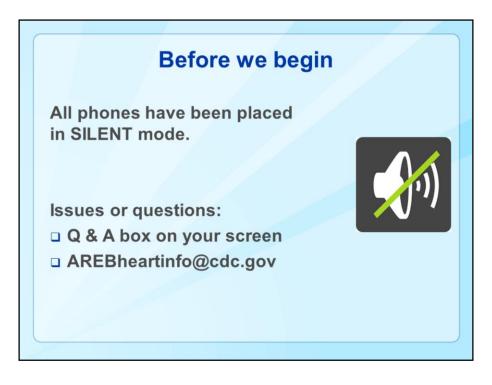MODERATOR:
Welcome to today's Coffee Break presented by the Applied Research and Evaluation Branch in the Division for Heart Disease and Stroke Prevention at the Centers for Disease Control and Prevention.

We are fortunate to have **[Kincaid Lowe Beasley]** as today's presenter, she is a **[Health Scientist]** on the **[Evaluation and Program Effectiveness Team/Applied Research and Evaluation Branch]** .

My name is **[Julia Jordan]** and I am today's moderator. I am an **[Evaluation Guest Researcher]** on the **[Evaluation and Program Effectiveness Team/Applied Research and Evaluation Branch]** .

Before we begin

All phones have been placed in SILENT mode.

Issues or questions:
❑ Q & A box on your screen
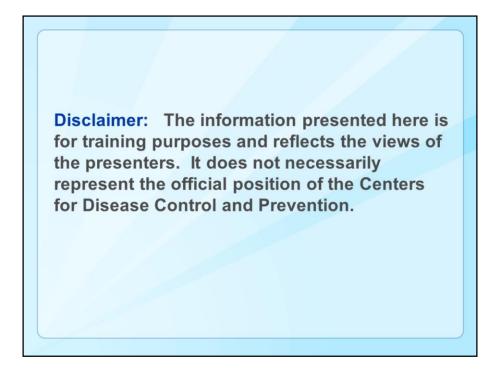❑ AREBheartinfo@cdc.gov

MODERATOR:
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 or send us an email at AREBheartinfo@cdc.gov

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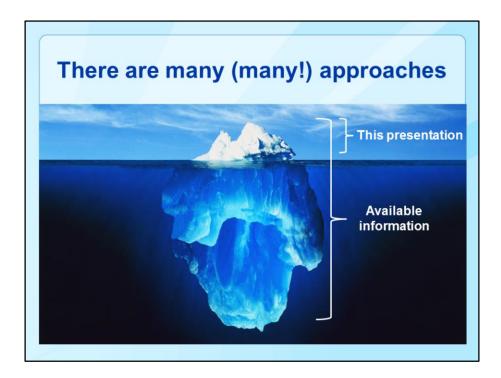
Since this is a training series on applied research and evaluation, we do hope you will complete the poll and provide us with your feedback.

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:

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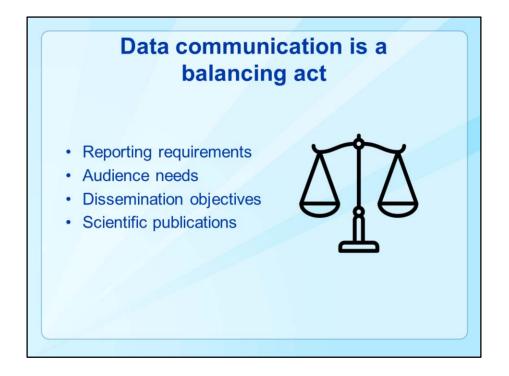
So, without further delay. Let's get started. **[Kincaid]** the floor is yours.
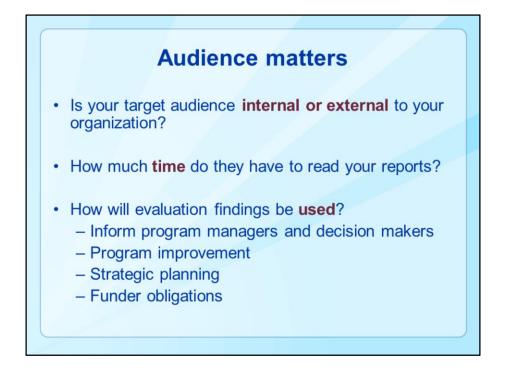
Thank you Julia.

Communicating data and evaluation findings effectively is essential but can be challenging as evaluators balance reporting requirements, audience needs, and dissemination objectives. Evaluators should use tailored strategies to effectively communicate data and evaluation findings to key audiences and stakeholders. Today, I will describe a few effective approaches and available tools to improve evaluation reports, data visualization, and communication of key findings. These practical approaches will support you in preparing a variety of dissemination documents from 1-pagers to full evaluation reports that can be tailored for various audiences.

