

**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 Ashley Marshall as today's presenter, she is an ORISE Fellow on the Evaluation and Program Effectiveness Team in the Applied Research and Evaluation Branch.

My name is Joyce Dieterly and I am today's moderator. I am an ORISE Fellow on the Evaluation and Program Effectiveness Team in the 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:**

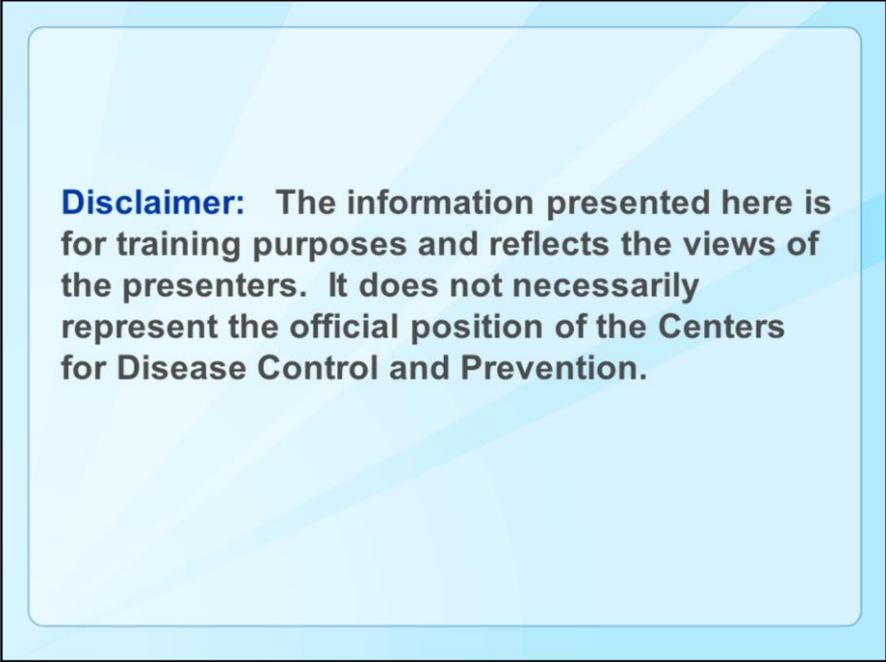
Before we begin we have a few housekeeping items.

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](mailto: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.

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

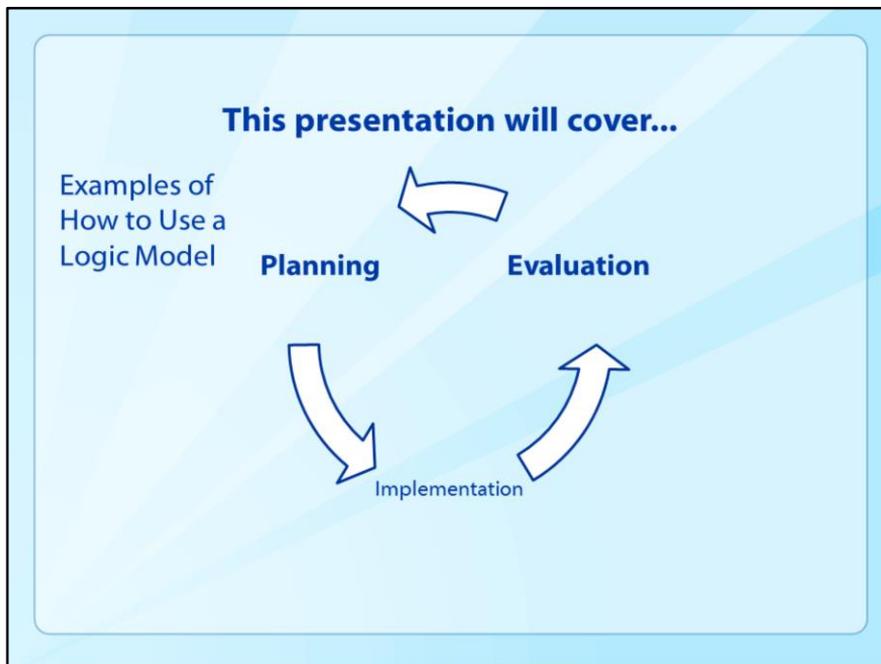
## Assumptions

- ❑ **Logic models are a commonly used tool for public health programs**
- ❑ **There are many good instructional resources and guides available on how to develop a logic model**
- ❑ **Less well understood is how to use a logic model once it has been developed**

