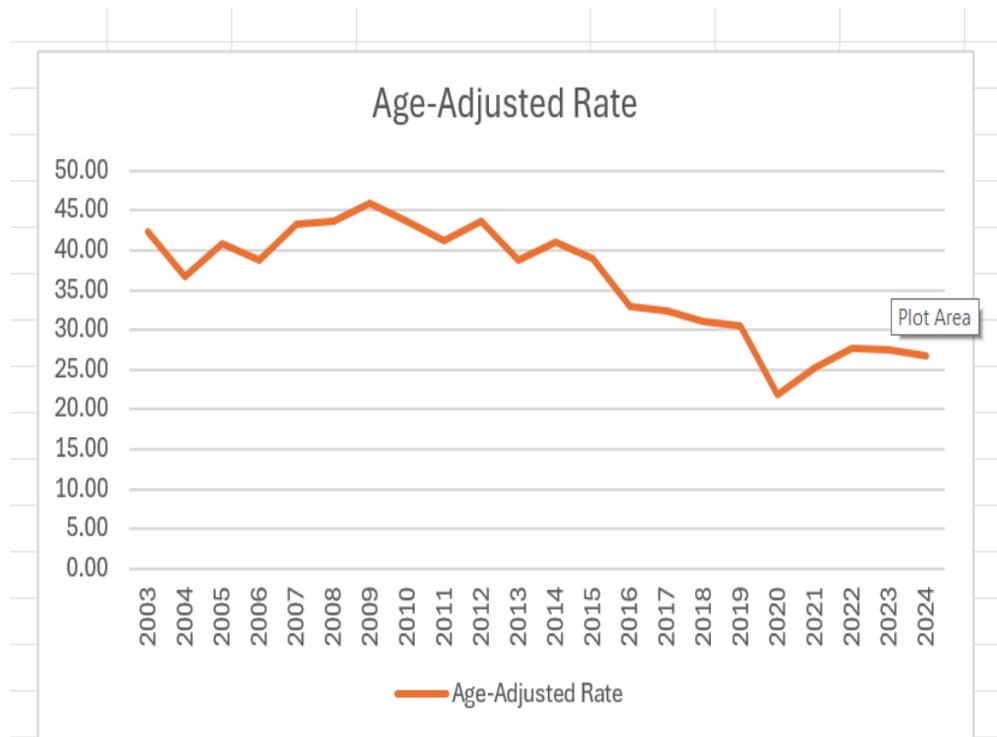


## Line Chart – Data elements instructions

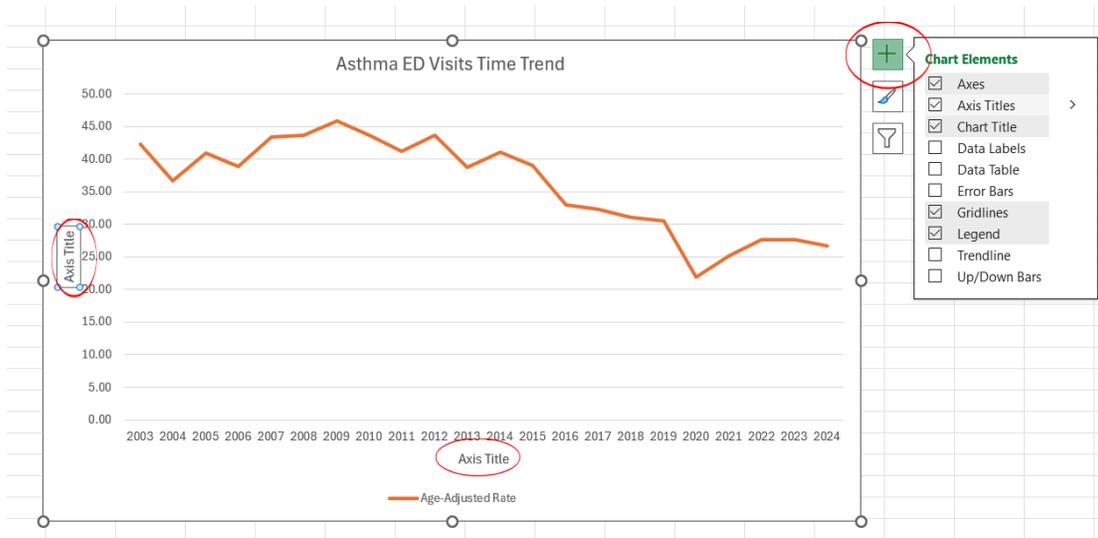
\*\*\* How to get the data and create chart – [VT1 Example](#)



This line chart shows asthma emergency department visits in Iowa over time. The data comes from the Iowa Tracking Portal, and directions on how to create this chart are in the link above.

