

Evaluating Environmental Approaches: Example from Nutrition

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April 8, 2014—Evaluating Environmental Approaches: Example from Nutrition Presenters: Eileen Chappelle and Diane Thompson

Environmental approaches that promote health and support healthful behaviors are important strategies to address multiple chronic diseases and conditions. States and communities implementing these approaches need to conduct evaluations that describe and improve their processes as well as report outcomes. This presentation will describe ways to evaluate environmental approaches and incorporate examples related to interventions that address the underlying causes of chronic disease such as implementing food service guidelines or nutrition standards where food and beverages are available. Considerations and challenges to evaluating environmental approaches will be shared and related evaluation tools and resources will be highlighted.

Ms. Chappelle provides evaluation technical assistance to grantees of the WISEWOMAN and FOA 1305.

Ms. Thompson also provides technical assistance to grantees of FOA 1305 - *State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health*, and she serves as a subject matter expert for the topic of food service guidelines.

Disclaimer

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

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Overview

- Defining environmental change
- Evaluation considerations
- Overview of food service guidelines
- Evaluation example
- Key points and lessons learned

Here is an overview of today's coffee break. This presentation will share evaluation considerations, describe ways to evaluate environmental approaches using food service guidelines as the main example, and share some lessons learned.

Defining Environmental Changes

- **Definition: A new or altered physical, social, economic, or communication environment influencing health or related health behaviors.¹**

- **Types:**
 - Built Environment
 - Legislative Policy
 - Organizational Policy

¹Brennan, L., Castro, S., Brownson, R.C., Claus, J., and Orleans, C.T. (2011). Accelerating evidence reviews and broadening evidence standards to identify effective, promising and emerging policy and environmental strategies for prevention of childhood obesity. *Annual Review of Public Health* 32, 199-223.

As you see here, it's a new or altered physical, social, economic, or communication environment influencing health or related health behaviors.

In other words, environmental changes is just one strategy public health uses to help us make the healthy choice the easy choice.

There are multiple types of environmental changes: it can be a Built Environment, a Legislative Policy, or an Organizational Policy. Environmental changes can happen without policy, and sometimes a policy can result in environmental change.

Policy and Environmental Change Related to Nutrition

- ❑ **Increase access to healthy foods and beverages**
- ❑ **Implement food service guidelines/nutrition standards where foods and beverages are available. Guidelines and standards should address sodium.**
- ❑ **Create supportive nutrition environments in schools**
- ❑ **Increase access to breastfeeding-friendly environments**

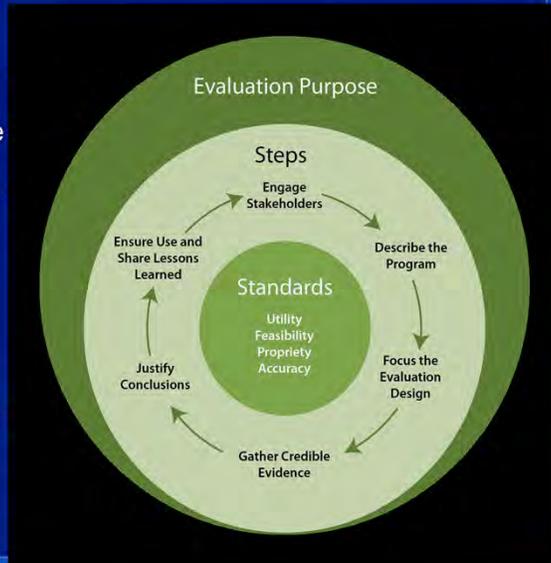
This slide shows a couple of policy and environmental changes related to nutrition. We will focus today's presentation primarily on implementing the food service guidelines/nutrition standards.

Evaluation Consideration: Determining the Purpose

□ A clear evaluation purpose:

- Will inform every phase of the framework
- May help the evaluator identify stakeholders
- Helps determine the most appropriate evaluation method
- Can keep evaluators motivated and focused on goals

Dunet, D.O. (May 23, 2011). "Focusing an evaluation through identifying its purpose," presentation.



