**Addendum to the 2002-2016**

**Combined Public Use Data File**

## Introduction

This codebook provides documentation for the 836,696 records on the combined 2002‑2016 National Survey on Drug Use and Health (NSDUH) public use data file (or PUF). It contains 4,669 variables, the majority of which are available across two or more of the individual-year PUFs. This addendum provides information specific to the combined file. Detailed information specific to each of the survey years is available in the documentation associated with the individual PUFs and can be accessed online through the Substance Abuse and Mental Health Data Archive (SAMHDA) at <https://datafiles.samhsa.gov/>.

## Organization of the Data File

The records on this data file are combined from each individual PUF for 2002 through 2016. Because the identifier for each record on the individual PUFs, QUESTID2, may be repeated across years, a new variable, YEAR, was added to the combined data file. The combination of YEAR and QUESTID2 will result in unique observations. The variable YEAR may also be used to subset the data to specific study years for analysis purposes.

The majority of the variables found in each of the single-year PUFs are included on the 2002-2016 combined PUF. For the most part, as long as a variable was available on more than 1 year of the data files, it was included on this combined file. Retaining or dropping variables from the combined PUF was based on the analytic utility for multiple-year data analysis. A few variables that had low analytic utility or were available for only 1 or 2 years were not included on this combined PUF. These variables can be obtained from the individual PUFs. Some variables that were not included on the 2002-2015 combined PUF are now retained on the 2002‑2016 PUF because they are available on 2 years of data. This consists of many 2015 NSDUH variables that were either new or considered not comparable with their counterparts from 2002-2014 due to the partial questionnaire redesign in the 2015 NSDUH (e.g., the cancer diagnostic variables and those dealing with the use of prescription psychotherapeutics). In addition, some demographic variables, such as education and employment status, and several substance use outcome variables, such as "recoded any illicit drug use in past month" and "recoded binge alcohol use in past 30 days," which were excluded for 2015 from the 2002-2015 combined PUF, are now available on the 2002-2016 combined PUF. The marital status variable IRMARIT was recreated for the 2016 PUF (similar to 2002-2014) and reflects the move of the marital status questions from self-administration in 2015 back to interviewer administration in 2016. The 2015 marital status variable IRMARITSTAT was also retained on the 2002-2016 combined PUF. Analytic goals should be considered prior to pooling or comparing marital status data from 2015 with data from other years. For details on how these two marital status variables differ, see the 2016 PUF codebook.[[1]](#footnote-1)

It is worth noting that prior to 2016, several variables that were not comparable across time were retained on the file. Reasons for variables not being comparable across years may include questionnaire changes, skip logic (i.e., routing) changes, or changes in how recoded variables were created. Additionally, for 2015 and 2016, COUTYP4 (COUNTY METRO/NONMETRO STATUS [2013 3-LEVEL]), which was created based on the 2013 Rural/Urban Continuum Codes (RUCC13), was included to replace COUTYP2, which was created based on the 2003 Rural/Urban Continuum Codes (RUCC03). COUTYP2 was still retained for the 2002-2014 data. Also, the poverty variable, POVERTY3 (RC-POVERTY LEVEL-NEW INC [% OF US CENSUS POVERTY THRESHOLD]) created for 2015 and 2016, is in fact comparable with POVERTY2 in previous years; for details regarding this variable, see the 2015 PUF codebook.[[2]](#footnote-2) A crosswalk chart (referred to as the "combined PUF measles chart") in the documentation provided for the combined 2002-2016 PUF indicates the variables that are present and comparable across the different years. Users are encouraged to look carefully at this crosswalk to ensure that comparisons across time are valid for given variables.

Analysts also are encouraged to refer to the questionnaires (i.e., the computer-assisted interviewing [CAI] specifications) for each of the survey years in conjunction with their review of the 2002-2016 codebook. The questionnaires provide detailed information about how respondents were routed through the questions in the interviews and changes to the instrument relative to the survey from the prior year.

The 2002 through 2016 questionnaires, as well as other resource materials and earlier years' documentation, can be found on the Substance Abuse and Mental Health Services Administration (SAMHSA) website and on SAMHDA's webpages:

* Start at SAMHSA's data webpage at <https://www.samhsa.gov/data/>, click on the link for "NSDUH | National Survey on Drug Use and Health" below the "Learn More About Our Data" heading. On this page, click on the "Data" tab, choose "Reports & Data Tables" from the drop-down list, then search "National Survey on Drug Use and Health" under "Survey Type." To find a specific year's questionnaire (e.g., 2016's), use the "Year Data Collected" search filter on the left-hand side of the page to fine-tune your search so it reads "From 2016" and "To 2016." Scroll through the search results (up to 100 items can be displayed at a time) until you find "NSDUH 2016 Questionnaire" or "NSDUH 2016 Methodological Resource Book (MRB)" (each survey year's questionnaire is included in the annual MRB). Continue to use the "Year Data Collected" search filter on the left-hand side of the page to fine-tune your search for other years' questionnaires.