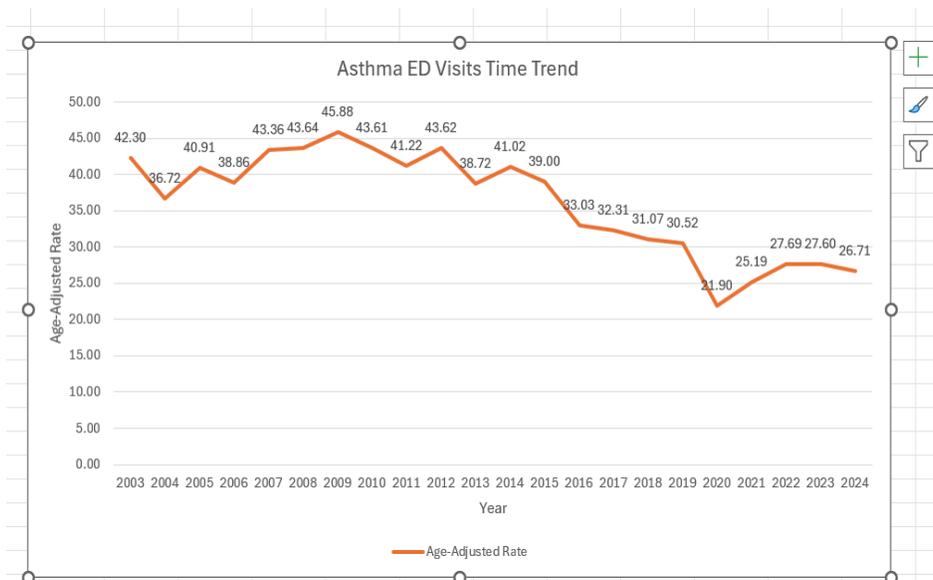
We will work on adding some features to the chart, such as chart titles, axis titles, and data labels. To add a new chart title, click on the title until you see the I-beam pointer that allows you to type and add text. Change the title to “Asthma ED Visits Time Trend.”

To add axis titles, click the green plus sign at the top right corner of the chart. This button is called the “Chart Elements” button. Once the chart elements menu is opened, click to check the box next to the “Axis Titles” option. You can see from the picture below that axis titles have been added to the left and bottom of the chart.

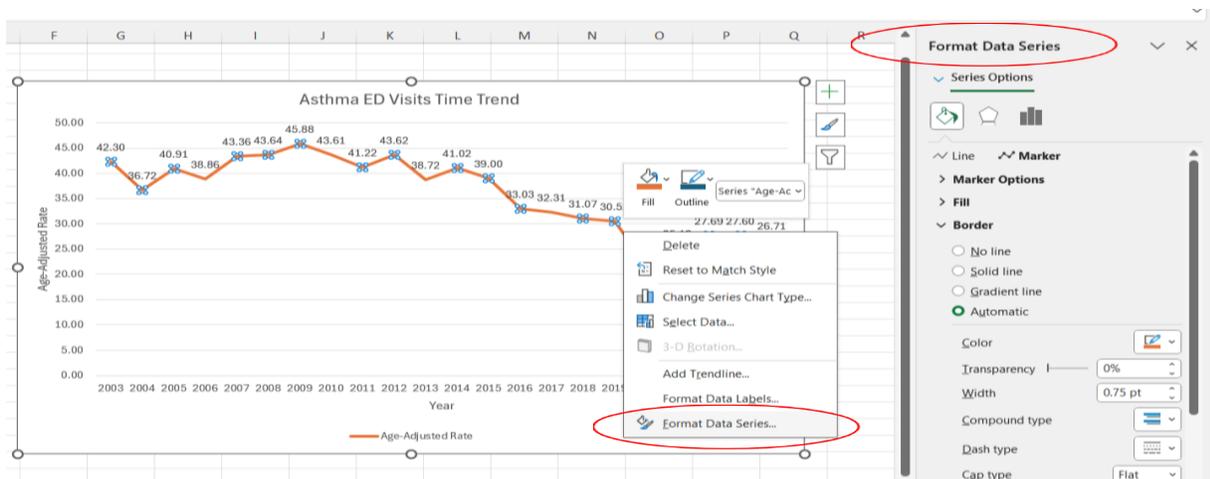


To change the axis titles, click on them like we did with the chart title. Change the Y-axis title to “Age-Adjusted Rate” and the X-axis title to “Year.”

