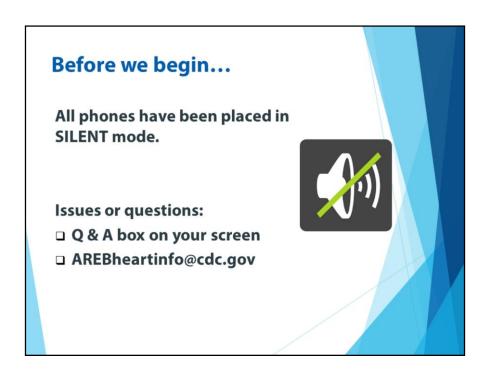


#### MODERATOR:

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 Jasmin Minaya-Junca as today's presenter, she 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 Evaluator on the Evaluation and Program Effectiveness Team.



#### 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.

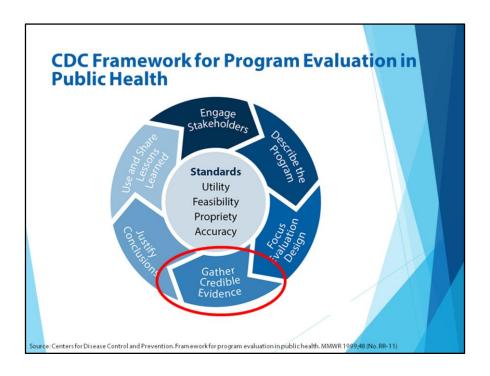
Since this is a training series on applied research and evaluation, we hope you will complete the poll at the end of the presentation and provide us with your feedback.

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. Jasmin the floor is yours.

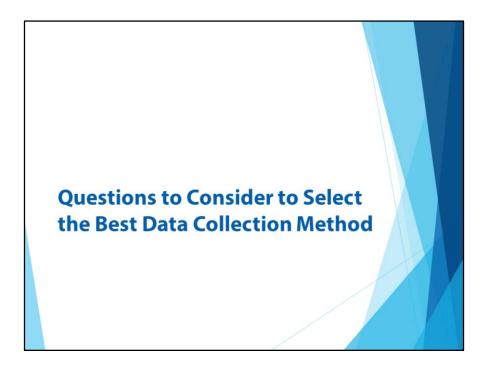


- Thank you, Ashley.
- Gathering credible evidence is the fourth step of the six-step CDC Evaluation Framework.
- In this phase of program evaluation, evaluators collect relevant data to answer evaluation questions within time and resource constraints.
- It can often be overwhelming to know which approach is best for your evaluation.
- There are practical benefits and limitations for each data collection approach.
- In addition to time and resources, the process generally takes into account the evaluation's purpose, evaluation questions, design, and stakeholder needs.

## **Presentation Overview**

- Important questions for selecting appropriate data collection approaches
- Common qualitative and quantitative data collection tools
- ☐ Advantages and disadvantages of each data collection tool
- Key points and resources
- Questions and Answers

- In this Coffee Break presentation I will describe a decision-making process for choosing the most suitable data collection method to optimize your program evaluation.
- I will delineate common questions for selecting appropriate data collection approaches, qualitative and quantitative data collection tools, advantages and disadvantages of each data collection method, some key points to remember, and resources as you move on to selecting the most appropriate data collection method for your program evaluation.
- I will conclude the presentation with an opportunity for questions and answers.
- Please note that this Coffee Break will provide a conceptual overview of the decisionmaking process to select an appropriate data collection method and it is not intended to be comprehensive as there are many ways to approach selecting a data collection method.



• Let's take a look at some key questions to consider before choosing a data collection method or methods for your evaluation.

# **Key Questions**

- ▶ What is the purpose of the evaluation?
- What are the evaluation questions?
- ▶ What is the evaluation design?
- What resources are available to conduct the evaluation?

- While there are many questions you may consider before selecting a data collection method, I'll focus on four of the most common questions.
  - What is the purpose of the evaluation?
  - What are the evaluation questions you need to answer?
  - · What is the evaluation design?
  - What resources are available to conduct your evaluation?
- We will use the next couple of slides to discuss these four questions in more detail.

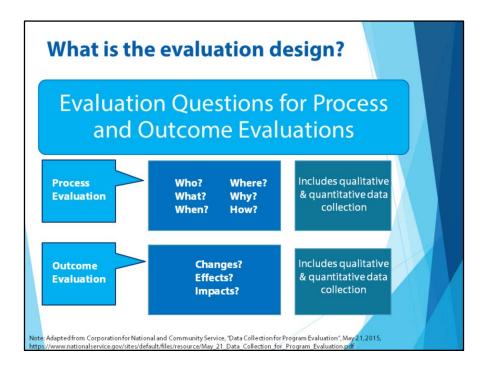
# What is the purpose of the evaluation?

