

2014-2016 National Surveys on Drug Use and Health: Guide to Substate Tables and Summary of Small Area Estimation Methodology

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Section A: Overview

A.1. Introduction

This document provides information on the model-based small area estimates of substance use and mental disorders in substate regions based on data from the combined 2014-2016 National Surveys on Drug Use and Health (NSDUHs). The estimates along with other related information are available at <https://www.samhsa.gov/data/>.

NSDUH is an annual survey conducted from January through December of the civilian, noninstitutionalized population aged 12 or older and is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services. NSDUH is planned and managed by SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ). Data collection and analysis are conducted under contract with RTI International.¹

NSDUH is the primary source of statistical information on the use of illicit drugs, alcohol, and tobacco by the U.S. civilian, noninstitutionalized population aged 12 or older. The survey also includes several series of questions that focus on mental health issues. Conducted by the federal government since 1971, NSDUH collects data through face-to-face interviews with a representative sample of the population at the respondent's place of residence.

In 2014-2016, the survey collected data from 203,916 respondents aged 12 or older and was designed to obtain representative samples from the 50 states and the District of Columbia. It covers residents of households and noninstitutional group quarters (e.g., shelters, rooming houses, dormitories) and from civilians living on military bases. NSDUH excludes homeless people who do not use shelters, military personnel on active duty, and residents of institutional group quarters, such as jails and hospitals.

The 1999 survey marked the first year in which the national sample was interviewed using a computer-assisted interviewing (CAI) method. The survey used a combination of computer-assisted personal interviewing (CAPI) conducted by an interviewer and audio computer-assisted self-interviewing (ACASI). Use of ACASI is designed to provide the respondent with a highly private and confidential means of responding to questions and increases the level of honest reporting of illicit drug use and other sensitive behaviors. For further details on the development of the CAI procedures for the 1999 National Household Survey on Drug Abuse (NHSDA),² see the Office of Applied Studies (OAS, 2001).³

The 1999 through 2001 NHSDAs and the 2002 through 2013 NSDUHs employed an independent, multistage area probability sample for each of the 50 states and the District of

¹ RTI International is a registered trademark and a trade name of Research Triangle Institute, Research Triangle Park, North Carolina.

² In 2002, the survey's name changed from the National Household Survey on Drug Abuse (NHSDA) to the National Survey on Drug Use and Health (NSDUH).

³ The Office of Applied Studies (OAS) is the former name of the Center for Behavioral Health Statistics and Quality (CBHSQ).

Columbia. For this design, eight states were designated as large sample states (California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas) with target sample sizes of 3,600 per year. For the remaining 42 states and the District of Columbia, the target sample size was 900 per year. This approach ensured that there was sufficient sample in every state to support small area estimation (SAE) production at the state and substate level, while at the same time maintaining efficiency for national estimates. The design also oversampled youths aged 12 to 17 and young adults aged 18 to 25 so that each state's sample was approximately equally distributed among three major age groups: 12 to 17 years, 18 to 25 years, and 26 years or older.

A coordinated design was developed for the 2014 through 2017 NSDUHs. Similar to the 1999 through 2013 surveys, the coordinated 4-year design is state-based with an independent, multistage area probability sample within each state and the District of Columbia. This design designates 12 states as large sample states that have the following target sample sizes per year: 4,560 completed interviews in California; 3,300 completed interviews each in Florida, New York, and Texas; 2,400 completed interviews each in Illinois, Michigan, Ohio, and Pennsylvania; and 1,500 completed interviews each in Georgia, New Jersey, North Carolina, and Virginia. Making the sample sizes more proportional to the state population sizes improves the precision of national NSDUH estimates. This change also allows for a more cost-efficient sample allocation to the 12 large sample states while slightly increasing the sample sizes in the 38 remaining smaller states and the District of Columbia to improve the precision of state and substate estimates.⁴

Starting in 2014, the allocation of the NSDUH sample is 25 percent for adolescents aged 12 to 17, 25 percent for adults aged 18 to 25, and 50 percent for adults aged 26 or older. The sample of adults aged 26 or older is further divided into three subgroups: aged 26 to 34 (15 percent), aged 35 to 49 (20 percent), and aged 50 or older (15 percent). For more information on the 2014 through the 2017 NSDUH sample design and for differences between the 2013 and 2014 surveys, refer to the 2014 NSDUH sample design report (CBHSQ, 2015a).

This marks the eighth time⁵ that estimates for substate regions (also referred to as planning regions or substate areas) in all 50 states and the District of Columbia have been presented by SAMHSA. Here, substate-level small area estimates are provided for 14 binary (0, 1) substance use or mental health measures using combined data from the 2014-2016 NSDUHs for individuals aged 12 or older (or adults 18 or older for the five mental health outcomes, and individuals aged 12 to 20 for underage alcohol use). For a list of outcomes for which substate-level estimates are available, refer to [Table A1](#) at the end of this section. These substate estimates are available at <https://www.samhsa.gov/data/>. The list of products (e.g., tables, maps, substate region definitions) related to the 2014-2016 substate estimates is provided in Section A.2.

Estimates for 406 substate regions were generated using the 2014-2016 NSDUH data. These substate regions were defined by government officials from each of the 50 states and the

⁴ The target sample size per year in each of the small sample states is 960 completed interviews, with the exception of Hawaii where the target sample size is 967 completed interviews.

⁵ Prior to this effort, substate small area estimates using combined 1999-2001, 2002-2004, 2004-2006, 2006-2008, 2008-2010, 2010-2012, and 2012-2014 data have been produced by SAMHSA. These estimates can be found at <https://www.samhsa.gov/data/>. (For 2006-2008 and earlier estimates, see <https://archive.samhsa.gov/data/>.)

District of Columbia and were typically based on the substance abuse treatment planning regions specified by the states in their applications for the Substance Abuse Prevention and Treatment Block Grant (SABG) administered by SAMHSA. The SABG program provides financial and technical assistance to the 50 states, the District of Columbia, and other jurisdictions to support substance abuse prevention and treatment programs and to promote public health. States use NSDUH substate estimates for a variety of purposes, including strategic planning and program development, production of epidemiological profiles for briefing state legislatures and informing the public, allocating funds to substate areas based on the need for services, and other uses. More information on defining these regions is available in Section A.3.

Section A.4 discusses the methodological changes that were introduced in the 2002 NSDUH. An unanticipated result of these changes was that the prevalence rates for 2002 were in general substantially higher than those for 2001. As a result, the 1999-2001 substate estimates are not comparable with the other substate estimates. Additionally, this section discusses NSDUH questionnaire changes from 2015 and how these changes affect the small area estimates. Section A.5 discussed related substance use measures and warns users about not drawing conclusions by subtracting small area estimates from two different measures.

Section B provides information on the SAE methodology used to produce substate estimates. Section C includes the population estimates and the combined 2014, 2015, and 2016 NSDUH sample sizes and response rates for each substate region. Users may find the population estimates helpful in calculating the prevalence estimate for any combination of substate regions or to determine the number of people using a particular substance in a substate region. For example, the number of individuals aged 12 or older who used marijuana in the past month in Alabama's Region 1 (58,320 individuals) can be obtained by multiplying the prevalence rate (5.10 percent) from Table 2 in the "2014-2016 NSDUH Substate Regions: Excel Tables" (see <https://www.samhsa.gov/data/>) and the population estimate from Table C1 (1,143,525) in this document. Section D lists the references cited in this document, and Section E provides a list of contributors to the production of the 2014-2016 substate estimates.

A.2. Presentation of Findings

In addition to this methodology document for the 2014-2016 substate SAE results, the following files are available at <https://www.samhsa.gov/data/>:

- **2014-2016 NSDUH Substate Region Estimates: Excel Tables and CSV Files:** These Excel tables and comma separated value (CSV) files⁶ for each outcome show the prevalence estimates and 95 percent Bayesian confidence intervals (CIs) for individuals aged 12 or older (12 to 20 for underage alcohol use and 18 or older for the five mental health outcomes).
- **2014-2016 NSDUH National Maps of Prevalence Estimates, by Substate Region:** More information about these maps is provided in Section A.3.

⁶ Files with a comma separated value (*.csv) extension are in plain text. They contain characters stored in a flat, nonproprietary format and can be opened by most computer programs. Computers with Microsoft Excel installed open *.csv files in Excel by default, with the fields automatically arranged appropriately in columns. Other database programs also open *.csv files with the fields appropriately arranged.

- **2014-2016 NSDUH Substate Region Definitions:** This document includes maps and tables that show the substate region definitions in terms of census tracts or counties.
- **2014-2016 NSDUH Substate Region Definition SAS files:** These SAS files consist of region definition variables along with census geography variables (state, county, and tract). These files can be used to merge 2014-2016 substate region definitions onto any file containing state, county, and census tract codes (based on 2010 census geography).
- **2014-2016 NSDUH Substate Region Shapefile:** This shapefile includes geographic boundaries of the substate regions and associated prevalence rates. It also includes the map group (one to seven) and associated lower and upper bounds of the group for each substate region. It can be used for analysis and data display with Geographic Information System (GIS) software.
- **2014-2016 NSDUH Substate Region Estimates, by Age Group:** Tables of prevalence estimates and 95 percent Bayesian CIs for youths aged 12 to 17, young adults aged 18 to 25, adults aged 26 or older, and adults aged 18 or older are provided for each measure and for substate regions having sufficient precision. These tables are available in Excel, CSV, and PDF formats.
- **2014-2016 NSDUH Substate Region Estimates Categorized into Seven Groups, by Age Group:** This table shows the ranges of prevalence estimates for each outcome categorized into seven groups from lowest to highest estimate for age groups 12 to 17, 18 to 25, 26 or older, and 18 or older. Information from this table can be used by users who wish to develop state or national maps similar to those produced for the 12 or older age group.
- **2014-2016 NSDUH State-Specific Substate Region Tables and Maps:** These state-specific tables and maps show substate region estimates for each state separately for individuals aged 12 or older (18 or older for the mental health outcomes and 12 to 20 for the underage alcohol use outcome). Note that the seven groups shown on each state-level map are taken from the national maps.
- **Comparison of 2012-2014 and 2014-2016 NSDUH Substate Region Estimates:** These tables show the 2012-2014 and 2014-2016 substate estimates and 95 percent Bayesian CIs, along with an indication of the statistical significance of the difference (p value). The methodology used to conduct significance tests is provided after the last table. The 2012-2014 estimates are compared with the 2014-2016 estimates for the 345 regions that remained the same over these two time periods and the 12 outcomes that are available for both time periods. See [Table A2](#) at the end of this section for the number of regions that remained the same between 2012-2014 and 2014-2016 for each state and [Table A1](#) for the list of outcomes available for both time periods.
- **Comparison of 2008-2010 and 2014-2016 NSDUH Substate Region Estimates:** These tables show the 2008-2010 and 2014-2016 substate estimates and 95 percent Bayesian CIs, along with an indication of the statistical significance of the difference (p value). This comparison is done between the most recent estimates (in this case, 2014-2016) and the earliest comparable estimates for all outcomes, including mental health (based on 2008-2010

NSDUH data). Note that for earlier comparison tables, current small area estimates were compared with small area estimates from 2002-2004. However, because NSDUH estimates for any mental illness (AMI), serious mental illness (SMI), and past year thoughts of suicide were not generated until 2008-2010, it was decided to establish 2008-2010 as the new baseline for comparisons with 2014-2016 data and beyond in order to include them in these tables. The methodology used to conduct significance tests is provided after the last table. The 2008-2010 estimates are compared with the 2014-2016 estimates for the 304 regions and the 12 outcomes that are available for both time periods. For the list of outcome measures, see [Table A1](#) at the end of this section, and for the number of regions that remained the same between 2008-2010 and 2014-2016 for each state, see [Table A2](#).

- **2014-2016 NSDUH: Comparison of Population Percentages from the United States, Census Regions, States, District of Columbia, and Substate Regions:** These 52 Excel tables (and matching CSV files) contain *p* values for each outcome that can be used to test the null hypothesis of no difference between population percentages for the following types of comparisons: total United States versus census region, state, and substate region; census region versus census region, state, and substate region; state versus state and substate region; and substate region versus substate region. The methodology used to compute these *p* values is provided in a document published with these Excel tables.

Note that other products may be added to the 2014-2016 NSDUH substate homepage at a later date.

A.3. Formation and Ranking of Substate Regions

The substate regions for each state were developed in a series of communications during the fall of 2017 between SAMHSA staff and state officials responsible for the SABG application. There is extensive variation in the size and use of substate regions across the states. In some states, the substate regions are used more for administrative purposes rather than for planning purposes. The goal of the project was to provide substate-level estimates showing the geographic distribution of substance use prevalence for regions that states would find useful for planning and reporting purposes. The final substate region boundaries were based on the state's recommendations, assuming that the NSDUH sample sizes were large enough to provide estimates with adequate precision.

Most states defined regions in terms of counties or groups of counties. A few states defined the regions in terms of census tracts. Several states also requested estimates for aggregate substate regions, along with the estimates for their substate regions. An aggregate substate region is made up of two or more substate regions. These substate region definitions are available in a document titled "2014-2016 NSDUH Substate Region Definitions" (see <https://www.samhsa.gov/data/> as listed in Section A.2). Some of the states (specifically, New Hampshire, Texas, and Washington) wanted the maps to be produced only for the aggregate regions. For example, Washington has eight substate regions, and those eight regions were combined to create three aggregate regions that are used in the maps. Hence, for each measure, maps were produced for 395 regions and not for 406 regions.

The 395 substate regions used in the maps were ranked from lowest to highest for each measure and were divided into seven categories (based on estimates rounded to two decimals) designed to represent distributions that are somewhat symmetric, as in a normal distribution. Colors were assigned to all substate regions such that the third having the lowest prevalence are in blue (132 substate regions), the middle third are in white (131 substate regions), and the third with the highest prevalence are in red (132 substate regions). To further distinguish among the substate regions that display relatively higher prevalence, the "highest" third in red has been subdivided into (a) dark red for the 18 substate regions with the highest estimates, (b) medium red for the 37 substate regions with the next highest estimates, and (c) light red for the 77 substate regions in the third highest group. The "lowest" third is categorized in a similar way using three distinct shades of blue. In some cases, a group (or category) could have more or fewer substate regions because two (or more) substate regions have the same estimate (to two decimal places). When such ties occurred at the "boundary" between two groups, all substate regions with the same estimate (to two decimal places) were assigned to the lower group. The upper and lower limits of each of the seven categories shown in the map legend collectively define a continuum and are not necessarily the actual values of a particular substate region.

For example, in Figure 6 (national map showing alcohol use in the past month among persons aged 12 or older) (see the "2014-2016 NSDUH National Maps of Prevalence Estimates, by Substate Region" at <https://www.samhsa.gov/data/> as listed in Section A.2), the values on the boundary in the lowest category (group 1) correspond to Utah County in Utah (21.10 percent) and Salt Lake County in Utah (35.81 percent) and are displayed in the legend. In the next to lowest category, Region 2 in Mississippi (36.10 percent) and Region 3 in South Carolina (42.36 percent) are the regions with the lowest and highest values; however, in the continuum of the legend, the lower limit for group 2 was assigned a value of 35.82 percent because the upper limit of group 1 is 35.81 percent.

The 2014-2016 substate estimates and corresponding Bayesian CIs are available in the "2014-2016 NSDUH Substate Region Estimates: Excel Tables and CSV Files" (as mentioned in Section A.2, see <https://www.samhsa.gov/data/>). These tables also contain a sort order number and a map group indicator (= 1 for the national estimate, = 2 for census region estimates, = 3 for state-level estimates, = 4 if a region is part of the 395 substate/aggregate region-level estimates included in the maps, and = 5 for all other substate/aggregate region-level estimates not included in the maps).

In addition to the substate region estimates, comparable estimates are provided for the 50 states and the District of Columbia and also for the four census regions. Design-based estimates and corresponding CIs for the nation are also included. Because these estimates are based on 3 consecutive years of data, they are not directly comparable with the annually published state, census region, or national estimates that are based on only 2 consecutive years of NSDUH data. The U.S. Census Bureau defines the census regions as follows:

Northeast Region - Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

Midwest Region - Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

South Region - Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

West Region - Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

A.4. Comparability with Past Estimates

For the 2002 NSDUH, a number of methodological changes were introduced, including a \$30 incentive for participating in the survey, additional training for interviewers to encourage adherence to survey protocols, a change in the survey name, and a shift to the 2000 decennial census (from the 1990 census) as a basis for population counts used in sample selection, weighting, and estimation. Additional information on these methodological changes is available in a report by the OAS (2005). An unanticipated result of these changes was that the prevalence rates for 2002 were in general substantially higher than the 2001 prevalence rates. The jump in the prevalence rates between 2001 and 2002 was more than the usual year-to-year change. Because of the changes in the survey that took place in 2002, substate estimates for 1999-2001 are not comparable with the other substate estimates. It is not possible to separate the effect of the methodological changes from the true trends in substance use.

However, estimates from 2002-2004, 2004-2006, 2006-2008, 2008-2010, 2010-2012, 2012-2014, and 2014-2016 are comparable for outcome measures that were defined in a similar manner and for substate regions defined consistently across these time periods. [Table A1](#) at the end of this section lists the outcome measures for which substate estimates were produced using 2014-2016 NSDUH data and shows the outcome measures that remained comparable over time (indicated with an "X" in the table) since 2002-2004.

