

# **WesDaX® Quick Start Guide**

**Version 1.0**



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# WesDaX® Quick Start Guide

WesDaX enables clients, collaborators, and Westat staff to run online analyses and display various types of reports quickly without programming and without directly exposing individual records. The WesDaX demonstration site (<https://www.wesdax.com>) provides a means of familiarizing yourself with WesDaX using real data. With WesDaX, you can create a simple summary table from a complex survey sample in less than 20 seconds with only four clicks. This guide will show you how to get off to a quick start exploring the data.

There are five required steps to get a result:

- Step 1: Log in
- Step 2: Click on “Create a Query”
- Step 3: Select a year
- Step 4: Select a topic
- Step 5: Get results

A number of optional steps provide additional ways to examine the data:

- Step 6: Cross-tabulations
- Step 7: Statistical options and population limits

Each of these steps is described in a separate section below.

## Step 1: Log in with the User Name (Email) “demouser” and the Password “Westat!1”

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The site has been set up with multiple public use datasets. For this guide, we use 2013 and 2014 data from the Behavioral Risk Factor Surveillance System (BRFSS). You can get more information about the BRFSS data from the “About the Data” link on the WesDaX home screen (see Figure 1).

The “Documents” link on the left-hand side of the screen contains a number of documents created outside of WesDaX that demonstrate the ability for a project to disseminate information that may be of interest to users.

The “Customized Reports” links show some of the power of WesDaX in action. For the purposes of this guide, we will use the “Create a Query” link ① (see Figure 1).

Figure 1. Home screen

**WesDaX®** • Westat's Data Xplorer

Home Contact Us Sign Out

Demo » Home

## Home

Welcome to the WesDaX® demo site. Within the WesDaX demo site, users can generate estimates in real-time from the 2013 and 2014 Behavioral Risk Factor Surveillance System (BRFSS) data that were extracted from public use files (PUFs). Anyone can conduct interactive, live analyses with the weighted BRFSS data to produce results.

Select what you would like to do:

- **Documentation:** Provide project reports, and other useful guidance, such as a tutorial to guide users on how to specify queries, using a few examples. A glossary of terms and FAQs are also helpful products.
- **About the data:** Review BRFSS WesDaX site file contents and the BRFSS codebook. A subset of variables was selected from the PUFs for this demo site.
- **Create a query:** To get started, the user simply selects the year, the topic, and then click on the "Get Results" button. Topics are categorical variables that form the table shell for the tabular results. Queries can be expanded upon by selecting a subgroup through the "Population Limits" panel. Analytical options are available under the "Statistical Options" panel. In that panel, other continuous variables are available for computing means or percentiles under the "Statistics of another Variable" option.
- **Produce a customized report**
  - **Run distributions & summary statistics:** Examples are provided to illustrate customizable sets of frequencies and summary statistics that can be produced.
  - **Run a regression model:** Examples are provided for processing regression analyses. Projects can set up SAS macros to process queries through the WesDaX data tool.
- **WesDaX system:** Learn about the special capabilities and benefits of the WesDaX system.

WesDaX enables clients, collaborators, and Westat staff to run online analyses and display various types of reports in real time using weighted (from complex samples) or unweighted data files. WesDaX is run from any standard web browser and is designed to allow users without high levels of technical and statistical expertise to have easy access to data. For more information, contact the [WesDaX team](#).

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You'll need Adobe Reader to read PDF files on this site.

You can use WesDaX to summarize datasets in many ways including simple frequency counts and crosstabs. You can then display the summary information in a variety of tables, charts, and graphs. Steps 2 through 7 show you how WesDaX works.

**Step 2: Click on the “Create a Query” link ① in the left panel of the Home screen to see the START NEW QUERY screen (see Figure 2).**

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**Figure 2.     START NEW QUERY screen**

The screenshot displays the 'START NEW QUERY' interface of WesDaX. On the left, a sidebar contains a 'START NEW QUERY' button and a 'Query Summary' section with links for 'Selection', 'Year', 'Topic(s)', 'Population Limits', and 'Statistical Options'. The main content area features a breadcrumb 'Demo » Create a query' and a row of tabs: 'YEAR', 'TOPIC(S)', 'GET RESULTS', 'OPTIONAL FILTERS', and 'SAVED QUERIES'. The 'YEAR' tab is selected, revealing a 'Year of Annual Data' section with checkboxes for '2013' and '2014', and an 'Include All' checkbox that is checked.

The three tabs you need initially to run analyses are YEAR, TOPIC(S), and GET RESULTS. Tabs OPTIONAL FILTERS and SAVED QUERIES let you produce more elaborate analyses and re-use previously used queries.

1. **YEAR:** Select 2013, 2014, or both (option “Include All”).
2. **TOPICS:** Choose the variable(s) to analyze.
3. **GET RESULTS:** View the results.
4. **OPTIONAL FILTERS:** Refine your query after you have seen initial results.
  - A. The POPULATION LIMITS panel lets you subset data to your population of interest.
  - B. The STATISTICAL OPTIONS panel lets you add another variable to compute means, percentiles, or ratios.
5. **SAVED QUERIES:** Re-use a query you have already developed if you saved it.