- The purpose of the evaluation helps determine why the evaluation is being conducted.
  - Establishes expectations
  - Narrows focus
- Who are the stakeholders and what do they want to know?
  - Stakeholders drive your evaluation
  - Stakeholders help you determine the evaluation purpose
  - Stakeholders help you better understand why the evaluation is being conducted, who needs the information, and how findings will be used
- Each evaluation should have a clearly defined purpose to direct the design and planning for the evaluation.
  - The purpose of the evaluation helps to determine why the evaluation is being conducted, drives the expectations around evaluation results, and narrows the evaluation's focus.
- At this point, it is key to engage program staff and stakeholders to discuss the purpose of the evaluation to ensure everyone is on the same page.
  - Stakeholders are those persons or organizations who have an investment in the program and will be primary users of the evaluation findings. They are the main drivers for your evaluation and results.
  - Engaging stakeholders will help you better understand why the evaluation is being conducted, who needs the information, and how the findings will be used.
  - The data you collect should provide your stakeholders with the relevant information they need.
- While you are determining the evaluation purpose, it is a good time to refer back to your program's logic model to help you confirm and clearly articulate the purpose of the evaluation as well as the intended outcomes.
- Knowing the information that is required by the stakeholders will determine the

| direction of the evaluation and provides the foundation for the best data collection method. |
|----------------------------------------------------------------------------------------------|
|                                                                                              |
|                                                                                              |
|                                                                                              |
|                                                                                              |
|                                                                                              |

# What are the evaluation questions?

- Evaluation questions
  - Encourage stakeholders to clarify what things the evaluation should address
  - Narrow evaluation focus by stating what aspects of the program will be further explored
  - ► Help to determine the most suitable evaluation design and the best data collection method
  - Reveal evaluation's focus on program processes or outcomes
- Let's take the evaluation purpose one step further by establishing clear evaluation questions.
- Clear evaluation questions encourage stakeholders to clarify what things the evaluation should address.
- Evaluation questions narrow the evaluation focus by stating what aspects of the program will be further explored.
- Questions will help determine the most suitable evaluation design and, ultimately, the best data collection method for your program evaluation.
- The questions will help reveal the evaluation's focus on program processes or outcomes.
- There are some key differences in evaluation questions for a process evaluation versus an outcome evaluation. On the next slide, we'll explore these main differences.



- The evaluation purpose and questions will help you develop your evaluation design.
- While there are several designs for public health evaluation, for this presentation, I
  will discuss two broad designs for program evaluations. Generally speaking, your
  design can either be a process or outcome evaluation.
- Process and outcome evaluations require different types of data collection methods.
  - Process evaluations consider questions about program operations, such as who, what, when, where, why, and how.
    - Process evaluations look at inputs/resources, program activities, outputs, and stakeholder perspectives as sources of information.
    - The goal of this design is usually to inform program improvements and includes both qualitative and quantitative methods of data collection.
  - Outcome evaluations examine the changes, effects, and impacts of the program to determine the program's effectiveness.
    - Outcome evaluations measure changes in knowledge, skills, attitudes, behaviors, and conditions of program participants.
    - The goal of this design is to identify the effects and results of the program.
    - This design also includes both qualitative and quantitative data collection methods; however, this type of evaluation more typically

requires statistical analysis methods in addition to qualitative methods.

• Clear decisions regarding the evaluation questions guide evaluation design and, in turn, data collection method selection.

# What resources are available to conduct the evaluation?

- Key Questions:
  - ▶ What data are you already collecting or have access to?
  - How much of your evaluation budget can be allocated to data collection?
  - ▶ How much staff time can be devoted to data collection?
    - What are the areas of expertise for each staff person?

- Once you have established the evaluation purpose and questions, be sure to consider your resources when selecting the evaluation design.
- This is an invaluable step as it determines how much time, effort, and funding can be devoted to your evaluation. I recommend that you ask yourself:
  - What data are you already collecting or have access to as part of routine program processes?
    - It is crucial to explore what data your program is already collecting or has easy access to that speak to your evaluation questions.
    - If you are already collecting data as part of performance measurement activities, you can potentially build upon that information to sufficiently provide data for your evaluation.
    - Once you know what data you have available, you can identify any gaps in information that may lead you to collect new data to address your evaluation questions.
    - Doing this type of data review will help you maximize resources.
  - How much of your evaluation budget can be allocated to data collection?
    - Some forms of data collection are more expensive than others. The
      costs depend on a variety of factors such as complexity and length of
      the data collection instruments, number of respondents, and already

existing data.

