Medicaid Spending Exercise

Question 1

You have been asked by a patron for data on Medicaid spending (per capita) in Maryland and Pennsylvania.

Background Information

Medicaid

- Medicaid provides health coverage for some low-income people, families and children, pregnant women, the elderly, and people with disabilities. Medicaid programs must follow federal guidelines, but they vary somewhat from state to state.

- In the literature, you will often see Medicaid called a "federal-state" program. This is because the Medicaid program is jointly funded by the federal government and states. The federal government pays states for a specified percentage of program expenditures, called the Federal Medical Assistance Percentage (FMAP) (Centers for Medicare & Medicaid Services, 2013).

- FMAP varies by state based on criteria such as per capita income. The regular average state FMAP is 57%, but ranges from 50% in wealthier states up to 75% in states with lower per capita incomes (the maximum regular FMAP is 82 %) (Centers for Medicare & Medicaid Services, 2013).

State Health Facts
- State Health Facts is a project of the Henry J. Kaiser Family Foundation and provides free access to health data for all 50 states, and the District of Columbia (The Kaiser Family Foundation, 2013).
- State Health Facts is comprised of more than 800 health indicators and provides users with the ability to map, rank, trend, and download data. Data come from a variety of public and private sources, including Kaiser Family Foundation reports, public websites, government surveys and reports, and private organizations (The Kaiser Family Foundation, 2013).

What Data Do You Need?
1. Which of the website's databases could you use to find the following information? Statehealthfacts.org http://www.statehealthfacts.org/
2. How much was spent in Maryland compared to Pennsylvania?
3. What is the approximate per capita expenditure in Maryland compared to Pennsylvania?

Steps to Answering the Question

1. Go to the Statehealthfacts.org http://www.statehealthfacts.org/ website (Figure 01).

Figure 01: State Health Facts Website.

2. [Where do you think you would find information about Medicaid? If you answered "Medicaid & CHIP," then you are correct].

3. Choose **Medicaid & CHIP** from the **Category** list.

4. [Where do you think the state category level data we need is located?]: **Total Medicaid Spending.**

5. Under **Medicaid & CHIP Indicators**, choose the **Total Medicaid Spending** category (Figure 02).

Figure 02: Choose state-level Medicaid & CHIP data.

6. [Look at the Timeframe: (under the Summary Section)].
   a. What is the date range for the state-level data? FY 2011

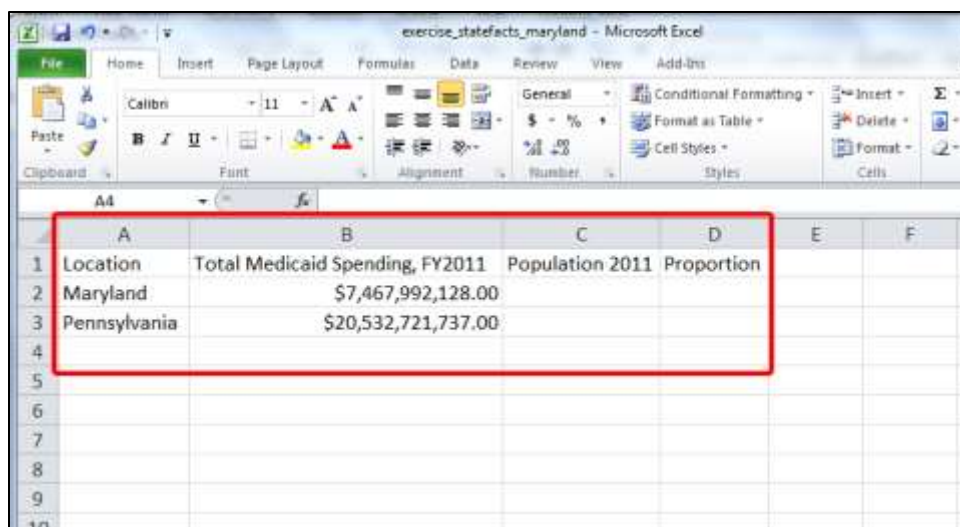7. Under the **Location>State**, select **Maryland** and **Pennsylvania** (Figure 03).