### Step 3: Select a Year

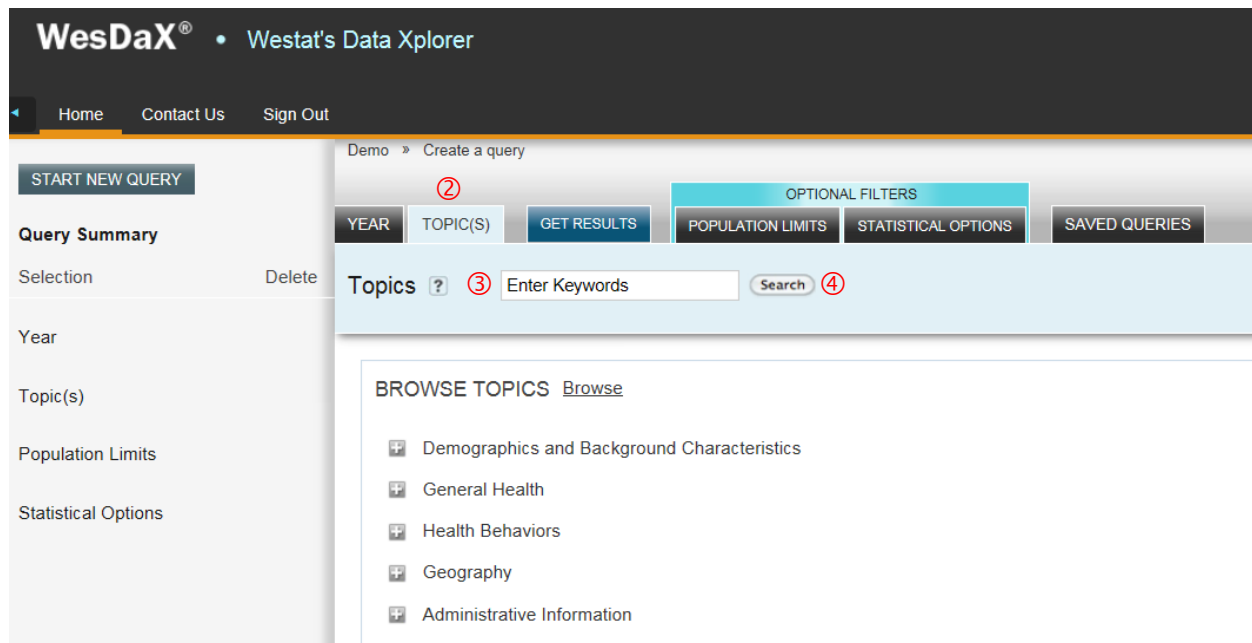
Click on the YEAR tab. Depending on the goals of your analysis, you might want to subset the data to a single year or all the years (option “Include All”) for which data are available.<sup>1</sup> If you select all years, the data are aggregated. If you want to analyze only a single year, select that year.

For purposes of this demonstration so you can produce the same results as in this tutorial, leave the default year selections (i.e., 2013, 2014 selected) in place.

### Step 4: Topics

**Step 4.1:** Click on the “TOPIC(S)” tab<sup>②</sup>. Your screen will now display the TOPIC(S) window. Here, you can review variables available in the dataset and select the ones you want to analyze (see Figure 3).

**Figure 3. BROWSE TOPICS screen**







There are two ways to find and select the variables to use for analysis. If you know the variable name or a word in the questionnaire item, you can enter it in the “Enter Keywords” <sup>③</sup> window and click “Search” <sup>④</sup>.

<sup>1</sup> Year is an optional filter, configured for the specific demonstration dataset. Some projects choose not to include a year filter.

**Step 4.2:** To try finding a variable, enter “smo” in the search window. The search will display two possible survey items, as shown in Figure 4.


**Figure 4.** Possible topics with "smo"

The screenshot shows a search results window with a header bar. On the left, it says "Select Topic". On the right, there is a link "Show More Information". Below the header, there are two search results. Each result has a green "Add" button on the left, followed by the question text, and a "+" icon on the right. Below each question, it says "listed under" followed by a link to "Health Behaviors".

Select Topic		Show More Information
	<b>How long has it been since you smoked?</b> listed under <a href="#">Health Behaviors</a>	
	<b>Do you smoke every day, some days, or not at all</b> listed under <a href="#">Health Behaviors</a>	

