

PARTICIPANT GUIDE



Selecting Effective Interventions

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Selecting Effective Interventions

LEARNING OBJECTIVES

At the end of the training, you will be able to:

- Draw a causal diagram to describe a noncommunicable disease (NCD) or risk factor
- Use the Community Guide to identify one evidence-based behavioral intervention and one policy, systems and environmental (PSE) intervention to address an NCD or risk factor
- For one selected intervention: describe how at least one behavioral theory or model has been applied; describe how to adapt the intervention to local culture; or describe at least two non-evidence based factors that may impact the intervention

ESTIMATED COMPLETION TIME

- 5 ½ hours (includes a 1 hour skill assessment and a 30 minute debrief)

REFERENCES AND RESOURCES

- The Community Guide. <http://www.thecommunityguide.org/index.html>
- Frieden, T (2010) A Framework for Public Health Action: The Health Impact Pyramid. *American Journal of Public Health*, 100 (4), 590 – 595.
- US Department of Health and Human Services. (2002) *Physical Activity Evaluation Handbook*. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention.
- Hoehner, C, Soares, J, et al. (2008) Physical Activity Interventions in Latin America: A Systematic Review. *Am J Prev Med.*;34(3):224-233.
- Glanz, K, Rimer, B (1997) *Theory at a Glance*. Bethesda, MA: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute.
- McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. *Health Education Quarterly* 15:351–377, 1988.

Slide	Notes
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Selecting Effective Interventions

Presenter's Name
Presenter's Title

Title of Event
Date of Event



Department of Health and Human Services
Centers for Disease Control and Prevention



Learning Objectives

At the end of the training, participants will be able to:

- Draw a causal diagram to describe a noncommunicable disease (NCD) or risk factor
- Use the Community Guide to identify one evidence-based behavioral intervention and one policy, systems and environmental (PSE) intervention to address an NCD or risk factor
- For one selected intervention:
 - Describe how at least one behavioral theory or model has been applied
 - Describe how to adapt the intervention to local culture
 - Describe at least two non-evidence based factors that may impact the intervention

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Lesson Overview

Selecting interventions

- Causal model
- Health Impact Pyramid
- Behavioral models and theories

Researching evidence-based interventions

- Community Guide

Considering non-evidence based decision-making factors

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Notes

Selecting Interventions

- Different frameworks can help you decide on an appropriate intervention
 - Causal Pathway
 - CDC Health Impact Pyramid
 - Behavioral Theories and Models
- Evidence-based interventions can help you select effective interventions

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Causal Methods

- Health professionals desire to understand the causes of disease
- With in-depth study of a disease and its risk factors, we can often identify the causal factors
- Many factors can be associated with a disease but are not causal
- Remember: Association  Causation

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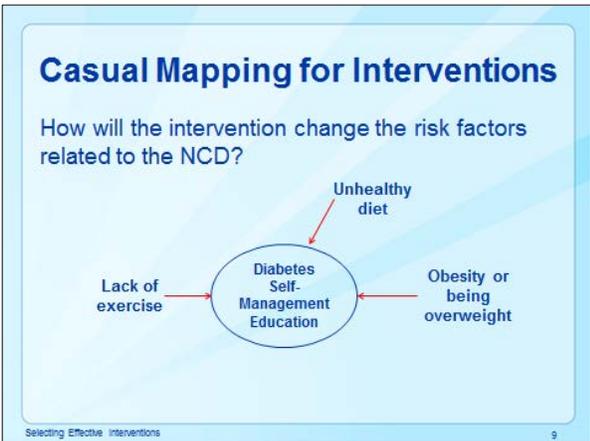
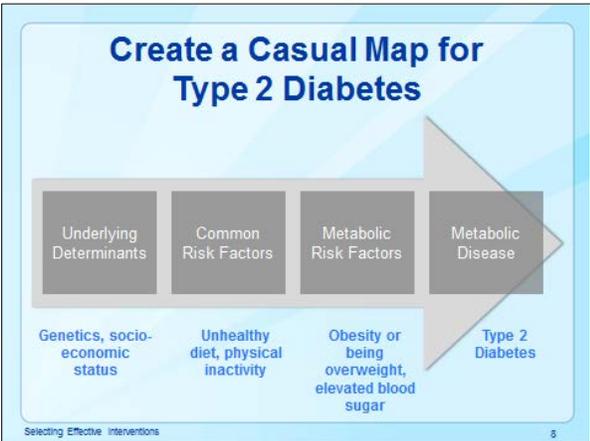
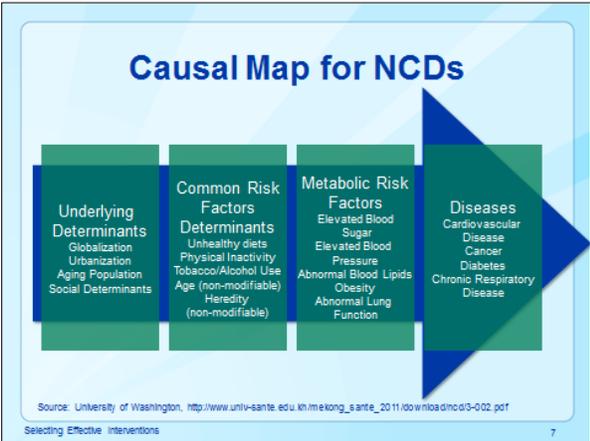
What is the Causal Pathway?

- Shows a visual representation of a hypothesis
- Shows the logical link behind a cause and an outcome
- Can be used to model diseases and treatments
- Can help program planners understand why a problem or risk factor is important

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Health Impact Pyramid

The diagram shows a pyramid with five levels. From top to bottom, the levels are: Counseling and Education, Clinical Interventions, Long-lasting Protective Interventions, Changing the Context, and Socioeconomic Factors. To the left of the pyramid is a vertical double-headed arrow labeled 'Smallest Impact' at the top and 'Largest Impact' at the bottom. To the right of the pyramid are five boxes with arrows pointing to the corresponding levels: 'Add healthy Physical Education classes' (top), 'Aspirin for high blood pressure, diabetes medications' (second), 'Smoking Cessation treatments' (third), 'Tobacco taxes, health laws' (fourth), and 'Healthy, safe schools' (bottom). The CDC logo is in the top right corner.

Source: Frieden, T. A Framework for Public Health Action: The Health Impact Pyramid. Am J Public Health. 2010; April; 100(4): 590-595.

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Using the Health Impact Pyramid

The diagram shows a blue pyramid with five horizontal layers. From top to bottom, the layers are labeled: Counseling and Education, Clinical Interventions, Long-lasting Protective Interventions, Changing the Context, and Socioeconomic Factors.

Source: Frieden, T. A Framework for Public Health Action: The Health Impact Pyramid. Am J Public Health. 2010; April; 100(4): 590-595.

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How Can You Apply Theory to Program Planning?

- Investigate “why”, “what”, and “how” health problems should be addressed
- Identify why people do or do not engage in certain health behaviors (e.g., lack of knowledge, social support, resources)
- Identify strategies that will have an impact and reach the right audience

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Applying Behavioral Models and Theories to Interventions

- Behavioral models and theories give planners tools to design health behavior and health promotion interventions at 3 levels:
 - Individual
 - Interpersonal
 - Community
- To use these models and theories effectively, health practitioners must understand the target population (e.g., gender, age, geographic location).

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Multi-Level Approach

- Effective interventions often address multiple levels: individual, interpersonal, and community
- An individual's health is shaped by many interactions (e.g., family, peers, coworkers, schools, environment)

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Socio-ecological Model

Adapted from: McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. Health Education Quarterly 15:351-377, 1988.

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Key Concepts: Socio-ecological Model

- Emphasizes the interaction between, and interdependence of, factors across all levels of a health problem (e.g., physical and sociocultural environments)
- Behavior both affects, and is affected by, multiple levels of influence
- An individual's behavior shapes and is shaped by the social and built/natural environment (*Reciprocal Causation*)

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Behavioral Theories

- Individual Level: Stages of Change (Transtheoretical) Model
- Interpersonal Level: Social Cognitive Theory
- Community Level: Community Organization Model

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Stages of Change Model

In adopting healthy behaviors or eliminating unhealthy ones, people progress through 5 levels related to their readiness to change:

1. Precontemplation
2. Contemplation
3. Preparation
4. Action
5. Maintenance

Source: Glanz, K, Rimer, B (1997) Theory at a Glance. Bethesda, MA: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute.

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Social Cognitive Theory (SCT)

- People learn from their own experiences *and* by observing the actions of others and the benefits of those actions.

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    graph TD
      Behavior --> PersonalFactors[Personal Factors]
      Behavior --> EnvironmentalFactors[Environmental Factors]
      PersonalFactors --> EnvironmentalFactors
      EnvironmentalFactors --> PersonalFactors
    
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Source: Pajares (2002). Overview of social cognitive theory and of self-efficacy. 12-8-04. From <http://www.emory.edu/EDUCATION/mfp/peff.html>

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Applying SCT

- Expectations
- Self-efficacy
- Observational learning (modeling)
- Reinforcements

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Community Organization Model

- Public health workers help community identify health and social problems and develop plans to address these problems
- Active community participation is essential
- Three types:
 1. Social planning
 2. Social action
 3. Locality (community) development

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Slide**Notes****Review of Behavioral Theories**

Which theories should you apply when selecting interventions?

- What level of impact do you want to have?
- What theory is applicable for that level?
- What intervention can support that theory?

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What is an Evidence-Based Intervention?

Treatments or programs which are proven or tested to be effective

How do you measure “effectiveness”?

- Reductions or improvements in a measurable outcome
- Application of the scientific method
- % of your targeted population reached

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Key Features of Evidence-Based Interventions

- Replication or duplication of results
- Consistency with other studies
- Outside review

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Examples of Evidence-Based Interventions

- Recommending that women be screened every 3 years for cervical cancer
- Incorporating a physical exercise class in schools to prevent obesity
- Increasing local taxes on all tobacco products to prevent youth from smoking

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How to Research Evidence-Based Interventions

- Community Guide
 - www.thecommunityguide.org
- World Health Organization (WHO) NCD Action Plan
 - <http://www.who.int/nmh/publications/9789241597418/en/>
- Cochrane Reviews
 - <http://www.cochrane.org/cochrane-reviews>

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Community Guide

Systematic reviews are used to answer these questions:

1. Which program and policy interventions have been proven effective?
2. Are there effective interventions that are right for my community?
3. What might effective interventions cost?
4. What is the likely return on investment?

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Notes

Why Use the Community Guide

- Finding answers
- Making decisions
- Obtaining support



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More Information on the Community Guide

- www.thecommunityguide.org
- Home page
- Tabs:
 - Task Force Findings
 - Topics
 - Use the Community Guide
 - Methods
 - Resources

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Using the Community Guide

Example of how to find recommended interventions for colorectal cancer prevention and control:

1. Click on "Cancer" under Topics.
2. Locate "Increasing Breast, Cervical, and Colorectal Cancer Screening" in the center of screen.
3. Click on "Client-Oriented Interventions"
4. Read the table on Task Force Recommendations & Findings and locate recommended interventions for colorectal cancer.
5. Click on "Client Reminders" and read the summary.

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Activity:
Using the Community Guide

1. Use the Community Guide to find evidence on interventions for **cardiovascular disease prevention and control**
2. Describe one recommended evidence-based behavioral intervention or one policy, systems & environmental (PSE) intervention
3. Provide a summary of evidence that supports implementing the intervention

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Non-Evidence Based Decision-Making Considerations

- Resource constraints
- Feasibility
- Political support
- Cultural environment

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Using Non-Evidence Based Factors in Selecting Interventions

- Do a systematic review of the non-evidence based factors for each potential intervention
- Involve stakeholders in the decision-making process
- Apply criteria to make a decision

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Adapting the Intervention to Your Community

- Examine demographics of the problem to target the intervention
- Use the non-evidence based factors to inform your adaptations
- Consider implementation issues specific to your community

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Skill Assessment

Your facilitator will provide you with an NCD or risk factor to use for this exercise.

You will spend approximately 1 hour with your assigned group to:

1. Draw a causal diagram to describe the NCD or risk factor.
2. Use the *Community Guide* to identify one evidence-based behavioral intervention and one policy, systems and environmental intervention to address the NCD or risk factor.
3. For one selected intervention:
 - a. Describe how at least one behavioral theory or model has been applied.
 - b. Describe how to adapt the intervention to local culture.
 - c. Describe at least two non-evidence based factors that may impact the intervention.

Your group will **present** its findings to the rest of the class.

Introduction to NCD Epidemiology

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4. Prepare a 5-minute presentation on **one** selected intervention and defend it with evidence to classmates. Your presentation should include:
 - a. An overview of the recommended intervention
 - b. A description of the evidence that supports the intervention
 - c. How the intervention can be adapted to the local culture