- How much staff time can be used for data collection? Then, what are the areas of expertise for each staff member?
  - Knowing how much staff time can be allocated to the evaluation can significantly reduce costs and build staff evaluation capacity.
  - Utilizing the expertise of existing staff may mean you won't have to depend on external evaluation services for the data collection process.
- Remember, that your evaluation purpose, questions, and design helped you focus your evaluation so you do not have to evaluate all aspects of your program.



Now that you have your evaluation purpose, questions, design, and you know what resources are available to you, the next step is to select the best data collection tool for your evaluation. Let's look at common qualitative and quantitative data collection tools you may consider for your evaluation.

# **Quantitative vs. Qualitative Data**

- Quantitative Data
  - ▶ Numerical
  - Can be quantified and statistically analyzed
  - Draws connections between factors
  - Answers "what", "how many", or "who"
    - ► Examples: assessments/tests, surveys
- Qualitative Data
  - ► Narrative/non-numerical
  - Provides insight into experiences, behaviors, or beliefs
  - Answers "how" and "why"
    - Examples: interviews, focus groups
- Let's start with the types of data that may meet your data collection needs.
- Data usually falls into two categories quantitative and qualitative.
- Quantitative Data
  - Is numerical and can be quantified and statistically analyzed
  - It can draw connections between study factors
  - Answers "what", "how many", or "who" for an evaluation
  - Most common examples of quantitative data collection are assessments/tests and surveys.
- Qualitative Data
  - Is narrative and non-numerical.
  - It describes meaning and provides insight into experiences, behaviors or beliefs of a study group.
  - It answers "how" and "why" for an evaluation.
  - Common examples of qualitative data collection are interviews and focus groups
- In the upcoming slides, I will present more details around common data collection examples.

# Your turn! Which type of data do you use most often in your program evaluation? Quantitative Qualitative Both

- POLL QUESTION:
  - Which type of data collection do you use most often?
    - Quantitative
    - Qualitative
    - Both

| Quantitative vs Qualitative Data Summary Table |                                                          |                                                       |  |  |
|------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|--|--|
|                                                | Quantitative Methods                                     | Qualitative Methods                                   |  |  |
| Scope                                          | Broad                                                    | In-depth                                              |  |  |
| Data Collection Tools                          | Standardized collection tools with close-ended questions | Semi-structured instruments with open-ended questions |  |  |
| Data Format                                    | Numeric                                                  | Narrative                                             |  |  |
| Data Analysis                                  | Statistical approaches                                   | Content analysis                                      |  |  |
| Results                                        | Descriptive                                              | Exploratory                                           |  |  |

- In the previous slide, I shared that data can generally be either quantitative or qualitative. This table summaries the main differences between quantitative and qualitative data methods.
- In terms of scope,
  - Quantitative data is broader and provides less detailed information across a larger group of study cases.
  - While qualitative data affords more detailed, in-depth information on fewer study cases.
- Data Collection
  - Quantitative data collection employs structured instruments with questions with pre-defined response options, such as close-ended questions or rating scales.
  - Qualitative data collects information through semi-structured instruments with open-ended questions where responses are not pre-defined.
- Data Format
  - As mentioned earlier, quantitative data is numeric and can be statistically analyzed.
  - Qualitative data is narrative information that provides insight and context to a program study.

#### Data Analysis

- Quantitative data relies on statistical approaches to study the data. This can range from simple frequencies to more complex statistical analyses such as regression models.
- Qualitative data depends on content analysis in which themes or patterns are identified, coded, and summarized.

#### Results

- The results from quantitative data are usually descriptive and can be statistically summarized and, in many cases, can be generalized to a larger population. It also has the ability to provide statistical evidence for program impact.
- Qualitative results tend to be exploratory and provide meaning, explanation, and insight into cases. Qualitative data results cannot be generalized to a larger population and does not provide any statistical evidence for program impact. However, qualitative data may provide a foundation for further decision-making.
- Although quantitative and qualitative data are often presented as mutually exclusive, using a mixed method approach (collecting both quantitative and qualitative data) can ultimately provide the most complete understanding of your program.
- In fact, many program evaluations will incorporate both quantitative and qualitative data in their evaluation.

