Theory of Change, Logic Model, and Performance Measurement
Session Outline

• Theory of Change
• Logic Model
• Performance Measurement
• Q&A
Learning Objectives

• Know the elements of theory of change
• Understand how theory of change informs program design
• Identify key components of a logic model and understand how to create a logic model as part of a CNCS application
• Define performance measurement
• Know how CNCS uses performance measures
• Learn characteristics of high quality performance measures
Theory of Change
Theory of Change

- Looks at cause and effect relationships
- Identifies specific interventions to achieve the desired result
- Shifts thinking from “what we are doing” to focus on “what we want to achieve”
**Theory of Change Elements**

- **Community Problem**: The negative condition that exists in the community
- **Community Need**: The prevalence and severity of the problem

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![Diagram](attachment://theory_of_change_elements.png)

**Community Problem/Need**

- Statistics documenting the problem/need

**Specific Intervention**

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

**Intended Outcome**

- Guides choice of intervention
- Supports cause-effect relationship
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?
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?

- Community Need
- Specific Intervention
- Intended Outcome
- Statistics documenting the need
- Evidence
  • Guides choice of intervention
  • Supports cause-effect relationship
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
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
- Specific Intervention
- Intended Outcome

- Statistics documenting the need
- Evidence
  - Guides choice of intervention
  - Supports cause-effect relationship
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?)
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
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

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.

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

**Specific Intervention**

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

**Intended Outcome**

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

Evidence: on design, frequency, duration of tutoring sessions. Research on building block skills leading to reading proficiency.
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?
Questions?
Practice Activity

• Read Practice Activity #1 Handout and Complete Questions 1-3
  – 15 minutes

• Discussion
  – 5 minutes
What Is a Logic Model?

• A detailed visual representation of a program and its theory of change.

• Communicates how a program works by depicting the intended relationships among program components:
  – Inputs or resources
  – Activities
  – Outputs
  – Outcomes
Why Develop a Logic Model?

• Generate a clear and shared understanding of how a program works
• Support program planning and improvement
• Serve as foundation for evaluation
Key Components

• Inputs or resources
• Activities
• Outputs
• Outcomes (short-, medium- and long-term)
Key Components - Inputs

- **Inputs or resources** include the human, financial, organizational, and community resources available for carrying out a program’s activities.

- **Examples:**
  - Funding
  - Program staff
  - AmeriCorps members
  - Volunteers
  - Research

**Key Components - Activities**

- **Activities** are the processes, tools, events, and actions that are used to bring about a program’s intended changes or results.

- **Examples:**
  - Workshops on healthy food options
  - Food preparation counseling
  - Referrals to food programs and resources

Key Components - Outputs

- **Outputs** are the direct products of a program’s activities and may include types, levels and targets of services to be delivered by the program.

- **Examples:**
  - # individuals attending workshops
  - # individuals receiving services
  - # individuals receiving referrals

• **Outcomes** are the expected changes in the population served that result from a program’s activities and fall along a continuum, ranging from short to long term results:

  – Short-term: changes in knowledge, skills, and/or attitudes (e.g., ↑ knowledge healthy choices)
  – Medium-term: changes in behavior or action (e.g., ↑ adoption of healthy food practices)
  – Long-term: changes in condition or status in life (e.g., ↑ food security)

How to Read a Logic Model

• Read from left to right
• Two “sides” to a logic model - a process side and an outcomes side
How to Create a Logic Model

- Two main approaches are used to create a logic model:
  - Reverse logic (right to left) – asks “but how” questions
  - Forward logic (left to right) – uses “if…then” statements
How to Create a Logic Model Using Forward Logic

Forward logic uses “if-then” statements.

If you achieve your goals, then you will have success.

If you accomplish your planned activities, then you will have the desired outcomes.

If you have access to resources, then you can use them to accomplish your planned activities.

If changes in behavior and action are achieved, then changes in social, economic, health, civic and/or environmental conditions or status might be expected to occur.

