

DATA VISUALIZATION: A QUICK GUIDE

What Is Data Visualization?

- Displays analytics in a visual presentation.
- Includes graphics, maps, charts and other images that represent data.

Types of Data Visualization

1. Pie chart.
2. Population pyramid.
3. Line graph.
4. Word cloud.
5. Network diagram.
6. Flow chart.
7. Infographic.
8. Bar chart.
9. Map.
10. Icon chart.
11. Histogram chart.
12. Chord diagram.
13. Sankey diagram.
14. Sliding scale.

Examples

Figure 1. Line Graph

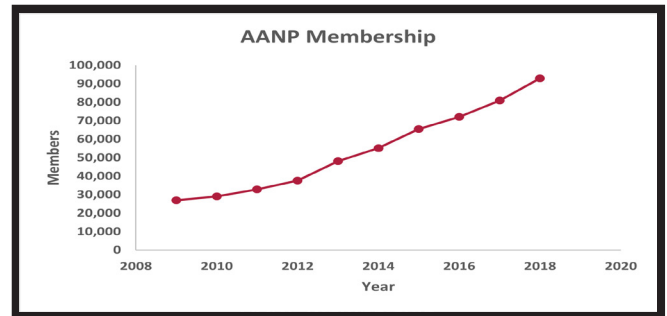


Figure 2. Map

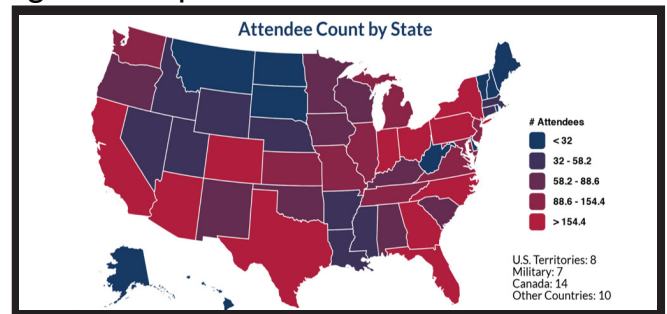


Figure 3. Infographic

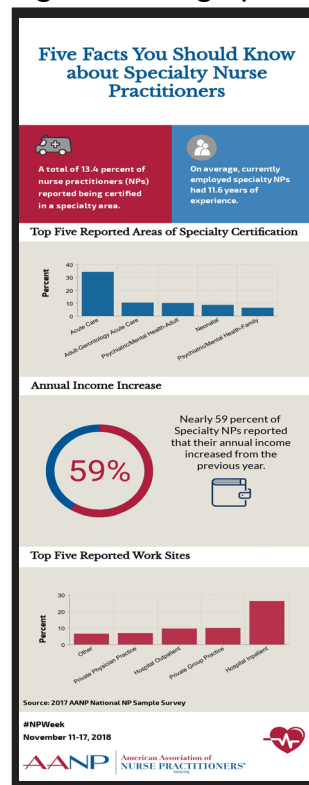
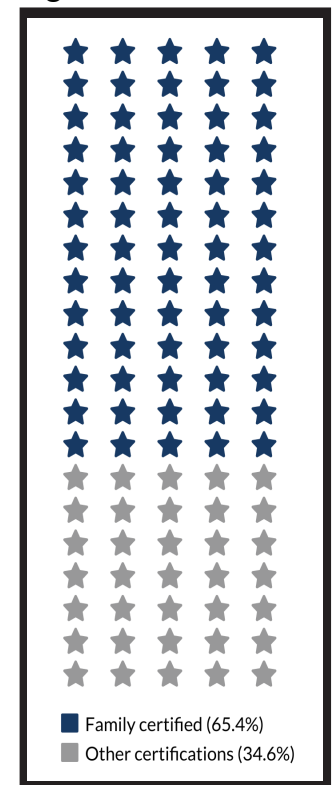


Figure 4. Icon Chart



Tips and Tricks

- Design data visualizations for your **audience**. Consider if they need a short infographic or an in-depth report. If you are unsure what your audience needs, ask them in a survey or focus group. Ask a few members of your audience to review the visualization before you finalize it.
- **Keep your visualizations simple** by avoiding 3D graphs and too many colors. A color palette is an important tool that can be used for simplicity, branding, visibility and consistency. Additionally, you can break up complicated graphs into multiple graphs that are easy to read and interpret.
- Remove unnecessary text, gridlines, pictures and icons. Do not include pictures that are irrelevant to your study findings or message. This will help you **reduce clutter** so readers can easily see and understand your visualization.
- To help simplify visualizations and reduce clutter, **use white space**, which is a negative or unmarked space between charts, images, icons and texts. This space can be any color as long as the space is empty of other elements.
- The internet contains a variety of data visualizations that are often disseminated through social media, which is why it is important to **always credit and cite all sources**. You can choose any citation style, but remember to use it consistently throughout your presentation.
- Try to focus on a **specific topic** when developing a data visualization. If you have multiple topics that you would like to address, consider creating additional data visualizations. For example, access to primary and specialty care are general topics that can be discussed in multiple infographics, diagrams and charts.
- **Emphasize important information** by bolding, increasing the size of or placing a colored background behind the text. You can also emphasize graphs by increasing their size, adding a colored border or including complementary text.
- Visualizations should follow all the rules of standard research when the data represent human subjects. For additional information, see [Health Insurance Portability and Accountability Act \(HIPAA\) and National Institutes of Health \(NIH\) Human Subjects Research Guide](#).

References

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4. Moorehead, S.A., Hazlett, D.E., Harrison, L., Carroll, J.K., Irwin, A., and Hoving, C. (2013). A new dimension of health care: Systematic review of the uses, benefits, and limitations of social media for health communication. *Journal of Medical Internet Research*, 15(4), 1-16. Retrieved from <https://doi.org/10.2196/jmir.1933>.
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