Figure 03: Selecting state-level variables.

8. What is the **Total Medicaid Spending, FY2011** for each state?
   a. Maryland: $7,467,992,128.00
   b. Pennsylvania: $20,532,721,737.00
9. We will need these two numbers to answer the rest of the patron's questions. Therefore, choose *Download Raw Data*, from the top of the data page.
   a. When prompted, choose *Open This File in Microsoft Excel* (Figure 04).

Figure 04: Downloading state-level variables.

   b. Open the data in Excel, and save the file on your desktop, in Microsoft Excel format.
   c. Create a **new column** in this spreadsheet for the demographic data. Call this column *Population 2011*.
   d. Create a **new column** in this spreadsheet for the comparison of **Per Capita Expenditure**. Call this column *Proportion* (Figure 05).

Figure 05: Creating custom column.

10. We will need stats census (demographic) data for the second part of the question.
11. Go back to the Statehealthfacts.org main page.
12. Choose the ***Demographics and the Economy Category*** (Figure 06).

Figure 06: Choosing Demographics and the Economy Category.

13. Under the **Population** section, choose ***Total Number of Residents***.
    a. [Look at the Timeframe: (under the **Summary Section**). Can we use this data?].
    b. Under the **Location>State**, select ***Maryland*** and ***Pennsylvania*** (Figure 07).
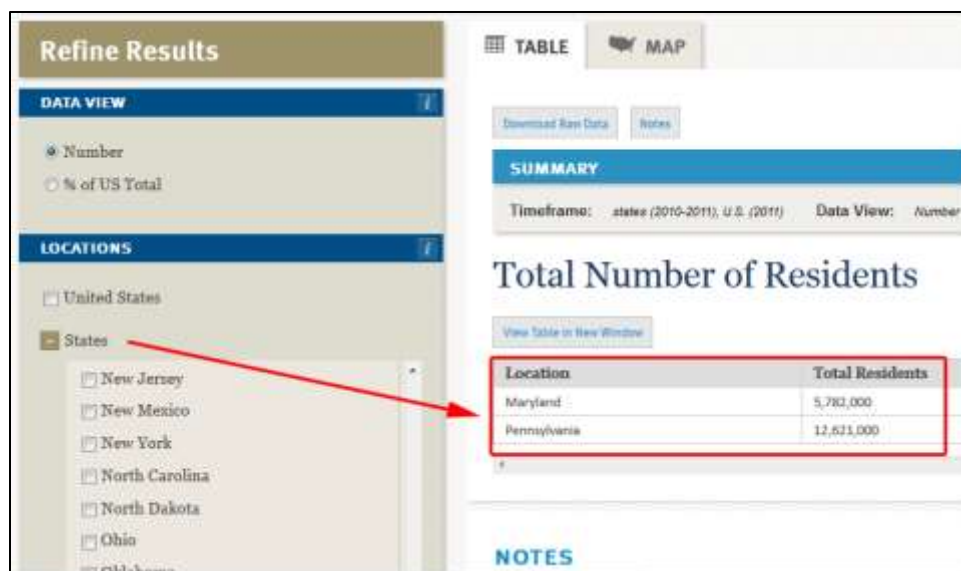
Figure 07: Choosing state population data.

