2012-2014 National Surveys on Drug Use and Health: Guide to Substate Tables and Summary of Small Area Estimation Methodology

Section A: Overview

A.1. Introduction

This document provides a guide on the development and presentation of model-based small area estimates of the prevalence of substance use and mental disorders in substate regions based on data from the combined 2012-2014 National Surveys on Drug Use and Health (NSDUHs). The estimates along with this document and other related information are available at http://www.samhsa.gov/data/.

An annual survey of the civilian, noninstitutionalized population aged 12 or older, NSDUH is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA). It collects information from individuals residing in households, noninstitutionalized group quarters (e.g., shelters, rooming houses, dormitories), and civilians living on military bases. In 2012-2014, NSDUH collected data from 204,048 respondents aged 12 or older and was designed to obtain representative samples from the 50 states and the District of Columbia. The survey is planned and managed by SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ). Data collection and analysis were conducted under contract with RTI International.[1]

The 1999 through 2001 National Household Surveys on Drug Abuse (NHSDAs)[2] and the 2002 through 2013 NSDUHs employed a 50-state design with an independent, multistage area probability sample for each of the 50 states and the District of Columbia. For the 50-state design, 8 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. These 12 states have the following target sample sizes per year: 4,560 interviews in California; 3,300 interviews in Florida, New York, and Texas; 2,400 interviews in Illinois, Michigan, Ohio, and Pennsylvania; and 1,500 interviews 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 largest states while slightly increasing

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[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).

the sample sizes in smaller states to improve the precision of state and substate estimates (note that the target sample size per year in the small states is 960 interviews with the exception of Hawaii where the target sample size is 967 interviews).

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, 2015).

This marks the seventh time[3] 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 25 binary (0, 1) substance use or mental health measures using combined data from the 2012-2014 NSDUHs for individuals aged 12 or older (or adults 18 or older for the four mental disorders, and individuals aged 12 to 20 for underage alcohol and binge 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 http://www.samhsa.gov/data/. The list of products (e.g., tables, maps, substate region definitions) related to the 2012-2014 substate estimates is provided in Section A.2.

Estimates for 384 substate regions were generated using the 2012-2014 NSDUH data. These substate regions were defined by government officials from each of the 50 states and the 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. 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 2012, 2013, and 2014 NSDUH sample sizes and response rates for each substate region. Users may find the population

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[3] Prior to this effort, substate small area estimates using the combined 1999-2001, 2002-2004, 2004-2006, 2006-2008, 2008-2010, and 2010-2012 data have been produced by SAMHSA. These estimates can be found at http://www.samhsa.gov/data/.

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 (53,712 individuals) can be obtained by multiplying the prevalence rate (4.71 percent) from Table 3 in the "2012-2014 NSDUH Substate Regions: Excel Tables" (see http://www.samhsa.gov/data/) and the population estimate from Table C1 (1,140,380) 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 2012-2014 substate estimates.

A.2. Presentation of Findings

The following products associated with the 2012-2014 substate estimates are available at http://www.samhsa.gov/data/:

- **2012-2014 NSDUH Substate Region Estimates: Excel Tables**: These Excel tables for each outcome show the prevalence estimates and confidence intervals (CIs) for individuals aged 12 or older (12 to 20 for underage alcohol and 18 or older for the four mental health outcomes).

- **2012-2014 NSDUH National Maps of Prevalence Estimates, by Substate Region**: More information about these maps is provided in Section A.3.

- **2012-2014 NSDUH Substate Region Definitions**: This document includes maps and tables that show the substate region definitions in terms of census tracts or counties.

- **2012-2014 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.

- **2012-2014 NSDUH Substate Age Group Tables**: Tables of prevalence estimates 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 and PDF format.

- **2012-2014 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.

- **2012-2014 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 two underage alcohol outcomes). Note that the seven groups shown on each state-level map are taken from the national maps.

- **Comparison of 2010-2012 and 2012-2014 NSDUH Substate Region Estimates**:
  These tables show the 2010-2012 and 2012-2014 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 2010-2012 estimates are compared with the 2012-2014 estimates for the 356 regions that remained the same over these two time periods (see Table A2 at the end of this section for the number of regions that remained the same between 2010-2012 and 2012-2014 for each state).

- **Comparison of 2002-2004 and 2012-2014 NSDUH Substate Region Estimates**:
  These tables show the 2002-2004 and 2012-2014 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 2002-2004 estimates are compared with the 2012-2014 estimates for the 264 regions and the outcome measures that remained the same over these two 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 2002-2004 and 2012-2014 for each state, see Table A2).

Note that other products may be added to the 2012-2014 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 2015 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 "2012-2014 NSDUH Substate Region Definitions" (see http://www.samhsa.gov/data/ as listed in Section A.2). Some of the states (specifically, New Hampshire, New York, Texas, and Washington) wanted the maps to be produced only for the aggregate regions. For example, New York has 15 substate regions, and those 15 regions were combined to create 4 aggregate regions that are used in the maps. Hence, for each measure, maps were produced for 362 regions and not for 384 regions.

These 362 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 2 decimals) designed to represent distributions that are somewhat symmetric, like a normal distribution. Colors were assigned to all substate regions such that the third having the lowest prevalence are in blue (121 substate regions), the middle third are in white (120 substate regions), and the third with the highest prevalence are in red (121 substate regions). The only exceptions were the three

perception-of-risk outcomes shown in Figure 4 (marijuana), Figure 11 (alcohol), and Figure 16 (cigarettes) of the national maps, which have the highest estimates represented in blue and the lowest estimates represented in red to reflect the inverse relationship between substance use and the perception of risk of using that substance. 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 16 substate regions with the highest estimates, (b) medium red for the 33 substate regions with the next highest estimates, and (c) light red for the 72 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 9 (national map showing alcohol use in the past month among persons aged 12 or older) (see the "2012-2014 NSDUH National Maps of Prevalence Estimates, by Substate Region" at http://www.samhsa.gov/data/), the values on the boundary in the lowest category (group 1) correspond to Utah County in Utah (21.37 percent) and Catchment Area 7 in Arkansas (36.38 percent) and are displayed in the legend. In the next to lowest category, Catchment Area 4 in Arkansas (37.39 percent) and Communicare and River Valley in Kentucky (43.54 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 36.39 percent because the upper limit of group 1 is 36.38 percent. These national maps are available at http://www.samhsa.gov/data/ as listed in Section A.2.

The 2012-2014 substate estimates and corresponding Bayesian CIs are available in the "2012-2014 NSDUH Substate Region Estimates: Excel Tables" (as mentioned in Section A.2, see http://www.samhsa.gov/data/). These tables also contain a sort order number and a map-group indicator (= 1 for the nation, = 2 for census regions, = 3 for states, = 4 if a region is part of the 362 mapping regions, and = 5 for all other substate/aggregate regions not included on 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 Office of Applied Studies (OAS, 2005).[4] 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, and 2012-2014 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 2012-2014 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 and 2012-2014 estimates, on the other hand, were produced using 2010 census data. Hence, when reviewing changes between 2002-2004 and 2012-2014, 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 http://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

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[4] OAS is the former name of SAMHSA's CBHSQ.

). The 2008-2010 and the 2010-2012 substate estimates exclude data based on falsified cases.

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 illicit drugs other than marijuana in the past month from the percentage who used illicit drugs in the past month to find the percentage who only used marijuana 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
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
Marijuana Use in the Past Month	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
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
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
Underage Past Month Use of Alcohol (among Individuals Aged 12 to 20)	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
Cigarette Use in the Past Month	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 Dependence or Abuse in the Past Year[2]	X	X	X	X	X	X
Alcohol Dependence in the Past Year[2]	X	X	X	X	X	X
Illicit Drug Dependence or Abuse 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
Dependence or Abuse of Illicit Drugs or Alcohol 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
Serious Mental Illness (SMI) in the Past Year[5]	--	--	--	X	X	X
Any Mental Illness (AMI) in the Past Year[5]	--	--	--	X	X	X
Had Serious Thoughts of Suicide in the Past Year	--	--	--	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 http://www.samhsa.gov/data/. Estimates using the combined 2008-2010, 2010-2012, and 2012-2014 data can also be found at http://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 marijuana initiation rate* (%) = 100 * {[$X_1 \div (0.5 * X_1 + X_2)$] ÷ 2}, where X_1 is the number of marijuana initiates in the past 24 months and X_2 is the number of individuals who never used marijuana (with the at-risk population defined as $0.5 * X_1 + X_2$). Both X_1 and X_2 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 A.8 in Appendix A of the 2009-2010 state estimates report (Hughes, Muhuri, Sathe, & Spagnola, 2012).

[2] Dependence or abuse is based on definitions found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). For more details on these measures, 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 2014 past year SPD measure. Substate small area estimates for 2006-2008, 2008-2010, 2010-2012, and 2012-2014 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, 2002-2014.

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

State	2002-2004		2010-2012		2012-2014			
	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 2002-2004[3]	Number of Substate Regions Overlapping with 2010-2012[3]
Total U.S.	357	340	384	363	384	362	264	356
Alabama	4	4	4	4	4	4	4	4
Alaska	4	4	4	4	4	4	1	4
Arizona	4	4	4	4	4	4	4	4
Arkansas	7	7	8	8	8	8	3	8
California	15	15	27	27	26	26	3	25
Colorado	5	5	5	5	5	5	5	5
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	14	14	18	18	18	18	8	16
Georgia	5	5	6	6	6	6	0	6
Hawaii	3	3	4	4	4	4	2	4
Idaho	7	7	7	7	7	7	5	5
Illinois	5	5	5	5	5	5	5	5
Indiana	8	8	8	8	8	8	8	8
Iowa	6	6	6	6	6	6	6	6
Kansas	6	6	6	6	6	6	6	6
Kentucky	6	6	6	6	6	6	6	6
Louisiana	7	7	6	6	6	6	5	6
Maine	7	7	8	8	8	8	3	8
Maryland	7	7	9	9	9	9	4	9
Massachusetts	6	6	6	6	6	6	6	6
Michigan	16	16	15	15	10	10	3	3
Minnesota	6	6	6	6	6	6	6	6
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	5	5	6	6	6	6	4	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	5	5	5	5
New York	15	4	15	4	15	4	15	15
North Carolina	4	4	12	11	14	14	0	10

See notes at end of table.   (continued)

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

State	2002-2004		2010-2012		2012-2014			
	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 2002-2004[3]	Number of Substate Regions Overlapping with 2010-2012[3]
North Dakota	5	5	5	5	7	7	3	3
Ohio	21	21	21	21	21	21	21	21
Oklahoma	7	7	7	7	7	7	7	7
Oregon	5	5	6	6	6	6	4	6
Pennsylvania	13	13	13	13	13	13	9	13
Rhode Island	4	4	4	4	4	4	4	4
South Carolina	4	4	4	4	4	4	2	2
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	6	6	6	6
Vermont	4	4	4	4	4	4	4	4
Virginia	5	5	5	5	5	5	3	5
Washington	6	6	6	3	8	3	2	2
West Virginia	8	8	6	6	6	6	2	6
Wisconsin	6	6	6	6	6	6	4	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, 2002-2014.

Section B: Substate Region Estimation Methodology

The survey-weighted hierarchical Bayes (SWHB) methodology used in the production of state estimates from the 1999 to 2014 National Surveys on Drug Use and Health (NSDUHs) also was used in the production of the 2012-2014 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 2012-2014 substate small area estimates have been benchmarked to the national design-based estimates.

B.1. General SAE Model Description

The model described here to produce the 2012-2014 substate small area estimates is the same logistic mixed[5] hierarchical Bayes (HB) model that was used to produce the 2010-2012 substate small area estimates (see "2010-2012 National Survey on Drug Use and Health: Overview and Summary of Substate Region Estimation Methodology" at http://www.samhsa.gov/data/). The following model was used:

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[5] 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.

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

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

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 Nielsen Claritas, 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 "2013-2014 NSDUH Guide to State Tables and Summary of Small Area Estimation Methodology" at http://www.samhsa.gov/data/.

The vectors $\eta_i = (\eta_{1i}, \cdots, \eta_{Ai})'$ and $v_{ij} = (v_{1ij}, \cdots, v_{Aij})'$, 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 HB estimation purposes, an improper uniform prior distribution[6] is assumed for β_a, and proper Wishart prior distributions are assumed for $D_\eta{}^{-1}$ 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 × race/ethnicity × gender cell within a block group can be obtained. These block group-level small area estimates then can be aggregated using the appropriate

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[6] 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).

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.6 of the "2011-2012 NSDUH Guide to State Tables and Summary of Small Area Estimation Methodology" at http://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 × age group × 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 (384 regions) × age group (12 to 17, 18 to 25, 26 to 34, and 35 or older) × gender (male and female) level collectively over 3 years (2012, 2013, and 2014) 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, Comparison, and 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 4.7 percent, and the 95 percent CI ranges from 3.5 to 6.3 percent.[7] 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.

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[7] See Table 3 in the "2012-2014 NSDUH Substate Region Estimates: Excel Tables" at http://www.samhsa.gov/data/.

