

MICROSOFT EXCEL

BUILDING GRAPHS

- Basic steps for creating graph in Microsoft Excel:
 1. Input your data in an Excel file.
 2. Choose a type of graph to create.
 3. Switch axes if necessary.
 4. Adjust your labels and legends, if desired.
 5. Change the axis measurement option, if desired.
 6. Reorder data, if needed.

1. Input your data in an Excel file.

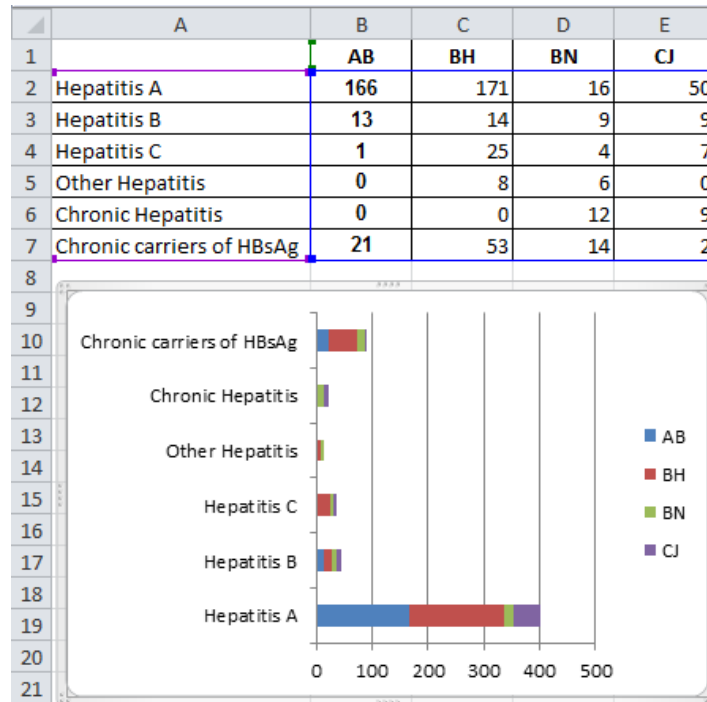
- Copy data from another file and Paste them in Excel file.
- Introduce data in Excel file.

In the example below, in Column A, we have a list of type of hepatitis while in columns B, C, D, and E we have the number of cases according to the county (where AB = Alba Iulia, BH = Bihor, BN = Bistrița Năsăud, CJ = Cluj-Napoca). For example, Column B, Row 2 (cell B2) illustrates that in Alba Iulia County were 166 subjects with Hepatitis A.

	A	B	C	D	E
1		AB	BH	BN	CJ
2	Hepatitis A	166	171	16	50
3	Hepatitis B	13	14	9	9
4	Hepatitis C	1	25	4	7
5	Other Hepatitis	0	8	6	0
6	Chronic Hepatitis	0	0	12	9
7	Chronic carriers of HBsAg	21	53	14	2

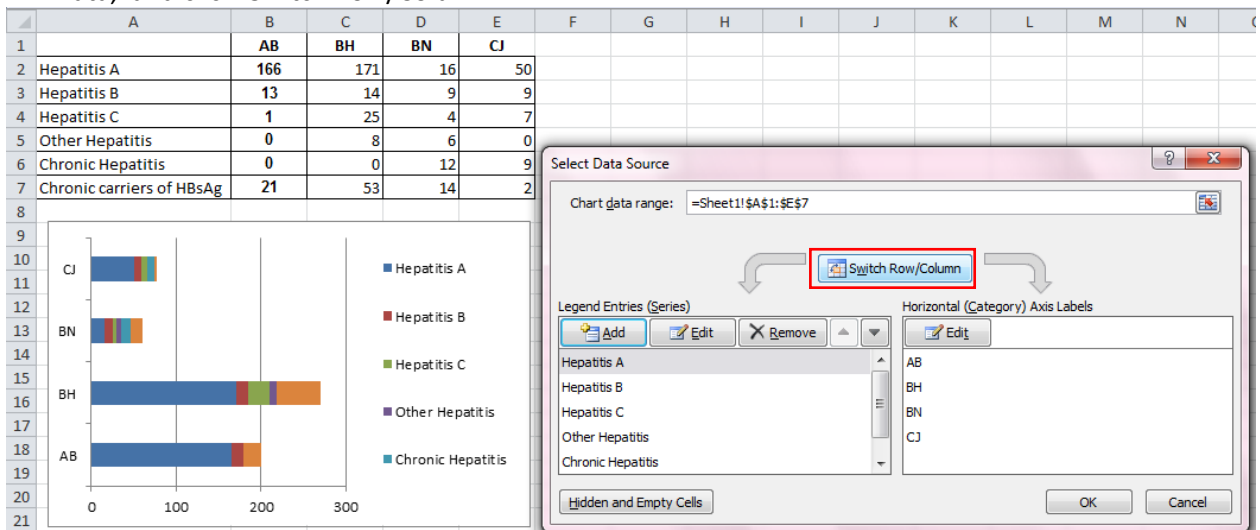
2. Choose a type of graph to create.