[http://www.sagepub.com/sites/default/files/upm-binaries/23937\\_Chapter\\_1\\_\\_\\_Introducing\\_Logic\\_Models.pdf](http://www.sagepub.com/sites/default/files/upm-binaries/23937_Chapter_1___Introducing_Logic_Models.pdf)

Thanks, Joyce.

Before I begin, I would like to lay out a few assumptions that I am using to frame this presentation. First, logic models are a commonly used tool for public health programs. They have been around for a long time, starting with early uses in the 1970s and widespread application in the mid-1990s. Therefore, I'm assuming that many in this audience already know the basic components of the logic model and how to develop a logic model. Additionally, there are many good instructional resources and guides available online that cover these topics, some of which I will highlight at the end of this presentation. Less well understood, however, is how to use a logic model once it has been developed. In my experience, being unable to see the value of a logic model has sometime led to frustration with the process or questioning whether the time spent developing the model is worth it.



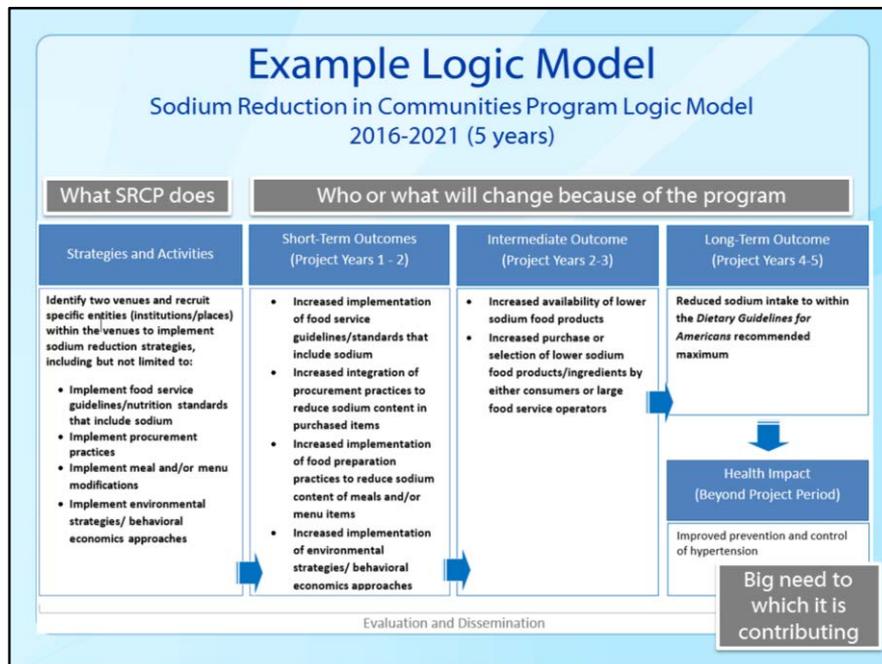
Today I'm going to present examples of how a logic model can be used throughout a program. Program planners, managers, and evaluators can use a logic model in several ways. One model may serve all three purposes, or it may be necessary to create different versions of the logic model. Although a logic model can be used in all three phases in the diagram, today I will focus on program planning and evaluation.