I want to recognize at the top of this presentation, that I am presenting only a small taste of all the guidance that is readily available through trainings, books, webinars, and online resources. This topic is growing in popularity in the field of evaluation and luckily there are many resources available. In this presentation, I will highlight a few approaches to reporting as well as a few of my favorite data visualization tips and tricks. At the end of the presentation, I include a few links to some of my favorite data visualization and evaluation report writing experts.

Data communication is a balancing act

- Reporting requirements
- Audience needs
- Dissemination objectives
- Scientific publications

Evaluators must consider a variety of conditions and needs when developing evaluation reports. Evaluators typically are asked to consider reporting requirements for the program, their audience's needs, the key dissemination objectives, and the contributions of their work among the peer reviewed literature.

Data communication can be quite challenging given all of these factors, plus any resource constraints you may experience in your setting. Often, it seems easiest to produce and circulate a one-size-fits-all document that can be shared with all levels of stakeholders.

Audience matters

- Is your target audience **internal or external** to your organization?

- How much **time** do they have to read your reports?

- How will evaluation findings be **used**?
  – Inform program managers and decision makers
  – Program improvement
  – Strategic planning
  – Funder obligations

However, it is important to format your evaluation findings strategically.

Consider that multiple reporting types may be required to address the unique needs of various audiences and stakeholders. Brainstorm about a few of your key target audiences – this may include your state health department leadership, policy makers, funders, community partners and program recipients. Keep these unique audiences in mind when designing various dissemination products. Your target audiences may be internal or external to your organization which may impact the level of detail you may need to convey. For example, high-level leaders may have less time to review an evaluation report and therefore a shorter, more summative document may be appropriate. Also think about how your evaluation findings will be used when crafting your report writing style.
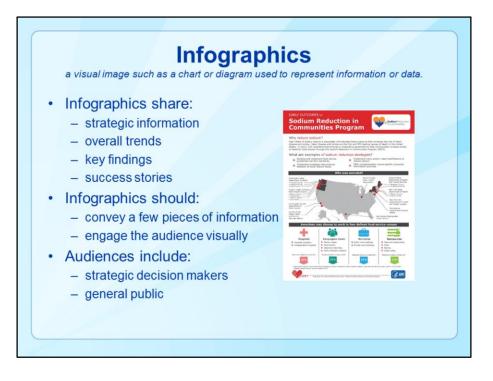
In general, it is important to streamline data communication, and present the main findings where they are easily accessed by readers. Consider consolidating findings where possible and collapse similar recommendations together when presenting findings to audiences that might only want know about the big picture.

A couple of considerations when thinking about the audience of an evaluation product are whether or not they are internal or external to the organization, how much time they may have to read your report, and how the reader will use the evaluation report and findings.

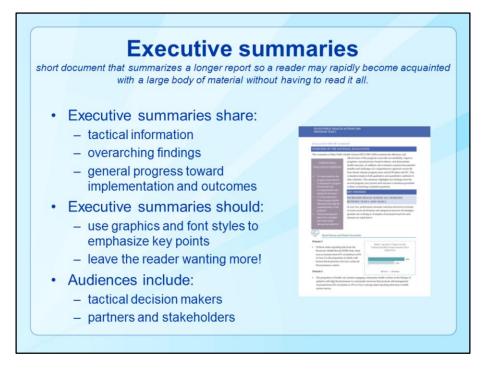Infographic · Executive Summary · Evaluation Report

A FEW REPORTING TYPES

Evaluation reporting is not a one-size-fits all approach.

A few reporting types that may work for you in your settings include: Infographics, Executive Summaries, and full Evaluation reports. These different reporting styles communicate different levels of data.
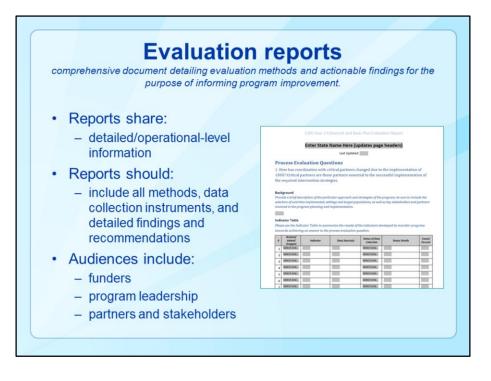
Infographics typically convey one or two strategic pieces of information and they utilize visualizations to engage the audience with the content. Visualizations may include graphs, charts, maps, icons, images or a combination of these tools. They may summarize an overall trend or key piece if information, and they are an effective strategy for disseminating evaluation findings to stakeholders that are interested in big picture findings. They are also a nice way to communicate findings to the general public, community members, or community partners.