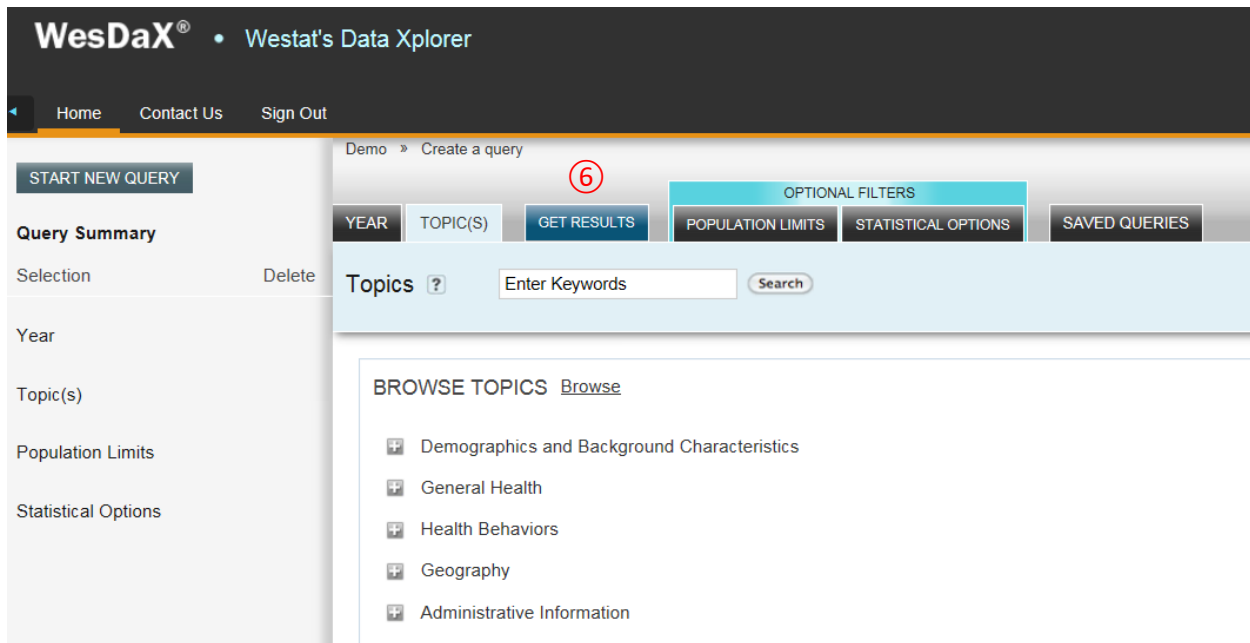
You can get detailed information about any of the variables in a list by clicking on the “+” sign to the right of the variable.

**Step 4.3:** Click on the “+” sign next to “Do you smoke every day, some days, or not at all.” You will learn that the variable name in the dataset is “SMOKDAY2,” and that there are five possible response options, including “Refused” and “Don’t know/Not sure.”

**Step 4.4:** To select the variable “Do you smoke every day, some days, or not at all,” click the green “Add” button  (see Figure 4) to the left of the variable. The Topic(s) item in the left hand panel will expand to show the selected question. A red “X” to the right of the question will let you remove the item if you no longer need it.