To represent these data we will use a Bar chart. To make a bar graph, select the data (inclusive the name of the rows and the name of the columns) and **[Insert - Bar]** and choose the type of the chart you wish. For exemplification we will use Stacked Bar.



3. Switch axes if necessary.

If you want to switch what appears on the X and Y axes, right click on the bar graph, click 'Select Data,' and click 'Switch Row/Column.'



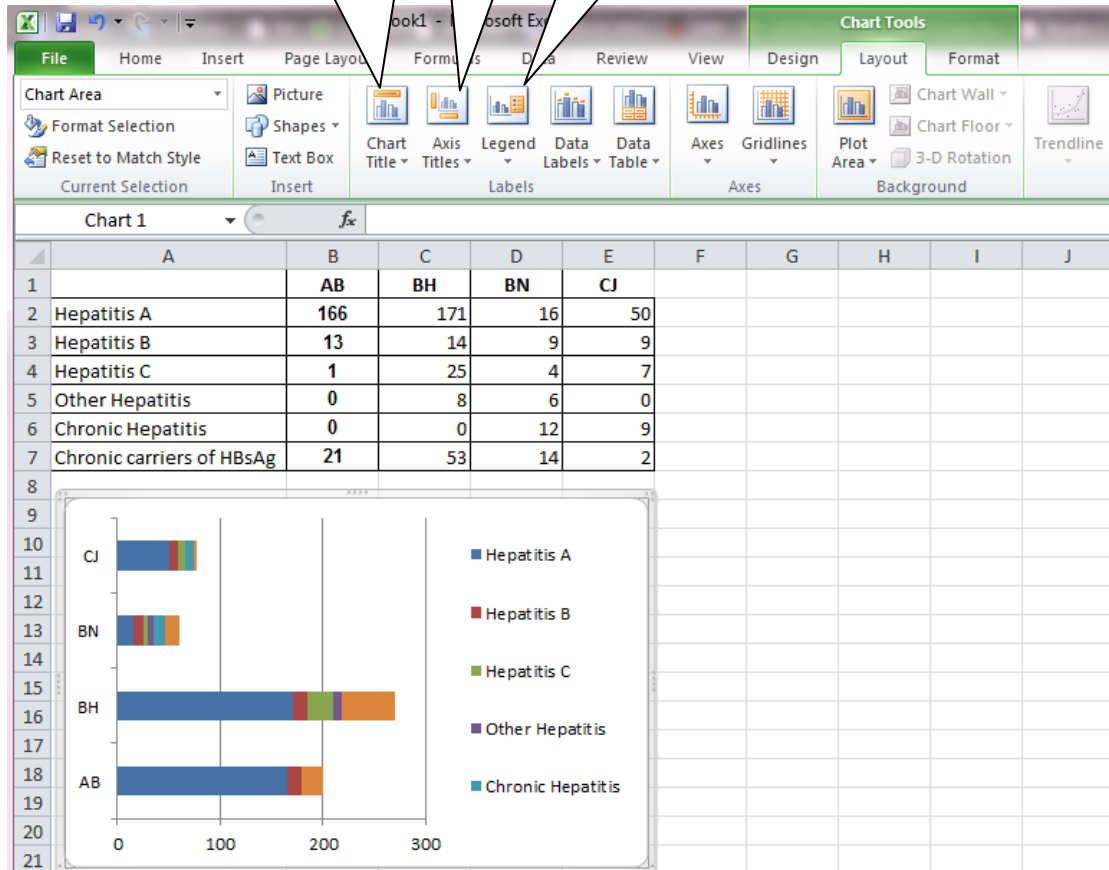
4. Adjust your labels and legends, if desired.