How to Create a Logic Model Using Reverse Logic

• What is the desired long-term outcome?
  – Increase # of healthy families. **But how?**

• What is the desired intermediate outcome?
  – Increase # of families using healthy food practices. **But how?**

• What is the desired short-term outcome?
  – Individuals gain knowledge of healthy food choices. **But how?**

• What outputs are needed to achieve the outcomes?
  – 200 families complete an educational workshop. **But how?**

• What activities are needed to achieve the outcomes?
  – Conduct four educational workshops per month. **But how?**

• What inputs are needed to achieve the outcomes?
  – Funding, program staff, AmeriCorps members, volunteers, research.
Verify Your Logic Model

• Consider asking the following questions:
  
  – **Level of detail:** Does your model contain an appropriate amount of detail for its intended use? Does it include all key program components?
  
  – **Plausible:** Does the logic of the model seem correct? Are there any gaps in the logic of the program?
  
  – **Realistic:** Is it reasonable to assume that the program can achieve the expected outcomes?
  
  – **Consensus:** Do program staff and external stakeholders agree that the model accurately depicts the program and its intended results?
• A logic model can serve as a framework for planning performance measurement activities. It can help to:
  – Identify components of your program to include in performance measurement
  – Identify indicators and the measures of progress/performance that align with program components
Resources for Logic Model Development

W.K. Kellogg Foundation Logic Model Development Guide


Innovation Network Logic Model Workbook

http://www.innonet.org/client_docs/File/logic_model_workbook.pdf
Resources for Logic Model Development

University of Wisconsin Extension: Program Development and Evaluation

http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html

CDC Program Evaluation Resources:

http://www.cdc.gov/eval/resources/index.htm

Measuring Program Outcomes: A Practical Approach (United Way)

Developing and Working with Program Logic Models (Bureau of Justice Assistance)
Questions?
Performance Measurement
What is Performance Measurement?

• Ongoing, systematic process of tracking your program or project outputs and outcomes

• **Outputs**: Amount of service provided (people served, products created, or programs developed)

• **Outcomes**: Changes or benefits that occur
  – Can reflect changes in individuals, organizations, communities or the environment
  – Typically include changes in **knowledge, attitude, behavior** or **condition**
  – Must have a logical connection to the intervention and be aligned with outputs
Purpose of Performance Measurement

• Recognition of progress
  – Collect reliable information about the intervention’s implementation and progress toward outcomes

• Accountability to funders and stakeholders
  – Communicate achievements in a meaningful and compelling way

• Program Improvement
  – Spot and correct problems
  – Strengthen the intervention
  – Determine where to allocate limited resources
Performance Measurement and Impact Evaluation

<table>
<thead>
<tr>
<th>Differences: Key Areas</th>
<th>Performance Measurement</th>
<th>Impact Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation</td>
<td>Monitoring and reporting of program accomplishments and progress</td>
<td>In-depth research activity that assesses whether the program works as expected</td>
</tr>
<tr>
<td>Time Focus</td>
<td>Ongoing</td>
<td>Conducted periodically or on an ad-hoc basis</td>
</tr>
<tr>
<td>Cause and Effect</td>
<td>Demonstrates if a change occurred, but not why; Change is not attributable to intervention</td>
<td>Tests cause and effect relationship between intervention and outcomes with a comparison or control group;</td>
</tr>
</tbody>
</table>
Grantees and sponsors contribute to the National Service story by selecting national performance measures:

- Agency-Wide Priority Measures
- Complementary Program Measures
CNCS National Performance Measures

Reflect the CNCS Strategic Plan and its programming priorities:

• Disaster Services
• Economic Opportunity
• Education
• Environmental Stewardship
• Healthy Futures
• Veterans & Military Families
• Capacity Building
• Grantees and sponsors use common terms, definitions and measurement approaches.

• CNCS Programs have specific performance measurement requirements.
How CNCS Uses Performance Measures

• Tell the story of the collective impact of national service programs

• National Performance Measures:
  – Reflect CNCS Strategic Plan and programming priorities
  – Allow for consistent terms, definitions, and approaches to measurement ("speaking the same language")
  – Priority Measures: used across multiple CNCS programs
  – Complementary Measures: customized for particular programs (e.g., AmeriCorps)

• Applicant-determined Measures*:
  – Intended for programs whose interventions, outputs, or outcomes do not fit under existing National Performance Measures

*Some National Performance Measures have applicant-determined outcomes - majority of VMF outcome measures are applicant-determined
Performance Measure Requirements