## Step 5: Get Results

Figure 5. BROWSE TOPICS screen

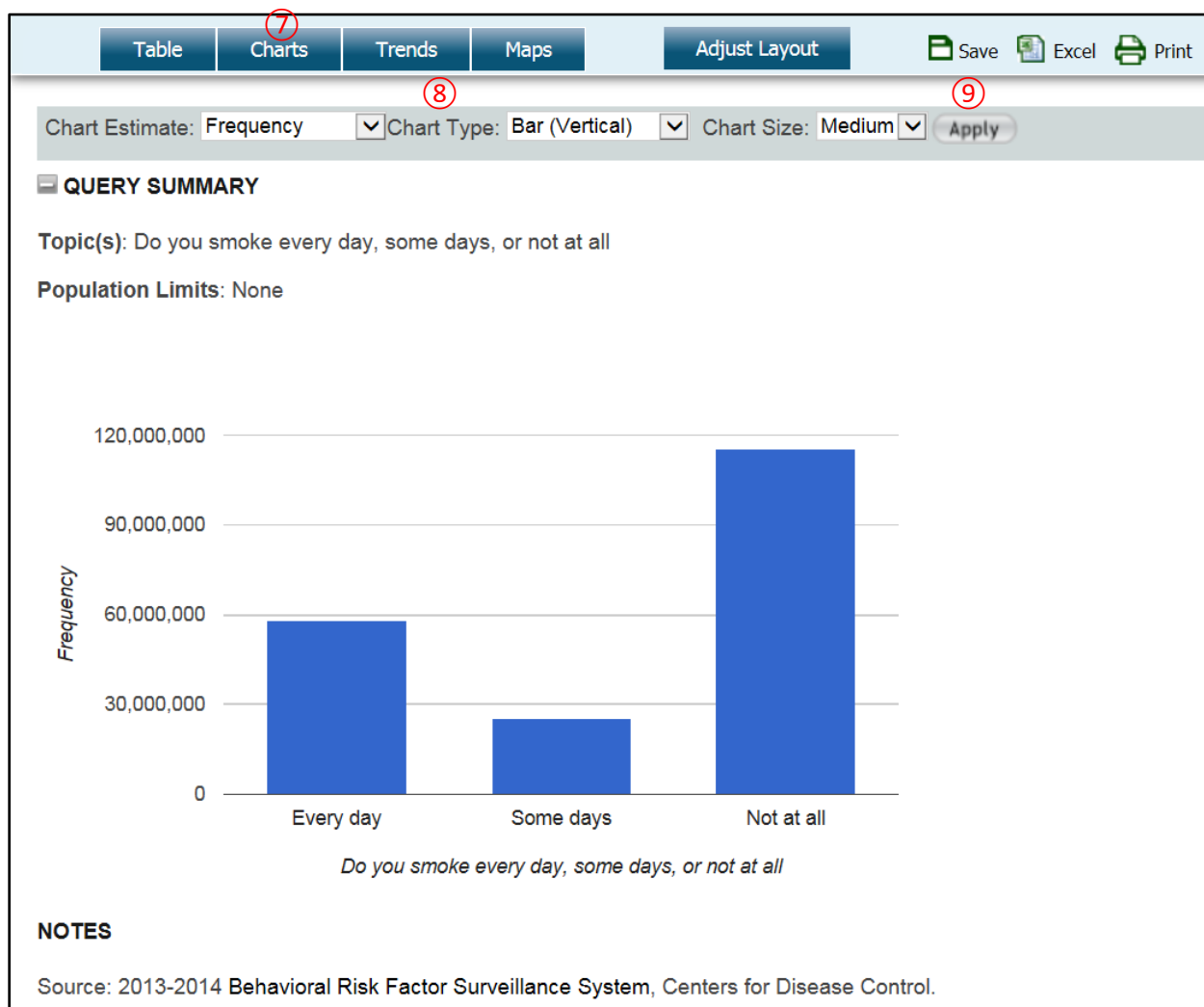


**Step 5.1:** Click the GET RESULTS tab ⑥ (see Figure 5). You will get the frequency distribution of the variable (see Figure 6). The table includes both frequency counts and the percentages of observations in each row. Note that the QUERY SUMMARY, above the table, tells you the Topic(s) included in the table and the Population Limits (in this example, “None”). Below the table, you will see LEGEND that shows what is displayed in the table and NOTES indicating the source of the data (see Figure 6).





**Figure 7. Bar chart showing smoking frequency responses**



If you would like to see the results displayed in another format, select the chart type you want from the “Chart Type” drop-down list (8) and click Apply (9).

**Step 5.3:** To view only the percentages without the frequency counts, go to the “Statistical Options” tab (10) (see Figure 8). In the left box, titled “Cell Estimates,” uncheck “Frequency.” (11) Click on the GET RESULTS tab (12), and WesDaX will generate a simplified table. (Similarly, to see only the frequencies, you can uncheck “Cell Percentage”.)

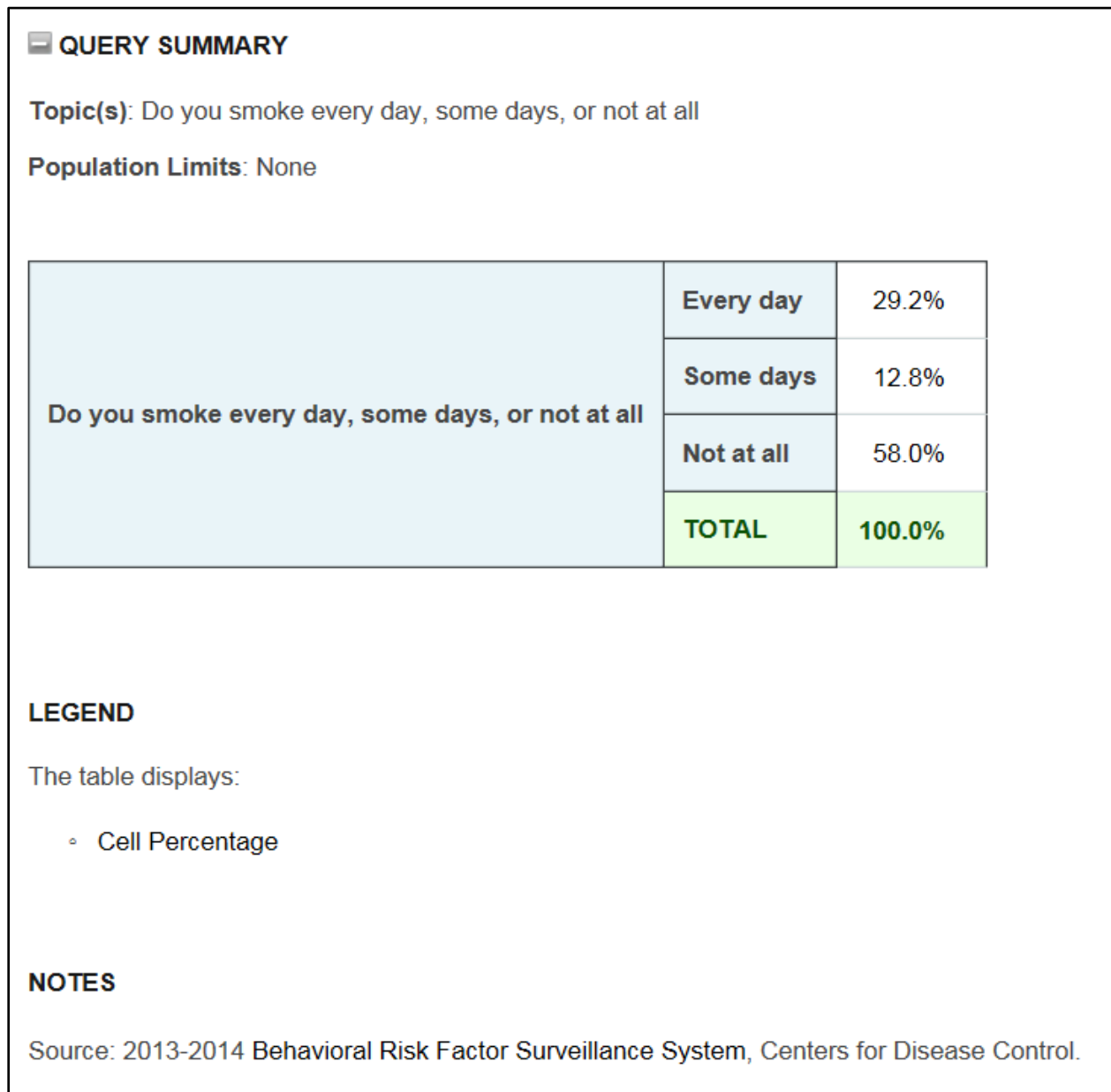
**Figure 8. Statistical options tab with Frequency unchecked**

