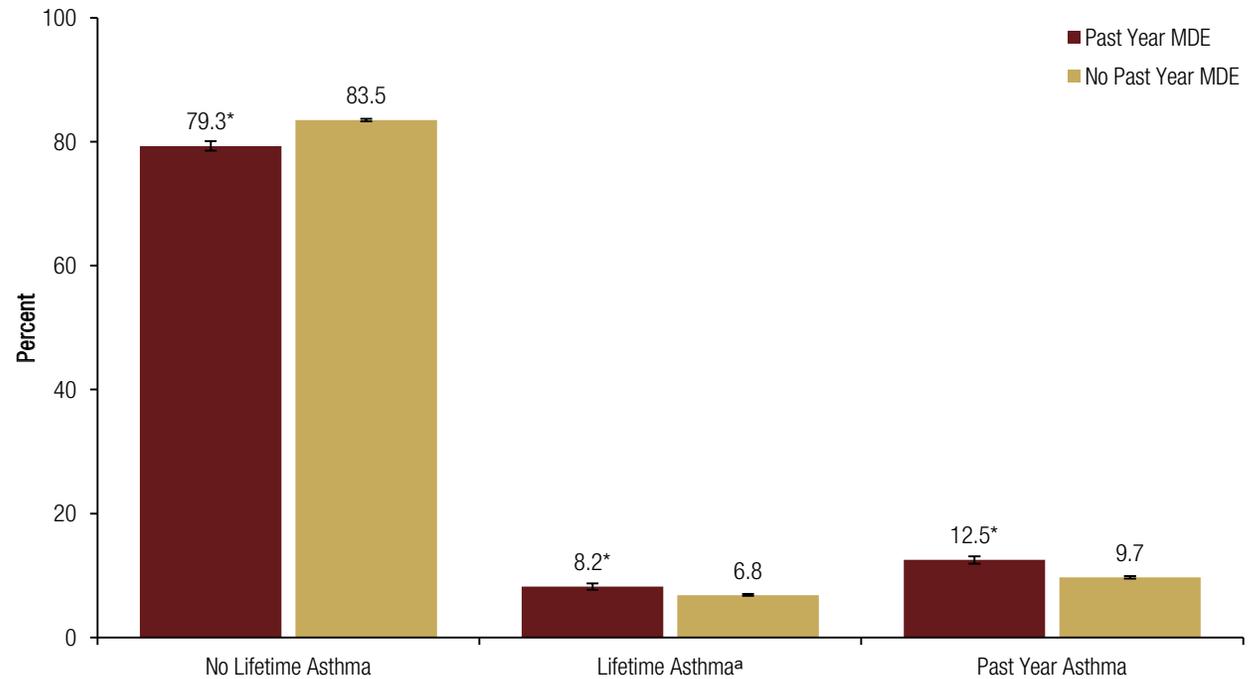
Pneumonia is closely related to bronchitis, and both health conditions are associated with higher asthma rates.²⁶ Although no prior research examines the association between pneumonia and depression, pneumonia's close relation to bronchitis and asthma (conditions known to be associated with depression) suggests the importance of studying the pneumonia-depression association.

4.1 Asthma

All Adolescents

Among all adolescents, the estimates of past year and lifetime (but not past year) asthma were higher among those with past year MDE compared with those without past year MDE (Figure 4.1). About 12.5 percent of adolescents with MDE had past year asthma compared with 9.7 percent of those without MDE. Similarly, 8.2 percent of those with MDE had lifetime asthma compared with 6.8 percent of those without MDE. Associations between past year MDE and both past year and lifetime asthma remained significant after adjusting for age group, gender, race/ethnicity, and poverty status (data not shown).

FIGURE 4.1 Estimates of Past Year and Lifetime Asthma among Adolescents Aged 12 to 17, by Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

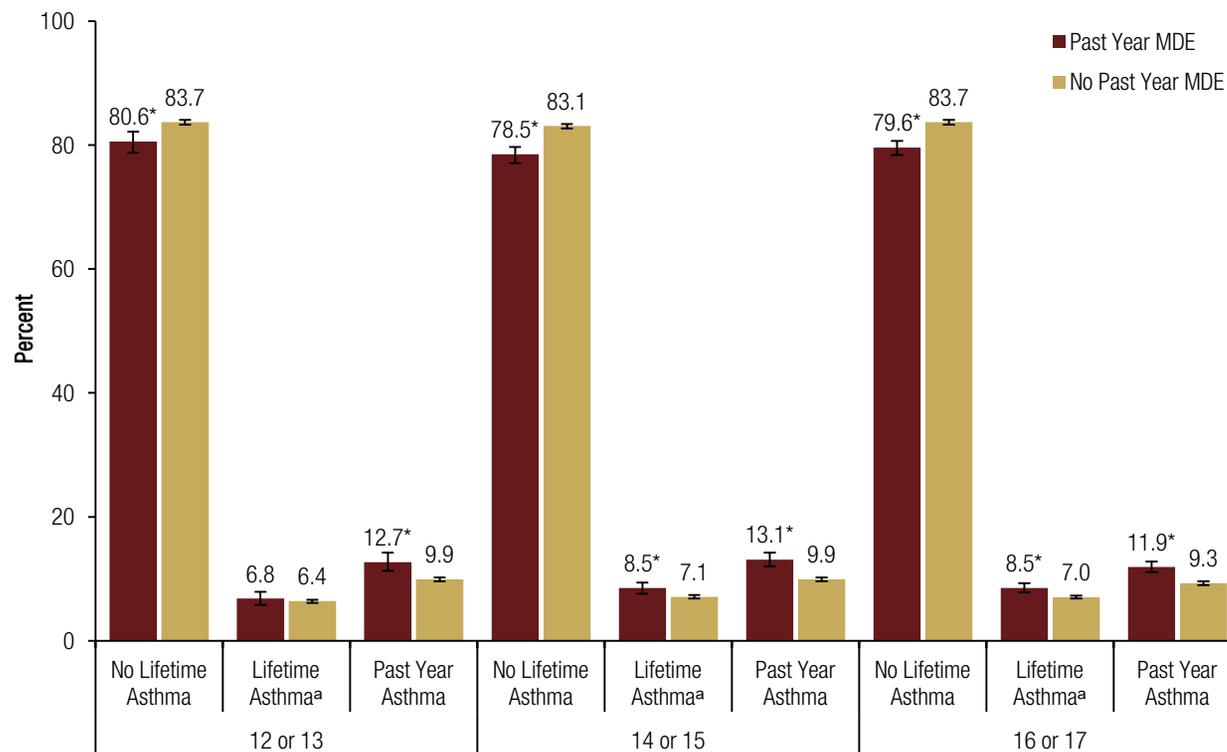
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Age Group

Among 12- or 13-year-old adolescents with MDE, past year asthma was more likely than among adolescents without MDE (12.7 vs. 9.9 percent) (Figure 4.2). However, lifetime asthma did not significantly differ among adolescents with MDE and those without MDE (6.8 vs. 6.4 percent). Among 14- or 15-year-old and 16- or 17-year-old adolescents with MDE, past year asthma and lifetime asthma were more likely than among adolescents without MDE.

FIGURE 4.2 Estimates of Past Year and Lifetime Asthma among Adolescents Aged 12 to 17, by Age Group and Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

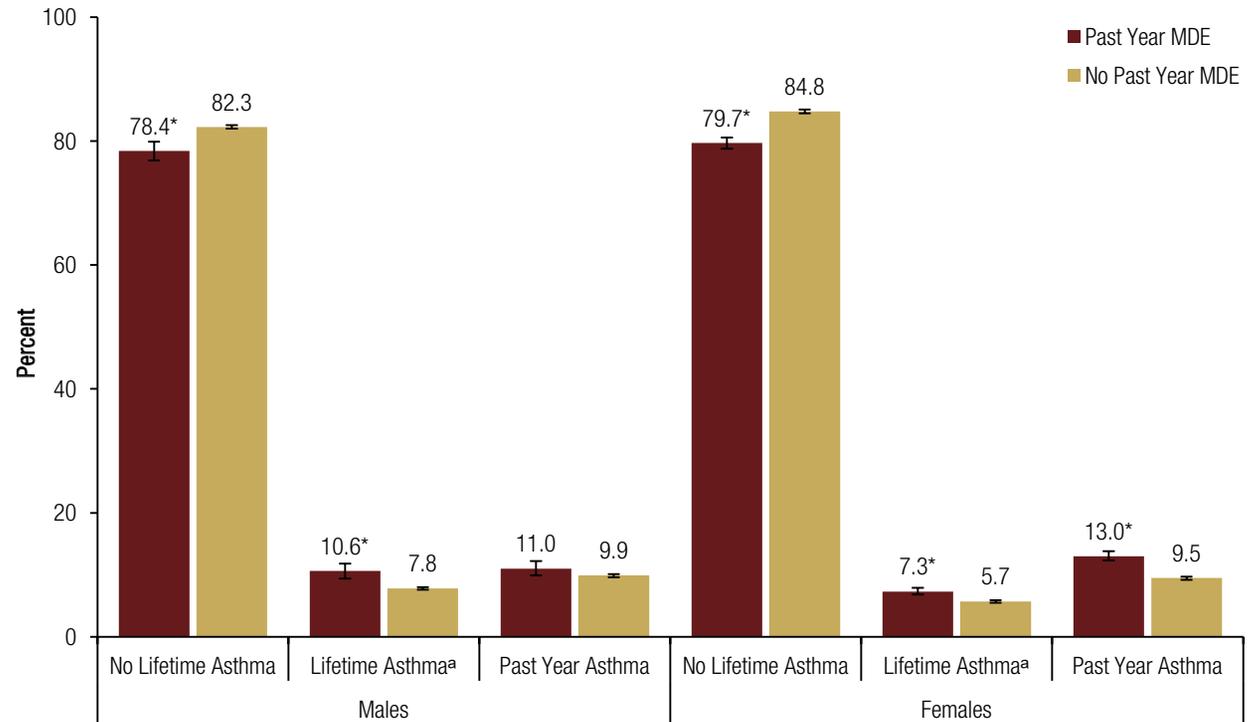
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Gender

Estimates of past year asthma among adolescent males with MDE were similar to estimates among those without MDE (11.0 vs. 9.9 percent) (Figure 4.3). Adolescent males with MDE were more likely to have lifetime asthma than those without MDE (10.6 vs. 7.8 percent). Female adolescents with MDE were more likely to have lifetime asthma than those without MDE (7.3 vs. 5.7 percent). Additionally, female adolescents with MDE were more likely to have past year asthma than those without MDE (13.0 vs. 9.5 percent).

FIGURE 4.3 Estimates of Past Year and Lifetime Asthma among Adolescents Aged 12 to 17, by Gender and Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

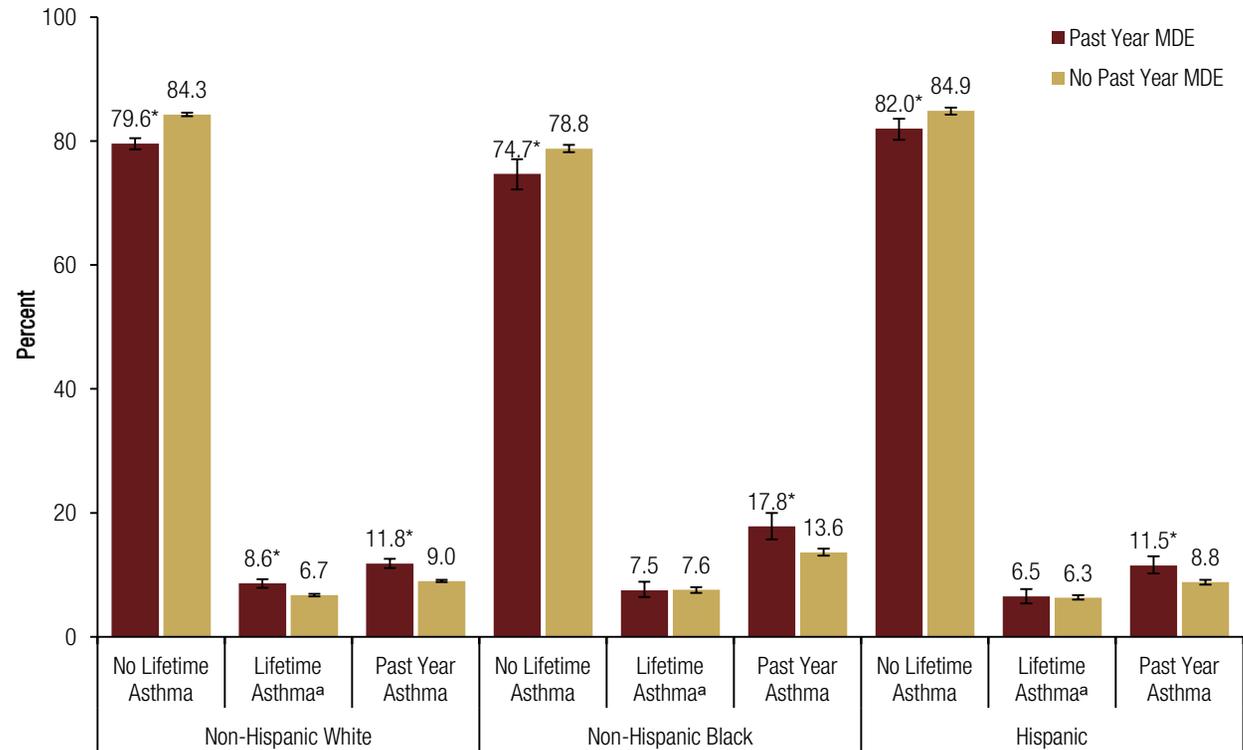
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Race/Ethnicity

Non-Hispanic white adolescents with MDE were more likely to have lifetime asthma than those without MDE (8.6 vs. 6.7 percent) (Figure 4.4). In addition, non-Hispanic white adolescents with MDE were more likely to have past year asthma than those without MDE (11.8 vs. 9.0 percent). Among non-Hispanic black and Hispanic adolescents, those with MDE were more likely to have past year asthma than those without MDE. Estimates of lifetime asthma among non-Hispanic black and Hispanic adolescents did not differ by MDE status.

FIGURE 4.4 Estimates of Past Year and Lifetime Asthma among Adolescents Aged 12 to 17, by Race/Ethnicity and Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

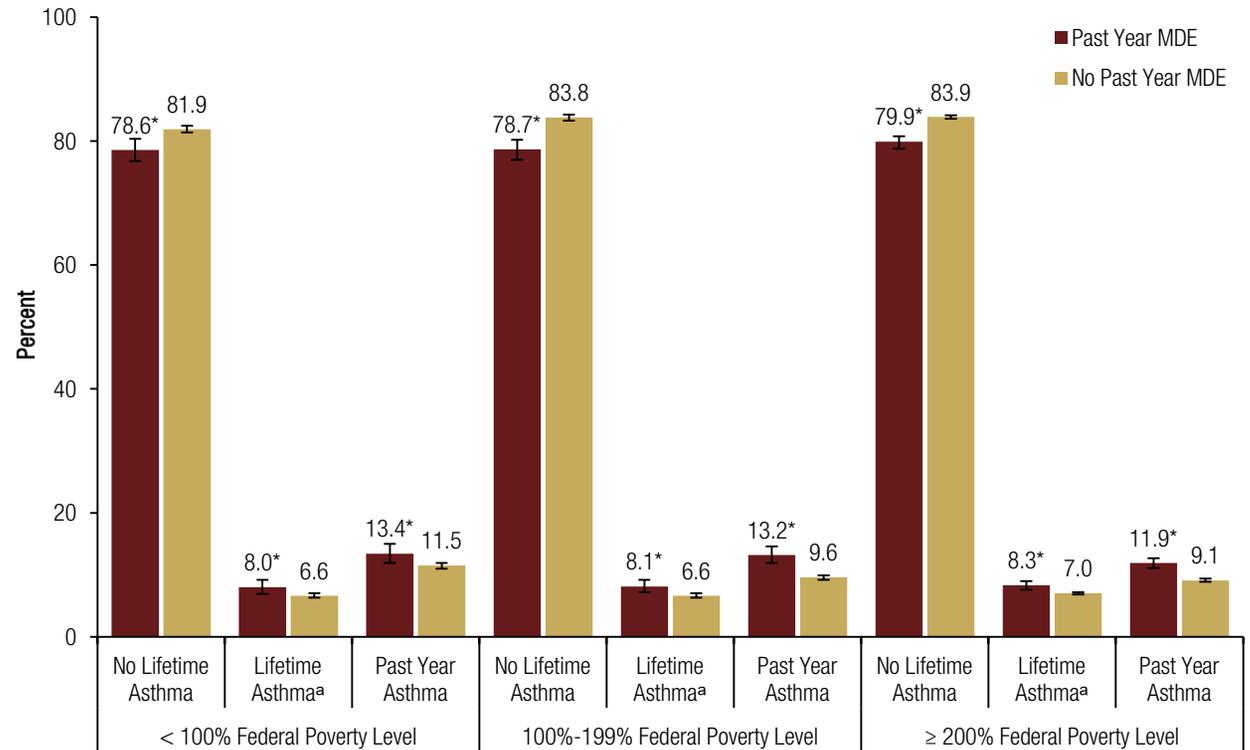
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Poverty Status

Adolescents with past year MDE were more likely to have past year asthma than those without past year MDE, regardless of poverty status (Figure 4.5). Adolescents with past year MDE also were more likely to have lifetime asthma than those without past year MDE across each poverty level category.

FIGURE 4.5 Estimates of Past Year and Lifetime Asthma among Adolescents Aged 12 to 17, by Poverty Status and Past Year Major Depressive Episode (MDE) Status, Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

^a"Lifetime" refers to "lifetime but not past year."

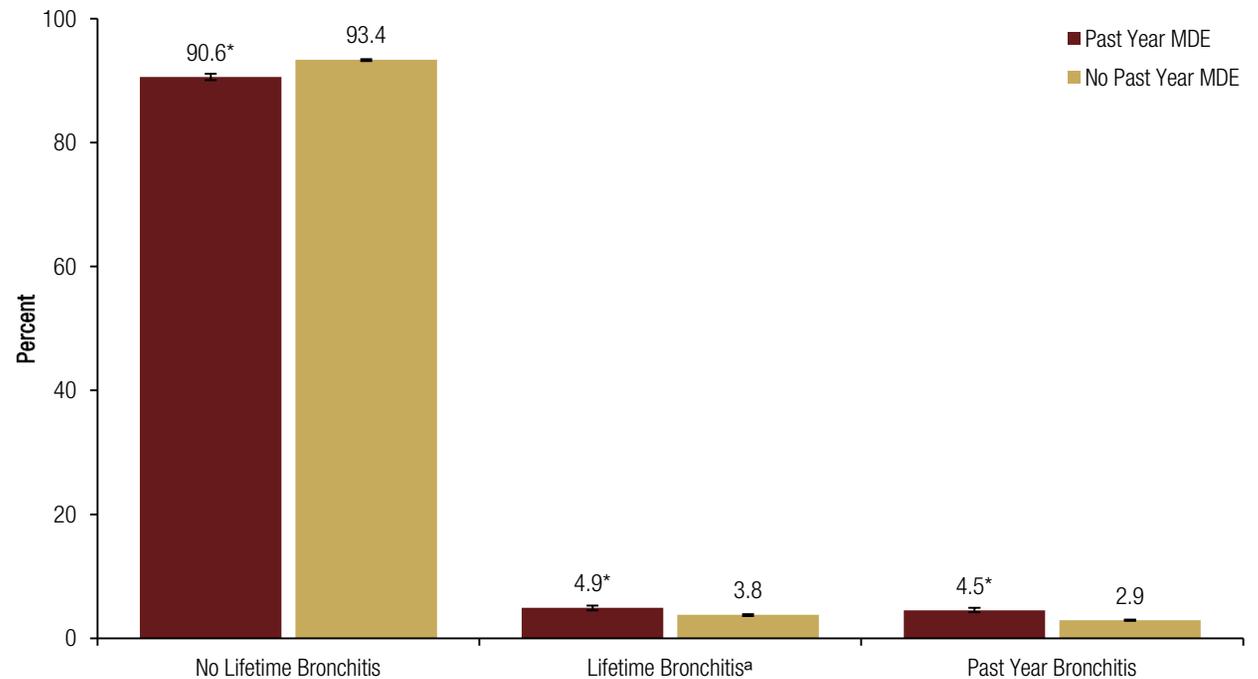
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

4.2 Bronchitis

All Adolescents

Adolescents with past year MDE were more likely to have past year bronchitis and lifetime bronchitis (any type) than those without past year MDE (Figure 4.6). About 4.5 percent of adolescents with MDE had past year bronchitis, whereas 2.9 percent of adolescents without MDE had past year bronchitis. Moreover, 4.9 percent of adolescents with past year MDE had lifetime bronchitis compared with 3.8 percent of adolescents without past year MDE. Associations between past year MDE and both past year and lifetime bronchitis remained significant after adjusting for age group, gender, race/ethnicity, and poverty status (data not shown).