To change the layout of the labeling and legend, click on the created graph, then click the 'Layout' tab. Here you can choose what layout you prefer for the chart title, axis titles, and legend.

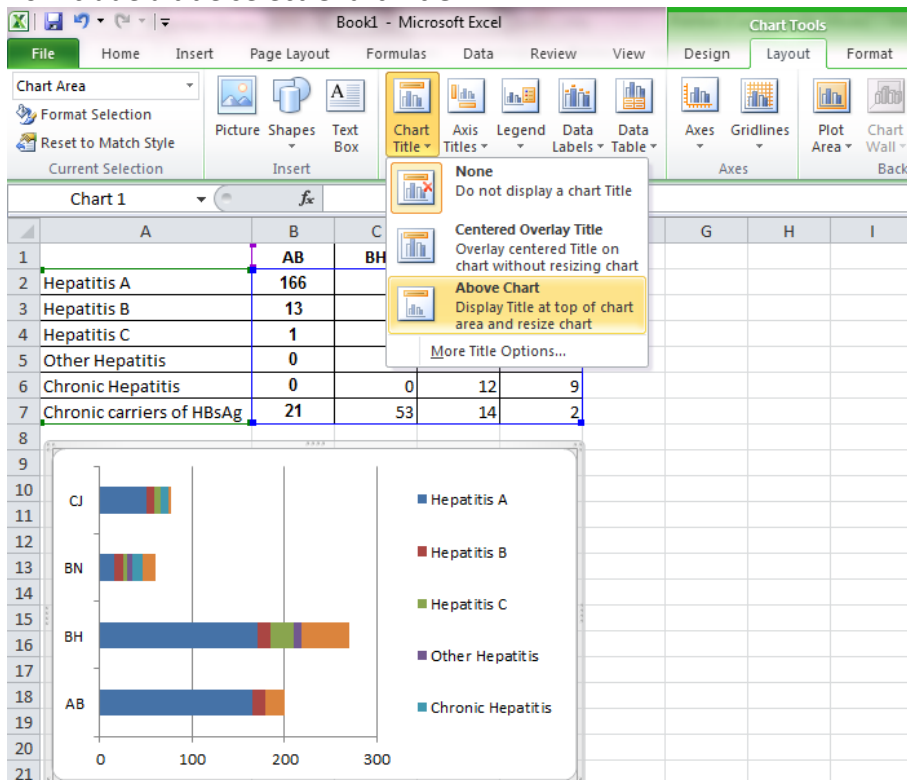