Alternatively and more simply, start at SAMHDA's main webpage at <https://datafiles.samhsa.gov/>, click on the "Download Data" heading, click next on "National Survey on Drug Use and Health (NSDUH)," then choose a dataset year (e.g., NSDUH-2016) or a set of aggregated years (NSDUH-2002-2016) from the list below the "Browse Studies" heading. Next, clicking on the link below "Datasets in this Study" heading (e.g., "NSDUH-2016-DS0001") will allow you to access the dataset's available documentation (e.g., the Codebook.pdf, Questionnaire-Specs.pdf, Questionnaire-Showcards.pdf, and Questionnaire-Screener.pdf files).

Furthermore, because of changes in how variables may have been created or recoded across years, the number of levels or level contents may vary from year to year for some variables. For example, for the industry and occupation variables (WRKIDST2, WRKIDSY2, WRKOCUP2, and WRKOCUY2), the category "Armed Forces" did not exist from 2008 to 2014. For certain other variables, the same values in the categories may have different meanings. For example, for the WHAT YEAR LAST WORKED variable, WRKLSTY2, 1968, stands for the exact year last worked in the 2007 and prior data; however, in 2008, it stands for 1968 and earlier. For the four weight gain or weight loss variables (ADWRGNL2, ADWRLSL2, YOWRGNL2, and YOWRLSL2), levels 21 and higher mean different weight categories for years before and after 2010. Caution should be taken, therefore, when combining years with such data, and further collapsing may be needed to make the levels comparable. Additional details on these variables are provided in this document.

## Weights and Design Variables for the Combined PUF

When analyzing any single year of data, the variable ANALWC1 should be used. This variable is the same as the variable ANALWT\_C that is found on the single-year PUFs. However, with a combined file, analysts have the option of using pooled data from 2 or more years. Therefore, in addition to the analysis weights for a single year of data (ANALWC1), additional weight variables, ANALWC2 to ANALWC15, were created to allow for multiple-year data analysis. These additional weight variables were created by adjusting the single-year weights by a scalar factor (i.e., the number of years of data used) so that the estimated numbers of individuals reported is representative of the national population. For example, ANALWC2, which can be used for producing estimates using any combination of 2 years of data (e.g., pooled 2002-2003 data, pooled 2015-2016 data, or even 2008 and 2010 combined data), was obtained by dividing the single-year weight ANALWC1 by 2. Similarly, ANALWC15 was obtained by dividing ANALWC1 by 15 and can be used for producing estimates using all 15 years of NSDUH data (i.e., combined data from 2002 to 2016).

Selecting which weights to use depends on the years of data being analyzed. This can depend on the years that certain variables are available because some of the analytic variables are not available or not comparable for all 15 years. (For details, see the combined PUF measles chart.) For example, a user may be interested in obtaining estimates from 15 years of data, but for variables like OTHINS (OTHER HEALTH INSURANCE), which is available for only 14 of those 15 years (i.e., no other health insurance data for 2002 were collected), ANALWC14 should be used instead of ANALWC15 during analysis for that particular variable. Also, for variables that are not comparable across time, such as YUFCSOR (STAYED IN FOSTER CARE FOR SOME OTHER REASON), if data from 2002 to 2004 (3 years) are used, ANALWC3 needs to be used, and if data from 2005 to 2016 (12 years) are used, ANALWC12 should be used. Therefore, caution should be taken when choosing the weights for multiple-year data analysis. Examples of SAS®, Stata, and SUDAAN® code focusing on how to use the weights appear toward the end of this document.

For years when a split-sample design is implemented (i.e., in 2004 and 2008), a special weight was developed for the split samples. When analysis with pooled data from multiple years is conducted, analysts should check the codebook introduction and other documents for that specific year on how to use the analysis weights in order to use a proper analysis weight for the pooled data analysis.

For example, in the 2004 NSDUH, adult respondents aged 18 or older were split approximately evenly, where respondents in sample A were administered the full adult mental health questionnaire section as it had been administered in 2002 and 2003, and respondents in sample B were administered a short version of the adult mental health questionnaire section in addition to the adult depression questionnaire section as it was administered in 2005, 2006, and 2007. Thus, analyses using 2004 data from either the adult mental health section (renamed the psychological distress section in 2005, 2006, and 2007)or the adult depression section need to be conducted using a different weight variable. For 2004, analyses that include the adult mental health variables for major depressive episode (MDE) and/or unadjusted serious psychological distress (SPD) should involve the following:

* Select either sample A or sample B by using the ADLTSAMP variable (ADLTSAMP = 1 corresponds to sample A, and ADLTSAMP = 2 corresponds to sample B) to restrict the analysis to the appropriate half sample.

When combining 2004 adult half-sample data with data for survey years that have comparably defined adult mental health variables, the weight variable (the SPD analysis weight for 2004 and the person-level analysis weight ANALWC1 for the other years in the analysis) should be divided by the total number of years in the analysis.