When comparing prevalence rates for two substate regions, it is tempting and often convenient to look at their 95 percent Bayesian CIs to decide whether the difference in the two substate regions' prevalence rates is significant. If the two Bayesian CIs overlap, one would conclude that the difference is not statistically significant. If the two Bayesian CIs do not overlap, it implies that the two substate regions prevalence rates are significantly different from each other. However, as discussed in Schenker and Gentleman (2001), the method of overlapping Bayesian CIs is more conservative (i.e., it rejects the null hypothesis of no difference less often) than the standard method based on z statistics when the null hypothesis is true. For details on the z statistics method to test the differences between the estimates of two substate regions, refer to Section B.12 (which describes the test for two state estimates) of the "2011-2012 NSDUH Guide to State Tables and Summary of Small Area Estimation Methodology" at http://www.samhsa.gov/data/. The same test can be extended to test the differences between two substate regions' prevalence rates. Note that the referenced test assumes zero correlation between the two estimates. Two substate regions in one state (or across states) are likely correlated, but the test can still be used knowing that the resulting test will be more conservative than if the correlation was accounted for. This is still a better alternative than using the overlapping CI test. Even if Bayesian CIs for two substate regions overlap, the two prevalence rates may be declared significantly different by the test based on z statistics. Hence, the method of overlapping Bayesian CIs is not recommended to test the equivalence of two substate prevalence rates. A detailed description of the method of overlapping CIs and its comparison with the standard methods for testing of a hypothesis is given in Schenker and Gentleman (2001) and Payton, Greenstone, and Schenker (2003).

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 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 52.3 percent (for 2012-2014), the average relative standard error (RSE)[8] was about 5.1 percent, and the RSE for substate regions with a large sample size was about 3.2 percent. For substate regions with a medium sample size, the average RSE was 4.3 percent; for small sample sizes, the average RSE was 5.7 percent. For past month use of marijuana (with a national prevalence of 7.7 percent), the average RSE was 9.6 percent for substate regions with large samples. For medium sample sizes, the average RSE was 12.6 percent, and for small samples, the RSE was 15.2 percent, whereas the overall national average RSE was 13.9 percent. Substance use measures with lower prevalence rates, such as past year use of cocaine (1.7 percent nationally), displayed larger average RSEs. For substate regions with large sample sizes, the average RSE was 19.3 percent. For those with medium sample sizes, the average RSE was 23.0 percent, and for those with small sample sizes, the average RSE was 26.0 percent. The overall national RSE for past year use of cocaine was 24.5 percent.

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[8] 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: 2012, 2013, and 2014 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	626,362	523,186	441,803	83.96%	268,038	204,048	262,720,104	71.97%	60.43%
Northeast	139,742	118,083	94,399	78.34%	54,810	40,433	47,408,955	68.62%	53.76%
Midwest	162,920	136,982	117,579	85.62%	70,864	53,789	56,241,587	72.32%	61.92%
South	197,620	162,556	139,570	86.12%	83,229	64,449	97,650,147	73.32%	63.14%
West	126,080	105,565	90,255	83.26%	59,135	45,377	61,419,415	72.10%	60.03%
Alabama	8,762	6,977	6,012	85.73%	3,573	2,765	4,046,816	71.86%	61.61%
Region 1	2,332	1,869	1,578	83.63%	856	634	1,140,380	68.91%	57.63%
Region 2	2,649	2,149	1,790	82.80%	1,113	833	1,294,847	69.88%	57.87%
Region 3	2,041	1,578	1,433	90.82%	874	716	719,075	76.62%	69.58%
Region 4	1,740	1,381	1,211	87.53%	730	582	892,515	73.59%	64.41%
Alaska	8,586	6,562	5,636	85.94%	3,584	2,639	581,260	72.00%	61.87%
Anchorage	3,220	2,793	2,392	85.72%	1,515	1,112	239,664	72.27%	61.95%
Northern	1,837	1,279	1,101	86.14%	775	563	128,698	69.11%	59.53%
South Central	2,627	1,812	1,520	84.10%	934	678	152,325	70.82%	59.56%
Southeast	902	678	623	91.56%	360	286	60,572	79.85%	73.11%
Arizona	8,298	6,379	5,578	87.44%	3,578	2,775	5,450,630	73.81%	64.54%
Maricopa	4,626	3,867	3,407	88.11%	2,245	1,708	3,244,780	71.15%	62.69%
Pima	1,358	1,017	866	85.94%	531	422	844,533	80.72%	69.37%
Rural North	1,065	750	655	86.56%	343	255	621,580	70.50%	61.02%
Rural South	1,249	745	650	86.83%	459	390	739,737	80.64%	70.03%
Arkansas	8,171	6,684	6,020	89.88%	3,667	2,785	2,436,479	71.92%	64.64%
Catchment Area 1	1,234	1,062	931	87.52%	665	495	394,933	70.19%	61.43%
Catchment Area 2	1,047	786	701	89.50%	381	292	296,809	76.56%	68.52%
Catchment Area 3	1,072	902	834	92.17%	513	398	325,708	72.47%	66.80%
Catchment Area 4	785	654	585	89.38%	367	279	215,114	69.78%	62.37%
Catchment Area 5	1,140	891	806	90.23%	533	393	363,227	70.04%	63.20%
Catchment Area 6	680	548	517	94.30%	284	243	174,036	85.38%	80.51%
Catchment Area 7	682	579	552	95.21%	316	249	189,808	75.38%	71.77%
Catchment Area 8	1,531	1,262	1,094	86.41%	608	436	476,844	64.66%	55.87%

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: 2012, 2013, and 2014 (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	29,722	26,482	21,146	79.61%	16,046	12,001	31,788,545	70.15%	55.85%
Region 1R	785	659	574	87.15%	387	304	813,670	75.19%	65.53%
Region 2R	1,101	753	634	83.94%	432	334	860,841	72.71%	61.03%
Region 3R (Sacramento)	1,067	979	800	81.88%	528	421	1,202,211	78.44%	64.23%
Region 4R	1,461	1,297	1,097	84.62%	690	536	1,108,749	78.65%	66.55%
Region 5R (San Francisco)	731	636	420	65.81%	293	197	746,157	57.61%	37.91%
Region 6 (Santa Clara)	1,314	1,243	984	79.34%	678	503	1,533,142	67.17%	53.29%
Region 7R (Contra Costa)	840	777	648	83.29%	453	341	906,155	72.27%	60.20%
Region 8R (Alameda)	1,326	1,194	958	80.38%	656	489	1,309,079	70.28%	56.49%
Region 9R (San Mateo)	665	612	506	82.64%	315	230	622,271	63.95%	52.85%
Region 10	908	822	693	84.33%	569	400	1,061,304	63.80%	53.81%
Region 11 (Los Angeles)	7,544	6,956	5,507	79.27%	4,410	3,188	8,347,839	67.45%	53.47%
LA SPA 1 and 5	779	717	546	76.40%	375	271	895,830	68.25%	52.14%
LA SPA 2	1,767	1,643	1,211	73.77%	955	680	1,834,499	65.93%	48.64%
LA SPA 3	1,198	1,119	889	79.95%	756	523	1,490,785	66.40%	53.09%
LA SPA 4	1,008	892	670	74.88%	471	326	977,073	65.62%	49.14%
LA SPA 6	612	545	478	88.12%	431	324	800,750	67.75%	59.70%
LA SPA 7	879	837	723	86.30%	692	522	1,063,490	69.09%	59.62%
LA SPA 8	1,301	1,203	990	82.07%	730	542	1,285,413	69.68%	57.19%
Region 12R	467	411	341	83.07%	258	194	702,429	68.88%	57.21%
Regions 13 and 19R	1,746	1,417	1,115	74.88%	1,019	796	2,006,173	74.09%	55.48%
Region 14 (Orange)	2,395	2,201	1,638	73.62%	1,289	931	2,609,808	66.61%	49.04%
Region 15R (Fresno)	634	587	476	81.13%	417	328	763,896	77.00%	62.47%
Region 16R (San Diego)	2,594	2,313	1,753	75.92%	1,237	936	2,682,797	70.80%	53.75%
Region 17R	1,185	1,077	883	81.84%	750	583	1,182,387	75.38%	61.69%
Region 18R (San Bernardino)	1,353	1,177	971	82.79%	877	686	1,694,198	75.16%	62.23%
Region 20R	786	708	601	85.05%	459	362	773,194	69.58%	59.18%
Region 21R	820	663	547	82.26%	329	242	862,248	67.52%	55.54%

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: 2012, 2013, and 2014 (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	8,468	7,269	6,060	83.34%	3,718	2,820	4,358,205	73.03%	60.86%
Region 1	943	815	680	83.04%	433	322	575,705	75.63%	62.81%
Regions 2 and 7	4,454	4,002	3,221	80.57%	2,046	1,556	2,441,220	73.05%	58.86%
Region 3	1,438	1,205	1,026	84.20%	626	489	644,112	72.41%	60.97%
Region 4	671	475	440	93.15%	231	187	232,934	77.59%	72.27%
Regions 5 and 6	962	772	693	89.52%	382	266	464,234	68.02%	60.90%
Connecticut	8,634	7,710	6,398	82.78%	3,897	2,837	3,044,939	69.23%	57.30%
Eastern	1,227	1,046	896	85.48%	543	423	372,631	74.22%	63.44%
North Central	2,475	2,264	1,881	82.87%	1,098	795	852,501	68.21%	56.52%
Northwestern	1,427	1,257	1,049	83.33%	680	489	526,119	66.62%	55.52%
South Central	2,053	1,856	1,578	84.96%	908	667	713,456	72.93%	61.96%
Southwest	1,452	1,287	994	76.75%	668	463	580,232	64.91%	49.81%
Delaware	8,661	7,178	5,936	82.68%	3,487	2,706	777,549	75.35%	62.30%
Kent	1,541	1,353	1,145	84.34%	724	561	139,696	73.87%	62.30%
New Castle (excluding Wilmington City)	4,205	3,805	3,108	81.62%	1,853	1,423	400,243	75.14%	61.33%
Sussex	2,392	1,586	1,313	82.96%	692	539	174,945	74.07%	61.45%
Wilmington City	523	434	370	85.64%	218	183	62,665	87.56%	74.98%
District of Columbia	14,851	12,364	9,829	78.97%	3,486	2,804	554,678	76.32%	60.27%
Ward 1	1,863	1,624	1,326	82.09%	436	343	69,539	70.83%	58.15%
Ward 2	1,676	1,257	893	69.90%	306	242	73,677	80.00%	55.92%
Ward 3	2,056	1,642	1,334	80.33%	448	352	72,326	78.50%	63.05%
Ward 4	1,871	1,641	1,286	78.48%	460	352	68,750	69.80%	54.78%
Ward 5	2,130	1,812	1,425	77.39%	522	414	69,786	75.01%	58.06%
Ward 6	2,180	1,853	1,530	82.42%	439	349	73,115	74.97%	61.79%
Ward 7	1,200	1,018	810	78.90%	316	279	64,161	87.09%	68.72%
Ward 8	1,875	1,517	1,225	80.99%	559	473	63,324	80.38%	65.10%

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: 2012, 2013, and 2014 (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	37,211	29,333	24,515	82.79%	13,756	10,524	16,632,820	70.85%	58.66%
Broward (Circuit 17)	2,988	2,420	1,962	80.56%	1,123	872	1,536,230	73.94%	59.56%
Central I	4,368	3,768	3,302	87.19%	2,080	1,579	2,090,644	69.63%	60.71%
Circuit 9	2,492	2,164	1,927	88.76%	1,323	1,046	1,238,291	74.56%	66.18%
Circuit 18	1,876	1,604	1,375	85.35%	757	533	852,353	63.27%	54.00%
Central II	11,058	8,108	6,720	82.25%	3,504	2,674	4,657,305	70.97%	58.37%
Circuit 6	2,823	2,163	1,744	79.37%	883	657	1,229,871	68.82%	54.62%
Circuit 10	1,230	1,020	889	87.26%	530	419	630,086	76.04%	66.35%
Circuit 12	1,969	1,431	1,209	84.45%	500	360	668,199	68.97%	58.24%
Circuit 13 (Hillsborough)	2,356	1,973	1,594	80.68%	964	762	1,085,807	73.95%	59.66%
Circuit 20	2,680	1,521	1,284	82.77%	627	476	1,043,341	68.77%	56.93%
Northeast	7,078	5,718	5,019	87.65%	2,599	1,956	3,121,138	69.54%	60.95%
Circuit 4	1,989	1,682	1,408	83.16%	768	579	963,449	70.58%	58.69%
Circuit 5	2,072	1,601	1,420	88.43%	682	528	934,745	71.43%	63.16%
Circuit 7	1,894	1,558	1,386	89.07%	672	490	762,973	64.19%	57.17%
Circuit 8 plus Columbia, Dixie, Hamilton, Lafayette, and Suwannee	1,123	877	805	92.03%	477	359	459,971	74.26%	68.34%
Northwest	3,003	2,357	1,797	76.28%	994	778	1,234,666	74.17%	56.58%
Circuit 1	1,319	1,147	746	66.54%	432	318	601,463	66.92%	44.53%
Circuit 2 plus Madison and Taylor	937	753	658	88.21%	379	317	377,593	81.17%	71.60%
Circuit 14	747	457	393	80.57%	183	143	255,610	75.39%	60.74%
South (Circuits 11 and 16)	4,425	3,725	3,045	78.64%	1,962	1,554	2,285,489	74.04%	58.23%
Southeast	4,291	3,237	2,670	81.72%	1,494	1,111	1,707,347	66.67%	54.48%
Circuit 15 (Palm Beach)	3,046	2,259	1,809	79.21%	1,080	789	1,172,607	64.67%	51.23%
Circuit 19	1,245	978	861	88.06%	414	322	534,740	72.15%	63.54%
Georgia	8,718	7,349	6,199	84.56%	4,266	3,286	8,151,672	73.51%	62.16%
Region 1	2,041	1,759	1,500	85.14%	1,013	755	2,100,001	73.11%	62.25%
Region 2	1,364	1,130	980	87.15%	636	494	1,052,144	74.39%	64.83%
Region 3	2,569	2,237	1,840	82.76%	1,377	1,039	2,431,810	71.52%	59.19%
Region 4	725	592	496	83.46%	314	254	505,270	74.40%	62.09%
Region 5	879	674	556	82.76%	367	296	923,299	74.83%	61.93%
Region 6	1,140	957	827	86.66%	559	448	1,139,148	76.75%	66.51%