FIGURE 4.6 Estimates of Past Year and Lifetime Bronchitis among Adolescents Aged 12 to 17, by Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

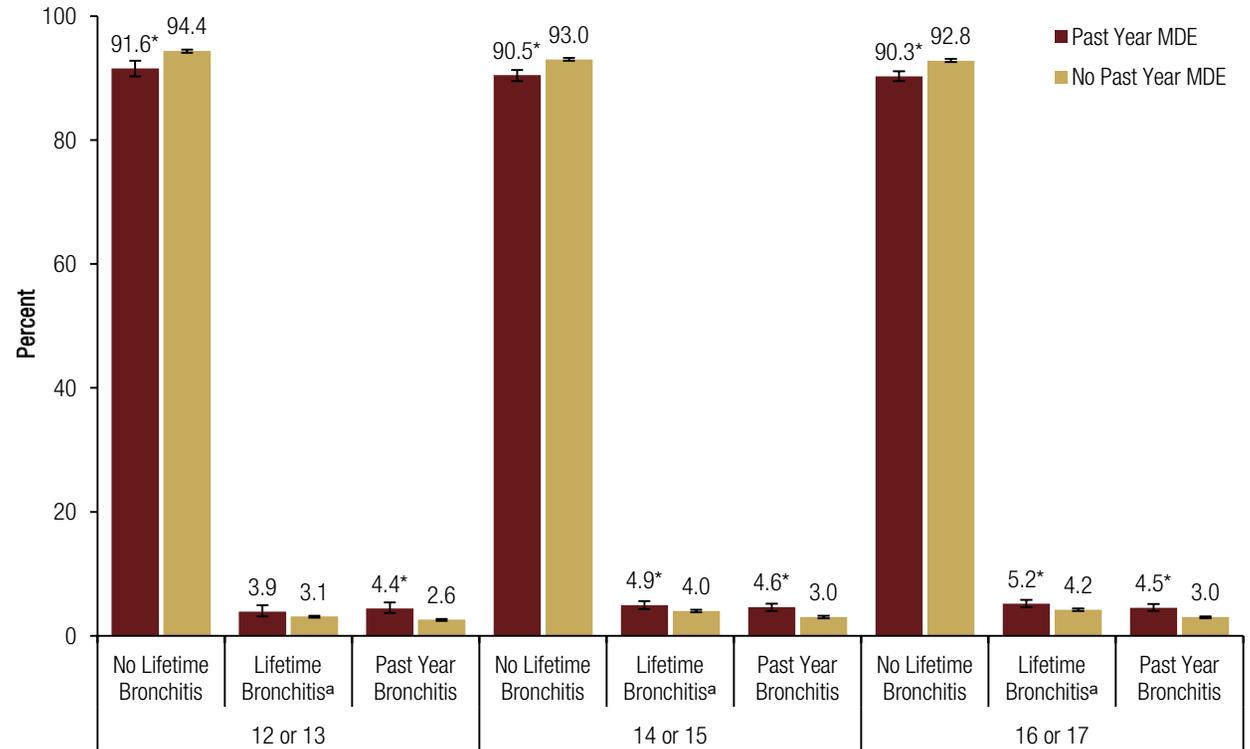
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Age Group

Adolescents aged 12 or 13 with MDE were more likely to have past year bronchitis than those without MDE (4.4 vs. 2.6 percent) (Figure 4.7). Lifetime bronchitis was not significantly different among adolescents aged 12 or 13 with versus without MDE (3.9 vs. 3.1 percent). Among 14- or 15-year-old and 16- or 17-year-old adolescents, both past year bronchitis and lifetime bronchitis were more likely among those with versus those without MDE.

FIGURE 4.7 Estimates of Past Year and Lifetime Bronchitis among Adolescents Aged 12 to 17, by Age Group and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

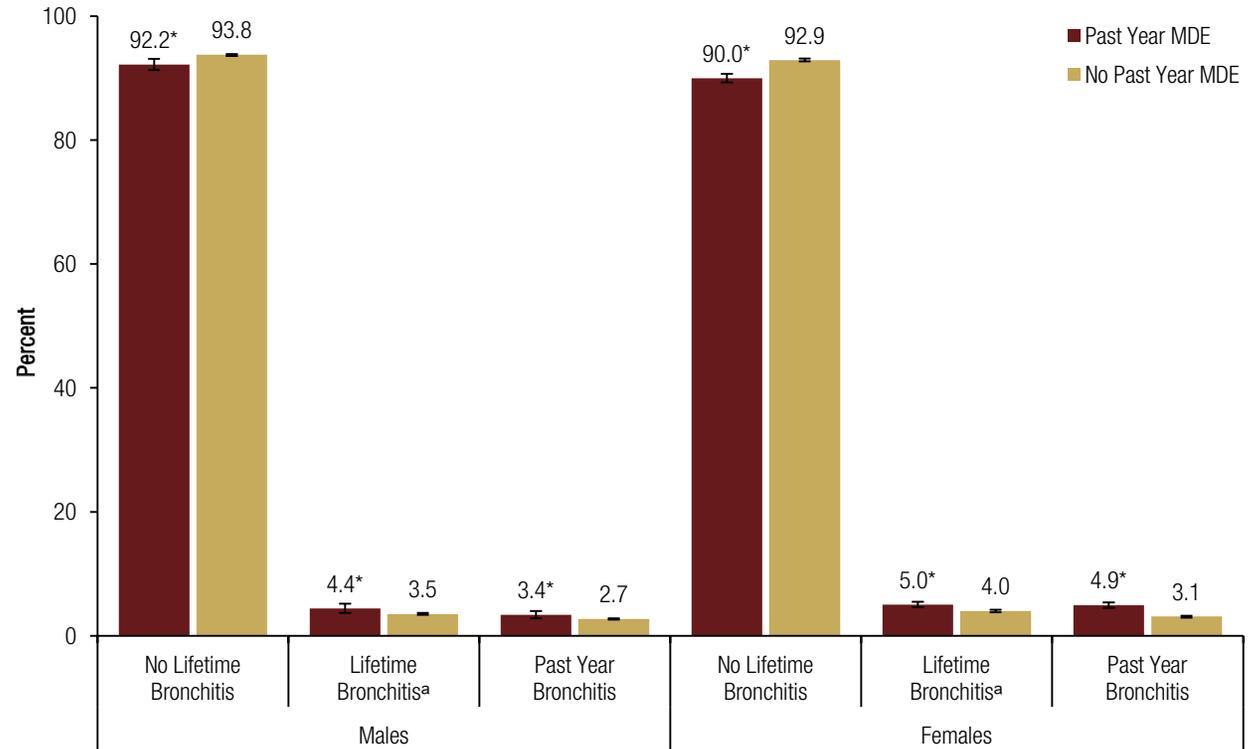
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Gender

Among males and females, the patterns of results were similar when examining past year and lifetime bronchitis by MDE status (Figure 4.8). Males and females with past year MDE were more likely to have past year bronchitis and more likely to have lifetime bronchitis than those without past year MDE.

FIGURE 4.8 Estimates of Past Year and Lifetime Bronchitis among Adolescents Aged 12 to 17, by Gender and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

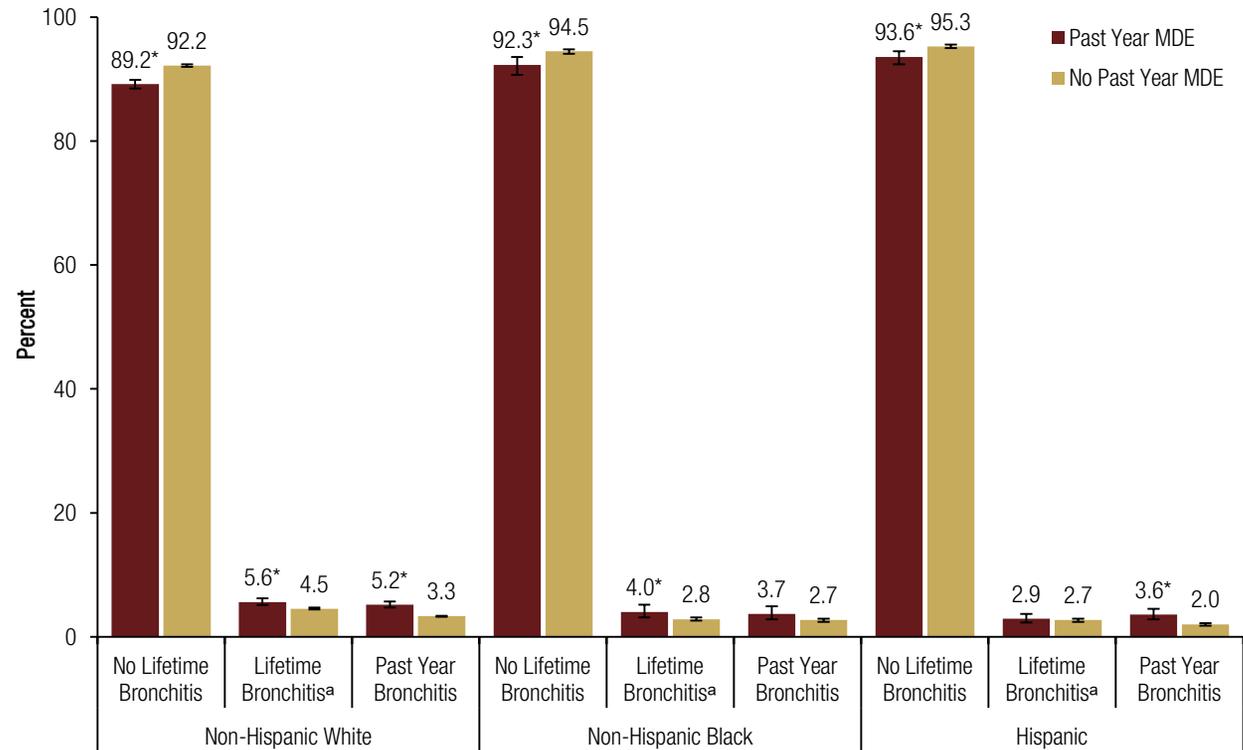
^a"Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Race/Ethnicity

Non-Hispanic white adolescents with past year MDE were more likely to have past year bronchitis than those without past year MDE (5.2 vs. 3.3 percent) (Figure 4.9). Non-Hispanic white adolescents with past year MDE also were more likely to have lifetime bronchitis than those without past year MDE (5.6 vs. 4.5 percent). Non-Hispanic black adolescents with MDE were more likely to have lifetime bronchitis than those without MDE (4.0 vs. 2.8 percent). However, estimates of past year bronchitis among non-Hispanic black adolescents did not significantly differ by MDE status. Hispanic adolescents with MDE were more likely to have past year bronchitis than those without MDE (3.6 vs. 2.0 percent). No significant differences were found among Hispanic adolescents with versus without MDE for lifetime bronchitis.

FIGURE 4.9 Estimates of Past Year and Lifetime Bronchitis among Adolescents Aged 12 to 17, by Race/Ethnicity and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

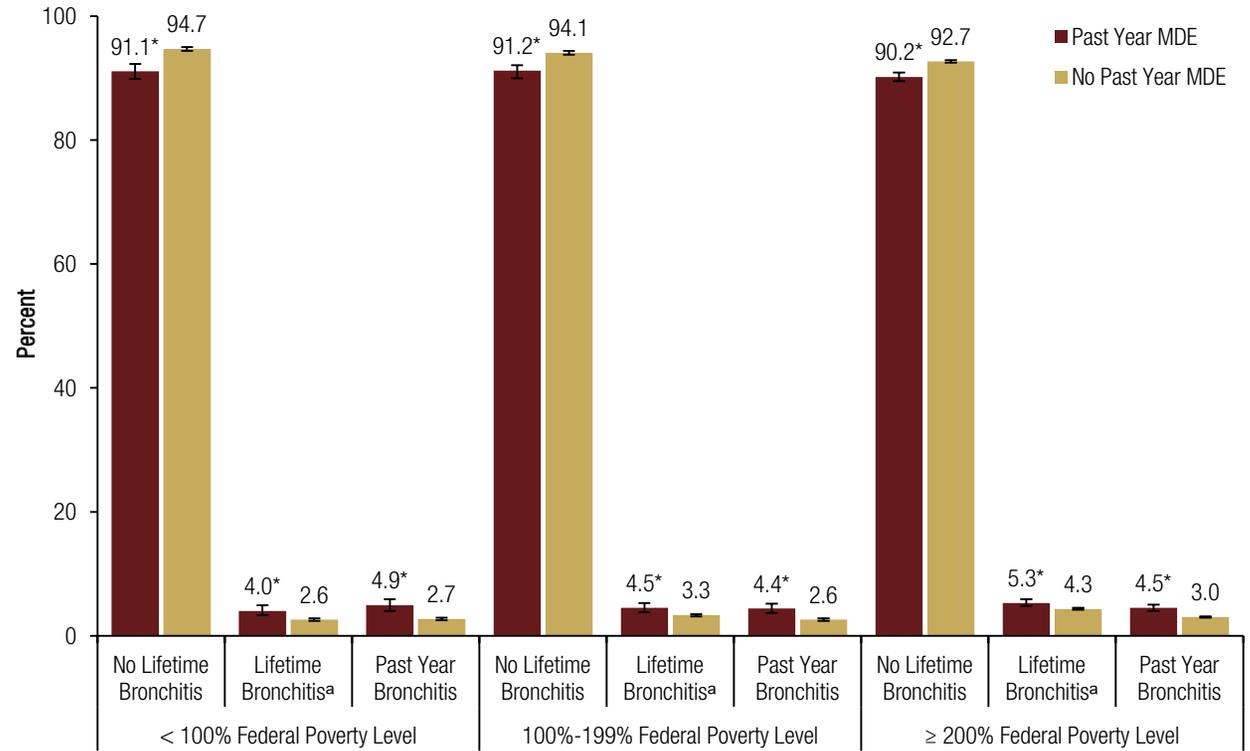
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Poverty Status

Adolescents with past year MDE were more likely to have past year bronchitis than those without past year MDE across all poverty level categories (Figure 4.10). Adolescents with past year MDE also were more likely to have lifetime bronchitis than those without past year MDE across all poverty level categories.

FIGURE 4.10 Estimates of Past Year and Lifetime Bronchitis among Adolescents Aged 12 to 17, by Poverty Status and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

^a"Lifetime" refers to "lifetime but not past year."

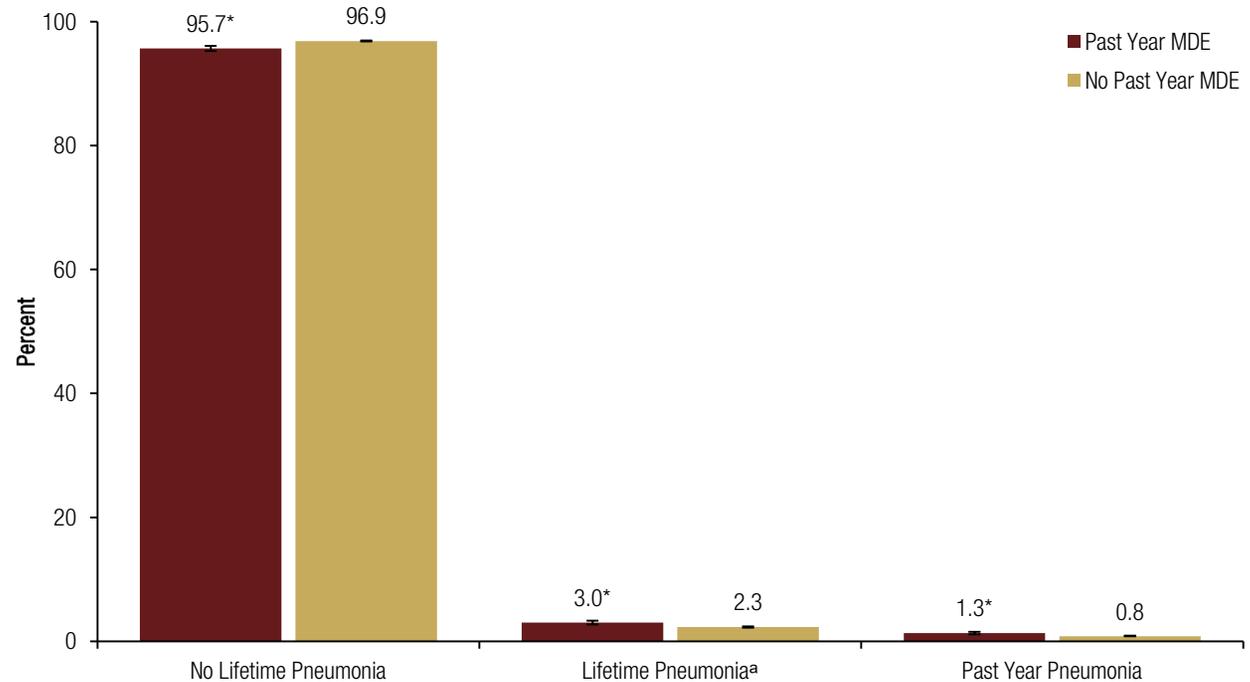
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

4.3 Pneumonia

All Adolescents

Adolescents with past year MDE were more likely to have past year pneumonia and lifetime pneumonia than those without past year MDE (Figure 4.11). About 1.3 percent of adolescents with MDE had past year pneumonia compared with 0.8 percent of those without MDE. Among adolescents with MDE, 3.0 percent had lifetime pneumonia compared with 2.3 percent of adolescents without MDE. Associations between past year MDE and both past year and lifetime pneumonia remained significant after adjusting for age group, gender, race/ethnicity, and poverty status (data not shown).