I will present three examples of how to use a logic model in program planning to:

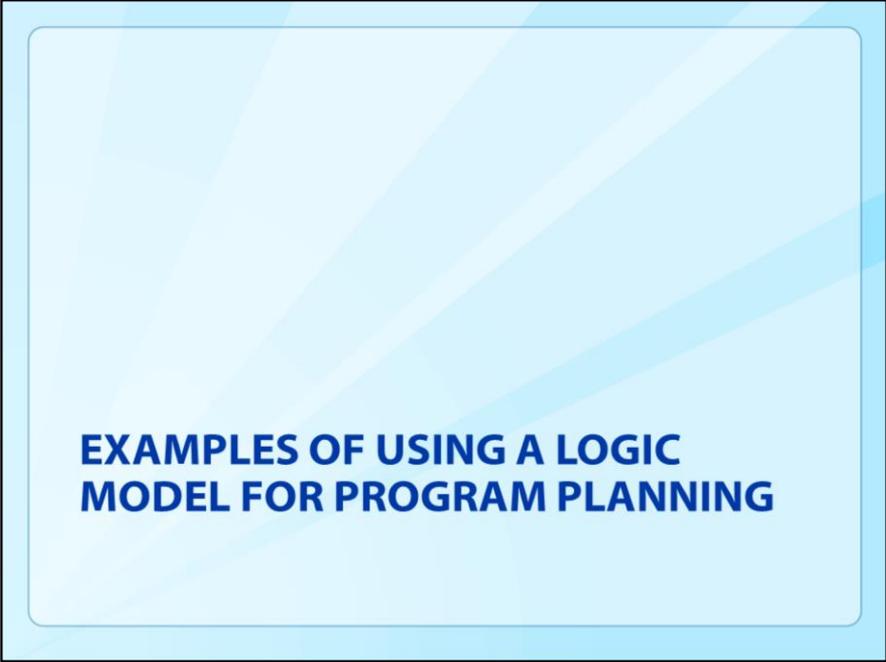
- Write program goals and objectives
- Identify strong program activities and outputs; and
- Help with situational analysis

Then, I will present three examples of how to use a logic model in program evaluation to:

- Determine what will be evaluated
- Identify evaluation questions and indicators; and
- Report evaluation findings



Throughout the presentation, I will be using the logic model for the Sodium Reduction in Communities Program or SRCP to illustrate each example of how to use a logic model. As you can see, this logic model is not complex. It only has five components – activities and strategies, short term outcomes, intermediate outcomes, long term outcome, and health impact. Even with this simple model, it tells what the program does, who or what will change because of the program, and the ‘big need’ to which it is contributing, in this case, improved prevention and control of hypertension. These are the basic components of a logic model that every program needs to know. Other logic model components, such as inputs, outputs, assumptions, and causal arrows can be added, depending on the needs of the program or the evaluation.



## **EXAMPLES OF USING A LOGIC MODEL FOR PROGRAM PLANNING**

Let's start with three examples of using a logic model for program planning.



First, programs are often asked to write statements about their goals and objectives. A **goal** is a statement that explains what the program wishes to accomplish. **Objectives** break the goal down into smaller parts that provide specific, measurable actions by which the goal can be accomplished. In a traditional logic model, objectives can be found in the short term or intermediate outcomes boxes, while goals can be found in long-term outcomes or impacts boxes.

### Writing goals and objectives, continued

- **Goal:** Reduced sodium intake to within the *Dietary Guidelines for Americans* recommended maximum
- **Objective:** By year 2 of the program, increase by XX% from baseline the number of cafeterias implementing food preparation practices to reduce sodium content of foods
- **Objective:** By year 3 of the program, increase by XX% from baseline the number of lower sodium foods purchased by cafeteria patrons per week

In the SRCP example, a goal from the long term outcomes could be: Reduced sodium intake to within the *Dietary Guidelines for Americans* recommended maximum. And the objectives from the short term and intermediate outcomes could be:

- By year 2 of the program, increase by some percentage from baseline the number of cafeterias implementing food preparation practices to reduce sodium content of food; and
- By year 3 of the program, increase by some percentage from baseline the number of lower sodium foods purchased by cafeteria patrons per week

Note that these objectives are SMART – in that they are **S**pecific, **M**easurable, **A**ttainable, **R**elevant, and **T**ime bound.