The screenshot displays the 'Statistical Options' tab in the Westat software interface. The top navigation bar includes 'YEAR', 'TOPIC(S)', 'GET RESULTS' (highlighted with a red circle 12), 'OPTIONAL FILTERS', 'POPULATION LIMITS', 'STATISTICAL OPTIONS' (highlighted with a red circle 10), and 'SAVED QUERIES'. The 'Statistical Options' section is divided into three panels:

- Cell Estimates ?** (highlighted with a red circle 11):
  - ☒ Basic Estimates (check all that apply)
    - ☐ Frequency
    - ☒ Cell Percentage
    - ☐ Row Percentage
    - ☐ Column Percentage
  - ☐ Statistics of Another Variable(s)
    - ☐ Mean
    - ☐ Total
    - ☐ Median
    - ☐ Percentile  1-99
    - ☐ Ratio
- Missing Values ?**
  - ☐ Yes
  - ☒ No
- Precision Measures ?** (check all that apply)
  - ☐ Confidence Interval
    - Approach: ☐ Standard ☐ Wilson
    - Confidence Level: ☐ 90% ☐ 95% ☐ 99%
  - ☐ Standard Error
  - ☐ Relative Standard Error (RSE)
- Statistical tests ?** (check all that apply)
  - ☐ Chi-Square
    - Approach: ☐ RS2 ☐ RS3
  - ☐ Two-sample t-test
    - [Select t-tests](#)

Selecting only “Cell Percentage” will produce the table in Figure 9.

**Figure 9. Table of mean values of responses to smoking question**





## Step 6: Crosstabulations (optional)

To see how the counts (or percentages) are distributed by gender, click on the TOPICS tab. If you haven't removed the question, you will see that "Do you smoke every day, some days, or not at all" is already selected as the Row Topic (Figure 10).

You can now select a column variable. Under BROWSE TOPICS, click the "+" sign ⑬ to the left of "Demographics and Background Characteristics." This will expand the available demographic variables.

Figure 10. TOPICS window after selecting the “Do you smoke” question

### SELECTED TOPICS

Row	Topic  	<u>Do you smoke every day, some days, or not at all</u>	<a href="#">Combine/Reorder Response Categories</a>
<hr/>			

### BROWSE TOPICS

[Browse](#)

13

+

Demographics and Background Characteristics

+

General Health

+

Health Behaviors

+

Geography

+

Administrative Information

Figure 11 shows a partial list of demographic variables.

Figure 11. Partial list of demographic variables

### BROWSE TOPICS

[Browse](#)

Select Topic

## Demographics and Background Characteristics

Show More Information

14

Add

Are you male or female

listed under [Demographics and Background Characteristics](#)

+

Add

Imputed Age collapsed over 80

listed under [Demographics and Background Characteristics](#)

+

Add

Education

listed under [Demographics and Background Characteristics](#)

+

**Step 6.1:** Add the variable “Are you male or female” by clicking the green Add button ⑭ (see Figure 11).

**Step 6.2:** Click on GET RESULTS to see the new table (Figure 12).

**Figure 12. Smoking responses by gender**

QUERY SUMMARY				
Topic(s): Do you smoke every day, some days, or not at all; Are you male or female				
Population Limits: None				
		Are you male or female		
		Male	Female	TOTAL
Do you smoke every day, some days, or not at all	Every day	31,521,879	26,631,707	58,153,586
	Some days	14,604,379	10,841,626	25,446,005
	Not at all	64,252,720	51,276,021	115,528,741
	TOTAL	110,378,979	88,749,354	199,128,333

## Step 7: OPTIONAL FILTERS: Statistical Options and Population Limits

WesDaX allows you to replace the counts in the table produced above with statistics calculated on a third variable.