FIGURE 4.11 Estimates of Past Year and Lifetime Pneumonia among Adolescents Aged 12 to 17, by Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

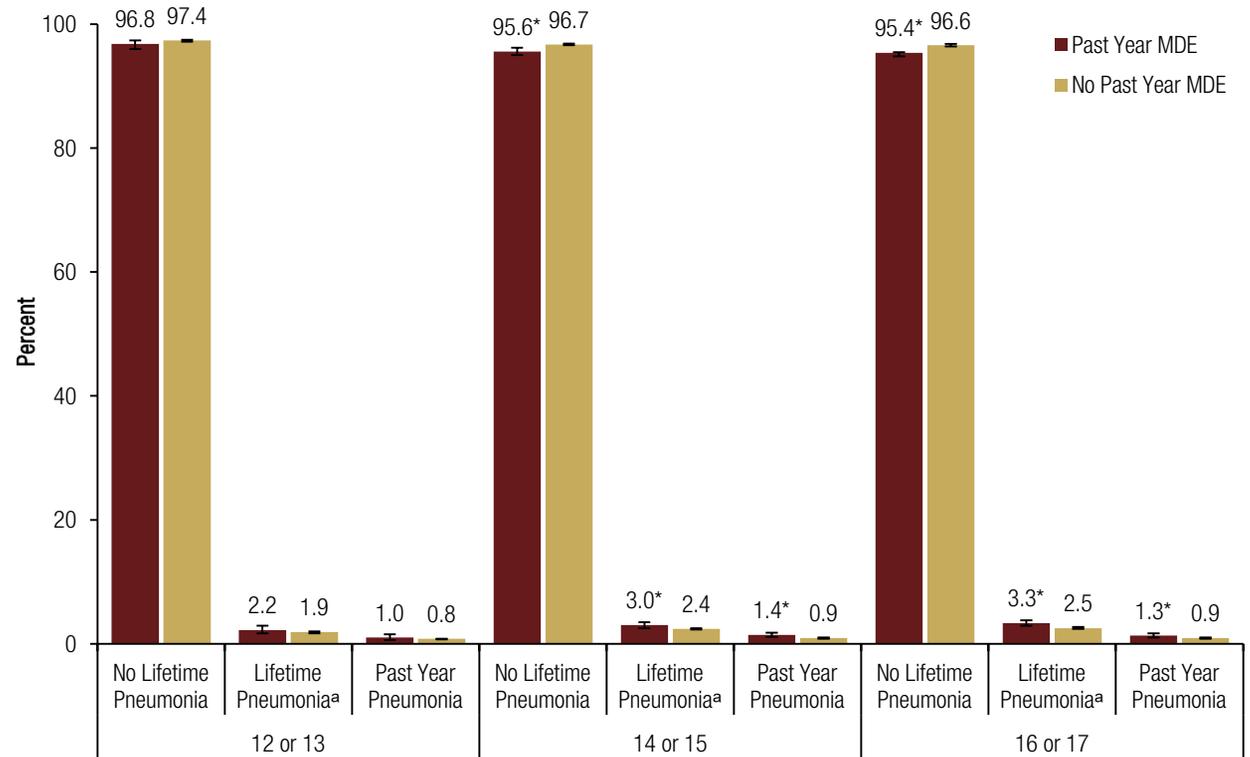
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Age Group

Among 12- or 13-year-old adolescents, there were no differences in past year pneumonia or lifetime pneumonia estimates among those with versus without past year MDE (Figure 4.12). Among 14- or 15-year-olds and 16- or 17-year-olds, those with MDE were more likely than those without MDE to have past year pneumonia and to have lifetime pneumonia.

FIGURE 4.12 Estimates of Past Year and Lifetime Pneumonia among Adolescents Aged 12 to 17, by Age Group and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

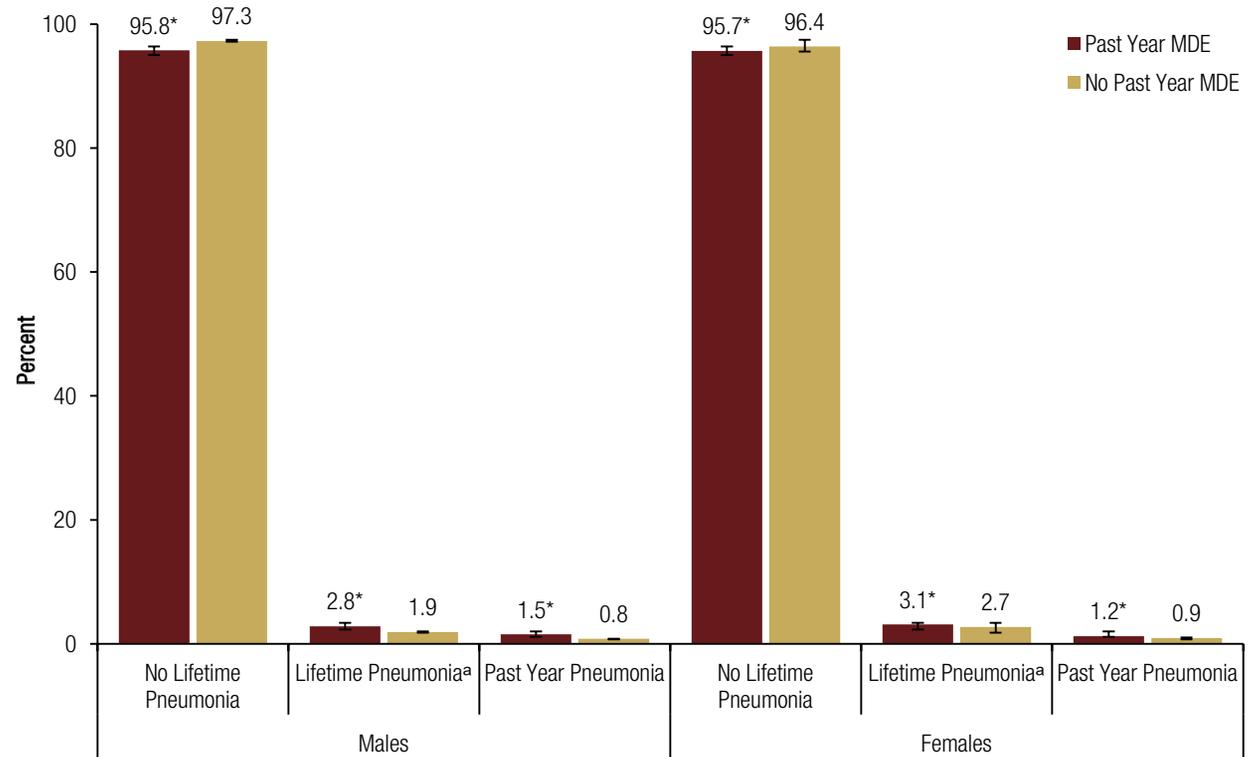
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Gender

Among male and female adolescents, estimates of past year pneumonia and lifetime pneumonia were higher among adolescents with past year MDE than those without past year MDE (Figure 4.13). For example, 1.5 percent of males and 1.2 percent of females with MDE had past year pneumonia compared with 0.8 percent of males and 0.9 percent of females without MDE.

FIGURE 4.13 Estimates of Past Year and Lifetime Pneumonia among Adolescents Aged 12 to 17, by Gender and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

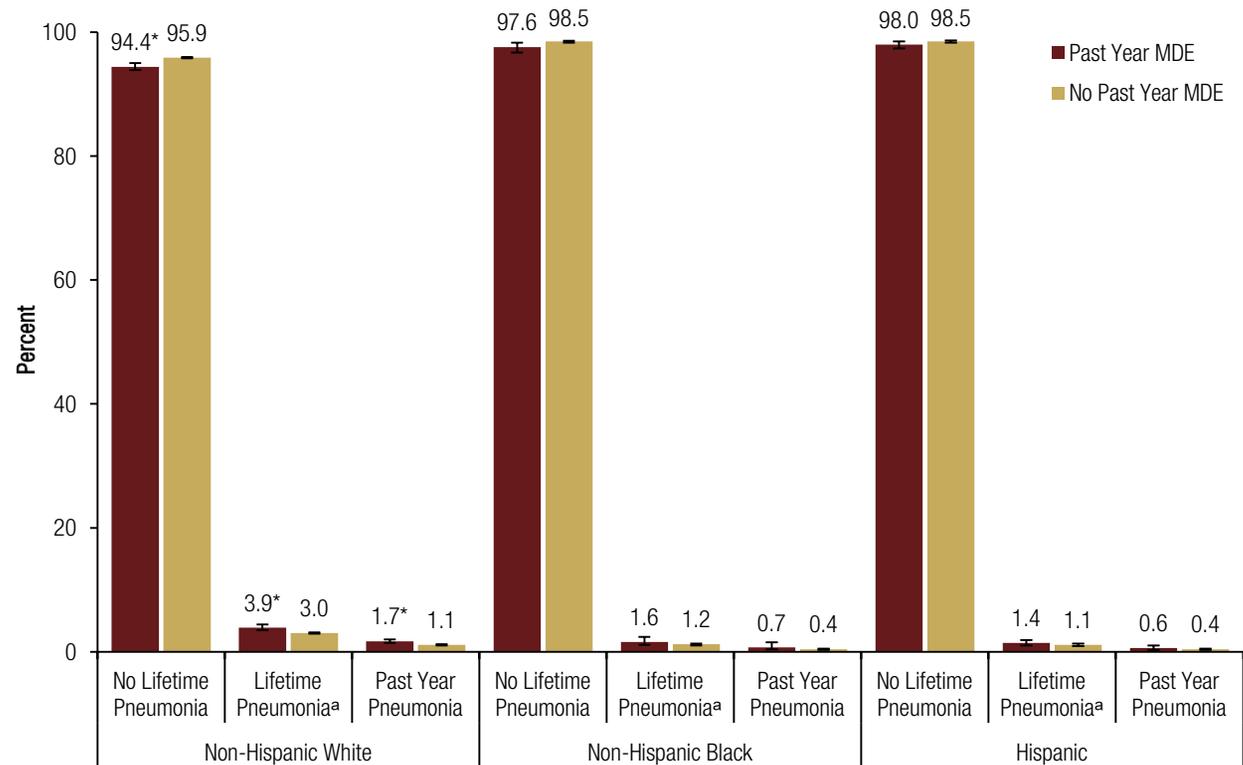
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Race/Ethnicity

Among non-Hispanic white adolescents, those with past year MDE were more likely than those without past year MDE to have past year pneumonia (1.7 vs. 1.1 percent) (Figure 4.14). Similarly, non-Hispanic white adolescents with MDE had higher estimates of lifetime pneumonia than those without MDE (3.9 vs. 3.0 percent). There were no significant associations between past year MDE and past year or lifetime pneumonia among non-Hispanic black and Hispanic adolescents.

FIGURE 4.14 Estimates of Past Year and Lifetime Pneumonia among Adolescents Aged 12 to 17, by Race/Ethnicity and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

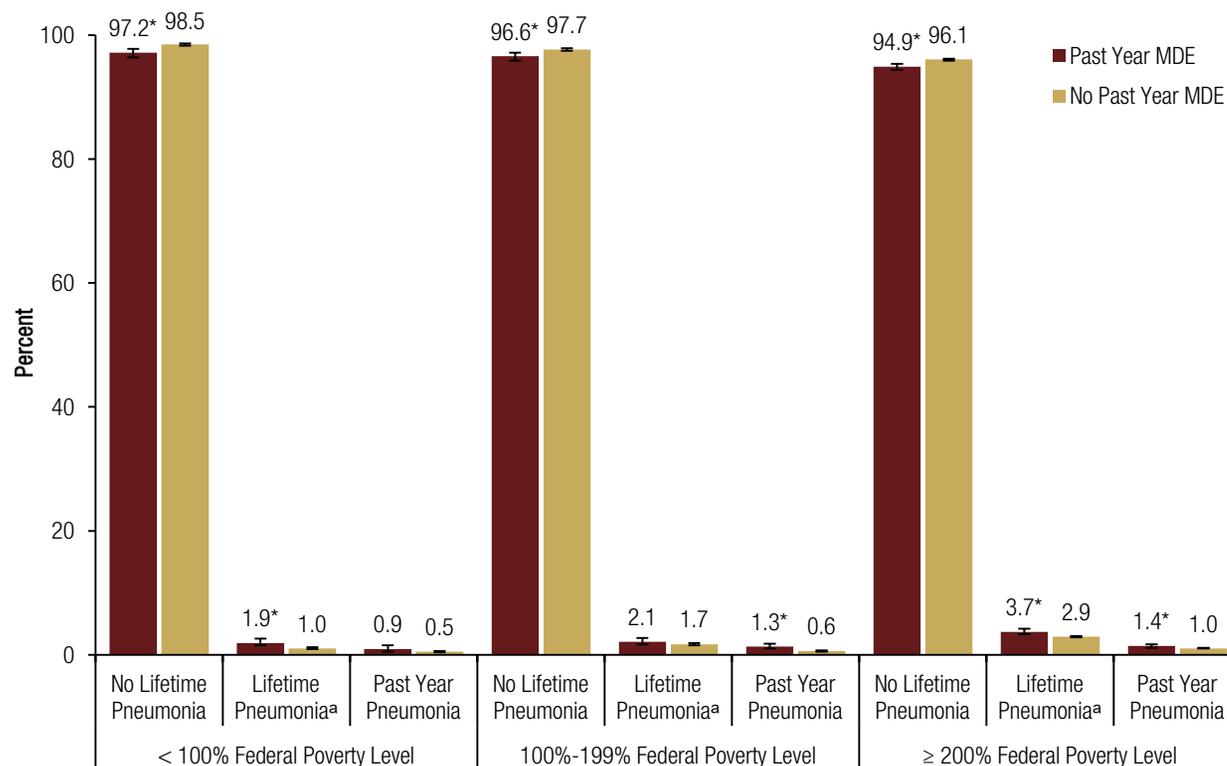
^a "Lifetime" refers to "lifetime but not past year."

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Poverty Status

Among adolescents in families with incomes less than 100 percent of the federal poverty level (FPL), there were no significant differences in past year pneumonia for those with versus without past year MDE (Figure 4.15). Adolescents in families with incomes less than 100 percent of the FPL with MDE were more likely to have lifetime pneumonia than those without MDE (1.9 vs. 1.0 percent). Adolescents in families with incomes between 100 and 199 percent of the FPL with MDE were more likely to have past year pneumonia than those without MDE (1.3 vs. 0.6 percent). There were no differences in lifetime pneumonia by past year MDE status among adolescents in families with incomes between 100 and 199 percent of the FPL. Adolescents in families with incomes 200 percent or more of the FPL with MDE were more likely to have past year pneumonia (1.4 vs. 1.0 percent) and were more likely to have lifetime pneumonia (3.7 vs. 2.9 percent) than those without MDE.

FIGURE 4.15 Estimates of Past Year and Lifetime Pneumonia among Adolescents Aged 12 to 17, by Poverty Status and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
^a "Lifetime" refers to "lifetime but not past year."
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

5. Body Mass Index

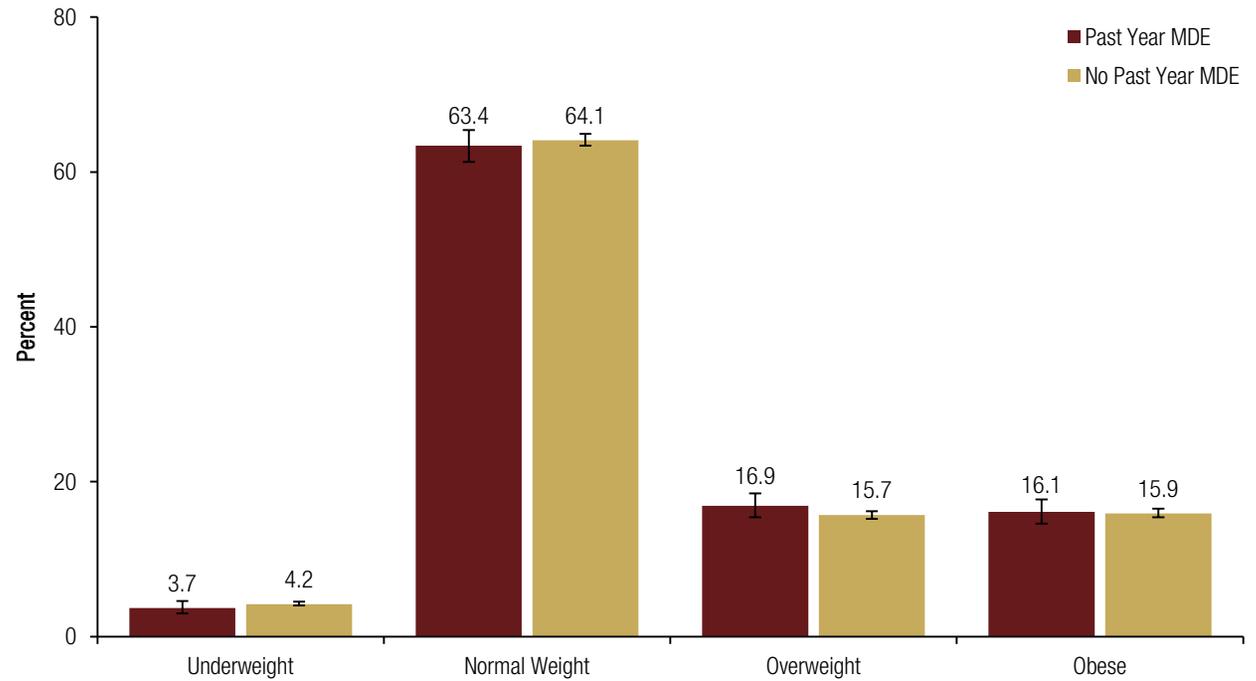
Various studies have examined the association between major depressive episode (MDE) and body mass index (BMI), although most have focused on adults. Research on these associations among children and adolescents has mostly been conducted in clinical settings, although a few recent studies have confirmed significant associations between overweight/obesity and depression among adolescents from nationally representative samples.^{10,27}

Other studies conducted among adolescents that provide a better understanding of whether depression leads to overweight/obesity or whether overweight/obesity leads to depression have found varying results. Some studies have shown that adolescent depression leads to the onset of obesity,²⁸ whereas others have shown that adolescent obesity can lead to the development of future depression.²⁹ Preliminary evidence suggests that the significance and direction of these associations among adolescents may differ by gender.⁹

All Adolescents

BMI category (underweight, normal weight, overweight, obese) and MDE were not significantly associated (Figure 5.1). For example, 16.1 percent of adolescents with past year MDE were classified as obese compared with 15.9 percent of those without past year MDE.

