

The medical student's quick guide to making research posters

You're a medical student, graduate student, or even undergraduate student, and you may have made one or two research posters in your life, or you may not have made any yet. Most students are not very fond of this part that comes after the painstaking research you have undergone -- making a poster is time-consuming, tedious, and annoying, especially when your adviser changes it up on you AFTER you've formatted the spacing and alignment. Your woes are understood.

In this 15-minute guide, you will read about tips and tricks that can save you *hours* of your precious time. You'll also learn how to make a poster that looks so good it could actually win a contest, and hey, that's certainly CV-worthy!

Before you click anything

1. Draw out your poster by hand. It's much easier to use a pencil to make things end up where you want them than to use a mouse.
2. Change the canvas size to the CORRECT dimensions according to the submission guidelines. Having to change the dimensions later on *after* you've spaced everything out can be a major PIA. Sometimes you will be provided with a template that already conforms to the size requirements, but still double check that it's not an old template and that it meets the required dimensions! If they give you a range, start with the biggest and then scale down if you have any leftover space. It's easier to do this than to try to make it bigger after you run out of space.
3. Check to see which version of MS Office you are using. If you are a student, then you likely have access to the most recent MS Office suite through your school. Scrap your 2007 programs; the files they produce are not very compatible when you try to email them back and forth. A lot of schools have these programs available on a VPN or other server so that you can work within a browser AND access your files in the cloud at any point.
4. If you're still using your Mac from college, don't. You've been warned. Refer to number 3 above for other options. I'm sure it's fine for all other uses, but just don't use it to make your poster.

Graphical abstracts and other images

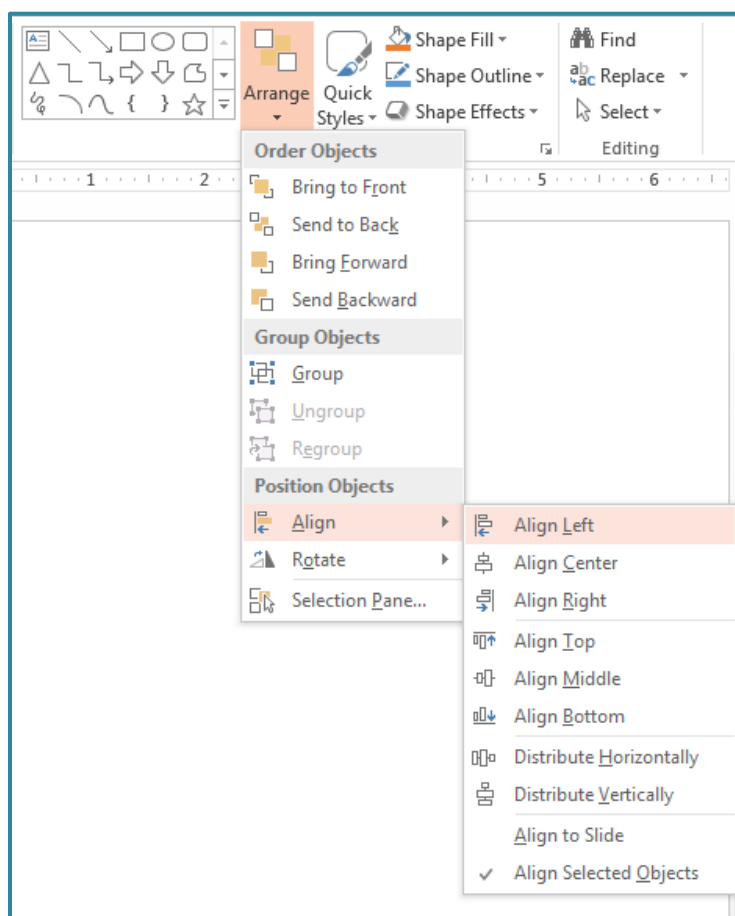
Nine times out of 10, you have too much text on your poster. If you want to win that poster contest, or at least have people understand your research, turn your text into figures! Many journals have even begun to use graphical abstracts to replace a block of text. They are beautiful, communicative, and much more enjoyable for the reader.

You can fairly easily turn a block of methods' text into a flow diagram that shows the steps you took to carry out the research. This is much more pleasing to viewers.

The auto-alignment tool

Don't waste another second of your life carefully dragging your text box around until it lines up with the dotted lines of its neighbor. Did you know there was a tool for that?! It took me a few years to find it, and I still amaze people all the time when I teach them about it. Time to share the light.

