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DECEMBER 2017

TOPIC: LET YOUR DATA DO THE TALKING

SARAH PRICE, NIHB

TRIBAL PRESENTATION: CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION

CARRIE SAMPSON, QUALITY DIRECTOR

National Indian Health Board

TALC Webinar Protocols

- The meeting will be recorded.
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- Use the chat box anytime or the phone line for questions during the Q&A
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Let Your Data do the Talking

Effective ways to use your data to support public health accreditation and quality improvement initiatives

Sarah Price
Public Health Associate
National Indian Health Board
TALC Webinar
12/8/2017

Overview

- We will Discuss:
  - Prioritizing Data
  - Catering Data to your Audience
  - Selecting Charts and Graphs
  - Using Data to Tell a Story

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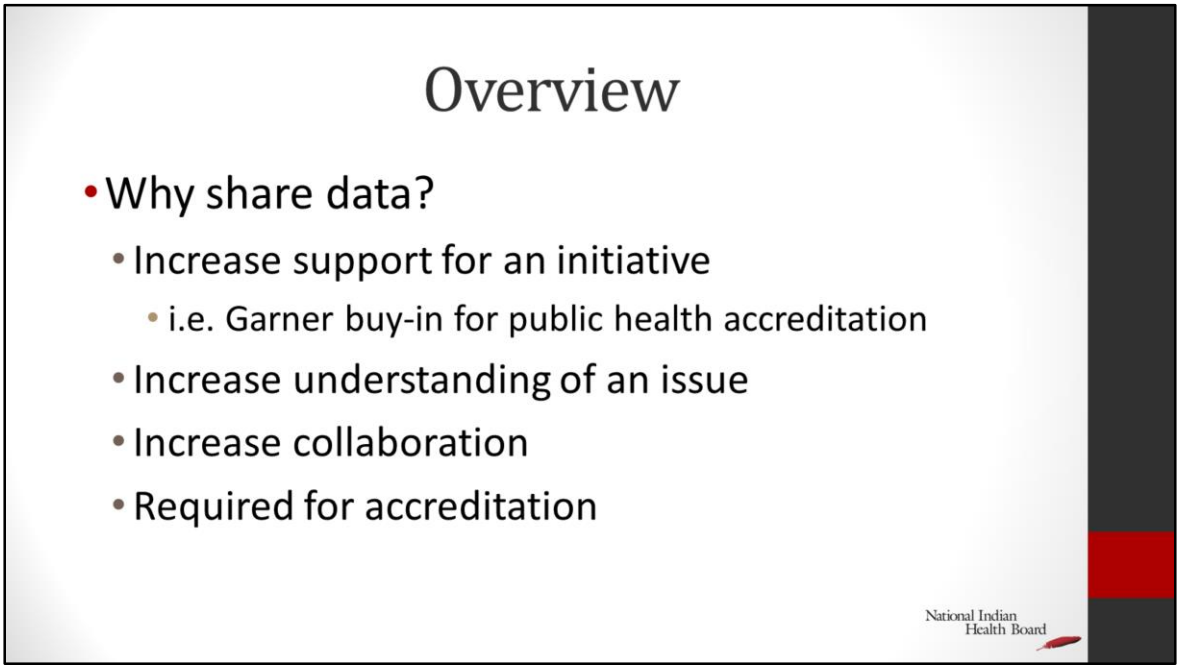
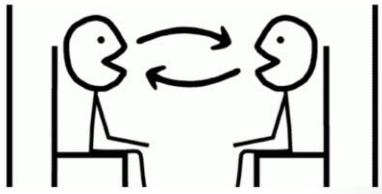


Our discussion today will generally center on taking data from an assessment like CHA and using it to advance to the next step.

Required to share data with stakeholders, partners, and community at large as per PHAB accreditation (standard 1.1, 1.3, 1.4, 3.2)

Types of Data

- Data is generally split into two categories:
  - Quantitative Data
  - Qualitative Data



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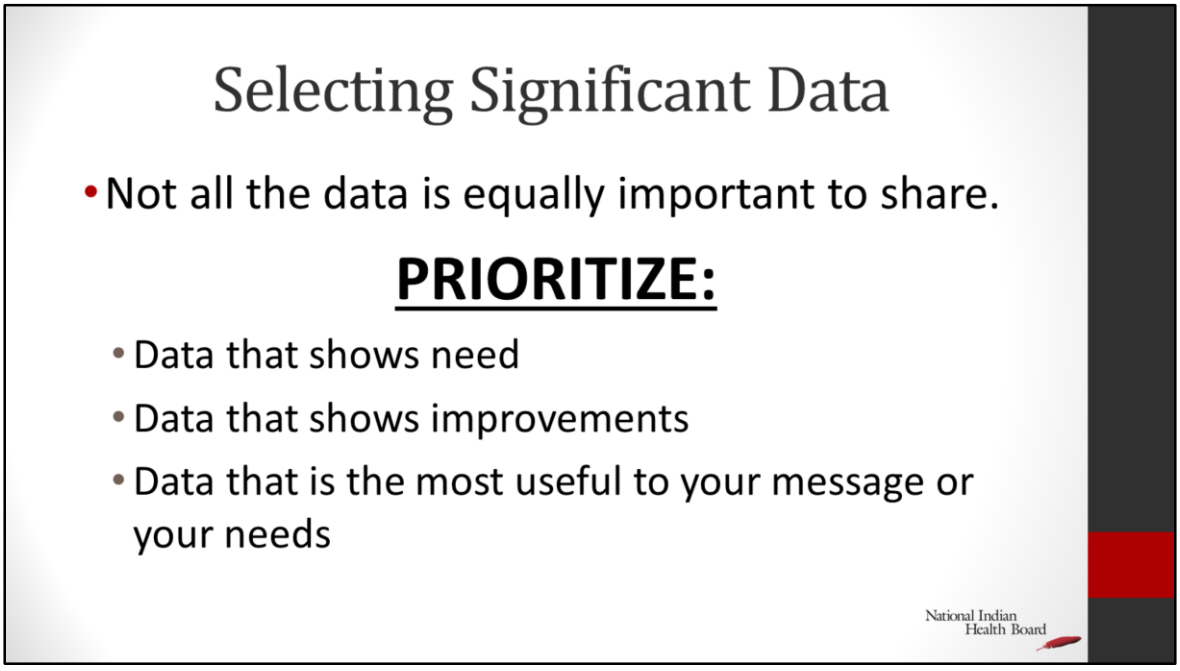
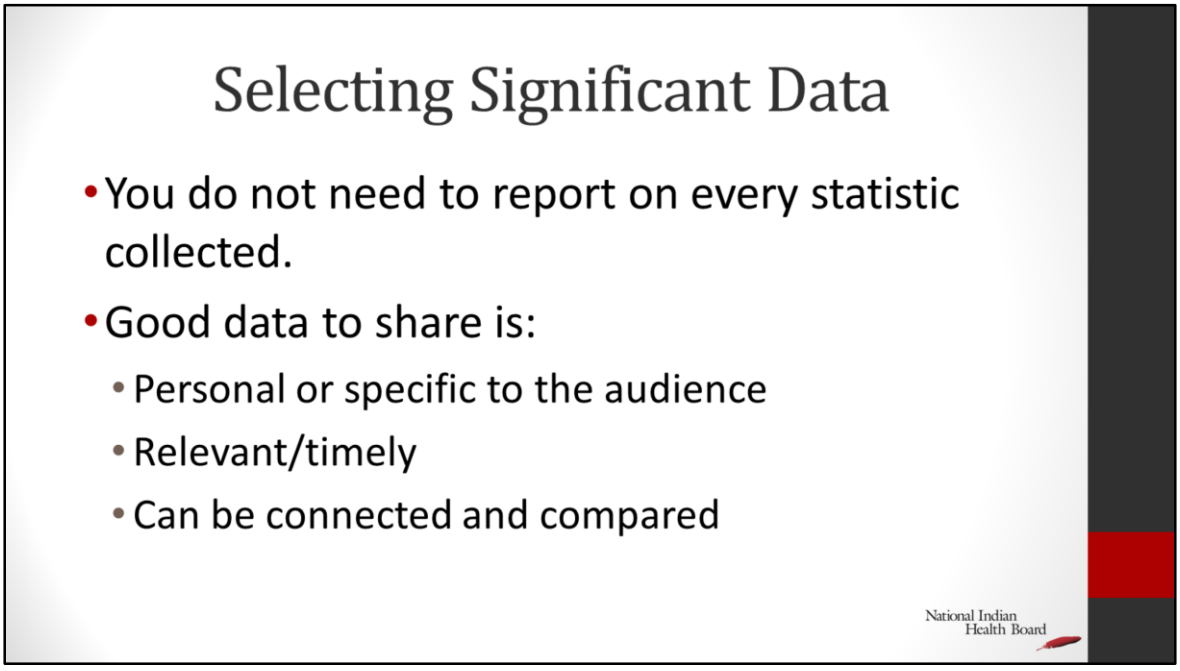