For variance estimation, no adjustment needs to be made to the sample design variables VESTR (variance estimation [pseudo] stratum) and VEREP (variance estimation [pseudo] replicate within stratum). Note that there are 60 pseudo strata (resulting in 60 degrees of freedom for variance estimation) per year for the 2013 data and prior PUF data and 50 pseudo strata (resulting in 50 degrees of freedom) per year for the 2014 and subsequent data. This change is due to the sample redesign implemented in the 2014 NSDUH.[[3]](#footnote-3) When combining any pair of years of data (e.g., 2015 and 2016), the degrees of freedom remain the same as if the pair of years was a single year (e.g., 50 for national estimates) when these years are part of the same sample design. When combining years with different degrees of freedom (e.g., 2013 and 2014), the specific number of degrees of freedom can be computed by counting the unique values of VESTR. For example, when combining data for 2015 and 2016, DDF=50 can be used because the sample design remained same across those 2 years. When combining data for 2013 and 2014, DDF=110 can be used because the sample design changed in 2014. When comparing estimates in two domains with different degrees of freedom, researchers should err on the conservative side and use the smaller degrees of freedom. For example, when comparing 2013 estimates with 2014 estimates, DDF=50 should be used. For details about degrees of freedom, see Section 6 in the 2016 statistical inference report.[[4]](#footnote-4) As with the single-year PUFs, users of multiyear PUFs should first sort the combined data by the sample design variables, then specify them in a statistical software package, such as SUDAAN,[[5]](#footnote-5) to estimate variances and standard errors (SEs).

## Variables with Differences in Levels in the Combined PUF

This section describes the variables that have levels that are not comparable across the 2002 to 2016 PUFs, where variables in items 1 and 2 pertain to the 2002-2014 data and variables in items 3 and 4 pertain to the 2002-2016 data.

### 1. Industry Variables

**WRKIDST2:** TYPE OF BUSINESS OR INDUSTRY

**WRKIDSY2:** TYPE OF BUSINESS OR INDUSTRY

Table A.1 provides descriptions of the industry variable levels. Note that, starting in 2008, the "Armed Forces" category (17) became unavailable. It was collapsed with "Public Administration" (15). These two variables are not available for 2015 and 2016.

Table A.1 Descriptions of the Industry Variable Levels

|  |  |  |
| --- | --- | --- |
| Level | Description (2007 and Earlier NSDUHs) | Description (2008 to 2014 NSDUHs) |
| 1 | Agriculture, Forestry, Fishing, & Hunting | Agriculture, Forestry, Fishing, & Hunting |
| 2 | Mining | Mining |
| 3 | Construction | Construction |
| 4 | Manufacturing, Nondurable Goods | Manufacturing, Nondurable Goods |
| 5 | Manufacturing, Durable Goods | Manufacturing, Durable Goods |
| 6 | Transportation & Utilities | Transportation & Utilities |
| 7 | Information & Communications | Information & Communications |
| 8 | Wholesale Trade, Durable Goods | Wholesale Trade, Durable Goods |
| 9 | Wholesale Trade, Nondurable Goods | Wholesale Trade, Nondurable Goods |
| 10 | Retail Trade | Retail Trade |
| 11 | Finance, Insur, Real Estate, Rental & Leasing | Finance, Insur, Real Estate, Rental & Leasing |
| 12 | Professional/Scientific/Mgmt/Admin/Waste Mgmt | Professional/Scientific/Mgmt/Admin/Waste Mgmt |
| 13 | Education, Health & Social Services | Education, Health & Social Services |
| 14 | Arts/Entertain/Recreation/Accommodation/ Food Svcs | Arts/Entertain/Recreation/Accommodation/ Food Svcs |
| 15 | Public Administration | Public Administration |
| 16 | Other Services (Except Public Admin) | Other Services (Except Public Admin) |
| 17 | Armed Forces | — |

### 2. Occupation Variables

**WRKOCUP2:** KIND OF WORK/JOB TITLE PRIMARY JOB

**WRKOCUY2:** KIND OF WORK/JOB TITLE PRIMARY JOB

Table A.2 provides descriptions of the occupation variable levels. Note that, starting in 2008, the "Armed Forces" category (15) became unavailable. It was collapsed with "Protective Service Occupations" (8). These two variables are not available for 2015 and 2016.

Table A.2 Descriptions of Occupation Variable Levels

|  |  |  |
| --- | --- | --- |
| Level | Description (2007 and Earlier NSDUHs) | Description (2008 to 2014 NSDUHs) |
| 1 | Executive/Administrative/Managerial/ Financial | Executive/Administrative/Managerial/ Financial |
| 2 | Professional (not Education/ Entertainment/ Media) | Professional (not Education/ Entertainment/ Media) |
| 3 | Education and Related Occupations | Education and Related Occupations |
| 4 | Entertainers, Sports, Media, and Communications | Entertainers, Sports, Media, and Communications |
| 5 | Technicians and Related Support Occupations | Technicians and Related Support Occupations |
| 6 | Sales Occupations | Sales Occupations |
| 7 | Office & Administrative Support Workers | Office & Administrative Support Workers |
| 8 | Protective Service Occupations | Protective Service Occupations |
| 9 | Service Occupations, Except Protective | Service Occupations, Except Protective |
| 10 | Farming, Fishing, & Forestry Occupations | Farming, Fishing, & Forestry Occupations |
| 11 | Installation, Maintenance & Repair Workers | Installation, Maintenance & Repair Workers |
| 12 | Construction Trades & Extraction Workers | Construction Trades & Extraction Workers |
| 13 | Production, Machinery Setters/Operators/Tenders | Production, Machinery Setters/Operators/Tenders |
| 14 | Transportation & Material Moving Workers | Transportation & Material Moving Workers |
| 15 | Armed Forces | — |

### 3. "What Year Last Worked" Variable

**WRKLSTY2:** WHAT YEAR LAST WORKED for 2002 to 2014

**WRKLASTYR2:** WHAT YEAR LAST WORKED for 2015 and 2016

Before 2008, the first category for this variable was coded to "1960 or earlier." For 2008 and 2009, it was coded to (SURVEY YEAR - 40). For 2010 and later years, it was coded to (SURVEY YEAR - 39). The cut point lumps all of the prior data together; therefore, values on or before the cut points have different meanings for the combined PUF. Table A.3 provides a breakdown of the years for which the first category was coded.