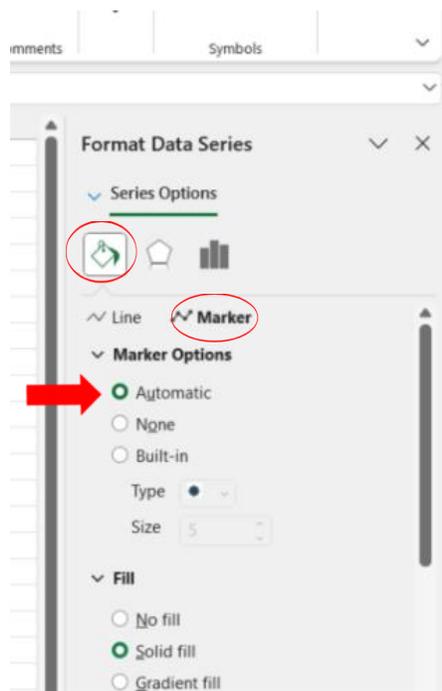
To add data labels to the chart, click the chart elements button and select the Data Labels option. When finished with these changes, the chart should look like this:



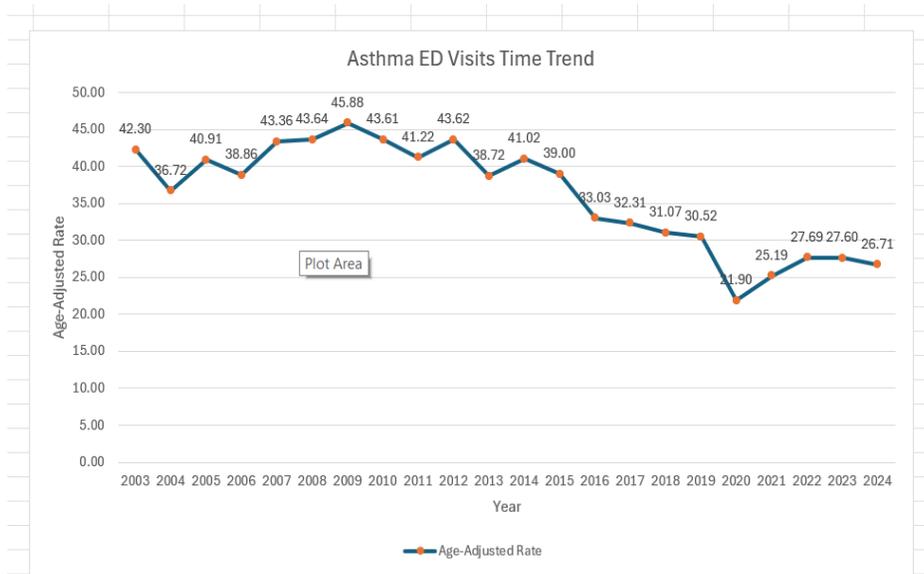
Additionally, we can add markers to the line to make it easier to see what data point corresponds with what year. Right click on the trendline and then click the bottom option that says, “format data series.” This will open a menu on the left side of the screen.