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: 2012, 2013, and 2014 (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)
Hawaii	9,448	8,091	6,408	78.67%	3,864	2,830	1,145,942	69.09%	54.35%
Hawaii Island	1,544	1,252	981	78.19%	488	366	154,193	70.27%	54.95%
Honolulu	6,222	5,470	4,257	77.21%	2,584	1,864	806,141	67.94%	52.46%
Kauai	677	525	473	90.11%	296	231	56,012	76.88%	69.28%
Maui	1,005	844	697	82.93%	496	369	129,596	70.21%	58.22%
Idaho	6,620	5,649	5,161	91.10%	3,566	2,815	1,310,838	76.44%	69.64%
Region 1	987	831	742	88.71%	438	333	184,241	76.63%	67.97%
Region 2	466	389	362	92.52%	221	166	92,647	71.29%	65.96%
Region 3	1,051	912	842	92.06%	620	486	207,040	71.83%	66.13%
Region 4	1,728	1,586	1,401	88.37%	940	753	374,859	76.51%	67.61%
Region 5	891	749	693	92.01%	491	385	151,475	77.37%	71.18%
Region 6	455	390	366	93.64%	271	210	98,121	78.77%	73.75%
Region 7	1,042	792	755	95.22%	585	482	202,455	81.08%	77.21%
Illinois	30,056	26,209	19,997	76.05%	13,294	9,572	10,710,970	68.05%	51.75%
Region I (Cook)	12,222	10,706	7,185	67.12%	4,935	3,480	4,357,973	67.49%	45.29%
Region II	8,626	7,815	6,321	80.05%	4,541	3,266	3,378,920	67.75%	54.24%
Region III	3,602	3,055	2,558	83.97%	1,612	1,199	1,212,886	69.93%	58.72%
Region IV	2,660	2,231	1,898	85.35%	1,034	742	757,300	68.73%	58.67%
Region V	2,946	2,402	2,035	83.96%	1,172	885	1,003,891	68.63%	57.62%
Indiana	7,987	6,701	5,885	87.79%	3,630	2,772	5,432,794	72.26%	63.44%
Central	1,882	1,627	1,377	84.36%	854	621	1,429,110	67.43%	56.88%
East	793	683	622	91.03%	373	273	459,906	71.27%	64.88%
North Central	1,316	1,070	956	89.32%	607	483	767,055	78.67%	70.27%
Northeast	727	612	533	86.69%	340	262	535,186	74.18%	64.30%
Northwest	917	799	686	85.81%	442	342	618,458	73.37%	62.96%
Southeast	843	717	645	90.17%	364	282	584,474	69.24%	62.44%
Southwest	624	542	490	90.86%	283	219	426,617	70.88%	64.40%
West	885	651	576	88.63%	367	290	611,988	74.71%	66.22%

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: 2012, 2013, and 2014 (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	7,725	6,618	5,993	90.47%	3,541	2,712	2,573,570	72.51%	65.60%
Central	1,412	1,231	1,086	88.70%	666	489	463,423	69.62%	61.75%
North Central	911	743	676	90.81%	380	299	286,618	76.42%	69.40%
Northeast	1,825	1,620	1,476	90.96%	855	654	626,017	72.66%	66.09%
Northwest	1,061	903	833	92.20%	473	378	393,835	73.92%	68.16%
Southeast	1,590	1,365	1,228	89.82%	746	571	545,834	70.29%	63.14%
Southwest	926	756	694	91.47%	421	321	257,843	75.86%	69.39%
Kansas	7,510	6,379	5,626	88.04%	3,570	2,781	2,349,071	74.93%	65.97%
Kansas City Metro	2,320	2,074	1,808	87.05%	1,223	938	790,271	75.19%	65.46%
Northeast	1,379	1,198	972	80.66%	628	491	452,635	72.60%	58.56%
South Central	1,043	873	811	92.78%	523	417	291,751	78.84%	73.14%
Southeast	670	445	407	91.13%	222	173	156,861	70.58%	64.32%
West	861	714	649	90.90%	345	259	255,068	69.56%	63.23%
Wichita (Sedgwick)	1,237	1,075	979	91.16%	629	503	402,484	78.30%	71.37%
Kentucky	8,493	7,043	6,370	90.30%	3,628	2,777	3,634,802	72.08%	65.08%
Adanta, Cumberland River, and Lifeskills	1,408	1,121	1,002	89.73%	577	446	610,288	76.26%	68.43%
Bluegrass, Comprehend, and North Key	2,600	2,216	2,016	90.65%	1,126	844	1,064,608	70.69%	64.08%
Communicare and River Valley	1,053	886	816	91.91%	455	336	403,536	67.82%	62.34%
Four Rivers and Pennyroyal	719	569	521	91.28%	287	222	343,249	74.25%	67.77%
Kentucky River, Mountain, and Pathways	897	691	622	89.45%	358	279	408,053	70.21%	62.80%
Seven Counties	1,816	1,560	1,393	89.29%	825	650	805,068	73.75%	65.85%

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: 2012, 2013, and 2014 (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	8,053	6,451	5,815	89.79%	3,562	2,796	3,772,866	74.77%	67.13%
Regions 1 and 10	1,531	1,213	1,084	88.30%	655	493	727,409	71.53%	63.16%
Region 1	724	497	453	90.84%	262	201	370,733	78.77%	71.55%
Region 10 (Jefferson)	807	716	631	87.10%	393	292	356,676	67.67%	58.94%
Regions 2 and 9	2,152	1,776	1,605	90.25%	1,039	830	1,001,912	77.91%	70.32%
Region 3	650	563	511	90.72%	327	250	328,066	75.06%	68.10%
Regions 4, 5, and 6	2,073	1,616	1,438	88.68%	858	654	972,236	71.14%	63.08%
Regions 7 and 8	1,647	1,283	1,177	91.80%	683	569	743,243	77.93%	71.54%
Maine	10,832	7,930	7,135	89.88%	3,489	2,804	1,151,999	77.55%	69.71%
Aroostook/Downeast	1,598	923	869	94.11%	390	323	137,788	82.13%	77.30%
Aroostook	721	523	490	93.48%	230	205	61,785	88.67%	82.89%
Downeast	877	400	379	94.85%	160	118	76,003	74.01%	70.19%
Central	1,525	1,148	1,041	90.59%	460	375	149,949	80.46%	72.89%
Cumberland	2,110	1,836	1,576	85.83%	824	634	247,034	74.11%	63.61%
Midcoast	1,075	730	662	90.62%	277	235	128,140	84.23%	76.32%
Penquis	1,513	1,067	985	92.20%	479	401	148,493	80.43%	74.16%
Western	1,517	1,120	1,007	89.80%	530	447	168,151	80.07%	71.91%
York	1,494	1,106	995	89.60%	529	389	172,445	67.00%	60.03%
Maryland	7,922	6,989	5,478	78.16%	3,554	2,770	4,947,177	74.97%	58.59%
Anne Arundel	853	743	573	76.53%	361	282	464,152	74.53%	57.04%
Baltimore City	1,037	865	682	78.96%	434	367	521,363	84.61%	66.81%
Baltimore County	990	899	664	73.25%	423	311	693,237	74.43%	54.52%
Montgomery	1,219	1,133	860	74.73%	549	425	838,186	74.66%	55.79%
North Central	489	452	349	77.23%	236	186	392,997	77.02%	59.48%
Northeast	644	554	468	84.51%	331	251	415,119	66.42%	56.13%
Prince George's	1,037	940	715	76.27%	492	359	729,740	69.37%	52.91%
South	901	754	615	81.95%	365	304	473,748	77.25%	63.31%
West	752	649	552	85.37%	363	285	418,634	76.17%	65.02%

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: 2012, 2013, and 2014 (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	9,019	7,886	6,465	81.81%	3,930	2,852	5,714,249	69.08%	56.51%
Boston	1,040	942	764	80.83%	531	375	710,161	68.43%	55.31%
Central	1,139	1,028	852	82.59%	486	330	736,188	64.21%	53.03%
Metrowest	1,766	1,646	1,312	79.54%	737	529	1,323,939	68.31%	54.34%
Northeast	1,767	1,646	1,347	81.62%	836	628	1,121,285	69.80%	56.97%
Southeast	1,979	1,510	1,270	84.10%	784	541	1,097,752	67.13%	56.45%
Western	1,328	1,114	920	82.34%	556	449	724,925	77.93%	64.17%
Michigan	30,130	24,549	20,634	83.90%	12,591	9,709	8,345,968	73.13%	61.36%
Region 1	1,332	891	795	89.45%	396	334	271,878	80.74%	72.22%
Region 2	1,839	1,102	942	85.31%	460	345	438,239	76.74%	65.46%
Region 3	3,398	2,948	2,539	85.53%	1,660	1,326	1,021,185	75.96%	64.96%
Region 4	2,509	2,099	1,884	89.13%	1,141	900	705,626	75.35%	67.16%
Region 5	5,074	3,945	3,420	86.39%	1,996	1,625	1,403,699	79.16%	68.39%
Region 6	2,450	2,072	1,790	85.83%	1,182	919	671,218	73.65%	63.22%
Region 7	5,034	4,021	3,160	78.41%	2,029	1,539	1,480,129	69.16%	54.23%
Region 8	3,431	3,091	2,517	81.56%	1,513	1,106	1,039,135	70.06%	57.14%
Region 9	2,489	2,287	1,782	78.43%	1,164	824	718,525	66.54%	52.18%
Region 10	2,574	2,093	1,805	86.37%	1,050	791	596,334	70.16%	60.60%
Minnesota	7,453	6,543	5,856	89.65%	3,484	2,775	4,518,658	77.91%	69.85%
Regions 1 and 2	1,041	751	667	88.92%	308	225	453,480	69.66%	61.94%
Regions 3 and 4	1,164	1,004	908	90.34%	508	422	771,938	84.30%	76.16%
Regions 5 and 6	1,295	1,128	1,049	93.08%	638	489	845,719	72.04%	67.06%
Region 7A (Hennepin)	1,495	1,382	1,195	86.48%	735	589	1,002,294	80.76%	69.84%
Region 7B (Ramsey)	639	579	519	89.58%	335	284	439,425	81.56%	73.06%
Region 7C	1,819	1,699	1,518	89.89%	960	766	1,005,802	77.94%	70.07%

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: 2012, 2013, and 2014 (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	7,193	5,820	5,278	90.52%	3,358	2,728	2,430,687	78.04%	70.64%
Region 1	1,506	1,246	1,133	90.79%	741	625	551,657	82.59%	74.99%
Region 2	928	724	651	89.26%	416	341	300,761	75.13%	67.07%
Region 3	1,233	974	905	92.38%	522	437	341,670	78.89%	72.88%
Region 4	1,170	979	843	86.18%	553	423	447,201	74.10%	63.87%
Region 5	384	273	258	94.23%	163	121	148,199	74.01%	69.74%
Region 6	923	763	728	95.30%	484	405	251,105	79.93%	76.18%
Region 7	1,049	861	760	88.28%	479	376	390,092	76.94%	67.92%
Missouri	8,601	7,111	6,357	89.24%	3,550	2,766	5,009,763	74.40%	66.40%
Central	1,224	1,031	939	91.03%	542	432	680,338	75.32%	68.56%
Eastern	2,930	2,581	2,320	89.70%	1,252	961	1,742,375	71.94%	64.54%
Eastern (St. Louis City and County)	1,884	1,623	1,463	89.85%	748	572	1,099,907	71.48%	64.23%
Eastern (excluding St. Louis)	1,046	958	857	89.47%	504	389	642,468	72.61%	64.96%
Northwest	1,921	1,578	1,443	91.29%	815	647	1,211,706	77.74%	70.97%
Northwest (Jackson)	1,046	871	798	91.46%	447	359	554,310	78.70%	71.98%
Northwest (excluding Jackson)	875	707	645	91.09%	368	288	657,395	76.66%	69.83%
Southeast	1,139	825	740	89.99%	453	354	595,780	75.46%	67.91%
Southwest	1,387	1,096	915	82.99%	488	372	779,564	73.80%	61.25%
Montana	9,115	7,309	6,702	91.57%	3,573	2,763	854,275	74.73%	68.44%
Region 1	711	495	474	95.72%	238	196	67,224	85.72%	82.05%
Region 2	1,441	1,102	1,019	92.11%	518	430	120,568	82.51%	75.99%
Region 3	2,141	1,765	1,587	89.71%	833	647	176,644	75.19%	67.45%
Region 4	2,022	1,622	1,476	90.98%	840	627	226,881	72.63%	66.08%
Region 5	2,800	2,325	2,146	92.21%	1,144	863	262,959	69.80%	64.36%
Nebraska	8,067	6,777	6,139	90.37%	3,584	2,788	1,533,852	73.60%	66.51%
Regions 1 and 2	856	643	596	92.36%	358	268	156,367	68.28%	63.07%
Region 1	528	375	345	91.68%	222	170	73,199	69.69%	63.89%
Region 2	328	268	251	93.35%	136	98	83,168	65.53%	61.17%
Region 3	1,258	1,017	945	92.76%	516	431	188,369	78.66%	72.97%
Region 4	775	616	579	93.94%	313	240	170,429	72.62%	68.22%
Region 5	2,041	1,761	1,604	90.96%	936	735	378,877	72.52%	65.96%
Region 6	3,137	2,740	2,415	87.80%	1,461	1,114	639,810	74.10%	65.06%