Table A.3 Coding of the First Category for the "What Year Last Worked" Variable

|  |  |
| --- | --- |
| NSDUH Survey Year | First Category Coded As |
| 2007 and earlier | 1960 or earlier |
| 2008 | 1968 or earlier |
| 2009 | 1969 or earlier |
| 2010 | 1971 or earlier |
| 2011 | 1972 or earlier |
| 2012 | 1973 or earlier |
| 2013 | 1974 or earlier |
| 2014 | 1975 or earlier |
| 2015 | 1976 or earlier |
| 2016 | 1977 or earlier |

### 4. Weight Gain/Loss Variables

Four recoded weight gain/loss variables were derived from the adult and youth depression questionnaire sections. ADWRGNL2 and ADWRLSL2 are the recoded adult depression section variables, and YOWRGNL2 and YOWRLSL2 are the recoded adolescent depression section variables. If respondents reported gaining or losing weight and these gains or losses could not be attributed to factors other than depression (e.g., growth, pregnancy, dieting), respondents were asked to report the number of pounds they gained or lost.

**ADWRGNL2:** WHEN PRBLMS WORST # LBS GAINED WITHOUT TRYING

**ADWRLSL2:** WHEN PRBLMS WORST # LBS LOST WITHOUT TRYING

**YOWRGNL2:** WHEN PRBLMS WORST # LBS GAINED WITHOUT TRYING

**YOWRLSL2:** WHEN PRBLMS WORST # LBS LOST WITHOUT TRYING

The levels were consistent from 2002 to 2009 and from 2010 to 2016. Table A.4 provides descriptions of the weight gain and weight loss variable levels.

Table A.4 Descriptions of the Weight Gain and Weight Loss Variable Levels

|  |  |  |
| --- | --- | --- |
| Level | Description (2009 and Earlier NSDUHs) | Description (2010 and Later NSDUHs) |
| 0-20 | Single level for 0-20 pounds (i.e., 0, 1, 2, …, 20 pounds) | Single level for 0-20 pounds (i.e., 0, 1, 2, …, 20 pounds) |
| 21 | 21 pounds | 21-25 pounds |
| 22 | 22 pounds | 26-30 pounds |
| 23 | 23 pounds | 31-35 pounds |
| 24 | 24 pounds | 36-40 pounds |
| 25 | 25 pounds | 41-45 pounds |
| 26 | 26 pounds | 46-50 pounds |
| 27 | 27 pounds | 51 or more pounds |
| 28-50 | Single level for 28-50 pounds (i.e., 28, 29, 30, …, 50 pounds) | — |
| 51 | 51 or more pounds | — |

## Examples of SUDAAN, Stata, and SAS Code

This section provides some examples of SUDAAN, SAS, and Stata code for generating estimates (means along with SEs) (see Exhibits A.1 to A.5) from the combined NSDUH PUF. Additionally, three tables showing estimates for tobacco product use, any mental illness (AMI), and use of prescription psychotherapeutics are included, using the combined 2002-2016 PUF (Tables A.5 to A.7). PUF users can ensure that PUF data are downloaded correctly, or that code is implemented correctly, by replicating estimates in these tables.

Exhibit A.1 Using SUDAAN DESCRIPT Procedure to Produce Mean Estimate and Standard Error of Past Month Alcohol Use (ALCMON), by Gender (IRSEX), Using 2002-2016 Combined PUF Data

|  |
| --- |
| PROC SORT DATA=DATANAME; */\*SAS code to sort output dataset by Nesting Variables\*/*BY VESTR VEREP;RUN;PROC DESCRIPT DATA=DATANAME DDF=170 DESIGN=WR FILETYPE=SAS DEFT4;*/\*The DOF here is based on 2002-2016 combined data. It may change depending on what years the combined data contains and whether or not the combined years cross survey designs. The specific number of degrees of freedom can be computed by counting the unique values of VESTR\*/*NEST VESTR VEREP;WEIGHT ANALWC15; */\*Use analwc15 since we are using 15 years of NSDUH data.\*/*VAR ALCMON; */\*Past month alcohol analysis variable\*/*SUBGROUP IRSEX; */\*Gender variable, where male=1 & female=2\*/*LEVELS 2; TABLES IRSEX; */\*by gender\*/*PRINT WSUM NSUM MEAN SEMEAN TOTAL SETOTAL / REPLACE STYLE=NCHS;OUTPUT WSUM MEAN SEMEAN TOTAL SETOTAL NSUM DEFFMEAN /REPLACE NSUMFMT=F8.0 WSUMFMT=F12.0 MEANFMT=F15.10 SEMEANFMT=F15.10 DEFFMEANFMT=F15.10 TOTALFMT=F12.0 SETOTALFMT=F12.0 FILENAME="OUT.SUDFILE";TITLE "ESTIMATES OF PAST MONTH ALCOHOL BY GENDER";RUN; Note: The following CLASS statement could be used in place of SUBGROUP and LEVELS statements in the above example: *CLASS IRSEX;*  |