### Identifying strong activities and outputs

Strategies/Activities	Outputs	Short Term Outcomes
Identify two venues and recruit specific entities within the venues to implement sodium reduction strategies, including but not limited to: <ul style="list-style-type: none"> <li>• Implement food service guidelines/nutrition standards that include sodium</li> </ul>	# of institutions <i>recruited that have experience writing food service guidelines</i>  # of guidance documents on food service guidelines <i>produced and disseminated to key stakeholders</i>	Increased implementation of food service guidelines/standards that include sodium

Second, a logic model can assist with lining up strategies under the objectives. Programs can ask “what would it take for this activity to reach this outcome” to identify strong activities and outputs from these activities.

In the SRCP example, the logic model provides broad activities and strategies that lead to short term outcomes. Take for example, the short-term outcome **increased implementation of food service guidelines/standards that include sodium**. The logic model specifies that the strategy intended to reach this short term outcome is **implement food service guidelines/nutrition standards that include sodium** by recruiting specific entities. A traditional output from these strategies might be the **# of institutions recruited to implement sodium reduction strategies**. An improved output might be if those institutions recruited have *experience writing food service guidelines*. As another example, an output from these activities might be the **# of guidance documents on food service guidelines produced and disseminated to key stakeholders**.

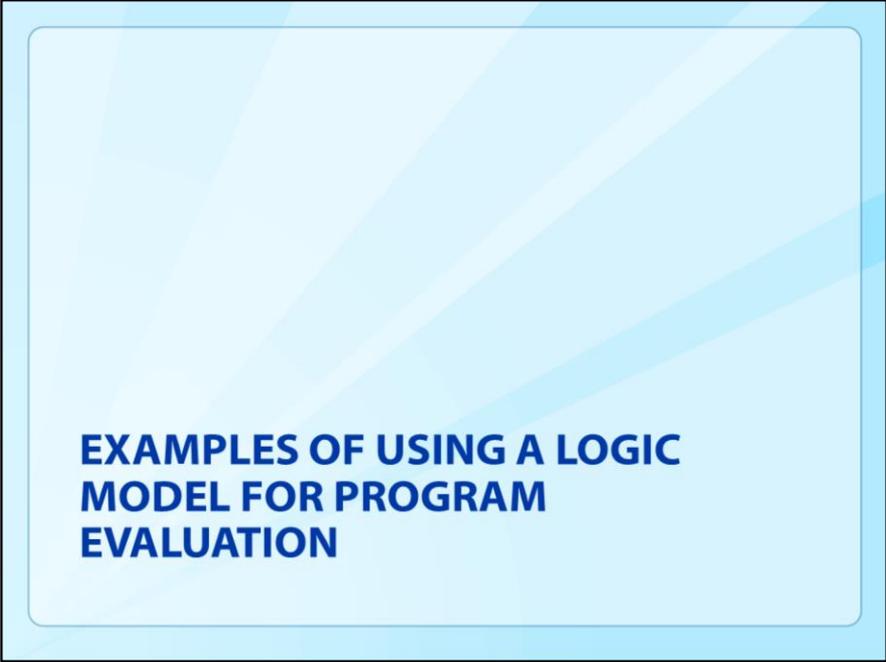
## Helping with situational analysis

- ❑ Logic models can help identify and address external factors that influence getting to outcomes
- ❑ Also known as a SWOT analysis
  - Strengths, Weaknesses, Opportunities, Threats