Executive summaries

short document that summarizes a longer report so a reader may rapidly become acquainted with a large body of material without having to read it all.

- Executive summaries share:
  - tactical information
  - overarching findings
  - general progress toward implementation and outcomes
- Executive summaries should:
  - use graphics and font styles to emphasize key points
  - leave the reader wanting more!
- Audiences include:
  - tactical decision makers
  - partners and stakeholders

Executive summaries generally have more detail than an infographic but less detail than a full evaluation report. Executive summaries are a common strategy for summarizing a longer report. However, they can also be useful stand-alone documents that share a bite-sized amount of information about your evaluation findings. They may share tactical information and depict general progress toward implementation and outcomes. You should utilize graphics and font styles to emphasize key points.

Remember, the executive summary may be the only piece of information that many people will have a chance to read in your report. Evaluation reports are often quite long and provide detailed and rich information on many findings, but they tend to be the most interesting to the people who are closest to the program. An executive summary allows you communicate a handful of key findings alongside your evaluation approach, as well as a few recommendations or conclusions. They tell "the whole story" but by synthesizing findings and presenting overarching themes.

Evaluation reports are familiar territory for most evaluators. They provide lots of detail and operational-level information. They include information about methods, data collection instruments, and detailed findings and recommendations.

Reports are useful tools that can serve as a roadmap for future program improvements. However, they are a not a one-size-fits all approach. I encourage you to write your evaluation reports so that they might be broken down in to smaller chunks that you can circulate to key stakeholders. Organize reports strategically and consider places where using other reporting approaches, like infographics and executive summaries, might be more useful.

Once you have identified your target audience, the key findings you want to highlight, and you reporting style, you will want to think through an approach for presenting your data.

Now, I will present a couple of tips for creating effective data visualizations.

These include: Simplify graphs, visually highlight key findings, and use meaningful colors.

Effective visualizations…

- **Tell a story** about your data

- Are **crisp**, **easy to understand**, and **free standing**

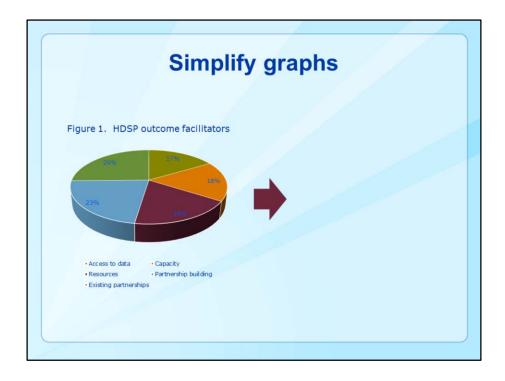- Complement text and **support key messages**

First, let's think about what makes a visualization effective at communicating data and keeping readers engaged.

Effective visualizations tell a story about your data. Clearly designed tables and figures help communicate key findings to your target audiences. Streamlining tables, reporting only essential values and figures, and providing a brief interpretation of the data is best practice.

The most effective visualizations include sufficient information so that it can stand on it's own and tell a complete story. Figures that don't require additional explanation or require legends to decode the data, are the best at communicating clearly to target audiences.

Design tables and figures to complement and support key messages.
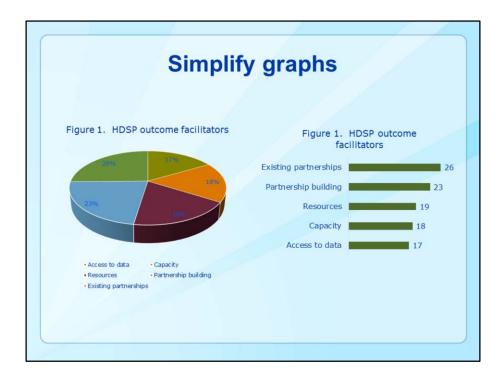
Now, let's walk through an example.

I'm going to walk through each of these tips using sample data for a program focused on heart disease and stroke prevention. Let's consider a program that collected data on the top factors that facilitate program implementation. We want to share this information with leaders and decision makers who expressed interest in learning about what factors help make our programs effective.