Exhibit A.2 Using SUDAAN DESCRIPT Procedure to Produce Mean Estimate and Standard Error of Any Mental Illness (AMIYR\_U), by Age Group (CATAGMH), Using 2008-2016 Combined PUF Data

|  |
| --- |
| DATA DATANAME;SET DATANAME;YR=YEAR+0; */\*YEAR is a character variable\*/*IF YR>=2008; */\*get 2008-2016 combined data\*/*RUN;PROC SORT DATA=DATANAME; */\*SAS code to sort output dataset by Nesting Variables\*/*BY VESTR VEREP;RUN;PROC DESCRIPT DATA=DATANAME DDF=110 DESIGN=WR FILETYPE=SAS DEFT4;*/\*The DOF here is based on 2008-2016 combined data. It may change depending on what years the combined data contains and whether or not the combined years cross survey designs. The specific number of degrees of freedom can be computed by counting the unique values of VESTR \*/*NEST VESTR VEREP;WEIGHT ANALWC9; */\*Use analwc9 since we are using 9 years of NSDUH data.\*/*VAR AMIYR\_U; */\*Any mental illness variable\*/*SUBGROUP CATAGEMH; */\*Adult age group variable that’s recoded from AGE2, where 18-25=1, 26-49=2, 50+=3, and 12-17=4. Youth 12-17 are not asked this question so level 4 is missing, we are only interested in levels 1, 2 and 3\*/*LEVELS 3; SUBPOPN CATAGMH <4;TABLES CATAGEMH; */\*by age group\*/*PRINT WSUM NSUM MEAN SEMEAN TOTAL SETOTAL / REPLACE STYLE=NCHS;OUTPUT WSUM MEAN SEMEAN TOTAL SETOTAL NSUM DEFFMEAN /REPLACE NSUMFMT=F8.0 WSUMFMT=F12.0 MEANFMT=F15.10 SEMEANFMT=F15.10 DEFFMEANFMT=F15.10 TOTALFMT=F12.0 SETOTALFMT=F12.0 FILENAME="OUT.SUDFILE";TITLE " ESTIMATES OF ANY MENTAL ILLNESS IN THE PAST YEAR BY AGE GROUP";RUN; Note: The following CLASS statement could be used in place of SUBGROUP and LEVELS statements in the above example: *CLASS CATAGEMH;*  |

Exhibit A.3 Using SUDAAN DESCRIPT Procedure to Produce Mean Estimate and Standard Error of Breast Cancer (CABREAST) among Women, by Race (NEWRACE2), Using 2015-2016 Combined PUF Data

|  |
| --- |
| DATA DATANAME;SET DATANAME;YR=YEAR+0; */\*YEAR is a character variable\*/*IF YR>=2015; */\*get 2015-2016 combined data\*/*RUN;PROC SORT DATA=DATANAME; */\*SAS code to sort output dataset by Nesting Variables\*/*BY VESTR VEREP;RUN;PROC DESCRIPT DATA=DATANAME DDF=50 DESIGN=WR FILETYPE=SAS DEFT4;*/\*The DOF here is based on 2015-2016 combined data. It may change depending on what years the combined data contains and whether or not the combined years cross survey designs. The specific number of degrees of freedom can be computed by counting the unique values of VESTR \*/*NEST VESTR VEREP;WEIGHT ANALWC2; */\*Use analwc2 since we are using 2 years of NSDUH data.\*/*VAR CABREAST\_r; */\*Breast Cancer: recode variable CABREAST to combine the yes and logically assigned yes as YES, and all other levels as NO\*/*SUBGROUP NEWRACE2; */\*Race categories\*/*LEVELS 7; SUBPOPN IRSEX=2;TABLES NEWRACE2; */\*by race category\*/*PRINT WSUM NSUM MEAN SEMEAN TOTAL SETOTAL / REPLACE STYLE=NCHS;OUTPUT WSUM MEAN SEMEAN TOTAL SETOTAL NSUM DEFFMEAN /REPLACE NSUMFMT=F8.0 WSUMFMT=F12.0 MEANFMT=F15.10 SEMEANFMT=F15.10 DEFFMEANFMT=F15.10 TOTALFMT=F12.0 SETOTALFMT=F12.0 FILENAME="OUT.SUDFILE";TITLE " ESTIMATES OF BREAST CANCER AMONG WOMEN BY RACE";RUN; Note: The following CLASS statement could be used in place of SUBGROUP and LEVELS statements in the above example: *CLASS NEWRACE2;*  |