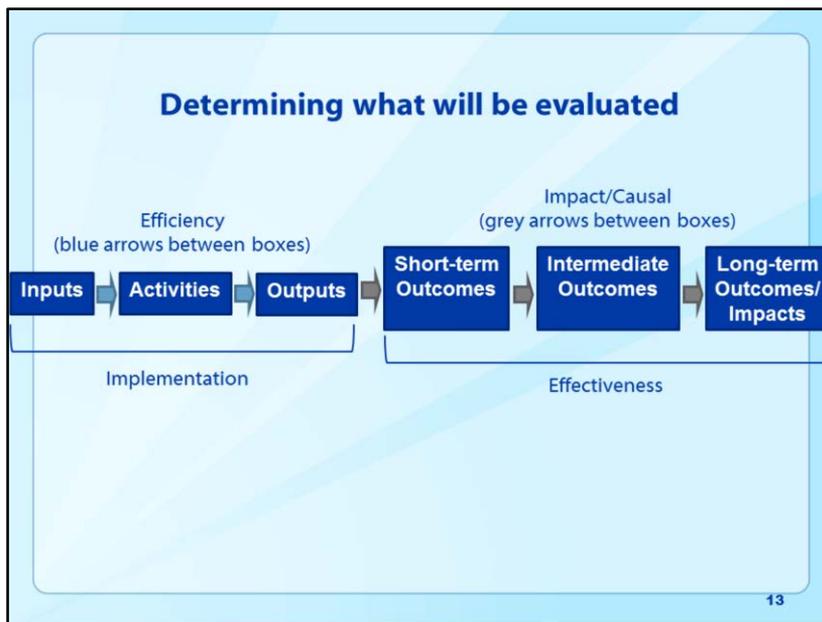
Photo credit: Wikimedia Commons

Finally, logic models can be used to identify external factors that may influence the ability of the program to achieve its intended outcomes and help programs think of ways to address these factors, either by capitalizing upon them or mitigating their effects. This is also known as a SWOT analysis. SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. For example, an SRCP activity may be to provide training to chefs on substituting herbs and spices for salt to add flavor to food. Even if chefs love the training, a moderating factor to achieving **increased implementation of food preparation practices to reduce sodium content of meals** may be a lack of reinforcement resulting in reduction of knowledge over time. This can be mitigated by providing periodic refresher trainings or a laminated handout to be posted in the kitchen.



**EXAMPLES OF USING A LOGIC  
MODEL FOR PROGRAM  
EVALUATION**

Now I will share three examples of using a logic model for program evaluation.



A logic model can be used with key stakeholders to help determine what to evaluate and what not to evaluate. A logic model ensures a mutual understanding of program activities and outcomes. It can help frame the discussion about what the focus of the evaluation will be. Typical focus areas for evaluation are:

- Implementation – for example, is the intervention implemented as planned?
- Effectiveness – to what extent is the intervention achieving its short-term, intermediate, and long-term outcomes?
- Efficiency – are program resources/inputs being used efficiently?; and
- Impact/Causal – do program participants experience better outcomes than non-participants?

While planning for an evaluation, it is a good idea to revisit the logic model to revise or elaborate upon it, such as by adding causal arrows, sequenced activities, mediators, moderators, or outputs.