A clear evaluation purpose is an important evaluation consideration.

This diagram shows the various steps of the CDC Framework. Depending on your purpose, it will change what you're considering within these steps. For example, in the engagement of stakeholders, if your purpose is to define the problem, you may need to speak with community leaders and community members to get a sense of what some of the barriers are and what environmental changes are needed. If you are evaluating implementation, you may want to capture lessons learned from program staff that put the environmental change in place.

Being clear on your purpose will help you lay out your evaluation plans.

Sample Evaluation Purposes

- **Accountability**
- **Monitoring**
- **Improvement**
- **Understanding**
- **Replicability**
- **Judgment**
- **Knowledge**
- **Development**

Dunet, D.O. (May 23, 2011). "Focusing an evaluation through identifying its purpose," presentation.

This is a list of some sample evaluation purposes to keep in mind.

For accountability, you may want to track the appropriate use of funds spent on the environmental change.

For replicability, you may conduct a process evaluation to determine how it was implemented and incorporate any lessons learned before implementing it somewhere else.

For judgment, you may just focus on conducting an outcome evaluation to determine if the desired outcomes were achieved.

Aspects of Environmental Changes to Evaluate

- **Development**
 - Define the problem
 - Develop solution
- **Implementation**
 - Training
 - Reach
 - Maintenance
- **Impact**
 - Effectiveness

*Raise awareness and engage partners throughout the process

In terms of what to evaluate, determining what aspects or stage of the environmental change to focus on will help refine the evaluation effort.

Think about the phase. Is it in development? Are you trying to figure out what's the best environmental change depending on the problem?

Or is it more about implementation? Do you need to train folks about what you're trying to achieve to implement this environmental change? Do you have to raise awareness? Do you have to make sure that you're reaching the appropriate number of people?

Or is it more about impact, in terms of what have you achieved now that the environmental change is in place?

As you think about what to evaluate, think clearly about the purpose of your evaluation, but also what's the aspect of the environmental change that you want to consider, and raising awareness and engaging partners through the process.

Evaluation Example: Food Service Guidelines

- **Food service guidelines create a food environment in which healthier choices are made easier for consumers by:**
 - Increasing the availability of healthier food and beverages
 - Providing calorie information so consumers make informed choices
 - Displaying the healthier options more prominently

Today we will be talking about evaluating food service guidelines. The purpose of food service guidelines is to create a food environment in which healthier choices are made easier for consumers. These guidelines are used to increase the availability of healthier food and beverages, to provide consumers with calorie information to inform their choice, and to display them more prominently, so that healthier options represent an easy choice for customers to make.

Healthy Food Procurement in the County of Los Angeles

□ Background

In 2011, the County of Los Angeles Board of Supervisors passed a motion for the *Healthy Food Promotion in Los Angeles County Food Service Contracts*.

The motion established a process for the county's Department of Public Health to develop nutrition standards and/or healthy food procurement practices in new and renewing Requests for Proposals for food service and vending contracts across county departments.

The Department of Public Health evaluates the institutional policy implementation and provides feedback and technical assistance to the contracted food vendors for quality improvement purposes.

For our food service guideline example, we will be discussing the evaluation of the healthy food procurement policy in the County of Los Angeles.

In 2011, the County of Los Angeles Board of Supervisors adopted *Healthy Food Promotion in Los Angeles County Food Service Contracts*, a motion aimed at County departmental food procurement policies and practices as they relate to nutrition.

The motion established a process for the county's Department of Public Health to develop nutrition standards and/or healthy food procurement practices in new and renewing Requests for Proposals for food service and vending contracts across county departments.

And the Department of Public Health evaluates the institutional policy implementation and provides feedback and technical assistance to the contracted food vendors for quality improvement purposes.