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: 2012, 2013, and 2014 (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)
Nevada	7,528	6,211	5,317	84.69%	3,550	2,796	2,316,939	74.33%	62.95%
Clark – Region 1	5,197	4,268	3,631	84.05%	2,391	1,897	1,667,917	74.56%	62.66%
Region 3	1,046	827	744	89.49%	436	322	285,362	73.04%	65.36%
Capital District	374	325	289	87.56%	169	124	135,596	71.30%	62.42%
Rural/Frontier	672	502	455	90.72%	267	198	149,766	74.35%	67.45%
Washoe – Region 2	1,285	1,116	942	83.69%	723	577	363,660	74.45%	62.30%
New Hampshire	9,522	7,865	6,744	85.70%	3,790	2,835	1,141,956	72.55%	62.17%
Central	2,864	2,397	2,091	87.18%	1,192	936	324,468	74.51%	64.96%
Central 1	1,318	1,138	1,009	88.56%	622	486	160,191	72.47%	64.18%
Central 2	1,546	1,259	1,082	85.91%	570	450	164,278	76.61%	65.82%
Northern	1,613	974	851	87.08%	433	330	148,840	76.58%	66.69%
Southern	5,045	4,494	3,802	84.62%	2,165	1,569	668,648	70.81%	59.92%
Southern 1 (Rockingham)	2,077	1,880	1,613	85.75%	902	623	257,005	68.28%	58.55%
Southern 2	2,968	2,614	2,189	83.81%	1,263	946	411,642	72.67%	60.91%
New Jersey	10,189	8,746	7,167	82.65%	4,560	3,347	7,480,144	70.73%	58.46%
Central	2,417	2,019	1,656	82.65%	1,030	755	1,718,758	69.87%	57.74%
Metropolitan	2,628	2,283	1,821	80.65%	1,147	839	1,797,944	68.89%	55.56%
Northern	3,085	2,690	2,222	82.99%	1,435	1,041	2,403,370	71.91%	59.67%
Southern	2,059	1,754	1,468	84.58%	948	712	1,560,072	72.32%	61.17%
New Mexico	7,952	6,052	5,482	90.44%	3,441	2,760	1,718,212	76.10%	68.82%
Region 1	1,461	1,178	1,081	91.13%	696	576	356,636	79.56%	72.50%
Region 2	1,322	926	821	88.69%	449	358	248,167	72.89%	64.64%
Region 3 (Bernalillo)	2,349	1,932	1,711	88.50%	1,061	846	559,454	76.53%	67.73%
Region 4	1,096	896	815	91.42%	562	435	214,977	73.31%	67.02%
Region 5	1,724	1,120	1,054	93.60%	673	545	338,978	76.14%	71.26%

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: 2012, 2013, and 2014 (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 York	40,767	35,101	24,961	70.60%	15,350	10,601	16,622,553	64.06%	45.23%
Region A	17,099	15,079	9,526	62.85%	6,219	4,014	7,075,349	59.55%	37.43%
Region 1	2,717	2,441	1,775	72.86%	1,264	940	1,152,598	72.11%	52.54%
Region 2	6,020	5,355	3,378	63.02%	2,198	1,348	2,539,400	56.31%	35.49%
Region 3	4,222	3,606	2,092	57.05%	1,139	761	1,441,473	64.88%	37.02%
Region 4	4,140	3,677	2,281	61.97%	1,618	965	1,941,877	52.80%	32.72%
Region B	9,019	8,127	5,652	68.38%	3,732	2,475	4,301,696	60.93%	41.67%
Region 5	4,871	4,422	3,187	69.91%	2,218	1,443	2,422,547	60.26%	42.13%
Region 6	2,422	2,234	1,402	63.12%	880	570	1,155,102	59.61%	37.63%
Region 7	1,726	1,471	1,063	71.90%	634	462	724,048	65.70%	47.24%
Region C	10,334	8,887	7,217	80.93%	4,081	3,114	3,921,179	72.80%	58.91%
Region 8	2,127	1,824	1,454	79.28%	842	603	858,772	71.52%	56.70%
Region 9	2,408	2,084	1,717	82.26%	963	751	814,993	73.74%	60.66%
Region 10	841	688	556	80.18%	313	252	378,512	75.69%	60.69%
Region 11	2,384	2,054	1,667	80.67%	966	738	898,353	73.36%	59.18%
Region 12	2,574	2,237	1,823	81.49%	997	770	970,550	71.76%	58.48%
Region D	4,315	3,008	2,566	84.71%	1,318	998	1,324,329	71.82%	60.84%
Region 13	1,856	1,131	964	84.64%	461	349	408,192	72.42%	61.29%
Region 14	1,024	688	581	84.56%	327	248	456,356	70.23%	59.39%
Region 15	1,435	1,189	1,021	84.86%	530	401	459,781	72.26%	61.32%

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: 2012, 2013, and 2014 (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	9,905	8,071	7,052	87.44%	4,176	3,330	8,112,661	76.00%	66.45%
Alliance Behavioral Healthcare 1	803	675	612	90.47%	392	334	636,566	84.01%	76.00%
Alliance Behavioral Healthcare 2	894	781	701	89.55%	388	313	782,617	75.45%	67.57%
Cardinal Innovations Healthcare Solutions 1	829	707	578	82.76%	328	246	619,013	72.63%	60.11%
Cardinal Innovations Healthcare Solutions 2	772	671	617	91.80%	361	295	557,384	80.56%	73.95%
Cardinal Innovations Healthcare Solutions 3	753	657	530	80.49%	361	259	789,444	70.64%	56.86%
CenterPoint Human Services	559	487	410	84.26%	274	237	450,760	83.11%	70.03%
Eastpointe	844	707	641	90.76%	379	299	679,883	70.37%	63.86%
Partners Behavioral Health Management	987	828	725	87.81%	468	370	757,835	75.17%	66.01%
Sandhills Center 1	428	321	272	82.86%	153	124	467,131	73.34%	60.77%
Sandhills Center 2	595	493	420	85.36%	235	191	419,943	83.68%	71.42%
Smoky Mountain Center 1	530	345	308	89.18%	185	141	457,963	68.83%	61.38%
Smoky Mountain Center 2	713	543	473	87.35%	191	153	451,426	78.59%	68.65%
Trillium Health Resources 1	544	396	348	89.35%	232	191	516,013	80.51%	71.93%
Trillium Health Resources 2	654	460	417	89.98%	229	177	526,682	64.99%	58.47%
North Dakota	10,051	7,763	7,159	92.06%	3,653	2,809	594,462	73.12%	67.32%
Badlands and West Central	2,569	1,951	1,860	95.33%	884	702	159,784	76.21%	72.65%
Lake Region	875	662	598	90.29%	273	209	33,321	72.96%	65.88%
North Central	1,336	910	847	92.62%	426	329	82,028	75.32%	69.75%
Northeast	1,332	1,092	987	90.60%	570	437	76,284	69.58%	63.04%
Northwest	568	372	359	96.40%	209	139	30,735	64.55%	62.22%
South Central	944	704	650	92.46%	263	207	48,377	75.32%	69.64%
Southeast	2,427	2,072	1,858	89.04%	1,028	786	163,934	72.37%	64.44%

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: 2012, 2013, and 2014 (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	29,584	25,253	22,004	86.76%	12,898	9,670	9,674,385	71.18%	61.75%
Boards 2, 46, 55, and 68	1,050	907	764	84.07%	481	343	428,541	66.48%	55.89%
Boards 3, 52, and 85	966	875	768	87.45%	410	304	318,153	72.48%	63.38%
Boards 4 and 78	791	669	611	91.30%	285	222	262,041	77.42%	70.68%
Boards 5 and 60	750	636	601	94.04%	400	324	286,254	79.15%	74.43%
Boards 7, 15, 41, 79, and 84	1,342	1,122	1,019	88.59%	528	405	391,238	73.11%	64.77%
Boards 8, 13, and 83	1,221	1,043	883	84.89%	571	406	415,759	67.34%	57.17%
Board 9 (Butler)	804	692	586	84.66%	389	272	307,246	64.96%	54.99%
Board 12	743	622	533	85.98%	329	233	291,381	63.08%	54.24%
Boards 18 and 47	4,269	3,544	3,017	84.37%	1,640	1,299	1,316,932	75.55%	63.73%
Boards 20, 32, 54, and 69	970	877	841	95.65%	459	354	286,134	74.38%	71.14%
Boards 21, 39, 51, 70, and 80	1,352	1,213	1,087	89.92%	709	527	463,444	71.12%	63.95%
Boards 22, 74, and 87	999	769	708	91.52%	401	312	326,476	78.47%	71.82%
Boards 23 and 45	966	799	723	90.27%	464	360	314,595	72.62%	65.56%
Board 25 (Franklin)	2,945	2,559	2,101	81.65%	1,310	957	986,745	70.98%	57.95%
Boards 27, 71, and 73	1,257	1,069	964	89.18%	592	421	413,378	63.56%	56.68%
Boards 28, 43, and 67	1,223	1,026	929	90.53%	613	481	413,943	75.41%	68.27%
Board 31 (Hamilton)	2,319	1,944	1,576	81.06%	897	691	662,797	73.53%	59.60%
Board 48 (Lucas)	1,095	984	860	87.60%	507	362	363,646	65.64%	57.50%
Boards 50 and 76	1,779	1,520	1,390	91.48%	758	549	518,114	66.33%	60.68%
Board 57 (Montgomery)	1,480	1,266	1,045	82.24%	589	445	452,661	71.36%	58.69%
Board 77 (Summit)	1,263	1,117	998	88.67%	566	403	454,908	66.82%	59.24%
Oklahoma	8,049	6,536	5,882	89.95%	3,723	2,795	3,128,664	69.88%	62.86%
Central	838	744	663	88.90%	442	312	394,726	62.74%	55.77%
East Central	895	761	714	94.11%	441	333	359,859	74.73%	70.32%
Northeast	1,075	859	799	92.89%	466	356	399,926	70.47%	65.46%
Northwest and Southwest	1,229	888	803	90.43%	462	362	447,891	71.91%	65.02%
Oklahoma County	1,532	1,310	1,140	87.13%	761	557	600,549	66.34%	57.81%
Southeast	1,304	1,009	934	92.23%	591	450	426,132	71.32%	65.78%
Tulsa County	1,176	965	829	85.94%	560	425	499,582	73.20%	62.91%