FIGURE 5.1 Estimates of Body Mass Index Category among Adolescents Aged 12 to 17, by Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2013-2014

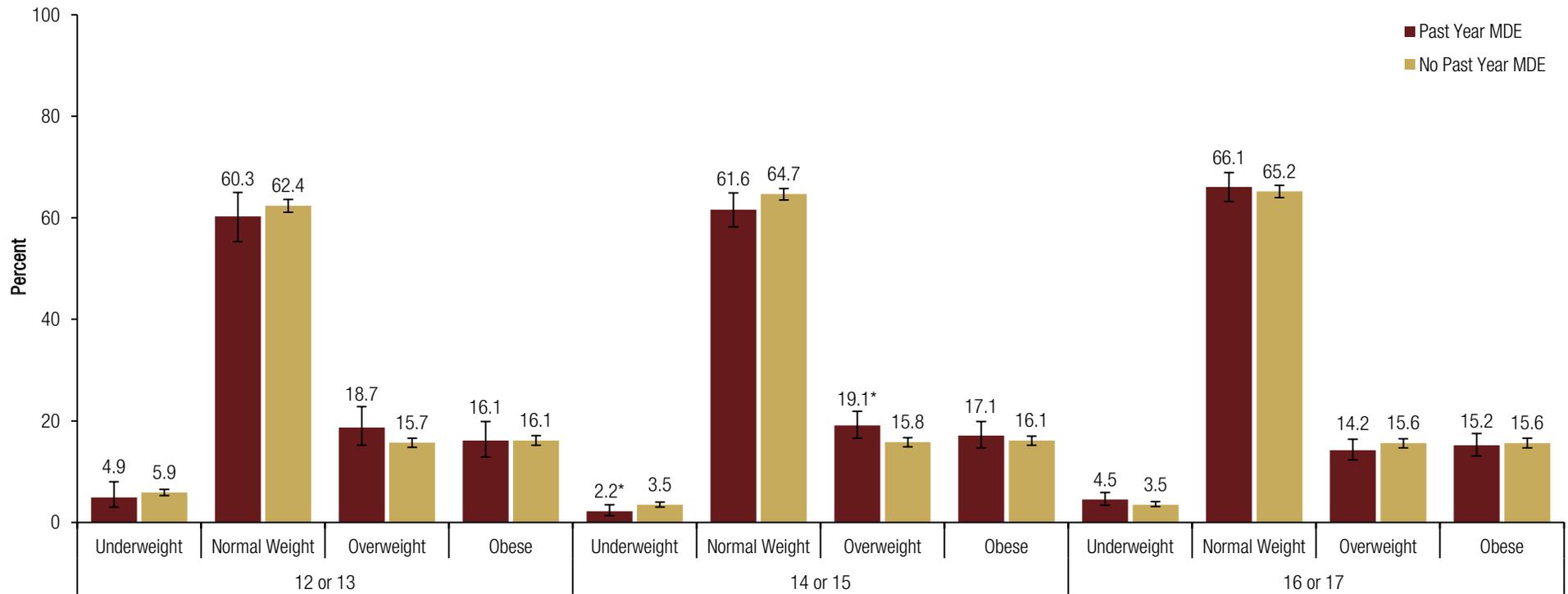


* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

By Age Group

There were no significant associations between past year MDE and BMI category among 12- or 13-year-olds and 16- or 17-year-olds (Figure 5.2). Among 14- or 15-year-olds, those with MDE were less likely to be underweight and more likely to be overweight than those without MDE (2.2 vs. 3.5 percent and 19.1 vs. 15.8 percent, respectively).

FIGURE 5.2 Estimates of Body Mass Index Category among Adolescents Aged 12 to 17, by Age Group and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2013-2014



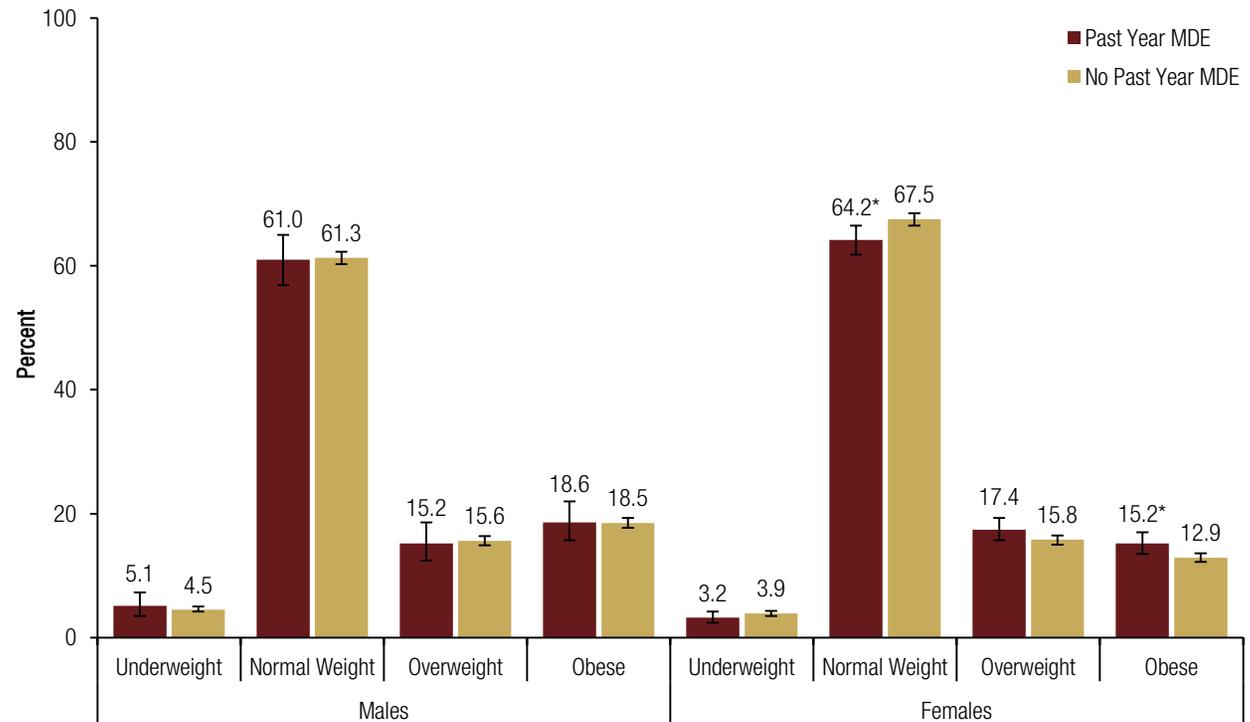
* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

By Gender

No significant associations were found between BMI category and past year MDE among males (Figure 5.3). Among females, those with past year MDE had higher obesity estimates and lower normal weight estimates than those without past year MDE (15.2 vs. 12.9 percent and 64.2 vs. 67.5 percent, respectively).

FIGURE 5.3 Estimates of Body Mass Index Category among Adolescents Aged 12 to 17, by Gender and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2013-2014

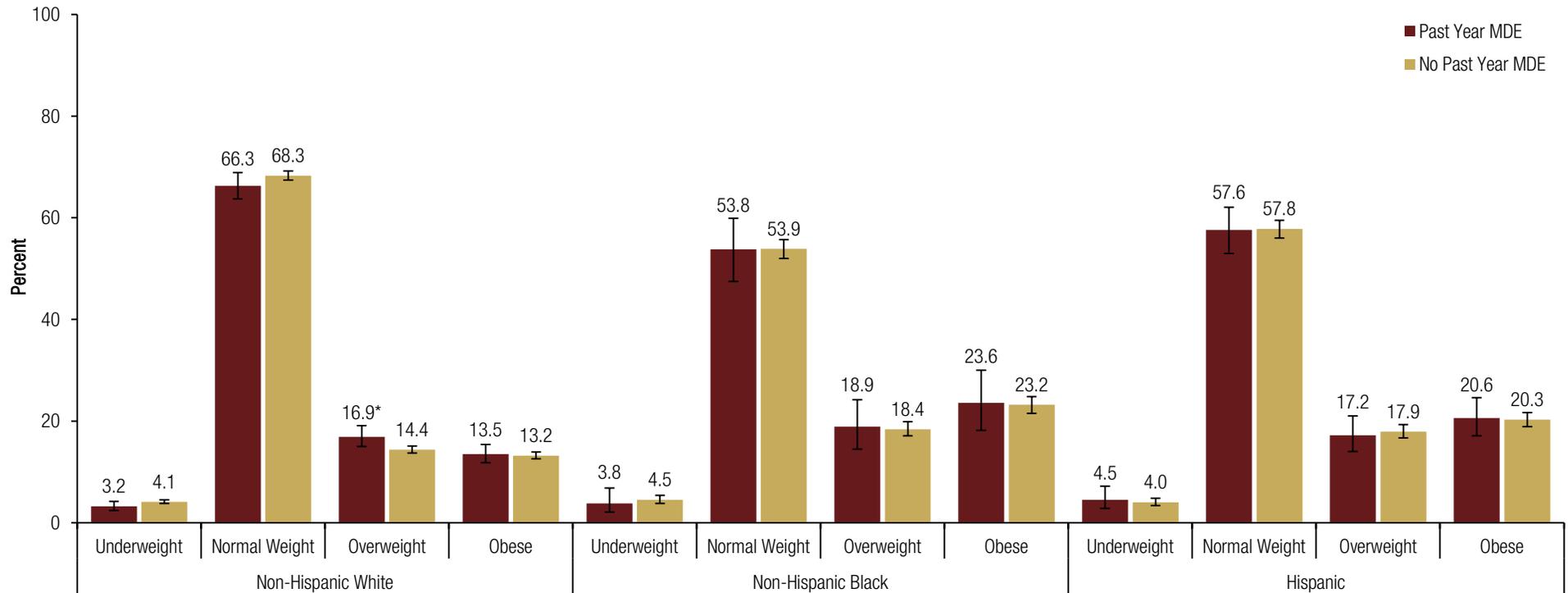


* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

By Race/Ethnicity

There were no significant associations between MDE and BMI category among non-Hispanic black and Hispanic adolescents (Figure 5.4). Among non-Hispanic white adolescents, those with past year MDE were more likely to be overweight than those without past year MDE (16.9 vs. 14.4 percent).

FIGURE 5.4 Estimates of Body Mass Index Category among Adolescents Aged 12 to 17, by Race/Ethnicity and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2013-2014



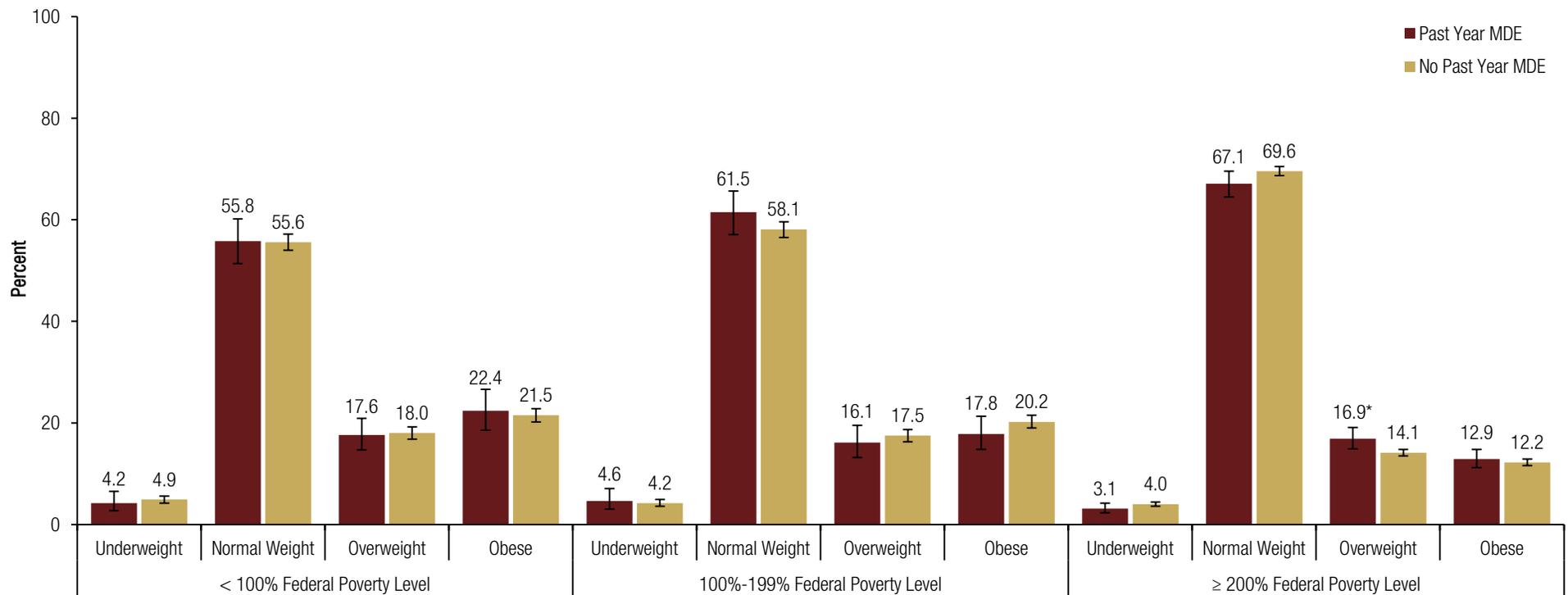
* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

By Poverty Status

There were no significant associations between past year MDE and BMI category among adolescents in families with incomes less than 100 percent of the federal poverty level (FPL) and between 100 and 199 percent of the FPL (Figure 5.5). Among adolescents in families with incomes 200 percent or more of the FPL, those with MDE were more likely to be overweight than those without MDE (16.9 vs. 14.1 percent).

FIGURE 5.5 Estimates of Body Mass Index Category among Adolescents Aged 12 to 17, by Poverty Status and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2013-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

6. Diabetes

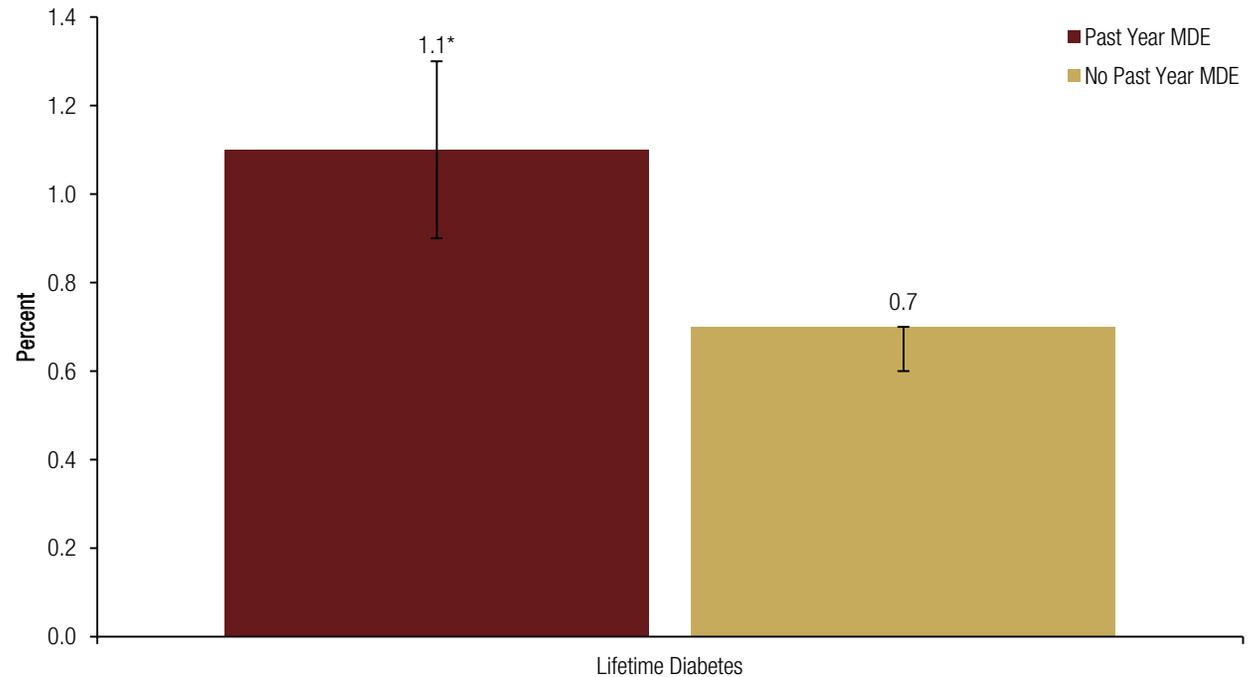
Studies conducted among adolescents have begun to examine the associations between depression and diabetes, a chronic physical health condition that has two types: type 1 (juvenile onset) or type 2 (developing later in life). Current population-based research, most of which has been conducted outside of the United States, does not demonstrate a clear link between type 1 diabetes and mental health conditions.^{12,30,31,32,33} A recent review of this topic concluded that children with diabetes experience somewhat elevated mental health conditions, but the differences “are small to medium in magnitude, and are moderated by several factors.”³⁴ For type 2 diabetes, which is less common than type 1 among adolescents, studies linking diabetes to depression have been mostly limited to clinical samples and have also had conflicting results.^{12,35}

In addition to understanding the association between diabetes and depression, it is important to understand how depression might affect self-management of diabetes among adolescents. As with studies focused on adult samples, several studies have found that depression in adolescents impairs their ability to manage diabetes.^{36,37,38} In this report, diabetes was categorized as no lifetime diabetes versus lifetime diabetes because diabetes is a chronic condition (i.e., there are no instances of lifetime but not past year).

All Adolescents

Estimates of lifetime diabetes were significantly higher among adolescents with past year major depressive episode (MDE) compared with those without past year MDE (1.1 vs. 0.7 percent) (Figure 6.1). Associations between past year MDE and lifetime diabetes remained significant after adjusting for age group, gender, race/ethnicity, and poverty status (data not shown).

FIGURE 6.1 Estimates of Lifetime Diabetes among Adolescents Aged 12 to 17, by Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014

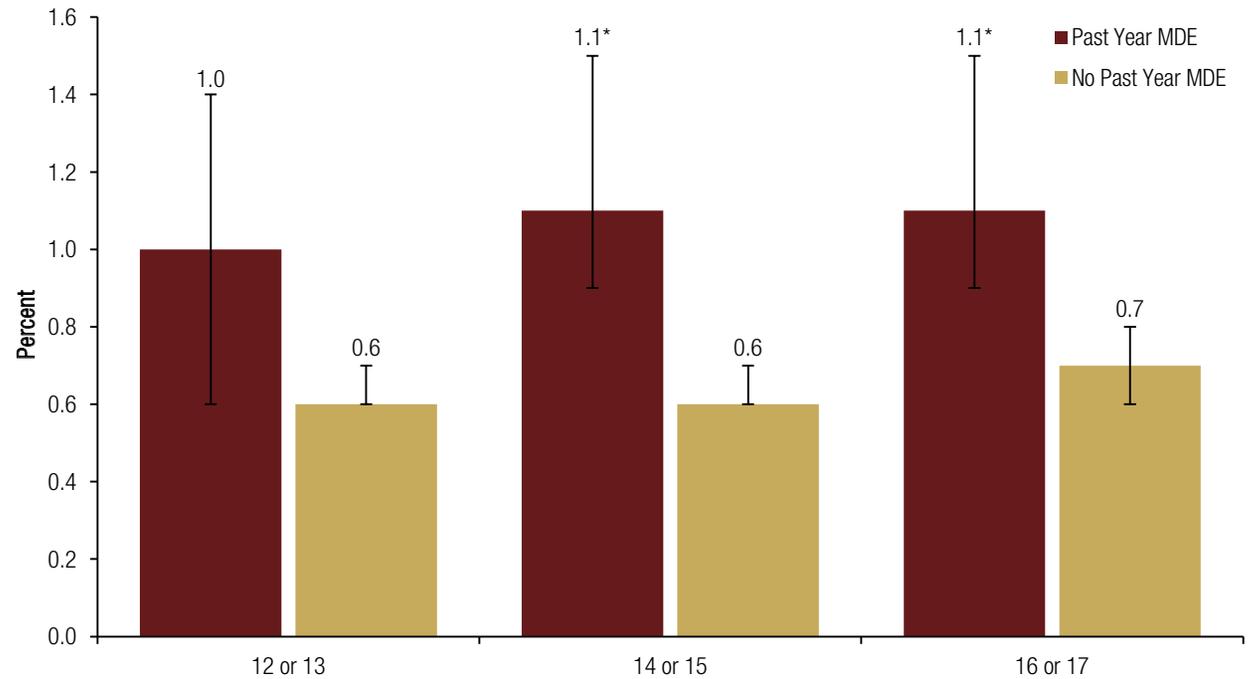


* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Age Group

The differences in lifetime diabetes prevalence among adolescents with MDE versus those without MDE was not significant among 12- or 13-year-olds (1.0 vs. 0.6 percent) (Figure 6.2). Among 14- or 15-year-olds and 16- or 17-year-olds, those with past year MDE were significantly more likely to have lifetime diabetes than those without past year MDE (1.1 vs. 0.6 percent and 1.1 vs. 0.7 percent, respectively).