### Step 7.1: Getting Means

To generate a table with the means of a third variable by row and by column variables, as shown in Figure 16, use the STATISTICAL OPTIONS tab:

- Select STATISTICAL OPTIONS ⑮ under OPTIONAL FILTERS (see Figure 813),
- Click on “Statistics of Another Variable(s),” ⑯ and
- Check the “Mean” ⑰ option.

The “Statistical Options” screen will now resemble Figure 13.

**Figure 13. STATISTICAL OPTIONS screen after checking “Statistics of Another Variable(s)”**

The screenshot shows the 'STATISTICAL OPTIONS' screen. At the top, there are tabs for 'YEAR', 'TOPIC(S)', 'GET RESULTS', 'POPULATION LIMITS', 'STATISTICAL OPTIONS' (highlighted), and 'SAVED QUERIES'. Below the tabs, the 'Statistical Options' section is active. It contains three main panels:

- Cell Estimates**: Includes options for 'Basic Estimates' (Frequency, Cell Percentage, Row Percentage, Column Percentage) and 'Statistics of Another Variable(s)' (Mean, Total, Median, Percentile, Ratio). The 'Mean' option is selected.
- Missing Values**: Includes options for 'Yes' or 'No' (No is selected), 'Precision Measures' (Confidence Interval, Approach, Confidence Level), and 'Standard Error' or 'Relative Standard Error (RSE)'.
- Statistical tests**: Includes options for 'Chi-Square' (Approach: RS2, RS3) and 'Two-sample t-test' (Select t-tests).

At the bottom, there is a section for 'BROWSE ANALYSIS VARIABLES' with a search bar and a list of categories: 'Demographics and Background Characteristics', 'General Health', and 'Health Behaviors'. The 'Demographics and Background Characteristics' category is expanded, showing a list of variables.

You now need to specify the analysis variable whose mean will be calculated. To do this, click on the “+” sign <sup>18</sup> next to “Demographics and Background Characteristics” at the bottom of the screen to see a list of numeric variables (only numeric variables can be used to produce means). Next, select the item “Imputed Age collapsed over 80” by clicking the green Add button <sup>19</sup> (see Figure 14).

Figure 14. STATISTICAL OPTIONS screen showing possible variables for mean

Statistical Options ?

**Cell Estimates ?**

☐ Basic Estimates  
(check all that apply)

☐ Frequency

☐ Cell Percentage

☐ Row Percentage

☐ Column Percentage

☒ Statistics of Another Variable(s)

☒ Mean

☐ Total

☐ Median

☐ Percentile  1-99

☐ Ratio

**ANALYSIS VARIABLES**

Enter Keywords

**Missing Values ?**

☐ Yes

☒ No

**Precision Measures ?**

(check all that apply)

☐ Confidence Interval

Approach

☐ Standard ☐ Wilson

Confidence Level

☐ 90% ☐ 95% ☐ 99%

☐ Standard Error

☐ Relative Standard Error (RSE)

**Statistical tests ?**

(check all that apply)

☐ Chi-Square

Approach

☐ RS2 ☐ RS3

☐ Two-sample t-test

[Select t-tests](#)

[Browse Analysis Variables](#)

Select Topic	Demographics and Background Characteristics	Show More Information
19 Add	Imputed Age collapsed over 80 listed under <a href="#">Demographics and Background Characteristics</a>	<input data-bbox="922 1035 946 1056" type="button" value="+"/>
Add	Number of Adults in House listed under <a href="#">Demographics and Background Characteristics</a>	<input data-bbox="922 1129 946 1150" type="button" value="+"/>

The WesDax window should now look like Figure 15. Note that the “Imputed Age collapsed over 80 (Mean)” 20 now appears in the left-hand column.

**Figure 15. STATISTICAL OPTIONS window after selecting an analysis variable**

**START NEW QUERY**

**Query Summary**

Selection Delete

Year

Topic(s)

Do you smoke every day, some days, or not at all ✖

Are you male or female ✖

Population Limits

Statistical Options

20 Imputed Age collapsed over 80 ✖  
(Mean)

Demo » Create a query

**OPTIONAL FILTERS**

**YEAR** **TOPIC(S)** **GET RESULTS** **POPULATION LIMITS** **STATISTICAL OPTIC**

**Statistical Options** ?

**Cell Estimates** ?

☐ Basic Estimates  
(check all that apply)

☐ Frequency

☐ Cell Percentage

☐ Row Percentage

☐ Column Percentage

☒ Statistics of Another Variable(s)

