Theory of Change and Evidence
Learning Objectives

• Know the elements of theory of change
• Understand how theory of change informs program design
• Know the difference between data that documents the community problem/need and evidence that supports the intervention
• Understand different types of evidence and their strengths
Theory of Change Elements

- Community Problem/Need
- Specific Intervention
- Intended Outcome
Theory of Change Perspective

- Looks at cause and effect relationships

the most effective set of activities for volunteers and participants
Theory of Change Perspective

- Identifies specific interventions to achieve the desired result

Adapted from www.theoryofchange.org/about
Theory of Change Perspective

- Shifts thinking from “what we are doing” to focus on “what we want to achieve”
Theory of Change Elements

- **Community Problem/Need**
  - Statistics documenting the need

- **Specific Intervention**
  - Evidence
    - Guides choice of intervention
    - Supports cause-effect relationship

- **Intended Outcome**
Everyday Life Example

Evidence
• Guides choice of intervention
• Supports cause-effect relationship

Strep throat → Antibiotics → Be Healthy
Example: Riverton Literacy Corps

Community Problem/need

Children reading below grade level in 3rd grade

Statistics on the number of students at below grade level in program’s service area; Research on why reading proficiency by 3rd grade is important.
Example:
Riverton Literacy Corps

- **Community Problem/need**
  - Children reading below grade level in 3rd grade

- **Intended Outcome**
  - Students are able to read at 3rd grade level (as measured by 3rd grade reading exam)

Statistics on the number of students at below grade level in program’s service area; Research on why reading proficiency by 3rd grade is important.
**Example: Riverton Literacy Corps**

**Community Problem/need**

- Children reading below grade level in 3rd grade

**Intended Outcome**

- Students are able to read at 3rd grade level (as measured by 3rd grade reading exam)

**Evidence:**

- Research on building block skills leading to reading proficiency. Research on reading sessions.

**Specific Intervention**

- Individualized tutoring 3 times/week for 20 min on five "building block" literacy skills through reading, writing and verbal communication activities

**Statistics**

- Statistics on the number of students at below grade level in program's service area; Research on why reading proficiency by 3rd grade is important.
• **Community Problem:** The negative condition that exists in the community
• **Community Need:** The prevalence and severity of the problem
Community Problem/Need

Statistics or data documenting prevalence and severity of the problem should answer these questions:

• **SCOPE**: Who and how many are directly affected? How severe is this?

• **SIGNIFICANCE**: What makes this a compelling need? Is it likely to become worse? What will happen if we do nothing?

• **CAUSE(S)**: Why does the need exist? How is it perpetuated?
Documenting Community Need

Healthy Futures Program Example

• **Scope:** National Survey of Children and Health found childhood obesity in State X increased 23% between 2003 and 2007 – the 2\textsuperscript{nd} fastest rate of increase in US (2010). CDC data show nearly one-third of children and teens are obese or overweight in Webb County (2009).

• **Significance:**
  • Obese children found to become obese adults
  • Links between childhood obesity and early onset of cardiovascular disease, and Type II diabetes
  • Webb County rising in state and national averages for cardiovascular disease
  • Long term health care costs rising

• **Causes:** Diet, sedentary lifestyle
Intended Outcome

• What change are you hoping to make related to the identified problem?
Identifying the Intended Outcome

Healthy Futures Program Example

- Possible outcomes to measure:
  - Increased knowledge of what is “healthy food”
  - More frequent choice of healthy foods to eat
  - More frequent involvement in physical activity or exercise
  - Improved physical condition
An intervention is the specific set of activities in which participants and volunteers will be engaged. What is the best way to achieve the intended outcome?
**Intervention**

- An intervention is the specific set of activities in which participants and volunteers will be engaged. What is the best way to achieve the intended outcome?

- **Community Need**
  - Statistics documenting the need

- **Specific Intervention**
  - Evidence
    - Guides choice of intervention
    - Supports cause-effect relationship

- **Intended Outcome**
Intervention

Describe the design and dosage of your intervention (service activity):

– **Design** (Specifics of the intervention)
– **Dosage**
  • **Frequency** (How many sessions a week?)
  • **Intensity** (Length of each session)
  • **Duration** (How many total weeks, sessions or months?)
Intervention Example

Healthy Futures Program Example

- **Design**: national service participants implement the Shape Up curriculum with economically disadvantaged urban girls ages 14-16 to increase physical activity (30 minutes/session) and educate them on healthy eating
- **Frequency**: twice a week afterschool
- **Intensity**: 60 minutes per session
- **Duration**: 12 weeks
Testing Your Theory of Change

• Is the intervention designed to solve the problem?
• Is the intervention likely to lead to the outcomes?
• Are the intended outcomes meaningful/important?
• Is the magnitude of the change worth the effort?
Practice Activity
EVIDENCE: Information or facts that are systematically obtained in a manner that is replicable, observable, credible and verifiable for use in making judgments or decisions. Evidence enables us to determine whether or not a program is achieving its intended outcomes.