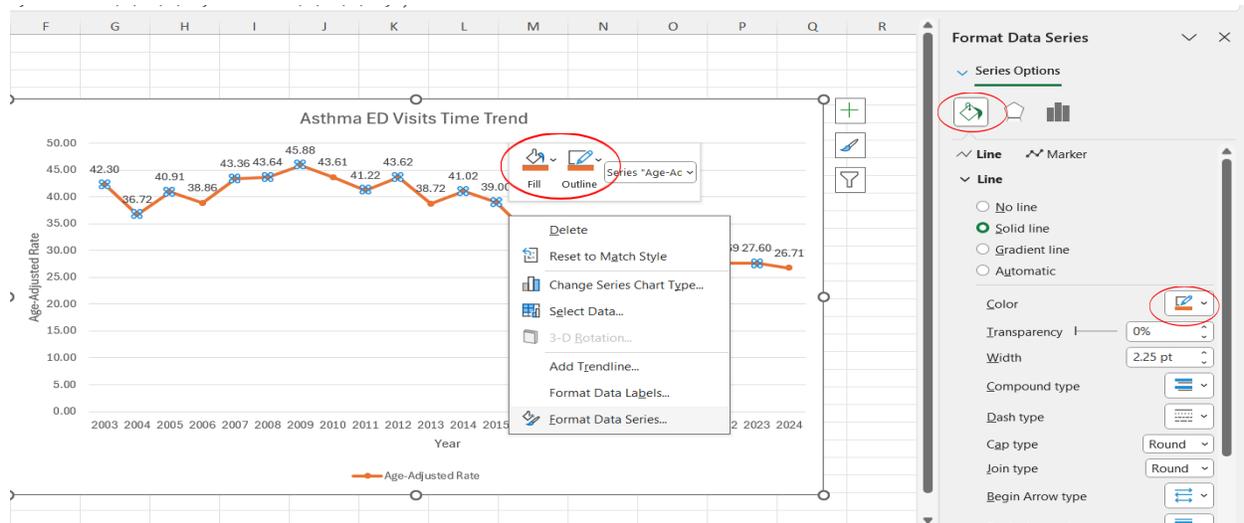
Click on the paint bucket icon under series options, under the paint bucket select the marker icon, and then under “marker options” choose automatic.



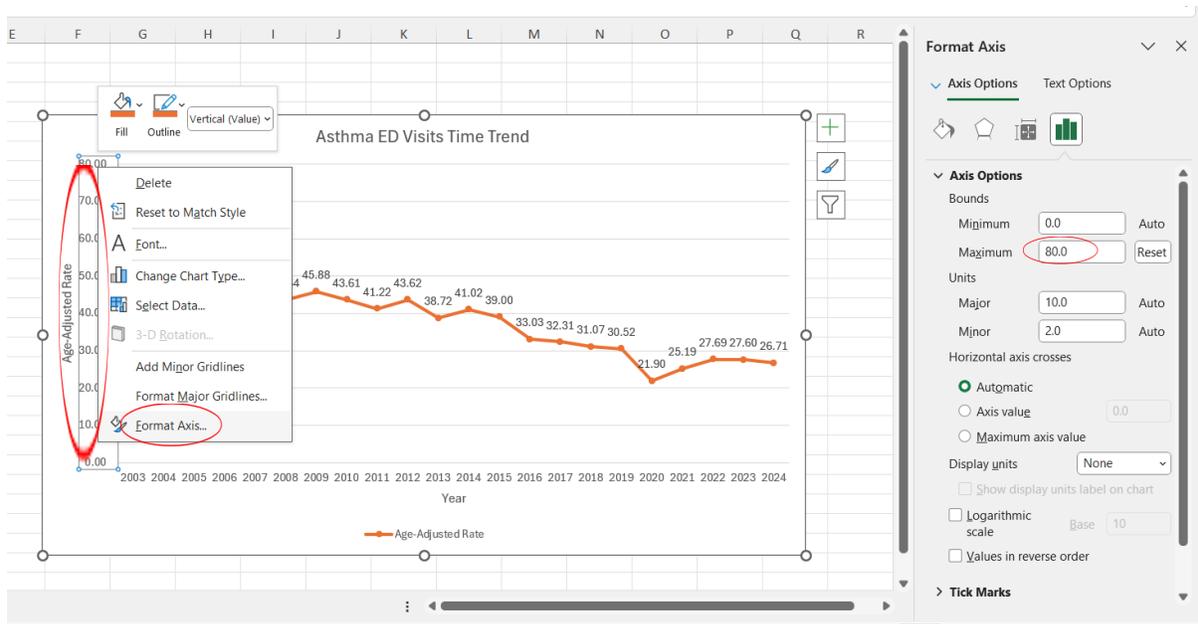
The line chart should look like this when done.