Exhibit A.4 Using Stata Commands svy: mean and svy: total to Produce Mean Estimate and Standard Error of Past Month Alcohol Use (ALCMON), by Gender (IRSEX), Using 2002-2016 Combined PUF Data

|  |
| --- |
| use using ".\\dataname.dta", clear*/\*Ensure all variables are lower case\*/*rename \*, lower*/\* ID Nesting variables (VESTR and VEREP) and weight variable (ANALWC15 – person analysis weight for 15 year combined NSDUH data). The DOF here is based on 2002-2016 combined data. It may change depending on what years the combined data contains and whether or not the combined years cross survey designs. The specific number of degrees of freedom can be computed by counting the unique values of VESTR\*/*svyset verep [pw=analwc15], strata(vestr) dof(170)gen total\_out=.gen setotal=.gen mean\_out=.gen semean=.gen nsum=.gen wsum=.gen deffmean=.*/\*Estimated means of past month alcohol use by gender\*/* */\*Gender variable, where male=1 & female=2\*/*svy: mean alcmon, over(irsex)matrix M=e(b) */\*Store mean estimates in matrix M\*/*matrix S=e(V) */\*Store variances in matrix S\*/*matrix N=e(\_N) */\*Store sample size in matrix N\*/*matrix W=e(\_N\_subp) */\*Store weighted sample size in matrix W\*/*estat effects, deff srssubpop*/\*Obtain design effect\*/*matrix D=e(deff) */\*Store design effect in matrix D\*/**/\*Extract values stored in the M, S, N, W, and D matrices defined above to the mean\_out, semean, nsum, wsum, and deffmean variables. The loop ensures that the appropriate values are extracted for each value of gender.\*/* forvalues j=1/2 { */\* number of gender categories\*/* replace mean\_out=(M[1,`j’]) if irsex==`j' replace semean=(sqrt(S[`j’,`j’])) if irsex==`j’  replace nsum=(N[1,`j’]) if irsex==`j’  replace wsum=(W[1,`j’]) if irsex==`j’  replace deffmean=(D[1,`j’]) if irsex==`j’ } |

 (continued)

Exhibit A.4 Using Stata Commands svy: mean and svy: total to Produce Mean Estimate and Standard Error of Past Month Alcohol Use (ALCMON), by Gender (IRSEX), Using 2002-2016 Combined PUF Data (continued)

|  |
| --- |
| */\*Estimated Totals\*/* svy: total alcmon, over(irsex)  matrix M=e(b) */\*Store total estimates in matrix M\*/* matrix S=e(V) */\*Store variances in matrix S\*/**/\*Extract values stored in the M and S matrices defined above to the total\_out and setotal variables. The loop ensures that the appropriate values are extracted for value of gender.\*/* forvalues j=1/2 { */\* number of gender categories\*/* replace total\_out=(M[1,`j’]) if irsex==`j’ replace setotal=(sqrt(S[`j’,`j’])) if irsex==`j’ }keep wsum mean\_out semean total\_out setotal nsum deffmean irsexduplicates drop irsex, force */\*keep one record per subpopulation*  *of interest\*/**/\*Format wsum, mean\_out, semean, total\_out, setotal, nsum, and deffmean variables to control appearance in output.\*/*format wsum %-12.0fcformat mean\_out %-15.10fformat semean %-15.10fformat total\_out %-12.0fcformat setotal %-12.0fcformat nsum %-8.0fcformat deffmean %-15.10f*/\*Estimates of past month alcohol by year and gender\*/*list irsex wsum nsum mean\_out semean total\_out setotal |

Exhibit A.5 SAS SURVEYMEANS Procedure to Produce Mean Estimate and Standard Error of Past Month Alcohol Use (ALCMON), by Gender (IRSEX), Using 2002-2016 Combined PUF Data

|  |
| --- |
| PROC SURVEYMEANS DATA=DATANAME SUMWGT NOBS MEAN SUM;STRATA VESTR; */\*Nesting variable - strata\*/*CLUSTER VEREP; */\*Nesting variable - PSU\*/*WEIGHT ANALWC15; */\*Use analwc15 since we are using 15 years of NSDUH data.\*/*VAR ALCMON; */\*Past month alcohol analysis variable\*/*DOMAIN IRSEX; */\*Gender variable, where male=1 & female=2\*/*ODS OUTPUT DOMAIN=OUT.SASFILE;RUN; |

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Table A.5 Tobacco Product Use in the Lifetime, Past Year, and Past Month among Individuals Aged 12 or Older, by Demographic Characteristics: Percentages and Standard Errors, 2002-2016 NSDUH Combined Public Use File Estimates

| Demographic Characteristic | LIFETIME | PAST YEAR | PAST MONTH |
| --- | --- | --- | --- |
| Estimate | SE | Estimate | SE | Estimate | SE |
| **TOTAL** | 68.6 | 0.09 | 32.8 | 0.09 | 27.5 | 0.09 |
| **GENDER** |  |  |  |  |  |  |
| Male | 76.1 | 0.12 | 40.3 | 0.14 | 33.7 | 0.14 |
| Female | 61.5 | 0.13 | 25.8 | 0.12 | 21.6 | 0.12 |
| **HISPANIC ORIGIN AND RACE** |  |  |  |  |  |  |
| Not Hispanic or Latino | 71.0 | 0.10 | 33.8 | 0.11 | 28.5 | 0.11 |
| White | 75.4 | 0.10 | 35.2 | 0.13 | 29.6 | 0.12 |
| Black or African American | 58.3 | 0.28 | 31.4 | 0.23 | 27.3 | 0.22 |
| American Indian or Alaska Native | 76.2 | 0.89 | 47.5 | 1.05 | 41.1 | 0.98 |
| Native Hawaiian or Other Pacific Islander | 61.1 | 1.55 | 33.0 | 1.66 | 27.5 | 1.51 |
| Asian  | 39.3 | 0.55 | 16.5 | 0.34 | 12.6 | 0.30 |
| Two or More Races | 71.4 | 0.60 | 40.6 | 0.68 | 34.6 | 0.62 |
| Hispanic or Latino | 54.5 | 0.26 | 27.1 | 0.25 | 21.1 | 0.23 |

PUF = public use file; SE = standard error that is associated with the PUF estimate.