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: 2012, 2013, and 2014 (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	7,846	6,915	6,049	87.50%	3,576	2,776	3,337,930	75.43%	66.00%
Region 1 (Multnomah)	1,603	1,461	1,263	86.78%	700	528	656,607	74.00%	64.22%
Region 2	1,554	1,444	1,264	87.65%	863	667	785,496	73.42%	64.35%
Region 3	2,461	2,157	1,889	87.25%	1,095	865	1,040,424	78.60%	68.58%
Region 4	1,253	1,055	901	85.50%	470	370	475,661	77.22%	66.03%
Region 5 (Central)	424	361	330	91.34%	214	173	174,095	76.62%	69.98%
Region 6 (Eastern)	551	437	402	92.22%	234	173	205,647	66.95%	61.74%
Pennsylvania	32,300	27,774	22,541	80.87%	12,651	9,631	10,808,980	71.52%	57.84%
Region 1 (Allegheny)	3,364	2,963	2,474	83.47%	1,308	905	1,057,711	65.55%	54.71%
Regions 3, 8, 9, and 51	1,924	1,682	1,442	86.07%	770	574	598,769	69.67%	59.97%
Regions 4, 11, 37, and 49	2,337	1,799	1,483	82.93%	881	661	766,595	70.20%	58.21%
Regions 5, 18, 23, 24, and 46	2,068	1,793	1,563	86.33%	831	671	632,134	74.27%	64.12%
Regions 6, 12, 16, 31, 35, 45, and 47	1,758	1,492	1,328	87.85%	765	610	607,968	75.65%	66.46%
Regions 7, 13, 20, and 33	6,109	5,529	4,056	72.03%	2,312	1,737	2,105,420	70.17%	50.55%
Regions 10, 15, 27, 32, 43, and 44	1,294	1,085	984	90.54%	505	409	440,206	78.50%	71.07%
Regions 17 and 21	917	797	717	89.53%	351	288	311,928	76.52%	68.51%
Regions 19, 26, 28, and 42	3,506	3,107	2,721	87.50%	1,597	1,238	1,227,294	73.51%	64.32%
Regions 22, 38, 40, 41, and 48	2,026	1,622	1,403	86.21%	742	546	710,814	69.90%	60.26%
Regions 29 and 34	1,506	1,250	1,104	89.19%	572	416	552,687	66.13%	58.98%
Regions 30 and 50	1,606	1,358	1,131	83.50%	627	457	520,153	72.25%	60.33%
Region 36 (Philadelphia)	3,885	3,297	2,135	65.37%	1,390	1,119	1,277,300	75.58%	49.41%
Rhode Island	8,270	6,956	6,021	86.51%	3,632	2,818	898,242	73.97%	64.00%
Bristol and Newport	1,004	792	700	88.33%	363	281	114,467	73.14%	64.60%
Kent	1,217	1,087	944	87.06%	533	393	142,012	68.12%	59.31%
Providence	4,825	4,090	3,505	85.58%	2,242	1,759	532,030	75.85%	64.91%
Washington	1,224	987	872	88.17%	494	385	109,733	73.57%	64.86%
South Carolina	9,440	7,736	6,640	85.63%	3,613	2,844	3,956,936	75.58%	64.72%
Region 1	2,901	2,409	2,047	84.64%	1,079	821	1,243,056	72.37%	61.26%
Region 2	2,111	1,827	1,564	85.53%	866	696	970,647	77.23%	66.05%
Region 3	1,941	1,460	1,261	86.16%	678	515	687,638	74.18%	63.91%
Region 4	2,487	2,040	1,768	86.50%	990	812	1,055,596	78.74%	68.11%

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: 2012, 2013, and 2014 (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 Dakota	7,527	6,146	5,769	93.90%	3,494	2,748	687,598	75.99%	71.35%
Region 1	1,965	1,618	1,504	93.06%	892	705	169,081	77.41%	72.03%
Region 2	702	573	538	93.98%	357	284	63,097	73.87%	69.42%
Region 3	1,879	1,436	1,347	93.78%	778	615	162,926	78.39%	73.51%
Region 4	1,007	831	793	95.48%	464	345	97,103	71.30%	68.08%
Region 5	1,974	1,688	1,587	94.00%	1,003	799	195,392	75.75%	71.20%
Tennessee	7,825	6,465	5,757	88.84%	3,430	2,767	5,424,854	77.56%	68.90%
Region 1	719	609	548	89.72%	304	234	439,416	75.15%	67.42%
Region 2	1,509	1,210	1,085	89.48%	617	493	1,015,153	79.60%	71.23%
Region 3	1,161	982	894	91.09%	549	461	812,846	79.57%	72.47%
Region 4 (Davidson)	850	697	606	86.84%	359	275	538,805	72.47%	62.93%
Region 5	1,644	1,434	1,268	88.17%	807	642	1,307,310	78.29%	69.02%
Region 6	883	649	613	94.22%	331	283	533,058	78.84%	74.28%
Region 7 (Shelby)	1,059	884	743	83.43%	463	379	778,267	75.80%	63.24%

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: 2012, 2013, and 2014 (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	25,375	21,395	18,731	87.41%	13,936	10,612	21,255,571	71.92%	62.86%
Region 1	1,006	866	775	89.06%	553	404	700,556	68.20%	60.74%
Region 2	530	398	373	93.51%	231	198	458,176	82.76%	77.39%
Region 3	6,321	5,621	5,151	91.49%	3,879	3,092	5,709,770	75.33%	68.92%
Region 3a	3,925	3,534	3,202	90.39%	2,382	1,867	3,636,876	73.39%	66.34%
Region 3bc	2,396	2,087	1,949	93.45%	1,497	1,225	2,072,894	78.66%	73.50%
Region 4	1,290	998	931	92.96%	614	487	937,270	73.94%	68.74%
Region 5	976	754	669	88.92%	395	287	646,406	67.17%	59.73%
Region 6	6,093	5,239	4,221	80.49%	3,267	2,213	5,140,988	63.27%	50.92%
Region 6a	5,355	4,669	3,750	80.19%	2,934	1,990	4,598,455	63.83%	51.18%
Region 6bc	738	570	471	83.00%	333	223	542,533	58.63%	48.66%
Region 7	3,330	2,635	2,382	90.10%	1,696	1,327	2,564,103	75.48%	68.01%
Region 7a	1,977	1,623	1,452	89.39%	990	754	1,622,678	73.13%	65.37%
Region 7bcd	1,353	1,012	930	91.31%	706	573	941,425	79.17%	72.29%
Region 8	2,675	2,291	1,855	81.17%	1,372	1,073	2,220,314	74.61%	60.56%
Region 9	620	501	469	93.67%	342	233	479,518	65.10%	60.98%
Region 10	734	670	621	92.22%	514	416	691,723	78.84%	72.71%
Region 11	1,800	1,422	1,284	90.26%	1,073	882	1,706,747	78.29%	70.67%
Region 11abd	1,184	904	824	91.04%	627	500	1,082,350	74.22%	67.57%
Region 11c (Hidalgo)	616	518	460	88.90%	446	382	624,398	84.43%	75.05%
Utah	5,359	4,673	4,427	94.88%	3,435	2,828	2,267,830	79.70%	75.62%
Bear River, Northeastern, Summit, Tooele, and Wasatch	690	598	561	93.69%	432	365	272,267	82.94%	77.70%
Central, Four Corners, San Juan, and Southwest	685	511	478	93.15%	326	250	275,710	72.42%	67.46%
Davis County	556	512	484	94.49%	392	340	245,606	86.09%	81.35%
Salt Lake County	2,148	1,897	1,805	95.15%	1,377	1,114	863,824	78.82%	75.00%
Utah County	893	810	763	95.11%	642	528	412,454	78.46%	74.63%
Weber, Morgan	387	345	336	97.67%	266	231	197,968	82.26%	80.34%

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: 2012, 2013, and 2014 (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	10,209	8,115	6,967	85.74%	3,511	2,708	545,894	74.75%	64.09%
Champlain Valley	4,144	3,424	2,957	86.32%	1,649	1,246	218,396	72.09%	62.23%
Rural Northeast	2,130	1,738	1,389	79.77%	698	538	128,688	75.86%	60.52%
Rural Southeast	2,225	1,684	1,474	87.36%	695	539	113,325	75.60%	66.04%
Rural Southwest	1,710	1,269	1,147	90.36%	469	385	85,486	79.64%	71.96%
Virginia	9,039	7,967	6,777	85.31%	4,263	3,335	6,803,172	75.33%	64.27%
Region 1	1,305	1,161	1,042	89.78%	679	579	1,057,936	83.35%	74.84%
Region 2	2,324	2,169	1,801	83.86%	1,216	921	1,910,006	72.23%	60.57%
Region 3	1,781	1,487	1,260	84.80%	722	570	1,155,467	77.20%	65.46%
Region 4	1,521	1,324	1,124	84.20%	676	512	1,160,224	71.50%	60.21%
Region 5	2,108	1,826	1,550	85.37%	970	753	1,519,538	74.50%	63.60%
Washington	7,747	6,714	5,720	85.15%	3,634	2,763	5,809,672	72.43%	61.67%
Region 1	1,559	1,300	1,153	88.61%	729	571	1,263,639	73.45%	65.08%
Greater Columbia and North Central	895	758	664	87.56%	436	345	748,582	74.78%	65.47%
Spokane	664	542	489	90.09%	293	226	515,057	71.71%	64.60%
Region 2	3,787	3,336	2,799	83.88%	1,741	1,291	2,670,225	71.47%	59.95%
King	2,278	2,090	1,699	81.35%	1,084	792	1,700,584	71.52%	58.19%
North Sound	1,509	1,246	1,100	88.20%	657	499	969,640	71.38%	62.96%
Region 3	2,401	2,078	1,768	85.03%	1,164	901	1,875,809	73.28%	62.31%
Peninsula	407	337	301	88.58%	161	119	311,642	68.62%	60.78%
Pierce	959	819	691	84.49%	490	399	683,820	78.75%	66.54%
SW WA and Timberlands	740	681	574	84.27%	373	271	606,660	66.52%	56.06%
Thurston-Mason	295	241	202	84.08%	140	112	273,686	81.26%	68.32%
West Virginia	9,952	8,198	7,279	88.75%	3,751	2,825	1,582,742	72.65%	64.48%
Region I	634	560	496	88.82%	246	170	126,303	60.42%	53.67%
Region II	1,158	996	858	86.10%	480	372	223,427	74.41%	64.06%
Region III	808	699	615	87.86%	280	201	145,864	68.65%	60.32%
Region IV	2,229	1,852	1,645	88.47%	888	685	347,725	75.54%	66.83%
Region V	3,056	2,550	2,274	89.17%	1,119	820	450,354	71.22%	63.50%
Region VI	2,067	1,541	1,391	90.47%	738	577	289,068	76.10%	68.84%

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: 2012, 2013, and 2014 (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)
Wisconsin	8,229	6,933	6,160	88.80%	3,575	2,687	4,810,496	72.98%	64.81%
Milwaukee	1,323	1,169	1,017	86.95%	641	468	777,283	69.49%	60.43%
Northeastern	1,789	1,495	1,326	88.60%	765	575	1,042,686	75.46%	66.86%
Northern	972	702	604	85.96%	303	228	416,255	75.10%	64.55%
Southeastern	1,511	1,358	1,202	88.51%	715	511	977,794	70.71%	62.58%
Southern	1,475	1,272	1,134	89.13%	660	515	938,374	74.09%	66.04%
Western	1,159	937	877	93.66%	491	390	658,104	73.85%	69.17%
Wyoming	9,391	7,259	6,569	90.38%	3,570	2,811	479,134	76.79%	69.40%
Judicial District 1 (Laramie)	1,579	1,361	1,208	88.71%	609	462	79,182	74.04%	65.68%
Judicial District 2	1,010	683	628	91.86%	368	308	46,192	78.18%	71.82%
Judicial District 3	1,460	1,028	981	95.33%	583	478	67,390	81.87%	78.05%
Judicial District 4	701	536	469	87.38%	250	196	32,066	70.54%	61.64%
Judicial District 5	685	545	475	86.62%	230	189	45,709	83.67%	72.47%
Judicial District 6	935	776	709	91.48%	420	315	49,732	72.47%	66.30%
Judicial District 7 (Natrona)	892	786	700	89.11%	410	325	64,704	75.61%	67.38%
Judicial District 8	915	733	675	92.06%	332	253	33,335	75.41%	69.43%
Judicial District 9	1,214	811	724	88.99%	368	285	60,825	79.07%	70.37%

DU = dwelling unit; SPA = service planning area.

NOTE: For substate region definitions, see the "2012-2014 National Survey on Drug Use and Health Substate Region Definitions" at http://www.samhsa.gov/data/.

NOTE: To compute the pooled 2012-2014 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 2012, 2013, and 2014 individual response rates.

NOTE: The total responded column represents the combined sample size from the 2012, 2013, and 2014 NSDUHs.

NOTE: The population estimate is the simple average of the 2012, 2013, and 2014 population counts for persons 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, 2012, 2013, and 2014.