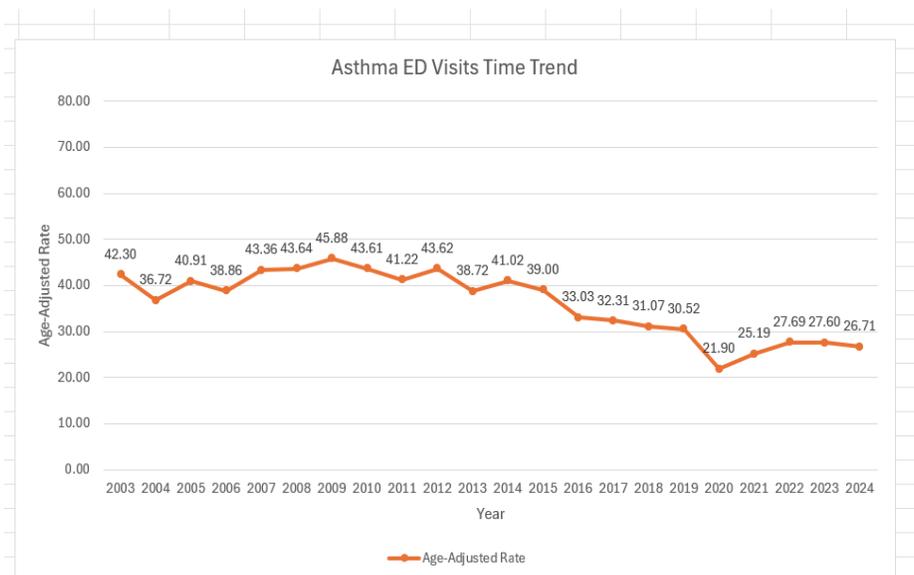
To change the color of the line and markers, click on the line, and above the menu that pops up, you should see a shortcut where you can change the fill and the outline of the line on the chart. Additionally, you can also change the color, and other aspects of the line such as the width, by opening the “Format Data Series” menu and selecting the paint bucket.



We can change the scale of the y-axis by right clicking on the axis numbers and clicking “Format Axis.” A similar side menu will appear, and then the minimum and maximum numbers on the y-axis can be changed. Change the maximum value to 80.



Here is our chart after all the above adjustments have been made. There are many more aspects of this chart that can be changed, for example, the decimal points can be shortened to make the numbers on the chart clearer, and the color and size of the text can be changed. Our [Data and Surveillance Resources Webpage](#) includes more information and tutorials on how to make changes like this in Excel.



**Stacked Bar Chart – Creation instructions (based on Visualize This pre-assessment data)**

D	E	F	G	H
	Q1	Q2	Q3	Q4
<b>1</b>	3	4	3	3
<b>2</b>	1	1	1	1
<b>3</b>	3	3	3	3
<b>4</b>	3	3	3	2
<b>5</b>	3	2	3	3
<b>6</b>	3	3	4	4
<b>7</b>	3	3	3	3
<b>8</b>	3	3	3	3
<b>9</b>	2	2	4	2
<b>10</b>	2	1	3	2

Here is data from one of our previous Visualize This evaluations. To evaluate confidence levels for skills learned in the training, we ask 4 questions having to do with the course objectives for the training. The table below represents pre-assessment data. The bold numbers represent individual responses to the assessment, and the responses are in the columns sorted out as Q1 through Q4. The numbers are based on the code below.

<b>High Confidence</b>	<b>4</b>
<b>Moderate Confidence</b>	<b>3</b>
<b>Slight Confidence</b>	<b>2</b>
<b>No Confidence</b>	<b>1</b>
<b>No Answer</b>	<b>5</b>

Using this code, the data is sorted into the 2 tables below. The first one uses the “countif” function, which counts how many responses are in each of the confidence categories. Here is an example of the “countif” function. The blue numbers are the column range of data and the number after the comma is the response number you want to be counted. In our code, the High Confidence category = the number 4.

High Confidence	=COUNTIF(E4:E46,4)	
Moderate Confid	COUNTIF(range, criteria)	5
Slight Confidence	2	2
No Confidence	1	2
No Answer/Othe	0	0
Total	10	10