NOTE: The combined NSDUH PUFs are available for download at <https://datafiles.samhsa.gov/>.

NOTE: The combined PUF weight variable ANALWT15 is used to produce these estimates based on combined 2002 to 2016 (15 years) data.

NOTE: Tobacco products include cigarettes, smokeless tobacco (i.e., snuff, dip, chewing tobacco, or "snus"), cigars, or pipe tobacco. Tobacco Product use in the past year excludes past year pipe tobacco use but includes past month pipe tobacco use.

NOTE: No precision-based suppression rules have been applied to this table; users are encouraged to apply appropriate suppression rules as needed.

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

180430

Table A.6 Any Mental Illness in the Past Year among Adults Aged 18 or Older, by Age Group and Demographic Characteristics: Percentages and Standard Errors, 2008-2016 NSDUH Combined Public Use File Estimates

| Demographic Characteristic | TOTAL | AGED 18-25 | AGED 26-49 | AGED 50+ |
| --- | --- | --- | --- | --- |
| Estimate | SE | Estimate | SE | Estimate | SE | Estimate | SE |
| **TOTAL** | 18.3 | 0.12 | 19.7 | 0.15 | 21.2 | 0.14 | 15.0 | 0.20 |
| **GENDER** |  |  |  |  |  |  |  |  |
| Male | 14.5 | 0.16 | 15.4 | 0.21 | 16.9 | 0.20 | 11.8 | 0.28 |
| Female | 21.8 | 0.16 | 24.1 | 0.20 | 25.3 | 0.19 | 17.8 | 0.28 |
| **HISPANIC ORIGIN AND RACE** |  |  |  |  |  |  |  |  |
| Not Hispanic or Latino | 18.8 | 0.13 | 20.3 | 0.16 | 22.5 | 0.16 | 15.0 | 0.21 |
| White | 19.4 | 0.15 | 21.5 | 0.19 | 24.1 | 0.18 | 15.2 | 0.23 |
| Black or African American | 16.4 | 0.28 | 15.1 | 0.30 | 18.5 | 0.41 | 14.4 | 0.54 |
| American Indian or Alaska Native | 22.8 | 1.09 | 21.2 | 1.38 | 26.2 | 1.70 | 19.7 | 2.21 |
| Native Hawaiian or Other Pacific Islander | 21.2 | 2.53 | 17.8 | 1.72 | 22.0 | 2.65 | 22.0 | 5.46 |
| Asian | 13.1 | 0.43 | 19.0 | 0.66 | 13.5 | 0.55 | 9.6 | 0.93 |
| Two or More Races | 26.4 | 0.84 | 26.5 | 0.88 | 29.7 | 1.04 | 23.2 | 1.67 |
| Hispanic or Latino | 15.5 | 0.25 | 17.5 | 0.33 | 15.2 | 0.34 | 14.7 | 0.58 |
| **HEALTH INSURANCE1** |  |  |  |  |  |  |  |  |
| Private | 15.8 | 0.13 | 19.5 | 0.19 | 18.3 | 0.15 | 12.5 | 0.23 |
| Medicaid/CHIP2 | 29.0 | 0.39 | 21.0 | 0.32 | 32.6 | 0.44 | 29.8 | 0.86 |
| Other3 | 17.4 | 0.24 | 21.4 | 0.45 | 32.0 | 0.58 | 15.1 | 0.27 |
| No Coverage | 21.1     | 0.31     | 19.3     | 0.30     | 22.6     | 0.39     | 19.2     | 0.87     |

PUF = public use file; SE = standard error that is associated with the PUF estimate.

NOTE: The combined NSDUH PUFs are available for download at <https://datafiles.samhsa.gov/>.

NOTE: The combined PUF weight variable ANALWT9 is used to produce these estimates based on combined 2008 to 2016 (9 years) data.

NOTE: Any mental illness (AMI) is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). These mental illness estimates are based on a predictive model and are not direct measures of diagnostic status. For details on the methodology, see Section D of the *2016 National Survey on Drug Use and Health: Methodological Summary and Definitions* at <https://www.samhsa.gov/data/>.

NOTE: No precision-based suppression rules have been applied to this table; users are encouraged to apply appropriate suppression rules as needed.

1 Respondents could indicate multiple types of health insurance; thus, these response categories are not mutually exclusive.

2 CHIP is the Children's Health Insurance Program. Individuals aged 19 or younger are eligible for this plan.

3 Other Health Insurance is defined as having Medicare, CHAMPUS, TRICARE, CHAMPVA, the VA, military health care, or any other type of health insurance.