Evaluation Methods

□ RE-AIM of Enacted Policies

- Reach to intended population, especially those at greatest risk
- Adoption (compliance) by settings/sectors
- Implementation
 - as intended
 - feasibility, acceptability, cost
- Maintenance

□ Impact

- Effectiveness

Glasgow et al. (2003)

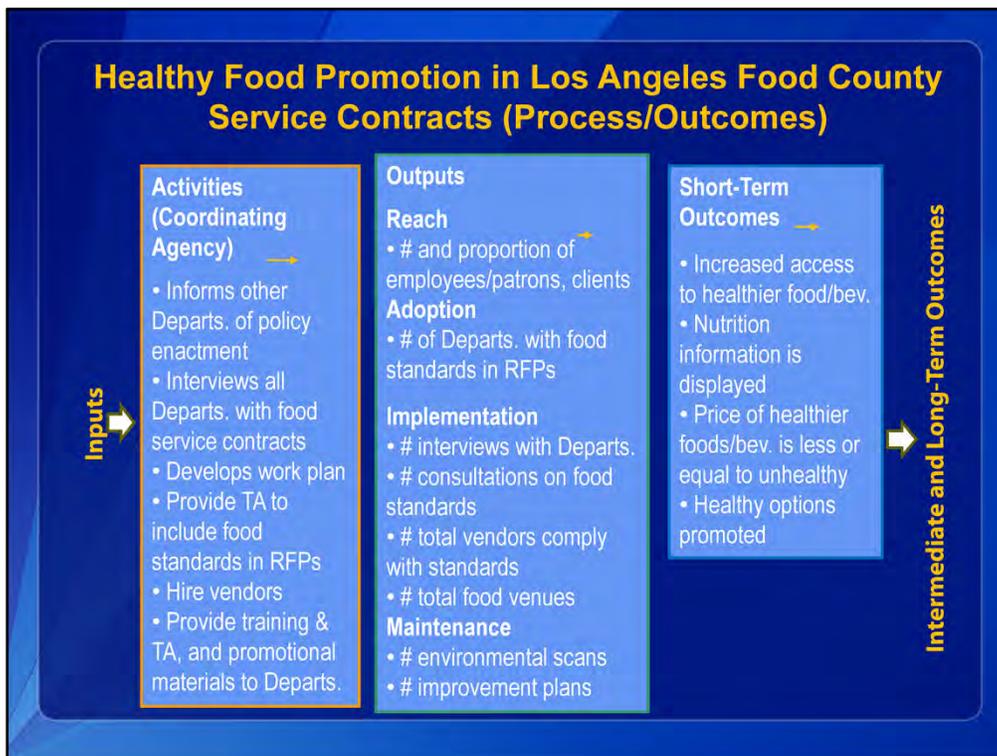
<http://www.centertrt.org>

This evaluation example is based on an evaluation framework developed by the University of North Carolina Center for Training and Research Translation that includes the RE-AIM framework that is widely used to assess an intervention's potential impact. It includes the following criteria:

- Does the intervention reach the intended population?
- Is it adopted by providers and settings?
- Is it implemented as intended and maintained over time?

And, for impact:

- Is it effective in achieving intended outcomes?



For evaluation, the logic model represents your program theory. Program theory is the logic that links parts of a particular program together and describes the relationships between program inputs, program activities, and program outcomes. It explains what the program’s activities are and how they are expected to lead to desired program outcomes, and it is used to guide development of the evaluation plan and evaluation questions.

For the purpose of this presentation, this logic model begins with the implementation of the motion *Healthy Food Promotion in Los Angeles County Food Service Contracts* and we will only talk about the highlighted section of the logic model related to the outputs, and short-term outcomes for process and outcome evaluation.

Example Process Evaluation Questions

Reach

How many people and what proportion of county department employees, patrons, and recipients of food and beverage distribution programs are reached by the food service contracts motion?