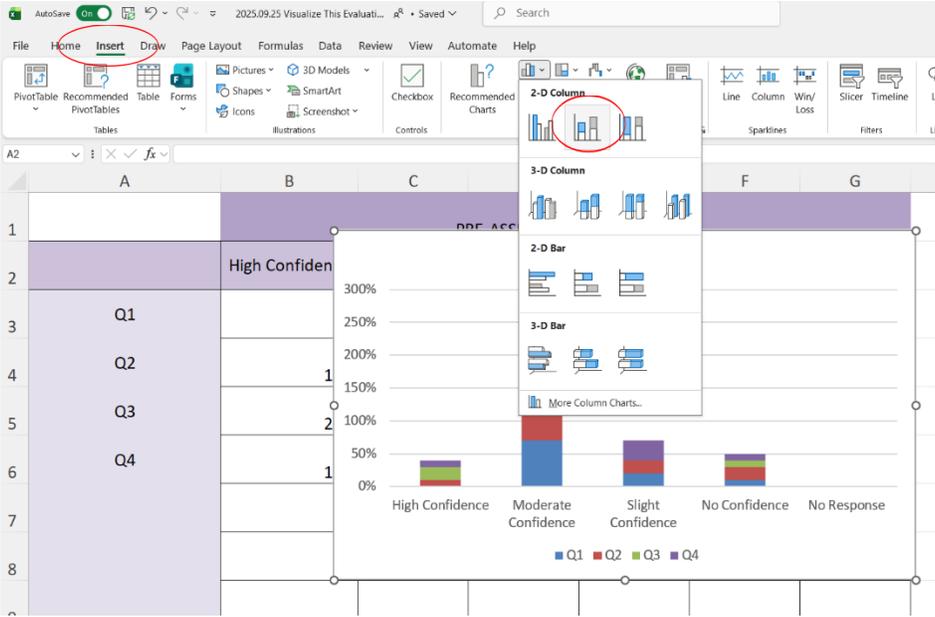
The bottom table is the percentage of these responses, which takes the count of each confidence category divided by the total number of responses (10) to get the percentage.

	D	E	F	G	H
High Confidence	0	1	2	1	
Moderate Confid	7	5	7	5	
Slight Confidence	2	2	0	3	
No Confidence	1	2	1	1	
No Answer/Othe	0	0	0	0	
Total	10	10	10	10	
					Val
High Confidence	0	0.1	0.2	0.1	
Moderate Confid	0.7	0.5	0.7	0.5	
Slight Confidence	0.2	0.2	0	0.3	
No Confidence	0.1	0.2	0.1	0.1	
No Answer/Othe	0	0	0	0	
Total	1	1	1	1	

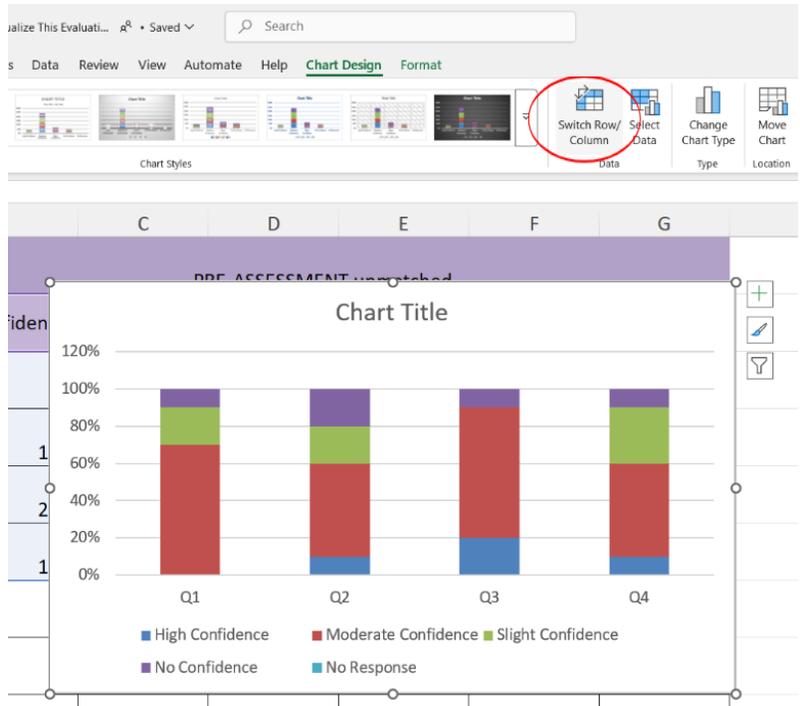
The bottom table in the above picture was reformatted into the table below. The data on the X and Y axis can be flipped in the table as well.

		PRE-ASSESSMENT unmatched				
		High Confidence	Moderate Confidence	Slight Confidence	No Confidence	No Response
Q1		0%	70%	20%	10%	0%
Q2		10%	50%	20%	20%	0%
Q3		20%	70%	0%	10%	0%
Q4		10%	50%	30%	10%	0%

Highlighting this data and choosing the stacked bar option located on the insert tab will create a stacked bar chart. It is important to remember that in order to use a stacked bar chart, each category needs to add up to 100%.