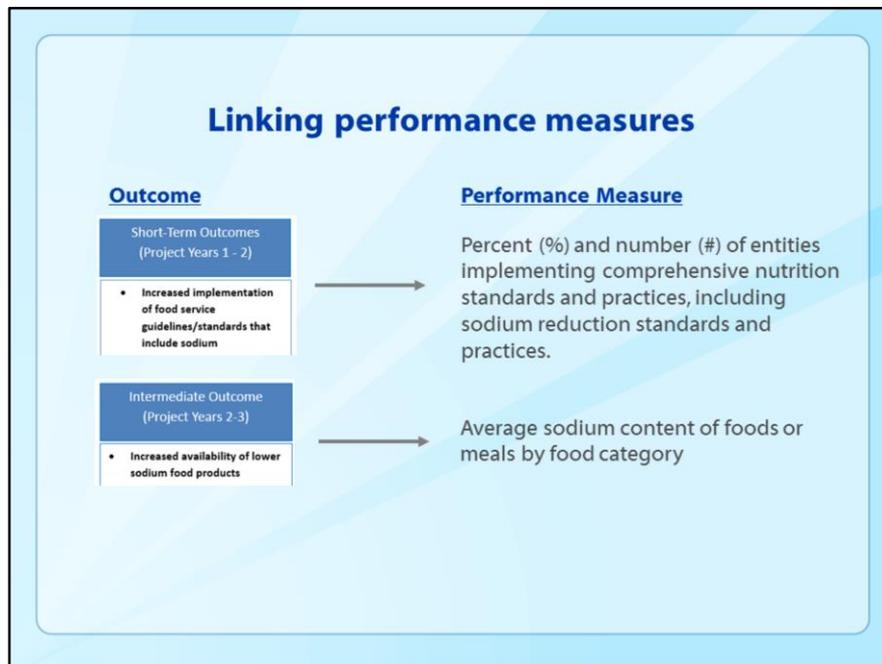
## Identifying evaluation questions

Strategies and Activities	Short-Term Outcomes (Project Years 1 - 2)	Intermediate Outcome (Project Years 2-3)
What promising and innovative sodium reduction strategies have been found effective that could be replicated by similar communities?	How and to what extent have sodium reduction interventions been implemented in specific venues and entities?	To what extent have lower sodium food products been purchased or selected by either consumers or large food service providers?  How and to what extent has the food environment changed since the implementation of sodium reduction interventions, specifically addressing availability of lower sodium food products?

14

After you have determined the primary purpose of the evaluation, a logic model can help narrow down the vast array of possible evaluation questions. For example, your program may want to know the effectiveness of the program – is it achieving its intended outcomes? Limited resources may not allow you to evaluate the effectiveness of the programs on all outcomes. A logic model can help prioritize which outcomes are most important (that is, those outcomes that are both relevant to the program and responsive to the funder).

SRCP has four evaluation questions that align with the logic model. One of the evaluation questions relates to strategies and activities, one asks about program effectiveness on short-term outcomes, and two ask about program effectiveness on intermediate outcomes. These questions were prioritized based on stakeholder needs and the stage of development of the program.



DHDSP uses performance measures in many of its large grants to demonstrate progress toward program outcomes and for continuous program improvement. The performance measures that CDC puts forth align with the program logic model. For example, performance measures associated with SRCP relate to outcomes in the program logic model. The performance measure: **Percent (%) and number (#) of entities implementing comprehensive nutrition standards and practices** is associated with the short term outcome: **Increased implementation of food service guideline/standards that include sodium**. And the performance measure: **Average sodium content of foods or meals by food category** is a measure for intermediate outcome: **Increased availability of lower sodium food products**.

## Reporting Evaluation Findings

### Impact Statements

"Our program did \_\_\_\_\_ (activity) which contributed to \_\_\_\_\_ (short term or intermediate outcome), which based on our logic model will lead to \_\_\_\_\_ (intermediate or long term outcomes)"