# Common Quantitative Data Collection Methods

- Surveys
  - Used when you want information from a defined group to get an idea of the situation or characteristics among study cases
  - > Standardized instrument with close-ended questions
  - Administered through mail, email, online, in-person, or phone
- Assessments/Tests
  - Standardized instruments that assess knowledge, skill, or performance
  - Administered on paper, electronically, or through observation
  - Programs can create their own assessments specific to their program
- Now, let's take a more in depth look at common data collection methods.
- There are two very common methods for collecting quantitative data surveys and assessments or tests.
- Surveys
  - Surveys are used when you want information from a defined group to get a overall idea of the study situation or to get a count of a particular characteristic among study cases.
  - They are standardized instruments that collect data from a specific group and are usually comprised of well-defined, close-ended questions.
  - Surveys are typically administered through mail, email, online, in-person, or via phone. Email or online surveys are generally less costly than the other administration modes.
- Assessments/Tests
  - Assessments or tests are standardized instruments that assess knowledge, skills, or performance. These can take the form of pre-and post-tests.
  - Assessments/tests can be administered to the study population on paper, electronically, or through direct observation.
  - There are some commercially available assessments and tests that are validated and measure a particular concept; however, programs can create

their own assessments/tests that are tailored to their specific program.

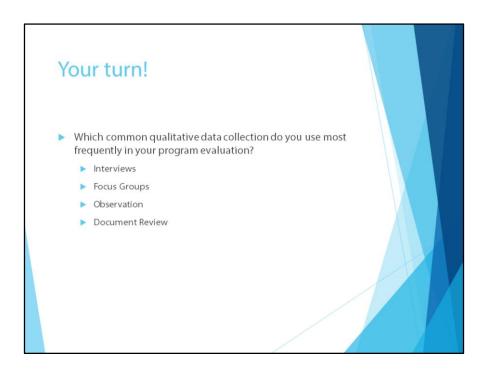
#### **Common Qualitative Data Collection Methods** Interviews Observation ► To understand individual To learn how the program naturally experiences in more detail May be structured or unstructured May be unstructured, semistructured, or structured Involves lengthy and descriptive questions Usually conducted in-person or Document Review via phone Analyzes program documents and Focus groups printed materials ► To collect narrative information Provides insight into the program from a group of people about their experiences Summarizes existing program information Facilitated small-group discussion

- There are four common collection methods for qualitative data interviews, focus groups, observation, and document review.
- Interviews are used when you want to understand individual experiences in more detail and want to be able to expand on ideas and clarify responses.
  - It uses structured, semi-structured, or unstructured questions to guide the discussion
  - Interviews can be conducted in-person or over the phone.
- Focus groups
  - Focus groups are used when the evaluation needs to collect narrative information from a group of people about their program experiences related to specific program components.
  - The information is collected through a guided small-group discussion that is lead by an experienced facilitator.
- Observation
  - Observation is used when you want to learn about how the program naturally occurs.
  - Observation can be structured or unstructured. For example, in a structured observation, the evaluator would use pre-determined categories with coding schemes or checklists to guide the observation. While an unstructured

- observation would rely on the evaluators narrative of the observations that are relevant to the evaluation questions.
- It also involves the evaluator taking lengthy and descriptive notes about what is being observed.

#### Document Review

- Lastly, document reviews analyze program documents and materials to provide insight into the program.
- It uses content analysis to summarize existing program information.
- The materials, such as meeting minutes, program logs, and training materials are often easy to obtain and do not cost much to review.
- All these approaches can inform some next step in your evaluation study.
- Remember that prior to implementing any data collection tool, you should review
  your methodology and tools with your institutional review board (IRB) to ensure all
  permissions are in place.



- POLL QUESTION:
  - Which qualitative method do you used most frequently?



• Now that we have an understanding of common collection tools for quantitative and qualitative data, let's discuss the advantages and disadvantages of each data collection method in the next couple of slides.

| Method            | Advantages                                                                                                                                                        | Disadvantages                                                                                                                                                    |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Surveys           | <ul> <li>Quick and efficient</li> <li>Obtain a large amount of data quickly</li> <li>Can be anonymous</li> <li>Responses easy to compare and analyze</li> </ul>   | Study sample may not be representative High response may be difficult to achieve May lack in-depth information on a specific topic Misunderstanding the question |
| Assessments/Tests | <ul> <li>Many standardized versions<br/>available</li> <li>Provide objective information<br/>knowledge and skills</li> <li>Easy to compare and analyze</li> </ul> | May be oversimplified     May be biased                                                                                                                          |