☒ Mean

☐ Total

☐ Median

☐ Percentile  1-99

☐ Ratio

**ANALYSIS VARIABLES**

Search

**SELECTED TOPICS**

**Analysis Variable** ✖ ? Imputed Age collapsed over 80

**BROWSE ANALYSIS VARIABLES**

+ Demographics and Background Characteristics

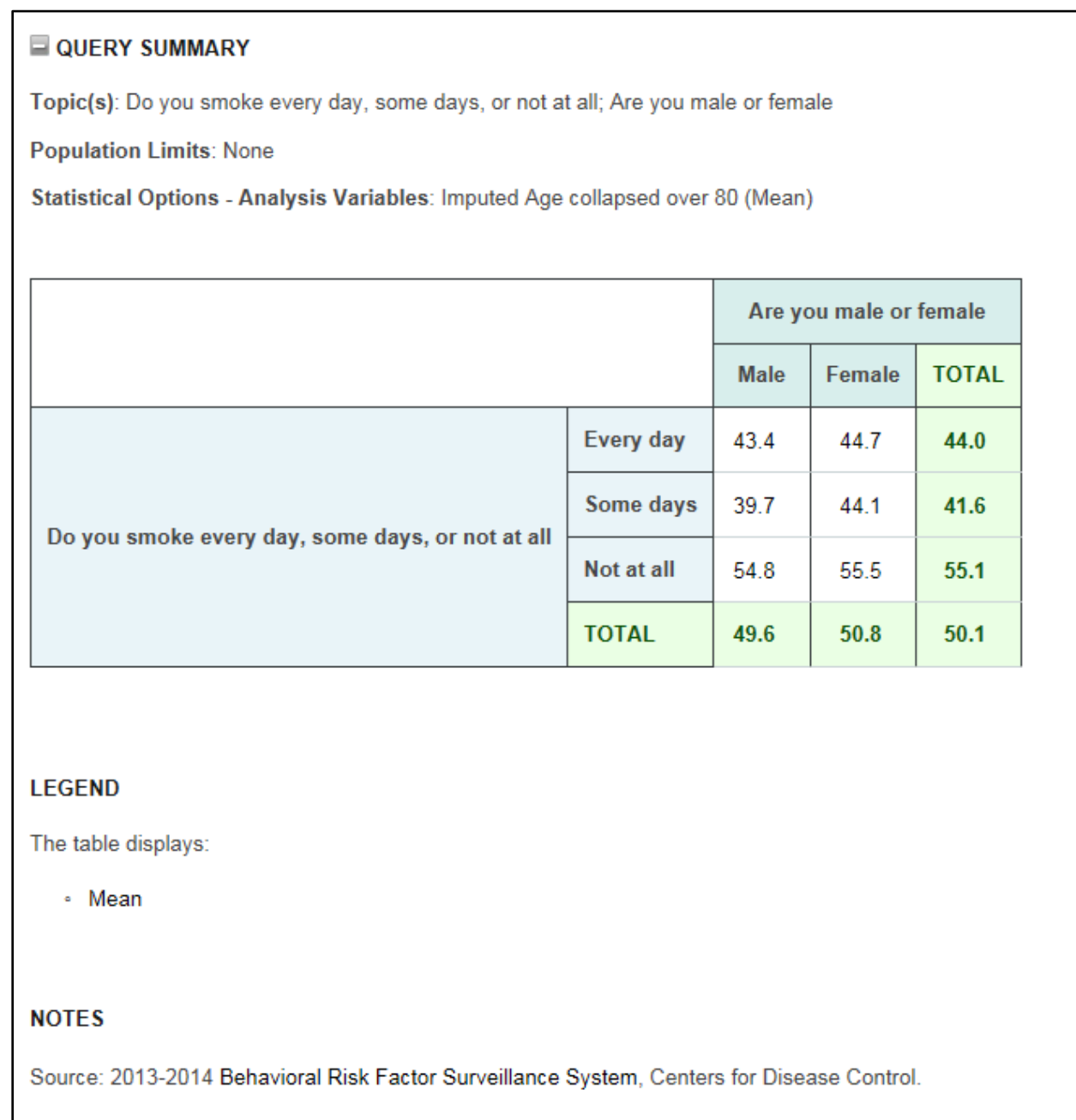
+ General Health

+ Health Behaviors

Click on GET RESULTS to see the table in Figure 16. This table is similar to Figure 12 but has the mean ages of the respondents in each cell instead of counts.



**Figure 16. Mean ages for smoking responses by gender**



## Step 7.2: Population Limits

The POPULATION LIMITS tab, [21](#) under OPTIONAL FILTERS, provides you with options to restrict the results to specific subpopulations (Figure 17). For instance, to produce the same table as that in Figure 16 while subsetting the data to non-Hispanic Whites, uncheck the “Include All” box [22](#) under “Imputed race” and check the “White, Non-Hispanic” option. When you click on “Get Results,” WesDax will generate Figure 17.

**Figure 17. Population Limits tab with White, Non-Hispanic race option selected**

OPTIONAL FILTERS

YEAR TOPIC(S) GET RESULTS POPULATION LIMITS STATISTICAL OPTIONS SAVED QUERIES

Population Limits ?