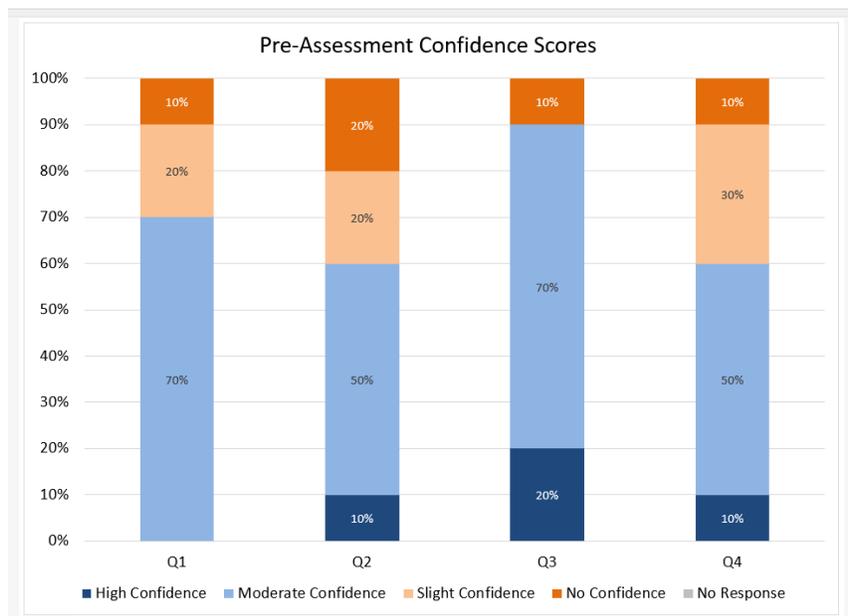


Right now, the table does not show the correct information, we need to switch the X and Y axis on the chart. We can do this by clicking the “Switch Row/Column” button. \*\*\* depending on how the data table is set up, you may not have to do this step.



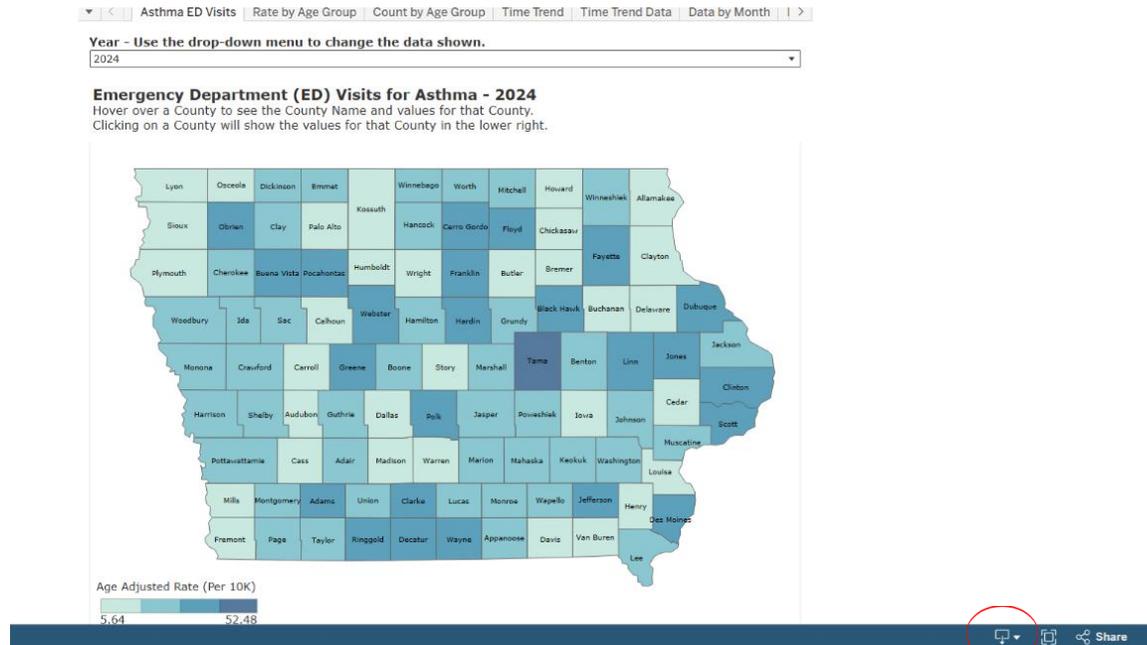
Now that the stacked bar chart is correct, we can add data elements like we did in the previous line chart example.