### Example from SRCP

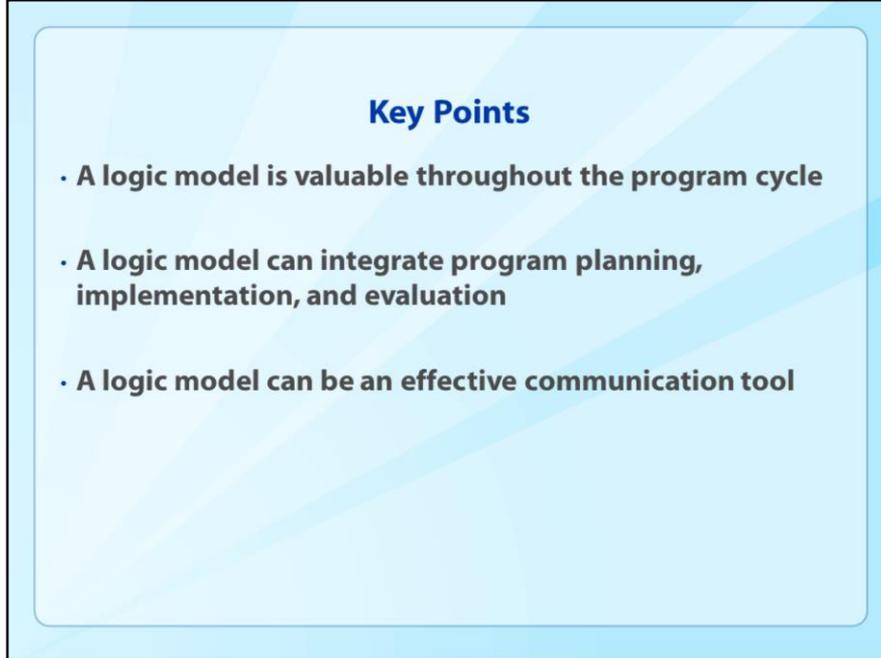
"Our program worked with chefs to implement meal modifications which contributed to a decrease in average sodium content of meals by 1000 mg, which based on our program logic model will lead to reduced sodium intake to within the *Dietary Guidelines for Americans* recommended maximum among cafeteria patrons."

In this final example, the logic model can be used as the 'storyline' for presenting evaluation findings. Since a logic model is a series of if/then statements, it can be used to write impact statements to use in briefing documents or conversations with decision-makers. Impact statements can follow the formula: our program did \_\_\_\_\_ (activity) which contributed to \_\_\_\_\_ (short term or intermediate outcome), which based on our logic model will lead to \_\_\_\_\_ (intermediate or long term outcomes).

For example, an impact statement for SRCP could be:

Our program worked with chefs to implement meal modifications which contributed to a decrease in average sodium content of meals by 1000 mg, which based on our program logic model will lead to reduced sodium intake to within the *Dietary Guidelines for Americans* recommended maximum among cafeteria patrons.

While progress may not always be in a linear direction as presented in the logic model, the lack of linearity can provide interesting findings for other programs. For example, did the logic of the logic model hold or was there an unanticipated moderator than inhibited getting from activities to short term outcomes?



Today I have gone over six different ways to use a logic model – three from program planning and three from program evaluation.

I hope that from this presentation you take away the following key points:

- a logic model is a valuable tool to use throughout the program cycle, and should be revisited often
- a logic model can integrated program planning, implementation, and evaluation and provide a clear line of sight for all three activities.
- a logic model is an effective communication tool to orient and engage partners, explain the program to the public and policy-makers, and organize and prepare evaluation reports.

## Additional Logic Model Resource

- ❑ **CDC Logic Model Resources**  
[https://www.cdc.gov/eval/tools/logic\\_models/index.html](https://www.cdc.gov/eval/tools/logic_models/index.html)
- ❑ **Community Toolbox Chapter 2 Section 1. Developing a Logic Model or Theory of Change**  
<http://ctb.ku.edu/en/table-of-contents/overview/models-for-community-health-and-development/logic-model-development/main>
- ❑ **Pell Institute Evaluation Toolkit**  
<http://toolkit.pellinstitute.org/evaluation-guide/plan-budget/use-a-logic-model-in-evaluation/>
- ❑ **W.K. Kellogg Foundation Logic Model Development Guide**  
<http://www.wkkf.org/resource-directory/resource/2006/02/wk-kellogg-foundation-logic-model-development-guide>

As I promised, here are some of my favorite logic model resources from CDC, the Community Toolbox, Pell Institute, and W.K. Kellogg Foundation. If you have a favorite logic model resource, please let us know by typing it into the chat box.