Define the axis of the chart

Include title to the chart

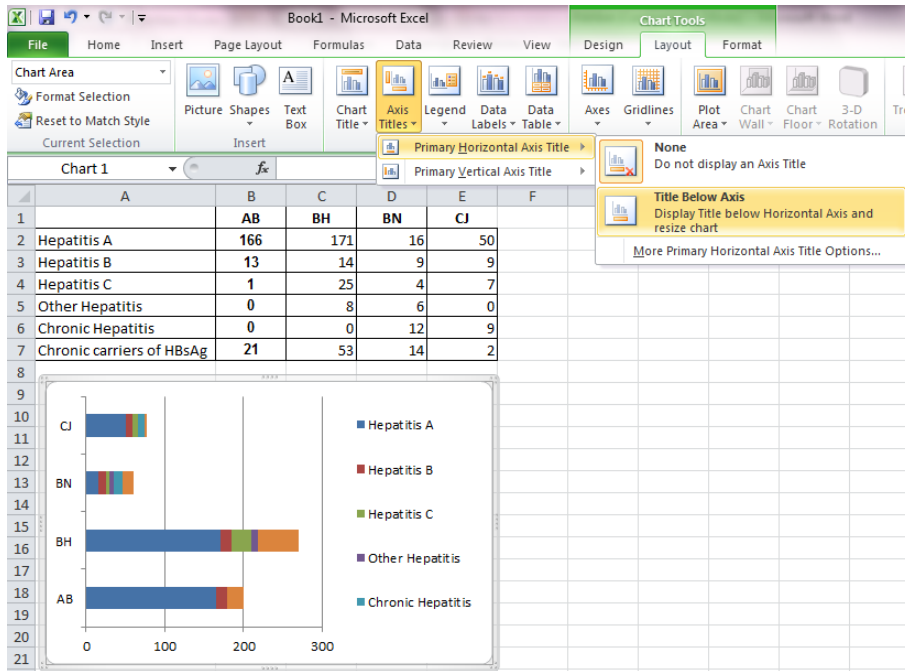
Move the legend



To include a title select **Chart Title**.

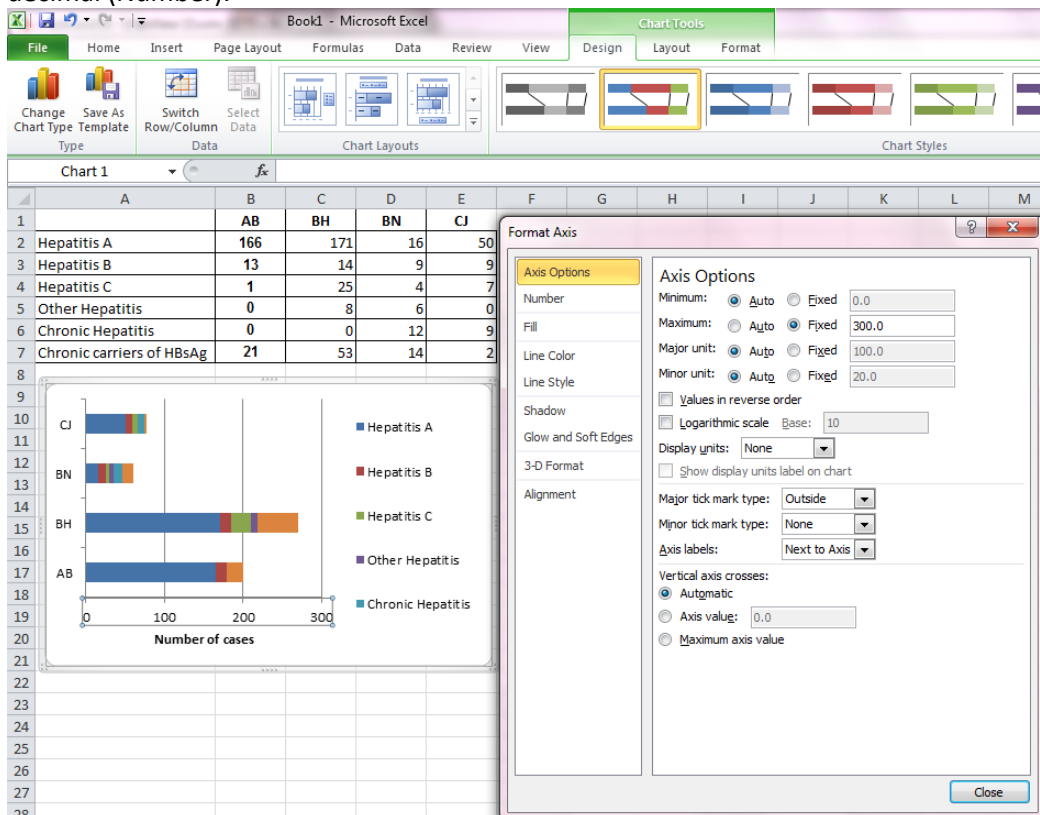


To define axis select **Axis Titles**.