Are you male or female

☒ Include All

☒ Male

☒ Female

Imputed race

☐ Include All

☒ White, Non-Hispanic

☐ Black, Non-Hispanic

☐ Asian, Non-Hispanic

☐ American Indian/Alaskan Native, Non-Hispanic

☐ Hispanic

☐ Other race, Non-Hispanic

SEARCH FILTERS

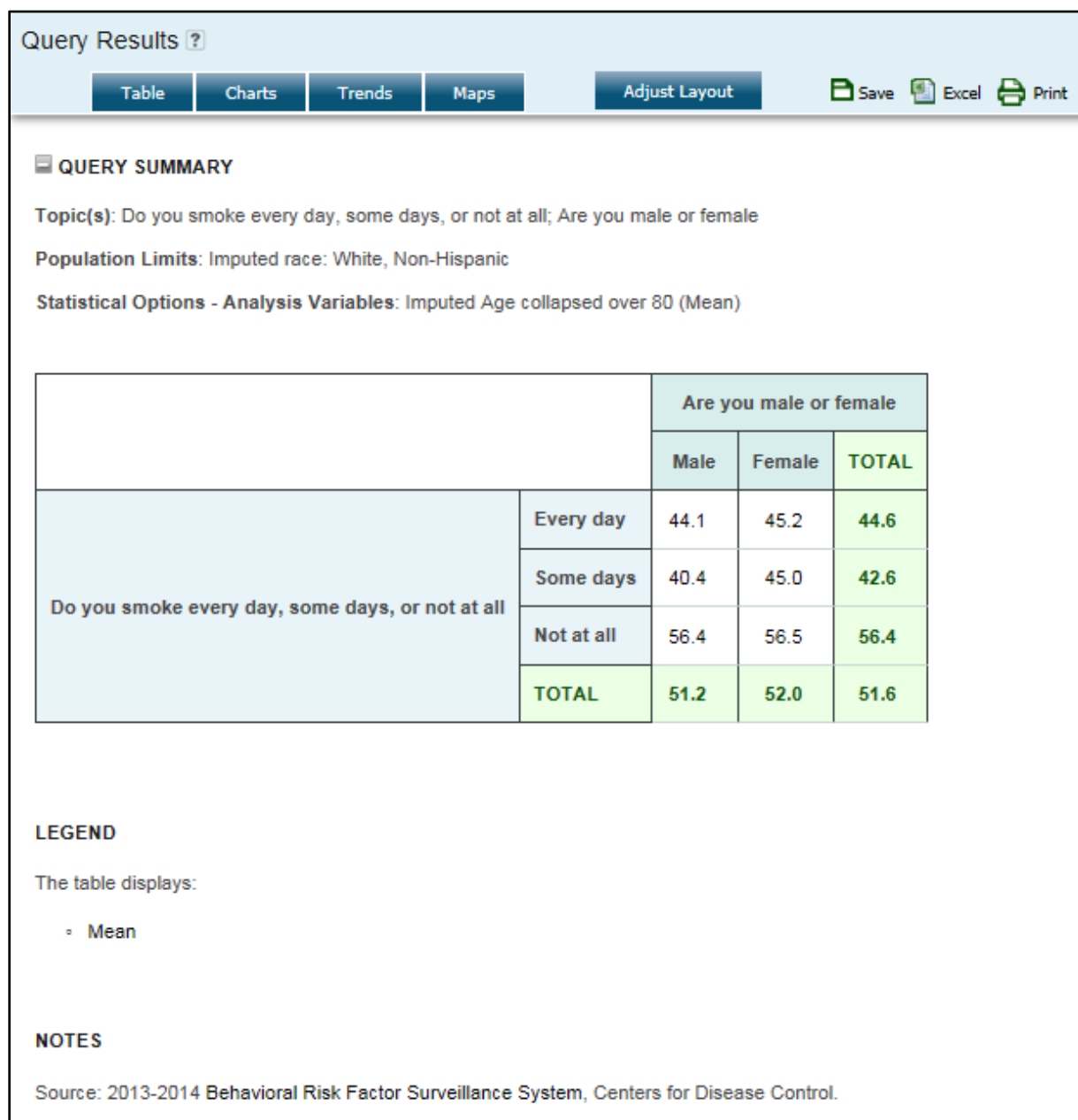
Enter Keywords Search

BROWSE FILTERS [Browse](#)

- + Query Topic(s)
- + Recently Used Filters
- + Demographics and Background Characteristics
- + General Health
- + Health Behaviors
- + Geography
- + Administrative Information

Click on GET RESULTS to generate the table shown in Figure 18.

**Figure 18. Mean ages for smoking responses by gender – White, Non-Hispanic**



This concludes the WesDaX Quick Start Guide. There are many other exciting features you can explore. Since WesDaX is a table and graph generating software that does not allow altering the underlying data, you can try different WesDaX options and features without worrying about damaging the data.

*Hint: Try clicking on the Adjust Layout and Charts tabs above a results table.*

*Hint: Click on START NEW QUERY to discard all your existing settings and start with a clean slate.*

*Hint: After generating a table, click on the “Excel” option to export the data to Excel.*

*Hint: After generating a table, click on the Charts tab to generate a bar chart with the same information as the table. Explore the effect of selecting different chart types.*

*Hint: After generating a table, click on “Save” to save a copy of your query for future use. You can see the list of saved queries by clicking on the SAVED QUERIES tab. After retrieving a saved query, you can modify it in the same way as when it was initially created. For instance, you can choose to add confidence intervals and standard errors to a table that did not have them in the saved query or to remove them if they were in the saved query. The modified query will not overwrite the original saved query.*