FIGURE 6.2 Estimates of Lifetime Diabetes among Adolescents Aged 12 to 17, by Age Group and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014

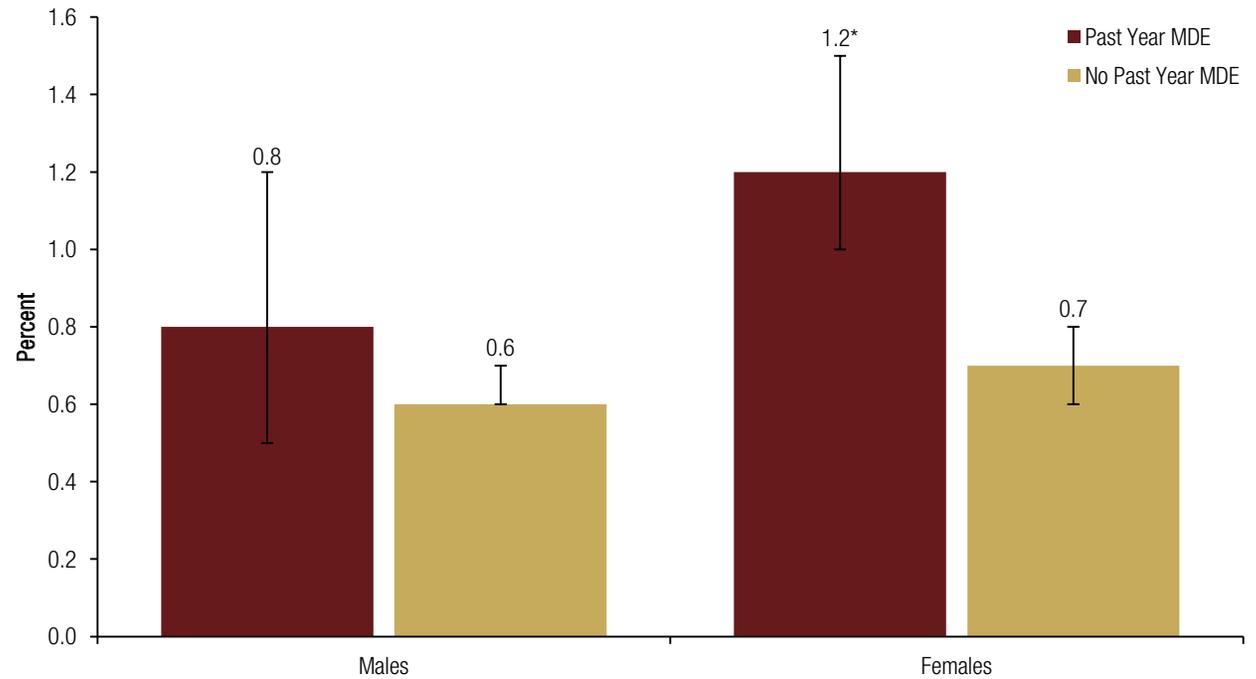


* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Gender

There was no significant association between past year MDE and lifetime diabetes among male adolescents (Figure 6.3). Female adolescents with past year MDE had significantly higher estimates of lifetime diabetes than those without past year MDE (1.2 vs. 0.7 percent).

FIGURE 6.3 Estimates of Lifetime Diabetes among Adolescents Aged 12 to 17, by Gender and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014

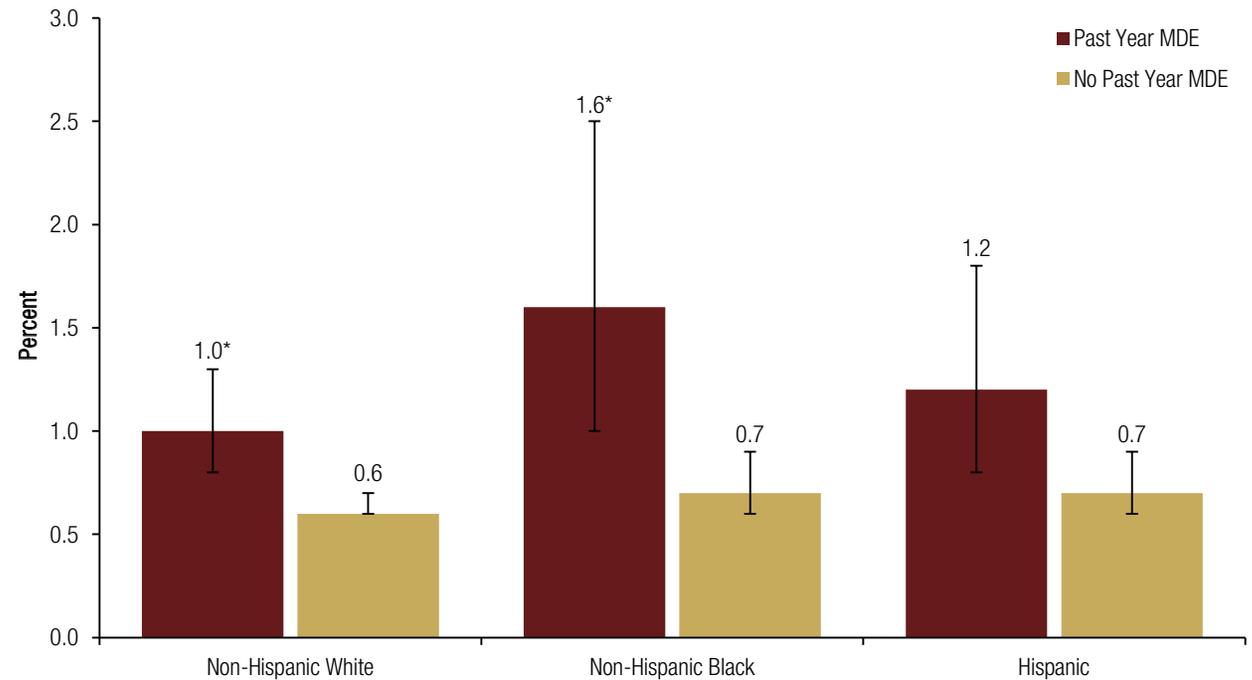


* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Race/Ethnicity

Non-Hispanic white and non-Hispanic black adolescents with past year MDE were more likely to have lifetime diabetes than those without past year MDE (1.0 vs. 0.6 percent and 1.6 vs. 0.7 percent, respectively) (Figure 6.4). The associations between MDE and lifetime diabetes did not reach significance among Hispanic adolescents, with 1.2 and 0.7 percent having lifetime diabetes among those with and without MDE, respectively.

FIGURE 6.4 Estimates of Lifetime Diabetes among Adolescents Aged 12 to 17, by Race/Ethnicity and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014

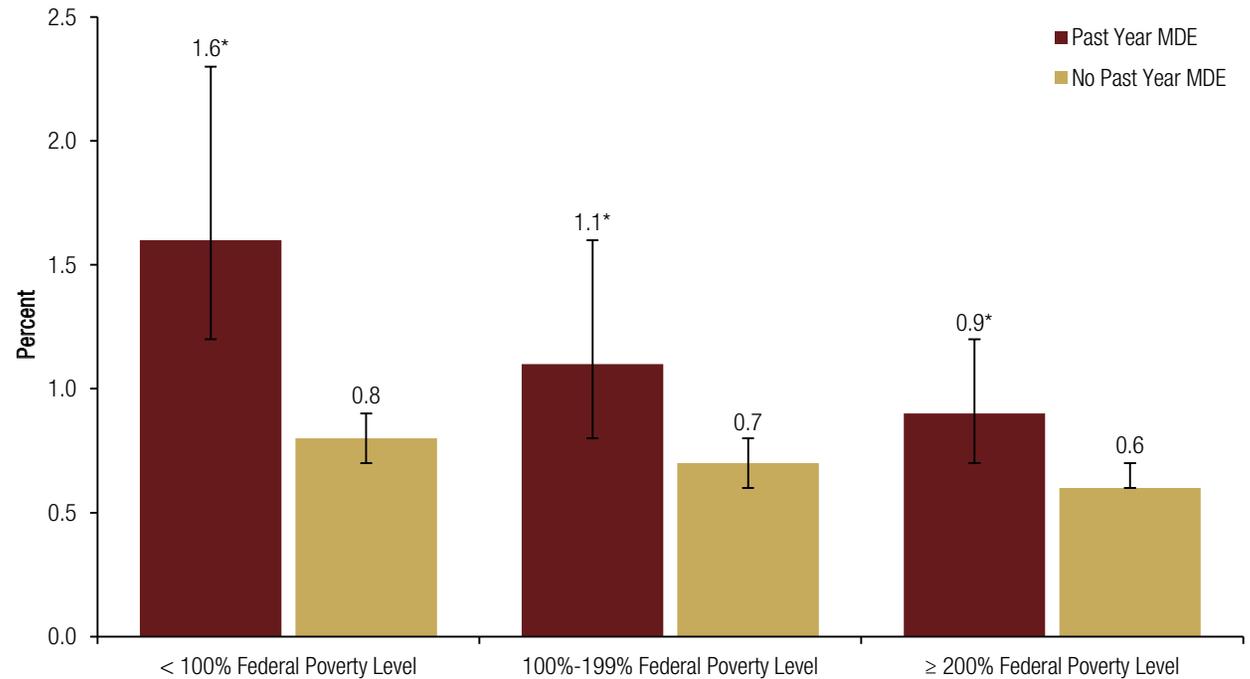


* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

By Poverty Status

Adolescents with past year MDE were more likely to have lifetime diabetes than those without past year MDE across all poverty level categories (Figure 6.5). For example, among adolescents in families with incomes less than 100 percent of the FPL, those with MDE were more likely to have lifetime diabetes than those without MDE (1.6 vs. 0.8 percent).

FIGURE 6.5 Estimates of Lifetime Diabetes among Adolescents Aged 12 to 17, by Poverty Status and Past Year Major Depressive Episode (MDE), Percentages and 95 Percent Confidence Intervals: NSDUH 2005-2014



* Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.
 Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

7. Discussion

This study found that several indicators of physical health were associated with depression among a nationally representative sample of U.S. adolescents aged 12 to 17. For example, adolescents with a past year major depressive episode (MDE) were less likely to be in excellent, very good, or good health and more likely to be in fair or poor health compared with those without past year MDE. This was consistent overall and by various sociodemographic characteristics (i.e., age, gender, race/ethnicity, and poverty status). Our findings support prior studies that found associations between depression and lower self-rated overall health.^{5,6,7} The absence of prior population-based studies examining the association between depression and self-rated health among particular adolescent populations that were explored in this study (i.e., age, gender, race/ethnicity, and poverty status) prevents comparisons of our findings with those from previous research. Further investigation is needed to replicate the findings of the current study and to explore whether the associations between depression and overall health persist after adjusting for other sociodemographic, adverse life experience, or parental factors that may influence the associations.

Analyses examining the link between respiratory health conditions and depression had very consistent findings. Adolescents with past year MDE had higher estimates of past year and lifetime asthma, bronchitis, and pneumonia compared with adolescents without a history of past year MDE.

The majority of prior studies on respiratory health conditions and depression have focused on the link between asthma and depression. Although not all prior studies found a significant association between depression and asthma,^{23,24} our findings are consistent with the majority of studies that did find an association between depression and asthma among adolescents.^{11,20,21,22} The differences in study results may be due to variations in the populations included. For example, the two studies that found no association between asthma and depression used smaller, non-nationally representative samples.^{23,24} Differences may also have been due to the inclusion of some factors that were not examined in this report (e.g., education,

co-occurring disorders).²⁴ Future research is needed to more fully evaluate the association between MDE and asthma among adolescents while controlling for some of these additional covariates.

Results on gender differences in the association between MDE and asthma among adolescents vary somewhat from prior studies. The Canadian Community Health Survey found a positive association between asthma and depression among female adolescents, but there was a negative association among males. Our findings were somewhat similar, showing a positive association for females for past year and lifetime asthma and for males for lifetime asthma only, with no significant association determined between past year asthma and MDE.⁸ This is in contrast to the findings of a synthesis of eight studies, which found no variation in the relationship between asthma and depression by gender among adolescent samples.²⁰ It is possible that some of these contradictory findings may be due to differences in the assessment of the timing of asthma or of depression occurrence (e.g., past year or lifetime) across studies.

Prior research into the link between depression and bronchitis and pneumonia in adolescents is lacking. Our findings on the association between MDE and bronchitis of any type support another study that found an association between chronic bronchitis and depression among male and female adolescents.⁸ Although there were some inconsistent findings for past year and lifetime bronchitis among a few groups in our results, both past year and lifetime bronchitis were associated with past year MDE among all adolescent subgroups. With the lack of prior population-based research into the association between depression and bronchitis among groups (other than by gender), it is not possible to compare these results with those from other studies, and future replicative research is needed to confirm these findings.

The analyses in this report found a fairly consistent association between adolescent depression and pneumonia, although this association was less consistent across the different groups than for asthma and bronchitis. The low prevalence of past year and lifetime pneumonia among adolescents may have contributed to the insignificant findings among groups with smaller

sample sizes (e.g., non-Hispanic black and Hispanic adolescents with MDE). To date, no known prior population-based research has examined depression and pneumonia in adults or adolescents, preventing comparisons with other research. Therefore, these results could be considered preliminary because further research is needed to establish the consistency of findings by using different study designs and populations.

The associations between body mass index (BMI) and depression were less consistent. In this nationally representative study, depression was not significantly associated with BMI among all adolescents. These findings are in contrast with those from other large studies of adolescents.^{10,27,28,29} Different methods of collecting BMI and depression information from respondents may explain some of the contrasting study findings. Because prior studies have not studied the associations between depression and BMI in specific age, race/ethnicity, and poverty status groups, comparisons between the findings from the current study and those from prior research cannot be made.

Adolescents with MDE in the current study had higher estimates of lifetime diabetes than those without MDE. These associations were inconsistent across groups, possibly because small sample sizes limited the power to detect significant differences. Overall, the current study findings support prior population-based research conducted among adolescent samples that has had mixed results.^{12,30,31,32,33,34,35} Further investigation is needed to replicate the current findings and determine potential reasons for the significant association found between depression and diabetes among some, but not all, populations (i.e., age, gender, race/ethnicity).

This study had a few limitations. First, the health measures were all self-reported, although depression was assessed according to clinical criteria. Differences between measurement of health estimates between the National Survey on Drug Use and Health (NSDUH) and other national data sources have been summarized elsewhere.³⁹ Second, the cross-sectional nature of the data does not allow the investigation of whether depression causes the health condition or whether the health condition causes depression. The large sample size of the combined years of data did allow

us to explore the associations between physical health conditions and depression across different adolescent populations. Also, because there is an increasing trend in past year prevalence of MDE,² additional studies may want to evaluate whether the association between MDE and specific health conditions among adolescents has been consistent over time.

Future studies can explore several unanswered research questions. First, because these investigations are so new, replication of our findings is needed in different samples and possibly across different years of data to confirm associations and absence of associations among adolescent population-based samples. Second, additional exploration of NSDUH data is needed to better understand whether the associations remain after adjusting analyses for other variables related to depression, physical health conditions, or both. The use of longitudinal studies that contain multiple assessments over time would add to knowledge about whether having a physical health condition causes depression or vice versa and would help begin the exploration of the mechanisms by which depression and health interact. Finally, additional research is needed to determine how treatment of depression or treatment of a particular health condition affects the associations between depression and physical health measures. For example, treating depression may improve adolescents' ability to engage in activities needed to monitor and care for chronic conditions like diabetes, and asthma treatment might lead to improved quality of life, which might help reduce depression.

Our findings have several important public health implications. Understanding which physical health conditions are associated with depression is important to aid prevention efforts, to improve the timely identification of at-risk populations, and to begin timely treatment strategies. For example, adolescents with particular health conditions can be regularly monitored for depression. Also, adolescents with existing depression can be monitored for the development of health conditions such as asthma and obesity. Treatment strategies that consider the presence of physical health conditions and depression may be needed to best increase the likelihood of successful interventions.

Author Affiliations

Sarra L. Hedden, Gary Blau, Rachel Lipari, and Lisa Rubenstein are with the Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services, Rockville, MD. Valerie L. Forman-Hoffman and Cristie Glasheen are with RTI International (a registered trademark and a trade name of Research Triangle Institute), Research Triangle Park, NC.

Acknowledgments of Reviewers

The authors would like to thank Kirsten Painter and Emily Lichvar of the Center for Mental Health Services and Jonaki Bose of the Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, for reviewing previous drafts of this report. Dexter McNutt and Jessica Roycroft of RTI International and Elizabeth Copello (formerly with RTI) assisted with data analysis.

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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.