5. Change the axis measurement option, if desired.

To change the type of measurement shown on the Y axis or X axis, right click on the axis and click on **Format Axis**. Here you can change the minimum and maximum value as well as major and minor units (Axis Options) or you can decide if you want to display number with 2 decimals or with 0 decimal (Number).

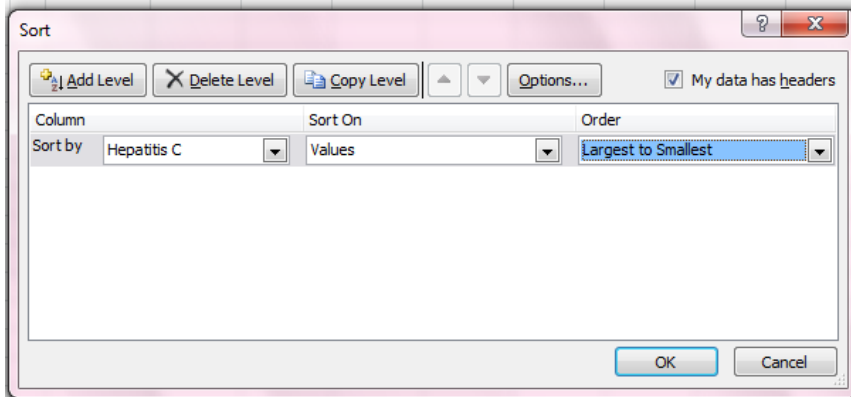


6. Reorder data, if needed.

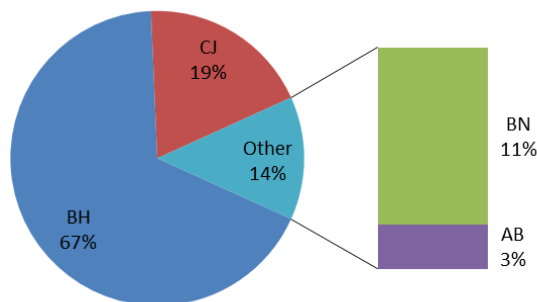
To sort the data so that the software choices appear in descending order, click on the column that is most important (in this case I picked column H), and [Data – Sort & Filter – Custom sort...] and

sort for example in descending order. You need to do this operation when you want to create Pie to Pie or Bar to Pie.

G	H	I	J	K	L	M	N	O	P
	Hepatitis C								
AB	1								
BN	4								
CJ	7								
BH	25								