- Surveys have a long list of advantages.
  - They can be a quick and efficient way to obtain information.
  - They allow you to obtain information from a large group of people and, depending on how it is administered, can allow respondents to be anonymous.
  - Survey instruments are standardized and allow for an easier way to analyze and compare results using a range of statistical methods.
- · However, surveys have some disadvantages.
  - Surveys may be administered to a group that is not representative of a larger study population. There may also be some self-reporting issues that may influence results.
  - High response rates are ideal, but may be difficult to achieve with a survey.
     High response rates are necessary to ensure quality data and sound data analysis.
  - Because surveys usually consist of close-ended questions with pre-defined responses, they may result in a lack of in-depth information on a specific topic or concept.
  - Lastly, self-administered surveys may be a challenge for people with lower reading levels. As a result, there my be a misunderstanding of the questions

making it hard to select the appropriate response.

- This scenario can bias the evaluation results.
- The good things about assessments/tests are that they are many standardized versions available.
  - They can provide objective information on knowledge and skills of program participants.
  - Like surveys, they are easy to compare and analyze across respondents.
- However, assessments/tests can be oversimplified because of their focus on a narrow concept or construct.
  - Assessments/tests are often criticized for being biased against particular groups of test takers.

#### **Oualitative Data Collection Methods: Advantages and Disadvantages** Method **Advantages** Interviews Better response rates Time-consuming than surveys · Less anonymity for Provides in-depth respondents information · Difficult to analyze and Allows flexibility in compare data questions/probes · Requires skilled interviewer **Focus Groups** Collect multiple Requires a skilled perspectives in a short facilitator amount of time Time consuming and Provide greater insight difficult to analyze Less expensive than Group setting my influence opinions interviews

- The four qualitative data collection methods that I presented earlier also have their advantages and disadvantages.
- Interviews
  - Interviews generally have better response rates than surveys
  - Provide rich, in-depth data with the ability to explore a range of topics with respondents
  - They allow for flexibility in questions/probes to clarify questions that some respondents may not understand.
- On the other hand, interviews can be very time-consuming to complete and result in less anonymity for the respondents because they are oftentimes administered inperson.
  - Depending on how structured the interview questions are they can be difficult to analyze and compare.
  - They can also be costly, because they require a skilled interviewer to obtain relevant information from the respondent.
- Focus groups are another qualitative data collection tool.
  - The group dynamic allows for the collection of multiple perspectives in a short amount of time.
  - Since focus group respondents can build off one another, focus groups can

provide greater insight than an one-to-one interview.

- They are typically less expensive than interviews.
- Disadvantages for focus groups include
  - That they require a skilled facilitator to guide the discussion and gather relevant and useful data.
  - They can be time-consuming to transcribe and analyze across groups.
  - The group setting may make it difficult to hear dissenting or unique opinions.

#### **Oualitative Data Collection Methods: Advantages and Disadvantages Continued** Method **Advantages** Disadvantages Observation View program in real Time-consuming Observer's selective Data occurs in its natural perception may setting influence data · Difficult to observe multiple processes at once Document Review Data already exists and · Time consuming is easy to access Data is limited • Data may be incomplete Does not interrupt program Reduced burden to program

- Let's take a look at the last two qualitative data collection methods I discussed.
- Observation
  - Observations are great because you are viewing the program in real time and in its natural setting
  - However, it can be time-consuming to complete the observation.
  - The presence of the observer may influence how the program participants act and the observer can introduce a selective bias to the data.
  - It is also very difficult to observe more than one process at a time. Therefore, the observer may not be able to experience the program in its entirety.
- Document Review
  - Document reviews are generally low-cost because the data already exists and, as a result, maybe easy to access.
  - It usually doesn't require a large interruption or burden on program implementers or participants because evaluators can review the materials separately.
  - However, while you may have the data already, do not underestimate the amount of work document reviews take to complete.
  - Data is limited to what already exists and what is available. Documents are rarely developed with the specific evaluation questions in mind and therefore

- may be less ideal as a sole data source. At times, they may be more useful to confirm or triangulate what you are learning from interviews, surveys, and other data.
- If the evaluation requires more information than the document reviews can provide, another form of data collection will be required.
- As I discussed in today's Coffee Break, each data collection method has advantages and disadvantages and provides different information or perspectives on your program. That said, the most effective way to optimize your program evaluation is to consider more than one approach. A mixed method approach combines both quantitative and qualitative data to provide the most comprehensive response to your evaluation questions.