Not all data is equally important to share. Data that shows "business as usual" may not be as interesting or useful as data that shares a major success, improvement, or need. You should think about your "story" when selecting data- what are you trying to convince the audience of? What you will convey. This, of course will depend on the audience.

You don't want to overwhelm people. If necessary, you can always put additional data in an appendix, however try to limit what you are sharing to things that will make an impact.

For accreditation, you may want to focus on what is most important for quality improvement efforts or your CHIP



To clarify, you don't need to report on every statistic collected unless it is a requirement of a report. When sharing data in less official ways, try to cater what you share.

Good data will be something the audience cares about.
It will be relevant to the current environment, and will be timely
Good data also can often be connected and compared- connected means you can show WHY something is where it is. I.e. comparing diabetes rates to rates of exercise. Comparing data means you can show how other groups might differ, or face similar problems

There are a number of tools that can help you prioritize data. One is the self assessment that Tribes complete, which helps you see where there is room for improvement. Another is the readiness assessment. You may have your own internal tools to help as well, such as a prioritization matrix. At the end of this slideshow, I will share the links to some of these resources.

Knowing your Audience

- Try to anticipate how your audience will react, and prepare for those reactions.

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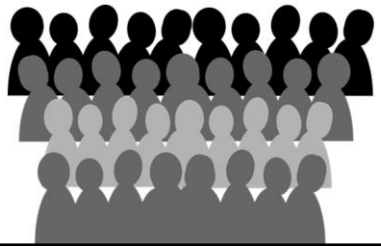
Based on who you are presenting to, and what is your goal?

Knowing your Audience

General Public-

- May have little prior knowledge of the health topics or public health accreditation.
- May have lower health literacy.



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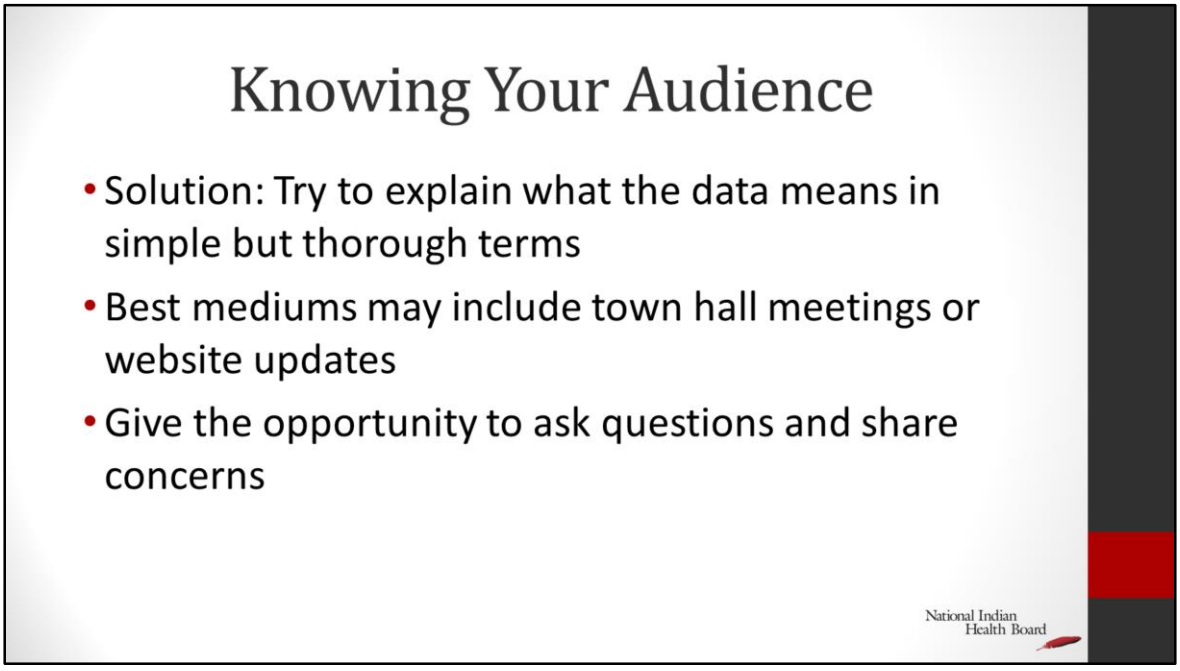
Lower health literacy- may not be able to understand complex health information, or read complicated charts and graphs



