Logic Models 101

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Climate and Health Learning Community
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Housekeeping

• Presentation will be recorded and posted online
• Please keep microphones muted
• Questions?
  • Use the chat box
  • End of presentation
• Survey
About Me

Mattie Curry, MPH, *Blackfeet Nation*
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Purpose: To advocate on behalf of all federally recognized American Indian and Alaska Native Tribes to ensure the fulfillment of the trust responsibility to deliver health and public health services as assured through treaties, and reaffirmed in legislation, executive orders and Supreme Court cases.

Mission Statement: One Voice affirming and empowering American Indian and Alaska Native Peoples to protect and improve health and reduce health disparities.
Learning Objectives

• Explain the different components of a logic model
• Develop the ability to form logic models as they apply to specific public health goals
• Discover how logic models are effective in communicating interventions to a wide variety of audiences
Logic models can be confusing!

- Also known as program impact models, evaluation map, program planning map
- Wind that powers the sails of your ship
- Gets everyone on the same page
- Not just for grant applications!
Big Picture: Program Evaluation

- Effective program evaluation is a systemic way to improve and account for public health actions by involving procedures that are useful, feasible, ethical, and accurate.

https://www.cdc.gov/mmwr/PDF/rr/rr4811.pdf
Where do Logic Models fit?

• Step 1: Engage stakeholders
• Step 2: Describe the program—need, expected effects, activities, resources, stage, context, and… Logic model!
• SMART goals: Specific, Measurable, Achievable, Realistic, and Timebound

https://www.cdc.gov/mmwr/PDF/rr/rr4811.pdf
What is a Logic Model?

- Big picture overview/map
- Shows the logic of relationship between activities/concepts and the resulting outcomes/aims

The Kellogg Foundation: Logic Model Development Guide
Logic Model Vocab: Planning the work

• **Resources/Inputs:** Human, financial, organizational, and community resources a program has available to direct toward doing the work.

• **Activities:** Processes, tools, events, technologies, and actions that are an intention part of the program implementation. Used to result intended changes.
Logic Model Vocab: Intended results

- **Outputs**: Direct products of program activities. May include types, levels, and targets of services to be delivered by program.
- **Outcomes**: Specific changes in program participants’ behavior, knowledge, skills, status, and level of functioning.
  - Short-term outcomes
  - Medium-term outcomes
- **Impact**: Long-term outcome. Fundamental intended/unintended change occurring in organizations, communities, or systems as a result of program activities.
You have a headache!!!!

What do you do?
Logic models show the obvious relationships between components.

Stress and tension have produced a headache.

Take two aspirins, rest for 30 minutes.

Headache pain will be reduced.
Why do we use logic models?

• Provide stakeholders with a road map—helps visualize how investments contribute to achieving program goals
• Logic models position programs for success
• Strengthens the case for program investment
• Collaborative!
A logic model is a snapshot of a program at one point in time.
3 types of logic models

1. Theory Approach Models: useful for program design, emphasizes the *theory of change* that has influenced program

2. Outcomes Approach Models: Connects resources/activities with desired results, useful in designing effective evaluation and reporting strategies

3. Activities Approach Models: Specifics of the implementation process, useful for management planning activities
There is no “best” logic model

• Choose the format that is the most helpful in providing the information you need
• Practice!
• Logic models are fluid—don’t be concerned if your model doesn’t look like the examples
PLANNING: start with the end in mind

Program Action

Inputs

Outputs
Activities
Participation

Outcomes - Impact
Short Term
Medium Term
Long Term

What we do
Conduct workshops, meetings
Deliver services
Develop products, curriculum, resources
Train
Provide counseling
Assess
Facilitate
Partner
Work with media

Who we reach
Participants
Clients
Agencies
Decision-makers
Customers

What the short term results are
Learning
Awareness
Knowledge
Attitudes
Skills
Opinions
Aspirations
Motivations

What the medium term results are
Action
Behavior
Practice
Decision-making
Policies
Social Action

What the ultimate impact(s) is
Conditions
Social
Economic
Civic
Environmental

Assumptions

External Factors

Evaluation

What do you want to know? How will you know it?

EVALUATION: check and verify

Source: Ashley Brooks-Russell, PhD, MPH, Colorado School of Public Health
Example:

Goal of Climate Ready Tribes (Impact): To build capacity with American Indian and Alaska Native Tribes to identify, assess, and take action to mitigate climate-related health threats.
**Exercise!**

**Goal:** Build capacity with AI/AN Tribes to identify, assess, and take action to mitigate climate-related health threats

<table>
<thead>
<tr>
<th>Resources</th>
<th>Activities</th>
<th>Outputs</th>
<th>Short-Medium Term Outcomes</th>
<th>Long-term Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inputs</td>
<td>In order to accomplish our set of activities we will need the following:</td>
<td>Target participants</td>
<td>We expect that once completed or underway these activities will produce the following evidence of service delivery:</td>
<td>We expect that if completed these activities will lead to the following changes in 7–10 years:</td>
</tr>
<tr>
<td></td>
<td>In order to address our problem or asset we will conduct the following activities:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**← Your planned work →** **← Your intended results →**
Logic model structure

- Structure of a logic model is flexible
- Logic model works as long as following components are included:
  - Goal/context
  - Activities
  - Short/medium outcomes and impact
  - And it all connects!
Logic Model Examples for Environmental Health
Logic model of climate change without intervention

**Inputs**
- HUMAN ACTIVITY
  - Land use changes: e.g. Deforestation
  - Extraction & fossil fuels
  - Population + consumerism