It is useful to note that the 2002-2004 to 2008-2010 substate estimates were produced using predictors from the 2000 census; also, the survey weights used population projections from the 2000 census. The 2010-2012, 2012-2014, and 2014-2016 estimates, on the other hand, were produced using 2010 census data. Hence, when reviewing changes between 2008-2010 and 2014-2016, it is important to note that they may be confounded with changes due to differences in the source of the predictors and the population projections (referred to as "census effects"). The impact of such census effects on national and state estimates is discussed in Section B.4.3 in Appendix B of the 2011 NSDUH national findings report (CBHSQ, 2012) and the "2011-2012 NSDUH: Impact of Using 2010 Census Data on 2010-2011 Small Area Estimates" at <https://www.samhsa.gov/data/>.

During regular data collection and processing checks for the 2011 NSDUH, data errors were identified. These errors were falsified cases submitted by field interviewers that affected the data for Pennsylvania (2006 to 2010) and Maryland (2008 and 2009). Cases with erroneous data were removed from the data files, and the remaining cases were reweighted to provide representative estimates (for more details on this data error, refer to Section A.7 of the "2011-2012 NSDUH Guide to State Tables and Summary of Small Area Estimation Methodology" at <https://www.samhsa.gov/data/>). The 2006-2008, 2008-2010, and the 2010-2012 substate estimates exclude data based on falsified cases.

In 2015, a number of changes were made to the NSDUH questionnaire and data collection procedures. These changes were intended to improve the quality of the data that were collected and to address the changing needs of substance use and mental health policy and research.⁷ Discussed here briefly is the effect of the redesign on the comparability between the 2015 NSDUH and earlier NSDUHs, specifically related to the SAE outcomes. For a more detailed discussion of the questionnaire redesign and its effect, see Section C of the 2015 NSDUH's methodological summary and definitions report (CBHSQ, 2016a) and a brief report summarizing the implications of the changes for data users (CBHSQ, 2016b).

In the alcohol section of the questionnaire, the threshold for defining binge alcohol use among females was revised from five or more drinks on an occasion to four or more drinks on an occasion to ensure consistency with federal definitions.⁸ The threshold for males in 2015 remained at five or more drinks on an occasion. Consequently, a new baseline was established in 2015 for estimates of binge alcohol for the overall population. Thus, substate small area estimates for past month binge alcohol use using combined 2014, 2015, and 2016 data were not produced. Note that this change did not affect estimates for alcohol use or alcohol use disorder.

Several changes were made to the various illicit drug modules. Specifically, changes were made to the hallucinogen, inhalant, methamphetamine, and prescription psychotherapeutic modules. For details on these specific changes, see Section C.1 of the 2015 NSDUH methodological summary and definitions report (CBHSQ, 2016a). These changes resulted in the need to revise the baseline for the following SAE outcomes: illicit drug use in the past month, nonmedical use of pain reliever in the past year,⁹ illicit drug use disorder, and needing but not receiving treatment for illicit drugs.

Additionally, changes to some of the drug modules might have affected the set of respondents in 2015 who were eligible to be asked questions about treatment for substance use. Hence, SAE outcomes on needing but not receiving treatment (for illicit drugs and alcohol) were potentially affected. Thus, substance use treatment estimates were not produced using combined 2014, 2015, and 2016 NSDUH data.

Finally, although questions on the perceptions of risk of harm from using different substances did not change in 2015, data quality checks on preliminary data and the full 2015 data

⁷ The exact changes are documented in the 2015 NSDUH's Office of Management and Budget (OMB) clearance package and in a summary report (CBHSQ, 2015b). The summary report and the 2015 NSDUH questionnaire are available on the SAMHSA website at <https://www.samhsa.gov/data/>.

⁸ The National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2016) defines binge drinking as a pattern of drinking that brings blood alcohol concentration (BAC) levels to 0.08 grams per deciliter (g/dL). This typically occurs after four drinks for women and five drinks for men in about 2 hours.

⁹ Prior to 2015, NSDUH referred to "nonmedical" use of prescription drugs. See Section C of the 2015 NSDUH methodological summary and definitions report (CBHSQ, 2016a) for further discussion about the change in terminology from nonmedical use to misuse of prescription drugs in 2015. Specifically, the approach and definition for measuring the misuse of prescription drugs were revised to include questions about any use of prescription drugs in addition to questions about misuse (previously called "nonmedical use"). Also, the definition for misuse was revised to focus on specific behaviors that indicate misuse (i.e., use in any way a doctor did not direct respondents to use prescription drugs, including use without a prescription of one's own; use in greater amounts, more often, or longer than told to take a drug; and use in any other way not directed by a doctor). Moreover, questions pertaining to specific prescription drugs focused on the past 12 months instead of the lifetime period that was used in the 2014 and prior questionnaires.

showed deviations from the expected trends for these measures. A survey redesign carries the risk that preceding changes to the questionnaire will affect how respondents answer later questions (e.g., context effects). A context effect may be said to take place when the response to a question is affected by information that is not part of the question itself. For example, the content of a preceding question may affect the interpretation of a subsequent question. Or a respondent may answer a subsequent question in a manner that is consistent with responses to a preceding question if the two questions are closely related to each other. The set of questions preceding the risk and availability module in the 2015 questionnaire had undergone a number of significant changes that could have affected the way in which respondents answered the perceived risk and availability questions. Because of these deviations, the perception of risk estimates were not produced using the combined 2014, 2015, and 2016 NSDUH data.

To summarize, several changes in the 2015 questionnaire had impacts on the comparability of the 2014 and 2015 NSDUH data. It was decided, therefore, that for those measures data across those 2 years could not be pooled, and estimates for those measures could not be produced using 2014-2016 NSDUH data. For a complete list of outcomes for which substate small area estimates are available using the 2014-2016 NSDUH data, refer to [Table A1](#).

A.5. Related Substance Use Measures

Small area estimates are produced for a number of related drug measures, such as marijuana use and illicit drug use. It might appear that one could draw conclusions by subtracting one from the other (e.g., subtracting the percentage who used cigarettes in the past month from the percentage who used tobacco products in the past month to find the percentage who used tobacco other than cigarettes in the past month). Because related measures have been estimated with different models (i.e., separate models by age group and outcome), subtracting one measure from another related measure at the substate region, state, or census region level can give misleading results, perhaps even a "negative" estimate, and should be avoided. However, these comparisons can be made at the national level because these estimates are design-based estimates. For example, at the national level, subtracting cigarette use estimates from tobacco use estimates will give the estimate of individuals who did not use cigarettes, but used other forms of tobacco.

Table A1. Outcomes, by Survey Year, for Which Substate Small Area Estimates Are Available

Measure	2002-2004	2004-2006	2006-2008	2008-2010	2010-2012	2012-2014	2014-2016
Illicit Drug Use in the Past Month	X	X	X	X	X	X	--
Marijuana Use in the Past Year	X	X	X	X	X	X	X
Marijuana Use in the Past Month	X	X	X	X	X	X	X
Perceptions of Great Risk from Smoking Marijuana Once a Month	X	X	X	X	X	X	--
First Use of Marijuana ¹	X	X	X	X	X	X	X
Illicit Drug Use Other Than Marijuana in the Past Month	X	X	X	X	X	X	--
Cocaine Use in the Past Year	X	X	X	X	X	X	X
Heroin Use in the Past Year	--	--	--	--	--	--	X
Nonmedical Use of Pain Relievers in the Past Year	X	X	X	X	X	X	--
Alcohol Use in the Past Month	X	X	X	X	X	X	X
Underage Past Month Use of Alcohol (among Individuals Aged 12 to 20)	X	X	X	X	X	X	X
Binge Alcohol Use in the Past Month	X	X	X	X	X	X	--
Underage Past Month Binge Alcohol Use (among Individuals Aged 12 to 20)	X	X	X	X	X	X	--
Perceptions of Great Risk from Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week	X	X	X	X	X	X	--
Tobacco Product Use in the Past Month	X	X	X	X	X	X	X
Cigarette Use in the Past Month	X	X	X	X	X	X	X
Perceptions of Great Risk from Smoking One or More Packs of Cigarettes per Day	X	X	X	X	X	X	--
Alcohol Use Disorder in the Past Year ²	X	X	X	X	X	X	X
Alcohol Dependence in the Past Year ²	X	X	X	X	X	X	--
Illicit Drug Use Disorder in the Past Year ²	X	X	X	X	X	X	--
Illicit Drug Dependence in the Past Year ²	X	X	X	X	X	X	--
Substance Use Disorder in the Past Year ²	X	X	X	X	X	X	--
Needing But Not Receiving Treatment for Illicit Drug Use in the Past Year	X	X	X	X	X	X	--
Needing But Not Receiving Treatment for Alcohol Use in the Past Year	X	X	X	X	X	X	--
Serious Psychological Distress (SPD) in the Past Year ³	X	X	--	--	--	--	--
Had at Least One Major Depressive Episode (MDE) in the Past Year ⁴	--	X	X	X	X	X	X
Serious Mental Illness (SMI) in the Past Year ⁵	--	--	--	X	X	X	X
Any Mental Illness (AMI) in the Past Year ⁵	--	--	--	X	X	X	X
Received Mental Health Services in the Past Year	--	--	--	--	--	--	X
Had Serious Thoughts of Suicide in the Past Year	--	--	--	X	X	X	X

X = available; -- = not available.

NOTE: The measures included in the 1999-2001 substate small area estimation (SAE) report are not included here. Because of the changes in the survey that took place in 2002, the 1999-2001 estimates are not comparable with the 2002-2004 or subsequent year estimates. Estimates using the combined 2002-2004, 2004-2006, and 2006-2008 data can be found at <https://www.samhsa.gov/data/>. Estimates using the combined 2008-2010, 2010-2012, and 2012-2014 data can also be found at <https://www.samhsa.gov/data/>.

¹ The marijuana incidence definition used here employs a simpler form of the at-risk population based on the model-based methodology. This model-based average annual incidence rate for first use of marijuana is defined as follows: *Average annual initiation of marijuana (%) = 100 * {[X₁ ÷ (0.5 * X₁ + X₂)] ÷ 2}*, where X₁ is the number of marijuana initiates in the past 24 months and X₂ is the number of individuals who never used marijuana (with the at-risk population defined as 0.5 * X₁ + X₂). Both X₁ and X₂ are based on binary measures that correspond to questions with a "yes" or "no" response option. For details on calculating the average annual rate of first use of marijuana from NSDUH data, see Section B of the "2015-2016 NSDUH: Guide to State Tables and Summary of Small Area Estimation Methodology" at <https://www.samhsa.gov/data/>.

² Substance use disorder is defined as meeting the criteria for illicit drug or alcohol dependence or abuse. Dependence or abuse is based on definitions found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* (American Psychiatric Association, 1994). For more details, see Section B.4.2 in Appendix B of the 2012 NSDUH national findings report (Center for Behavioral Health Statistics and Quality [CBHSQ], 2013b).

³ Because of questionnaire changes, SPD estimates in 2002-2004 are not comparable with the 2004-2006 SPD estimates. For details, see Section B.7 of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health* (Office of Applied Studies [OAS], 2008). Additional questionnaire changes were made in 2008 that affected past year SPD trends. However, revised past year SPD measures were created for 2005 through 2007 that are comparable with the 2008 through 2016 past year SPD measure. Substate small area estimates for 2006-2008, 2008-2010, 2010-2012, 2012-2014, and 2014-2016 were not created for this measure.

⁴ Questions used to determine MDE were added in 2004. The 2004-2006 MDE estimates are not comparable with the 2006-2008 and subsequent year estimates. For details on MDE, see Sections B.4.2 and B.4.4 in Appendix B of the 2012 NSDUH mental health findings report (CBHSQ, 2013a).

⁵ The mental illness measures are based on a predictive model and are not direct measures of diagnostic status (i.e., a small subsample of the respondents received a clinical follow-up, and these responses along with questionnaire data were used to create predictive models for all of the respondents). For details about these measures and the predictive models, see Section B.4.3 in Appendix B of the 2012 NSDUH mental health findings report (CBHSQ, 2013a).

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health, 2002-2016.

Table A2. NSDUH Substate Region Counts and Overlap, by State and Estimation Period

State	2008-2010		2012-2014		2014-2016			
	Number of Substate Regions ¹	Number of Map Regions ²	Number of Substate Regions ¹	Number of Map Regions ²	Number of Substate Regions ¹	Number of Map Regions ²	Number of Substate Regions Overlapping with 2008-2010 ³	Number of Substate Regions Overlapping with 2012-2014 ³
Total U.S.	383	362	384	362	406	395	304	345
Alabama	4	4	4	4	4	4	4	4
Alaska	4	4	4	4	4	4	4	4
Arizona	4	4	4	4	4	4	2	2
Arkansas	8	8	8	8	8	8	8	8
California	27	27	26	26	26	26	25	26
Colorado	5	5	5	5	7	7	0	0
Connecticut	5	5	5	5	5	5	5	5
Delaware	4	4	4	4	4	4	4	4
District of Columbia	8	8	8	8	8	8	8	8
Florida	18	18	18	18	18	18	16	18
Georgia	6	6	6	6	6	6	6	6
Hawaii	4	4	4	4	4	4	4	4
Idaho	7	7	7	7	7	7	5	7
Illinois	5	5	5	5	17	17	0	0
Indiana	8	8	8	8	8	8	8	8
Iowa	6	6	6	6	6	6	6	6
Kansas	6	6	6	6	5	5	0	0
Kentucky	6	6	6	6	6	6	6	6
Louisiana	5	5	6	6	6	6	4	6
Maine	7	7	8	8	8	8	6	8
Maryland	9	9	9	9	9	9	9	9
Massachusetts	6	6	6	6	6	6	6	6
Michigan	15	15	10	10	10	10	3	10
Minnesota	6	6	6	6	9	9	3	3
Mississippi	7	7	7	7	7	7	7	7
Missouri	7	7	7	7	7	7	7	7
Montana	5	5	5	5	5	5	5	5
Nebraska	6	6	6	6	6	6	6	6
Nevada	3	3	4	4	4	4	2	4
New Hampshire	5	3	5	3	5	3	5	5
New Jersey	4	4	4	4	4	4	4	4
New Mexico	5	5	5	5	6	6	4	4
New York	15	4	15	4	15	15	4	4
North Carolina	12	11	14	14	14	14	10	14

See notes at end of table.

(continued)

**Table A2. NSDUH Substate Region Counts and Overlap, by State and Estimation Period
(continued)**

State	2008-2010		2012-2014		2014-2016			
	Number of Substate Regions ¹	Number of Map Regions ²	Number of Substate Regions ¹	Number of Map Regions ²	Number of Substate Regions ¹	Number of Map Regions ²	Number of Substate Regions Overlapping with 2008-2010 ³	Number of Substate Regions Overlapping with 2012-2014 ³
North Dakota	5	5	7	7	8	8	2	6
Ohio	21	21	21	21	21	21	21	21
Oklahoma	7	7	7	7	7	7	7	7
Oregon	6	6	6	6	6	6	6	6
Pennsylvania	13	13	13	13	13	13	13	13
Rhode Island	4	4	4	4	7	7	0	0
South Carolina	4	4	4	4	4	4	2	4
South Dakota	7	7	5	5	5	5	0	5
Tennessee	7	7	7	7	7	7	5	7
Texas	15	11	15	11	15	11	15	15
Utah	6	6	6	6	7	7	5	5
Vermont	4	4	4	4	4	4	4	4
Virginia	5	5	5	5	5	5	5	5
Washington	6	3	8	3	8	3	2	8
West Virginia	6	6	6	6	6	6	6	6
Wisconsin	6	6	6	6	6	6	6	6
Wyoming	9	9	9	9	9	9	9	9

¹ Number of regions only include the main substate regions and not the aggregate regions.

² More information on the map regions can be found in Section A.3.

³ The names of some of the substate regions have changed across the time periods. However, as long as the two regions are made of the same counties or tracts, they are included in the count of overlapping regions.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health, 2008-2016.

Section B: Substate Region Estimation Methodology

The survey-weighted hierarchical Bayes (SWHB) methodology used in the production of state estimates from the 1999 to 2016 National Surveys on Drug Use and Health (NSDUHs) also was used in the production of the 2014-2016 substate estimates. The SWHB methodology is described by Folsom, Shah, and Vaish (1999). A general model description is given in Section B.1. A brief discussion of the precision of the estimates and interpretation of the Bayesian confidence intervals (CIs) is given in Section B.2. The goals of the small area estimation (SAE) modeling, the general model description, and the implementation of SAE modeling remain the same and are described in Appendix E of the 2001 state report (Wright, 2003).

Small area estimates obtained using the SWHB methodology are design consistent (i.e., for states or substate areas with large sample sizes, the small area estimates are close to the corresponding robust design-based estimates). The substate small area estimates when aggregated by using the appropriate population totals result in national small area estimates that are very close to the national design-based estimates. However, for many reasons, including internal consistency, it is desirable to have the national small area estimates exactly match the national design-based estimates. Beginning in 2002, exact benchmarking was introduced (see Appendix A, Section A.4, in Wright & Sathe, 2005). The 2014-2016 substate small area estimates have been benchmarked to the national design-based estimates.

B.1. General SAE Model Description

The model can be characterized as a complex mixed¹⁰ model (including both fixed and random effects) of the following form:

$$\log[\pi_{aijk} / (1 - \pi_{aijk})] = x'_{aijk} \beta_a + \eta_{ai} + \nu_{aij},$$

where π_{aijk} is the probability of engaging in the behavior of interest (e.g., using marijuana in the past month) for person- k belonging to age group- a in substate region- j of state- i .