Town hall- allows you to explain information and answer questions/ invite interactions
Website- easy and accessible to community

Ex. Tell a human interest story; convert percentages and ratios to the # of people affected

Knowing your Audience

Sponsors/Partners-

- Have prior understanding of some aspects of the project.
- Solution: Provide details about how data effects their organization.
- Best mediums may include a formal presentation, round table meeting, or formal report/report summary

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Knowing your Audience

Policy Maker-

- Busy and deal with many issues.
- Solution: Explain data briefly and succinctly, with sufficient background for them to understand.
- Focus on evidence, and clear recommendations.
- Best mediums include human interest stories that they can share, and policy briefs

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Ex. Human interest stories; policy briefs

Knowing your Audience

Program Staff-

- Carry out day to day tasks and need regular updates.
- Solution: Focus on progress, and point out how it relates to their position. Highlight positive results impacted by the program.
- Best mediums include an agency newsletter or a department meeting

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Knowing your Audience

Program Manager/ Director/ Administrators-

- Leads the project, oversees day to day, and makes decisions.
- Solution: Promote data in a way that is efficient and encourages decision making.
- Best mediums include a formal presentation or executive summary .

https://www.cdc.gov/dhdsp/pubs/docs/cb_december_13_2011.pdf

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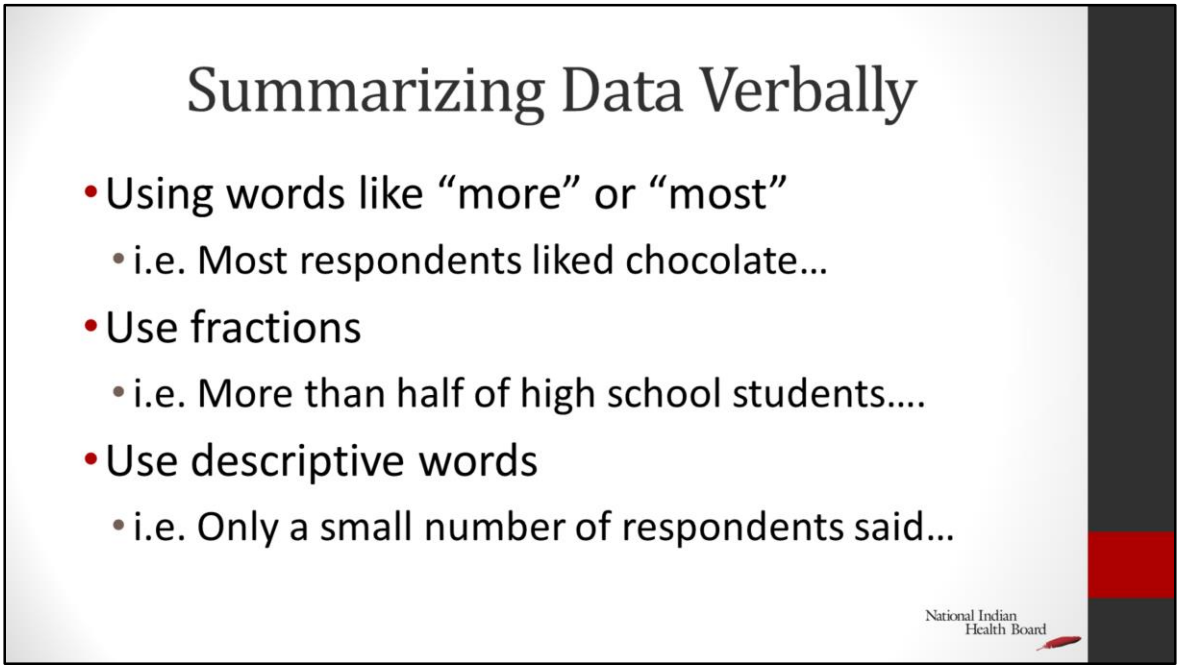

Insure your language is interpreted correctly; for example the difference between "more than half" vs "slightly over half" changes how the audience interprets data.

Choosing Charts and Graphs

- Why use charts and graphs?
  - Lend visual interest to written material
  - Draw eye more than blocks of text
  - Emphasize most important points
  - Summarize information
  - Help readers understand complex information
  - Replace lengthy explanations

CDC TRAIN Creating Easier to Understand Lists, Charts, and Graphs

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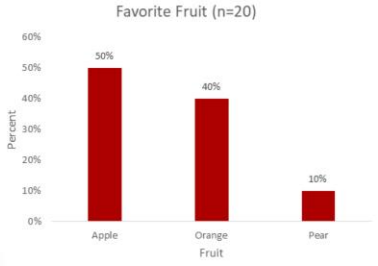
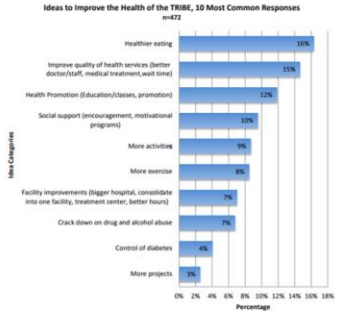
Choosing Charts and Graphs

- Column/ Bar Graph- Used to compare different values, changes over time, or compare how groups differ.
- Column-keep under 7 categories, bar can be higher





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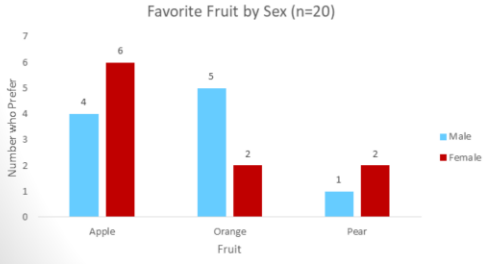
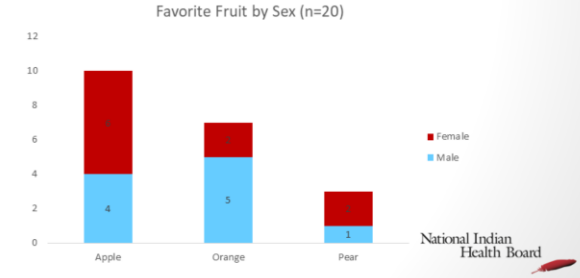
Column graph: Data is easiest to read if it goes from highest to lowest in most cases
Simple is best- get rid of shadows, lines, etc.
It can represent frequency or percentage- these graphs both represent percentage, however visually graph would look the same with frequency although axis and data labels would be in frequency

Bar Graph- this is able to capture more categories of data in a way that feels less cluttered. However, based on the audience it may be more effective to choose the most significant data. I.e. when speaking to public you could focus only on most important traits, or if speaking to a workgroup, highlight the traits that you may have prioritized.