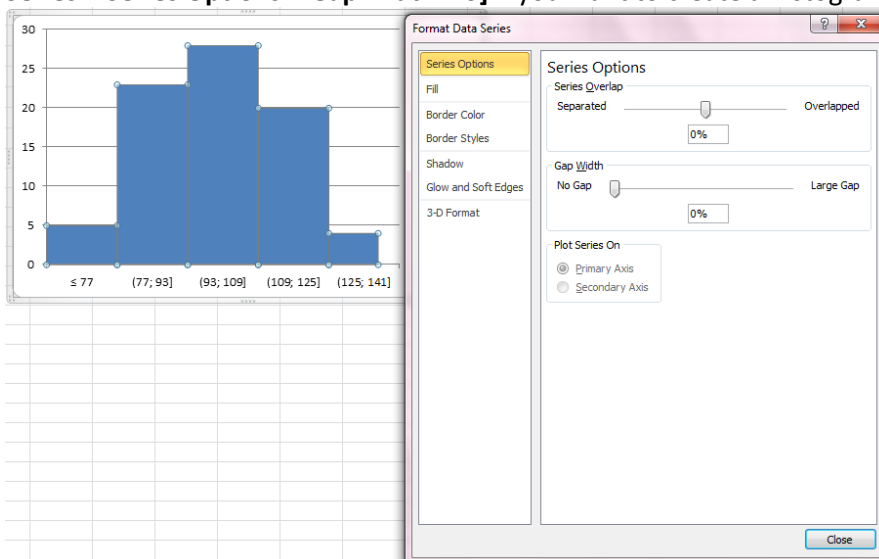


Hepatitis C



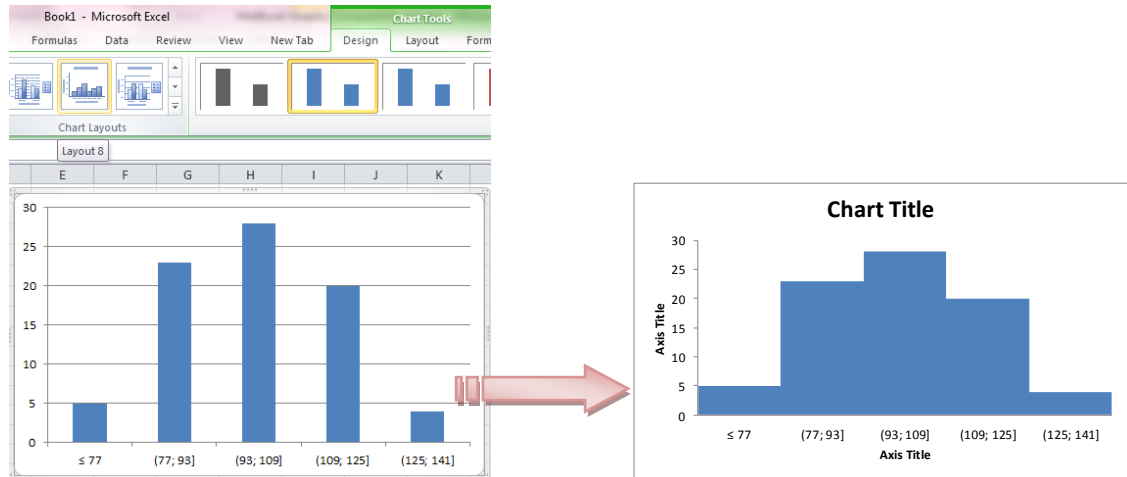
7. Change the design of the graph.

- Modify the gap between columns: double click on one column of the graph and **[Format Data Series – Series Options – Gap width = 0]** if you want to create a histogram:

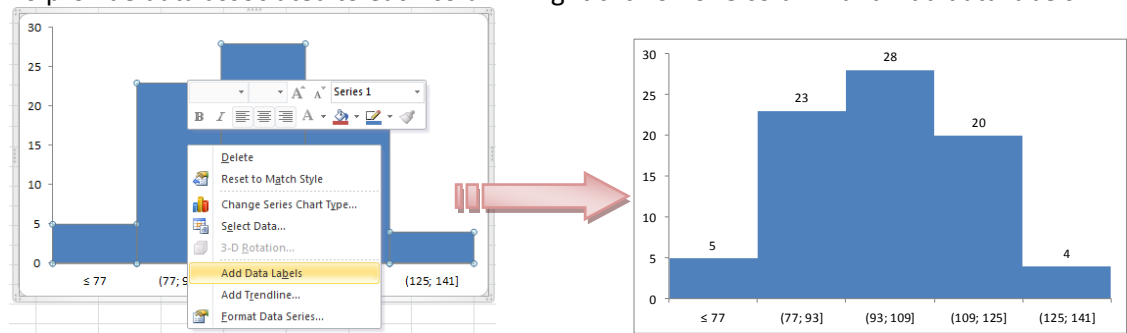


OR

Select the chart and [Chart Tools – Design – Chart Layout – Layout 8]



