



## Instructions for “A Data Story: Visualizing with Purpose in Excel”

Please use this handout **in conjunction with the recording, PowerPoint, and MS Excel spreadsheet with raw data from the webinar “A Data Story: Visualizing with Purpose in Excel.”** These instructions refer to the two examples covered during the live Excel demonstration so that you can practice with raw data while following along with the recording.

### Example Chart 1

Q: What barriers do you have to becoming credentialed in 2023?\*

Barrier	%
State/organization not supportive	9%
No barriers	11%
Not enough study resources	11%
Time constraints	11%
Procrastination	13%
Fear of taking/not passing the test	15%
Financial constraints	15%

\*Participants were able to choose more than one answer including “other,” which was not included in the data for demonstration purposes.

1. Open the Excel file, “Visualizing Data with a Purpose” and select the Survey Question tab at the bottom. (The Excel file is a separate handout that accompanies these materials.)
2. Left click with your mouse to select the data from cell A1 through B8.
3. Go to the INSERT tab at the top and select “recommended charts.”
4. Choose the “clustered bar” chart and select OK. The chart will appear on the page.
5. Inside the chart, click the Title (where the % sign currently is) and type your title.
6. While the title is still selected, go to the HOME tab at the top, and using the Align Left button, align your title to the left and drag the title to the top left corner of your chart.
7. Double click inside the chart to open the “Format” options to the far right of your screen.
8. Click on the gridlines within the chart to select and at the far right under Format Major Gridlines, under the paint can icon, select “no line.” (or you can push delete on your keyboard while the lines are selected)
9. Click on the y axis to select it, or “categories” and select “no line” in the “Format Axis” and then Line options.
10. Click the bars on the graph, click the “+” sign at the top right of your chart to open the “chart elements” and check the “data labels” box.



11. While the bars are selected, go to the “Format Data Series” options at the far right of your screen and click the 3-bar icon called Series Options if you hover over the icon. Reduce the gap width size to make your bars larger. The smaller the gap percentage, the larger your bars will appear.
12. While the bars are selected, choose the Fill & Line icon (paint can) icon in the “Format” options to customize the colors. Click the dropdown arrow to change the color.
13. Click on the percentages in the X-axis, click the “+” sign at the top right of your chart to open the “chart elements.” Hover over the “Axes” option until you see the arrow to the right and uncheck the “primary horizontal” box.
14. Double-click on the second bar “Fear of taking/not passing the test” to isolate that bar. Use the “Format” options to choose a different color for that bar. Repeat this step with the first bar.
15. Click the data labels to select them (hint: the data labels are the percentages to the right of each bar in the graph), open the HOME tab at the top to enlarge the font, make them bold and change the colors. Double click on one data label at a time if you want to isolate it and make it a different color from the others or the same color as your bar.
16. Click the title to customize your title using the bold the colors that match your chart.

## Example Chart 2

Alcohol-induced deaths for females per 100,000

Gender	Year	Age Adjusted Rate
Female	2010	3.9
Female	2011	4.1
Female	2012	4.2
Female	2013	4.3
Female	2014	4.6
Female	2015	5
Female	2016	5.2
Female	2017	5.3
Female	2018	5.6
Female	2019	5.9
Female	2020	7.5

To calculate the change in death rate from 2019 to 2020, double click in cell D13. Type the formula  $= (C13 - C12) / C12 * 100$ .

1. With the Excel file still open, “Visualizing Data with a Purpose” select the CDC Data tab at the bottom left. (The Excel file is a separate handout that accompanies these materials.)



2. Block the data from cell A1 over to C1 and down to A13 and over to C13.
3. Select "INSERT" tab and select recommended charts tab. Select the "line" chart. Select "OK." The chart will appear on the page.
4. Click on the frame of the new chart you made to open the format options on the right of the chart.
5. Click within the title and modify the title to: Alcohol-induced deaths for females increased 27% from 2019 to 2020. Click on the Home label at the top and select the Align Left icon. Move the title box over to the left of the chart.
6. Click on the gridlines within the chart. The Format Major Gridlines menu will appear at the right. Under the Fill & Line icon (paint can) select "no line."
7. Select the horizontal (x axis) with years. On the Format Axis menu at the right select the Fill & Line icon (paint can) and then under Line, click "no line."
8. Select the vertical (y axis) with the numbers. Click the large + sign at right of the chart (Chart Elements) and select "Axes" and uncheck "primary vertical."
9. Select entire chart. On the Format Chart Area menu, select "No fill" for Fill and "No line" for Border.
10. Click on the entire trend line in your graph. On the Format Data Series options under the Fill & Line icon (paint can), under Line, select navy blue color. Under the Marker tab, (hint: the second tab under the three icons at the top of the menu), Marker Options, select Automatic (hint: you may need to select the drop down arrow next to Marker Options to get this option). Change color to navy blue, also. Under Border, select "No line."
11. Go back into the Chart Elements (+ to the right of the chart you created) and click on "Data Labels." Numbers will appear on the trend line.
12. Go back into the Chart Elements (+) and click "Data Labels."
13. Highlight three data points on the trend line. First, double click on the 2010 marker, select "data labels", Second, double click the 2019 marker, select "data labels." Third, double click the 2020 marker, select "data labels." Click just one of the three numbers to select all three. Increase the font size to 12 on the Home tab, select Bold, select navy blue color.
14. Double click on the 2020 marker. In the Format Data Label menu to the far right, click the paint bucket icon. Select "dash type" and select the first line option (round dots). Select the dark red color. Select the Marker (by Fill). Select the dark red color.
15. Double click on the 2019 marker. In the Format Data Point, select the Marker (by Fill) and select the dark red color.
16. Double click the 2020 data label. On Home tab, change font color to dark red.
17. Double click the 2019 data label. On Home tab, change font color to dark red.
18. Select the title of the chart. Change the font of the title to navy blue. Highlight the phrase "increased 27%" and change the color to dark red and bold the words.

Repeat the steps above in Example Chart 2 using the male data in the table below.

	Alcohol-induced Deaths per	
	100,000	
	Age Adjusted	
Gender	Year	Rate



Male	2010	11.7
Male	2011	11.7
Male	2012	12.1
Male	2013	12.5
Male	2014	12.9
Male	2015	13.6
Male	2016	14.1
Male	2017	14.3
Male	2018	14.7
Male	2019	15.2
Male	2020	19.2