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Appendix A. Overall Health Tables

Table A1 Self-Rated Overall Health by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, Numbers in Thousands and Percentages: NSDUH 2005-2014

| MDE Status | Excellent/Very Good/Good | | Fair/Poor | |
|------------------|--------------------------|-------------------------------|-----------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Lifetime MDE | 3,136 | 93.6 ^a (93.2-94.0) | 213 | 6.4 ^a (6.0-6.8) |
| No Lifetime MDE | 20,461 | 96.8 (96.7-96.9) | 682 | 3.2 (3.1-3.3) |
| Past Year MDE | 2,014 | 93.1 ^b (92.6-93.6) | 149 | 6.9 ^b (6.4-7.4) |
| No Past Year MDE | 21,508 | 96.7 (96.6-96.8) | 741 | 3.3 (3.2-3.4) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents with unknown overall health data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table A2 Self-Rated Overall Health by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Age Group, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Age Group and MDE Status | Excellent/Very Good/Good | | Fair/Poor | |
|--------------------------|--------------------------|-------------------------------|-----------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| 12 or 13 | | | | |
| Lifetime MDE | 589 | 94.3 ^a (93.4-95.0) | 36 | 5.7 ^a (5.0-6.6) |
| No Lifetime MDE | 6,880 | 97.1 (96.9-97.3) | 205 | 2.9 (2.7-3.1) |
| Past Year MDE | 366 | 93.6 ^b (92.5-94.6) | 25 | 6.4 ^b (5.4-7.5) |
| No Past Year MDE | 7,083 | 97.1 (96.9-97.2) | 215 | 2.9 (2.8-3.1) |
| 14 or 15 | | | | |
| Lifetime MDE | 1,147 | 94.0 ^a (93.3-94.5) | 74 | 6.0 ^a (5.5-6.7) |
| No Lifetime MDE | 6,902 | 96.7 (96.6-96.9) | 233 | 3.3 (3.1-3.4) |
| Past Year MDE | 743 | 93.9 ^b (93.1-94.5) | 49 | 6.1 ^b (5.5-6.9) |
| No Past Year MDE | 7,280 | 96.6 (96.4-96.8) | 256 | 3.4 (3.2-3.6) |
| 16 or 17 | | | | |
| Lifetime MDE | 1,400 | 93.1 ^a (92.5-93.6) | 104 | 6.9 ^a (6.4-7.5) |
| No Lifetime MDE | 6,679 | 96.5 (96.3-96.7) | 244 | 3.5 (3.3-3.7) |
| Past Year MDE | 905 | 92.3 ^b (91.6-93.0) | 75 | 7.7 ^b (7.0-8.4) |
| No Past Year MDE | 7,145 | 96.4 (96.2-96.5) | 271 | 3.6 (3.5-3.8) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents with unknown overall health data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table A3 Self-Rated Overall Health by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Gender, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Gender and MDE Status | Excellent/Very Good/Good | | Fair/Poor | |
|-----------------------|--------------------------|-------------------------------|-----------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Males | | | | |
| Lifetime MDE | 923 | 93.4 ^a (92.6-94.0) | 65 | 6.6 ^a (6.0-7.4) |
| No Lifetime MDE | 11,137 | 96.6 (96.4-96.7) | 394 | 3.4 (3.3-3.6) |
| Past Year MDE | 542 | 92.5 ^b (91.5-93.4) | 44 | 7.5 ^b (6.6-8.5) |
| No Past Year MDE | 11,496 | 96.5 (96.4-96.7) | 415 | 3.5 (3.3-3.6) |
| Females | | | | |
| Lifetime MDE | 2,213 | 93.7 ^a (93.3-94.2) | 148 | 6.3 ^a (5.8-6.7) |
| No Lifetime MDE | 9,324 | 97.0 (96.9-97.2) | 287 | 3.0 (2.8-3.1) |
| Past Year MDE | 1,472 | 93.4 ^b (92.8-93.9) | 105 | 6.6 ^b (6.1-7.2) |
| No Past Year MDE | 10,012 | 96.8 (96.7-97.0) | 326 | 3.2 (3.0-3.3) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents with unknown overall health data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table A4 Self-Rated Overall Health by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Race/Ethnicity, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Race/Ethnicity and MDE Status | Excellent/Very Good/Good | | Fair/Poor | |
|-------------------------------|--------------------------|-------------------------------|-----------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Non-Hispanic White | | | | |
| Lifetime MDE | 1,843 | 94.4 ^a (93.9-94.8) | 110 | 5.6 ^a (5.2-6.1) |
| No Lifetime MDE | 11,881 | 97.6 (97.4-97.7) | 297 | 2.4 (2.3-2.6) |
| Past Year MDE | 1,216 | 93.9 ^b (93.3-94.4) | 79 | 6.1 ^b (5.6-6.7) |
| No Past Year MDE | 12,467 | 97.5 (97.3-97.6) | 325 | 2.5 (2.4-2.7) |
| Non-Hispanic Black | | | | |
| Lifetime MDE | 413 | 92.8 ^a (91.6-93.8) | 32 | 7.2 ^a (6.2-8.4) |
| No Lifetime MDE | 3,002 | 95.6 (95.3-95.9) | 138 | 4.4 (4.1-4.7) |
| Past Year MDE | 249 | 91.9 ^b (90.4-93.2) | 22 | 8.1 ^b (6.8-9.6) |
| No Past Year MDE | 3,155 | 95.5 (95.2-95.8) | 147 | 4.5 (4.2-4.8) |
| Hispanic | | | | |
| Lifetime MDE | 647 | 92.6 ^a (91.7-93.5) | 51 | 7.4 ^a (6.5-8.3) |
| No Lifetime MDE | 4,015 | 95.4 (95.1-95.7) | 194 | 4.6 (4.3-4.9) |
| Past Year MDE | 404 | 92.1 ^b (90.8-93.2) | 35 | 7.9 ^b (6.8-9.2) |
| No Past Year MDE | 4,242 | 95.3 (95.0-95.6) | 209 | 4.7 (4.4-5.0) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents with unknown overall health data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table A5 Self-Rated Overall Health by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Poverty Status, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Poverty Status and MDE Status | Excellent/Very Good/Good | | Fair/Poor | |
|-------------------------------|--------------------------|-------------------------------|-----------|-----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| < 100% FPL | | | | |
| Lifetime MDE | 608 | 91.4 ^a (90.4-92.2) | 58 | 8.6 ^a (7.8-9.6) |
| No Lifetime MDE | 3,994 | 94.7 (94.4-95.0) | 223 | 5.3 (5.0-5.6) |
| Past Year MDE | 382 | 91.1 ^b (90.0-92.2) | 37 | 8.9 ^b (7.8-10.0) |
| No Past Year MDE | 4,204 | 94.6 (94.3-94.9) | 242 | 5.4 (5.1-5.7) |
| 100%-199% FPL | | | | |
| Lifetime MDE | 731 | 93.1 ^a (92.3-93.8) | 54 | 6.9 ^a (6.2-7.7) |
| No Lifetime MDE | 4,395 | 96.0 (95.8-96.3) | 181 | 4.0 (3.7-4.2) |
| Past Year MDE | 470 | 92.3 ^b (91.2-93.2) | 39 | 7.7 ^b (6.8-8.8) |
| No Past Year MDE | 4,637 | 96.0 (95.7-96.2) | 194 | 4.0 (3.8-4.3) |
| 200% or More FPL | | | | |
| Lifetime MDE | 1,796 | 94.6 ^a (94.1-95.1) | 102 | 5.4 ^a (4.9-5.9) |
| No Lifetime MDE | 12,071 | 97.8 (97.6-97.9) | 278 | 2.2 (2.1-2.4) |
| Past Year MDE | 1,162 | 94.2 ^b (93.5-94.7) | 72 | 5.8 ^b (5.3-6.5) |
| No Past Year MDE | 12,666 | 97.7 (97.5-97.8) | 305 | 2.3 (2.2-2.5) |

CI = confidence interval; FPL = federal poverty level; MDE = major depressive episode.

NOTE: Respondents with unknown overall health data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Appendix B. Respiratory Health Conditions Tables

B1: Asthma Tables

Table B1.1 No Lifetime, Lifetime, and Past Year Asthma by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, Numbers in Thousands and Percentages: NSDUH 2005-2014

| MDE Status | No Lifetime Asthma | | Lifetime Asthma ^a | | Past Year Asthma | |
|------------------|--------------------|-------------------------------|------------------------------|----------------------------|------------------|-------------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Lifetime MDE | 2,610 | 79.6 ^b (79.0-80.2) | 257 | 7.8 ^b (7.4-8.3) | 411 | 12.5 ^b (12.0-13.1) |
| No Lifetime MDE | 16,984 | 83.7 (83.4-83.9) | 1,383 | 6.8 (6.7-7.0) | 1,933 | 9.5 (9.3-9.7) |
| Past Year MDE | 1,685 | 79.3 ^c (78.6-80.1) | 174 | 8.2 ^c (7.7-8.7) | 265 | 12.5 ^c (11.9-13.1) |
| No Past Year MDE | 17,849 | 83.5 (83.3-83.7) | 1,462 | 6.8 (6.7-7.0) | 2,070 | 9.7 (9.5-9.9) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including asthma, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B1.2 No Lifetime, Lifetime, and Past Year Asthma by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Age Group, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Age Group and MDE Status | No Lifetime Asthma | | Lifetime Asthma ^a | | Past Year Asthma | |
|--------------------------|--------------------|-------------------------------|------------------------------|----------------------------|------------------|-------------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| 12 or 13 | | | | | | |
| Lifetime MDE | 477 | 79.9 ^b (78.5-81.2) | 40 | 6.7 (5.9-7.6) | 80 | 13.4 ^b (12.2-14.6) |
| No Lifetime MDE | 5,587 | 83.9 (83.5-84.2) | 424 | 6.4 (6.1-6.6) | 651 | 9.8 (9.5-10.1) |
| Past Year MDE | 304 | 80.6 ^c (78.8-82.2) | 25 | 6.8 (5.8-7.9) | 48 | 12.7 ^c (11.3-14.2) |
| No Past Year MDE | 5,747 | 83.7 (83.3-84.1) | 438 | 6.4 (6.1-6.6) | 681 | 9.9 (9.6-10.2) |
| 14 or 15 | | | | | | |
| Lifetime MDE | 938 | 78.6 ^b (77.5-79.6) | 97 | 8.1 ^b (7.4-8.8) | 159 | 13.3 ^b (12.4-14.2) |
| No Lifetime MDE | 5,733 | 83.3 (82.9-83.7) | 485 | 7.1 (6.8-7.3) | 663 | 9.6 (9.3-9.9) |
| Past Year MDE | 609 | 78.5 ^c (77.1-79.7) | 66 | 8.5 ^c (7.6-9.4) | 102 | 13.1 ^c (12.0-14.2) |
| No Past Year MDE | 6,040 | 83.1 (82.7-83.4) | 515 | 7.1 (6.8-7.4) | 717 | 9.9 (9.6-10.2) |
| 16 or 17 | | | | | | |
| Lifetime MDE | 1,195 | 80.3 ^b (79.5-81.2) | 120 | 8.1 ^b (7.5-8.7) | 172 | 11.6 ^b (10.9-12.3) |
| No Lifetime MDE | 5,664 | 83.8 (83.4-84.2) | 474 | 7.0 (6.8-7.3) | 619 | 9.2 (8.9-9.5) |
| Past Year MDE | 772 | 79.6 ^c (78.4-80.7) | 83 | 8.5 ^c (7.8-9.3) | 116 | 11.9 ^c (11.1-12.8) |
| No Past Year MDE | 6,063 | 83.7 (83.3-84.1) | 510 | 7.0 (6.8-7.3) | 672 | 9.3 (9.0-9.6) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including asthma, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B1.3 No Lifetime, Lifetime, and Past Year Asthma by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Gender, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Gender and MDE Status | No Lifetime Asthma | | Lifetime Asthma ^a | | Past Year Asthma | |
|-----------------------|--------------------|-------------------------------|------------------------------|------------------------------|------------------|-------------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Males | | | | | | |
| Lifetime MDE | 755 | 78.6 ^b (77.4-79.7) | 97 | 10.1 ^b (9.2-11.0) | 109 | 11.3 ^b (10.4-12.3) |
| No Lifetime MDE | 9,050 | 82.4 (82.1-82.7) | 852 | 7.8 (7.5-8.0) | 1,079 | 9.8 (9.6-10.1) |
| Past Year MDE | 448 | 78.4 ^c (76.9-79.9) | 60 | 10.6 ^c (9.4-11.8) | 63 | 11.0 (9.9-12.2) |
| No Past Year MDE | 9,342 | 82.3 (82.0-82.6) | 887 | 7.8 (7.6-8.0) | 1,122 | 9.9 (9.6-10.1) |
| Females | | | | | | |
| Lifetime MDE | 1,856 | 80.0 ^b (79.3-80.8) | 160 | 6.9 ^b (6.5-7.4) | 302 | 13.0 ^b (12.5-13.7) |
| No Lifetime MDE | 7,934 | 85.1 (84.8-85.4) | 531 | 5.7 (5.5-5.9) | 854 | 9.2 (8.9-9.4) |
| Past Year MDE | 1,237 | 79.7 ^c (78.8-80.6) | 113 | 7.3 ^c (6.8-7.9) | 202 | 13.0 ^c (12.3-13.8) |
| No Past Year MDE | 8,508 | 84.8 (84.5-85.1) | 575 | 5.7 (5.5-5.9) | 948 | 9.5 (9.2-9.7) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including asthma, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B1.4 No Lifetime, Lifetime, and Past Year Asthma by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Race/Ethnicity, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Race/Ethnicity and MDE Status | No Lifetime Asthma | | Lifetime Asthma ^a | | Past Year Asthma | |
|-------------------------------|--------------------|-------------------------------|------------------------------|----------------------------|------------------|-------------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Non-Hispanic White | | | | | | |
| Lifetime MDE | 1,536 | 80.1 ^b (79.3-80.8) | 155 | 8.1 ^b (7.6-8.6) | 227 | 11.8 ^b (11.2-12.4) |
| No Lifetime MDE | 9,950 | 84.5 (84.2-84.7) | 784 | 6.7 (6.5-6.8) | 1,047 | 8.9 (8.7-9.1) |
| Past Year MDE | 1,015 | 79.6 ^c (78.7-80.5) | 109 | 8.6 ^c (7.9-9.3) | 150 | 11.8 ^c (11.1-12.6) |
| No Past Year MDE | 10,439 | 84.3 (84.0-84.6) | 827 | 6.7 (6.5-6.9) | 1,118 | 9.0 (8.8-9.2) |
| Non-Hispanic Black | | | | | | |
| Lifetime MDE | 327 | 75.3 ^b (73.4-77.2) | 31 | 7.2 (6.3-8.3) | 76 | 17.4 ^b (15.8-19.2) |
| No Lifetime MDE | 2,356 | 79.0 (78.4-79.6) | 226 | 7.6 (7.2-8.0) | 400 | 13.4 (12.9-14.0) |
| Past Year MDE | 197 | 74.7 ^c (72.2-77.1) | 20 | 7.5 (6.4-8.9) | 47 | 17.8 ^c (15.7-20.0) |
| No Past Year MDE | 2,476 | 78.8 (78.2-79.4) | 237 | 7.6 (7.1-8.0) | 428 | 13.6 (13.1-14.2) |
| Hispanic | | | | | | |
| Lifetime MDE | 555 | 81.8 ^b (80.4-83.1) | 45 | 6.6 (5.8-7.5) | 79 | 11.6 ^b (10.5-12.9) |
| No Lifetime MDE | 3,396 | 85.1 (84.5-85.7) | 250 | 6.3 (5.9-6.7) | 344 | 8.6 (8.2-9.1) |
| Past Year MDE | 352 | 82.0 ^c (80.2-83.6) | 28 | 6.5 (5.4-7.7) | 50 | 11.5 ^c (10.2-13.0) |
| No Past Year MDE | 3,586 | 84.9 (84.3-85.4) | 267 | 6.3 (6.0-6.7) | 372 | 8.8 (8.4-9.2) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including asthma, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B1.5 No Lifetime, Lifetime, and Past Year Asthma by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Poverty Status, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Poverty Status and MDE Status | No Lifetime Asthma | | Lifetime Asthma ^a | | Past Year Asthma | |
|-------------------------------|--------------------|-------------------------------|------------------------------|----------------------------|------------------|-------------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| < 100% FPL | | | | | | |
| Lifetime MDE | 508 | 78.6 ^b (77.1-80.0) | 49 | 7.6 ^b (6.8-8.6) | 89 | 13.8 ^b (12.6-15.1) |
| No Lifetime MDE | 3,255 | 82.1 (81.6-82.7) | 261 | 6.6 (6.2-6.9) | 448 | 11.3 (10.9-11.7) |
| Past Year MDE | 320 | 78.6 ^c (76.8-80.4) | 32 | 8.0 ^c (6.9-9.2) | 55 | 13.4 ^c (11.9-15.0) |
| No Past Year MDE | 3,430 | 81.9 (81.4-82.5) | 277 | 6.6 (6.3-7.0) | 479 | 11.5 (11.0-11.9) |
| 100%-199% FPL | | | | | | |
| Lifetime MDE | 609 | 79.5 ^b (78.2-80.7) | 56 | 7.3 (6.6-8.1) | 101 | 13.2 ^b (12.1-14.3) |
| No Lifetime MDE | 3,664 | 84.0 (83.5-84.4) | 292 | 6.7 (6.4-7.0) | 408 | 9.4 (9.0-9.7) |
| Past Year MDE | 393 | 78.7 ^c (77.0-80.2) | 41 | 8.1 ^c (7.2-9.2) | 66 | 13.2 ^c (11.9-14.6) |
| No Past Year MDE | 3,865 | 83.8 (83.3-84.3) | 307 | 6.6 (6.3-7.0) | 441 | 9.6 (9.2-9.9) |
| 200% or More FPL | | | | | | |
| Lifetime MDE | 1,493 | 80.0 ^b (79.3-80.8) | 151 | 8.1 ^b (7.6-8.7) | 221 | 11.8 ^b (11.2-12.5) |
| No Lifetime MDE | 10,065 | 84.1 (83.8-84.4) | 831 | 6.9 (6.7-7.1) | 1,078 | 9.0 (8.8-9.2) |
| Past Year MDE | 971 | 79.9 ^c (78.8-80.8) | 101 | 8.3 ^c (7.6-9.0) | 144 | 11.9 ^c (11.1-12.7) |
| No Past Year MDE | 10,555 | 83.9 (83.6-84.2) | 879 | 7.0 (6.8-7.2) | 1,150 | 9.1 (8.9-9.4) |

CI = confidence interval; FPL = federal poverty level; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including asthma, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

B2: Bronchitis Tables

Table B2.1 No Lifetime, Lifetime, and Past Year Bronchitis by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, Numbers in Thousands and Percentages: NSDUH 2005-2014