14. [What is the date range for the state-level data?]
    a. FY 2011, great it is the same year as the first portion of the question so we can use these figures.
    b. Scroll down to the **Notes** section of the data page. Is there any information in this section that would prevent us from analyzing this data?
        i. Population and demographic data are based on analysis of the Census Bureau's March 2011 and 2012 Current Population Surveys (CPS) and **may differ from other population estimates** published yearly by the Census Bureau.
        ii. U.S. and state population data displayed on this site are restricted to the non-institutionalized, civilian (not active duty military) population; state data represent 2-year averages.
    c. Look at the source of the data: "Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the *Census Bureau's March 2011 and 2012 Current Population Survey (CPS: Annual Social and Economic Supplements)*."
15. Copy the values from **Total Residents** and paste them into the **Population 2011** columns, in Excel.
16. We now need to compute the proportion of spending per resident. We can do this very easily in Excel by creating a function (Figure 8).
    a. [What value will be the numerator and what value will be the denominator?]
    b. The formula we need is: =(B2/C2), where **B2** = *Total Medicaid Spending, FY2011*, and **C2** = *Population 2011*.
    c. Put your cursor in cell **D2** and type in the following formula: (*B2/C2*), then hit **Enter**.
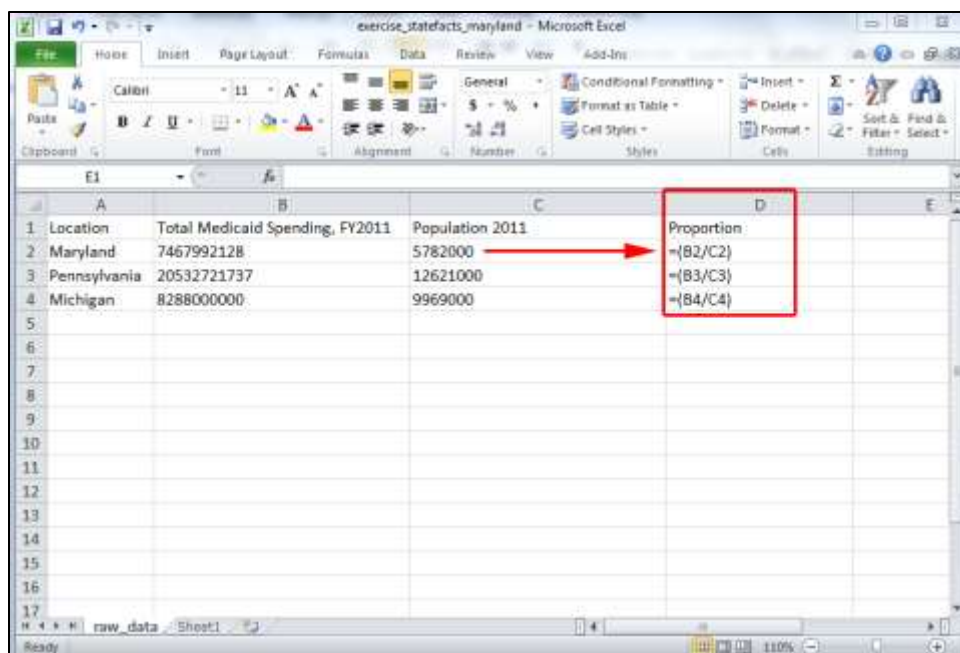   d. Copy this formula you just created into cell **D3**, then hit **Enter**.

Figure 08: Computing state Medicaid spending, per person (per capita).

- e. Maryland spending is $1,291/per person
- f. Pennsylvania spending, is $1,626/ per person
- g. If you ever want to see the formulas in your worksheet, select ***Crtl+~***

Question 2

Where might we get demographic data, if the data from State Health Facts data was from a previous year?

Background Information

American Factfinder
- American Factfinder is a search tool that provides access to data about the United States, Puerto Rico, and the Island Areas.
- GPO has a training webinar archive, which includes webinars from the Census Bureau.[1]
- The following data are available on American FactFinder (Figure 09):
  - o American Community Survey
  - o American Housing Survey
  - o Annual Economic Surveys
  - o Annual Surveys of Governments
  - o Census of Governments
  - o Decennial Census

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[1] GPO Archives: http://login.icohere.com/public/topics.cfm?cseq=1172