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

150105

Table A.7 Any Use of Prescription Psychotherapeutics in the Past Year among Individuals Aged 12 or Older, by Age Group and Demographic Characteristics: Percentages and Standard Errors, 2015-2016 NSDUH Combined Public Use File Estimates

| Demographic Characteristic | AGED 12-17 | AGED 18-25 | AGED 26+ |
| --- | --- | --- | --- |
| Estimate | SE | Estimate | SE | Estimate | SE |
| **TOTAL** | 26.6 | 0.33 | 42.4 | 0.40 | 46.1 | 0.25 |
| **GENDER** |  |  |  |  |  |  |
| Male | 26.4 | 0.45 | 38.9 | 0.52 | 42.3 | 0.40 |
| Female | 26.9 | 0.47 | 46.1 | 0.48 | 49.6 | 0.33 |
| **HISPANIC ORIGIN AND RACE** |  |  |  |  |  |  |
| Not Hispanic or Latino | 27.4 | 0.39 | 43.9 | 0.44 | 47.7 | 0.27 |
| White | 28.4 | 0.49 | 47.7 | 0.50 | 49.9 | 0.32 |
| Black or African American | 26.1 | 1.02 | 36.8 | 0.80 | 44.1 | 0.85 |
| American Indian or Alaska Native | 19.5 | 2.66 | 43.4 | 4.07 | 48.9 | 3.18 |
| Native Hawaiian or Other Pacific Islander | 25.7 | 5.48 | 42.0 | 5.07 | 45.5 | 3.95 |
| Asian | 20.3 | 1.41 | 24.3 | 1.49 | 26.4 | 1.23 |
| Two or More Races | 29.3 | 1.53 | 48.9 | 2.03 | 55.3 | 1.90 |
| Hispanic or Latino | 24.2 | 0.84 | 37.0 | 0.78 | 36.7 | 0.50 |
| **EDUCATION** |  |  |  |  |  |  |
| < High School | da | da | 39.3 | 0.98 | 41.3 | 0.69 |
| High School Graduate | da | da | 40.4 | 0.70 | 46.3 | 0.64 |
| Some College/Associate's Degree | da | da | 45.6 | 0.64 | 51.6 | 0.45 |
| College Graduate | da | da | 40.7 | 0.93 | 43.1 | 0.46 |
| **CURRENT EMPLOYMENT** |  |  |  |  |  |  |
| Full-Time | da | da | 43.2 | 0.55 | 42.8 | 0.38 |
| Part-Time | da | da | 42.9 | 0.96 | 46.2 | 0.74 |
| Unemployed | da | da | 44.1 | 1.17 | 45.8 | 1.36 |
| Other1 | da | da | 39.9 | 0.72 | 50.9 | 0.51 |

da = does not apply; PUF = public use file; SE = standard error that is associated with the PUF estimate.

NOTE: The combined NSDUH PUFs are available for download at <https://datafiles.samhsa.gov/>.

NOTE: The combined PUF weight variable ANALWT2 is used to produce these estimates based on combined 2015 and 2016 (2 years) data.

NOTE: Prescription psychotherapeutics include pain relievers, tranquilizers, stimulants, or sedatives and do not include over-the-counter drugs.

NOTE: Any use of prescription psychotherapeutics is defined as (a) the use of one's own prescription medication as directed by a doctor or (b) misuse of prescription psychotherapeutics. Misuse of prescription psychotherapeutics is defined as use in any way not directed by a doctor, including use without a prescription of one's own; use in greater amounts, more often, or longer than told; or use in any other way not directed by a doctor. Prescription psychotherapeutics do not include over-the-counter drugs.

NOTE: Prescription psychotherapeutic subtypes were revised in 2016; one effect was the comparability of codeine products between 2015 and 2016.

NOTE: No precision-based suppression rules have been applied to this table, users are encouraged to apply appropriate suppression rules as needed.

1 The Other Employment category includes students, persons keeping house or caring for children full time, retired or disabled persons, or other persons not in the labor force.

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

1. Center for Behavioral Health Statistics and Quality. (2017). *National Survey on Drug Use and Health: 2016 public use file and codebook*. Retrieved from <https://datafiles.samhsa.gov/> [↑](#footnote-ref-1)
2. Center for Behavioral Health Statistics and Quality. (2016). *National Survey on Drug Use and Health: 2015 public use file and codebook*. Retrieved from <https://datafiles.samhsa.gov/> [↑](#footnote-ref-2)
3. For details, see the following reference: Center for Behavioral Health Statistics and Quality. (2015). *2014 National Survey on Drug Use and Health: Methodological resource book (Section 2, sample design report)*. Retrieved from <https://www.samhsa.gov/data/> [↑](#footnote-ref-3)
4. Center for Behavioral Health Statistics and Quality. (2018). *2016 National Survey on Drug Use and Health: Methodological resource book (Section 13, Statistical inference report).* Retrieved from <https://www.samhsa.gov/data/> [↑](#footnote-ref-4)
5. RTI International. (2012). *SUDAAN®, Release 11.0* [computer software]. Research Triangle Park, NC: Author. [↑](#footnote-ref-5)