- **Indicator:** # and % of county department employees, patrons, and recipients of food and beverage distribution programs affected by the policy
- **Data collection:**
 - Program and administrative records
 - Food venue records of sales to estimate number of customers

Process evaluation focuses on the quality and implementation of the intervention to identify strengths, weaknesses, and areas that need improvement. It is conducted periodically throughout the duration of the intervention to examine the implementation of the intervention, including which activities are taking place, who is conducting the activities, and who is reached through the activities.

For Reach, the evaluation question is: How many people and what proportion of county department employees, patrons, and recipients of food and beverage distribution programs are reached by the food service contracts motion? For this, the indicator is the number and percentage of county department employees, patrons, and recipients of food and beverage distribution programs affected by the policy. The data collection involves either programmatic and administrative records of number of employees or program recipients, or you may also use food venue records of sales to estimate the number of customers that you're serving.

Example Process Evaluation Questions

Adoption

How many/what proportion of county departments have adopted the food service contracts motion by incorporating new food service requirements in their Requests for Proposals?

- **Indicator:** # and % of county departments adopting policy out of total eligible
- **Data collection:** Review RFPs and food service contracts for departments involved in food and beverage procurement, sales or distribution

Another example of a process evaluation questions is Adoption.

How many/what proportion of county departments have adopted the food service contracts motion by incorporating new food service requirements in their Requests for Proposals?

An indicator would be the number and percentage of county departments adopting the policy out of the total eligible. And your data collection would involve the review of Requests for Proposals and food service contracts for the departments involved in food and beverage procurement, sales, or distribution.

Example Outcomes Question

Short-term outcomes:

What foods and beverages are available in county department food service venues?

- **Indicator:** Change in food environment/available options at baseline and 6-month follow-up
- **Data collection:** Environmental scans (vending and cafeteria)

Outcome evaluation focuses on assessing the achievement of expected outcomes of the intervention. Outcome evaluation should build on process evaluation. Outcome evaluations are used to assess the impact of the interventions using short-term, intermediate-term, and long-term outcomes. This type of evaluation assesses what has occurred because of the intervention and whether it has achieved the intended outcomes.

A short-term outcome would include what foods and beverages are available in county department food service venues. An indicator would be a change in the food environment or available options at baseline and then at 6-month follow-up. Your data collection would include environmental scans or audits of the food and beverages that are offered and the food venues, whether that's vending or cafeteria.

Example Outcome Question

Short-term outcomes:

What percentage of packaged food and beverage or menu items have nutrition information displayed?

- **Indicator:** Presence of menu labels at baseline and 6-month follow-up
- **Data collection:** Environmental scans (vending and cafeteria)

Another example of an outcome evaluation question is related to nutrition information, specifically calorie information, since this information allows the consumer to make informed choices and select more healthful diets.

For this short-term outcome, we would be asking: What percentage of packaged food and beverage or menu items have nutrition information displayed? The indicator would be the presence of menu labels at both baseline and 6-month follow-up. And again, the data collection method would be using environmental scans or audits of calorie information in the vending and cafeteria.

Evaluation Results: To Date

ADOPTION as of 3/2014

Six of 12 county departments have adopted nutrition standards and other healthy food procurement practices in their food service contracts:

- Chief Executive Office
- Department of Beaches and Harbors
- Department of Public Works
- Department of Health Services
- Probation Department
- Department of Parks and Recreation

IMPLEMENTATION

One out of the 12 county departments (Department of Public Works) has begun implementation of the policy:

- Integrating healthy procurement standards in their contract
- Hiring a new food vendor
- Measured an increase in access to healthier food choices in their cafeteria and vending machines

So let's talk a little bit about what sort of evaluations LA County has seen to date.

For adoption, 6 of the 12 county departments have adopted nutrition standards and other healthy food procurement practices in their food service contracts, and you'll see the departments listed on the slide.

For implementation, one of the county health departments has begun implementation of the policy. They've integrated their procurement standards into their contract, they've hired a new food vendor, and now they're measuring the increased access to healthier food in their cafeteria and vending machines.

Evaluation Results: To Date

EFFECTIVENESS

Pre-post assessment and observations (6 months after food requirements implementation) in vending machines and a cafeteria in one county department.

- Improvements in percent of healthy snacks (41% to 80%) and beverages (30% to 79%) were observed in vending machines.
- Three entrées were labeled as healthy compared to none at baseline.
- Compliance with the 12 oz. cup limit for sugary drinks was noted.
- Implementing some of the pricing, placement, and promotion activities recommended in the food service contract.

For effectiveness, pre- and post-assessment and observations were conducted (6 months after food requirements implementation) in vending machines and a cafeteria in one county department.

Improvements in percent of healthy snacks (41% to 80%) and beverages (30% to 79%) were observed in vending machines.

Three entrées were labeled as healthy compared to none at baseline.

There was increased compliance with the smaller 12 oz. cup size to limit sugary drinks.

They're also implementing some of the pricing, placement, and promotion activities recommended in the food service contract.

Lessons Learned from *Healthy Food Promotion in Los Angeles County Food Service Contracts*

- ❑ Taking a step-by-step approach has allowed for better adoption and greater understanding of county departments' food services needs
- ❑ Start implementation slowly
- ❑ Learn from initial successes and challenges
- ❑ Incorporate lessons learned into technical assistance

So what are some lessons learned from the LA County experience?

Taking a step-by-step approach has allowed for better adoption and greater understanding of county departments' food services needs.

They advised people to start the implementation slowly, to learn from initial successes and challenges, and to continue to incorporate lessons learned into technical assistance.

Helpful Tips

- It is important to be clear about the evaluation purpose.
- Collect baseline data before the environmental change is implemented.
- Engaging program staff often ensures the evaluation is useful and relevant.

It is important to be clear about the evaluation purpose.

- In this case the purpose was accountability to the funder through the reporting of reach and adoption and program improvement for continued implementation of the food service guidelines.

Collect baseline data before the environmental change is implemented. This information provides a baseline that can be used for the following purposes:

- Determine what percentage of food and beverages already meet specific food and nutrition standards.
- Establish objectives for implementation of the food service guidelines that can be phased in over time.
- Track changes over time with repeated measurements for program improvement.
- Monitor compliance with food service guidelines.

Engaging program staff often ensures the evaluation is useful and relevant.

Acknowledgements

- **Healthy Food Procurement in the County of Los Angeles**

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Evaluation logic model and evaluation plan for a policy modeled after the Healthy Food Promotion in Los Angeles County Food Service Contracts Institutional Policy.