- o Economic Census
- o Equal Employment Opportunity (EEO) Tabulation
- o Population Estimates Program
- o Puerto Rico Community Survey
- There are three primary options for accessing AFF data:
  - o **Community Facts**: Find popular facts (population, income, etc.) and frequently requested data about a geographic area.
  - o **Guided Search**: Finds Census data by specifying search criteria using a step-by-step approach. The following options are available via Guided Search:
    - Searching for information about people (e.g. age, sex, income, poverty, education).
    - Searching for information about housing (e.g. housing units, household type, and value of home).
    - Searching for information about businesses or industries (e.g. annual payroll, sales and receipts, number of employees).
    - Searching for information from a specific dataset (e.g. 2006-2010 American Community Survey 5-Year Estimates, or the 2010 Census Summary File 1).
    - Searching for a specific table number or a table title (e.g. P1, EC0700A1, b04*, Social Characteristics).
  - o **Advanced Search**: Table selection by topic clusters.
- Downloading Data: Available methods for downloading data include:
  a. Download from the search results page: Download up to 10 tables from the search results page in a comma-delimited format (.csv). This format can be imported into Microsoft Excel, as well as other spreadsheet and database programs.
  b. Download when viewing a table: Download a single table from the table view in comma-delimited (.csv), PDF, Microsoft Excel (.xls), or Rich Text Format (.rtf) formats.
  c. Download spatial data from reference maps and thematic maps.
  d. Download Shapefiles: can be imported into various geographic information systems (GIS) software packages.

Figure 09: American Factfinder homepage.

Steps to Answering the Question: Community Facts

1. Go to American Factfinder.
2. To make this easier, we will be searching using **Community Facts**.
3. Type in *Maryland* in the **Search** box.
   a. You will notice that AFF suggests possible **Geographic** locations for your search.
   b. Choose the first option *Maryland* (Figure 10).
   c. Click *Go*.

Figure 10: Searching American Factfinder, using Community Facts.

4. **Community Facts** defaults to the overall population, so you will only see one number (Figure 11).
   a. You are also given the source for the data: **2010 Demographic Profile**.
5. If you want to explore more options, click on the ***We found more results for your geography search*** link.

a. This provides links to other data with **Maryland** in the title, from the **Census Geographies** tables.
    i. I will be talking more about these tables in the second webinar/class in this series: Introduction to GIS.

Figure 11: Community Facts search results.

6. If you are interested in exploring other state related variables, the following options are available (Figure 11):
    a. Age
    b. Business and Industry
    c. Education
    d. Housing
    e. Income
    f. Origins and Language
    g. Poverty
    h. Veterans
7. From the **2010 Census** section, click on the **Population, Age, Sex, Race and Housing** link (Figure 12).
    a. This opens the specific data table from 2010 Census.

Figure 12: Opening datasets from Community Facts.

8. American Factfinder gives 5,839,572 as the population estimate for Maryland (Figure 13).
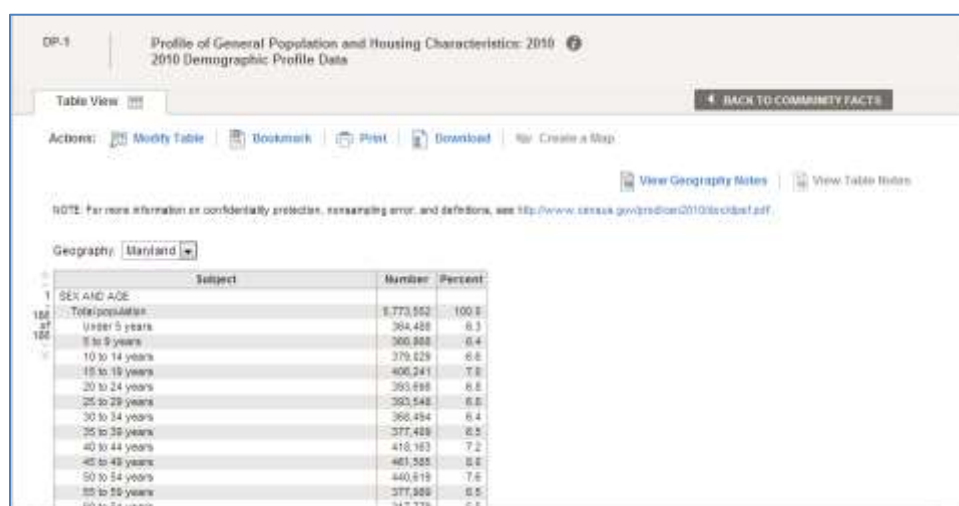
Figure 13: Opening datasets from Community Facts.

Steps to Answering the Question: Guided Search

1. Go to American Factfinder.
2. Guide Search is focused on the three primary pieces of data you need to answer most Census questions:
   a. What is the timeframe you are looking for (the year).
   b. What is the topic of interest (Hispanics).
   c. What is the geography (Montgomery County, Maryland).
3. Click on **Guided Search**, and then **Get Me Started** (Figure 14).

Figure 14: Guided Search.

4. Since we are still interested in the number of folks living in Maryland, select *I'm looking for information about people*.
5. Click *Next* (Figure 15).
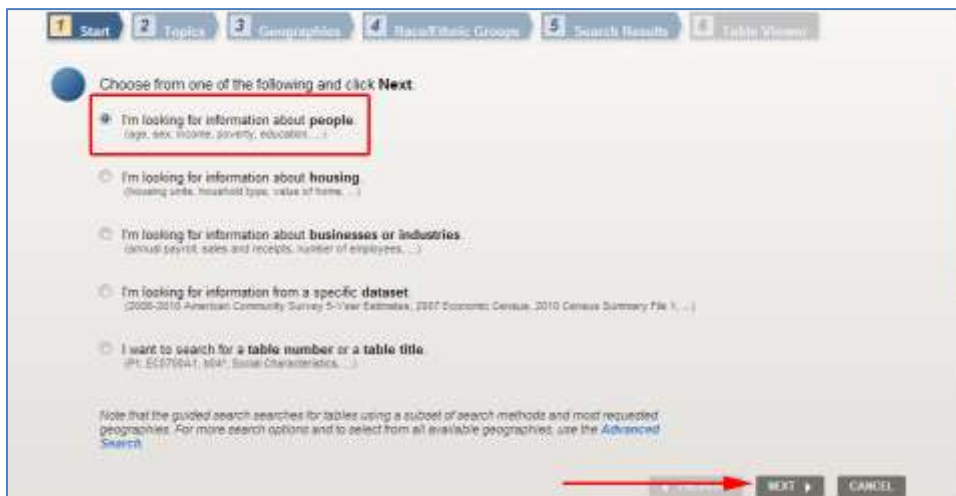
Figure 15: Selected topic, guided search.

6. This step of the search provides you with a list of **Topics** that are available under the **People** category.
    a. If there is a **+** sign next to a topic category, that means that you can expand this section.

Figure 16: People topics, under Guided Search.

7. Click on the **Basic Count/Estimate** topic (Figure 16).
8. The following sub-topics are available (the number next to the sub-topic category represents the number of tables matching your selection) (Figure 17):
    a. Civilian Population (4,014)
    b. Group Quarters Population (761)
    c. Household & Family (454)
    d. Overseas Population (4)
    e. Population Change (10)
    f. Population in Housing Units (519)
    g. Population Total (867)
    h. Resident Population (35)
    i. Urban/Rural (72)
9. Select **Civilian Population** to add this category to the selection queue (Figure 17).

Figure 17: Basic Counts/Estimates, under Guided Search.

10. The next step in the search is adding Geography.
11. You have two options at this step:
    a. Entering *Maryland* in the **Enter a state, county, city, town or zip code** search box (Figure 18).
    b. Selecting *Pennsylvania* from the **Add one or more geographic areas (states, cities, towns, etc.) to Your Selections** pull-down (Figure 19).
12. Add *Maryland* and *Pennsylvania* to the selection queue.

Figure 18: Adding geography variables (search), under Guided Search.

Figure 19: Adding geography variables (selection), under Guided Search.

      a. Each time you add another variable to the selection queue; this might provide more options under the **Select a Geographic Type** pull-down menu.

      b. If a variable is no longer available, it will appear grayed out (Figure 20). If you try to select one of these variables, you will get the following message: ***The selected geographic type is not available based on 'Your Selections'. Modify 'Your Selections' and try again***.

Figure 20: Unavailable variables, under Guided Search.

13. [Based on what you have seen thus far…what might be some of the advantages of using AFF when compared to State Health Facts?]
14. Click **Next**.
15. The next step in the search is the Ethics/Racial Groups tab.

      a. Selecting a race or ethnic group will limit your results to tables from datasets containing detailed race, ancestry, or tribe data. These include data from the Decennial Census

(SF2, SF4, and AIAN) and the American Community Survey (Selected Population Profiles and AIAN tables).

b. Since we are not interested in the breakdown by this variable, click **Skip This Step**.

Figure 21: Race/Ethic variables, under Guided Search.

16. The last tab provides you with all of the tables (2,624) that matched the contents of our selections (Figure 22).
17. The **Search Results** page shows you the ten most relevant data products in FactFinder based on your search criteria (Figure 22).
18. Each table listed has a corresponding table identifier (Table ID), and the name of the dataset (Figure 22).

Figure 22: Results of Guided Search, table view.

Modifying an American Factfinder Table

Most tables in AFF can be customized using the **Modify Table** feature.

1. Select the first table in the list *Selected Economic Characteristics for The Civilian Noninstitutionalized Population by Disability Status*.

2. The **Actions** section of this view displays the options for interacting with table data (Figure 23).
3. The **View Geographic Notes**, and **View Table Notes** section of this view provides information about the table data (Figure 23).

Figure 23: Economic Characteristics, table view.

4. Click *Modify Table*.
5. A set of Table Tools is displayed that includes (Figure 24):
   a. Reset table
   b. Show Hidden Rows/Columns
   c. Transpose Rows/Columns
6. A description of the modifications that can be made to a table view is shown in the legend below the Table Tools. These include (Figure 24):
   d. show/hide rows and columns
   e. collapse/expand data categories
   f. rearrange columns
   g. rearrange rows
   h. sort ascending/descending
   i. filter rows
7. Table tools are available on every table; however, the modifications you can make to a table may be unavailable depending on the table you are viewing.

Figure 24: Modify Table options.

8. Using only the Maryland data, click the checkbox at the top of the **Margin of Error** columns, to hide these columns (Figure 25).

Figure 25: Hiding the Margin of Error columns.

9. A note has been added above the table indicating that the table has been modified from its original display (Figure 26).
10. To restore the **Percentage** column, click the *Show Hidden Rows/Columns* button (Figure 26).
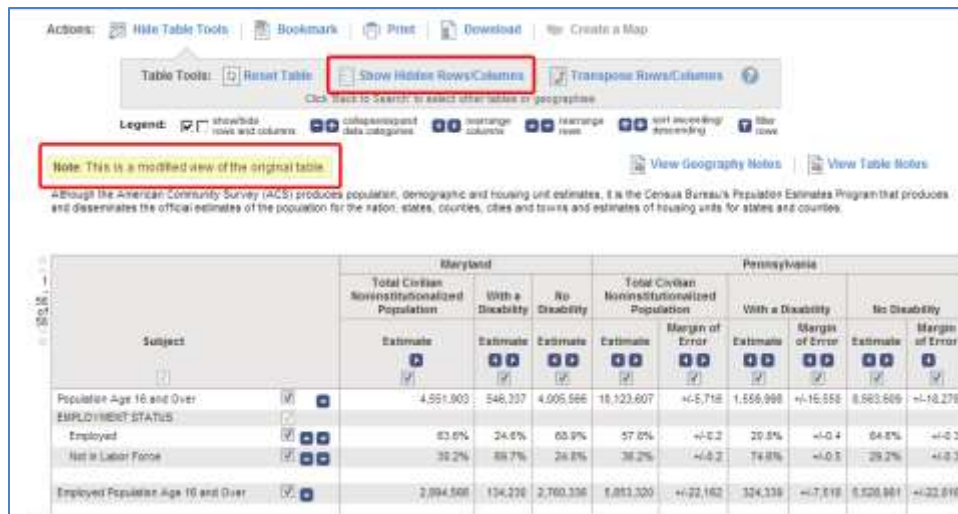
Figure 26: Hiding a table column.

11. Click **Reset Table** (Figure 27).
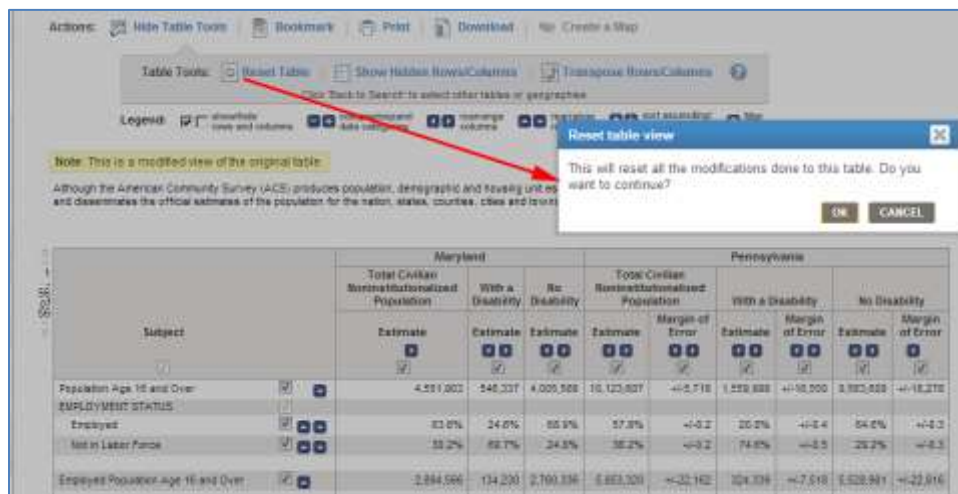12. Notice that the table has returned to its original view.

Figure 27: Resetting the table display.

13. Click **Modify Table** to display the table tools.
14. Click the filter icon in the **Subject** column, to select columns to display (Figure 28).
15. A dialog box appears prompting you to select the columns to display.
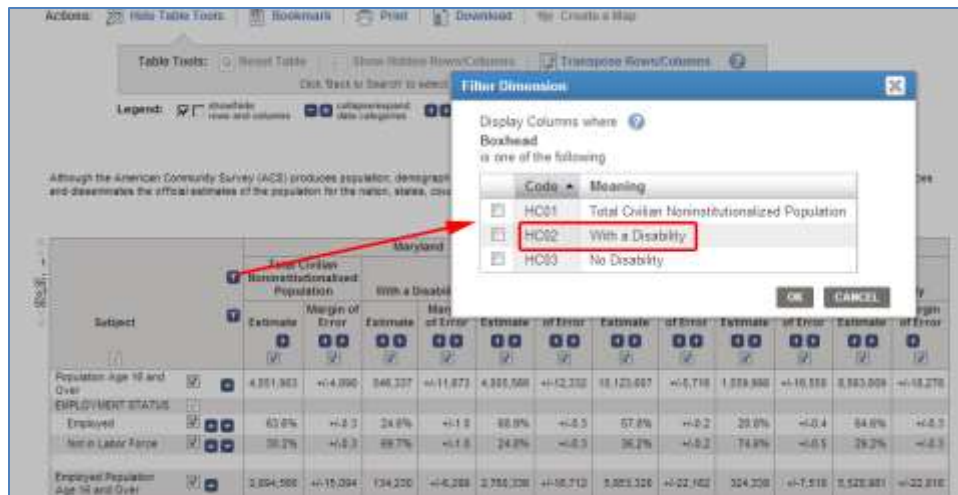16. Select the checkbox next to **With a Disability** and click OK (Figure 28).

Figure 28: Filtering a data table.

17. The table view is updated to display only the **With a Disability** data (Figure 29).

Figure 29: Data table filtered by With a Disability.

18. Click *Reset Table*.
19. [How effective do you feel Guided search is, for answering our questions? What type of question would be more appropriate for **Guided Search**?]
20. The Census Bureau has a great page that provides information on when to use **1-year, 3-year, or 5-year estimates**.
21. Note: If you click *Advanced Search* from **Guided Search,** all of your variable selections will remain.
    a. You will need to select *clear all selections and start a new search*, on the **Advanced Search** screen to start from scratch (screenshot).

References

Centers for Medicare & Medicaid Services. (2013). Medicaid Financing and Reimbursement.   Retrieved
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