There are tons of capabilities in this section, including distribute, which equally spaces objects. This is very handy for lining up your different-sized text boxes after you've finished typing everything out.



The grouping feature

When you have to make the same changes to many objects at once, such as changing the line color of all your text boxes, there is a way to do it ultra quickly. Select all of your boxes, right-click, and select "Group." You may have used this feature before. But did you know that when you have them all selected as a grouped object and you go to change the font, background color, dimensions, or line weight that they will all change at once?! Do this to try out different

fonts and colors in a matter of seconds. Even while the objects are grouped, you can still click one of them within the group to alter it individually without having to ungroup.

Citation generators

Never hand-type a reference again. It's painfully tedious and sometimes even inaccurate. If you don't have access to citation software yet, there are free programs you can download (e.g. [Mendeley](#)) that will change your life. These are especially useful for word documents with many references, but they can certainly be used to generate your poster references section, too! Since you can use it for so many things, it's worth spending 30 minutes figuring out how to use this software.

Figures and tables

I know this is bold, but do not EVER use Excel to make another figure again. It is lifetimes easier and better to use PowerPoint to create your figures for research posters for the following reasons:

1. In PowerPoint, the figures start out with pre-labeled axes so you can see exactly where things will end up when you input your data into the chart's spreadsheet.
2. The colors are better, and they actually match the color palettes you chose in PowerPoint for the rest of your poster's color scheme.
3. If you didn't heed rule #3 in the "Before you click anything" section, there can be resolution and compatibility issues when copying over Excel charts to a PowerPoint file. Depending on the version of MS Office you have and the method you used to copy figures over, sometimes Excel figures are not editable in PowerPoint after they are copied over, so you have to go back into the Excel file, edit, then paste into PowerPoint AGAIN. Every time you want to make a change. Talk about a waste of time.
4. Unless you're doing really advanced stuff, all of the same types of charts available in Excel are also available in PowerPoint. You're not missing anything.
5. In general, PowerPoint is a good way to store all your figures for later use in manuscripts or other publications and presentations, since they aren't free-floating on some random sheet in Excel's blank space. They are much more organized and easier to find in PowerPoint slides after you've spent time away from the files.

I don't know why Excel, one of the most user-friendly, functional programs for data manipulation and analysis, is not my friend for charts. Sure, you could spend a couple of hours learning how to enter in your data correctly so you can just highlight your dataset and graph in once click, but let's face it, most med students are probably not going to go on and do a ton of research in their careers, and learning this is not a requirement for graduation.

Other tips for figures:

- Remember that figure legends need to include a title (I usually use a description of what the results are showing), the number of observations included in the dataset, the types of statistical analyses completed along with definitions of variables and scales, the types of values being presented (e.g. mean \pm SEM), any p values and the tests used to calculate them, and any descriptions/definitions of symbols if you don't include a key. It's a lot of information, but that's the only way people will really know what you did.

On the flip side, I think tables are fairly interconvertible between PowerPoint and Excel. Either way, you will have to do some minor formatting. You can easily paste cells from Excel into a pre-existing table in PowerPoint or just into some blank space on the PowerPoint slide so that a new table is created. Conversely, if you find that you need to sort your data after you've made your table, just highlight the table in PowerPoint, paste into Excel (retaining the PowerPoint formatting, not matching the destination formatting), and continue from there. For cosmetics, highlight your table and click "Design" under "Table Tools" to quickly change the color scheme.

Making it pretty

Yes, this part is important. Some poster competition judges can look beyond the colors and style, and some are influenced by the design. Spend about 10 minutes doing these things to make your final product appealing to all:

1. Choose a good color scheme. I am not an artist, but I did learn that complementary colors are usually opposites on the color wheel (e.g. orange and blue, green and red, purple and yellow). You don't want to use bright colors, but some muted versions of these pairs can look really good together if you do it right. Also, don't underestimate black, brown, or grey; they can make your poster look really sharp when used correctly.
2. Some schools require you to use a white background so that it doesn't use as much ink when you go to print it. The way I get around this is to use a colored slide background but use white backgrounds in the text boxes, since there's not much leftover space between all the boxes. Also, black text on a white background is far superior to any-colored text on a colored background.
3. Don't forget to put the school's or funding institution's official logo on the poster! These are usually provided in a template if you are given one. They also make your poster look...official.

Don't have the time or energy to do all of this?

You can always consult with an [experienced researcher](#) to help with your poster. It's also good to get a second pair of eyes looking at your work before you send it to your very busy attending or adviser; this is another great opportunity to impress them with your work rather than to *give* them more work to do!