• One aligned performance measure (output + outcome) for primary intervention

• Programs may create additional performance measures to measure outcomes of significant program interventions
VMF Performance Measures

• V1 - Number of veterans that received CNCS-supported assistance
• V2 - Number of veterans engaged in service opportunities as a National Service Participant or volunteer
• V3 - Number of veterans assisted in pursuing educational opportunities
• V4 - Number of veterans assisted in receiving professional certification, licensure, or credentials
• V6 - Number of housing units developed, repaired, or otherwise made available for veterans
VMF Performance Measures

- V7 - Number of family members of active duty military service members that received CNCS-supported assistance
- V8 - Number of veterans’ family members that received CNCS-supported assistance
- V9 - Number of active duty military service members that received CNCS-supported assistance
- V10 - Number of military family members engaged in service opportunities as a National Service Participant or volunteer
### Outcomes

#### Types of Outcomes

<table>
<thead>
<tr>
<th>Attitude/Belief</th>
<th>Knowledge/Skill</th>
<th>Behavior</th>
<th>Condition</th>
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<td>Thought, feeling</td>
<td>Understanding, know-how</td>
<td>Action</td>
<td>Situation, circumstance</td>
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- **Attitude/Belief**: Thought, feeling
- **Knowledge/Skill**: Understanding, know-how
- **Behavior**: Action
- **Condition**: Situation, circumstance
## Outcome Examples—Education

<table>
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<th>Knowledge/Skill</th>
<th>Behavior</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased interest in school</td>
<td>Improved math ability</td>
<td>Increased school attendance</td>
<td>Successful completion of High School</td>
</tr>
</tbody>
</table>
### Outcome Examples—Healthy Futures

<table>
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<th>Behavior</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased desire to adapt good nutrition habits</td>
<td>Improved low-budget cooking skills</td>
<td>Increased healthy food intake</td>
<td>Improved household food security (supply)</td>
</tr>
</tbody>
</table>

![Image of people cooking and healthy food]
High Quality Performance Measures

- Alignment with theory of change
- Alignment of outputs and outcomes
- Meaningful change – Worth measuring
Alignment with Theory of Change

- Logical connection between problem, intervention, outcome
- The intervention is likely to lead to the outcome
- The outcome measures what the intervention is trying to accomplish (change in knowledge, attitude, behavior, condition)
Theory of Change: VMF Example

Community Problem/Need
Young veterans have high rates of unemployment

Specific Intervention
Job training and placement services.

Intended Outcome
Veterans find or are placed in jobs.
Alignment of Outputs and Outcomes

- Intervention produces output
- Output leads to the outcome
- Output and outcome measure the same intervention and beneficiaries
- National Measures aligned as directed in CNCS guidance

![Diagram showing the flow from Intervention to Outcome with numbers 100 and 75]
Meaningful Outcomes

The Outcome should:

• Reflect a meaningful change in knowledge, attitude, behavior or condition

• So what?

• Be ambitious yet realistic
Meaningful Outcome

• Is the outcome logically connected to the community problem?

• Is the outcome central or peripheral to the program’s theory of change?
Meaningful Outcome

- Beneficiaries. Is the target audience identified in the outcome?
- Scope of the outcome. How many will benefit?
- Magnitude of the outcome. How much change will occur for beneficiaries?
- Data collection plan. Are proposed methods/instruments appropriate? Is there a clear plan/timeline for developing instruments and collecting data?
Practice Activity

• Read Activity #2 Handout and Complete Worksheet
  – 10 minutes

• Discussion
  – 5 minutes
Best Practices: Performance Measure Design

- Select PMs that fit your program design and theory of change, not vice versa
- Less = more: focus on a small number of high-quality measures
- Measure outputs and outcomes for program beneficiaries*
- Clearly define all terms used
- For longer-term outcomes, set targets that are achievable in a single grant year

*Except for member development and teacher corps measures
Best Practices: Performance Measure Design (continued)

• Use numerical targets, not percentages
• For outcomes that require participant follow-up, set targets that take into account response rate attrition
• Clearly distinguish outcomes from outputs while maintaining logical alignment
• Choose outcome measures that are ambitious but realistic; ensure that the program can realistically document or track the required information.
Questions?
AmeriCorps Performance Measures Page:
http://www.nationalservice.gov/resources/performance-measurement/americorps

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