Choosing Charts and Graphs

- Comparing Groups with Column/Bar Graphs
  - Clustered Column- Compares groups side by side to highlight differences.
    - Great for showing health disparities
  - Stacked Column- Shows the composition of a group. Emphasis on overall value. May be harder to photocopy in black and white.

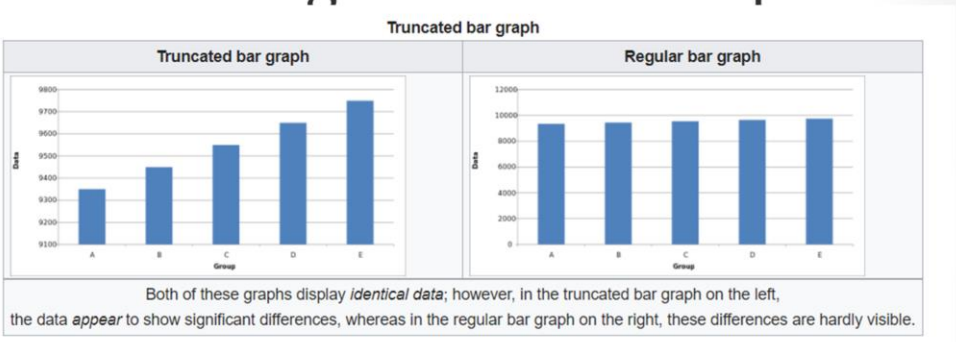




While these are both really showing the same thing, choosing between them depends on how you want the audience to understand the data. First shows a comparison- the emphasis is on how the groups differ. Second shows composition- the overall value is more apparent, with an indication of who is in the group. Both of these can be in a column or bar graph format.

Depending on how the document will be distributed, remember that the stacked graph may be harder to photocopy in black and white. When photocopying, make sure colors are different shades with enough contrast.

Choosing Charts and Graphs



https://en.wikipedia.org/wiki/Misleading_graph

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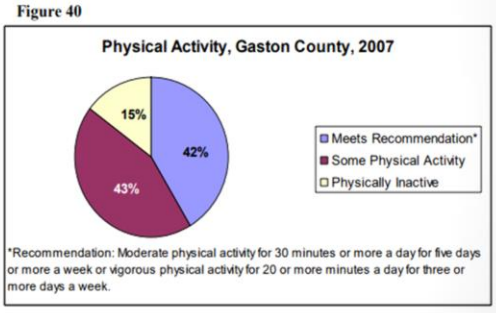
Based on the format of your graph, data can look different. These two graphs show the same data. The first is truncated to save space (y axis starts higher and ends lower), which changes the visual. Make sure you feel your graphs really represent the data so that it will be interpreted correctly, even by those who are less health literate.

Another issue is not standardizing the size of graphs, which can lead to two graphs looking vastly different. Try to standardize the size throughout the same document. For instance, long and skinny graphs will look very different and may make data look higher than it is due to being stretched out. Word, excel, and PowerPoint have size boxes in the ribbons, where you can make sure graph size is standardized.

Choosing Charts and Graphs

- Pie Graph- Best used to compare parts of a whole. Often used as an alternative to a column graph.
  - Benefits: Easier for audience with low health literacy
  - Limitations:
  - Harder to photocopy in black and white
  - Difficult to interpret similarly sized slices
  - Harder to visualize data in side by side pie charts.



Gaston County CHA, 2007

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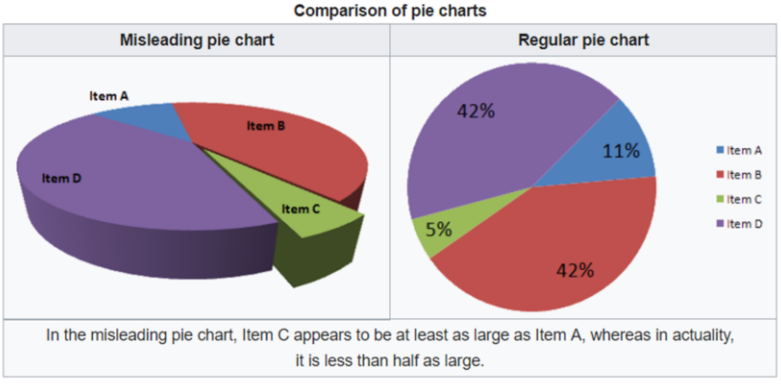
Pie graphs are an alternative to column or bar graphs. Generally, they are easier for audiences with low health literacy to read. However there are more limitations.
They may be harder to photocopy in black and white.
Generally, if slices are similar sizes it might be harder to interpret the data (although including the percentage directly on the chart makes it easier)
They work best when there are large differences in data.
It is harder to compare data side by side for comparisons.

Choosing Charts and Graphs



https://en.wikipedia.org/wiki/Misleading_graph

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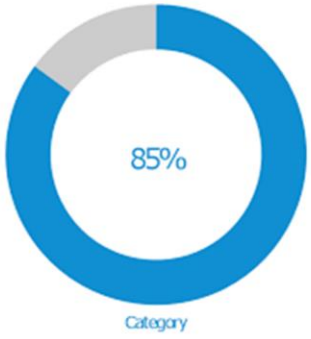
In some cases 3D may be more appealing- however balance this with the fact that 3D may skew perception of data.

In this graph you can see that C and A look similar in the first graph, but C is less than half the size. Generally, simpler is better.

Even though adding data labels to the 3D graph might eliminate some confusion, the visual may still leave a false impression with the audience.

Choosing Charts and Graphs

- Donut Charts- basically a pie chart, but you can use multi-levels of data and put text in the center.



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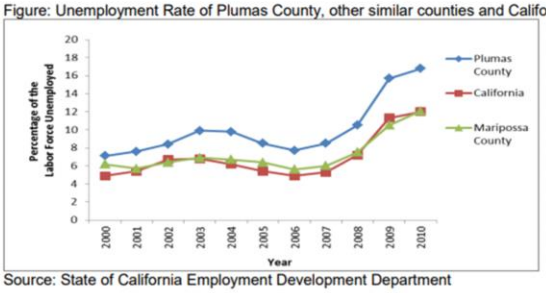
Choosing Charts and Graph

- Line Graphs- Relationship between 2 variables. Generally used to show changes over time

Figure: Unemployment Rate of Plumas County, other similar counties and California



Source: State of California Employment Development Department

http://www.countyofplumas.com/DocumentCenter/View/9455

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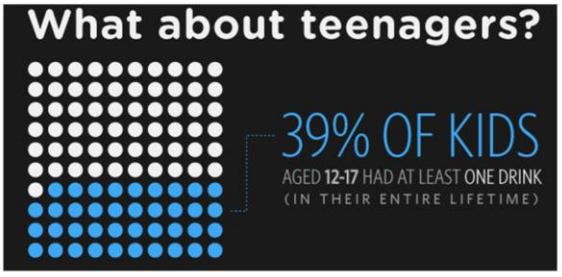
Line graphs will show the relationship between two variables. Generally, they show change over time (variable 1) and another factor (Unemployment, variable 2). Avoid using many lines in the same graph- particularly if you are photocopying in black and white.