**Outputs**
- GREENHOUSE EFFECT
  - Sea level rise
  - Climate disruption
    - Temperature rise

**Outcomes**
- DISASTERS
  - Coastal & fluvial floods
  - Severe storms
  - Drought
  - Forest fires
  - Earthquakes
  - Pollution risks
  - Crop losses

**Impacts**
- MORE GLOBAL WARMING
  - Feedback effects.
  - Plus, storms, extreme temps & pollution damage

**Impacts on Humans**
- Economic losses
- Migrations
- Famine & disease
- Conflict & less capacity to adapt

**Impacts on Biodiversity**
- Extinction risk to vertebrates & many other species

https://possibleculture.wordpress.com/the-logic-model-of-climate/
Logic Model

Using the Environmental Public Health Performance Standards to Improve Program Performance to Control Drinking Water Exposures

**Inputs**
- Drinking water programs and activities
  - Public and private partnerships
  - Proven experience in water program management
  - Completed performance assessment of DW program using the 10 essential services, including gap analysis and performance improvement plan to address gaps
  - Leveraged funding
  - Policy environment
  - CDC
  - Technical Assistance
  - Training, Guidance

**Activities (Examples)**
- Strategy: Improve drinking water (DW) program efficiency and effectiveness by closing programmatic gaps
  - Organize DW quality, water system and health data in a format that aids clear communication and interpretation by the public and policy makers.
  - Collect and use DW hazard, exposure, and health outcome data from a range of sources involved in environmental and public health protection (e.g., epidemiology, disease registries, tracking partners, local and state departments of environmental quality).
  - Develop partnerships with epidemiologists, statisticians, laboratory professionals, toxicologists, hydrologists, and others needed to assist in analyzing DW program data (hazards, exposures, health outcomes).
  - Establish working environments/coalitions so that multiple partners (e.g., health department, planning and zoning, public works, building, environmental advocacy groups, and the media) have a forum to work together on DW education and promotion activities.
  - Develop partnerships among government agencies and the private sector to enhance DW program effectiveness.
  - Promote prevention and protection policies for community members who bear a disproportionate burden of disease, or that are at greater risk of exposure to DW hazards.
  - Organize the updating and/or modification of existing, or new laws, regulations, and ordinances designed to assure and improve DW protection programs and DW quality.
  - Create and provide leadership for workgroups of multiple agencies that have responsibility for assuring that DW program services delivery system is coordinated, timely and responsive to all community members.
  - Communicate workforce gaps and needs to appropriate stakeholders (governing bodies, advisory groups, academic institutions, and public and private agencies) that have the capabilities to effect change.
  - Develop an activity to assess and measure the satisfaction of stakeholders and residents with drinking water services program that includes a process to provide increased quality of services.
  - Develop partnerships with colleges, universities and research organizations needed to conduct drinking water research to improve program performance.

**Outputs**
- Surveillance systems established
  - The timely processing of DW samples & inspections
  - Investigations/assessments completed to reduce DW problems to environmental factors
  - The implementation of community meetings with diverse representation
  - The delivery of targeted DW educational activities (social media, web, etc.)
  - Partnerships/coalitions established

**Short**
- Increase in DW programs and practices that have improved efficiency (time, effort, and cost)
- Increase in enforcement of feasible policies and regulations based on evidence and need
- Increase the reach of DW programs
- Increase in DW programs that have established a continual process to routinely close performance gaps to improve DW services

**Medium (Examples)**
- Decreased hazards that threaten water systems
- Reduced exposures to waterborne contaminants
- Decreased number of people in the US drinking contaminated water
- Improved health of Americans through access to safe water

**Long**
- Safe water activities focus on individuals and systems not protected by the Safe Drinking Water Act.
- Safe water priorities are to improve drinking water program performance and reduce exposure to waterborne contaminants in the US.

[https://www.cdc.gov/nceh/ehs/envphps/docs/dw-logic-model.pdf](https://www.cdc.gov/nceh/ehs/envphps/docs/dw-logic-model.pdf)
Logic Model for the National Water Program 2012 Strategy: Response to Climate Change*

**Vision**
- Tribes are able to preserve, adapt, and maintain the viability of their culture, traditions, natural resources, and economies in the face of a changing climate.

**Goal**
- Core programs incorporate climate change considerations & NWP collaborates with other EPA offices, federal agencies to work with tribes on climate change issues.

**EPA Role**
- Develop guidance & provide technical decision support.
- Support data development.
- Provide & facilitate use of funding for climate change adaptation and building sustainability.
- Coordinate stakeholders.
- Communicate key issues.

**Primary Audiences**
- Tribes
- EPA Core Programs
- Other EPA Offices
- Other Federal Agencies

**Audience Awareness**
- Aware of potential for existing programs & resources to address climate change concerns.
- Understand potential effects of climate change on tribal resources.

**Audience Behavior**
- Integrate climate change considerations into implementation of core programs for tribal nations.
- Utilize established programs and funding mechanisms to address climate change issues.

**Conditions**
- Tribes maintain and protect their traditional cultures, values, and resources in spite of climate change.

*For a complete articulation of EPA’s visions, goals, & strategic actions related to the National Water Program’s Response to Climate Change, see the 2012 Strategic Plan at http://water.epa.gov/scitech/climatechange/2012-National-Water-Program-Strategy.cfm*
Important considerations for logic model success

• Think through ALL your audiences
• Make sure the intensity/duration of your program is appropriate for your targeted participants
• Outcomes are reasonable and progressive
• The impact is not beyond the achievable scope of the program
Final thoughts/takeaways

• Logic models are simply a different way to describe the flow of a program
• Tools for guidance, not confusion and/or headaches
• The logical progression of solving a problem
Thank you!

Questions?

Please fill out the evaluation survey!

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