## **Points to Remember**

- Your evaluation purpose, questions, design, and resources help determine the best data collection method for your evaluation.
- There are common quantitative and qualitative data collection methods and each method has advantages and disadvantages that should be taken into consideration.
- A mixed method approach to your data collection can provide the most comprehensive perspective to your program evaluation.
- Acknowledging that there are many ways to select the best data collection method for your evaluation, I focused on some common approaches to selecting data collection methods for public health evaluation.
- Here are some important take-home messages from today's presentation:
  - Your evaluation purpose, questions, design, and resources help determine the best data collection method for your evaluation.
  - There are common quantitative and qualitative data collection methods and each has advantages and disadvantages that should be taken into consideration.
  - A mixed method approach to your data collection can provide the most comprehensive perspective to your program evaluation.

### Resources

- Division for Heart Disease and Stroke Prevention, Evaluation Resources
  - https://www.cdc.gov/dhdsp/evaluation\_resources/index.htm
- ► CDC Evaluation Framework
  - https://www.cdc.gov/eval/framework/index.htm
- CDC Adolescent and School Health Data Collection Methods
  - https://www.cdc.gov/healthyyouth/evaluation/
- ► The American Evaluation Association
  - http://www.eval.org
- Here are some resources that may be useful as you conduct your program evaluation.
- Thank you again for your time.



#### MODERATOR:

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\*

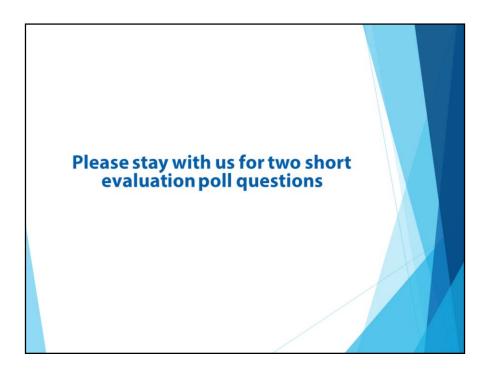
\*If we do not have questions, proceed with the script below\*

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.

#### Questions:

- 1. In your presentation you discussed the importance of establishing an evaluation purpose. What are some examples of evaluation purposes?
  - Answer: Thank you for your question. There are countless purposes for public health evaluations. However, according to the CDC Evaluation Framework, there are four very common purposes.
    - 1. Gain Insight This occurs when stakeholders want to establish a

- need for the program, assess the feasibility of a program, clarify how activities should be designed to bring about expected changes, or identify barriers and facilitators to program use.
- Program Improvement This is most appropriate during the implementation phase at which time there is a keen interest in strategies on how to make the program better. It determines what has been done and to what extent. Evaluations done for this purpose aim to improve quality, effectiveness, or program efficiency.
- 3. Assess Effects -This evaluation is done to examine the relationships between program activities and observed results. This purpose is best for established programs where it is clear what interventions or practices were delivered to certain populations or groups. Also this evaluation purpose studies if there is evidence that the program contributed to observed effects.
- 4. Affect Participants This purpose aims to describe who program reached and how participants were affected by the program.
- 1. What are some tips on how to engage stakeholders?
  - 1. After you've identified your stakeholders, bring them together in a meeting to start off your evaluation planning. Ask them what does success for your program look like. They can help you with your evaluation design and directly participate in your evaluation by helping you gather or interpret data. It can be very helpful to engage stakeholders as you are selecting your data collection strategies since the types of information gathered using some data collection strategies may better meet their dissemination needs, may be seen as more credible to your stakeholders.
- 2. In your presentation you emphasized that a mixed method approach to program evaluation provides a comprehensive view of the program. What is an example of a mixed method approach?
  - In mixed method approach you utilize both qualitative and quantitative methods to conduct your evaluation. For example, you can conduct a focus group (qualitative) and use the themes from the focus group to guide the development of a survey (quantitative). You would incorporate the themes into your survey.



#### MODERATOR:

Next, please stay with us for two 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] question should be showing, it read [read question and potential answers]

Please respond with the appropriate answer at this time.

#### The level of information was

Too basic About right

## Beyond my needs

# The information presented was helpful to me.

- Yes.
- Somewhat.
- Not at all.

# **Reminders!**

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

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

AREBheartinfo@cdc.gov

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.



#### MODERATOR:

Our next Coffee Break is scheduled for Tuesday, June 12 and is entitled "Evaluative Thinking: Strategies for Reflective Thinking in Your Organization".

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