## Any Questions?



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

### 1. How often should my program revisit or revise our logic model?

Good question. There are no specific guidelines for how often to revisit your program logic model. It will depend on your program needs and capacity. If your program is collecting annual process or performance measure data and you are not making progress toward your targets, then it may be time to revisit the logic model to examine its assumptions. There could be issues with implementation of the program or there could be other contextual factors that are hindering progress that you may not have considered previously. It is also a good idea to revisit the program logic model prior to evaluation to ask if the way the program operates and its intended outcomes are the same as when the model was written or if they have changed over time.

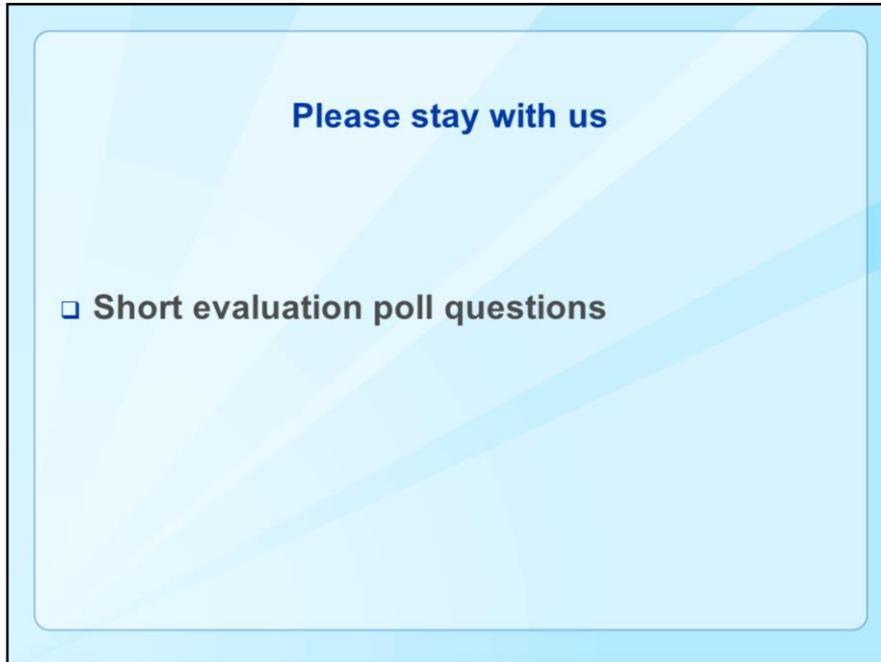
### 2. The logic models in some CDC Funding Opportunity Announcements (FOAs) don't typically have inputs or outputs. Why not?

That's correct. The logic model in the FOA is meant to serve as a guide. In developing

your program logic model, you may decide that it's important to include inputs and outputs so that everyone has a mutual understanding of the planned work. It is ok to add program inputs, activities, or outputs to an existing CDC logic model if they are relevant to your program. By adding these types of details, you can make the logic model more specific to your program, which will aid in program planning and evaluation.

3. What other elements can my program add to the logic model to aid in evaluation?

Again, it depends on the needs of your program evaluation, but you may wish to add a broad timeline for evaluation or planned evaluation products to the FOA logic model. You could also show how evaluation questions link to the logic model by indicating the components of the logic model that the questions will examine. Finally, you could even add the specific indicators that you will use to measure outcomes to the logic model.



Please stay with us a few poll questions.'

**This coffee break was worthwhile for me.**

Yes very worthwhile

Somewhat

A little

No not at all

**The level of information was**

Too basic

About right

Beyond my needs

**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](mailto: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.

## Next Coffee Break

**When: Tuesday, April 11**

**Topic: Advancing Knowledge to Practice  
through the Application of a Policy Research  
Continuum**

**Presenters: Erika Fulmer and  
Siobhan Gilchrist**



Division for Heart Disease and Stroke Prevention  
National Center for Chronic Disease Prevention and Health Promotion



Our next Coffee Break is scheduled for Tuesday, April 11 and is entitled “Advancing Knowledge to Practice through the Application of a Policy Research Continuum”.

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