Let's look at the data that are displayed here. The pie chart attempts to visualize the proportion of respondents that reported each of these five factors as a facilitator that helped the program reach it's intended outcomes. For this graph, I entered the raw data into Microsoft Excel. Then, I made a pie chart using Excel's basic auto-formatting.
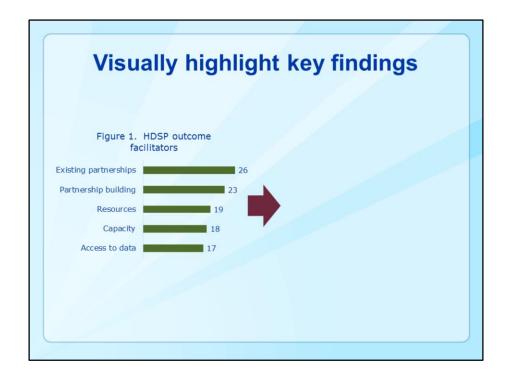
But, there are some challenges and complexities to this graph. First of all, pie charts don't do a great job showing differences between segments here. For example, one segment represents 23% and another segment represents 26% - but the size of those pie pieces look almost the same. Second, the current format asks the viewer to go back and forth between the pie chart and legend to understand what the visualization means. Finally, the pie chart is presented in 3D which does not add to the meaning of the visualization. In fact, the 3D formatting distracts from the graph itself.

Let's simplify this graph.

Simplify graphs

Figure 1. HDSP outcome facilitators

Figure 1. HDSP outcome facilitators

17%
18%
26%
23%

Existing partnerships — 26
Partnership building — 23
Resources — 19
Capacity — 18
Access to data — 17

• Access to data • Capacity
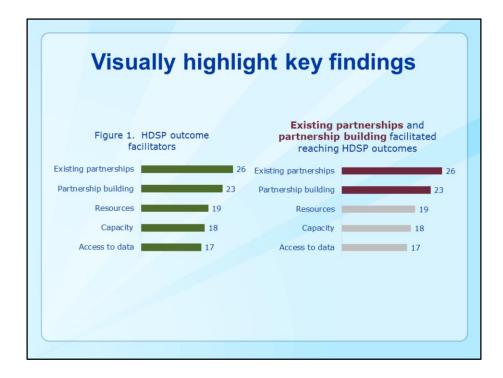• Resources • Partnership building
• Existing partnerships

To simplify the approach, I took the same data in Excel and plotted it using a horizontal bar chart. I took away any 3D elements that could distract the viewer from the data itself. I ordered the data from greatest to least so that the biggest categories would be at the top of the graph, and so that a reader could easily see differences between each category. I also directly labeled each category so that there was no need for a legend. The horizontal bar chart approach allows you to look at each category in line with the data it represents.

This is a more simple approach, but ultimately it allows the reader to engage with the data with much less effort.

Now, let's take this graph and see if we can make it better.

I would like to visually highlight the key findings that I want to share with my stakeholders.

Here is a simple approach to visually highlighting key findings.

I want stakeholders to see that partnerships are a big facilitator for accomplishing the work of our program. So, I highlighted the top two rows in a different color, and I faded out the other rows so that a reader is drawn to the data that is most meaningful.

Additionally, I added a descriptive title that summarizes the key points from these data: Existing partnerships and partnership building facilitated reaching HDSP outcomes.

Visually highlighting key findings really helps readers quickly hone in on the data and extract meaning with ease.

Finally, I suggest using meaningful colors when you develop your visualizations. You may want to use your organization's logo, style guide, or brand standards to guide your color choices. For example, I developed this presentation using colors that align with CDC's National Center for Chronic Disease Prevention and Health Promotion.

It may seem easier to just use the default colors in your Microsoft products. However, it isn't much more challenging to customize your color palette using the colors tool. Just go to additional colors and type in the color code for the color you are looking to include. RGB code stands for Red, Green, Blue and is the best code to use for products that are going on the web. CMYK codes are better to use for printed documents. If you don't happen to know the RGB or CMYK codes for the color you want to use, you can download an application from www.instanteyedropper.com to help you identify these codes for a given color.

When picking out colors, consider the needs of your audience. Consider that some people do not have the ability to see certain colors – you can find colorblind compatible color palettes at www.colorbrewer.com. Also consider whether or not your document will be printed in color or greyscale. Some colors, when printed in greyscale, don't look very different from one another. This makes it difficult for your data visualization to make a high impact on audiences once the information is printed.

Finally, how do we accomplish all these different kinds of reporting types and use these tips and tricks for data visualization?

There are many tools and resources out there that can help us accomplish our ambitious goals of creating effective reports that powerfully convey our evaluation findings and really inspire our stakeholders.

I will share a handful of tools and resources that can help accomplish these goals.

What tools do I need?