Other Graph Ideas



https://visual.ly/community/infographic/other/visualizing-alcohol-use

For less formal reports:

Keep it simple and visually enticing.

Translate complex data into simple messages that tell a story.

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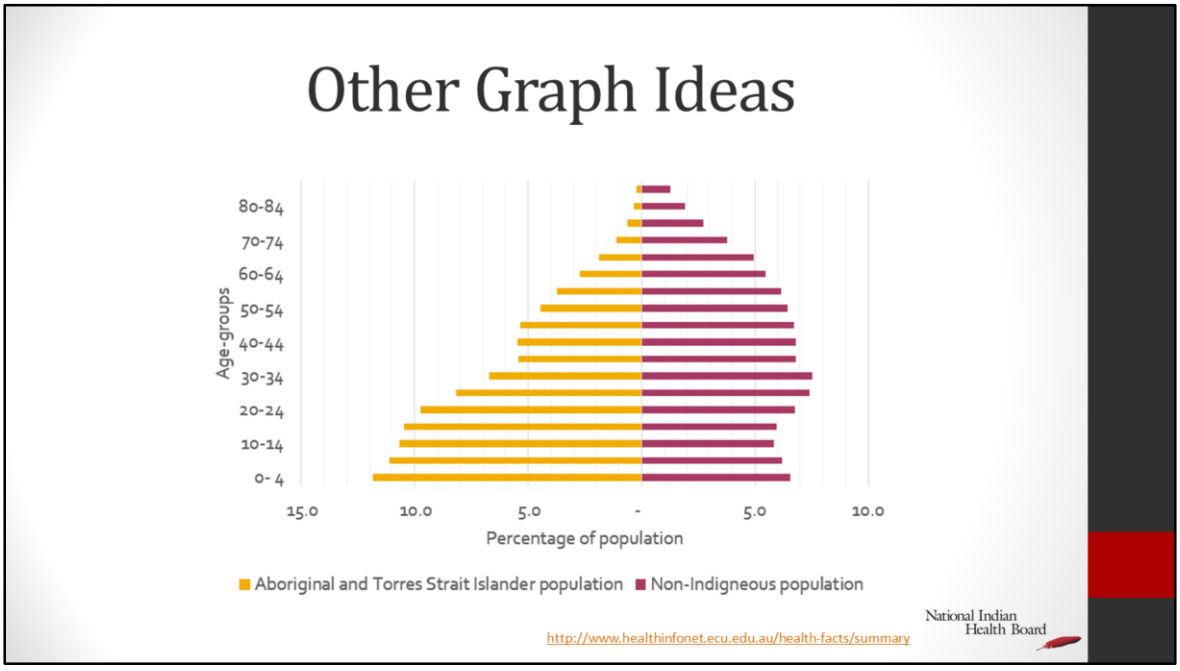
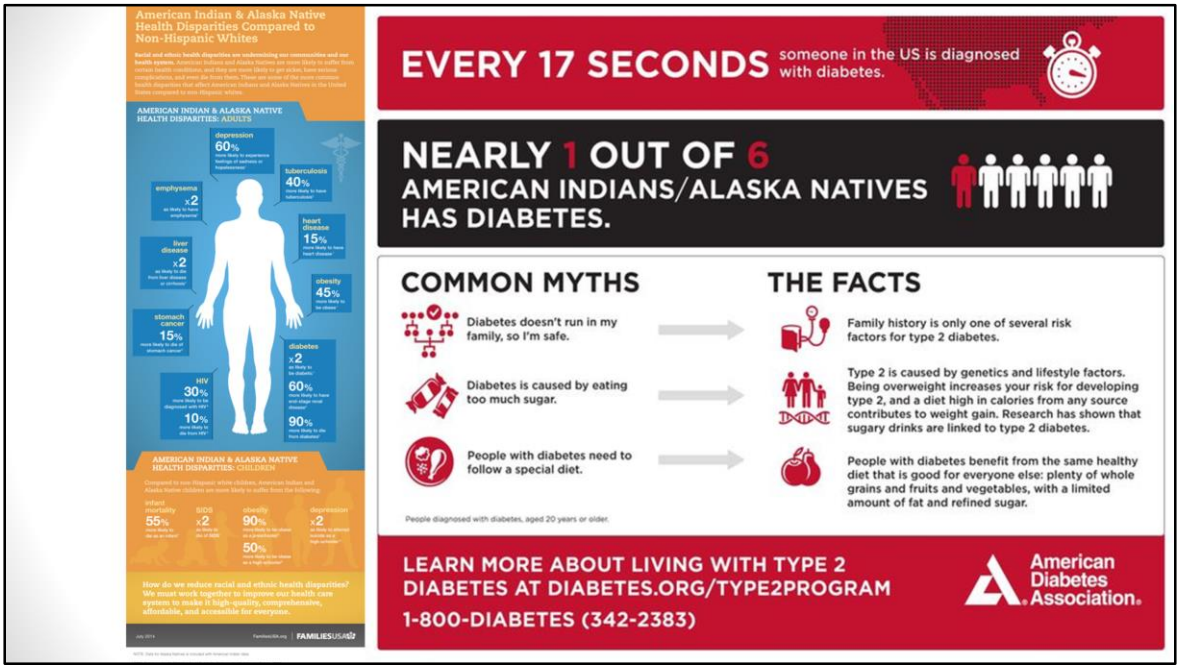
This chart is a good visual way to show a single percentage. This takes the most important prioritized data (kids drinking) and displays it simply and clearly.