Here is what a finished chart could look like after adding data elements:



## Map – Datawrapper example with Iowa Tracking Portal asthma data (<https://www.datawrapper.de/>)

We are going to recreate the ED Visits for Asthma map below. Download the data by clicking the button in the bottom right corner.



Go to the Datawrapper website and choose the create map option. The website brings you to this page, where you can choose a basemap to work with. Type in “Iowa counties” in the search bar to find a blank map of the counties in Iowa.

Welcome to Datawrapper 😊 [Learn how to create your first chart.](#)

- 1 Select your map
- 2 Add your data
- 3 Visualize
- 4 Publish & Embed

**Choropleth map** [Proceed →](#)

What type of map do you want to create?

[or Upload Map](#)

USA > Iowa > Counties

« 1 »

Click the proceed button, and then we can upload our data file we downloaded from the Iowa Tracking Portal.

The interface shows a map of Iowa on the left and a data table on the right. The map is currently blank with a few colored squares. Below the map, there is a section titled "Now your map needs data!" with options to "Upload", "Match", and "Check". There are also buttons for "Upload a file (CSV or Excel)" and "Copy & paste your data".

The data table has the following columns: A Name, B Suppression Label, C Year, D Values, E ED Visit Count, and F Age Adjusted Rate (Per 10K). The table contains 19 rows of data for various Iowa counties, with the year set to 2024. The last row, Cherokee, has a "1 error" indicated.

A	Name	B	C	D	Values	E	F
1	County	Suppression Label	Year		ED Visit Count	Crude Rate (Per 10K)	Age Adjusted Rate (Per 10K)
2	Adair	-	2024		13	17.78	20.44
3	Adams	-	2024		12	33.6	38.51
4	Allamakee	-	2024		16	11.47	12.86
5	Appanoose	-	2024		25	21.03	24.37
6	Audubon	-	2024		7	12.74	11.61
7	Benton	-	2024		45	17.68	19.84
8	Black Hawk	-	2024		424	33.03	34.35
9	Boone	-	2024		46	17.46	20.11
10	Bremer	-	2024		39	15.64	15.9
11	Buchanan	-	2024		30	14.66	16.03
12	Buena Vista	-	2024		76	37.25	38.01
13	Butler	-	2024		20	14.32	16.01
14	Calhoun	-	2024		9	9.42	10.94
15	Carroll	-	2024		24	11.89	13.05
16	Cass	-	2024		17	13.22	15.25
17	Cedar	-	2024		22	12.26	12.88
18	Cerro Gordo	-	2024		112	26.91	29.26
19	Cherokee	-	2024		28	24.28	27.16
	1 unused	1 error					

After clicking proceed, you have the option to refine, annotate, and change the layout of the map. Here is an example of each of those options.

The interface shows a map of Iowa with a color scale from 5.64 to 52.48. The "Refine" tab is selected, showing options for "Colors", "Patterns", and "Legend". The "Colors" section includes a "Select column" dropdown set to "Age Adjusted Rate (Per 10K)", a "Select palette" dropdown, and a "Type" dropdown set to "Continuous". The "Patterns" section has a "Use pattern overlay" toggle. The "Legend" section has a "Show color legend" toggle and a "Position" dropdown set to "Above visualization".

The "PREVIEW" section shows a "Size (px)" dropdown set to 600, a "Colorblind check" icon, and a "Dark Mode" icon.



After customizing your map, you can download your map by entering your email address.

Welcome to Datawrapper [Learn how to create your first chart.](#)

1 Select your map ✓ 2 Add your data ✓ 3 Visualize ✓ 4 Publish & Embed

### Publish visualization

Embed your chart or download it as PNG.

You can embed your Datawrapper visualizations on your website for free. Enter your email address to create an account and get the embed code for your visualization. Already have an account? [Sign in to embed your chart.](#)

Enter your email:

  
e.g. your.email@gmail.com

[Get the data](#) • Created with [Datawrapper](#)

[Back](#)

Datawrapper also helps to create charts and tables as well.