- Reporting and data communication
  - Microsoft Excel, Word, PowerPoint, Access
  - Tableau, Google Charts, R

- Experts and blogs:
  - http://stephanieevergreen.com/
  - http://annkemery.com/
  - http://www.storytellingwithdata.com/
  - http://www.vizwiz.com/

If your offices are like ours at CDC, we typically have access to the traditional Microsoft suite of products. Fortunately, there is a lot of guidance out there on how to leverage the features of these products to build visually appealing designs and communicate data effectively. I often reference Stephanie Evergreen or Ann K Emery when I'm trying to figure out my own approaches to data visualizations and report writing. They have particularly helpful resources when it comes to designing reports and data visualizations using a traditional suite of software tools.

Others of you may have experience with other tools like Tableau, Google Charts, and R. These tools allow for a bit more flexibility and customization when it comes to data visualizations.

I also wanted to point out a couple of websites from evaluation and data visualization experts that have great tips for developing effective approaches to disseminating your data. These are great places to go to brainstorm your own approaches to data visualization.

In addition to web-based resources, I also turn to a few books for guiding straightforward approaches to effective presentation of data. There are many other books available as well.

So, how do you know if you created an effective data visualization or report? Well, there are a number of ways to answer this question. First and foremost, is the audience getting out of the document what you intended? If yes, then that's a good sign that that you're meeting your goals.

For a more systematic approach, I like to use two checklists that provide guidance on both data visualization and evaluation reporting. These were developed by two specialists in data visualization for evaluators.

The data visualization checklist walks through simplifying graphs and data visualizations, using graphics meaningfully, and calling out key findings from the data so that they are easy to pick up by the target audience. The evaluation report layout checklist takes a similar approach, but focuses on organization reports using effective strategies that allow the reader to easily access key findings and take-home points.

In the end, there isn't a singular approach to effective reporting and data communication. It really comes down to the combination of these strategies to effectively communicate the needs of your unique data. Start with identifying audience needs, then choose the type of report you want to produce. Then, you can start integrating data visualizations that supports the communication of key findings based on your audience's need.

There are many tools and resources you can use to help accomplish these goals. And as I mentioned, this is really just the tip of the iceberg. My goal today was to foster an interest in data visualization and convey the importance of effective reporting. This is one way that our evaluation findings can become impactful. By using these approaches, we can ignite the interest of important decision makers in our work.

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 tab.

ADD 3 MOCK QUESTIONS

Q1: How can I get buy-in from my organization to support the use of effective data visualization techniques and new reporting types?
A1: One way to gain buy-in from your organization is to better understand what kind of information your organization needs from an evaluation. Understanding your audience's needs will help guide you to better understand what kinds of reporting types and data presentation techniques are most useful. You can also consider piloting a single new template or a new reporting type and gaining feedback from your stakeholders to see what aspects of your report were most effective at convey the information they need to make decisions. Ultimately, these strategies are meant to help evaluators present data more effectively and better meet their audience's needs. Try out a few of these techniques and see which of them work best for you and your setting.

Q2: My organization uses standard templates for all our reports and products – how do I incorporate these techniques into our standard reporting templates?
A2: You're not alone - this is a challenge that many evaluators face. Sometimes changing

your reporting approach will be incremental. If you are working with a standard reporting template, try creating an executive summary that you can pair with the report and strategically share with stakeholders that may be most interested. Also, some of these techniques may seem simple but can make a big difference even when incorporated into a standard reporting structure. For example, simple, meaningful, descriptive graphs are at home in almost all reporting types. Try incorporating one or two of these techniques at first, then explore some of the resources I provided to see what other techniques might be right for your data and your audience.

Please stay with us

❑ Short evaluation poll questions

Please stay with us a few poll questions.'

ADD Three EVAL questions

The quality of the presentation was:
Excellent
Good
Fair
Poor

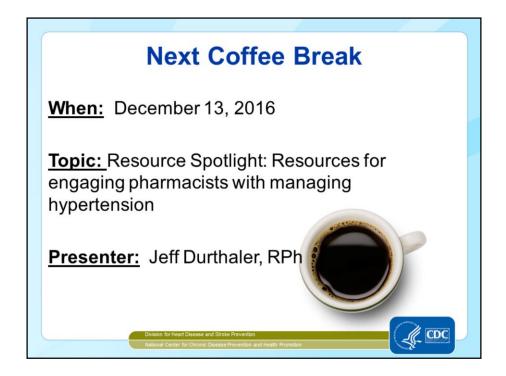**The level of information was**
Too basic
About right
Beyond my needs

This coffee break was worthwhile for me.
Yes
very worthwhile
Somewhat
A little

No not at all

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

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, **December, 13th** and is entitled
"**Resource Spotlight: Resources for engaging pharmacists with managing hypertension**".

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