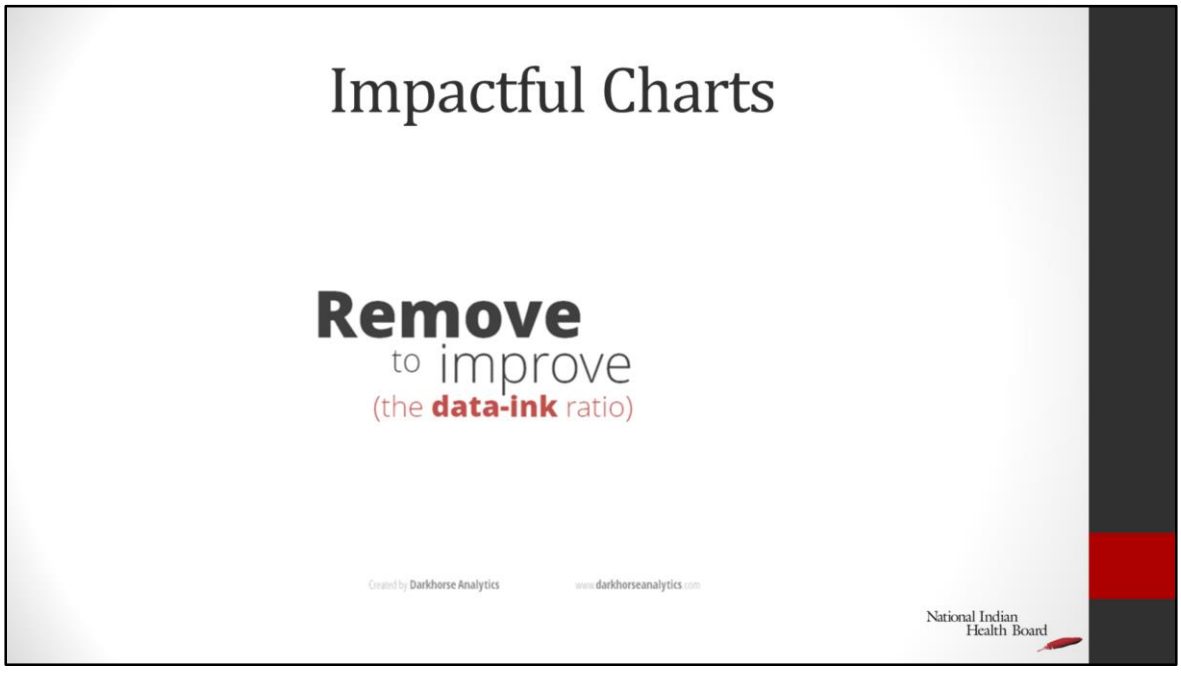


Two-way bar graph can show a shift towards a higher percentage of a particular outcome. This shows percentage of population in each age group based on indigenous vs non indigenous people. Easy to see that indigenous population is younger than non-indigenous.



Infographics- less formal than graphs, find visually appealing ways to represent data. Generally involves choosing the highest priority data to share.

For instance- first graph diagram reports one percentage per disease disparity, and makes them more visually appealing by including image of person.
Second pictograph shows picture representation of 1 out of 6 AI/AN- this makes it very easy to understand the data. Pictographs also may hold more emotional power than raw data.


Impactful Charts
Remove
to improve
(the data-ink ratio)
Created by Darkhorse Analytics
www.darkhorseanalytics.com
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Choosing Charts and Graphs

Table 35. Percentage of AI/AN adults who reported eating 5 or more fruits and vegetables daily

	AI/AN Total	AI/AN Men	AI/AN Women
	% (sample size)	% (sample size)	% (sample size)
2002	14.1% (952)	11.9% (422)	15.9% (530)
2010	15.9% (946)	13.9% (405)	17.6% (541)
2011	9.3% (899)	8.2% (405)	10.2% (494)
2012	11.8% (912)	11.6% (411)	12.1% (501

The Community Food Survey (CFS) explored barriers to healthy eating. In Table 36, of the 149 respondents, EBCI members reported the following barriers to eating 5 or more fruits and vegetables daily.

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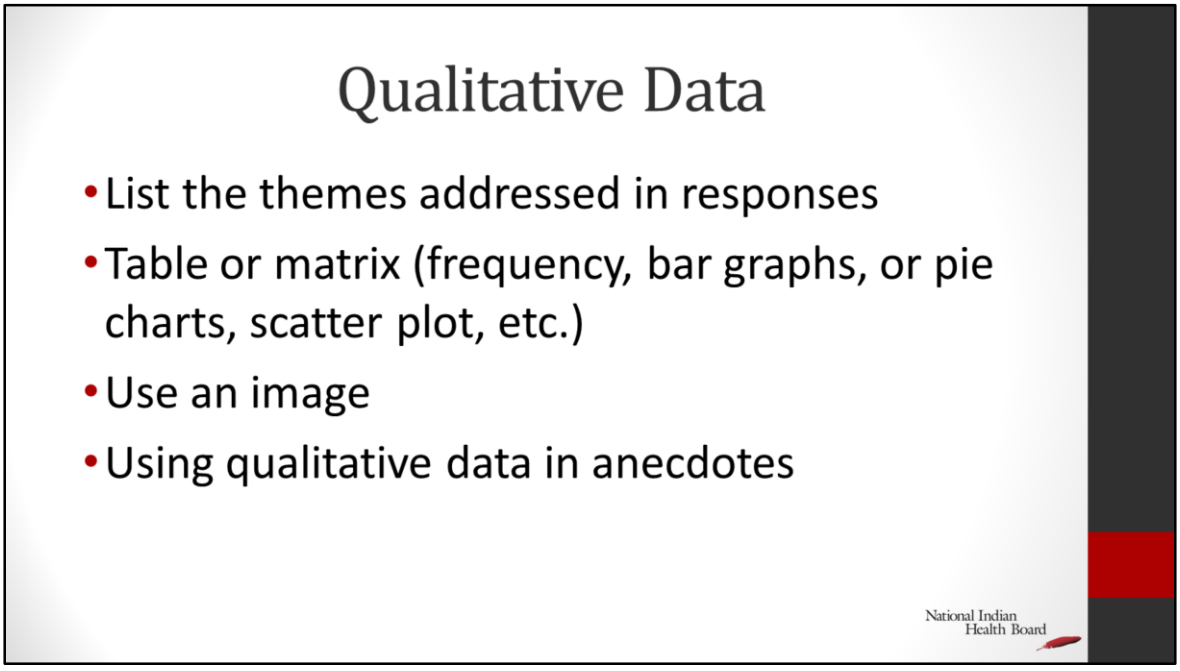
Sometimes, tables are the most appropriate way to display data, particularly if you are dividing it by multiple variables.
For example, for a scientific report, you may want to include all data. For a less formal report, you may just include the most important statistics.

Appendix can also include all less impactful or more detailed information.

Having different colors to differentiate columns/ rows can make the chart easier to read.

Leave white space, prioritize significant information, and avoid including too much information.



List themes in responses- you can interpret data based on overarching themes. One way to represent thematic data is to just report the most common themes or sentiments displayed.

Using a table or matrix to represent data, similarly to how you would graph quantitative data. If you can evenly divide data into categories, you may report the frequency someone responded a specific way using different graphs.

Using an image that represents the general sentiment of responses may be a visually appealing way to represent data.

Qualitative data may also be very useful for developing anecdotes. Anecdotes may be used to support quantitative data, or on their own to represent individual's perception of an issue.

Qualitative Data Graph Idea

http://dhss.alaska.gov/dph/Pages/default.aspx

www.shutterstock.com · 361374719

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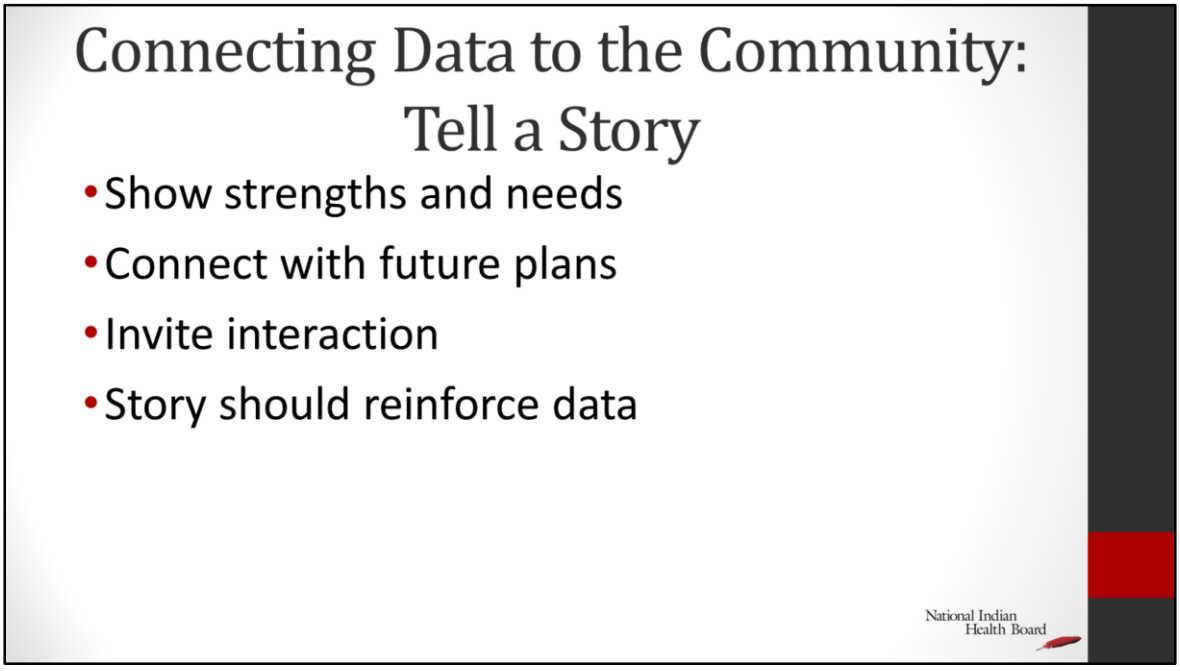
This is a fun and appealing way to present words that may be more common in written responses.



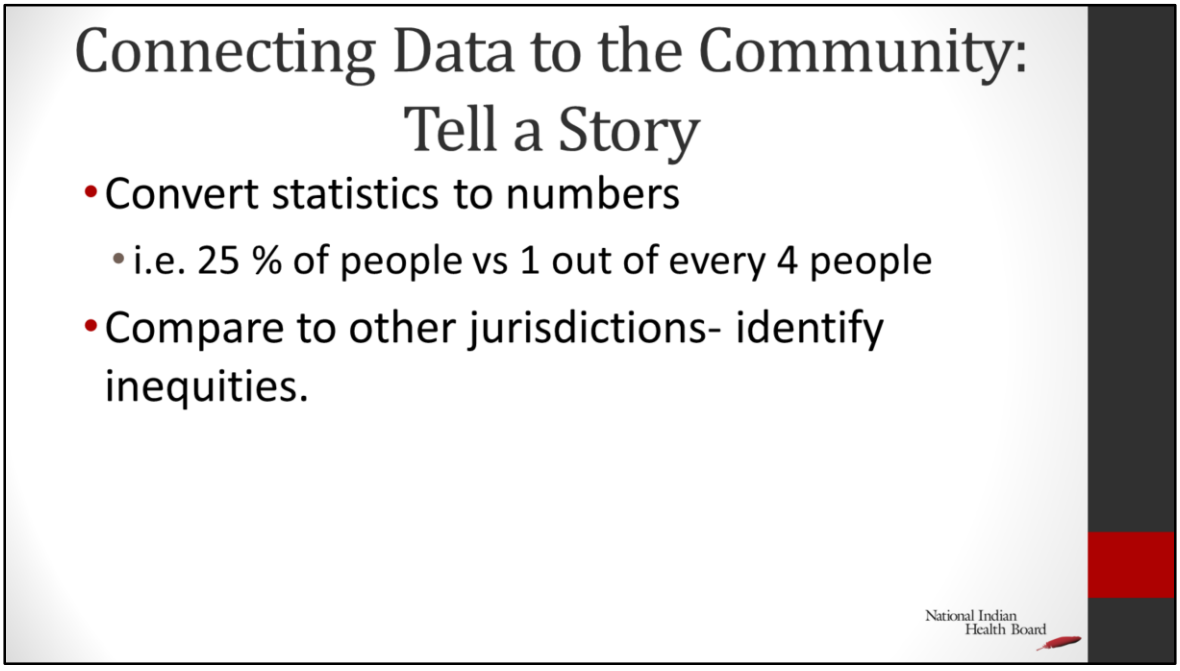
Your story should show the strengths of your program and the needs of your community. Emphasize and prioritize your strengths (accomplishments) and needs to insure data is relevant and important

Connect data with your CHIP or other QI activities. Gives the data a purpose, and reinforces that your plan is driven by evidence that it is needed, or that it will be effective
For instance, you are planning on implementing a program that promotes traditional and healthy food. Data may show that programs to promote healthy foods are needed due to low rates of eating fruits and vegetables. Data may also show evidence that the community would be interested in a program that focuses on traditional food. This community interest can be used to support the implementation of the program.

Invite the audience to ask questions. Give them a method to interact with the data.