• http://vetoviolence.cdc.gov/evidence/faqs.aspx
How Evidence Informs Program Design

New Programs:

- What existing interventions have demonstrated success in solving the problem?
- Where have existing interventions fallen short?
- What is the recommended design (specific program activities) and dosage (frequency, intensity, and duration) to achieve an intended outcome?
Program design is based on or adapted from a similar program that has evidence from an evaluation.
Existing Programs:

• Is there sufficient evidence for the intervention to continue its use?
• Based on the evidence, are there modifications to the intervention that would make it more effective?
• Do you need to choose a new intervention?
Evidence-Based

- Program designs where evaluation has established a causal linkage between program activities and intended outcomes
Building Evidence of Effectiveness

**Evidence Informed**

- Identify a strong program design
  - Gather evidence supporting the intervention
  - Design/Adopt a strong program
  - Develop a Logic Model
  - Create Implementation Materials
  - Pilot implementation

- Ensure effective implementation
  - Document program process(es)
  - Ensure fidelity in implementation
  - Evaluate program’s quality and efficiency
  - Establish continuous process improvement protocols

- Assess program’s outcomes
  - Develop indicators for measuring outcomes
  - Conduct pre-/post-intervention evaluation to measure outcomes
  - Conduct process evaluation
  - Performance Measures - Outcomes

- Obtain evidence of positive program outcomes
  - Examine linkage between program activities and outcomes
  - Perform multiple pre- and post-evaluations (time series design)
  - Conduct independent (unbiased) outcome evaluation(s)
  - Conduct meta-analysis of various studies

- Establish causal linkage between program activities and intended outcomes/impact (e.g. Conduct quasi-experimental evaluation using a comparison group, evaluation with random assignment (RCT), regression analysis, or other appropriate study design)
- Conduct Multiple independent evaluations using strong study designs
- Measure cost effectiveness compared to other interventions addressing same need

**Evidence Based**

- Attain strong evidence of positive program outcomes
Possible sources of evidence include:
- Evaluations that document the outcomes of similar programs
- Performance measurement outcome data
- Results from an evaluation of your program outcomes
Evidence Source: Evaluations from Other Organizations

– Have similar programs been successful in achieving the outcomes you want your program to produce?
Past performance measurement outcome data:

- What do your past performance measurement results tell you?
- Can you show positive outcomes over time?
Evidence Source: Your Program Evaluation

Results from an evaluation of your program outcomes:

- What type of evaluation is it?
- Does it document change in knowledge, attitude, behavior or condition of beneficiaries?
- Does it show that your intervention is what caused the change?
Assessing Evidence

Considerations:

- **Similar**: Cites comparable intervention with similar beneficiaries and results
- **Significant**: Findings show that the program had a positive and statistically significant effect on beneficiaries
- **Up-to-date**: Recently published or most recent available
- **High Quality**: Use well-implemented and appropriate research methodologies given the research questions of interest
- **Reputable**: Source with no stake in outcome and published in a peer reviewed journal or by credible organization
## Evidence Continuum

### Causation

<table>
<thead>
<tr>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
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<tbody>
<tr>
<td>Preliminary</td>
<td>Impact evaluations</td>
<td>Impact evaluations</td>
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<tr>
<td>- Outcome results from performance measurement or outcome evaluations</td>
<td>- Show causality, compares intervention recipients to non-recipients</td>
<td>- Show causality, compares intervention recipients to non-recipients</td>
</tr>
<tr>
<td>- Doesn’t show causality</td>
<td>- Comparison groups: Quasi-experimental Design</td>
<td>- Comparison groups: Quasi-experimental Design</td>
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<tr>
<td>- No comparison group</td>
<td>- Comparison groups: Experimental Design</td>
<td>- Randomly-assigned control groups: Experimental Design</td>
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### Evidence Continuum

- **Shape Up: afterschool obesity prevention program**

<table>
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<tr>
<th>Preliminary</th>
<th>Moderate</th>
<th>Strong</th>
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<tbody>
<tr>
<td>Performance measurement shows that 75% of girls age 14-16 participating in the Shape Up program increased knowledge of healthy food choices.</td>
<td>A 2005 impact evaluation by internal evaluators (using a quasi-experimental design) found that after 12 weeks, the girls in the program made 50% more healthy food choices than the comparison group.</td>
<td>A 2010 impact evaluation of the program by University of MN using experimental design/ random assignment found after 12 weeks, the girls in the experimental group made 50% more healthy food choices than</td>
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<tr>
<td>Outcomes evaluation</td>
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Practice Activity
Key Points

- Theory of change elements include the community problem, an intervention designed to address the problem, and outcomes that occur as a result of the intervention.
- Data that documents the prevalence and severity of the problem is not the same as evidence that supports the intervention.
- Evidence enables us to determine whether a program is achieving its outcomes.
- Evidence should inform all stages of program design and implementation.
Additional Resources

• AmeriCorps Performance Measurement Resources: http://www.nationalservice.gov/resources/performance-measurement/americorps

• CNCS Performance Measurement Core Curriculum: http://www.nationalservice.gov/resources/performance-measurement/training-resources

• AmeriCorps State and National Evaluation Resources: http://www.nationalservice.gov/resources/americorps/evaluation-resources-americorps-state-national-grantees