Information available at <http://www.centertrt.org/?p=intervention&id=1184>

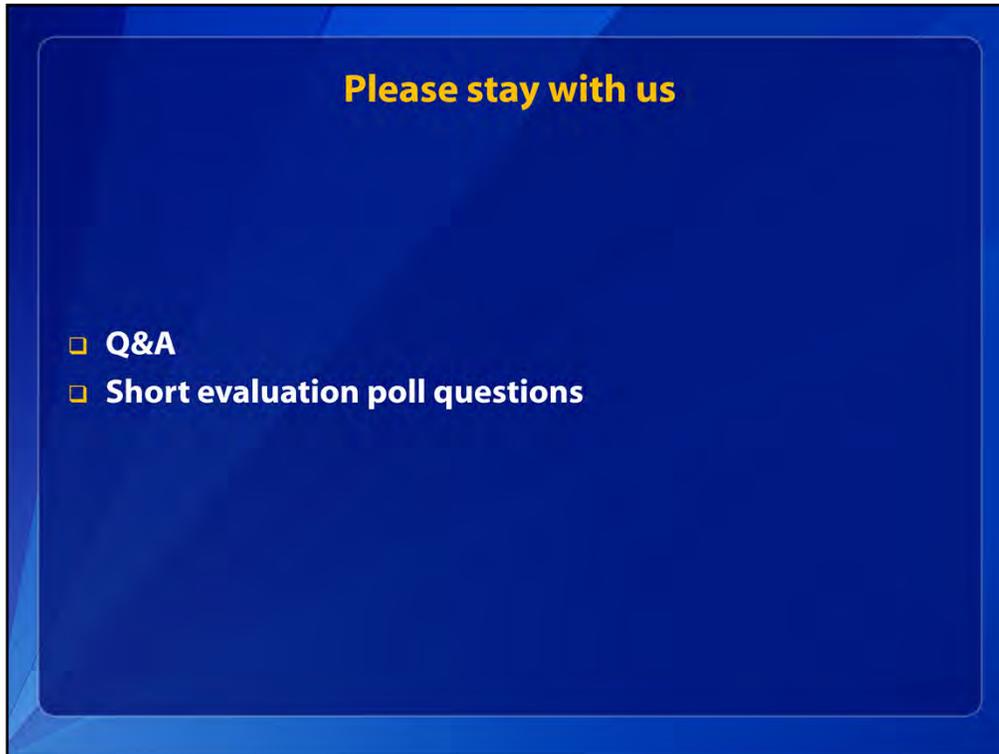
I would like to thank Michelle Wood for letting me share the work that the LA County Department of Public Health has done related to *Healthy Food Procurement in the County of Los Angeles*.

And I would like to thank the University of North Carolina Center for Training and Research Translation for sharing their logic model and sample evaluation questions for this presentation. Please go to the link on the slide (<http://www.centertrt.org/?p=intervention&id=1184>) for a more detailed description of how to evaluate a food procurement policy.

Resources

- ❑ **DHDSP Evaluation Guides:**
http://www.cdc.gov/dhdsp/programs/nhdsp_program/evaluation_guides/index.htm
- ❑ **Evaluation: Quick Start Resources:** A list of key references and tools for planning and implementing program and/or project evaluations, focusing specifically on physical activity programs and evaluations.
http://www.cdc.gov/nccdphp/dnpa/physical/pdf/PA_evaluation_quick_start.pdf
- ❑ **Recommended Community Strategies and Measurements to Prevent Obesity in the United States:** A list of key references and tools for planning and implementing program and/or project evaluations, focusing specifically on physical activity programs and evaluations.
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5807a1.htm>
- ❑ **Robles, B., Wood, M., Kimmons, J., and Kuo, T. (2013). Comparison of Nutrition Standards and Other Recommended Procurement Practices for Improving Institutional Food Offerings in Los Angeles County, 2010–2012. *Adv Nutr* 4, 191-202.**

Here are a few resources for your consideration.



Question 1: What key stakeholders should be considered when evaluating food service guidelines?

Response: First when talking about stakeholders, include those served or affected by the guidelines as well as those that are responsible for implementing the food guidelines. To begin with your stakeholder group, start with a wellness committee you already have and expand that to include additional food service staff. Always bring agency leaders and public health staff on board. For food service guidelines, also bring on the building facilities manager, purchasing director, and your legal department for writing contracts. It's important to engage the food service staff as well as the food vendors.

Question 2: How do you determine if there are food service guidelines?

Response: LA County and other health department counties that are in the process of implementing food service guidelines have found that it is important initially to conduct a food service assessment. With a comprehensive assessment, you may be looking at where food is prepared, served, or sold across several different agencies, or you may want to focus on a certain area like vending and cafeterias. When conducting the assessment, you are really trying to find out where the food is served, what food service venues are available, what sort of policies/standards/practices are already in place for those different food service venues, and who has the contracting authority for those food service guidelines, because that's the person to talk to in order to make changes. What is the actual procurement process? All of this is helpful to find out what standards are in existence to build on or how to establish new food service guidelines.

All sessions are archived and
can be accessed on-demand at:

<http://www.cdc.gov/dhds/pubs/podcasts.htm>

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

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If you have any ideas for future topics or questions, please contact us at
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