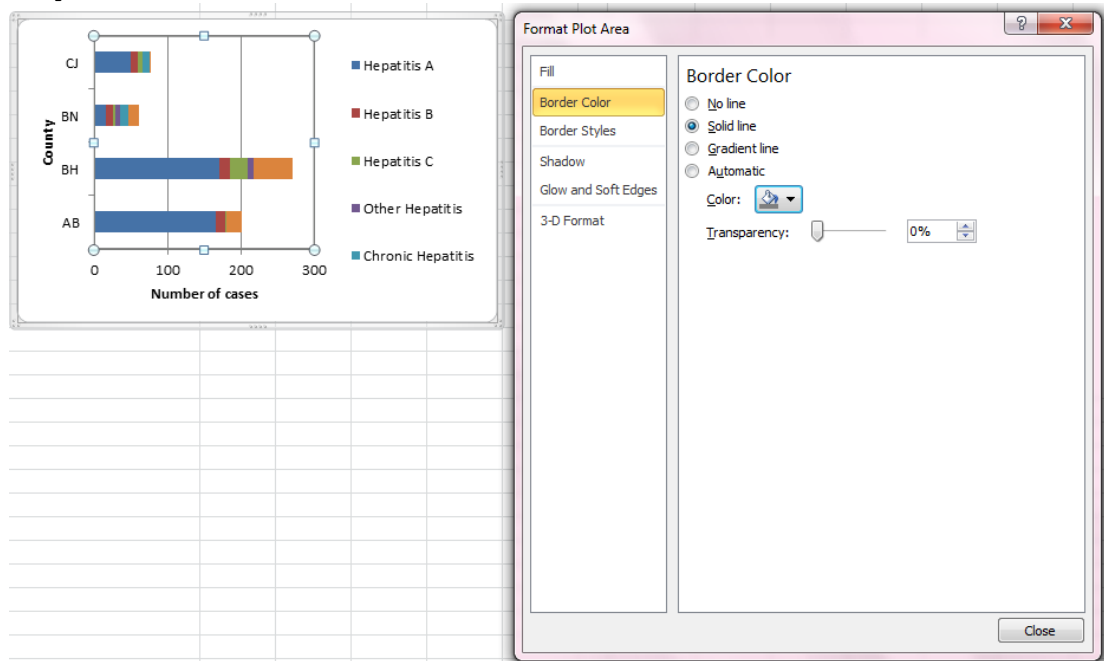
- To delete the legend (if the legend is not informative): select the legend and Delete key.
- To provide data associated to each column: right click on one column and Add data labels:



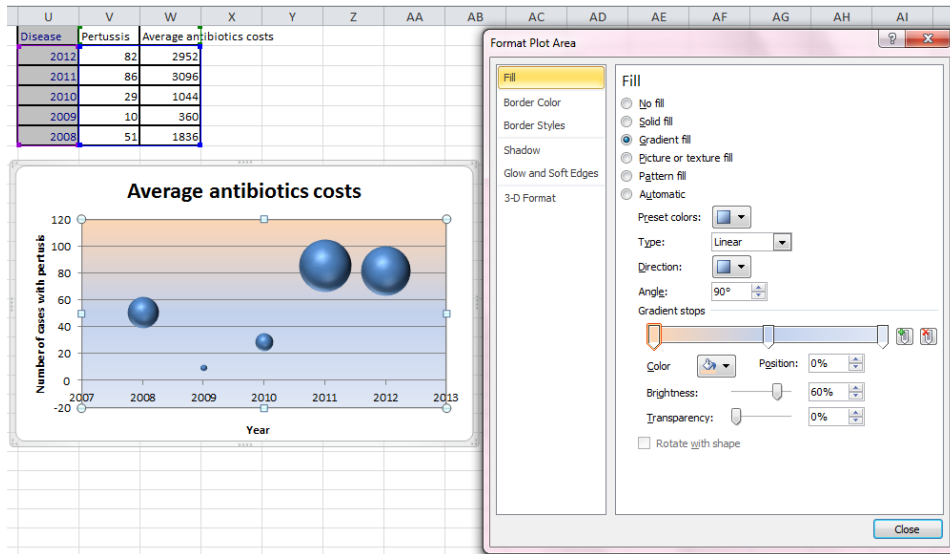
- mmm

8. Formatting the background.

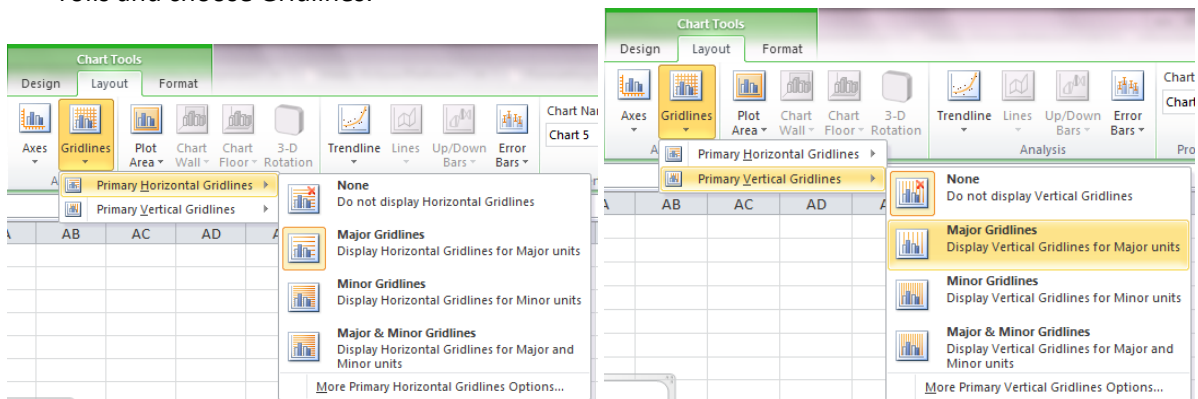
- Formatting the border: select the graph and right click [Format Plot Area – Border Color –Solid line].



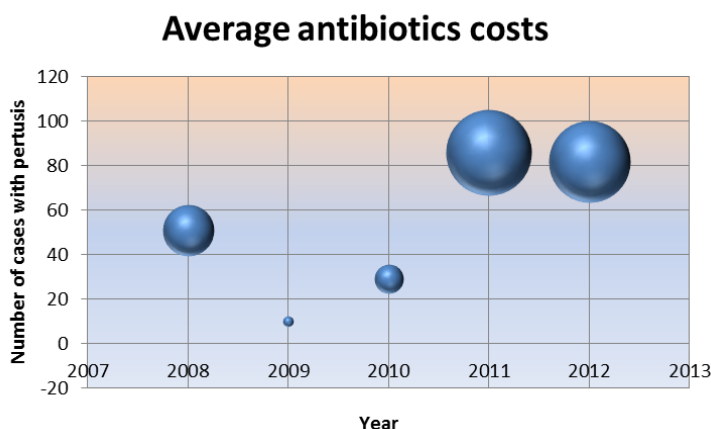
- Filling with a solid color: right click on the Chart Area (white background) and [Fill – Solid Fill] and choose the color that you want.



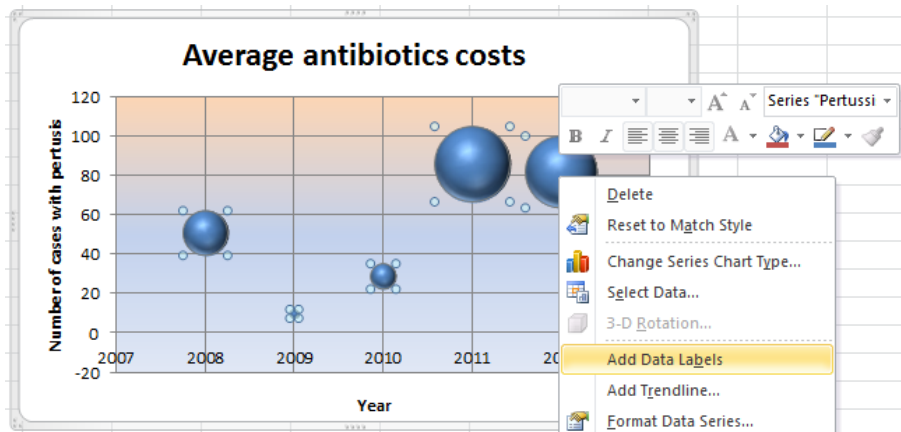
- Gridlines. Gridlines are horizontal and vertical lines that help us to see where precisely a particular data marker is in relation with the axes. The default for most chart types involves some gridlines but we can add or remove them as we wish: select the chart and go to Chart Tools and choose Gridlines.



For our example we choose to include the major vertical gridlines:



- Data labels: can be attached to data points (such as series name, category name, or value). To add labels, select first the data point to which you want to add labels and right click and choose add data labels:



If you choose Format Data Labels you will be able to display the desired label. For our example, we choose to display the Bubble Size:

