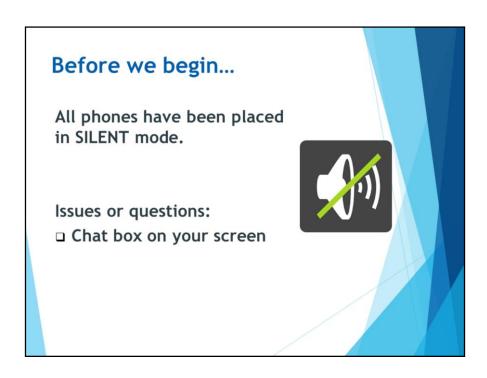


Welcome to today's Coffee Break presented by the Applied Research and Evaluation Branch in the Division for Heart Disease and Stroke Prevention at the Centers for Disease Control and Prevention.

We are fortunate to have **Mark Rivera** as today's presenter, he is a **Health Scientist** on the **Evaluation and Program Effectiveness Team**.

My name is **Ashley Marshall** and I am today's moderator. I am an **ORISE Fellow** on the **Evaluation and Program Effectiveness Team** as well.



Before we begin we have a few housekeeping items.

All participants have been muted. However, to improve audio quality please mute your phones and microphones.

If you are having issues with audio or seeing the presentation, please message us using the chat box.

If you have questions during the presentation, please enter it on the chat box on your screen. We will address your questions at the end of the session.

Since this is a training series on applied research and evaluation, we do hope you will complete the poll and provide us with your feedback.

Disclaimer: The information presented here is for training purposes and reflects the views of the presenters. It does not necessarily represent the official position of the Centers for Disease Control and Prevention.

MODERATOR:

The information presented here is for training purposes and reflects the views of the presenters. It does not necessarily represent the official position of the Centers for Disease Control and Prevention.

So, without further delay. Let's get started. Mark the floor is yours.

Learning Objectives Potential qualitative data sources Strategies to enhance data quality A range of qualitative data displays Options for organizing within and across data displays

- Hi everyone, thanks for joining today's coffee break
- In the time we have, I'll touch on
- Some sources of qualitative data and approaches for helping ensure their quality
- I'll briefly review some options for displaying these data
- And some ways to organize qualitative information within and across displays.
- [Next Slide]



So to start out, let's briefly turn to some sources of qualitative data.[Next Slide]

There is Often Plenty of Qualitative Data Newly proposed data Some of the data that may already exist: · Existing surveys, assessments, forms, interviews, collection might include: focus groups, and observations Surveys, assessments, and forms TA tracking, training evaluations, other reporting Interviews and focus groups systems, interviews... Observations Meeting summaries · Proposals, plans, reports, frameworks Policies and guidelines Program recipient feedback Success stories

- You may be wondering what forms of qualitative data you might collect.
- In some cases you might ask respondents to write short narratives to open-ended
 questions--for example, on a survey which may be a great approach if you are trying
 to include information from people who are scattered across a large area or just
 seeking input from a lot of people quickly and at a relatively low cost.
- Or you might record and analyze respondent's comments provided during interviews or focus groups.
- These in-person approach can help ensure participants understand the questions—
 and you can also follow up to explore topics in greater depth just, to name a couple
 of advantages over a survey. But interviews and focus groups are also relatively time
 intensive and costly.
- There are a range of other types of qualitative data including observations, document reviews, and so on.
- And while you may decide there is a need to collect new qualitative data, consider first doing a brief inventory of the data that you and your partners already have as there may be little or no additional data needed to address your evaluation questions.
- The list on the right is just some of the types of data sources you might already have.
- If you decide additional qualitative data collection will be needed

• [Next Slide]

Enhance Data Quality and Credibility	
Topic	Consideration
Questions/Participants/Purpose	Ensure stakeholders agree on the questions to be addressed
Final Alignment	Ensure final protocol still aligns with the questions
Triangulate	Multiple sources (interviews, documents, observations)
Member Checks	Invite and document participant input throughout
Inter-coder Agreement	Assess agreement across two coders. Adjust as needed.
Constant Comparison	Continually refine codes and definitions as text is coded
Audit Trail	Document throughout: Data collection, coding, key decisions
Negative Cases	Outliers can clarify findings and define boundaries
Transferability	Describe the participants and the context
Periodically, Consider Displays	This may inform data collection (e.g., filling gaps and listening for metaphors)

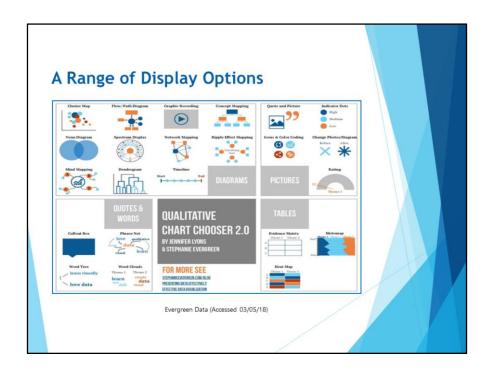
- And here's a table that summarizes key ways to help ensure high quality qualitative data.
- First, it's helpful to ensure you have agreement on the evaluation questions and that you have selected participants, documents and other data sources that do a good job of representing the groups whose ideas you are wanting to understand.
- And if you have received input on a draft of your survey, interview protocol or other data collection tool, make sure that, once it is revised, that it still aligns with the evaluation questions you had proposed at the beginning and that you have sought agreement on any changes to the original evaluation questions.
- *Consider if you can triangulate---or use more than one data source to increase your confidence in the findings.
- *Include member checking where you share findings with participants for their interpretation
- *Also, assess inter-coder agreement, where your team might all code the same small set of interviews to see if your coding is in agreement or if codes need to be revised.
- *Consider using constant comparison where, as you gather and analyze

- data, you adjust the themes and codes based on what you are learning.
- *And document changes as you go where this is sometimes called developing an audit trail.
- Pay close attention to outliers, also called negative cases, as there may be important differences in responses that you need to explore more fully.
- Also, you will want to include displays that show characteristics of the people, documents and other data sources that your results are based on.
- *This helps with transferability where your audience is better able to decide what action might be appropriate to take based on the findings.
- Finally, think about possible displays periodically as you gather and analyze the data. This can help you identify gaps at points that you are still able to address them.
- For a deeper dive into qualitative data collection and analysis, please see additional Coffee Breaks and other resources on the Division's website.

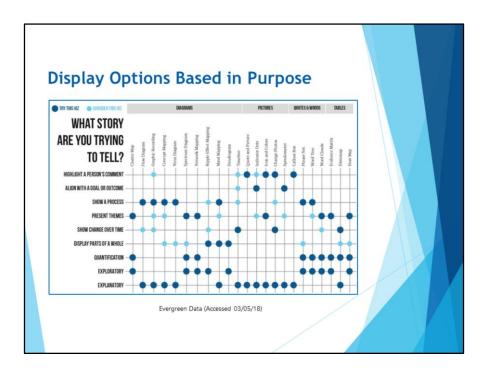
[Next Slide]



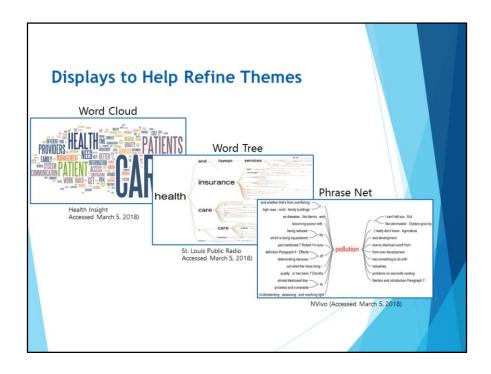
Now let's turn to selecting among display formats.[Next Slide]



- As a starting point, this is a great summary of some display options at the link provided.
- We will review a sample of these and you will now also have this as a reminder of the variety of display options that are out there.
- In addition, [Next Slide]



- Here is what is sometimes called a crosswalk showing different display options based on a display's purpose which may be to share quotes, show a process, present themes, show change over time, and so on.
- We will have a look at some examples that address sampling of these display purposes.
- And as we move along, keep in mind there are lots of ways to tailor and combine these approaches.
- [Next Slide]



To start, displays generated from qualitative software can help you develop or refine your themes.

The upper left image is a Word Cloud which includes frequently occurring words.

Larger words appear more frequently in the data than smaller words.

The middle image is a word tree showing which words occurred frequently together and again where word size indicates frequency.

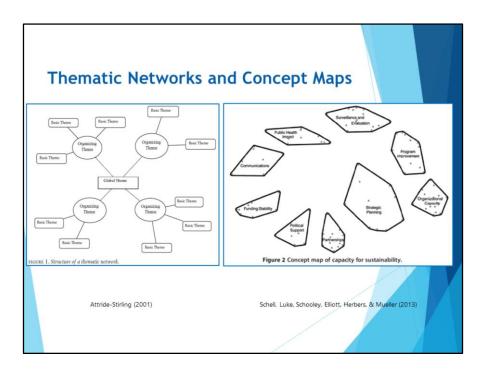
The bottom image is a phrase net which shows phrases that either preceded or followed a given word.

Please note these bottom two displays are likely to be most helpful for theme development rather than to display results to an audience.

And even with these displays for reference, you would still want to code your qualitative data for a more thorough understanding.

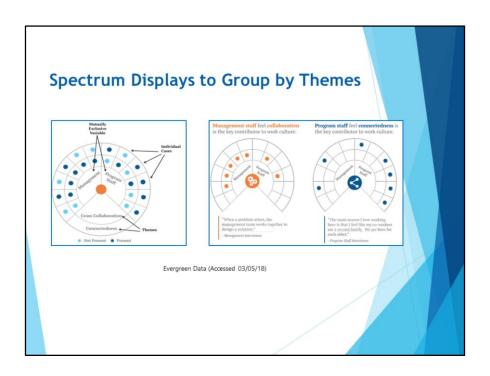
These displays may just provide some helpful hints.

Now let's look at ways to display themes once you've identified them. [Next Slide]



- The image on the left is called a thematic network.
- This format shows all of the themes and subthemes and how they are related.
- In this display, the global theme would be something fairly broad like program implementation.
- What are called organizing themes are a bit narrower and are themes related to program implementation that emerged frequently.
- These organizing themes could include topics like readiness, capacity, structure, partnerships, and so on.
- In turn, each of these organizing themes may have a set of even narrower basic or subthemes.
- The diagram on the right is called a concept map. Each of the shapes you see is a broad theme, also sometimes called a domain and where these are all related to a global theme in this case sustainability which is noted in the caption below the figure. As the authors of this study indicate, the dots in each shape represent comments made by participants. When the dots representing comments for a theme are closer together, they are more closely related. Smaller shapes with dots that are close together, like those in organizational capacity in this example, are more cohesive or more strongly related than ones that are further apart like here for strategic planning.

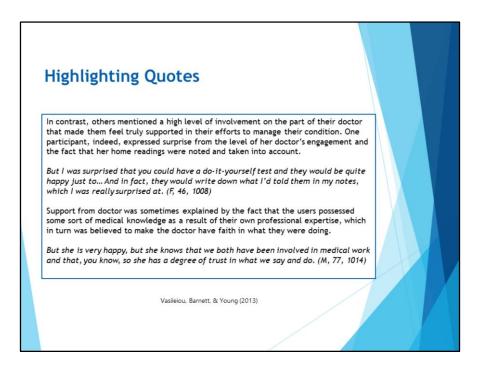
- Both of these displays provide an overview of the framework of themes used to organize the data.
- Now, let's have a look at another type of display that separates the themes for different groups of people, documents, or other sources of information.
- [Next Slide]



- This is called a Spectrum Display
- In the display furthest to the left, the headings in the middle are for 2 broad groups —management and program staff.
- Each ring in the circle is then for a theme/outcome or anything else you want.
- Each dot can represent an individual person, an organization, a site, or any other grouping.
- And then the dots were shaded in the image on the left to show if the theme was present or not.
- Also, the image on the right shows how the information can be split out for example to display the results for each group separately.
- If you do not have a software application that can generate this type of display, the same idea can be used to create a table where,

for this example, the rows could be the participant groups and columns could be each of the themes.

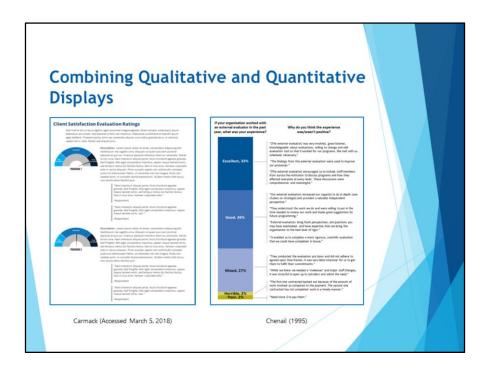
- Also consider if it is helpful to have displays like this side by side to show changes in themes over time.
- Let's now turn to more a more frequent set of qualitative display approaches where the original quotes are included. [Next Slide]



- Where this can be done in a very straight forward way as in this example where quotes are added to the narrative.
- Or the quotes might appear in a text box or in a bar down the side of the page that visually separates them from the rest of the text.
- However, consider that not separating them out can be important for some participants and other stakeholders as it can send a subtle message that quotes are in fact part of the narrative interpretation and do not necessarily need to be summarized by the authors.
- This is the kind of display decision where member checking can be helpful.
- Overall, including direct quotes that have not been boiled down into themes can be an impactful way to combine quotes with other denser narrative descriptions and to give voice to the participants.
- [Next Slide]



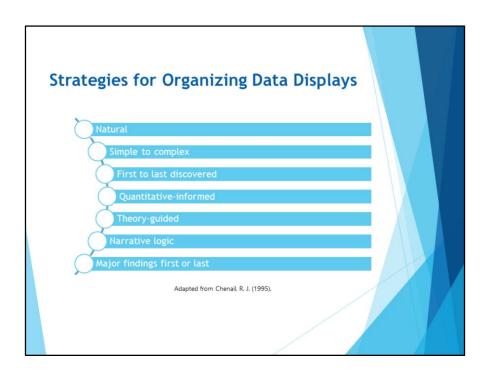
- Here are two other examples of displays that provide direct quotes.
- This type of display, which is also an example of what is called an evidence matrix, includes quotes organized into themes.
- The upper left example uses quotes to highlight challenges experienced by sites implementing sodium reduction strategies.
- It also includes strategies suggested by participants for overcoming these challenges
- The lower right example also organizes quotes according to themes that emerged from participants, in this case for a cardiovascular health education program.
- The lower right example also includes modifications made based on participant feedback.
- Unlike a thematic network and concept map that show all of the themes and subthemes, these displays might only include a few key themes and relevant quotes.
- Also, note these displays emphasize some sort of action based on participant feedback which is one way to increase the impact of qualitative data displays.
- Another way to display themes and quotes [Next Slide]



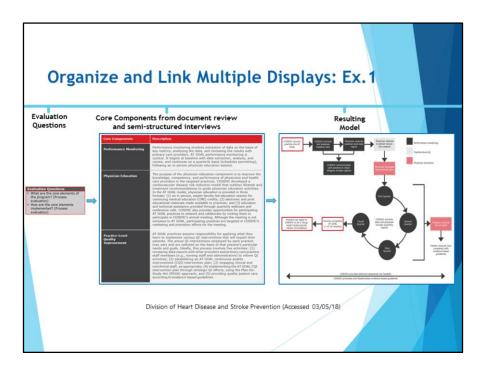
- Is to present them along with related quantitative data as in both of thee displays.
- The display on the left includes an average rating for each program on some dimension along with a narrative summary and just a few quotes.
- In contrast, the display on the right includes quotes for participants who provided each level of rating and does not pair this with a narrative summary.
- More generally, since not all information can be easily converted to numbers, pairing qualitative with quantitative data can help with interpretation.
- [Next Slide]



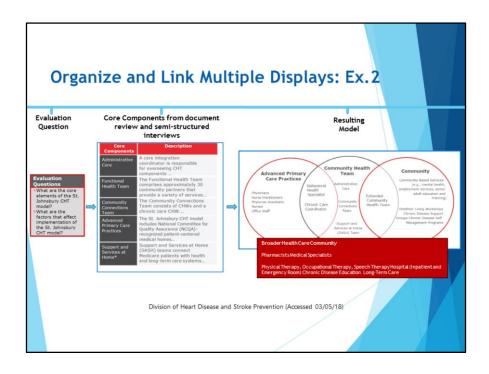
Now let's very briefly review approaches that can help organize ideas appearing in a more complicated display and that can connect ideas across multiple displays. [Next Slide]



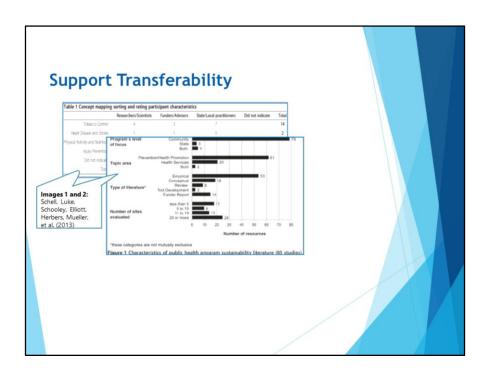
- For example, a natural display reflects how the thing being studied would naturally occur.
- For instance, if you have comments made during a training event, you might present themes in an order that represents the flow of the training itself.
- Or you might order your displays from simple to complex for to build understanding.
- Or from first discovered to last when for example, you want to illustrate where changes in themes followed program improvements that were implemented
- Quantitative-informed displays would arrange qualitative data by for example frequencies, the most typical responses, and so on.
- In the case of a theory-guided display, you could organize themes by the major components of the theory on which a program was based.
- In the case of narrative logic, themes might be organized in a way that helps to tell a story.
- And you might either provide major findings first or end with them.
- These are just some possibilities.
- Let's very briefly look at a couple of examples showing how these organizing strategies factor in.
- [Next Slide]



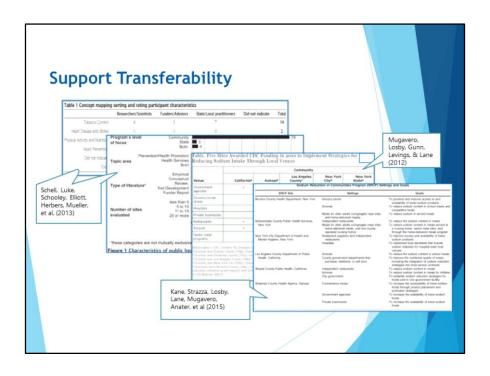
- Here is an example from an evaluation that can be found on the Division of Heart Disease and Stroke Prevention website.
- The displays from the report are brought together here to discuss how they are related.
- This leans toward a Natural approach by first describing program components and then showing how they work in the real world.
- On the left, the narrative for each component or theme that emerged provides support for that component and appears in what is basically an evidence table.
- This provides the basis for the more complex diagram to the right illustrating how the components fit together in practice.
- Let's have a look at another example. [Next Slide]



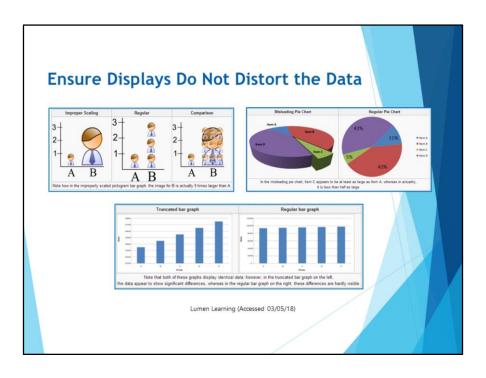
- This is from another evaluation also available on the Division website and where, again, the core components are highlighted on the left along with a supporting narrative for each.
- This report also includes a new display type, a Venn Diagram selected to highlight the relationships between the core components of the program model and specifically in a community clinical context.
- Both of these reports, along with others containing qualitative data display formats can be found on the Division's website at the link provided in the resources section of this slide deck.
- In addition to including displays that summarize findings
- [Next Slide]



- Remember to include information that can support transferability, or the ability for the audience to gauge for themselves what practices and approaches are most appropriate to adapt for their own purposes.
- These are examples of displays highlighting characteristics of participants and documents included in a study.
- The table in the background reports frequencies of each participant type
- The figure in the foreground, instead uses a bar chart to help highlight patterns across a set of documents that were included.



- These two additional displays now at the bottom are from studies conducted examining sodium reduction effort
- The first of these illustrates the effectiveness of a simplified checklist
- The lowest display shows how program goals and other information can be included as well.
- Consider engaging a few stakeholders to determine what they most recommend including.
- A finally [Next Slide]



- Consider whether a given display approach may distort how the audience interprets it.
- For example, in the upper left example, with the image of the person, the image was intended to show a 3-fold increase. However, the image is actually 9 times larger.
- Moving to the right, the 3D pie chart makes Item A look smaller than it is--as can be seen by the regular pie chart to the right.
- Last, in the case of the bar chart at the bottom, in the image on the left, the scale for the horizontal axis was shortened or truncated to make a pattern more visible than in the non-truncated version to the right. This can make the viewer believe that the difference was a lot more pronounced.
- Avoid visual distortions of the data when possible or at least make the audience aware of them. [Next Slide]

Summary

- Consider displays early and often
- Consider the use of existing data
- Maximize data quality
- □ Keep a given display's purpose in mind
- Use strategies described to organize within and across displays
- When possible show how findings inform action
- Support transferability through displays describing the sample
- Ensure displays do not distort the data
- □ Please see other DHDSP Coffee Breaks and evaluation resources!

So, in Summary:

- Begin to discuss displays early to help fine-tune your data collection efforts
- Consider the use of existing data before collecting new data, and
- Use the strategies described to increase the quality of qualitative data.
- Consider a display's purpose when selecting a display type
- Consider the strategies discussed for organizing within and across displays and
- When possible, use displays to show how qualitative data has informed action or can inform it in the future
- Include participant information to support transferability whereby intended users are better able to act based on the results
- Be attentive to how displays may confuse or mislead the audience and
- Finally, be sure to see the other Coffee Breaks and evaluation resources on the Division's website.

Examples and Other Resources □ Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. Qualitative Research, 1(3): 385-405. Accessed on 03/05/18 at: http://www.utscutoronto.ca/~kmacd/IDSC10/Readings/test%20analysis/themes.pdf □ Antioch University New England, Online Qualitative Research Resources. Accessed 3/5/18 from https://www.antioch.edu/new-england/degrees-porgrams/psychology-epyd/aff □ Center for Innovation in Research and Teaching. An Introduction to Qualitative Software. Accessed 03/09/18 from: https://www.antioch.edu/new-england/degrees-porgrams/psychology-epyd/aff □ Denzin, N.K. and Lincoln, Y.S. (eds.). *Handbook of Qualitative Research, Sage. Thousand Oaks. 1994. The Qualitative Report Resources: https://www.antioch.edu/new-england/degrees-programs/psychology-engree/clinical-psychology-psyd/aff □ Evergreen Data. Qualitative Chart Chooser. Accessed 03/05/18 at https://www.antioch.edu/new-england/degrees-programs/psychology-engree/clinical-psychology-psyd/aff □ Evergreen Data. Qualitative Chart Chooser. Accessed 03/05/18 at https://www.antioch.edu/new-england/degrees-programs/psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psychology-engree/clinical-psycho

Now these slides [Next Slide]



Indicate where to find additional information presented on each example shown and also provide some additional resources.

And now, I'd like to open the line to questions. [Next Slide]



At this time, we'll take an questions but first we'll check to see if any questions have come in through the Q&A box.

If we have questions ask the questions posed by the attendees to the presenter

If we do not have questions, proceed with the script below

Since it appears that we have no questions at this time from the audience, we have some questions that we wanted to ask that might be insightful to our participants.

What qualitative software do you recommend to generate displays?

- -There is a wide range of qualitative software packages available and it depends on what you are trying to do with the data.
- -So I want to be careful not to bias you toward any particular package.
- -I would recommend you explore various options on the web as there just was not enough time to do that in this session.
- -Be sure to consider the primary purpose of a given qualitative software package.

- -For example some primarily code text and others may be used for theory building
- -The more comprehensive ones are likely to have more display options but also a steeper learning curve
- -Also, if you already have qualitative software, you might instead consider something like Tableau or another package that is

More heavily focused on data visualization for example.

- -I did include one link in the slide resources that compares various qualitative software packages
- -And while you may not want Wikipedia to be your primary source of information, it also has a fairly good comparison table
- -Another reference on the resources page is for the Center for Innovation in Research and Teaching--this site also provides access to a nice comparison table.
- -And finally, if searching on the web, try searching for QDA (qualitative data analysis) or try searching for CAQDAS Computer assisted qualitative data analysis software

What other sources would you recommend that address the qualitative data collection?

- -The expanded sourcebook by Miles and Huberman that I included on the resources slides is a great one to start with.
- -Also, I'd recommend considering a qualitative analysis book that focus on team data collection and coding

How would you recommend displaying results from a case study? Case studies can look and feel very different but generally, they include multiple data sources and may require a combination of display formats. Consider the organizing principles I briefly reviewed as well as the audience and how they plan to use the data. If it is going to be used to inform key decisions, you might consider some sort of display that briefly highlights how the data were collected with the goal to build confidence in what you are presenting. Also, consider where you can link what you have learned from multiple data sources to further build confidence in the findings and to support their interpretation. Finally, don't feel that you have to focus just on what went well. Understanding challenges and solutions to them is also very important to share.

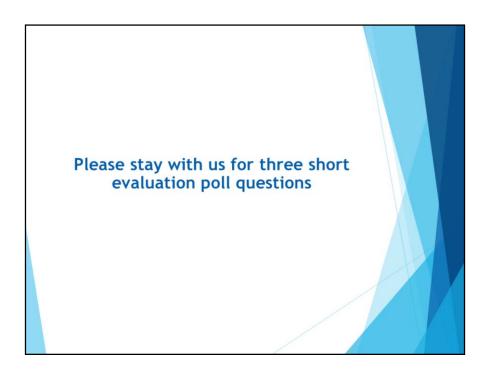
I've heard that pie charts should never be used. What is your recommendation?

- I think using them sparingly is fine but would suggest keeping the number of slices in the pie relatively small, maybe no more than 7 roughly.
- Pie charts can be a nice compromise when you want to vary your visuals a bit and allow for some basic comparison that may not come through as well in a table of numbers.

What is a mind mapping display?

• All of the displays se displays can each take a variety of forms

- The mind mapping format that I'm most familiar with would look somewhat like a thematic network but then, connected to the themes and possibly the subthemes, you might have examples, quotes, and so on.
- I've also seen a similar mapping display that shows ideas or themes that occur for example in transcripts and where those that frequently occur together are linked by a line.
- Please note that some of these display options are more closely linked to particular
 qualitative research approaches. For example, another somewhat visually related
 example is a ripple effect map. In a ripple effect, you might engage a community or
 health practice in dialogue around what they think may have led to a particular
 outcome in a health system and you might also ask what else happened as a result.
 What the participants identify is then mapped out to show how the ideas (in these
 case the variety of outcomes) are related as a series of ripple effects.



Next, please stay with us for three short poll questions.

Please allow a few seconds for the poll to pop up on your screen. We will pause for a few moments after the question is presented to give you time to answer. One moment everyone.

Moderator present poll question. Make sure to read the following after presenting each.

The [first, second, or third] question should be showing, it read [read question and potential answers]

Please respond with the appropriate answer at this time.

Please stay with us to answer a couple poll questions.

The level of information was

Too basic About right Beyond my needs

The information presented was helpful to me.

Yes

Somewhat

Not at all

Considering that this was a brief presentation, overall it was

Excellent

Good

Fair

Poor

Reminders!

All sessions are archived and the slides and script can be accessed at: http://www.cdc.gov/dhdsp/pubs/podcasts.htm

If you have any questions, comments, or topic ideas send an email to:

AREBheartinfo@cdc.gov

MODERATOR:

Thank you for your participation!

As a reminder, all sessions are archived and the slides and script can be accessed at our Division website. Today's slides will be available in 2-3 weeks.

If you have any ideas for future topics or questions, please contact us at the listed email address on this slide.



Our next Coffee Break is scheduled for Tuesday, **April 10th 2018** and is entitled Tools for Creating Visually Engaging Products.

Thank you for joining us. Have a terrific day everyone. This concludes today's call.