¹⁰ The use of mixed models (fixed and random effects) allows additional error components (random effects) to be included. These account for differences between states and within-state variations that are not taken into account by the predictor variables (fixed effects) alone. It is also difficult (if not impossible) to produce valid mean squared errors (MSEs) for small area estimates based solely on a fixed-effect national regression model (i.e., synthetic estimation) (Rao, 2003, p. 52). The mixed models produce estimates that are approximately represented by a weighted combination of the direct estimate from the substate data and a regression estimate from the national model. The regression coefficients of the national model are estimated using data from all of the substate areas (i.e., borrowing strength), and the regression estimate for a particular substate area is obtained by applying the national model to the substate-specific predictor data. The regression estimate for the substate area is then combined with the direct estimate from the substate data in a weighted combination where the weights are obtained by minimizing the MSE (variance + squared bias) of the small area estimate.

Let x_{aijk} denote a $p_a \times 1$ vector of the auxiliary (predictor) variables associated with age group- a (12 to 17, 18 to 25, 26 to 34, and 35 or older) and β_a denote the associated vector of the regression parameters. The age group-specific vectors of the auxiliary variables are defined for every block group in the nation and also include person-level demographic variables, such as race/ethnicity and gender. The auxiliary variables include block group, census tract, county, and state-level data. These predictor variables include demographic and socioeconomic data from the American Community Survey (ACS), population projections obtained from Claritas,¹¹ food stamp participation rates from the U.S. Census Bureau, Uniform Crime Report (UCR) arrest totals from the Federal Bureau of Investigation (FBI), per capita income from the Bureau of Economic Analysis (BEA), unemployment rates from the Bureau of Labor Statistics (BLS), mortality rates from the National Center for Health Statistics (NCHS), treatment rates from the National Survey of Substance Abuse Treatment Services (N-SSATS), and Block Grant awards, cost of services, and total taxable resources from the Substance Abuse and Mental Health Services Administration (SAMHSA). For a complete list of predictors, refer to Section B of the "2015-2016 NSDUH Guide to State Tables and Summary of Small Area Estimation Methodology" at <https://www.samhsa.gov/data/>.

The vectors $\eta_i = (\eta_{1i}, \dots, \eta_{Ai})'$ and $v_{ij} = (v_{1ij}, \dots, v_{Aij})'$, defined as state- and substate-level random effects, respectively, are assumed to be mutually independent with $\eta_i \sim N_A(0, D_\eta)$ and $v_{ij} \sim N_A(0, D_V)$, where A is the total number of individual age groups modeled (generally, $A = 4$). For hierarchical Bayes (HB) estimation purposes, an improper uniform prior distribution¹² is assumed for β_a , and proper Wishart prior distributions are assumed for D_η^{-1} and D_V^{-1} . The HB solution for π_{aijk} involves a series of complex Markov Chain Monte Carlo (MCMC) steps to generate values of the desired fixed and random effects from the underlying joint distribution. The basic process is described in Folsom et al. (1999), Shah, Barnwell, Folsom, and Vaish (2000), and Wright (2003). Once the required number of MCMC samples for the parameters of interest are generated and tested for convergence properties (see Raftery & Lewis, 1992), the small area estimates for each age group \times race/ethnicity \times gender cell within a block group can be obtained. These block group-level small area estimates then can be aggregated using the appropriate population projections to form substate- and state-level small area estimates for the desired age group(s). These small area estimates then are benchmarked to the national design-based estimates (for details on exact benchmarking, see Section B.5 of the

¹¹ Claritas is a market research firm headquartered in Ithaca, New York (see <https://www.claritas.com/>). When the Claritas data were obtained for the 2014-2016 NSDUHs, Claritas was affiliated with Nielsen Holdings, from which they became independent in January 2017.

¹² Improper noninformative priors were used for the fixed regression coefficients. Because NSDUH's sample size is very large (approximately 200,000 observations across 3 years), it can be said with certainty that the posterior distribution for the fixed regression coefficients will be proper. For the W1 and W2 matrices, noninformative proper inverse Wishart prior distributions were used so that proper posterior distributions are guaranteed. Noninformative priors are used so that the data speak for themselves and inferences are unaffected by information external to the current data. For further information on Bayesian inference and analysis, see Box and Tiao (1992) and Gelman, Carlin, Stern, and Rubin (2003).

"2015-2016 NSDUH Guide to State Tables and Summary of Small Area Estimation Methodology" at <https://www.samhsa.gov/data/>).

Because the objective here was to produce small area estimates for substate regions, it was decided to ratio adjust the person-level sampling weights to match population projections available from Claritas at the substate \times age group \times gender level. These adjusted sampling weights are used in the estimation because they reflect the demography of the substate regions better than the unadjusted weights. This ratio adjustment was done at the substate region (406 regions) \times age group (12 to 17, 18 to 25, 26 to 34, and 35 or older) \times gender (male and female) level collectively over 3 years (2014, 2015, and 2016) of data.

The SAE methodology used here tends to borrow strength from both the national model and the state-level random effects. Estimates for substate regions with smaller sample sizes tend to be shrunk more toward the corresponding state and national prevalence estimates than substate regions with larger sample sizes. This methodology tends to cluster the small sample substate estimates around their state prevalence estimates. Thus, relatively high estimates for substate regions with small sample sizes tend to shrink toward the state prevalence estimates, while relatively low estimates tend to increase toward the state prevalence estimates. On the other hand, for substate regions with large sample sizes, the methodology produces estimates that are close to the weighted average of the sample data in that substate region. In addition, these estimates are design consistent so that, as the sample size for a substate region increases, the estimate approaches the corresponding design-based estimate.

B.2. Precision Validation of the Estimates

The primary purpose of producing substate estimates is to give policy officials and data users a better perspective on the range of prevalence estimates within and across states. Because the data were collected in a consistent manner by field interviewers who adhered to the same procedures and administered the same questions across all states and substate regions, the results are comparable within and across the 50 states and the District of Columbia.

The 95 percent Bayesian CI associated with each estimate provides a measure of the accuracy of the estimate. It defines the range within which the true value can be expected to fall 95 percent of the time. For example, the estimated prevalence of past month use of marijuana in Region 1 in Alabama is 5.1 percent, and the 95 percent CI ranges from 4.0 to 6.5 percent.¹³ Therefore, the probability is 0.95 that the true value is within that range. The CI indicates the uncertainty due to both sampling variability and model bias. The key assumption underlying the validity of the CIs is that the state- and substate-level error (or bias correction) terms in the models behave like random effects with zero means and common variance components.

A comparison of the standard errors (SEs) among substate regions with small ($n \leq 500$), medium ($500 < n \leq 1,000$), and large ($n > 1,000$) sample sizes for certain measures shows that the small area estimates behave in predictable ways. Regardless of whether the substate region is from a state with a larger annual sample size or one of the other states, the sizes of the CIs are

¹³ See Table 2 in the "2014-2016 NSDUH Substate Region Estimates: Excel Tables and CSV Files" at <https://www.samhsa.gov/data/>.

very similar and are primarily a function of the sample size of the substate region and the prevalence estimate of the measure. Substate regions with large sample sizes had the smallest SEs. For past month use of alcohol, where the national prevalence for all individuals aged 12 or older was 51.7 percent (for 2014-2016), the average relative standard error (RSE)¹⁴ was about 4.6 percent, and the RSE for substate regions with a large sample size was about 3.0 percent. For substate regions with a medium sample size, the average RSE was 3.9 percent; for small sample sizes, the average RSE was 5.2 percent. For past month use of marijuana (with a national prevalence of 8.5 percent), the average RSE was 9.1 percent for substate regions with large samples. For medium sample sizes, the average RSE was 11.2 percent, and for small samples, the RSE was 13.7 percent, whereas the overall national average RSE was 12.7 percent. Substance use measures with lower prevalence rates, such as past year use of cocaine (1.8 percent nationally), displayed larger average RSEs. For substate regions with large sample sizes, the average RSE was 18.5 percent. For those with medium sample sizes, the average RSE was 22.3 percent, and for those with small sample sizes, the average RSE was 26.4 percent. The overall national RSE for past year use of cocaine was 24.6 percent.

¹⁴ The RSE of an estimate is the posterior SE divided by the estimate itself. Note that the RSEs have been calculated based on the unbenchmarked small area estimates.