| MDE Status | No Lifetime Bronchitis | | Lifetime Bronchitis ^a | | Past Year Bronchitis | |
|------------------|------------------------|-------------------------------|----------------------------------|----------------------------|----------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Lifetime MDE | 2,982 | 90.8 ^b (90.4-91.3) | 158 | 4.8 ^b (4.5-5.2) | 143 | 4.3 ^b (4.1-4.7) |
| No Lifetime MDE | 19,008 | 93.5 (93.4-93.6) | 753 | 3.7 (3.6-3.8) | 569 | 2.8 (2.7-2.9) |
| Past Year MDE | 1,926 | 90.6 ^c (90.1-91.1) | 103 | 4.9 ^c (4.5-5.3) | 96 | 4.5 ^c (4.2-4.9) |
| No Past Year MDE | 19,997 | 93.4 (93.2-93.5) | 804 | 3.8 (3.6-3.9) | 612 | 2.9 (2.8-3.0) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including bronchitis, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B2.2 No Lifetime, Lifetime, and Past Year Bronchitis by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Age Group, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Age Group and MDE Status | No Lifetime Bronchitis | | Lifetime Bronchitis ^a | | Past Year Bronchitis | |
|--------------------------|------------------------|-------------------------------|----------------------------------|----------------------------|----------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| 12 or 13 | | | | | | |
| Lifetime MDE | 549 | 91.6 ^b (90.7-92.5) | 24 | 4.0 ^b (3.3-4.7) | 26 | 4.4 ^b (3.8-5.1) |
| No Lifetime MDE | 6,306 | 94.4 (94.2-94.6) | 203 | 3.0 (2.9-3.2) | 169 | 2.5 (2.4-2.7) |
| Past Year MDE | 346 | 91.6 ^c (90.3-92.8) | 15 | 3.9 (3.1-4.9) | 17 | 4.4 ^c (3.7-5.4) |
| No Past Year MDE | 6,493 | 94.4 (94.1-94.6) | 211 | 3.1 (2.9-3.2) | 177 | 2.6 (2.4-2.7) |
| 14 or 15 | | | | | | |
| Lifetime MDE | 1,086 | 90.8 ^b (90.1-91.6) | 58 | 4.9 ^b (4.4-5.5) | 51 | 4.3 ^b (3.8-4.8) |
| No Lifetime MDE | 6,413 | 93.1 (92.8-93.3) | 272 | 4.0 (3.8-4.2) | 204 | 3.0 (2.8-3.1) |
| Past Year MDE | 703 | 90.5 ^c (89.5-91.3) | 38 | 4.9 ^c (4.3-5.6) | 36 | 4.6 ^c (4.0-5.2) |
| No Past Year MDE | 6,773 | 93.0 (92.8-93.3) | 290 | 4.0 (3.8-4.2) | 219 | 3.0 (2.8-3.2) |
| 16 or 17 | | | | | | |
| Lifetime MDE | 1,347 | 90.5 ^b (89.8-91.1) | 76 | 5.1 ^b (4.7-5.6) | 65 | 4.4 ^b (4.0-4.9) |
| No Lifetime MDE | 6,289 | 93.0 (92.7-93.3) | 278 | 4.1 (3.9-4.3) | 196 | 2.9 (2.7-3.1) |
| Past Year MDE | 877 | 90.3 ^c (89.5-91.1) | 50 | 5.2 ^c (4.6-5.8) | 44 | 4.5 ^c (4.0-5.1) |
| No Past Year MDE | 6,732 | 92.8 (92.6-93.1) | 303 | 4.2 (4.0-4.4) | 216 | 3.0 (2.8-3.1) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including bronchitis, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B2.3 No Lifetime, Lifetime, and Past Year Bronchitis by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Gender, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Gender and MDE Status | No Lifetime Bronchitis | | Lifetime Bronchitis ^a | | Past Year Bronchitis | |
|-----------------------|------------------------|-------------------------------|----------------------------------|----------------------------|----------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Males | | | | | | |
| Lifetime MDE | 884 | 91.9 ^b (91.2-92.6) | 43 | 4.5 ^b (4.0-5.1) | 34 | 3.6 ^b (3.1-4.1) |
| No Lifetime MDE | 10,322 | 93.8 (93.7-94.0) | 386 | 3.5 (3.4-3.7) | 292 | 2.7 (2.5-2.8) |
| Past Year MDE | 527 | 92.2 ^c (91.3-93.1) | 25 | 4.4 ^c (3.7-5.2) | 19 | 3.4 ^c (2.8-4.0) |
| No Past Year MDE | 10,663 | 93.8 (93.6-93.9) | 403 | 3.5 (3.4-3.7) | 305 | 2.7 (2.6-2.8) |
| Females | | | | | | |
| Lifetime MDE | 2,098 | 90.4 ^b (89.8-90.9) | 115 | 5.0 ^b (4.6-5.3) | 109 | 4.7 ^b (4.3-5.1) |
| No Lifetime MDE | 8,686 | 93.1 (92.9-93.3) | 367 | 3.9 (3.8-4.1) | 278 | 3.0 (2.8-3.1) |
| Past Year MDE | 1,398 | 90.0 ^c (89.3-90.7) | 78 | 5.0 ^c (4.6-5.5) | 77 | 4.9 ^c (4.5-5.4) |
| No Past Year MDE | 9,334 | 92.9 (92.7-93.2) | 401 | 4.0 (3.8-4.2) | 307 | 3.1 (2.9-3.2) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including bronchitis, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B2.4 No Lifetime, Lifetime, and Past Year Bronchitis by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Race/Ethnicity, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Race/Ethnicity and MDE Status | No Lifetime Bronchitis | | Lifetime Bronchitis ^a | | Past Year Bronchitis | |
|-------------------------------|------------------------|-------------------------------|----------------------------------|----------------------------|----------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Non-Hispanic White | | | | | | |
| Lifetime MDE | 1,717 | 89.4 ^b (88.8-89.9) | 108 | 5.6 ^b (5.2-6.1) | 96 | 5.0 ^b (4.6-5.4) |
| No Lifetime MDE | 10,884 | 92.3 (92.1-92.5) | 527 | 4.5 (4.3-4.6) | 382 | 3.2 (3.1-3.4) |
| Past Year MDE | 1,137 | 89.2 ^c (88.5-89.9) | 72 | 5.6 ^c (5.1-6.2) | 66 | 5.2 ^c (4.7-5.7) |
| No Past Year MDE | 11,426 | 92.2 (92.0-92.4) | 561 | 4.5 (4.4-4.7) | 410 | 3.3 (3.2-3.4) |
| Non-Hispanic Black | | | | | | |
| Lifetime MDE | 403 | 92.6 ^b (91.4-93.6) | 17 | 3.9 ^b (3.2-4.8) | 15 | 3.5 ^b (2.8-4.3) |
| No Lifetime MDE | 2,825 | 94.6 (94.2-94.9) | 83 | 2.8 (2.5-3.1) | 79 | 2.7 (2.4-2.9) |
| Past Year MDE | 244 | 92.3 ^c (90.7-93.6) | 11 | 4.0 ^c (3.1-5.2) | 10 | 3.7 (2.8-4.9) |
| No Past Year MDE | 2,973 | 94.5 (94.1-94.8) | 89 | 2.8 (2.6-3.1) | 84 | 2.7 (2.4-2.9) |
| Hispanic | | | | | | |
| Lifetime MDE | 636 | 93.5 ^b (92.6-94.3) | 21 | 3.1 (2.6-3.7) | 23 | 3.4 ^b (2.8-4.1) |
| No Lifetime MDE | 3,814 | 95.4 (95.1-95.7) | 105 | 2.6 (2.4-2.9) | 80 | 2.0 (1.8-2.2) |
| Past Year MDE | 402 | 93.6 ^c (92.4-94.5) | 12 | 2.9 (2.3-3.7) | 15 | 3.6 ^c (2.8-4.5) |
| No Past Year MDE | 4,033 | 95.3 (95.0-95.6) | 113 | 2.7 (2.4-2.9) | 86 | 2.0 (1.8-2.2) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including bronchitis, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had.

Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B2.5 No Lifetime, Lifetime, and Past Year Bronchitis by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Poverty Status, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Poverty Status and MDE Status | No Lifetime Bronchitis | | Lifetime Bronchitis ^a | | Past Year Bronchitis | |
|-------------------------------|------------------------|-------------------------------|----------------------------------|----------------------------|----------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| < 100% FPL | | | | | | |
| Lifetime MDE | 591 | 91.5 ^b (90.5-92.4) | 25 | 3.9 ^b (3.3-4.6) | 30 | 4.6 ^b (4.0-5.4) |
| No Lifetime MDE | 3,768 | 94.8 (94.5-95.1) | 103 | 2.6 (2.4-2.8) | 102 | 2.6 (2.4-2.8) |
| Past Year MDE | 371 | 91.1 ^c (89.9-92.3) | 16 | 4.0 ^c (3.3-4.9) | 20 | 4.9 ^c (4.0-5.9) |
| No Past Year MDE | 3,973 | 94.7 (94.4-95.0) | 111 | 2.6 (2.4-2.8) | 112 | 2.7 (2.5-2.9) |
| 100%-199% FPL | | | | | | |
| Lifetime MDE | 701 | 91.2 ^b (90.3-92.0) | 35 | 4.5 ^b (3.9-5.2) | 33 | 4.3 ^b (3.7-5.0) |
| No Lifetime MDE | 4,120 | 94.3 (94.0-94.6) | 140 | 3.2 (3.0-3.4) | 110 | 2.5 (2.3-2.7) |
| Past Year MDE | 456 | 91.2 ^c (90.0-92.1) | 22 | 4.5 ^c (3.8-5.3) | 22 | 4.4 ^c (3.7-5.2) |
| No Past Year MDE | 4,347 | 94.1 (93.8-94.4) | 152 | 3.3 (3.1-3.5) | 119 | 2.6 (2.4-2.8) |
| 200% or More FPL | | | | | | |
| Lifetime MDE | 1,690 | 90.5 ^b (89.9-91.0) | 98 | 5.3 ^b (4.9-5.7) | 80 | 4.3 ^b (3.9-4.7) |
| No Lifetime MDE | 11,121 | 92.8 (92.6-93.0) | 510 | 4.3 (4.1-4.4) | 357 | 3.0 (2.9-3.1) |
| Past Year MDE | 1,098 | 90.2 ^c (89.5-90.9) | 65 | 5.3 ^c (4.8-5.9) | 54 | 4.5 ^c (4.0-5.0) |
| No Past Year MDE | 11,677 | 92.7 (92.5-92.9) | 542 | 4.3 (4.2-4.5) | 381 | 3.0 (2.9-3.1) |

CI = confidence interval; FPL = federal poverty level; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including bronchitis, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

B3: Pneumonia Tables

Table B3.1 No Lifetime, Lifetime, and Past Year Pneumonia by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, Numbers in Thousands and Percentages: NSDUH 2005-2014

| MDE Status | No Lifetime Pneumonia | | Lifetime Pneumonia ^a | | Past Year Pneumonia | |
|------------------|-----------------------|-------------------------------|---------------------------------|----------------------------|---------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Lifetime MDE | 3,146 | 95.8 ^b (95.5-96.1) | 96 | 2.9 ^b (2.7-3.2) | 41 | 1.3 ^b (1.1-1.4) |
| No Lifetime MDE | 19,715 | 96.9 (96.8-97.0) | 456 | 2.2 (2.2-2.3) | 165 | 0.8 (0.8-0.9) |
| Past Year MDE | 2,035 | 95.7 ^c (95.3-96.1) | 64 | 3.0 ^c (2.7-3.3) | 27 | 1.3 ^c (1.1-1.5) |
| No Past Year MDE | 20,755 | 96.9 (96.8-97.0) | 486 | 2.3 (2.2-2.4) | 177 | 0.8 (0.8-0.9) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including pneumonia, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B3.2 No Lifetime, Lifetime, and Past Year Pneumonia by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Age Group, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Age Group and MDE Status | No Lifetime Pneumonia | | Lifetime Pneumonia ^a | | Past Year Pneumonia | |
|--------------------------|-----------------------|-------------------------------|---------------------------------|----------------------------|---------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| 12 or 13 | | | | | | |
| Lifetime MDE | 580 | 96.8 (96.2-97.4) | 12 | 2.0 (1.6-2.5) | 7 | 1.2 ^b (0.9-1.6) |
| No Lifetime MDE | 6,506 | 97.4 (97.2-97.5) | 126 | 1.9 (1.8-2.0) | 49 | 0.7 (0.7-0.8) |
| Past Year MDE | 365 | 96.8 (96.0-97.4) | 8 | 2.2 (1.7-2.9) | 4 | 1.0 (0.6-1.5) |
| No Past Year MDE | 6,703 | 97.4 (97.2-97.5) | 129 | 1.9 (1.7-2.0) | 52 | 0.8 (0.7-0.8) |
| 14 or 15 | | | | | | |
| Lifetime MDE | 1,146 | 95.8 ^b (95.3-96.3) | 35 | 2.9 ^b (2.5-3.3) | 15 | 1.3 ^b (1.0-1.6) |
| No Lifetime MDE | 6,669 | 96.8 (96.6-97.0) | 164 | 2.4 (2.2-2.5) | 58 | 0.8 (0.8-0.9) |
| Past Year MDE | 743 | 95.6 ^c (95.0-96.2) | 23 | 3.0 ^c (2.5-3.5) | 11 | 1.4 ^c (1.1-1.8) |
| No Past Year MDE | 7,046 | 96.7 (96.6-96.9) | 174 | 2.4 (2.3-2.5) | 62 | 0.9 (0.8-1.0) |
| 16 or 17 | | | | | | |
| Lifetime MDE | 1,420 | 95.4 ^b (94.9-95.8) | 50 | 3.3 ^b (3.0-3.8) | 19 | 1.3 ^b (1.0-1.5) |
| No Lifetime MDE | 6,540 | 96.7 (96.5-96.9) | 167 | 2.5 (2.3-2.6) | 57 | 0.8 (0.8-1.0) |
| Past Year MDE | 926 | 95.4 ^c (94.8-95.9) | 32 | 3.3 ^c (2.9-3.8) | 13 | 1.3 ^c (1.0-1.7) |
| No Past Year MDE | 7,006 | 96.6 (96.4-96.8) | 183 | 2.5 (2.4-2.7) | 63 | 0.9 (0.8-1.0) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including pneumonia, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B3.3 No Lifetime, Lifetime, and Past Year Pneumonia by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Gender, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Gender and MDE Status | No Lifetime Pneumonia | | Lifetime Pneumonia ^a | | Past Year Pneumonia | |
|-----------------------|-----------------------|-------------------------------|---------------------------------|----------------------------|---------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Males | | | | | | |
| Lifetime MDE | 925 | 96.1 ^b (95.6-96.6) | 25 | 2.6 ^b (2.2-3.1) | 12 | 1.3 ^b (1.0-1.6) |
| No Lifetime MDE | 10,712 | 97.4 (97.2-97.5) | 207 | 1.9 (1.8-2.0) | 84 | 0.8 (0.7-0.8) |
| Past Year MDE | 548 | 95.8 ^c (95.0-96.4) | 16 | 2.8 ^c (2.3-3.4) | 8 | 1.5 ^c (1.1-2.0) |
| No Past Year MDE | 11,071 | 97.3 (97.2-97.5) | 216 | 1.9 (1.8-2.0) | 87 | 0.8 (0.7-0.8) |
| Females | | | | | | |
| Lifetime MDE | 2,221 | 95.7 ^b (95.3-96.0) | 71 | 3.1 ^b (2.8-3.4) | 29 | 1.2 ^b (1.1-1.5) |
| No Lifetime MDE | 9,003 | 96.5 (96.3-96.6) | 249 | 2.7 (2.5-2.8) | 81 | 0.9 (0.8-1.0) |
| Past Year MDE | 1,487 | 95.7 ^c (95.2-96.1) | 48 | 3.1 ^c (2.8-3.5) | 19 | 1.2 ^c (1.0-1.5) |
| No Past Year MDE | 9,684 | 96.4 (96.2-96.6) | 271 | 2.7 (2.6-2.8) | 90 | 0.9 (0.8-1.0) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including pneumonia, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B3.4 No Lifetime, Lifetime, and Past Year Pneumonia by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Race/Ethnicity, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Race/Ethnicity and MDE Status | No Lifetime Pneumonia | | Lifetime Pneumonia ^a | | Past Year Pneumonia | |
|-------------------------------|-----------------------|-------------------------------|---------------------------------|----------------------------|---------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Non-Hispanic White | | | | | | |
| Lifetime MDE | 1,818 | 94.6 ^b (94.2-95.0) | 72 | 3.7 ^b (3.4-4.1) | 31 | 1.6 ^b (1.4-1.9) |
| No Lifetime MDE | 11,319 | 96.0 (95.8-96.1) | 352 | 3.0 (2.9-3.1) | 125 | 1.1 (1.0-1.1) |
| Past Year MDE | 1,204 | 94.4 ^c (93.9-95.0) | 50 | 3.9 ^c (3.5-4.4) | 21 | 1.7 ^c (1.4-2.0) |
| No Past Year MDE | 11,894 | 95.9 (95.8-96.0) | 373 | 3.0 (2.9-3.1) | 135 | 1.1 (1.0-1.2) |
| Non-Hispanic Black | | | | | | |
| Lifetime MDE | 424 | 97.4 ^b (96.6-98.1) | 8 | 1.9 ^b (1.4-2.5) | 3 | 0.7 (0.4-1.3) |
| No Lifetime MDE | 2,945 | 98.5 (98.3-98.7) | 33 | 1.1 (0.9-1.3) | 11 | 0.4 (0.3-0.5) |
| Past Year MDE | 258 | 97.6 (96.7-98.3) | 4 | 1.6 (1.1-2.4) | 2 | 0.7 (0.4-1.5) |
| No Past Year MDE | 3,099 | 98.5 (98.3-98.6) | 36 | 1.2 (1.0-1.3) | 12 | 0.4 (0.3-0.5) |
| Hispanic | | | | | | |
| Lifetime MDE | 666 | 97.9 ^b (97.4-98.3) | 10 | 1.5 ^b (1.1-1.9) | 4 | 0.6 (0.4-0.9) |
| No Lifetime MDE | 3,942 | 98.5 (98.3-98.7) | 42 | 1.1 (0.9-1.2) | 16 | 0.4 (0.3-0.5) |
| Past Year MDE | 422 | 98.0 (97.4-98.5) | 6 | 1.4 (1.0-1.9) | 2 | 0.6 (0.3-1.0) |
| No Past Year MDE | 4,170 | 98.5 (98.3-98.7) | 46 | 1.1 (0.9-1.3) | 18 | 0.4 (0.3-0.5) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including pneumonia, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table B3.5 No Lifetime, Lifetime, and Past Year Pneumonia by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Poverty Status, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Poverty Status and MDE Status | No Lifetime Pneumonia | | Lifetime Pneumonia ^a | | Past Year Pneumonia | |
|-------------------------------|-----------------------|-------------------------------|---------------------------------|----------------------------|---------------------|----------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| < 100% FPL | | | | | | |
| Lifetime MDE | 629 | 97.2 ^b (96.6-97.7) | 12 | 1.9 ^b (1.5-2.4) | 6 | 0.9 ^b (0.6-1.3) |
| No Lifetime MDE | 3,917 | 98.6 (98.4-98.7) | 39 | 1.0 (0.9-1.1) | 17 | 0.4 (0.4-0.5) |
| Past Year MDE | 396 | 97.2 ^c (96.4-97.8) | 8 | 1.9 ^c (1.5-2.6) | 4 | 0.9 (0.5-1.5) |
| No Past Year MDE | 4,134 | 98.5 (98.3-98.7) | 43 | 1.0 (0.9-1.2) | 19 | 0.5 (0.4-0.6) |
| 100%-199% FPL | | | | | | |
| Lifetime MDE | 743 | 96.7 ^b (96.1-97.2) | 17 | 2.2 ^b (1.8-2.6) | 9 | 1.2 ^b (0.9-1.5) |
| No Lifetime MDE | 4,272 | 97.7 (97.5-97.9) | 73 | 1.7 (1.5-1.8) | 26 | 0.6 (0.5-0.7) |
| Past Year MDE | 484 | 96.6 ^c (95.9-97.2) | 11 | 2.1 (1.7-2.7) | 7 | 1.3 ^c (1.0-1.8) |
| No Past Year MDE | 4,514 | 97.7 (97.5-97.9) | 78 | 1.7 (1.5-1.9) | 28 | 0.6 (0.5-0.7) |
| 200% or More FPL | | | | | | |
| Lifetime MDE | 1,774 | 95.0 ^b (94.5-95.4) | 68 | 3.6 ^b (3.3-4.0) | 27 | 1.4 ^b (1.2-1.7) |
| No Lifetime MDE | 11,526 | 96.1 (96.0-96.3) | 344 | 2.9 (2.7-3.0) | 121 | 1.0 (0.9-1.1) |
| Past Year MDE | 1,155 | 94.9 ^c (94.4-95.4) | 45 | 3.7 ^c (3.3-4.2) | 17 | 1.4 ^c (1.1-1.7) |
| No Past Year MDE | 12,107 | 96.1 (95.9-96.2) | 365 | 2.9 (2.8-3.0) | 130 | 1.0 (1.0-1.1) |

CI = confidence interval; FPL = federal poverty level; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including pneumonia, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had. Another checklist followed to assess if a doctor or other medical professional had told them that they had these health conditions in the past year.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a "Lifetime" refers to "lifetime but not past year."