Anecdotes can be powerful in combination with data- you can tell a story
i.e this person struggled with diabetes because x y z, then connect with the data to show how many others also struggle with diabetes. This emphasizes that the

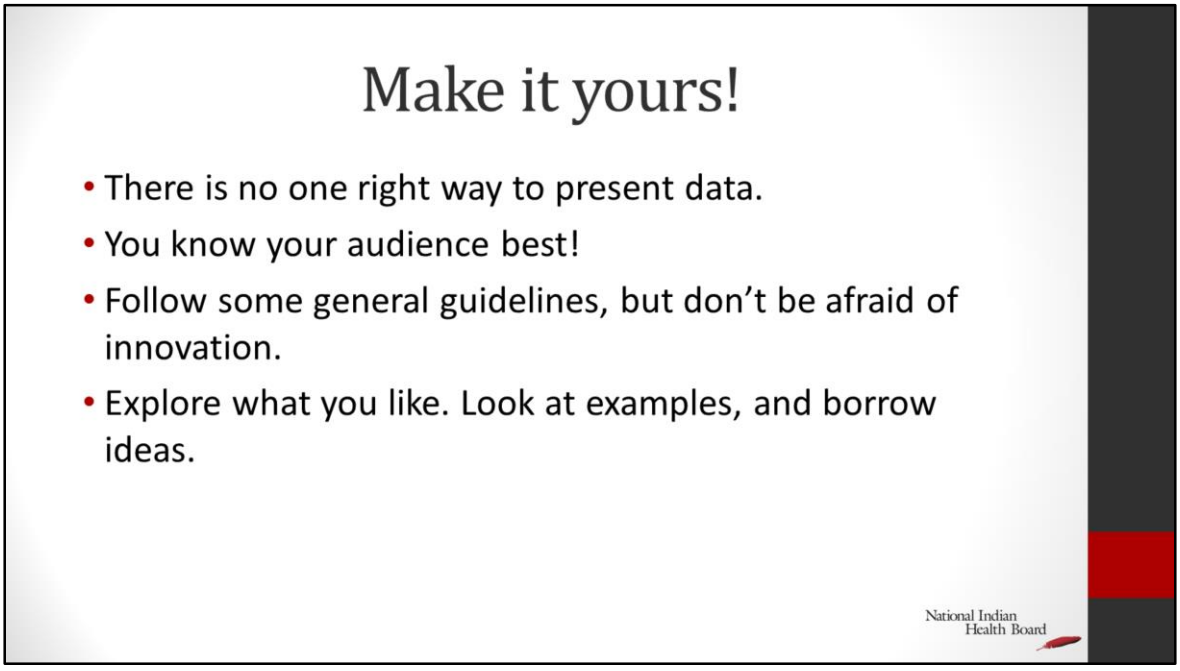
anecdote is just one of many stories that you could share.



Some ways to make your stories more effective:

Some people may visualize numbers in different ways. While 25% may seem abstract, or low, 1 out of every 4 people is more personal and easier to visualize

Compare to other jurisdictions- can show how well you are doing, or the specific challenges your community faces



Don't be afraid to ignore rules:

i.e. an innovative idea is to use a local artist's image in your graphs. Although is not "simplified", this can draw community interest and encourage a feeling of ownership over the data.

The list of graphs included in this presentation are not comprehensive- search online for other ideas to present your data.

Resources

- CDC Reporting Evaluation Findings to Different Audiences
- Resources for Prioritizing Health Problems
  - NACCHO Prioritizing Health Problems
- Creating Easier to Understand Lists, Charts, and Graphs
- Data Visualization: Choosing the Right Chart Type
- NACCHO High Quality CHA and CHIPs
- NIHB Examples of Tribal CHA and CHIPs

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Contact

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Upcoming Trainings/Events

The Open Forum for Quality Improvement and Innovation in Public Health: March 29-30, 2018

Registration is now open!

Register by February 16, 2018

Public Health Institute Training (PHIT)

June 26-27, 2018 in Atlanta, GA

For more information, click here

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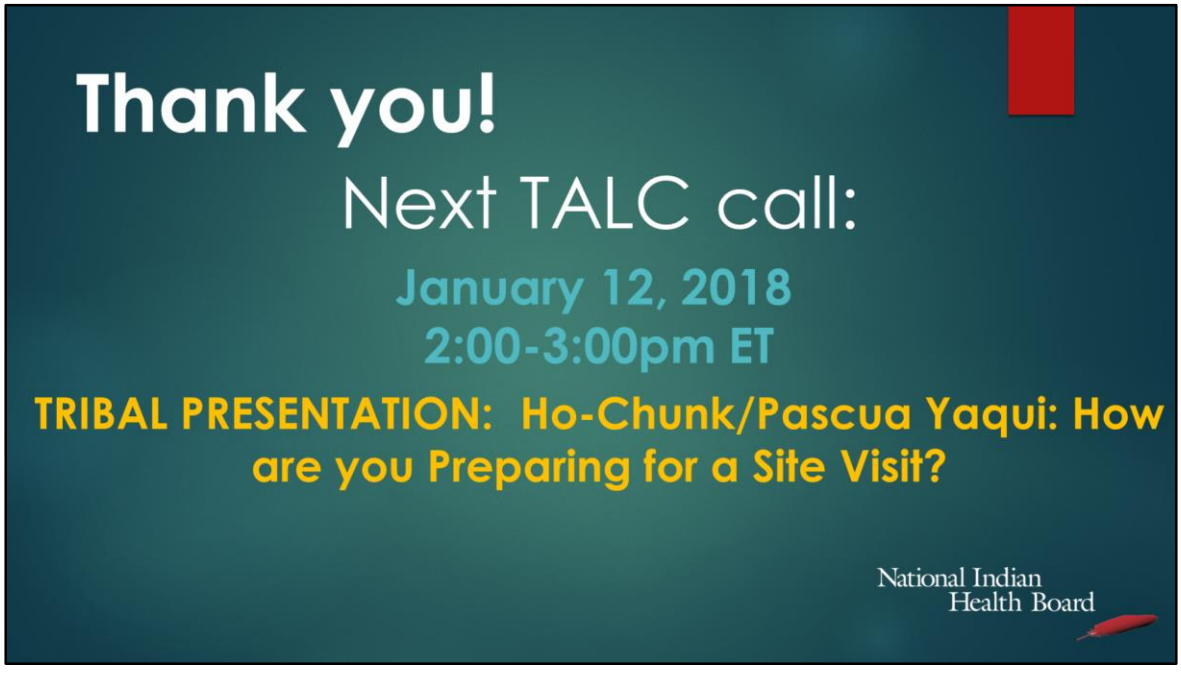
Thank you!
Next TALC call:
January 12, 2018
2:00-3:00pm ET
TRIBAL PRESENTATION: Ho-Chunk/Pascua Yaqui: How are you Preparing for a Site Visit?
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