Section C: Sample Sizes, Response Rates, and Population Estimates

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 NSDUHs

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Total United States	588,564	493,010	395,003	79.83%	281,746	203,916	267,494,781	69.62%	55.58%
Northeast	130,212	109,845	83,084	73.82%	55,945	38,736	47,754,274	65.92%	48.66%
Midwest	135,800	114,520	94,528	81.59%	66,524	47,738	56,630,386	69.19%	56.45%
South	192,981	159,911	130,205	82.66%	92,574	68,382	100,115,205	71.32%	58.96%
West	129,571	108,734	87,186	78.16%	66,703	49,060	62,994,916	70.12%	54.80%
Alabama	8,433	6,746	5,587	82.74%	3,992	2,900	4,066,740	68.88%	56.99%
Region 1	2,309	1,923	1,643	84.67%	1,167	844	1,143,525	68.33%	57.85%
Region 2	2,693	2,201	1,687	76.94%	1,245	855	1,300,200	64.48%	49.61%
Region 3	1,623	1,174	1,020	86.70%	728	545	727,198	72.93%	63.23%
Region 4	1,808	1,448	1,237	85.70%	852	656	895,817	73.18%	62.71%
Alaska	9,546	7,113	5,743	80.61%	4,084	2,888	583,292	69.48%	56.01%
Anchorage	3,829	3,059	2,448	79.97%	1,748	1,275	239,206	70.37%	56.27%
Northern	2,197	1,464	1,172	79.95%	855	592	129,318	67.55%	54.01%
South Central	2,508	1,903	1,534	80.95%	1,083	762	153,717	70.79%	57.30%
Southeast	1,012	687	589	83.66%	398	259	61,051	65.96%	55.18%
Arizona	8,457	6,429	5,443	84.88%	3,945	2,949	5,644,790	73.47%	62.36%
Central	5,037	3,991	3,348	84.27%	2,501	1,860	3,371,572	72.65%	61.22%
North	901	712	616	86.59%	393	284	681,935	72.39%	62.68%
South	2,519	1,726	1,479	85.59%	1,051	805	1,591,283	75.90%	64.97%
South A	1,574	1,101	954	86.75%	602	465	870,076	77.03%	66.82%
South B	945	625	525	83.53%	449	340	721,207	74.34%	62.10%
Arkansas	8,585	7,050	5,992	85.13%	3,986	2,937	2,459,210	70.42%	59.94%
Catchment Area 1	1,329	1,126	913	81.39%	655	464	405,083	67.96%	55.31%
Catchment Area 2	1,158	900	738	82.45%	473	359	297,808	74.71%	61.60%
Catchment Area 3	1,131	922	829	89.59%	575	442	326,336	76.04%	68.13%
Catchment Area 4	812	707	605	85.84%	421	313	216,727	70.69%	60.68%
Catchment Area 5	1,313	1,052	923	87.54%	633	454	367,776	66.57%	58.27%
Catchment Area 6	749	597	522	87.76%	315	251	171,970	74.05%	64.99%
Catchment Area 7	555	437	403	92.54%	234	185	189,124	75.72%	70.07%
Catchment Area 8	1,538	1,309	1,059	81.08%	680	469	484,385	65.16%	52.83%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
California	33,713	30,426	22,640	74.04%	19,568	13,954	32,482,792	67.98%	50.34%
Region 1R	1,011	866	729	84.55%	520	394	817,672	74.77%	63.22%
Region 2R	996	845	668	79.21%	553	421	877,839	72.74%	57.62%
Region 3R (Sacramento)	1,500	1,371	967	70.62%	767	580	1,229,336	72.19%	50.98%
Region 4R	1,275	1,153	915	79.80%	691	489	1,127,236	68.12%	54.36%
Region 5R (San Francisco)	978	842	552	66.40%	380	231	766,151	56.74%	37.68%
Region 6 (Santa Clara)	1,666	1,537	1,205	78.54%	1,065	761	1,578,447	68.44%	53.75%
Region 7R (Contra Costa)	1,010	945	732	77.56%	615	456	930,884	71.67%	55.59%
Region 8R (Alameda)	1,267	1,148	936	81.34%	735	535	1,344,459	71.07%	57.81%
Region 9R (San Mateo)	623	572	479	83.73%	372	263	637,069	69.06%	57.82%
Region 10	980	864	639	74.65%	557	374	1,078,944	64.83%	48.40%
Region 11 (Los Angeles)	8,376	7,815	5,656	72.73%	5,106	3,443	8,495,997	63.21%	45.97%
LA SPA 1 and 5	873	818	491	61.58%	451	319	916,998	66.96%	41.23%
LA SPA 2	1,878	1,766	1,253	71.08%	1,170	748	1,870,818	60.16%	42.76%
LA SPA 3	1,351	1,271	898	71.16%	797	547	1,514,521	64.79%	46.11%
LA SPA 4	1,052	947	686	72.66%	499	295	994,517	53.76%	39.06%
LA SPA 6	737	686	571	83.83%	591	438	816,244	71.13%	59.63%
LA SPA 7	914	870	667	76.51%	702	465	1,075,611	63.29%	48.42%
LA SPA 8	1,571	1,457	1,090	74.74%	896	631	1,307,289	64.23%	48.01%
Region 12R	699	603	495	82.07%	413	314	716,288	70.62%	57.96%
Regions 13 and 19R	2,037	1,781	1,304	66.66%	1,249	942	2,065,736	72.47%	48.31%
Region 14 (Orange)	2,629	2,431	1,555	62.95%	1,432	937	2,678,523	60.92%	38.35%
Region 15R (Fresno)	768	697	535	76.75%	500	362	781,651	69.67%	53.47%
Region 16R (San Diego)	3,124	2,871	1,930	67.16%	1,530	1,111	2,747,477	70.22%	47.16%
Region 17R	1,571	1,358	1,132	83.71%	1,012	801	1,208,114	75.20%	62.95%
Region 18R (San Bernardino)	1,580	1,426	1,113	78.48%	1,138	837	1,735,180	70.87%	55.61%
Region 20R	661	596	516	86.51%	474	364	787,695	75.78%	65.56%
Region 21R	962	705	582	82.68%	459	339	878,093	70.69%	58.45%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Colorado	7,814	6,657	5,395	80.86%	4,009	2,922	4,525,628	70.75%	57.21%
Region 1	1,539	1,137	932	80.96%	632	441	751,752	70.62%	57.18%
Region 2	574	486	399	82.03%	288	205	349,899	62.59%	51.35%
Region 3	1,905	1,716	1,372	80.00%	1,155	844	1,177,330	69.67%	55.74%
Region 4	588	446	385	86.34%	241	190	308,602	77.30%	66.75%
Region 5	908	822	656	79.44%	504	376	568,069	73.84%	58.66%
Region 6	1,332	1,233	949	76.98%	692	500	769,114	70.38%	54.17%
Region 7	968	817	702	86.20%	497	366	600,861	72.82%	62.76%
Connecticut	8,642	7,561	5,864	77.60%	4,241	2,881	3,055,203	65.36%	50.72%
Eastern	1,185	965	788	81.97%	529	377	371,164	68.06%	55.79%
North Central	2,497	2,217	1,726	77.56%	1,183	822	854,958	66.84%	51.84%
Northwestern	1,477	1,329	1,039	78.28%	781	535	526,857	69.98%	54.78%
South Central	2,058	1,763	1,419	80.49%	1,018	687	713,696	63.77%	51.33%
Southwest	1,425	1,287	892	69.63%	730	460	588,528	58.68%	40.86%
Delaware	8,426	7,199	5,491	76.48%	3,917	2,824	793,943	70.82%	54.16%
Kent	1,517	1,326	1,067	80.49%	758	563	143,583	71.22%	57.32%
New Castle (excluding Wilmington City)	4,264	3,887	2,842	73.30%	2,177	1,539	406,917	70.31%	51.53%
Sussex	2,104	1,522	1,226	80.72%	734	518	179,873	69.42%	56.03%
Wilmington City	541	464	356	77.29%	248	204	63,569	79.71%	61.60%
District of Columbia	15,447	13,166	9,321	70.65%	3,710	2,826	573,161	73.82%	52.15%
Ward 1	1,748	1,463	1,088	75.26%	411	300	71,811	68.08%	51.24%
Ward 2	2,493	2,137	1,238	57.97%	404	292	76,179	70.10%	40.64%
Ward 3	1,877	1,424	1,018	71.57%	411	293	73,589	72.68%	52.02%
Ward 4	1,888	1,707	1,286	75.24%	530	395	70,867	73.58%	55.36%
Ward 5	1,677	1,486	1,053	69.88%	430	334	72,601	74.76%	52.25%
Ward 6	2,505	2,140	1,568	73.29%	569	455	74,876	76.52%	56.08%
Ward 7	1,598	1,423	1,020	70.70%	451	362	66,937	77.99%	55.14%
Ward 8	1,661	1,386	1,050	75.71%	504	395	66,301	75.82%	57.40%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Florida	32,081	25,876	20,751	80.02%	13,844	10,152	17,242,820	69.51%	55.62%
Broward (Circuit 17)	2,647	2,056	1,544	74.58%	1,052	772	1,594,764	70.64%	52.69%
Central I	3,856	3,402	2,916	85.80%	2,173	1,627	2,176,032	72.24%	61.98%
Circuit 9	2,154	1,946	1,684	86.75%	1,395	1,066	1,296,722	73.81%	64.03%
Circuit 18	1,702	1,456	1,232	84.65%	778	561	879,310	70.25%	59.47%
Central II	9,941	7,712	6,115	78.96%	3,796	2,777	4,831,147	69.43%	54.82%
Circuit 6	2,549	2,103	1,596	74.85%	1,004	686	1,266,166	65.47%	49.00%
Circuit 10	1,351	1,130	976	86.63%	642	520	650,370	79.61%	68.97%
Circuit 12	1,514	977	773	79.64%	434	324	691,693	75.57%	60.18%
Circuit 13 (Hillsborough)	2,516	2,168	1,715	79.04%	1,119	820	1,138,621	68.02%	53.76%
Circuit 20	2,011	1,334	1,055	78.60%	597	427	1,084,296	65.07%	51.14%
Northeast	5,866	4,727	3,894	82.62%	2,310	1,614	3,221,106	66.12%	54.63%
Circuit 4	1,929	1,595	1,262	79.22%	761	530	993,903	65.14%	51.60%
Circuit 5	1,830	1,394	1,152	82.89%	655	448	965,790	68.46%	56.75%
Circuit 7	1,342	1,105	927	84.31%	577	397	788,951	61.15%	51.55%
Circuit 8 plus Columbia, Dixie, Hamilton, Lafayette, and Suwannee	765	633	553	87.24%	317	239	472,462	72.45%	63.21%
Northwest	2,470	2,032	1,738	85.63%	1,205	927	1,275,635	73.94%	63.31%
Circuit 1	1,183	1,034	886	85.81%	603	454	624,250	71.06%	60.97%
Circuit 2 plus Madison and Taylor	849	668	567	85.28%	422	334	388,803	76.66%	65.37%
Circuit 14	438	330	285	85.75%	180	139	262,582	77.04%	66.06%
South (Circuits 11 and 16)	3,853	3,253	2,494	76.30%	1,900	1,422	2,378,649	70.75%	53.99%
Southeast	3,448	2,694	2,050	76.45%	1,408	1,013	1,765,488	66.15%	50.58%
Circuit 15 (Palm Beach)	2,294	1,802	1,328	74.30%	954	667	1,213,150	63.74%	47.36%
Circuit 19	1,154	892	722	80.89%	454	346	552,337	71.18%	57.58%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Georgia	11,327	9,535	7,613	79.83%	6,019	4,555	8,354,200	72.40%	57.80%
Region 1	2,724	2,365	1,990	84.12%	1,547	1,119	2,154,037	69.26%	58.27%
Region 2	1,633	1,376	1,137	82.85%	870	676	1,069,386	73.31%	60.74%
Region 3	3,536	3,019	2,195	72.66%	1,887	1,407	2,498,830	71.14%	51.69%
Region 4	681	568	497	87.43%	337	285	515,403	83.94%	73.39%
Region 5	1,257	961	789	81.95%	620	489	949,323	76.48%	62.68%
Region 6	1,496	1,246	1,005	80.42%	758	579	1,167,221	73.09%	58.78%
Hawaii	10,030	8,428	6,371	75.28%	4,186	2,992	1,162,034	69.58%	52.38%
Hawaii Island	1,512	1,227	1,069	86.51%	640	476	155,455	73.18%	63.31%
Honolulu	6,745	5,691	4,045	71.05%	2,740	1,956	818,697	68.81%	48.89%
Kauai	638	544	468	86.15%	317	230	56,499	74.09%	63.83%
Maui	1,135	966	789	81.69%	489	330	131,383	67.37%	55.03%
Idaho	6,605	5,654	4,849	85.84%	3,973	3,024	1,351,967	74.17%	63.67%
Region 1	1,047	817	633	78.61%	463	305	189,702	64.11%	50.39%
Region 2	441	380	315	82.90%	231	180	94,958	77.36%	64.13%
Region 3	1,056	949	821	86.25%	731	566	213,811	75.76%	65.35%
Region 4	1,815	1,652	1,427	86.46%	1,121	866	389,716	75.90%	65.62%
Region 5	880	715	638	88.72%	529	421	155,306	77.97%	69.17%
Region 6	438	352	308	87.65%	259	186	100,522	69.16%	60.62%
Region 7	928	789	707	89.89%	639	500	207,951	75.13%	67.54%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Illinois	21,229	18,462	13,547	73.46%	10,869	7,229	10,726,139	64.08%	47.08%
Region 1 (Cook)	8,592	7,394	4,692	63.86%	3,936	2,539	4,372,169	62.36%	39.83%
Region 1.1 (Far North Side)	771	702	433	61.82%	284	172	401,000	62.16%	38.43%
Region 1.2 (Northwest Side)	463	402	281	70.43%	266	156	226,723	56.71%	39.95%
Region 1.3 (North Central Side)	923	784	300	38.96%	234	133	401,961	57.82%	22.52%
Region 1.4 (West Side)	938	787	353	43.97%	315	222	392,394	65.81%	28.94%
Region 1.5 (South Side)	822	675	413	61.82%	372	251	551,374	69.79%	43.15%
Region 1.6 (Southwest Side)	821	688	424	61.81%	434	273	303,419	59.90%	37.03%
Region 1.7 (Suburban Cook)	3,854	3,356	2,488	74.38%	2,031	1,332	2,095,299	62.15%	46.23%
Region 2	6,289	5,758	4,386	75.95%	3,697	2,449	3,393,930	63.84%	48.49%
Region 2a (DuPage)	1,502	1,403	991	70.74%	833	518	782,530	59.24%	41.91%
Region 2b	3,183	2,914	2,312	79.33%	2,057	1,375	1,820,605	64.45%	51.13%
Region 2c (Winnebago)	559	502	364	70.06%	231	166	239,220	73.71%	51.64%
Region 2d	1,045	939	719	76.59%	576	390	551,575	65.16%	49.90%
Region 3	2,596	2,210	1,881	85.11%	1,419	960	1,208,296	64.79%	55.15%
Region 3a (Champaign)	357	322	276	85.31%	229	154	172,198	64.26%	54.82%
Region 3b	2,239	1,888	1,605	85.08%	1,190	806	1,036,097	64.89%	55.21%
Region 4	1,639	1,393	1,208	86.82%	820	584	753,290	69.65%	60.46%
Region 4a (Sangamon)	369	324	277	85.76%	190	138	167,678	72.32%	62.02%
Region 4b	1,270	1,069	931	87.14%	630	446	585,612	68.91%	60.05%
Region 5	2,113	1,707	1,380	81.11%	997	697	998,455	67.52%	54.76%
Region 5a	875	684	539	78.80%	382	274	444,704	69.76%	54.97%
Region 5b	1,238	1,023	841	82.64%	615	423	553,751	66.19%	54.70%
Indiana	7,793	6,519	5,266	80.79%	3,956	2,873	5,483,151	69.99%	56.55%
Central	2,193	1,972	1,480	75.15%	1,194	856	1,455,692	70.38%	52.89%
East	644	485	426	87.89%	314	232	459,504	72.55%	63.77%
North Central	1,089	907	752	82.61%	519	391	769,741	72.96%	60.28%
Northeast	752	653	552	84.38%	415	304	540,515	70.62%	59.59%
Northwest	799	677	556	81.93%	471	332	620,599	62.56%	51.26%
Southeast	840	706	603	85.56%	425	305	588,921	70.81%	60.58%
Southwest	604	529	411	78.03%	274	206	428,875	71.73%	55.97%
West	872	590	486	82.17%	344	247	619,304	67.81%	55.72%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Iowa	8,457	7,230	6,192	85.61%	4,011	2,902	2,597,970	70.57%	60.41%
Central	1,557	1,374	1,121	81.57%	765	529	472,094	66.89%	54.57%
North Central	978	799	686	85.80%	438	320	287,303	70.40%	60.40%
Northeast	1,979	1,746	1,515	86.75%	1,016	734	631,363	71.09%	61.67%
Northwest	1,318	1,101	1,010	91.80%	602	445	394,239	69.87%	64.15%
Southeast	1,881	1,620	1,336	82.25%	854	625	551,512	72.10%	59.31%
Southwest	744	590	524	89.00%	336	249	261,459	74.40%	66.22%
Kansas	7,466	6,477	5,515	85.10%	4,010	2,964	2,364,482	72.14%	61.39%
Northeast	3,697	3,312	2,673	80.50%	2,026	1,485	1,182,405	71.29%	57.39%
Northwest and North Central	551	457	407	89.17%	243	168	188,357	69.46%	61.94%
South Central	2,249	1,912	1,713	89.72%	1,225	928	681,690	74.69%	67.01%
Southeast	510	415	375	90.32%	252	182	175,731	65.82%	59.44%
Southwest	459	381	347	91.30%	264	201	136,298	76.56%	69.90%
Kentucky	8,187	6,666	5,626	84.54%	4,000	2,837	3,668,395	67.98%	57.47%
Adanta, Cumberland River, and Lifeskills	1,413	1,088	942	87.04%	641	438	614,496	66.01%	57.46%
Bluegrass, Comprehend, and North Key	2,408	1,992	1,707	85.86%	1,249	874	1,078,518	67.22%	57.71%
Centerstone	1,805	1,532	1,294	84.31%	905	706	814,353	72.59%	61.20%
Communicare and River Valley	723	609	531	87.29%	397	263	408,784	61.58%	53.75%
Four Rivers and Pennyroyal	834	693	553	79.51%	366	257	343,762	69.32%	55.12%
Kentucky River, Mountain, and Pathways	1,004	752	599	80.33%	442	299	408,482	68.42%	54.96%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Louisiana	7,999	6,538	5,480	84.25%	3,912	2,908	3,816,673	72.37%	60.97%
Regions 1 and 10	1,541	1,311	1,083	83.26%	776	568	746,613	70.59%	58.77%
Region 1	657	527	446	85.04%	319	244	389,722	76.99%	65.47%
Region 10 (Jefferson)	884	784	637	82.44%	457	324	356,891	67.17%	55.37%
Regions 2 and 9	2,163	1,809	1,519	84.62%	1,105	816	1,013,680	75.82%	64.16%
Region 3	744	637	563	88.53%	410	328	327,511	77.86%	68.93%
Regions 4, 5, and 6	2,038	1,572	1,267	80.71%	897	629	979,634	66.21%	53.44%
Regions 7 and 8	1,513	1,209	1,048	87.24%	724	567	749,235	73.89%	64.46%
Maine	11,560	8,526	7,222	84.98%	4,024	2,926	1,155,877	71.91%	61.10%
Aroostook/Downeast	1,528	1,036	937	90.88%	520	407	138,205	79.60%	72.34%
Aroostook	740	547	490	90.10%	294	240	61,755	83.31%	75.07%
Downeast	788	489	447	91.70%	226	167	76,450	74.61%	68.41%
Central	1,382	1,038	854	82.70%	445	340	150,204	76.56%	63.31%
Cumberland	2,435	1,943	1,596	82.49%	975	654	248,377	68.13%	56.20%
Midcoast	1,210	883	756	85.86%	396	294	128,172	72.63%	62.36%
Penquis	1,435	1,083	965	89.42%	473	359	149,029	75.37%	67.39%
Western	1,869	1,292	1,087	84.54%	615	454	167,659	71.38%	60.34%
York	1,701	1,251	1,027	81.81%	600	418	174,230	65.35%	53.46%
Maryland	7,209	6,389	4,820	74.94%	3,904	2,907	5,011,465	71.70%	53.73%
Anne Arundel	658	609	450	72.95%	372	278	471,453	73.44%	53.58%
Baltimore City	982	812	633	77.89%	495	388	518,452	76.60%	59.67%
Baltimore County	934	831	554	65.85%	401	292	698,887	70.41%	46.37%
Montgomery	1,194	1,115	834	73.77%	706	534	860,532	73.79%	54.44%
North Central	609	566	442	77.93%	351	255	402,195	68.74%	53.56%
Northeast	594	520	413	78.91%	325	224	419,191	67.23%	53.05%
Prince George's	942	870	603	69.42%	540	385	736,311	67.62%	46.94%
South	638	558	463	82.87%	357	278	480,838	74.88%	62.05%
West	658	508	428	84.22%	357	273	423,607	70.79%	59.62%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Massachusetts	10,014	8,753	6,564	75.36%	4,624	2,936	5,813,831	62.04%	46.75%
Boston	1,201	1,056	694	66.34%	540	336	730,029	59.66%	39.58%
Central	1,235	1,137	867	76.34%	618	390	749,026	62.50%	47.72%
Metrowest	2,203	2,033	1,514	74.74%	1,036	643	1,352,593	60.69%	45.35%
Northeast	2,016	1,898	1,474	78.00%	1,095	706	1,144,574	62.23%	48.54%
Southeast	2,049	1,508	1,180	77.94%	778	498	1,109,094	63.59%	49.56%
Western	1,310	1,121	835	75.43%	557	363	728,515	63.44%	47.86%
Michigan	20,865	17,084	14,160	82.78%	9,963	7,279	8,390,651	70.32%	58.22%
Region 1	913	625	541	86.61%	332	245	273,965	71.09%	61.57%
Region 2	1,086	733	612	83.58%	350	244	439,495	70.09%	58.59%
Region 3	2,268	1,983	1,676	84.38%	1,336	1,013	1,033,763	73.73%	62.21%
Region 4	1,888	1,603	1,359	84.13%	952	727	708,970	74.97%	63.06%
Region 5	3,920	3,013	2,585	85.82%	1,747	1,365	1,408,645	76.76%	65.88%
Region 6	1,346	1,191	981	82.47%	746	562	680,057	72.11%	59.47%
Region 7	3,627	2,865	2,236	77.84%	1,661	1,160	1,471,779	65.75%	51.18%
Region 8	2,540	2,316	1,847	79.75%	1,257	860	1,056,401	66.75%	53.23%
Region 9	1,690	1,556	1,279	81.99%	908	600	724,098	61.26%	50.23%
Region 10	1,587	1,199	1,044	87.13%	674	503	593,478	71.10%	61.95%
Minnesota	7,461	6,538	5,446	83.28%	3,927	2,880	4,574,972	72.39%	60.29%
Regions 1 and 2	959	730	601	82.13%	375	256	454,682	67.60%	55.52%
Region 1	402	333	258	76.79%	162	106	171,843	65.83%	50.55%
Region 2	557	397	343	86.45%	213	150	282,840	68.82%	59.50%
Regions 3 and 4	1,435	1,170	998	85.32%	714	529	778,084	74.61%	63.66%
Region 3	339	259	215	83.06%	161	118	271,946	74.14%	61.58%
Region 4	1,096	911	783	86.00%	553	411	506,138	74.75%	64.28%
Regions 5 and 6	1,191	1,032	913	88.51%	699	490	847,281	68.01%	60.20%
Region 5	589	501	450	89.83%	377	272	428,215	68.62%	61.64%
Region 6	602	531	463	87.27%	322	218	419,066	67.29%	58.72%
Region 7	3,876	3,606	2,934	81.34%	2,139	1,605	2,494,926	73.80%	60.03%
Region 7A (Hennepin)	1,624	1,534	1,230	80.19%	925	690	1,023,049	75.17%	60.28%
Region 7B (Ramsey)	742	661	548	82.89%	395	305	447,005	77.22%	64.00%
Region 7C	1,510	1,411	1,156	81.84%	819	610	1,024,872	70.98%	58.09%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Mississippi	7,135	5,723	4,856	84.99%	3,710	2,764	2,447,101	72.55%	61.66%
Region 1	1,587	1,328	1,160	87.49%	925	692	556,236	73.32%	64.14%
Region 2	900	648	518	79.86%	385	316	298,326	76.60%	61.17%
Region 3	998	793	704	88.90%	526	393	341,474	71.21%	63.30%
Region 4	1,230	1,077	851	79.03%	688	507	454,881	73.95%	58.44%
Region 5	436	292	261	90.09%	189	137	147,446	71.48%	64.39%
Region 6	906	717	659	91.99%	479	364	253,078	73.75%	67.85%
Region 7	1,078	868	703	81.37%	518	355	395,660	66.70%	54.27%
Missouri	7,772	6,457	5,611	86.84%	3,894	2,858	5,053,610	70.60%	61.31%
Central	1,066	840	746	88.85%	498	361	686,509	70.27%	62.43%
Eastern	2,690	2,327	2,043	87.77%	1,382	1,018	1,756,158	70.85%	62.18%
Eastern (St. Louis City and County)	1,606	1,328	1,160	87.33%	768	580	1,104,367	73.46%	64.16%
Eastern (excluding St. Louis)	1,084	999	883	88.34%	614	438	651,791	67.84%	59.93%
Northwest	1,891	1,598	1,358	84.83%	966	722	1,224,829	72.21%	61.26%
Northwest (Jackson)	957	822	681	82.47%	509	391	559,340	73.19%	60.37%
Northwest (excluding Jackson)	934	776	677	87.31%	457	331	665,490	71.19%	62.16%
Southeast	848	685	606	88.51%	441	343	598,268	75.10%	66.48%
Southwest	1,277	1,007	858	85.15%	607	414	787,845	65.23%	55.54%
Montana	9,241	7,400	6,442	87.27%	4,049	2,972	867,472	71.00%	61.96%
Region 1	658	412	389	94.67%	271	209	68,591	76.91%	72.82%
Region 2	1,409	1,145	1,019	88.97%	629	471	122,807	70.77%	62.97%
Region 3	2,005	1,728	1,468	85.09%	905	651	179,688	71.84%	61.14%
Region 4	2,380	1,874	1,613	86.41%	1,049	748	230,640	69.56%	60.10%
Region 5	2,789	2,241	1,953	87.42%	1,195	893	265,746	70.66%	61.77%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Nebraska	7,665	6,608	5,517	83.50%	3,933	2,847	1,547,666	71.18%	59.44%
Regions 1 and 2	808	653	576	88.40%	328	235	156,621	70.52%	62.34%
Region 1	406	318	277	86.98%	168	121	73,417	70.53%	61.34%
Region 2	402	335	299	89.84%	160	114	83,205	70.51%	63.35%
Region 3	1,072	912	815	89.43%	553	418	190,009	74.54%	66.66%
Region 4	798	669	616	92.09%	430	307	170,599	66.68%	61.40%
Region 5	1,831	1,576	1,324	84.29%	866	639	383,101	72.61%	61.21%
Region 6	3,156	2,798	2,186	77.86%	1,756	1,248	647,336	70.54%	54.92%
Nevada	7,476	6,429	4,864	75.54%	3,864	2,924	2,405,650	71.78%	54.23%
Clark – Region 1	5,321	4,622	3,443	74.34%	2,794	2,128	1,735,247	71.81%	53.38%
Region 3	939	732	588	80.28%	388	272	294,972	66.88%	53.69%
Capital District	304	264	200	75.15%	136	97	140,001	64.62%	48.56%
Rural/Frontier	635	468	388	83.41%	252	175	154,971	68.57%	57.19%
Washoe – Region 2	1,216	1,075	833	77.48%	682	524	375,432	74.86%	58.00%
New Hampshire	9,612	7,965	6,394	80.22%	4,078	2,863	1,151,028	68.07%	54.61%
Central	2,965	2,506	2,098	83.73%	1,396	1,011	326,910	69.81%	58.45%
Central 1	1,373	1,124	952	84.79%	642	463	161,866	69.43%	58.87%
Central 2	1,592	1,382	1,146	82.86%	754	548	165,044	70.15%	58.12%
Northern	1,677	1,012	825	80.84%	442	333	148,941	71.43%	57.74%
Southern	4,970	4,447	3,471	78.13%	2,240	1,519	675,177	66.38%	51.86%
Southern 1 (Rockingham)	1,812	1,653	1,262	76.66%	793	521	260,103	66.55%	51.01%
Southern 2	3,158	2,794	2,209	78.98%	1,447	998	415,074	66.28%	52.35%
New Jersey	12,849	11,258	8,549	75.30%	6,563	4,486	7,541,739	66.11%	49.78%
Central	2,964	2,620	1,951	72.13%	1,492	976	1,730,180	64.23%	46.33%
Metropolitan	3,130	2,696	2,004	74.27%	1,506	1,015	1,820,453	64.98%	48.27%
Northern	4,212	3,743	2,880	76.81%	2,249	1,556	2,426,107	65.18%	50.06%
Southern	2,543	2,199	1,714	77.96%	1,316	939	1,565,000	71.26%	55.56%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
New Mexico	7,788	5,622	4,919	87.64%	3,647	2,898	1,721,763	77.80%	68.18%
Region 1	1,344	1,047	918	87.94%	731	594	358,976	78.36%	68.91%
Region 2	976	664	581	87.98%	414	347	248,007	80.11%	70.47%
Region 3 (Bernalillo)	2,520	1,991	1,700	85.29%	1,254	971	559,940	77.19%	65.83%
Region 4	872	675	615	91.31%	479	378	214,196	74.48%	68.01%
Region 5	2,076	1,245	1,105	88.91%	769	608	340,644	78.81%	70.07%
Region 5a	1,378	693	612	88.69%	378	301	161,878	77.95%	69.13%
Region 5b (Dona Ana)	698	552	493	89.21%	391	307	178,766	79.92%	71.29%
New York	35,578	30,774	20,398	65.88%	14,732	9,826	16,748,149	63.04%	41.53%
Region 1: Long Island	4,668	4,134	2,799	67.65%	2,266	1,369	2,434,332	57.39%	38.83%
Region 2: New York City	14,905	13,215	7,850	58.74%	6,058	3,742	7,202,566	57.98%	34.06%
Region 2A: Bronx	2,292	2,137	1,517	71.00%	1,197	885	1,171,688	71.88%	51.03%
Region 2B: Kings	4,226	3,659	2,313	63.32%	1,785	1,035	2,180,764	54.68%	34.62%
Region 2C: New York	3,998	3,431	1,709	48.01%	1,171	744	1,467,390	61.25%	29.40%
Region 2D: Queens	3,614	3,297	1,843	55.96%	1,537	846	1,981,210	51.51%	28.82%
Region 2E: Richmond	775	691	468	68.15%	368	232	401,513	59.45%	40.52%
Region 3: Mid-Hudson	4,331	3,705	2,359	63.52%	1,646	1,071	1,955,838	61.75%	39.22%
Region 4: Capital Region	1,519	1,276	925	72.78%	641	474	812,980	74.06%	53.90%
Region 5: Mohawk Valley	367	251	207	82.61%	153	116	222,088	78.03%	64.47%
Region 6: North Country	673	472	382	79.94%	213	166	263,280	77.23%	61.74%
Region 7: Tug Hill Seaway	691	489	419	85.71%	275	216	214,345	75.50%	64.72%
Region 8: Central	2,008	1,647	1,239	75.35%	807	636	866,864	77.11%	58.10%
Region 9: Southern Tier	860	693	553	79.56%	341	287	382,701	81.89%	65.15%
Region 10: Finger Lakes	2,328	2,058	1,525	73.93%	971	722	1,085,658	71.52%	52.87%
Region 11: Western	3,228	2,834	2,140	75.64%	1,361	1,027	1,307,498	71.36%	53.98%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
North Carolina	12,558	10,519	8,794	83.54%	6,170	4,617	8,318,964	72.62%	60.67%
Alliance Behavioral Healthcare 1	1,261	1,054	911	86.33%	655	500	657,907	73.18%	63.18%
Alliance Behavioral Healthcare 2	1,015	898	755	84.15%	549	416	820,197	73.50%	61.85%
Cardinal Innovations Healthcare Solutions 1	944	840	683	81.08%	500	340	632,700	66.16%	53.64%
Cardinal Innovations Healthcare Solutions 2	742	623	543	87.15%	376	283	568,160	73.41%	63.98%
Cardinal Innovations Healthcare Solutions 3	1,224	1,064	842	79.09%	612	447	822,355	70.22%	55.54%
CenterPoint Human Services	817	679	555	81.70%	380	295	459,622	76.49%	62.49%
Eastpointe	1,244	1,095	920	84.21%	649	493	691,059	73.60%	61.98%
Partners Behavioral Health Management	914	785	665	84.66%	465	355	768,880	71.83%	60.81%
Sandhills Center 1	519	439	367	83.59%	253	191	479,961	76.22%	63.71%
Sandhills Center 2	680	597	480	80.56%	355	264	432,615	71.90%	57.92%
Smoky Mountain Center 1	881	641	546	85.21%	370	269	460,631	71.51%	60.93%
Smoky Mountain Center 2	773	644	545	84.57%	313	228	458,990	72.78%	61.55%
Trillium Health Resources 1	949	704	588	82.90%	443	361	524,436	78.10%	64.75%
Trillium Health Resources 2	595	456	394	86.16%	250	175	541,448	68.82%	59.30%
North Dakota	9,979	8,003	7,141	89.28%	3,926	2,917	617,037	72.96%	65.14%
Badlands and West Central	2,704	2,129	2,001	94.05%	1,090	807	165,469	72.78%	68.45%
Badlands	567	389	368	94.52%	181	132	37,436	73.69%	69.65%
West Central	2,137	1,740	1,633	93.94%	909	675	128,033	72.59%	68.19%
Lake Region	681	500	447	89.34%	224	172	34,469	78.01%	69.69%
North Central	1,267	963	854	88.47%	460	347	86,655	73.46%	65.00%
Northeast	1,403	1,178	1,014	86.31%	574	426	77,789	71.56%	61.77%
Northwest	448	301	266	88.77%	171	111	33,304	60.87%	54.03%
South Central	842	600	539	89.37%	241	173	48,790	75.08%	67.10%
Southeast	2,634	2,332	2,020	86.73%	1,166	881	170,560	73.92%	64.11%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Ohio	20,158	17,139	14,004	81.70%	10,158	7,220	9,725,850	68.62%	56.06%
Boards 2, 46, 55, and 68	674	588	492	83.62%	376	256	428,775	64.61%	54.03%
Boards 3, 52, and 85	527	488	397	81.47%	309	219	320,796	73.43%	59.83%
Boards 4 and 78	602	502	437	87.11%	297	226	261,594	76.24%	66.42%
Boards 5 and 60	495	427	388	90.75%	297	213	287,227	70.42%	63.91%
Boards 7, 15, 41, 79, and 84	839	713	555	77.51%	369	238	390,557	62.26%	48.25%
Boards 8, 13, and 83	628	576	456	79.05%	332	230	422,162	64.41%	50.92%
Board 9 (Butler)	660	584	475	81.39%	356	229	310,689	62.01%	50.47%
Board 12	721	570	405	71.43%	305	213	293,200	68.71%	49.08%
Boards 18 and 47	2,791	2,357	1,849	78.39%	1,275	923	1,315,794	70.35%	55.15%
Boards 20, 32, 54, and 69	762	672	619	91.97%	426	311	286,136	71.80%	66.03%
Boards 21, 39, 51, 70, and 80	640	559	493	88.22%	426	315	468,487	71.65%	63.21%
Boards 22, 74, and 87	897	607	537	88.37%	401	301	328,042	71.24%	62.95%
Boards 23 and 45	736	629	542	86.28%	465	324	317,970	65.97%	56.92%
Board 25 (Franklin)	2,115	1,867	1,441	77.42%	1,118	790	1,007,348	68.67%	53.16%
Boards 27, 71, and 73	917	706	572	80.78%	412	275	414,284	62.10%	50.16%
Boards 28, 43, and 67	897	780	686	88.05%	496	344	415,913	67.49%	59.43%
Board 31 (Hamilton)	1,595	1,321	1,041	78.64%	716	500	663,396	66.98%	52.68%
Board 48 (Lucas)	670	590	502	85.08%	342	254	363,436	66.86%	56.88%
Boards 50 and 76	1,163	1,029	894	86.84%	604	433	517,995	70.08%	60.86%
Board 57 (Montgomery)	996	839	639	76.43%	410	313	456,829	74.09%	56.63%
Board 77 (Summit)	833	735	584	79.63%	426	313	455,218	68.66%	54.67%
Oklahoma	7,770	6,311	5,321	84.55%	4,017	2,873	3,180,210	68.10%	57.58%
Central	929	816	661	81.31%	560	395	406,362	65.73%	53.45%
East Central	795	633	563	89.34%	435	310	363,907	69.08%	61.72%
Northeast	954	765	684	89.42%	493	349	403,170	68.38%	61.15%
Northwest and Southwest	1,250	901	797	88.79%	542	411	452,073	70.67%	62.75%
Oklahoma County	1,426	1,198	957	79.85%	690	493	616,207	67.01%	53.51%
Southeast	1,085	853	727	85.88%	553	397	429,603	69.98%	60.10%
Tulsa County	1,331	1,145	932	81.70%	744	518	508,888	66.86%	54.63%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Oregon	8,215	7,167	5,904	82.57%	4,042	2,958	3,424,658	71.66%	59.17%
Region 1 (Multnomah)	1,633	1,481	1,221	82.69%	852	599	676,840	69.74%	57.67%
Region 2	1,867	1,725	1,429	83.19%	1,096	817	811,991	73.03%	60.75%
Region 3	2,379	2,058	1,647	80.00%	1,132	835	1,063,850	72.54%	58.03%
Region 4	1,455	1,198	979	81.90%	549	415	483,699	71.40%	58.47%
Region 5 (Central)	299	265	236	89.31%	155	103	178,587	70.50%	62.97%
Region 6 (Eastern)	582	440	392	89.38%	258	189	209,690	69.97%	62.54%
Pennsylvania	22,355	18,950	15,206	80.16%	9,726	7,122	10,839,410	71.00%	56.92%
Region 1 (Allegheny)	2,263	1,993	1,555	78.17%	907	611	1,059,578	67.40%	52.68%
Regions 3, 8, 9, and 51	1,470	1,250	1,035	82.91%	638	475	597,776	72.05%	59.74%
Regions 4, 11, 37, and 49	1,652	1,247	1,017	81.69%	621	437	767,695	70.32%	57.44%
Regions 5, 18, 23, 24, and 46	1,400	1,217	1,019	83.60%	650	497	633,833	73.21%	61.20%
Regions 6, 12, 16, 31, 35, 45, and 47	1,051	854	698	81.83%	500	383	608,238	72.53%	59.35%
Regions 7, 13, 20, and 33	4,176	3,801	2,845	73.95%	1,908	1,356	2,117,660	68.44%	50.61%
Regions 10, 15, 27, 32, 43, and 44	908	665	588	88.57%	359	279	436,103	73.91%	65.46%
Regions 17 and 21	674	518	449	86.64%	287	213	311,440	74.36%	64.42%
Regions 19, 26, 28, and 42	2,341	2,121	1,848	87.12%	1,186	887	1,233,033	72.54%	63.20%
Regions 22, 38, 40, 41, and 48	1,458	1,237	1,044	84.39%	618	445	708,013	69.50%	58.66%
Regions 29 and 34	1,117	918	793	86.85%	461	316	558,238	66.20%	57.49%
Regions 30 and 50	1,127	946	791	83.87%	510	392	518,639	76.89%	64.49%
Region 36 (Philadelphia)	2,718	2,183	1,524	69.95%	1,081	831	1,289,164	74.37%	52.02%
Rhode Island	8,654	7,365	5,817	79.21%	4,044	2,892	903,919	69.62%	55.14%
Region 1: Southern Providence County	1,353	1,242	950	76.88%	672	442	165,030	66.75%	51.32%
Region 2: Northern Providence County/Blackstone Valley	1,913	1,708	1,407	82.38%	1,010	737	181,461	69.45%	57.22%
Region 3: Providence	1,236	985	718	73.32%	608	470	150,431	75.50%	55.35%
Region 4: Kent County	1,248	1,136	908	80.50%	592	432	147,798	71.13%	57.26%
Region 5: East Bay	809	727	568	78.42%	390	287	83,752	70.49%	55.28%
Region 6: Newport County	843	648	525	81.07%	326	202	71,293	63.81%	51.73%
Region 7: South County	1,252	919	741	80.77%	446	322	104,153	69.89%	56.45%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
South Carolina	8,619	6,994	5,847	83.46%	3,938	2,955	4,071,052	73.37%	61.24%
Region 1	2,608	2,133	1,756	82.11%	1,155	849	1,274,110	70.05%	57.52%
Region 2	2,108	1,768	1,480	83.57%	1,089	796	1,001,686	71.17%	59.48%
Region 3	1,571	1,279	1,105	86.33%	714	536	705,283	74.78%	64.56%
Region 4	2,332	1,814	1,506	82.99%	980	774	1,089,973	78.16%	64.86%
South Dakota	7,330	6,085	5,515	90.96%	3,812	2,845	698,307	73.62%	66.97%
Region 1	1,750	1,476	1,338	90.89%	901	687	172,217	74.65%	67.85%
Region 2	661	552	499	90.69%	332	254	64,285	77.26%	70.07%
Region 3	1,844	1,429	1,322	92.80%	886	661	164,858	74.42%	69.07%
Region 4	1,087	897	812	90.98%	545	409	98,178	71.61%	65.16%
Region 5	1,988	1,731	1,544	89.57%	1,148	834	198,769	71.98%	64.47%
Tennessee	8,030	6,527	5,524	84.75%	3,929	2,943	5,508,015	72.95%	61.82%
Region 1	685	584	500	85.10%	364	272	445,617	70.25%	59.78%
Region 2	1,461	1,167	997	85.50%	649	503	1,031,340	77.28%	66.08%
Region 3	1,352	1,054	941	89.39%	642	488	825,704	76.10%	68.03%
Region 4 (Davidson)	790	684	507	74.74%	382	260	545,915	66.00%	49.32%
Region 5	1,704	1,475	1,247	84.81%	943	681	1,340,254	73.03%	61.93%
Region 6	905	658	607	92.26%	381	285	535,742	66.41%	61.27%
Region 7 (Shelby)	1,133	905	725	80.36%	568	454	783,443	75.29%	60.50%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Texas	20,024	16,766	14,481	86.18%	13,194	9,984	22,110,904	72.80%	62.73%
Region 1	717	597	505	84.48%	412	296	720,872	70.41%	59.48%
Region 2	609	478	439	92.00%	325	254	464,435	76.34%	70.23%
Region 3	5,079	4,532	4,069	89.79%	3,823	3,002	5,965,536	76.39%	68.59%
Region 3a	3,184	2,876	2,522	87.71%	2,430	1,835	3,811,325	72.96%	64.00%
Region 3bc	1,895	1,656	1,547	93.46%	1,393	1,167	2,154,212	82.46%	77.07%
Region 4	1,171	806	736	91.15%	580	486	960,048	81.68%	74.45%
Region 5	666	471	447	95.18%	326	265	661,439	78.95%	75.14%
Region 6	4,665	3,960	3,194	80.59%	3,051	2,116	5,368,072	65.03%	52.41%
Region 6a	4,157	3,604	2,881	79.84%	2,750	1,906	4,805,141	65.08%	51.96%
Region 6bc	508	356	313	87.61%	301	210	562,931	64.54%	56.54%
Region 7	2,537	2,146	1,848	86.23%	1,651	1,221	2,685,359	71.80%	61.91%
Region 7a	1,552	1,335	1,148	86.23%	1,007	715	1,714,533	69.64%	60.05%
Region 7bcd	985	811	700	86.23%	644	506	970,827	75.53%	65.13%
Region 8	2,134	1,737	1,455	83.88%	1,310	1,016	2,305,620	75.07%	62.97%
Region 9	451	365	327	89.26%	291	189	494,537	61.94%	55.28%
Region 10	511	451	399	88.52%	380	294	718,969	75.50%	66.83%
Region 11	1,484	1,223	1,062	84.23%	1,045	845	1,766,017	76.63%	64.55%
Region 11abd	898	808	707	87.65%	679	535	1,113,103	74.45%	65.25%
Region 11c (Hidalgo)	586	415	355	79.20%	366	310	652,914	80.24%	63.54%
Utah	4,523	3,991	3,589	89.98%	3,605	2,876	2,359,519	77.60%	69.82%
Bear River, Northeastern, Summit, Tooele, and Wasatch	400	346	322	93.13%	311	251	284,421	79.58%	74.11%
Central, Four Corners, San Juan, and Southwest	660	478	424	88.56%	380	282	285,613	72.46%	64.18%
Central, Four Corners, and San Juan	306	204	184	89.83%	160	116	109,353	73.52%	66.05%
Southwest	354	274	240	87.66%	220	166	176,260	71.62%	62.79%
Davis County	415	389	338	86.36%	323	252	255,266	76.18%	65.79%
Salt Lake County	1,869	1,716	1,529	89.28%	1,575	1,279	895,778	79.06%	70.58%
Utah County	748	682	621	91.15%	656	518	434,211	76.49%	69.72%
Weber, Morgan	431	380	355	93.72%	360	294	204,230	78.41%	73.49%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Response Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Vermont	10,948	8,693	7,070	81.26%	3,913	2,804	545,119	71.25%	57.90%
Champlain Valley	3,984	3,489	2,824	80.89%	1,743	1,237	219,413	69.19%	55.97%
Rural Northeast	2,453	1,869	1,389	74.09%	768	552	128,344	72.28%	53.55%
Rural Southeast	2,593	1,930	1,639	84.98%	806	583	112,629	73.11%	62.13%
Rural Southwest	1,918	1,405	1,218	86.81%	596	432	84,734	73.18%	63.53%
Virginia	11,525	10,047	8,175	81.46%	6,210	4,558	6,920,132	70.57%	57.49%
Region 1	1,573	1,365	1,167	85.39%	858	666	1,075,646	74.06%	63.24%
Region 2	3,000	2,753	2,151	78.36%	1,859	1,285	1,969,310	65.75%	51.52%
Region 3	2,221	1,817	1,573	86.48%	1,035	793	1,159,100	74.24%	64.21%
Region 4	1,948	1,725	1,389	80.54%	1,056	774	1,178,568	71.25%	57.39%
Region 5	2,783	2,387	1,895	79.51%	1,402	1,040	1,537,508	71.21%	56.62%
Washington	7,920	7,017	5,483	78.16%	3,909	2,813	5,983,711	70.11%	54.79%
Region 1	1,587	1,320	1,108	83.99%	881	639	1,297,892	70.82%	59.48%
Greater Columbia and North Central	972	809	676	83.66%	580	417	772,866	69.21%	57.90%
Spokane	615	511	432	84.53%	301	222	525,025	73.58%	62.19%
Region 2	3,778	3,425	2,571	74.98%	1,794	1,243	2,757,283	67.05%	50.28%
King	2,524	2,310	1,658	71.54%	1,175	806	1,761,061	66.40%	47.50%
North Sound	1,254	1,115	913	82.24%	619	437	996,223	68.34%	56.21%
Region 3	2,555	2,272	1,804	79.59%	1,234	931	1,928,536	74.43%	59.24%
Pierce	1,255	1,130	875	77.61%	619	485	704,398	78.28%	60.76%
Salish	381	334	278	82.82%	175	121	320,556	68.65%	56.86%
SW WA and Great Rivers	628	572	450	79.14%	317	239	621,859	73.54%	58.20%
Thurston-Mason	291	236	201	85.41%	123	86	281,722	66.98%	57.21%
West Virginia	9,626	7,859	6,526	83.15%	4,122	2,842	1,572,220	66.11%	54.97%
Region I	679	596	500	84.07%	285	190	124,260	62.73%	52.74%
Region II	1,188	1,026	867	84.54%	584	434	223,897	73.35%	62.01%
Region III	895	712	614	86.38%	376	261	144,615	64.86%	56.02%
Region IV	2,075	1,744	1,441	82.54%	995	657	347,400	65.47%	54.04%
Region V	2,672	2,127	1,759	82.81%	1,062	693	445,709	61.18%	50.67%
Region VI	2,117	1,654	1,345	81.62%	820	607	286,339	70.09%	57.21%

See notes at end of table.

(continued)

Table C1. Sample Sizes, Weighted Screening and Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 or Older: 2014, 2015, and 2016 (continued)

State/Substate Region	Total Selected DUs	Total Eligible DUs	Total Completed Screeners	Weighted DU Screening Rate (Percentage)	Total Selected	Total Responded	Population Estimate	Weighted Interview Response Rate (Percentage)	Weighted Overall Response Rate (Percentage)
Wisconsin	9,625	7,918	6,614	83.55%	4,065	2,924	4,850,551	70.47%	58.88%
Milwaukee	1,610	1,462	1,153	78.70%	705	490	783,239	67.91%	53.44%
Northeastern	1,876	1,677	1,386	82.42%	779	573	1,052,103	74.47%	61.38%
Northern	1,316	719	616	85.90%	326	256	417,435	78.72%	67.62%
Southeastern	1,837	1,645	1,350	82.27%	921	626	985,969	66.92%	55.06%
Southern	1,925	1,606	1,393	86.47%	874	640	949,286	68.58%	59.30%
Western	1,061	809	716	88.64%	460	339	662,520	71.40%	63.29%
Wyoming	8,243	6,401	5,544	86.57%	3,822	2,890	481,640	73.85%	63.93%
Judicial District 1 (Laramie)	1,383	1,160	972	83.75%	631	460	79,139	69.94%	58.58%
Judicial District 2	853	633	545	85.74%	433	347	46,291	79.51%	68.18%
Judicial District 3	1,167	818	733	89.09%	530	412	67,465	77.26%	68.83%
Judicial District 4	456	349	300	85.97%	190	134	32,153	67.00%	57.60%
Judicial District 5	864	679	574	84.64%	333	259	46,042	80.30%	67.96%
Judicial District 6	918	719	623	87.04%	441	350	50,169	78.56%	68.38%
Judicial District 7 (Natrona)	1,014	879	756	86.35%	541	430	65,305	78.62%	67.89%
Judicial District 8	632	484	432	89.22%	293	195	33,622	63.32%	56.50%
Judicial District 9	956	680	609	89.25%	430	303	61,452	67.29%	60.06%

DU = dwelling unit; SPA = service planning area.

NOTE: For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data>.

NOTE: To compute the pooled 2014-2016 weighted response rates, the three samples were combined, and the individual-year weights were used for the pooled sample. Thus, the response rates presented here are weighted across 3 years of data rather than being a simple average of the 2014, 2015, and 2016 individual response rates.

NOTE: The total responded column represents the combined sample size from the 2014, 2015, and 2016 NSDUHs.

NOTE: The population estimate is the simple average of the 2014, 2015, and 2016 population counts for individuals aged 12 or older. Because of rounding, the sum of the substate region population counts within a state may not exactly match the state population count listed in the table.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Total United States	88,841	69,151	37,874,213	78.03%	216,172	152,806	242,602,294	68.74%
Northeast	17,552	13,182	6,446,688	74.02%	43,015	29,039	43,627,889	65.16%
Midwest	21,201	16,233	8,084,417	76.11%	50,884	35,759	51,280,094	68.46%
South	29,207	23,163	14,215,451	79.70%	70,878	51,166	90,640,312	70.44%
West	20,881	16,573	9,127,658	79.93%	51,395	36,842	57,053,999	69.03%
Alabama	1,222	964	583,463	80.07%	3,117	2,206	3,687,329	67.70%
Region 1	363	277	159,857	76.89%	899	635	1,035,597	67.25%
Region 2	364	275	187,245	75.93%	990	657	1,180,600	63.17%
Region 3	246	204	110,798	87.01%	565	417	660,982	71.82%
Region 4	249	208	125,563	83.91%	663	497	810,150	72.08%
Alaska	1,351	985	90,578	72.89%	3,080	2,172	524,044	69.33%
Anchorage	551	422	36,804	75.30%	1,349	975	215,449	70.10%
Northern	292	208	21,871	69.89%	642	441	115,457	67.40%
South Central	382	277	23,681	74.46%	783	551	137,679	70.52%
Southeast	126	78	8,222	63.31%	306	205	55,458	66.73%
Arizona	1,176	929	792,006	79.61%	3,063	2,246	5,097,411	72.70%
Central	723	574	483,793	79.84%	1,970	1,435	3,031,603	71.82%
North	117	84	89,562	72.73%	305	219	621,983	72.00%
South	336	271	218,652	81.54%	788	592	1,443,826	75.14%
South A	170	138	114,084	82.50%	473	359	795,469	76.32%
South B	166	133	104,567	80.63%	315	233	648,357	73.39%
Arkansas	1,254	990	345,621	78.49%	3,048	2,197	2,222,652	69.59%
Catchment Area 1	193	158	63,385	81.56%	516	348	362,320	66.60%
Catchment Area 2	133	111	36,724	83.18%	405	304	272,510	74.16%
Catchment Area 3	187	146	47,299	78.80%	431	326	293,789	75.45%
Catchment Area 4	143	116	31,108	83.17%	307	222	194,739	69.35%
Catchment Area 5	201	154	52,306	74.81%	485	342	334,562	65.76%
Catchment Area 6	108	90	23,726	81.57%	233	180	156,218	72.88%
Catchment Area 7	76	66	26,194	87.45%	171	130	170,946	74.41%
Catchment Area 8	213	149	64,878	69.34%	500	345	437,568	64.87%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
California	5,967	4,775	4,784,400	79.99%	15,275	10,504	29,434,856	66.70%
Region 1R	180	136	107,076	76.15%	395	302	750,574	74.93%
Region 2R	184	154	127,834	83.69%	415	307	796,588	71.53%
Region 3R (Sacramento)	215	176	178,714	80.39%	623	460	1,111,600	71.28%
Region 4R	200	158	148,314	78.36%	531	360	1,029,401	66.96%
Region 5R (San Francisco)	51	38	57,099	68.06%	340	200	731,968	56.12%
Region 6 (Santa Clara)	292	230	212,871	79.69%	844	589	1,436,324	67.42%
Region 7R (Contra Costa)	182	147	132,712	80.94%	485	350	841,324	70.70%
Region 8R (Alameda)	192	152	176,169	79.00%	608	435	1,233,116	70.51%
Region 9R (San Mateo)	89	72	76,639	81.86%	303	205	583,830	67.61%
Region 10	179	129	167,426	70.32%	428	280	977,787	64.17%
Region 11 (Los Angeles)	1,557	1,227	1,227,942	78.95%	4,015	2,580	7,724,963	61.64%
LA SPA 1 and 5	138	112	124,934	82.35%	353	241	843,590	65.43%
LA SPA 2	382	292	253,028	75.69%	905	542	1,706,615	58.38%
LA SPA 3	236	175	216,070	74.04%	625	420	1,378,551	63.99%
LA SPA 4	99	82	111,247	83.44%	430	237	925,724	51.90%
LA SPA 6	197	162	156,949	82.92%	457	324	720,942	69.59%
LA SPA 7	231	173	180,454	75.58%	539	345	961,561	62.09%
LA SPA 8	274	231	185,260	84.61%	706	471	1,187,980	62.33%
Region 12R	143	120	115,900	85.79%	306	224	640,601	68.66%
Regions 13 and 19R	435	361	354,924	83.42%	956	703	1,837,605	71.41%
Region 14 (Orange)	446	343	383,565	76.57%	1,105	680	2,430,400	58.81%
Region 15R (Fresno)	160	126	138,530	76.44%	392	277	693,102	68.70%
Region 16R (San Diego)	452	383	386,786	84.96%	1,208	836	2,508,452	68.74%
Region 17R	325	277	214,799	83.14%	759	582	1,068,543	73.88%
Region 18R (San Bernardino)	385	303	307,658	80.74%	843	603	1,537,109	69.50%
Region 20R	162	131	136,808	83.31%	368	279	699,336	74.90%
Region 21R	138	112	132,631	78.49%	351	252	802,232	69.94%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Colorado	1,303	1,042	650,188	79.85%	3,060	2,154	4,107,426	69.62%
Region 1	167	118	102,188	70.29%	508	353	688,644	70.63%
Region 2	95	82	56,080	87.02%	221	147	314,026	59.43%
Region 3	398	332	181,725	84.07%	853	594	1,051,515	67.86%
Region 4	90	71	42,196	73.42%	179	142	281,980	78.05%
Region 5	173	142	69,054	80.55%	406	290	525,296	72.62%
Region 6	213	169	104,856	78.36%	522	361	704,640	69.26%
Region 7	167	128	94,088	78.22%	371	267	541,324	71.88%
Connecticut	1,308	999	440,718	77.32%	3,298	2,160	2,773,834	64.11%
Eastern	149	121	59,284	83.78%	423	293	340,079	66.69%
North Central	333	259	118,873	77.95%	923	617	776,864	65.53%
Northwestern	243	178	74,892	74.40%	589	395	475,800	69.51%
South Central	319	240	99,699	77.15%	784	509	652,746	62.21%
Southwest	264	201	87,971	75.68%	579	346	528,345	57.41%
Delaware	1,274	986	107,615	77.92%	2,997	2,105	725,071	70.07%
Kent	257	200	21,087	79.12%	567	409	130,096	69.90%
New Castle (excluding Wilmington City)	718	552	58,594	77.12%	1,668	1,147	370,720	69.70%
Sussex	215	161	19,735	74.64%	579	403	166,287	69.11%
Wilmington City	84	73	8,199	87.93%	183	146	57,967	78.21%
District of Columbia	1,037	862	55,389	83.78%	2,881	2,143	542,377	73.29%
Ward 1	68	59	6,159	93.60%	368	266	69,188	67.86%
Ward 2	96	84	6,166	85.27%	368	260	75,103	69.74%
Ward 3	96	74	5,779	74.66%	327	226	70,331	72.23%
Ward 4	150	120	6,323	80.12%	400	291	66,071	73.08%
Ward 5	141	114	7,253	80.79%	308	236	68,569	74.33%
Ward 6	98	88	4,442	85.33%	479	372	71,791	75.88%
Ward 7	173	148	8,934	87.48%	316	249	61,385	77.52%
Ward 8	215	175	10,332	82.72%	315	243	59,938	75.17%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Florida	4,326	3,455	2,112,061	80.15%	10,605	7,580	15,841,372	68.63%
Broward (Circuit 17)	307	254	197,862	83.19%	825	583	1,457,063	69.54%
Central I	717	575	293,723	80.61%	1,631	1,192	1,984,893	71.46%
Circuit 9	465	384	186,420	82.45%	1,055	785	1,178,609	72.96%
Circuit 18	252	191	107,303	77.27%	576	407	806,284	69.59%
Central II	1,142	884	561,947	77.46%	2,902	2,094	4,448,834	68.88%
Circuit 6	307	220	134,463	73.69%	755	510	1,173,449	64.76%
Circuit 10	224	183	84,823	82.41%	475	385	592,906	79.41%
Circuit 12	126	93	70,017	71.88%	331	247	643,096	75.82%
Circuit 13 (Hillsborough)	328	266	157,368	81.22%	872	621	1,034,066	66.97%
Circuit 20	157	122	115,277	74.68%	469	331	1,005,318	64.75%
Northeast	728	551	391,607	76.42%	1,757	1,191	2,965,173	65.11%
Circuit 4	248	188	133,307	74.83%	574	383	903,630	63.80%
Circuit 5	198	136	98,470	70.27%	502	345	897,402	68.46%
Circuit 7	169	141	94,000	84.81%	453	289	726,193	58.86%
Circuit 8 plus Columbia, Dixie, Hamilton, Lafayette, and Suwannee	113	86	65,830	77.90%	228	174	437,948	72.19%
Northwest	393	326	171,408	84.85%	969	743	1,172,641	73.49%
Circuit 1	197	161	82,970	82.64%	477	354	571,015	70.21%
Circuit 2 plus Madison and Taylor	141	121	57,271	88.00%	349	278	360,226	76.61%
Circuit 14	55	44	31,167	83.74%	143	111	241,400	76.87%
South (Circuits 11 and 16)	614	511	292,977	83.47%	1,444	1,041	2,186,453	69.51%
Southeast	425	354	202,537	82.14%	1,077	736	1,626,314	64.80%
Circuit 15 (Palm Beach)	280	234	139,028	82.37%	739	487	1,118,123	62.19%
Circuit 19	145	120	63,509	81.65%	338	249	508,191	70.23%
Georgia	1,899	1,530	1,232,724	80.30%	4,571	3,398	7,503,516	71.61%
Region 1	505	397	321,545	79.61%	1,158	816	1,924,757	68.16%
Region 2	282	228	159,654	79.51%	668	510	966,011	72.68%
Region 3	574	453	357,533	78.61%	1,427	1,049	2,244,757	70.33%
Region 4	113	99	77,785	86.13%	252	210	464,512	83.71%
Region 5	199	169	139,210	85.63%	482	375	859,320	75.78%
Region 6	226	184	176,996	80.42%	584	438	1,044,159	72.42%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Hawaii	1,322	1,013	148,317	77.00%	3,200	2,235	1,064,978	68.94%
Hawaii Island	221	170	20,261	76.83%	474	349	141,904	72.78%
Honolulu	854	665	104,456	78.44%	2,112	1,468	751,659	68.04%
Kauai	105	75	6,993	74.47%	239	171	51,617	73.47%
Maui	142	103	16,607	69.14%	375	247	119,797	67.21%
Idaho	1,251	998	215,761	80.10%	3,082	2,301	1,205,453	73.27%
Region 1	132	88	26,535	72.29%	375	244	171,286	62.93%
Region 2	66	51	14,042	75.39%	199	154	87,499	77.49%
Region 3	247	201	36,934	82.39%	551	422	188,302	75.13%
Region 4	325	269	58,998	82.75%	892	673	348,081	74.92%
Region 5	175	143	25,199	76.66%	399	313	137,821	77.65%
Region 6	92	72	16,742	80.08%	189	128	89,142	67.01%
Region 7	214	174	37,311	82.42%	477	367	183,322	74.00%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Illinois	3,405	2,495	1,551,146	73.53%	8,349	5,382	9,706,617	63.14%
Region 1 (Cook)	1,163	832	591,721	72.80%	3,093	1,929	3,980,259	61.36%
Region 1.1 (Far North Side)	56	30	44,374	49.35%	245	147	372,698	62.28%
Region 1.2 (Northwest Side)	76	49	32,313	66.42%	215	119	205,023	55.03%
Region 1.3 (North Central Side)	42	26	29,875	64.55%	200	113	385,950	57.72%
Region 1.4 (West Side)	86	67	55,939	76.40%	255	174	357,461	64.75%
Region 1.5 (South Side)	136	98	79,398	74.26%	273	180	500,953	69.51%
Region 1.6 (Southwest Side)	146	105	54,572	72.39%	331	199	266,658	58.31%
Region 1.7 (Suburban Cook)	621	457	295,251	75.43%	1,574	997	1,891,516	60.99%
Region 2	1,245	914	538,068	72.83%	2,748	1,748	3,024,899	62.64%
Region 2a (DuPage)	260	188	113,613	71.18%	628	370	703,190	57.87%
Region 2b	739	537	304,544	72.96%	1,502	974	1,609,372	63.40%
Region 2c (Winnebago)	65	51	34,195	78.56%	182	123	215,957	72.43%
Region 2d	181	138	85,716	73.08%	436	281	496,380	63.66%
Region 3	460	340	182,612	74.78%	1,086	722	1,103,337	64.22%
Region 3a (Champaign)	68	54	32,778	81.67%	196	130	160,071	63.91%
Region 3b	392	286	149,834	73.33%	890	592	943,266	64.28%
Region 4	235	182	103,777	77.91%	634	443	686,609	69.13%
Region 4a (Sangamon)	55	42	22,724	79.55%	151	109	152,156	72.08%
Region 4b	180	140	81,053	77.43%	483	334	534,453	68.31%
Region 5	302	227	134,967	75.07%	788	540	911,513	66.91%
Region 5a	119	96	61,492	77.66%	299	204	403,887	68.49%
Region 5b	183	131	73,475	73.25%	489	336	507,626	66.00%
Indiana	1,243	966	827,225	77.35%	3,043	2,160	4,943,155	69.15%
Central	373	283	215,549	75.09%	919	645	1,303,238	69.76%
East	92	69	69,367	76.05%	254	184	418,618	71.66%
North Central	161	133	117,127	79.93%	400	289	691,621	71.75%
Northeast	140	110	84,822	81.11%	307	221	482,206	69.51%
Northwest	154	120	91,921	77.86%	347	236	557,453	61.01%
Southeast	156	119	83,081	75.23%	306	214	531,555	70.13%
Southwest	80	68	61,626	87.58%	225	166	388,847	70.89%
West	87	64	103,732	71.72%	285	205	569,618	67.77%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Iowa	1,295	980	371,555	76.09%	3,048	2,174	2,354,955	70.02%
Central	242	175	67,913	70.55%	575	389	425,237	66.39%
North Central	125	97	43,668	78.01%	347	249	262,901	69.78%
Northeast	329	243	90,132	73.88%	786	568	573,041	71.00%
Northwest	199	160	55,823	85.30%	450	325	356,506	68.51%
Southeast	295	225	77,907	73.86%	632	453	501,572	71.66%
Southwest	105	80	36,112	78.90%	258	190	235,697	73.82%
Kansas	1,323	1,015	366,159	76.97%	3,051	2,242	2,126,952	71.83%
Northeast	671	503	183,915	74.83%	1,548	1,138	1,064,841	71.24%
Northwest and North Central	73	54	26,141	75.31%	182	124	171,274	69.24%
South Central	400	316	106,068	79.81%	936	702	610,972	74.29%
Southeast	78	64	26,245	81.29%	197	137	159,519	64.24%
Southwest	101	78	23,790	78.11%	188	141	120,346	76.08%
Kentucky	1,295	987	511,359	75.60%	3,040	2,098	3,328,551	67.09%
Adanta, Cumberland River, and Lifeskills	213	156	86,520	73.92%	478	316	558,416	64.85%
Bluegrass, Comprehend, and North Key	378	290	154,669	76.29%	973	661	978,054	66.26%
Centerstone	309	261	111,337	83.52%	669	502	737,009	71.27%
Communicare and River Valley	129	99	58,440	76.29%	295	186	368,569	59.97%
Four Rivers and Pennyroyal	112	76	46,815	67.33%	292	207	313,333	69.48%
Kentucky River, Mountain, and Pathways	154	105	53,579	67.99%	333	226	373,169	68.66%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Louisiana	1,307	1,048	575,865	80.24%	2,964	2,160	3,449,120	71.65%
Regions 1 and 10	236	194	99,714	79.84%	599	420	683,376	69.54%
Region 1	105	89	53,766	84.81%	241	177	357,579	75.96%
Region 10 (Jefferson)	131	105	45,947	76.43%	358	243	325,798	66.22%
Regions 2 and 9	370	293	157,745	81.53%	869	639	913,889	75.66%
Region 3	150	126	50,616	85.33%	292	232	294,147	77.10%
Regions 4, 5, and 6	320	236	151,080	72.29%	645	441	880,787	65.24%
Regions 7 and 8	231	199	116,711	86.17%	559	428	676,921	72.93%
Maine	1,306	984	143,706	75.11%	3,070	2,210	1,063,424	71.65%
Aroostook/Downeast	168	125	15,867	75.42%	396	321	127,875	80.59%
Aroostook	103	79	7,418	77.65%	213	182	56,908	84.65%
Downeast	65	46	8,449	72.04%	183	139	70,966	75.25%
Central	161	123	18,581	77.42%	334	252	137,966	76.15%
Cumberland	300	207	31,674	68.21%	739	488	228,127	67.83%
Midcoast	119	95	14,344	79.70%	305	221	118,144	72.14%
Penquis	139	107	19,991	78.04%	371	282	137,992	75.26%
Western	219	171	21,938	75.97%	449	323	153,654	70.65%
York	200	156	21,312	78.44%	476	323	159,666	64.73%
Maryland	1,220	957	685,424	78.16%	3,003	2,198	4,557,206	70.96%
Anne Arundel	126	101	62,545	81.61%	277	203	429,327	72.71%
Baltimore City	120	98	66,395	79.98%	406	316	479,689	76.45%
Baltimore County	122	89	92,243	71.86%	306	220	640,187	69.90%
Montgomery	202	166	111,181	83.99%	543	401	777,360	72.83%
North Central	116	91	58,631	78.23%	263	188	359,790	67.92%
Northeast	105	72	58,037	68.22%	244	168	379,811	67.00%
Prince George's	180	138	106,281	74.36%	444	310	670,647	66.72%
South	121	101	71,086	84.33%	263	198	435,659	73.61%
West	128	101	59,026	80.06%	257	194	384,736	69.71%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Massachusetts	1,472	1,031	853,712	70.14%	3,582	2,212	5,326,206	61.37%
Boston	149	106	107,248	67.47%	449	268	685,461	58.75%
Central	198	132	116,835	66.83%	483	300	679,570	62.18%
Metrowest	315	214	190,911	66.01%	793	476	1,235,420	60.11%
Northeast	332	242	164,499	73.40%	835	516	1,042,578	61.07%
Southeast	256	177	153,576	70.41%	599	376	1,014,978	63.15%
Western	222	160	120,643	75.39%	423	276	668,199	63.13%
Michigan	3,143	2,445	1,182,347	77.30%	7,634	5,471	7,606,591	69.66%
Region 1	111	88	34,285	76.64%	249	180	252,982	70.66%
Region 2	111	73	51,706	63.99%	271	192	402,996	70.60%
Region 3	445	353	157,899	78.53%	1,007	748	928,432	73.01%
Region 4	284	231	101,098	82.97%	762	576	642,567	74.55%
Region 5	527	433	209,324	82.09%	1,361	1,052	1,283,845	76.42%
Region 6	248	199	101,086	80.54%	555	409	618,067	71.34%
Region 7	529	393	211,045	73.66%	1,257	861	1,327,476	65.00%
Region 8	404	310	138,708	76.92%	941	614	956,248	65.55%
Region 9	255	186	93,386	72.49%	726	467	658,476	60.20%
Region 10	229	179	83,809	76.22%	505	372	535,501	70.44%
Minnesota	1,264	982	635,000	77.54%	2,985	2,142	4,147,990	71.84%
Regions 1 and 2	132	97	59,516	74.51%	272	183	416,464	66.96%
Region 1	52	37	24,298	70.27%	122	79	155,492	65.49%
Region 2	80	60	35,219	77.19%	150	104	260,972	67.99%
Regions 3 and 4	250	196	111,319	76.67%	528	380	703,972	74.20%
Region 3	67	50	36,440	73.07%	103	73	248,519	73.82%
Region 4	183	146	74,878	77.82%	425	307	455,453	74.31%
Regions 5 and 6	227	170	119,724	75.89%	546	381	769,544	67.63%
Region 5	128	105	59,671	82.28%	299	212	389,634	67.93%
Region 6	99	65	60,053	66.09%	247	169	379,909	67.26%
Region 7	655	519	344,441	78.96%	1,639	1,198	2,258,010	73.18%
Region 7A (Hennepin)	290	220	131,150	76.10%	703	518	935,344	75.17%
Region 7B (Ramsey)	119	95	63,448	80.25%	315	236	407,727	76.25%
Region 7C	246	204	149,843	81.64%	621	444	914,939	69.90%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Mississippi	1,147	926	369,961	82.04%	2,856	2,082	2,202,655	71.69%
Region 1	296	234	86,983	81.11%	696	514	499,526	72.62%
Region 2	105	94	44,216	90.79%	308	247	268,417	75.20%
Region 3	154	132	53,466	84.73%	419	302	307,885	70.13%
Region 4	230	181	68,550	80.13%	519	378	407,947	73.73%
Region 5	65	53	20,773	83.46%	133	91	133,202	69.71%
Region 6	147	118	37,775	82.11%	370	281	228,576	73.44%
Region 7	150	114	58,198	76.24%	411	269	357,102	65.34%
Missouri	1,206	949	706,985	79.07%	3,008	2,159	4,583,870	69.77%
Central	156	118	105,002	77.78%	385	277	625,025	69.66%
Eastern	415	333	235,338	80.33%	1,069	762	1,593,064	69.81%
Eastern (St. Louis City and County)	214	174	139,938	81.30%	603	446	1,008,021	72.89%
Eastern (excluding St. Louis)	201	159	95,400	79.37%	466	316	585,043	66.22%
Northwest	294	233	171,888	78.90%	747	546	1,108,151	71.55%
Northwest (Jackson)	155	130	74,259	82.30%	398	296	507,830	72.12%
Northwest (excluding Jackson)	139	103	97,629	74.93%	349	250	600,321	70.95%
Southeast	148	121	82,570	82.05%	333	255	543,665	74.43%
Southwest	193	144	112,186	75.72%	474	319	713,965	64.43%
Montana	1,266	971	114,610	76.56%	3,132	2,262	792,939	70.36%
Region 1	104	79	9,166	72.98%	184	143	62,168	77.60%
Region 2	189	144	17,179	75.18%	479	354	111,316	69.95%
Region 3	270	189	23,676	71.17%	694	502	163,281	71.79%
Region 4	324	248	30,322	77.24%	851	593	212,218	68.83%
Region 5	379	311	34,268	81.35%	924	670	243,955	69.61%
Nebraska	1,251	969	230,669	77.60%	3,025	2,144	1,395,872	70.44%
Regions 1 and 2	90	71	22,455	78.61%	256	179	141,522	69.93%
Region 1	44	34	10,465	78.30%	131	93	66,553	70.01%
Region 2	46	37	11,990	78.86%	125	86	74,969	69.84%
Region 3	172	134	28,180	75.47%	415	310	171,343	74.46%
Region 4	156	117	25,578	72.88%	311	221	153,261	66.54%
Region 5	236	189	56,334	81.05%	681	487	349,383	71.64%
Region 6	597	458	98,121	77.83%	1,362	947	580,364	69.52%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Nevada	1,202	994	331,099	82.74%	2,979	2,180	2,182,228	70.50%
Clark – Region 1	894	745	240,327	83.08%	2,137	1,570	1,572,346	70.44%
Region 3	108	81	39,221	75.70%	307	210	267,727	65.92%
Capital District	37	28	17,612	75.18%	109	75	127,816	63.40%
Rural/Frontier	71	53	21,609	76.00%	198	135	139,910	67.87%
Washoe – Region 2	200	168	51,550	85.12%	535	400	342,155	73.77%
New Hampshire	1,312	983	154,875	76.07%	3,097	2,131	1,053,471	67.37%
Central	479	360	45,187	75.90%	1,053	755	300,402	69.36%
Central 1	238	178	23,712	76.54%	483	346	149,234	68.93%
Central 2	241	182	21,475	75.18%	570	409	151,168	69.75%
Northern	139	106	19,423	77.42%	352	267	138,182	71.16%
Southern	694	517	90,265	75.89%	1,692	1,109	614,887	65.43%
Southern 1 (Rockingham)	237	155	33,329	66.73%	600	394	236,373	66.51%
Southern 2	457	362	56,936	80.47%	1,092	715	378,514	64.84%
New Jersey	2,114	1,579	1,033,555	74.26%	5,036	3,339	6,845,720	65.22%
Central	510	357	239,285	70.29%	1,126	720	1,566,037	63.59%
Metropolitan	449	326	260,263	72.39%	1,183	777	1,649,807	64.05%
Northern	693	543	318,919	78.24%	1,754	1,169	2,209,141	63.93%
Southern	462	353	215,089	75.08%	973	673	1,420,735	70.81%
New Mexico	1,157	976	246,704	85.82%	2,769	2,155	1,555,252	76.92%
Region 1	245	210	54,806	86.60%	547	436	320,110	77.30%
Region 2	124	116	30,307	94.85%	310	250	227,155	78.76%
Region 3 (Bernalillo)	370	302	76,454	82.33%	991	755	508,712	76.71%
Region 4	158	133	34,203	85.42%	348	266	191,461	72.94%
Region 5	260	215	50,933	86.65%	573	448	307,815	78.10%
Region 5a	120	102	21,447	89.08%	286	225	147,310	77.09%
Region 5b (Dona Ana)	140	113	29,486	84.43%	287	223	160,505	79.43%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
New York	4,482	3,270	2,180,289	71.18%	11,379	7,381	15,326,050	62.30%
Region 1: Long Island	745	515	331,745	67.95%	1,703	976	2,202,755	56.20%
Region 2: New York City	1,659	1,146	864,081	67.16%	4,880	2,938	6,646,216	57.38%
Region 2A: Bronx	411	323	179,377	79.68%	896	651	1,058,323	71.21%
Region 2B: Kings	506	314	278,589	60.32%	1,428	820	1,995,099	54.49%
Region 2C: New York	237	176	126,561	73.45%	1,016	630	1,393,420	60.76%
Region 2D: Queens	394	251	226,790	61.40%	1,252	665	1,833,734	50.74%
Region 2E: Richmond	111	82	52,765	75.94%	288	172	365,641	57.72%
Region 3: Mid-Hudson	560	391	281,749	66.27%	1,202	757	1,762,699	60.98%
Region 4: Capital Region	215	163	107,427	74.94%	476	350	744,482	74.10%
Region 5: Mohawk Valley	44	28	30,563	63.22%	123	98	203,261	80.09%
Region 6: North Country	55	45	32,025	82.32%	169	129	242,330	76.47%
Region 7: Tug Hill Seaway	78	67	31,381	89.56%	214	165	195,295	74.74%
Region 8: Central	298	240	123,819	81.40%	575	449	790,248	76.55%
Region 9: Southern Tier	112	94	56,956	83.66%	259	217	353,216	81.68%
Region 10: Finger Lakes	290	232	148,955	78.62%	738	539	989,065	70.99%
Region 11: Western	426	349	171,589	82.92%	1,040	763	1,196,482	70.17%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
North Carolina	1,941	1,547	1,150,506	79.80%	4,707	3,449	7,538,179	71.86%
Alliance Behavioral Healthcare 1	219	179	95,410	80.43%	497	367	594,097	72.12%
Alliance Behavioral Healthcare 2	172	149	121,754	88.51%	411	296	734,002	71.64%
Cardinal Innovations Healthcare Solutions 1	189	138	93,454	71.16%	342	222	564,709	64.75%
Cardinal Innovations Healthcare Solutions 2	104	83	79,917	79.74%	296	220	517,054	73.01%
Cardinal Innovations Healthcare Solutions 3	165	129	113,890	78.57%	495	357	741,529	69.84%
CenterPoint Human Services	113	90	63,494	80.97%	286	219	416,164	75.84%
Eastpointe	231	183	96,546	78.18%	472	353	624,214	73.24%
Partners Behavioral Health Management	170	144	104,359	84.68%	341	250	695,496	70.35%
Sandhills Center 1	77	59	66,978	79.44%	198	149	432,349	75.93%
Sandhills Center 2	104	90	62,072	87.17%	269	187	392,881	69.96%
Smoky Mountain Center 1	112	79	58,490	70.06%	294	220	424,488	72.24%
Smoky Mountain Center 2	80	60	53,046	76.30%	258	190	421,844	72.96%
Trillium Health Resources 1	133	114	70,954	86.91%	348	280	480,390	77.32%
Trillium Health Resources 2	72	50	70,141	68.26%	200	139	498,965	68.46%
North Dakota	1,344	1,051	94,691	78.86%	2,966	2,181	565,225	72.57%
Badlands and West Central	352	276	23,558	79.11%	801	580	151,189	71.97%
Badlands	55	43	5,065	75.70%	135	97	34,418	73.39%
West Central	297	233	18,493	79.77%	666	483	116,771	71.68%
Lake Region	84	64	5,869	77.71%	155	122	30,711	78.69%
North Central	153	118	13,207	77.47%	328	244	79,334	72.92%
Northeast	212	173	13,362	83.55%	451	331	72,104	71.10%
Northwest	51	37	4,745	75.13%	128	81	30,311	60.12%
South Central	71	50	6,614	64.63%	182	131	44,857	75.51%
Southeast	421	333	27,336	79.49%	921	692	156,719	73.67%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Ohio	3,154	2,386	1,376,806	74.84%	7,820	5,442	8,812,617	67.93%
Boards 2, 46, 55, and 68	139	100	63,029	67.57%	271	179	386,190	63.74%
Boards 3, 52, and 85	111	80	49,596	68.14%	217	149	286,414	73.51%
Boards 4 and 78	82	63	33,999	78.08%	232	176	237,864	75.99%
Boards 5 and 60	94	66	45,267	72.30%	235	170	261,526	70.29%
Boards 7, 15, 41, 79, and 84	121	83	49,683	66.83%	274	171	356,695	61.28%
Boards 8, 13, and 83	123	95	63,145	74.47%	227	145	376,691	62.33%
Board 9 (Butler)	117	79	49,736	67.19%	265	167	279,429	61.40%
Board 12	116	83	43,151	66.46%	231	159	266,843	68.83%
Boards 18 and 47	369	282	176,770	75.67%	997	710	1,196,862	69.85%
Boards 20, 32, 54, and 69	138	112	41,741	82.42%	321	228	257,077	70.95%
Boards 21, 39, 51, 70, and 80	165	124	68,761	75.29%	292	212	419,629	70.63%
Boards 22, 74, and 87	140	113	47,843	79.51%	307	226	298,088	70.55%
Boards 23 and 45	145	109	48,559	74.14%	359	248	285,280	65.52%
Board 25 (Franklin)	324	249	142,114	78.26%	896	624	916,263	68.00%
Boards 27, 71, and 73	131	96	57,053	73.68%	322	209	375,064	60.95%
Boards 28, 43, and 67	137	101	59,784	73.17%	400	275	377,548	67.28%
Board 31 (Hamilton)	212	158	91,803	73.95%	562	384	603,424	66.29%
Board 48 (Lucas)	97	80	52,258	80.49%	272	192	329,959	64.89%
Boards 50 and 76	172	133	69,292	76.82%	475	333	471,711	69.46%
Board 57 (Montgomery)	107	94	61,962	89.26%	320	236	416,147	72.97%
Board 77 (Summit)	114	86	61,260	74.13%	345	249	413,912	67.86%
Oklahoma	1,247	944	461,843	75.12%	3,062	2,151	2,866,854	67.42%
Central	178	137	60,354	75.33%	427	293	366,536	64.66%
East Central	145	107	53,840	74.91%	324	229	327,085	68.66%
Northeast	147	109	59,763	72.74%	388	270	365,000	67.90%
Northwest and Southwest	193	156	66,323	78.70%	396	294	407,463	69.88%
Oklahoma County	186	148	87,083	76.73%	546	381	555,362	66.37%
Southeast	172	127	60,975	75.31%	412	290	388,160	69.04%
Tulsa County	226	160	73,505	72.22%	569	394	457,247	66.42%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Oregon	1,269	960	434,609	76.13%	3,078	2,216	3,133,289	71.13%
Region 1 (Multnomah)	235	171	73,920	71.04%	673	462	627,664	69.18%
Region 2	398	308	108,537	78.51%	773	568	734,104	72.48%
Region 3	340	253	145,315	75.21%	901	662	973,074	72.34%
Region 4	171	132	55,877	77.84%	420	313	445,555	70.76%
Region 5 (Central)	49	38	22,308	75.35%	116	70	162,608	69.35%
Region 6 (Eastern)	76	58	28,651	79.99%	195	141	190,283	69.13%
Pennsylvania	3,120	2,444	1,449,943	78.45%	7,432	5,326	9,908,218	70.32%
Region 1 (Allegheny)	229	171	125,049	75.62%	745	491	979,005	66.91%
Regions 3, 8, 9, and 51	215	172	78,431	80.39%	487	355	549,973	71.48%
Regions 4, 11, 37, and 49	206	149	106,827	73.36%	462	321	698,209	69.98%
Regions 5, 18, 23, 24, and 46	202	166	83,605	82.10%	489	366	579,877	72.57%
Regions 6, 12, 16, 31, 35, 45, and 47	182	147	89,248	81.95%	402	308	562,637	72.23%
Regions 7, 13, 20, and 33	616	482	291,035	78.26%	1,434	982	1,917,341	67.39%
Regions 10, 15, 27, 32, 43, and 44	102	83	53,882	81.33%	279	216	399,808	73.66%
Regions 17 and 21	88	63	44,957	71.72%	216	162	283,787	74.58%
Regions 19, 26, 28, and 42	395	301	170,669	77.05%	882	656	1,117,029	72.07%
Regions 22, 38, 40, 41, and 48	185	149	82,848	79.88%	482	336	652,080	68.71%
Regions 29 and 34	169	129	78,899	76.50%	329	213	507,199	64.86%
Regions 30 and 50	167	131	64,614	78.86%	377	286	477,374	76.63%
Region 36 (Philadelphia)	364	301	179,879	80.21%	848	634	1,183,899	73.46%
Rhode Island	1,211	947	120,526	78.46%	3,138	2,190	829,196	68.92%
Region 1: Southern Providence County	193	141	19,434	72.29%	521	330	152,440	66.27%
Region 2: Northern Providence County/Blackstone Valley	297	236	22,858	80.06%	782	559	165,039	68.55%
Region 3: Providence	180	151	27,596	82.54%	486	369	137,221	74.89%
Region 4: Kent County	187	150	16,574	81.34%	456	324	135,835	70.40%
Region 5: East Bay	116	95	10,232	82.32%	302	214	77,111	69.01%
Region 6: Newport County	96	65	8,633	68.82%	250	150	65,704	63.32%
Region 7: South County	142	109	15,200	77.48%	341	244	95,847	69.84%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
South Carolina	1,238	998	554,493	80.82%	3,011	2,206	3,704,783	72.65%
Region 1	369	300	177,635	82.80%	889	633	1,156,520	68.79%
Region 2	377	301	143,058	80.20%	801	570	908,309	70.33%
Region 3	220	171	89,361	76.00%	539	398	644,968	74.52%
Region 4	272	226	144,440	82.39%	782	605	994,986	77.68%
South Dakota	1,278	1,007	103,486	79.11%	2,880	2,109	631,809	73.03%
Region 1	276	219	25,408	77.40%	691	519	155,569	74.44%
Region 2	120	96	10,026	81.25%	234	176	57,293	76.61%
Region 3	311	245	25,113	79.58%	664	483	150,285	73.70%
Region 4	215	170	14,744	79.57%	397	295	89,128	71.13%
Region 5	356	277	28,196	78.97%	894	636	179,535	71.17%
Tennessee	1,261	979	789,042	77.55%	3,024	2,240	4,999,822	72.48%
Region 1	140	109	57,411	76.58%	281	211	409,331	69.98%
Region 2	192	152	141,017	81.19%	510	391	941,367	76.89%
Region 3	197	148	114,695	75.94%	490	371	754,196	75.92%
Region 4 (Davidson)	105	73	72,028	73.61%	304	206	502,251	65.61%
Region 5	333	249	204,741	75.96%	698	499	1,202,771	72.79%
Region 6	101	80	77,846	78.39%	298	219	486,354	65.49%
Region 7 (Shelby)	193	168	121,305	80.47%	443	343	703,552	74.25%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Texas	4,241	3,448	3,549,733	81.00%	10,097	7,449	19,733,150	71.72%
Region 1	112	80	117,711	69.12%	329	237	647,431	70.71%
Region 2	105	89	70,068	82.59%	250	189	421,410	75.37%
Region 3	1,221	1,022	943,303	83.79%	2,924	2,252	5,312,787	75.45%
Region 3a	786	636	603,411	80.97%	1,850	1,366	3,392,041	71.83%
Region 3bc	435	386	339,892	89.11%	1,074	886	1,920,746	81.79%
Region 4	167	143	138,151	85.27%	458	379	867,534	81.06%
Region 5	100	85	95,784	85.98%	256	207	599,333	78.71%
Region 6	987	769	851,043	77.39%	2,324	1,540	4,783,998	63.33%
Region 6a	876	683	765,152	77.61%	2,100	1,387	4,280,533	63.28%
Region 6bc	111	86	85,891	75.63%	224	153	503,465	63.75%
Region 7	509	395	420,793	77.52%	1,283	931	2,425,665	71.05%
Region 7a	305	228	259,866	75.29%	797	561	1,546,425	69.30%
Region 7bcd	204	167	160,928	81.27%	486	370	879,240	74.18%
Region 8	406	344	369,937	84.52%	1,015	766	2,059,794	73.97%
Region 9	99	73	78,074	76.29%	225	139	443,839	59.71%
Region 10	138	107	131,965	76.66%	280	217	630,716	75.37%
Region 11	397	341	332,904	85.73%	753	592	1,540,643	75.08%
Region 11abd	256	213	201,000	82.11%	490	375	977,902	72.96%
Region 11c (Hidalgo)	141	128	131,904	92.37%	263	217	562,741	78.52%
Utah	1,139	977	426,435	85.30%	2,740	2,132	2,066,736	76.48%
Bear River, Northeastern, Summit, Tooele, and Wasatch	106	94	52,930	88.90%	229	179	247,427	78.30%
Central, Four Corners, San Juan, and Southwest	123	105	52,714	88.30%	287	206	250,047	70.58%
Central, Four Corners, and San Juan	49	38	20,887	83.59%	121	88	95,230	72.79%
Southwest	74	67	31,827	91.29%	166	118	154,816	68.81%
Davis County	116	93	47,892	77.18%	234	179	220,512	75.44%
Salt Lake County	476	413	147,675	85.78%	1,211	958	792,739	78.05%
Utah County	202	172	90,104	85.03%	507	391	376,232	75.16%
Weber, Morgan	116	100	35,120	85.29%	272	219	179,780	77.71%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Vermont	1,227	945	69,363	77.27%	2,983	2,090	501,770	70.75%
Champlain Valley	528	409	30,611	79.00%	1,372	956	201,776	68.55%
Rural Northeast	252	193	15,974	72.76%	564	393	117,817	71.96%
Rural Southeast	259	193	12,476	74.96%	608	435	103,906	72.97%
Rural Southwest	188	150	10,302	81.43%	439	306	78,272	72.45%
Virginia	1,960	1,559	925,947	79.75%	4,752	3,384	6,294,357	69.53%
Region 1	256	215	154,624	82.89%	676	510	975,404	73.10%
Region 2	558	428	252,543	78.09%	1,423	944	1,778,797	64.18%
Region 3	305	238	149,400	76.85%	815	618	1,066,498	73.86%
Region 4	338	273	159,366	81.77%	803	569	1,072,836	70.29%
Region 5	503	405	210,015	80.42%	1,035	743	1,400,823	70.13%
Washington	1,221	957	827,195	78.09%	3,028	2,119	5,452,060	69.24%
Region 1	317	259	206,611	81.16%	656	451	1,170,456	69.23%
Greater Columbia and North Central	224	183	131,248	81.85%	424	288	692,588	67.50%
Spokane	93	76	75,363	79.49%	232	163	477,868	72.11%
Region 2	500	373	353,258	74.01%	1,432	975	2,528,868	66.38%
King	303	221	216,593	71.78%	957	646	1,620,679	65.89%
North Sound	197	152	136,664	77.35%	475	329	908,189	67.38%
Region 3	404	325	267,326	81.03%	940	693	1,752,736	73.78%
Pierce	193	160	101,689	83.13%	478	369	638,133	77.89%
Salish	55	42	39,709	79.12%	135	89	295,141	67.36%
SW WA and Great Rivers	103	83	88,952	79.82%	245	180	562,027	72.97%
Thurston-Mason	53	40	36,976	78.18%	82	55	257,435	65.55%
West Virginia	1,338	983	204,404	74.37%	3,143	2,120	1,443,317	65.29%
Region I	86	59	15,563	68.08%	221	145	114,550	62.16%
Region II	195	155	32,297	80.41%	422	301	202,685	72.05%
Region III	121	82	18,102	65.29%	287	199	132,177	64.59%
Region IV	339	245	47,890	74.91%	776	501	321,732	64.77%
Region V	323	223	56,350	70.90%	819	527	408,659	60.44%
Region VI	274	219	34,201	79.23%	618	447	263,514	69.25%

See notes at end of table.

(continued)

Table C2. Sample Sizes, Weighted Interview Response Rates, and Population Estimates, by Substate Region, for Individuals Aged 12 to 20 and Adults Aged 18 or Older: 2014, 2015, and 2016 NSDUHs (continued)

State/Substate Region	12-20 Total Selected	12-20 Total Responded	12-20 Population Estimate	12-20 Weighted Interview Response Rate (Percentage)	18+ Total Selected	18+ Total Responded	18+ Population Estimate	18+ Weighted Interview Response Rate (Percentage)
Wisconsin	1,295	988	638,347	74.72%	3,075	2,153	4,404,440	69.75%
Milwaukee	199	155	112,040	78.31%	567	381	705,880	66.81%
Northeastern	233	168	133,164	68.08%	593	433	957,254	74.63%
Northern	113	94	50,016	83.67%	241	186	382,235	78.18%
Southeastern	337	238	134,304	69.59%	646	427	888,924	66.21%
Southern	268	216	120,564	77.59%	677	480	866,220	67.55%
Western	145	117	88,259	79.14%	351	246	603,927	70.02%
Wyoming	1,257	996	65,756	77.72%	2,909	2,166	437,329	73.44%
Judicial District 1 (Laramie)	184	135	10,616	73.10%	489	356	71,842	69.66%
Judicial District 2	156	130	7,082	81.05%	366	291	43,273	79.05%
Judicial District 3	188	150	10,180	77.41%	378	291	60,068	77.37%
Judicial District 4	76	56	4,066	76.94%	133	91	29,304	65.50%
Judicial District 5	104	82	6,142	81.64%	242	190	41,797	80.55%
Judicial District 6	149	123	7,097	80.23%	334	261	45,004	78.48%
Judicial District 7 (Natrona)	179	154	8,682	85.01%	406	314	59,360	77.94%
Judicial District 8	99	74	4,322	70.83%	216	138	30,658	62.61%
Judicial District 9	122	92	7,570	69.60%	345	234	56,024	66.53%

SPA = service planning area.

NOTE: For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data>.

NOTE: Computations in this table are based on a respondent's age at screening. Thus, the data in the Total Responded column(s) could differ from data in other NSDUH tables that use the respondent's age recorded during the interview.

NOTE: To compute the pooled 2014-2016 weighted response rates, the three samples were combined, and the individual-year weights were used for the pooled sample. Thus, the response rates presented here are weighted across 3 years of data rather than being a simple average of the 2014, 2015, and 2016 individual response rates.

NOTE: The total responded column represents the combined sample size from the 2014, 2015, and 2016 NSDUHs.

NOTE: The population estimate is the simple average of the 2014, 2015, and 2016 population counts for individuals aged 12 to 20 and adults aged 18 or older. Because of rounding, the sum of the substate region population counts within a state may not exactly match the state population count listed in the table.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

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Section E: List of Contributors

This National Survey on Drug Use and Health (NSDUH) document was prepared by the Center for Behavioral Health Statistics and Quality (CBHSQ), Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS), and by RTI International (a registered trademark and a trade name of Research Triangle Institute), Research Triangle Park, North Carolina. Work by RTI was performed under Contract No. HHSS283201300001C.

At RTI, Neeraja S. Sathe and Kathryn Spagnola were responsible for the writing of the document, and Akhil K. Vaish was responsible for the overall methodology and estimation for the model-based Bayes estimates and confidence intervals. At SAMHSA, Matthew Williams reviewed the document and provided substantive revisions.

The following staff were responsible for generating the estimates: Akhil K. Vaish, Neeraja S. Sathe, and Kathryn Spagnola. The following staff provided other support: Brenda K. Porter and Ana Saravia. Ms. Spagnola also provided oversight for production of the document. Richard S. Straw edited it; Debbie F. Bond formatted its text and tables; and Teresa F. Bass, Kimberly Cone, Danny Occoquan, and Pamela Tuck prepared the web versions. Justine L. Allpress prepared the maps used in the associated files.