^b Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^c Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Appendix C. Body Mass Index Category Tables

Table C1 Body Mass Index Category by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, Numbers in Thousands and Percentages: NSDUH 2013-2014

| MDE Status | Underweight | | Normal Weight | | Overweight | | Obese | |
|------------------|-------------|---------------------|---------------|---------------------|------------|---------------------|--------|---------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Lifetime MDE | 139 | 3.8 (3.1-4.5) | 2,347 | 63.7 (62.0-65.4) | 602 | 16.3 (15.1-17.6) | 597 | 16.2 (15.0-17.5) |
| No Lifetime MDE | 804 | 4.3 (4.0-4.6) | 12,124 | 64.1 (63.4-64.9) | 2,967 | 15.7 (15.1-16.3) | 3,007 | 15.9 (15.4-16.5) |
| Past Year MDE | 93 | 3.7 (3.0-4.6) | 1,599 | 63.4 (61.3-65.4) | 426 | 16.9 (15.4-18.5) | 406 | 16.1 (14.6-17.7) |
| No Past Year MDE | 847 | 4.2 (4.0-4.5) | 12,816 | 64.1 (63.4-64.9) | 3,134 | 15.7 (15.2-16.2) | 3,184 | 15.9 (15.4-16.5) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Underweight, overweight, and obesity were determined by calculating body mass index (BMI) from self-reported height/weight. Underweight was based on BMI-for-age below the 5th percentile of the 2000 CDC growth charts.¹⁵ Overweight was based on BMI-for-age at or above the 85th percentile and below the 95th percentile. Obesity was based on BMI-for-age at or above the 95th percentile. Respondents with unknown BMI data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

Table C2 Body Mass Index Category by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Age Group, Numbers in Thousands and Percentages: NSDUH 2013-2014

| Age Group and MDE Status | Underweight | | Normal Weight | | Overweight | | Obese | |
|--------------------------|-------------|----------------------------|---------------|-------------------------------|------------|-------------------------------|--------|---------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| 12 or 13 | | | | | | | | |
| Lifetime MDE | 32 | 5.0 (3.4-7.1) | 393 | 60.8 (56.7-64.7) | 113 | 17.5 (14.7-20.7) | 108 | 16.7 (13.9-20.0) |
| No Lifetime MDE | 357 | 5.9 (5.3-6.5) | 3,779 | 62.4 (61.1-63.6) | 950 | 15.7 (14.8-16.6) | 974 | 16.1 (15.1-17.1) |
| Past Year MDE | 22 | 4.9 (3.0-8.0) | 268 | 60.3 (55.3-65.0) | 83 | 18.7 (15.2-22.8) | 72 | 16.1 (12.9-19.9) |
| No Past Year MDE | 366 | 5.9 (5.3-6.5) | 3,895 | 62.4 (61.1-63.6) | 979 | 15.7 (14.8-16.6) | 1,007 | 16.1 (15.2-17.1) |
| 14 or 15 | | | | | | | | |
| Lifetime MDE | 33 | 2.4 ^a (1.7-3.5) | 854 | 61.8 ^a (58.9-64.5) | 262 | 19.0 ^a (16.9-21.3) | 233 | 16.9 (14.9-19.0) |
| No Lifetime MDE | 224 | 3.5 (3.0-4.0) | 4,166 | 64.9 (63.7-66.1) | 1,001 | 15.6 (14.7-16.5) | 1,030 | 16.0 (15.1-17.0) |
| Past Year MDE | 21 | 2.2 ^b (1.3-3.5) | 591 | 61.6 (58.2-64.9) | 183 | 19.1 ^b (16.6-21.9) | 164 | 17.1 (14.7-19.9) |
| No Past Year MDE | 236 | 3.5 (3.0-4.0) | 4,407 | 64.7 (63.5-65.8) | 1,076 | 15.8 (14.9-16.7) | 1,095 | 16.1 (15.2-17.0) |
| 16 or 17 | | | | | | | | |
| Lifetime MDE | 73 | 4.4 (3.4-5.6) | 1,100 | 66.5 (64.0-68.8) | 226 | 13.7 ^a (12.0-15.5) | 256 | 15.5 (13.7-17.4) |
| No Lifetime MDE | 222 | 3.5 (3.0-4.0) | 4,179 | 65.1 (63.8-66.3) | 1,016 | 15.8 (14.9-16.8) | 1,004 | 15.6 (14.7-16.6) |
| Past Year MDE | 50 | 4.5 (3.4-5.9) | 741 | 66.1 (63.2-68.9) | 159 | 14.2 (12.3-16.4) | 170 | 15.2 (13.1-17.5) |
| No Past Year MDE | 245 | 3.5 (3.1-4.1) | 4,514 | 65.2 (64.0-66.4) | 1,080 | 15.6 (14.7-16.5) | 1,082 | 15.6 (14.7-16.6) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Overweight and obesity were determined by calculating body mass index (BMI) from self-reported height/weight. Overweight was based on BMI-for-age at or above the 85th percentile and below the 95th percentile of the 2000 Centers for Disease Control and Prevention growth charts.¹⁵ Obesity was based on BMI-for-age at or above the 95th percentile. Respondents with unknown BMI data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

Table C3 Body Mass Index Category by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Gender, Numbers in Thousands and Percentages: NSDUH 2013-2014

| Gender and MDE Status | Underweight | | Normal Weight | | Overweight | | Obese | |
|-----------------------|-------------|----------------------------|---------------|-------------------------------|------------|---------------------|--------|-------------------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Males | | | | | | | | |
| Lifetime MDE | 57 | 5.7 (4.3-7.4) | 608 | 60.1 (56.8-63.3) | 144 | 14.3 (12.1-16.8) | 203 | 20.0 (17.4-22.9) |
| No Lifetime MDE | 473 | 4.5 (4.1-4.9) | 6,495 | 61.4 (60.4-62.4) | 1,664 | 15.7 (15.0-16.5) | 1,941 | 18.4 (17.6-19.2) |
| Past Year MDE | 33 | 5.1 (3.5-7.3) | 393 | 61.0 (56.9-65.0) | 98 | 15.2 (12.4-18.6) | 120 | 18.6 (15.7-22.0) |
| No Past Year MDE | 496 | 4.5 (4.2-5.0) | 6,700 | 61.3 (60.3-62.3) | 1,707 | 15.6 (14.9-16.4) | 2,019 | 18.5 (17.7-19.3) |
| Females | | | | | | | | |
| Lifetime MDE | 81 | 3.0 ^a (2.4-3.8) | 1,739 | 65.1 ^a (63.1-67.0) | 457 | 17.1 (15.7-18.6) | 395 | 14.8 ^a (13.4-16.2) |
| No Lifetime MDE | 331 | 4.0 (3.5-4.4) | 5,629 | 67.6 (66.5-68.6) | 1,303 | 15.6 (14.9-16.4) | 1,067 | 12.8 (12.1-13.6) |
| Past Year MDE | 60 | 3.2 (2.4-4.2) | 1,206 | 64.2 ^b (61.8-66.5) | 327 | 17.4 (15.7-19.3) | 286 | 15.2 ^b (13.5-17.0) |
| No Past Year MDE | 350 | 3.9 (3.5-4.3) | 6,116 | 67.5 (66.5-68.5) | 1,427 | 15.8 (15.0-16.5) | 1,165 | 12.9 (12.2-13.6) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Underweight, overweight, and obesity were determined by calculating body mass index (BMI) from self-reported height/weight. Underweight was based on BMI-for-age below the 5th percentile of the 2000 Centers for Disease Control and Prevention growth charts.¹⁵ Overweight was based on BMI-for-age at or above the 85th percentile and below the 95th percentile. Obesity was based on BMI-for-age at or above the 95th percentile. Respondents with unknown BMI data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

Table C4 Body Mass Index Category by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Race/Ethnicity, Numbers in Thousands and Percentages: NSDUH 2013-2014

| Race/Ethnicity and MDE Status | Underweight | | Normal Weight | | Overweight | | Obese | |
|-------------------------------|-------------|---------------------|---------------|---------------------|------------|-------------------------------|--------|---------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| Non-Hispanic White | | | | | | | | |
| Lifetime MDE | 71 | 3.4 (2.7-4.3) | 1,379 | 66.5 (64.3-68.6) | 349 | 16.8 ^a (15.2-18.6) | 275 | 13.3 (11.9-14.8) |
| No Lifetime MDE | 434 | 4.1 (3.8-4.5) | 7,198 | 68.4 (67.4-69.3) | 1,503 | 14.3 (13.6-15.0) | 1,392 | 13.2 (12.6-13.9) |
| Past Year MDE | 47 | 3.2 (2.4-4.2) | 962 | 66.3 (63.7-68.9) | 245 | 16.9 ^b (15.0-19.1) | 196 | 13.5 (11.8-15.4) |
| No Past Year MDE | 457 | 4.1 (3.8-4.5) | 7,580 | 68.3 (67.4-69.2) | 1,600 | 14.4 (13.7-15.1) | 1,465 | 13.2 (12.6-13.9) |
| Non-Hispanic Black | | | | | | | | |
| Lifetime MDE | 16 | 4.0 (2.5-6.4) | 224 | 55.1 (50.0-60.1) | 78 | 19.1 (15.4-23.3) | 89 | 21.8 (17.8-26.5) |
| No Lifetime MDE | 119 | 4.5 (3.8-5.4) | 1,417 | 53.7 (51.8-55.6) | 484 | 18.3 (17.0-19.8) | 618 | 23.4 (21.7-25.2) |
| Past Year MDE | 10 | 3.8 (2.1-6.8) | 146 | 53.8 (47.5-59.9) | 51 | 18.9 (14.5-24.2) | 64 | 23.6 (18.2-30.0) |
| No Past Year MDE | 126 | 4.5 (3.8-5.4) | 1,491 | 53.9 (52.0-55.7) | 510 | 18.4 (17.1-19.9) | 641 | 23.2 (21.5-24.8) |
| Hispanic | | | | | | | | |
| Lifetime MDE | 33 | 3.8 (2.6-5.6) | 508 | 57.9 (54.1-61.6) | 139 | 15.9 (13.3-18.8) | 196 | 22.4 (19.1-26.1) |
| No Lifetime MDE | 167 | 4.2 (3.5-5.0) | 2,316 | 57.7 (55.9-59.5) | 732 | 18.2 (16.9-19.6) | 798 | 19.9 (18.5-21.3) |
| Past Year MDE | 26 | 4.5 (2.8-7.2) | 336 | 57.6 (53.0-62.1) | 100 | 17.2 (14.0-21.0) | 120 | 20.6 (17.1-24.6) |
| No Past Year MDE | 174 | 4.0 (3.4-4.8) | 2,476 | 57.8 (56.0-59.5) | 769 | 17.9 (16.7-19.3) | 868 | 20.3 (18.9-21.7) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Overweight and obesity were determined by calculating body mass index (BMI) from self-reported height/weight. Overweight was based on BMI-for-age at or above the 85th percentile and below the 95th percentile of the 2000 Centers for Disease Control and Prevention growth charts.¹⁵ Obesity was based on BMI-for-age at or above the 95th percentile. Respondents with unknown BMI data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

Table C5 Body Mass Index Category by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Poverty Status, Numbers in Thousands and Percentages: NSDUH 2013-2014

| Poverty Status and MDE Status | Underweight | | Normal Weight | | Overweight | | Obese | |
|-------------------------------|-------------|---------------------|---------------|---------------------|------------|-------------------------------|--------|---------------------|
| | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) | Number | Percentage (95% CI) |
| < 100% FPL | | | | | | | | |
| Lifetime MDE | 32 | 3.9 (2.7-5.6) | 472 | 56.5 (52.9-60.1) | 145 | 17.4 (15.0-20.0) | 185 | 22.2 (19.2-25.6) |
| No Lifetime MDE | 208 | 5.0 (4.3-5.8) | 2,310 | 55.5 (53.8-57.1) | 750 | 18.0 (16.8-19.3) | 894 | 21.5 (20.2-22.8) |
| Past Year MDE | 23 | 4.2 (2.7-6.5) | 309 | 55.8 (51.4-60.2) | 97 | 17.6 (14.7-20.9) | 124 | 22.4 (18.6-26.6) |
| No Past Year MDE | 216 | 4.9 (4.2-5.6) | 2,460 | 55.6 (54.0-57.2) | 796 | 18.0 (16.8-19.2) | 951 | 21.5 (20.2-22.8) |
| 100%-199% FPL | | | | | | | | |
| Lifetime MDE | 34 | 4.1 (2.8-5.9) | 498 | 60.4 (56.7-64.0) | 139 | 16.8 (14.3-19.6) | 154 | 18.7 (16.0-21.8) |
| No Lifetime MDE | 166 | 4.3 (3.7-5.0) | 2,252 | 58.0 (56.4-59.6) | 676 | 17.4 (16.2-18.7) | 787 | 20.3 (19.0-21.6) |
| Past Year MDE | 26 | 4.6 (3.0-7.1) | 349 | 61.5 (57.1-65.7) | 91 | 16.1 (13.2-19.5) | 101 | 17.8 (14.8-21.3) |
| No Past Year MDE | 173 | 4.2 (3.6-4.9) | 2,394 | 58.1 (56.5-59.6) | 720 | 17.5 (16.3-18.7) | 834 | 20.2 (19.0-21.5) |
| 200% or More FPL | | | | | | | | |
| Lifetime MDE | 72 | 3.6 (2.8-4.6) | 1,377 | 68.0 (65.8-70.1) | 318 | 15.7 (14.1-17.5) | 258 | 12.7 (11.4-14.2) |
| No Lifetime MDE | 429 | 4.0 (3.6-4.4) | 7,563 | 69.7 (68.7-70.6) | 1,540 | 14.2 (13.5-14.9) | 1,326 | 12.2 (11.6-12.9) |
| Past Year MDE | 44 | 3.1 (2.3-4.2) | 941 | 67.1 (64.5-69.6) | 237 | 16.9 ^a (14.9-19.1) | 181 | 12.9 (11.2-14.8) |
| No Past Year MDE | 457 | 4.0 (3.6-4.4) | 7,963 | 69.6 (68.7-70.5) | 1,618 | 14.1 (13.5-14.8) | 1,399 | 12.2 (11.6-12.9) |

CI = confidence interval; FPL = federal poverty level; MDE = major depressive episode.

NOTE: Overweight and obesity were determined by calculating body mass index (BMI) from self-reported height/weight. Overweight was based on BMI-for-age at or above the 85th percentile and below the 95th percentile of the 2000 Centers for Disease Control and Prevention growth charts.¹⁵ Obesity was based on BMI-for-age at or above the 95th percentile. Respondents with unknown BMI data were excluded.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2013-2014.

Appendix D. Diabetes Tables

Table D1 Lifetime Diabetes by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, Numbers in Thousands and Percentages: NSDUH 2005-2014

| MDE Status | Lifetime Diabetes | |
|------------------|-------------------|----------------------------|
| | Number | Percentage (95% CI) |
| Lifetime MDE | 33 | 1.0 ^a (0.9-1.2) |
| No Lifetime MDE | 133 | 0.7 (0.6-0.7) |
| Past Year MDE | 24 | 1.1 ^b (0.9-1.3) |
| No Past Year MDE | 142 | 0.7 (0.6-0.7) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including diabetes, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table D2 Lifetime Diabetes by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Age Group, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Age Group and MDE Status | Lifetime Diabetes | |
|--------------------------|-------------------|----------------------------|
| | Number | Percentage (95% CI) |
| 12 or 13 | | |
| Lifetime MDE | 6 | 0.9 (0.7-1.3) |
| No Lifetime MDE | 42 | 0.6 (0.6-0.7) |
| Past Year MDE | 4 | 1.0 (0.6-1.4) |
| No Past Year MDE | 44 | 0.6 (0.6-0.7) |
| 14 or 15 | | |
| Lifetime MDE | 12 | 1.0 ^a (0.8-1.2) |
| No Lifetime MDE | 43 | 0.6 (0.6-0.7) |
| Past Year MDE | 9 | 1.1 ^b (0.9-1.5) |
| No Past Year MDE | 46 | 0.6 (0.6-0.7) |
| 16 or 17 | | |
| Lifetime MDE | 16 | 1.1 ^a (0.9-1.3) |
| No Lifetime MDE | 48 | 0.7 (0.6-0.8) |
| Past Year MDE | 11 | 1.1 ^b (0.9-1.5) |
| No Past Year MDE | 52 | 0.7 (0.6-0.8) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including diabetes, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table D3 Lifetime Diabetes by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Gender, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Gender and MDE Status | Lifetime Diabetes | |
|-----------------------|-------------------|----------------------------|
| | Number | Percentage (95% CI) |
| Males | | |
| Lifetime MDE | 7 | 0.8 (0.6-1.1) |
| No Lifetime MDE | 70 | 0.6 (0.6-0.7) |
| Past Year MDE | 5 | 0.8 (0.5-1.2) |
| No Past Year MDE | 73 | 0.6 (0.6-0.7) |
| Females | | |
| Lifetime MDE | 26 | 1.1 ^a (0.9-1.3) |
| No Lifetime MDE | 63 | 0.7 (0.6-0.7) |
| Past Year MDE | 19 | 1.2 ^b (1.0-1.5) |
| No Past Year MDE | 69 | 0.7 (0.6-0.8) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including diabetes, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table D4 Lifetime Diabetes by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Race/Ethnicity, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Race/Ethnicity and MDE Status | Lifetime Diabetes | |
|-------------------------------|-------------------|----------------------------|
| | Number | Percentage (95% CI) |
| Non-Hispanic White | | |
| Lifetime MDE | 19 | 1.0 ^a (0.8-1.2) |
| No Lifetime MDE | 73 | 0.6 (0.6-0.7) |
| Past Year MDE | 13 | 1.0 ^b (0.8-1.3) |
| No Past Year MDE | 78 | 0.6 (0.6-0.7) |
| Non-Hispanic Black | | |
| Lifetime MDE | 6 | 1.4 ^a (1.0-2.0) |
| No Lifetime MDE | 21 | 0.7 (0.6-0.9) |
| Past Year MDE | 4 | 1.6 ^b (1.0-2.5) |
| No Past Year MDE | 23 | 0.7 (0.6-0.9) |
| Hispanic | | |
| Lifetime MDE | 7 | 1.0 (0.7-1.4) |
| No Lifetime MDE | 30 | 0.7 (0.6-0.9) |
| Past Year MDE | 5 | 1.2 (0.8-1.8) |
| No Past Year MDE | 31 | 0.7 (0.6-0.9) |

CI = confidence interval; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including diabetes, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014.

Table D5 Lifetime Diabetes by Lifetime and Past Year MDE, among Adolescents Aged 12 to 17, by Poverty Status, Numbers in Thousands and Percentages: NSDUH 2005-2014

| Poverty Status and MDE Status | Lifetime Diabetes | |
|-------------------------------|-------------------|----------------------------|
| | Number | Percentage (95% CI) |
| < 100% FPL | | |
| Lifetime MDE | 10 | 1.5 ^a (1.1-2.0) |
| No Lifetime MDE | 31 | 0.8 (0.7-0.9) |
| Past Year MDE | 7 | 1.6 ^b (1.2-2.3) |
| No Past Year MDE | 34 | 0.8 (0.7-0.9) |
| 100%-199% FPL | | |
| Lifetime MDE | 9 | 1.2 ^a (0.9-1.6) |
| No Lifetime MDE | 29 | 0.7 (0.6-0.8) |
| Past Year MDE | 6 | 1.1 ^b (0.8-1.6) |
| No Past Year MDE | 31 | 0.7 (0.6-0.8) |
| 200% or More FPL | | |
| Lifetime MDE | 14 | 0.8 (0.6-1.0) |
| No Lifetime MDE | 74 | 0.6 (0.6-0.7) |
| Past Year MDE | 11 | 0.9 ^b (0.7-1.2) |
| No Past Year MDE | 77 | 0.6 (0.6-0.7) |

CI = confidence interval; FPL = federal poverty level; MDE = major depressive episode.

NOTE: Respondents were presented with a list of 20 health conditions, including diabetes, and were asked to read the list and select the specific conditions that a doctor or other medical professional had ever told the respondents that they had.

NOTE: MDE is defined as in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders*,¹³ which specifies a period of at least 2 weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. Respondents with unknown past year MDE data were excluded.

^a Difference between Lifetime MDE and No Lifetime MDE is statistically significant at the $p < .05$ level.

^b Difference between Past Year MDE and No Past Year MDE is statistically significant at the $p < .05$ level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2005-2014