

Why Demographers Need to be Data Visualization Experts

Erica Nybro, DHS Program | Amanda Makulec, JSI | Libby Skolnik, Johns Hopkins

Leading thinkers in the visual presentation of information, such as graphic designer [Nancy Duarte](#), have highlighted the challenge of balancing the volume of information available with what our brains can comprehend. Speedy and brief communications mediums have reconditioned people to prefer consuming information in small chunks, like getting their news from Twitter and skimming blogs between meetings. **Today, content not simplified to key points seldom reaches key decision makers.**

The result? Inefficient communication has become ineffective communication. And researchers, accustomed to writing precise, long form journal articles, are being forced to think outside their comfort zone and embrace new ways of sharing research in easy-to-tweet sound bites and visuals to **make sure the valuable findings are used by policy makers and decision makers.**

Small and easily consumable bits of information are most effective when portrayed through or accompanied by visuals. Articles that contain images get 94% more views than articles that don't—not surprising given that 65% of the US population are visual learners and visuals are processed 60,000 times faster than text (Duarte 2014).

Who's on your visualization team?

-  Researcher
-  Technical Expert
-  Graphic Designer
-  Communications Expert

While it's great to build your own skills, enlist a team when you're working on a big project, like a journal article and dissemination plan.

A Simple Design Process

Identifying who you want to engage with your research findings (audience) and crafting a succinct data story are essential first steps to designing great visualizations. And don't forget the importance of a dissemination plan, including social media & web.



By learning simple data visualization design principles, researchers can expand the reach of their learning.

General Tips:

- › Graphs should highlight a significant finding; emphasize what matters
- › Graphs should be simple: Just because you *can* squeeze a ton of information into a graph or infographic does not mean you should.
- › Graph type should correspond to data being shown (i.e. pie charts for percent distributions)
- › Include contextualized or comparison data
- › All "chart elements should work together to reinforce take away message"
- › Include visualizations with corresponding text so reader does not have to flip back and forth

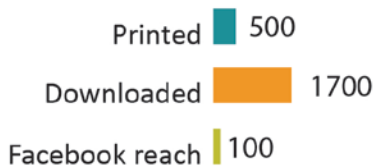
Stephanie Evergreen & Ann Emery have created a checklist for designing visualizations that provides a great summary of best practices. You can access the full checklist (<http://tinyurl.com/DataVizChecklist>) and some of our favorite tips are included here.

Layout Tips:

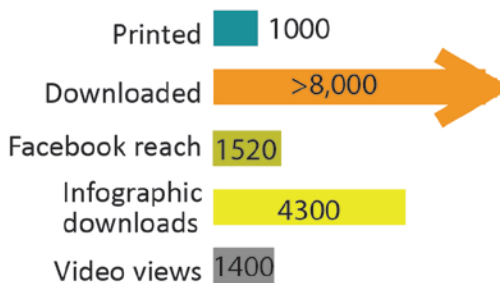
- › "Proportions are accurate"
- › "Data are intentionally ordered"
- › "Axis intervals are equidistant"
- › "Graph is two dimensional"
- › Display is free from distracting decoration
 - › If you use Excel, remove the extraneous details of the default options (gridlines, color, etc.)

An Example: Increasing DHS Analysis Reach

Typical DHS analysis



DHS analysis with data viz strategy



Check out
DataVizHub.co
for more resources!

Favorite Data Viz Design Tools

- Looking for **the master guide for data visualization and design**, from how to plan for great visualizations from the data collection through to the execution? Check out the [Data + Design](#) free eBook, a wonderful, comprehensive resource.
- Want to **design interesting graphs, charts, and custom icons** to use in presentations and reports? [Piktochart](#) is one of our favorite viz design tools. It has everything from infographic templates to tools for creating icon matrixes (that are difficult to hack in Excel).
- Interested in **improving your visualization and design skills using the ubiquitous Microsoft Excel**? [Ann Emery's Excel Video Tutorials](#) are fantastic resources.
- Aiming to **improve the visual design of your reports and presentations** to present a mix of qualitative and quantitative information more visually? Check out Nancy Duarte's [Slidedocs](#) guide and templates.
- Want to **be inspired, see great examples, and learn new tricks and approaches** to visualization? [Storytelling with Data](#), [PolicyViz](#), and [Information is Beautiful](#) are favorite bookmarks on our browsers.