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: 2012, 2013, and 2014 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	104,160	84,746	38,119,368	81.31%	191,869	141,978	237,815,123	70.96%
Northeast	21,218	16,934	6,512,384	79.01%	39,392	28,175	43,215,107	67.62%
Midwest	27,903	22,483	8,167,441	80.00%	50,412	37,251	50,845,917	71.44%
South	32,337	26,621	14,080,628	82.14%	59,359	44,748	88,292,583	72.35%
West	22,702	18,708	9,358,915	82.79%	42,706	31,804	55,461,515	70.92%
Alabama	1,341	1,111	574,793	82.57%	2,568	1,934	3,663,979	70.76%
Region 1	305	232	155,640	76.92%	619	455	1,033,386	68.16%
Region 2	410	336	184,610	81.25%	815	589	1,173,788	68.72%
Region 3	376	322	110,715	85.66%	590	475	650,749	75.61%
Region 4	250	221	123,828	87.82%	544	415	806,056	72.14%
Alaska	1,398	1,065	92,936	75.88%	2,551	1,877	521,224	71.86%
Anchorage	573	440	37,968	77.30%	1,099	806	215,669	72.15%
Northern	318	234	22,276	70.90%	551	403	114,716	69.26%
South Central	360	272	24,285	76.64%	646	466	135,963	70.27%
Southeast	147	119	8,407	79.96%	255	202	54,877	79.93%
Arizona	1,404	1,160	809,966	82.48%	2,546	1,910	4,908,587	72.64%
Maricopa	882	730	493,252	82.99%	1,615	1,177	2,908,477	69.63%
Pima	193	161	118,807	81.79%	398	308	770,148	80.19%
Rural North	149	110	88,418	71.88%	222	167	565,487	70.49%
Rural South	180	159	109,490	89.62%	311	258	664,475	79.33%
Arkansas	1,412	1,124	352,319	79.08%	2,638	1,969	2,200,019	71.24%
Catchment Area 1	255	207	64,364	82.28%	507	370	352,318	69.24%
Catchment Area 2	122	93	37,333	76.90%	287	222	271,614	76.74%
Catchment Area 3	217	173	48,480	78.10%	341	261	293,037	71.82%
Catchment Area 4	144	124	32,026	87.86%	255	184	192,768	68.08%
Catchment Area 5	190	149	53,652	77.47%	410	297	330,119	69.42%
Catchment Area 6	95	82	24,711	83.95%	214	181	157,928	85.09%
Catchment Area 7	137	110	27,022	80.27%	208	159	171,384	74.30%
Catchment Area 8	252	186	64,730	71.44%	416	295	430,851	63.94%

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: 2012, 2013, and 2014 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	6,027	4,983	4,980,281	82.53%	11,774	8,464	28,688,457	68.80%
Region 1R	157	127	115,230	78.56%	282	221	744,769	75.14%
Region 2R	180	147	135,097	83.50%	297	225	777,854	71.36%
Region 3R (Sacramento)	185	152	185,633	78.64%	399	312	1,083,281	78.30%
Region 4R	256	205	153,980	79.86%	482	372	1,009,809	78.74%
Region 5R (San Francisco)	74	63	58,844	84.11%	264	175	713,281	56.95%
Region 6 (Santa Clara)	212	174	215,073	81.84%	522	372	1,393,058	65.72%
Region 7R (Contra Costa)	158	130	136,022	80.22%	338	246	815,822	71.35%
Region 8R (Alameda)	196	163	180,548	85.35%	515	371	1,198,818	68.83%
Region 9R (San Mateo)	100	85	77,266	85.87%	249	174	569,928	62.47%
Region 10	227	169	177,020	73.32%	408	279	957,493	62.73%
Region 11 (Los Angeles)	1,603	1,309	1,289,339	80.56%	3,279	2,257	7,553,191	66.03%
LA SPA 1 and 5	125	107	129,907	87.02%	282	192	822,243	66.59%
LA SPA 2	372	306	265,950	81.15%	695	466	1,665,774	64.25%
LA SPA 3	279	207	229,849	72.66%	540	359	1,348,424	65.39%
LA SPA 4	129	105	116,414	78.89%	383	252	907,093	64.42%
LA SPA 6	170	145	163,130	84.32%	311	221	702,729	65.87%
LA SPA 7	274	231	190,582	82.80%	504	362	944,015	67.23%
LA SPA 8	254	208	193,505	81.13%	564	405	1,162,914	68.76%
Region 12R	113	93	120,358	85.30%	172	127	625,135	67.03%
Regions 13 and 19R	492	419	365,434	85.96%	729	552	1,774,072	72.66%
Region 14 (Orange)	469	392	402,287	83.63%	953	644	2,356,009	64.55%
Region 15R (Fresno)	164	140	143,653	85.50%	319	241	673,696	75.47%
Region 16R (San Diego)	460	388	402,281	83.89%	909	660	2,442,309	69.38%
Region 17R	339	278	221,581	82.13%	471	352	1,040,107	73.95%
Region 18R (San Bernardino)	349	300	318,118	87.31%	618	462	1,491,700	73.55%
Region 20R	190	165	142,522	87.40%	311	236	682,632	67.59%
Region 21R	103	84	139,997	83.43%	257	186	785,491	66.82%

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: 2012, 2013, and 2014 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	1,408	1,153	610,116	82.60%	2,698	1,986	3,952,890	72.10%
Region 1	157	115	88,152	72.15%	328	245	521,941	75.87%
Regions 2 and 7	792	658	333,695	84.17%	1,469	1,073	2,214,402	71.80%
Region 3	237	200	94,650	85.31%	452	346	581,345	71.42%
Region 4	95	85	33,809	88.45%	161	123	211,284	76.57%
Regions 5 and 6	127	95	59,809	76.17%	288	199	423,918	67.57%
Connecticut	1,503	1,201	438,656	80.47%	2,810	1,977	2,757,464	68.14%
Eastern	204	175	58,926	87.02%	422	322	341,160	73.42%
North Central	427	337	119,098	79.65%	757	528	772,148	66.77%
Northwestern	271	221	74,616	83.58%	468	312	473,950	64.57%
South Central	346	276	99,984	81.38%	678	489	650,631	72.33%
Southwest	255	192	86,032	72.84%	485	326	519,575	64.25%
Delaware	1,397	1,144	105,479	81.75%	2,447	1,854	709,231	74.81%
Kent	302	242	20,743	78.80%	494	377	126,396	73.44%
New Castle (excluding Wilmington City)	744	601	57,534	80.61%	1,313	984	363,974	74.65%
Sussex	257	219	18,843	86.47%	488	369	161,718	73.28%
Wilmington City	94	82	8,359	87.61%	152	124	57,143	87.25%
District of Columbia	1,292	1,133	57,432	87.75%	2,477	1,915	523,865	75.59%
Ward 1	116	104	6,673	93.51%	354	271	67,110	70.34%
Ward 2	103	89	5,935	86.58%	280	218	72,780	79.77%
Ward 3	127	103	5,426	77.84%	343	265	69,420	78.28%
Ward 4	176	151	6,651	85.99%	303	217	64,027	68.67%
Ward 5	206	183	7,746	88.48%	361	269	65,600	73.92%
Ward 6	111	99	4,319	86.03%	347	264	70,224	74.19%
Ward 7	157	143	9,603	92.48%	185	161	58,182	86.80%
Ward 8	296	261	11,079	88.72%	304	250	56,522	79.54%

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: 2012, 2013, and 2014 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	5,299	4,363	2,092,834	82.19%	9,870	7,306	15,244,962	69.75%
Broward (Circuit 17)	435	360	195,904	83.52%	782	588	1,399,241	72.85%
Central I	830	681	294,041	81.88%	1,475	1,086	1,899,753	68.44%
Circuit 9	535	450	184,932	84.11%	943	728	1,121,864	73.56%
Circuit 18	295	231	109,108	77.78%	532	358	777,889	62.03%
Central II	1,335	1,102	553,444	81.70%	2,495	1,829	4,280,251	69.89%
Circuit 6	345	281	134,224	80.69%	615	432	1,136,991	67.19%
Circuit 10	233	189	83,377	82.11%	353	276	573,539	75.36%
Circuit 12	163	128	68,987	77.57%	376	261	620,143	68.39%
Circuit 13 (Hillsborough)	370	313	154,192	83.72%	709	540	983,526	72.83%
Circuit 20	224	191	112,665	82.59%	442	320	966,053	67.88%
Northeast	1,014	816	390,397	79.63%	1,869	1,354	2,866,045	68.39%
Circuit 4	287	236	132,579	82.49%	558	401	873,523	69.18%
Circuit 5	280	231	97,652	80.98%	469	350	866,597	70.51%
Circuit 7	252	206	93,805	81.57%	492	341	700,237	62.66%
Circuit 8 plus Columbia, Dixie, Hamilton, Lafayette, and Suwannee	195	143	66,361	70.71%	350	262	425,688	74.02%
Northwest	378	308	170,611	83.53%	737	570	1,132,870	73.32%
Circuit 1	176	138	82,028	78.59%	312	219	549,058	65.07%
Circuit 2 plus Madison and Taylor	137	120	57,444	91.52%	289	242	349,303	80.66%
Circuit 14	65	50	31,138	78.33%	136	109	234,509	75.66%
South (Circuits 11 and 16)	766	658	288,055	86.82%	1,435	1,109	2,097,732	73.05%
Southeast	541	438	200,383	80.64%	1,077	770	1,569,071	65.44%
Circuit 15 (Palm Beach)	395	318	137,395	79.77%	782	546	1,078,349	63.33%
Circuit 19	146	120	62,988	83.37%	295	224	490,722	71.22%
Georgia	1,611	1,308	1,268,845	81.47%	3,101	2,341	7,316,745	72.65%
Region 1	393	313	325,139	80.53%	726	530	1,874,488	72.38%
Region 2	231	186	167,580	80.31%	466	356	949,652	73.90%
Region 3	526	427	364,507	81.77%	1,002	734	2,185,513	70.37%
Region 4	116	93	81,766	76.07%	224	177	455,203	73.31%
Region 5	117	102	144,719	88.56%	288	230	835,534	73.94%
Region 6	228	187	185,133	82.78%	395	314	1,016,355	76.10%

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: 2012, 2013, and 2014 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	1,406	1,121	147,189	80.19%	2,807	1,991	1,048,507	68.14%
Hawaii Island	188	153	20,051	81.64%	350	254	140,541	69.12%
Honolulu	931	732	103,868	79.43%	1,883	1,315	738,904	66.95%
Kauai	122	102	6,939	85.54%	199	151	51,085	76.26%
Maui	165	134	16,332	79.67%	375	271	117,976	69.57%
Idaho	1,401	1,168	209,051	83.60%	2,564	1,957	1,168,987	75.25%
Region 1	162	130	25,696	80.96%	325	240	166,188	75.85%
Region 2	80	62	13,683	76.86%	170	127	85,384	70.85%
Region 3	266	223	36,161	84.93%	436	327	182,126	69.83%
Region 4	332	285	55,911	86.21%	701	544	335,312	75.30%
Region 5	229	188	24,714	79.59%	321	240	134,420	76.26%
Region 6	100	81	16,208	83.18%	198	148	87,108	77.69%
Region 7	232	199	36,678	85.97%	413	331	178,449	80.15%
Illinois	5,100	3,985	1,562,197	78.10%	9,568	6,635	9,671,148	66.93%
Region I (Cook)	1,805	1,399	599,958	77.24%	3,668	2,464	3,959,568	66.25%
Region II	1,873	1,460	537,681	78.15%	3,122	2,160	3,002,794	66.51%
Region III	611	484	182,831	79.36%	1,172	855	1,105,771	69.26%
Region IV	377	284	104,606	75.93%	742	525	688,792	68.21%
Region V	434	358	137,120	82.00%	864	631	914,223	67.37%
Indiana	1,390	1,112	805,744	79.10%	2,620	1,960	4,891,833	71.42%
Central	301	225	207,789	73.09%	638	460	1,279,161	66.74%
East	126	98	68,097	78.33%	287	207	418,235	70.87%
North Central	234	194	114,701	80.03%	431	334	688,476	78.08%
Northeast	139	111	82,735	80.48%	235	175	476,675	72.79%
Northwest	170	138	91,531	79.91%	306	229	554,496	72.50%
Southeast	155	129	81,532	83.57%	256	193	526,227	67.58%
Southwest	107	92	60,030	86.45%	205	153	386,336	69.58%
West	158	125	99,331	77.93%	262	209	562,228	74.51%

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: 2012, 2013, and 2014 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	1,364	1,105	376,485	80.21%	2,543	1,908	2,331,516	71.81%
Central	262	212	66,819	77.48%	462	324	418,051	68.71%
North Central	158	128	45,576	82.47%	273	213	261,694	75.67%
Northeast	303	240	91,562	77.50%	637	481	567,910	72.28%
Northwest	198	174	57,333	90.37%	330	250	355,324	71.75%
Southeast	307	243	78,823	75.60%	519	393	496,432	69.86%
Southwest	136	108	36,372	82.96%	322	247	232,104	75.77%
Kansas	1,398	1,154	360,624	82.42%	2,538	1,929	2,111,849	74.10%
Kansas City Metro	500	397	119,069	78.88%	850	640	709,882	74.70%
Northeast	207	173	70,186	83.32%	491	375	409,624	71.64%
South Central	225	188	44,976	83.87%	362	282	262,360	78.20%
Southeast	89	74	23,858	84.57%	151	114	142,077	68.79%
West	121	106	40,187	87.34%	252	179	228,432	68.00%
Wichita (Sedgwick)	256	216	62,348	84.51%	432	339	359,474	77.74%
Kentucky	1,441	1,176	517,498	81.23%	2,559	1,902	3,294,920	71.07%
Adanta, Cumberland River, and Lifeskills	226	179	88,471	78.29%	413	318	553,262	76.05%
Bluegrass, Comprehend, and North Key	430	347	156,418	80.25%	809	590	964,590	69.71%
Communicare and River Valley	176	143	58,902	81.62%	314	220	363,284	66.22%
Four Rivers and Pennyroyal	117	96	47,520	82.32%	214	160	312,746	73.35%
Kentucky River, Mountain, and Pathways	133	117	54,925	87.56%	262	195	371,879	68.69%
Seven Counties	359	294	111,261	81.61%	547	419	729,160	72.69%

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: 2012, 2013, and 2014 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	1,395	1,173	574,987	83.43%	2,550	1,952	3,405,070	73.90%
Regions 1 and 10	214	179	98,913	80.00%	496	359	665,793	70.69%
Region 1	89	76	52,326	82.54%	196	144	340,233	78.22%
Region 10 (Jefferson)	125	103	46,587	78.30%	300	215	325,560	66.79%
Regions 2 and 9	435	365	157,519	83.25%	750	592	901,628	77.53%
Region 3	148	117	51,559	80.46%	207	157	293,967	74.40%
Regions 4, 5, and 6	323	266	150,915	81.41%	609	449	872,660	70.01%
Regions 7 and 8	275	246	116,082	90.65%	488	395	671,023	76.68%
Maine	1,392	1,162	145,270	82.81%	2,482	1,975	1,057,570	77.20%
Aroostook/Downeast	157	130	16,252	84.77%	271	227	127,118	82.34%
Aroostook	91	81	7,625	88.11%	160	145	56,743	89.36%
Downeast	66	49	8,627	80.05%	111	82	70,375	73.67%
Central	182	152	18,909	84.33%	324	262	137,358	80.21%
Cumberland	320	260	31,579	77.65%	580	435	226,494	73.59%
Midcoast	90	83	14,526	91.76%	212	177	117,872	84.02%
Penquis	190	160	20,442	82.33%	333	282	137,197	80.62%
Western	228	194	22,053	84.55%	367	307	153,929	79.36%
York	225	183	21,508	82.93%	395	285	157,603	66.15%
Maryland	1,377	1,118	664,412	80.35%	2,519	1,924	4,490,598	74.22%
Anne Arundel	155	124	60,580	78.95%	236	183	422,356	73.96%
Baltimore City	132	120	64,746	87.46%	334	273	481,314	83.76%
Baltimore County	161	117	90,244	72.14%	310	228	634,067	74.59%
Montgomery	212	174	102,652	83.38%	374	284	758,355	73.85%
North Central	100	87	57,300	86.17%	164	124	350,403	76.30%
Northeast	132	108	58,062	81.34%	224	165	374,855	64.94%
Prince George's	169	124	102,304	72.69%	383	275	662,200	68.46%
South	153	137	70,306	90.34%	249	201	427,589	76.14%
West	163	127	58,218	78.00%	245	191	379,457	75.60%

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: 2012, 2013, and 2014 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	1,508	1,200	782,267	79.36%	2,842	1,990	5,223,941	68.20%
Boston	150	112	95,009	74.21%	443	310	668,386	68.09%
Central	195	146	107,491	75.25%	333	214	665,374	62.93%
Metrowest	263	208	174,380	80.31%	520	357	1,207,726	67.16%
Northeast	336	281	152,156	83.69%	580	417	1,018,681	68.37%
Southeast	305	233	142,882	75.15%	576	383	1,001,184	66.64%
Western	259	220	110,348	84.39%	390	309	662,591	77.54%
Michigan	5,061	4,078	1,223,572	79.85%	8,889	6,740	7,544,403	72.47%
Region 1	153	138	35,390	89.62%	280	231	250,499	80.28%
Region 2	188	132	52,904	66.84%	321	248	400,863	77.66%
Region 3	663	548	160,133	82.54%	1,138	893	915,546	75.19%
Region 4	450	379	103,771	83.79%	789	607	638,370	74.75%
Region 5	747	624	216,428	83.87%	1,486	1,208	1,276,129	78.91%
Region 6	467	386	104,461	82.05%	861	660	608,005	72.99%
Region 7	842	669	224,967	79.39%	1,463	1,089	1,329,957	68.09%
Region 8	640	494	141,735	76.61%	999	708	937,373	69.11%
Region 9	476	358	96,285	74.42%	827	571	651,472	65.69%
Region 10	435	350	87,497	77.61%	725	525	536,189	69.09%
Minnesota	1,350	1,145	634,874	84.68%	2,477	1,912	4,093,708	77.10%
Regions 1 and 2	118	88	60,648	78.20%	227	168	414,929	69.41%
Regions 3 and 4	201	175	112,158	87.54%	361	294	697,366	83.96%
Regions 5 and 6	238	198	121,304	81.94%	454	336	767,548	70.78%
Region 7A (Hennepin)	249	212	127,780	86.51%	547	425	917,410	80.13%
Region 7B (Ramsey)	139	127	63,220	90.76%	242	197	401,071	80.28%
Region 7C	405	345	149,764	83.22%	646	492	895,383	77.03%

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: 2012, 2013, and 2014 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	1,367	1,165	374,676	85.43%	2,335	1,862	2,184,218	77.33%
Region 1	305	266	88,001	88.31%	503	419	494,304	82.04%
Region 2	168	146	45,448	87.87%	302	241	270,315	73.80%
Region 3	205	184	54,742	88.24%	377	306	307,535	77.93%
Region 4	227	180	68,432	78.59%	378	288	400,607	74.10%
Region 5	58	43	21,163	78.12%	118	89	133,781	74.21%
Region 6	198	174	38,159	88.82%	340	280	226,620	79.18%
Region 7	206	172	58,732	83.71%	317	239	351,055	75.69%
Missouri	1,358	1,123	703,170	82.32%	2,529	1,913	4,537,760	73.44%
Central	203	173	102,483	84.98%	411	316	619,647	74.18%
Eastern	464	382	240,646	81.56%	903	668	1,574,889	70.75%
Eastern (St. Louis City and County)	284	230	147,370	81.47%	539	401	998,801	70.46%
Eastern (excluding St. Louis)	180	152	93,276	81.71%	364	267	576,087	71.17%
Northwest	301	253	169,079	83.03%	578	449	1,095,401	77.25%
Northwest (Jackson)	167	146	74,140	85.69%	316	247	502,397	78.09%
Northwest (excluding Jackson)	134	107	94,939	79.74%	262	202	593,004	76.30%
Southeast	199	162	82,010	81.38%	300	228	540,963	74.57%
Southwest	191	153	108,952	81.42%	337	252	706,860	72.93%
Montana	1,457	1,176	117,946	80.98%	2,507	1,911	780,158	74.14%
Region 1	117	97	9,385	81.52%	148	121	60,830	86.39%
Region 2	188	163	17,648	87.77%	366	300	109,284	82.19%
Region 3	334	274	23,978	81.74%	574	435	160,458	74.43%
Region 4	344	257	31,306	76.01%	601	452	208,544	72.45%
Region 5	474	385	35,628	81.24%	818	603	241,042	68.73%
Nebraska	1,419	1,180	229,797	82.63%	2,566	1,947	1,385,174	72.62%
Regions 1 and 2	166	137	22,699	83.02%	240	172	141,371	66.45%
Region 1	94	80	10,592	85.53%	144	104	66,422	67.69%
Region 2	72	57	12,107	80.12%	96	68	74,949	64.00%
Region 3	201	179	28,388	88.43%	363	292	169,893	77.33%
Region 4	131	108	25,973	78.06%	206	154	153,104	72.36%
Region 5	372	311	56,452	83.62%	690	539	345,998	71.82%
Region 6	549	445	96,284	81.06%	1,067	790	574,808	73.07%

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: 2012, 2013, and 2014 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	1,346	1,154	339,747	86.15%	2,592	1,972	2,095,504	73.08%
Clark – Region 1	888	775	246,185	87.66%	1,761	1,344	1,506,486	73.12%
Region 3	173	133	39,964	78.00%	313	226	258,414	72.61%
Capital District	68	52	17,924	77.02%	122	87	123,581	70.96%
Rural/Frontier	105	81	22,040	78.50%	191	139	134,833	73.90%
Washoe – Region 2	285	246	53,598	86.31%	518	402	330,603	73.27%
New Hampshire	1,597	1,251	167,083	79.22%	2,654	1,968	1,041,444	72.17%
Central	513	429	48,867	85.03%	868	674	297,358	73.92%
Central 1	313	268	25,768	87.29%	444	344	147,376	71.70%
Central 2	200	161	23,098	80.81%	424	330	149,982	76.14%
Northern	205	159	21,158	78.85%	307	237	137,687	76.90%
Southern	879	663	97,059	75.56%	1,479	1,057	606,399	70.40%
Southern 1 (Rockingham)	362	261	35,718	72.83%	617	419	232,337	67.83%
Southern 2	517	402	61,341	77.42%	862	638	374,062	72.30%
New Jersey	1,702	1,337	1,044,003	79.28%	3,314	2,372	6,776,162	69.85%
Central	411	319	241,494	77.54%	730	523	1,552,030	69.02%
Metropolitan	391	308	261,669	80.32%	854	609	1,626,795	67.82%
Northern	504	402	322,437	81.53%	1,080	759	2,184,675	71.05%
Southern	396	308	218,403	77.15%	650	481	1,412,662	71.66%
New Mexico	1,338	1,139	251,927	85.28%	2,461	1,914	1,549,877	74.91%
Region 1	268	239	56,486	90.22%	499	401	318,051	78.39%
Region 2	155	138	31,035	90.07%	325	246	226,769	71.30%
Region 3 (Bernalillo)	397	332	77,475	83.10%	785	607	508,046	75.34%
Region 4	264	210	34,860	80.35%	366	279	191,653	72.06%
Region 5	254	220	52,071	86.25%	486	381	305,358	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: 2012, 2013, and 2014 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	5,799	4,437	2,249,511	75.89%	11,041	7,288	15,173,526	62.86%
Region A	2,177	1,598	878,530	73.03%	4,696	2,901	6,518,835	58.42%
Region 1	530	432	186,007	82.00%	877	620	1,036,410	70.93%
Region 2	788	533	337,616	66.19%	1,665	993	2,317,580	55.50%
Region 3	285	225	126,518	77.32%	960	620	1,370,195	64.42%
Region 4	574	408	228,389	74.40%	1,194	668	1,794,650	50.86%
Region B	1,530	1,138	624,703	73.98%	2,548	1,581	3,871,194	59.31%
Region 5	912	667	344,235	72.64%	1,521	927	2,183,053	58.78%
Region 6	360	258	169,363	70.31%	598	362	1,035,505	58.20%
Region 7	258	213	111,106	84.65%	429	292	652,636	63.26%
Region C	1,618	1,316	559,345	81.56%	2,849	2,111	3,575,427	71.88%
Region 8	354	257	118,195	73.37%	560	399	784,327	71.47%
Region 9	409	345	121,183	84.90%	654	491	740,418	72.51%
Region 10	120	100	58,625	79.41%	241	189	348,455	74.85%
Region 11	365	293	130,480	80.24%	679	508	816,246	72.68%
Region 12	370	321	130,863	87.56%	715	524	885,981	70.16%
Region D	474	385	186,933	80.50%	948	695	1,208,070	70.85%
Region 13	168	136	57,291	81.90%	328	238	373,284	71.31%
Region 14	107	88	64,012	86.12%	243	181	416,796	69.19%
Region 15	199	161	65,630	76.18%	377	276	417,990	71.47%

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: 2012, 2013, and 2014 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	1,538	1,285	1,120,046	83.86%	3,051	2,386	7,344,723	75.11%
Alliance Behavioral Healthcare 1	135	118	90,634	86.30%	299	251	575,093	83.80%
Alliance Behavioral Healthcare 2	164	144	114,862	87.53%	246	188	700,520	73.94%
Cardinal Innovations Healthcare Solutions 1	132	99	91,249	73.35%	225	166	551,825	72.09%
Cardinal Innovations Healthcare Solutions 2	111	96	78,842	87.16%	279	224	506,508	79.97%
Cardinal Innovations Healthcare Solutions 3	111	87	107,636	77.59%	281	196	712,067	69.92%
CenterPoint Human Services	102	90	61,945	88.69%	193	166	407,724	82.63%
Eastpointe	157	133	95,280	84.58%	268	204	612,590	68.79%
Partners Behavioral Health Management	190	160	104,105	86.68%	330	257	683,738	73.80%
Sandhills Center 1	56	50	64,933	91.77%	109	84	420,365	71.26%
Sandhills Center 2	85	71	60,589	82.70%	180	141	380,568	82.80%
Smoky Mountain Center 1	81	65	59,264	83.19%	139	108	421,307	68.20%
Smoky Mountain Center 2	61	46	52,322	73.31%	149	123	414,641	79.20%
Trillium Health Resources 1	87	71	70,193	85.11%	169	141	472,296	80.32%
Trillium Health Resources 2	66	55	68,193	83.34%	184	137	485,480	62.83%
North Dakota	1,385	1,131	87,446	81.65%	2,633	1,975	544,336	72.37%
Badlands and West Central	313	268	21,759	83.98%	632	483	145,880	75.15%
Lake Region	119	95	5,244	81.94%	182	135	29,650	71.75%
North Central	177	133	11,978	72.97%	272	213	75,117	75.53%
Northeast	223	189	12,583	85.75%	438	326	70,654	68.29%
Northwest	83	62	4,133	71.18%	144	89	27,982	63.48%
South Central	87	74	6,300	84.92%	191	146	44,398	74.76%
Southeast	383	310	25,450	81.60%	774	583	150,655	71.93%

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: 2012, 2013, and 2014 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	5,290	4,192	1,409,063	78.94%	8,964	6,545	8,750,593	70.31%
Boards 2, 46, 55, and 68	200	159	64,265	75.34%	315	210	385,490	64.93%
Boards 3, 52, and 85	182	142	50,146	78.99%	271	197	283,559	71.75%
Boards 4 and 78	111	90	35,066	80.08%	197	150	237,734	76.95%
Boards 5 and 60	199	167	46,604	83.34%	301	242	260,144	78.60%
Boards 7, 15, 41, 79, and 84	212	168	50,931	78.67%	374	284	356,843	72.61%
Boards 8, 13, and 83	250	189	62,641	75.91%	370	252	370,805	66.00%
Board 9 (Butler)	159	116	50,152	70.23%	268	181	276,181	64.19%
Board 12	136	102	44,196	74.45%	230	159	264,936	62.06%
Boards 18 and 47	657	564	184,762	86.06%	1,137	865	1,193,450	74.49%
Boards 20, 32, 54, and 69	188	153	42,380	82.62%	314	235	256,829	73.47%
Boards 21, 39, 51, 70, and 80	327	245	68,568	73.11%	440	329	414,969	70.99%
Boards 22, 74, and 87	176	137	48,899	77.41%	293	232	296,234	78.97%
Boards 23 and 45	202	162	49,176	79.67%	296	225	281,631	71.71%
Board 25 (Franklin)	495	386	143,523	78.76%	952	677	897,304	70.25%
Boards 27, 71, and 73	252	191	57,958	75.58%	422	291	373,892	62.16%
Boards 28, 43, and 67	271	222	61,584	81.27%	431	334	374,770	74.95%
Board 31 (Hamilton)	357	292	95,290	80.68%	625	465	601,566	72.64%
Board 48 (Lucas)	216	168	54,209	78.41%	337	228	329,559	63.84%
Boards 50 and 76	294	227	71,614	76.80%	544	383	470,658	65.25%
Board 57 (Montgomery)	205	162	63,420	81.35%	436	324	411,534	70.60%
Board 77 (Summit)	201	150	63,682	74.00%	411	282	412,503	65.74%
Oklahoma	1,480	1,159	476,983	76.92%	2,650	1,948	2,820,561	69.13%
Central	172	134	63,066	76.40%	326	221	355,862	61.35%
East Central	200	149	56,086	73.23%	295	222	322,240	74.73%
Northeast	183	146	63,827	81.24%	345	264	360,940	69.93%
Northwest and Southwest	214	171	68,431	75.51%	304	233	404,489	71.37%
Oklahoma County	278	215	86,764	76.20%	543	392	543,373	65.54%
Southeast	237	192	63,929	80.11%	408	295	384,299	69.98%
Tulsa County	196	152	74,879	75.88%	429	321	449,359	72.78%

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: 2012, 2013, and 2014 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	1,377	1,132	457,538	82.57%	2,592	1,959	3,046,250	74.69%
Region 1 (Multnomah)	235	187	76,731	77.71%	530	388	607,794	73.39%
Region 2	355	291	112,092	82.10%	597	447	708,028	72.44%
Region 3	429	348	155,869	82.18%	813	635	949,188	78.30%
Region 4	180	153	59,634	85.48%	337	257	436,964	76.47%
Region 5 (Central)	82	74	23,165	90.72%	159	123	158,143	75.43%
Region 6 (Eastern)	96	79	30,047	86.00%	156	109	186,134	64.71%
Pennsylvania	4,954	4,072	1,480,904	82.02%	9,105	6,708	9,861,971	70.47%
Region 1 (Allegheny)	466	358	128,851	77.45%	961	628	975,588	64.17%
Regions 3, 8, 9, and 51	294	241	81,459	82.38%	561	402	549,711	68.70%
Regions 4, 11, 37, and 49	371	304	109,140	80.87%	612	442	695,119	69.01%
Regions 5, 18, 23, 24, and 46	322	278	85,000	84.68%	592	460	577,717	72.97%
Regions 6, 12, 16, 31, 35, 45, and 47	306	249	91,779	82.17%	565	452	561,746	75.39%
Regions 7, 13, 20, and 33	871	734	294,951	85.28%	1,668	1,193	1,902,261	68.68%
Regions 10, 15, 27, 32, 43,and 44	201	164	56,235	80.37%	349	282	402,461	78.55%
Regions 17 and 21	123	106	46,366	81.87%	263	213	283,624	76.53%
Regions 19, 26, 28, and 42	700	571	172,159	81.63%	1,104	841	1,110,681	72.71%
Regions 22, 38, 40, 41, and 48	299	229	86,166	76.13%	518	376	652,989	69.43%
Regions 29 and 34	227	186	78,637	80.99%	401	273	501,438	64.64%
Regions 30 and 50	254	196	66,633	79.55%	461	329	477,864	71.64%
Region 36 (Philadelphia)	520	456	183,530	84.48%	1,050	817	1,170,774	74.43%
Rhode Island	1,402	1,168	132,087	83.53%	2,615	1,980	822,015	73.23%
Bristol and Newport	158	131	16,503	86.85%	263	204	104,975	72.45%
Kent	190	155	17,532	80.69%	401	284	130,120	67.24%
Providence	846	713	79,554	83.56%	1,628	1,241	486,412	75.13%
Washington	208	169	18,498	83.03%	323	251	100,508	73.00%
South Carolina	1,401	1,148	541,337	82.26%	2,541	1,969	3,596,083	74.98%
Region 1	415	335	173,813	81.27%	761	566	1,127,070	71.55%
Region 2	362	311	139,965	86.82%	587	457	878,504	76.26%
Region 3	263	199	88,126	74.22%	470	357	627,339	74.23%
Region 4	361	303	139,433	84.25%	723	589	963,170	78.27%

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: 2012, 2013, and 2014 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 Dakota	1,383	1,162	105,160	83.71%	2,519	1,928	621,956	75.21%
Region 1	336	276	24,999	80.15%	633	490	153,104	77.05%
Region 2	160	143	9,467	89.98%	234	174	56,396	71.89%
Region 3	324	273	26,074	84.29%	574	445	148,447	77.93%
Region 4	173	136	15,361	80.13%	339	249	88,007	70.84%
Region 5	390	334	29,259	85.06%	739	570	176,003	74.62%
Tennessee	1,305	1,101	759,270	83.92%	2,465	1,951	4,918,833	76.93%
Region 1	109	91	54,945	81.37%	225	169	403,218	74.69%
Region 2	238	196	134,754	83.78%	441	349	926,189	79.44%
Region 3	217	190	109,776	87.04%	387	317	741,941	78.64%
Region 4 (Davidson)	115	88	68,238	75.41%	280	215	497,055	72.43%
Region 5	318	259	195,168	80.51%	561	442	1,172,253	78.10%
Region 6	120	110	75,704	93.04%	243	204	482,718	77.73%
Region 7 (Shelby)	188	167	120,684	88.08%	328	255	695,458	73.76%

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: 2012, 2013, and 2014 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	5,491	4,504	3,444,138	81.60%	9,923	7,298	18,944,344	70.65%
Region 1	187	151	115,574	79.02%	417	296	628,963	67.31%
Region 2	76	68	69,557	90.81%	177	150	415,696	82.12%
Region 3	1,529	1,309	906,472	85.68%	2,746	2,114	5,078,952	73.94%
Region 3a	906	774	577,395	85.42%	1,703	1,282	3,233,114	71.80%
Region 3bc	623	535	329,078	86.12%	1,043	832	1,845,838	77.62%
Region 4	223	190	136,677	85.44%	449	345	845,637	72.62%
Region 5	167	129	95,227	75.95%	259	179	584,572	65.84%
Region 6	1,229	907	821,986	72.93%	2,371	1,543	4,573,572	61.91%
Region 6a	1,095	809	738,683	72.97%	2,137	1,391	4,088,986	62.49%
Region 6bc	134	98	83,303	72.56%	234	152	484,586	57.08%
Region 7	637	536	404,643	83.98%	1,275	975	2,316,920	74.65%
Region 7a	341	286	245,257	82.22%	747	552	1,465,297	72.26%
Region 7bcd	296	250	159,386	85.98%	528	423	851,623	78.44%
Region 8	588	502	360,371	85.81%	922	685	1,980,282	72.96%
Region 9	134	96	76,366	72.70%	241	160	430,196	63.92%
Region 10	229	196	129,511	83.46%	346	273	604,974	78.27%
Region 11	492	420	327,753	86.29%	720	578	1,484,582	76.82%
Region 11abd	288	241	198,702	84.29%	421	324	948,499	72.33%
Region 11c (Hidalgo)	204	179	129,051	89.06%	299	254	536,082	83.69%
Utah	1,321	1,147	420,016	87.10%	2,465	1,981	1,986,263	78.53%
Bear River, Northeastern, Summit, Tooele, and Wasatch	184	167	52,068	90.81%	285	230	236,606	81.21%
Central, Four Corners, San Juan, and Southwest	129	106	52,115	86.37%	227	169	241,440	70.68%
Davis County	167	142	47,471	82.24%	275	240	211,915	86.41%
Salt Lake County	490	417	144,536	84.39%	1,011	795	765,196	77.78%
Utah County	263	233	89,148	89.91%	465	375	356,816	77.01%
Weber, Morgan	88	82	34,678	94.15%	202	172	174,291	80.96%

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: 2012, 2013, and 2014 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	1,361	1,106	72,604	81.47%	2,529	1,917	501,015	74.27%
Champlain Valley	664	541	32,271	82.13%	1,218	899	200,149	71.31%
Rural Northeast	247	197	16,517	80.17%	503	384	117,880	75.62%
Rural Southeast	267	210	13,034	78.80%	481	373	104,234	75.54%
Rural Southwest	183	158	10,782	84.97%	327	261	78,752	79.03%
Virginia	1,643	1,379	944,663	84.75%	3,020	2,291	6,181,981	74.38%
Region 1	269	238	157,157	89.39%	487	406	958,791	82.57%
Region 2	479	393	253,841	84.32%	837	611	1,723,482	70.87%
Region 3	256	212	152,331	82.96%	526	408	1,063,921	76.80%
Region 4	261	221	163,956	85.41%	469	338	1,053,897	69.92%
Region 5	378	315	217,378	82.87%	701	528	1,381,891	73.77%
Washington	1,404	1,145	855,057	82.00%	2,641	1,951	5,279,538	71.53%
Region 1	329	277	214,765	85.58%	499	376	1,135,716	72.12%
Greater Columbia and North Central	202	170	135,663	84.39%	295	228	668,527	73.84%
Spokane	127	107	79,102	87.46%	204	148	467,190	69.90%
Region 2	605	477	363,834	78.88%	1,297	942	2,444,573	70.85%
King	367	283	220,868	76.96%	809	581	1,564,010	71.16%
North Sound	238	194	142,966	81.79%	488	361	880,563	70.35%
Region 3	470	391	276,458	83.41%	845	633	1,699,249	72.20%
Peninsula	60	53	41,543	87.33%	121	81	285,757	66.15%
Pierce	190	164	104,520	85.42%	362	289	618,236	78.09%
SW WA and Timberlands	155	122	92,120	80.17%	271	188	546,023	65.06%
Thurston-Mason	65	52	38,275	81.30%	91	75	249,234	82.22%
West Virginia	1,547	1,230	210,916	79.43%	2,645	1,946	1,452,450	72.02%
Region I	101	77	16,330	76.44%	164	108	116,314	58.81%
Region II	206	170	32,591	80.76%	309	227	202,057	73.27%
Region III	113	83	18,740	69.56%	188	129	133,231	67.80%
Region IV	402	324	49,781	81.44%	678	524	322,096	75.50%
Region V	426	329	58,067	78.04%	799	573	412,851	70.61%
Region VI	299	247	35,407	82.01%	507	385	265,900	75.45%

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: 2012, 2013, and 2014 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	1,405	1,116	669,309	78.16%	2,566	1,859	4,361,642	72.01%
Milwaukee	228	182	114,736	79.18%	481	336	702,647	68.09%
Northeastern	305	234	140,203	75.19%	545	402	946,149	75.24%
Northern	128	94	53,634	70.95%	209	157	379,798	75.25%
Southeastern	290	223	140,634	76.64%	491	330	878,892	69.45%
Southern	255	212	126,323	80.92%	479	359	855,445	72.78%
Western	199	171	93,779	85.23%	361	275	598,710	72.26%
Wyoming	1,415	1,165	67,146	81.47%	2,508	1,931	435,273	76.27%
Judicial District 1 (Laramie)	238	193	10,846	81.85%	424	315	72,026	73.63%
Judicial District 2	140	123	7,579	82.44%	281	230	43,225	77.22%
Judicial District 3	239	200	10,453	84.10%	396	317	59,981	81.36%
Judicial District 4	101	82	4,110	83.21%	191	151	29,252	69.91%
Judicial District 5	91	80	6,284	90.34%	158	127	41,458	83.21%
Judicial District 6	175	134	7,253	73.19%	282	205	44,585	72.16%
Judicial District 7 (Natrona)	165	136	8,859	79.17%	281	213	58,836	74.47%
Judicial District 8	139	114	4,519	79.52%	226	168	30,325	75.15%
Judicial District 9	127	103	7,243	82.72%	269	205	55,583	78.85%

DU = dwelling unit; SPA = service planning area.

NOTE: For substate region definitions, see the "2012-2014 National Survey on Drug Use and Health Substate Region Definitions" at http://www.samhsa.gov/data.

NOTE: To compute the pooled 2012-2014 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 2012, 2013, and 2014 individual response rates.

NOTE: The total responded column represents the combined sample size from the 2012, 2013, and 2014 NSDUHs.

NOTE: The population estimate is the simple average of the 2012, 2013, and 2014 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, 2012, 2013, and 2014.

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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.

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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 Nicole Mack. 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.