Focus On:
Logic model–A planning and evaluation tool

Introduction

A logic model is a visual illustration of a program’s resources, activities and expected outcomes.\textsuperscript{1,2} It is a tool used to simplify complex relationships between various components and can be used during program planning, implementation and evaluation.\textsuperscript{3,4} A term that is sometimes used concurrently with logic models is theory of change. Theory of change is a foundational concept that provides an understanding of the pathway to bring about change.\textsuperscript{5-7} It clarifies expectations amongst diverse stakeholders and highlights common understanding regarding intended outcomes of the proposed change.\textsuperscript{8} Logic models can be viewed as a representation of the program’s underlying theory of change.

This document provides an overview of the components of a logic model, examples of logic model designs, and describes the use of logic models in program planning and evaluation.
Methods

The content of this Focus On was developed based on the logic models webinar presented by Public Health Ontario (PHO). A general search of available resources was conducted through the Google search engine, reviewing existing PHO knowledge products, and input from health promotion consultants within the Health Promotion Capacity Building unit at PHO.

Components of a logic model

A logic model can be as broad or specific as needed, depending on whether it is describing an activity, program, initiative, policy or organization. The design and purpose of one logic model may differ from another, however there are common components that all logic models share including a goal, inputs, activities, audience, outputs, and outcomes. Table 1 outlines the most commonly used logic model components and provides examples for each one. Possible additional components are situation, assumptions, external factors, and strategies, which are described in Table 2.

Table 1. Common components of logic models

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>The overall long-term health outcomes the program hopes to achieve.</td>
<td>To prevent diet-related health problems in adulthood.</td>
</tr>
</tbody>
</table>
| Inputs    | The resources invested into a program or initiative. | • Staff  
            • Funding  
            • Time  
            • Materials  
            • Supplies |
| Activities| Activities or interventions that will be carried out as part of the program. | • Public service announcements (PSAs) on health risks of sexually transmitted infections (STIs)  
            • Workshops on healthy eating for children and their parents  
            • Bi-weekly community sports activities for neighbourhood adolescents |
| Audience  | Whom the program is targeting. Programs may target specific groups such as young children or older adults but may also be broad in nature. | A program designed to train teachers on how to provide physical activity to students.  
                                    • Primary audience: teachers  
                                    • Secondary audience: students |
|           | Primary audience: the main population that is being targeted. | |
|           | Secondary audience: groups who are impacted or influenced by a program, but are not the direct recipients of the program. | |
### Component | Description | Example
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**Outputs** | Products that are produced from program activities or interventions. Outputs can be viewed as quantifying activities and providing numeric values or attributing percentages. | • Number of PSAs run during a health promotion campaign  
• Number of workshops provided on healthy eating  
• Percentage of organized community sports activities held  

**Outcomes** | The changes expected to result from the program. Outcomes range from short-term to long-term, and are associated with changes in knowledge, awareness, behaviour and skills. | • Increased awareness of the health risks of STIs  
• Increased knowledge on healthy foods and proper food handling skills  
• Reduction in the number of secondary students reporting physical inactivity on school surveys  

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**Table 2. Additional possible components of logic models**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Example</th>
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</table>
**Situation** | The situational context that lead to the creation of the program. | • Increased rates of obesity lead to the creation of a physical activity program for adolescents aged 12 to 18 years old  
• Increased incidence of gonorrhea and low perceived susceptibility to sexually transmitted infections (STIs) amongst 14 to 24 year olds  

**Assumptions** | Underlying theories and beliefs about the program and its context which can influence the development of a program and which activities are implemented. Transparency around assumptions makes explicit the beliefs that underlie chosen actions. | • Adolescents are interested in physical activity programs  
• The public has access to a radio and will hear the PSAs  

**External factors** | Factors that impact the program but are beyond the control of program planners and overseers. Factors may be positive or negative and are likely to influence program success. | • Cultural norms  
• Political climate  
• Social policies  
• Environmental factors  

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### Examples of logic models

Logic models can be simple or complex, and allow for great flexibility in design. They are often shown in a linear fashion for simplicity, logical flow, and ease of understanding; however, they can be presented in a cyclical model and be as visually engaging as needed. The design of a logic model is dependent on the type of information that is being presented and the needs of stakeholders (program staff, funders, and community members). Different types of logic models will be appropriate for different programs—what works in one program area may not work in another. Although there are common components, the aim is not a one-size-fits-all approach, rather these components help to streamline and guide the development of the model and help to operationalize program interventions. Figure 1 below outlines a simple logic model template that can be used as a starting point.

<table>
<thead>
<tr>
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<th>Example</th>
</tr>
</thead>
</table>
| Strategies | A broad approach or plan to facilitate change. | The Ottawa Charter for Health Promotion identifies five strategies to consider when developing health promotion programs:  
- Build healthy public policy  
- Create supportive environments  
- Strengthen community action  
- Develop personal skills  
- Re-orient health services |

**Figure 1. Example of a logic model template**
The additional components listed in Table 2 are often described in a program’s theory of change, however, these components can be directly included in the logic model as well. Figure 2 shows an example of a logic model which includes the situation, assumptions, and external factors in addition to the common components.

**Figure 2. Example of a logic model including situation, assumptions, and external factors**

<table>
<thead>
<tr>
<th>SITUATION</th>
<th>INPUTS</th>
<th>ACTIVITIES</th>
<th>AUDIENCE</th>
<th>OUTPUTS</th>
<th>OUTCOMES</th>
</tr>
</thead>
</table>
| Primary school students are bringing lunches to school that are high in salt, sugar, and fat. Consumption of these unhealthy foods may lead to poor health conditions, which can have negative impacts later on in adulthood. | • Funding  
• Staff  
• Time  
• Research  
• Supplies and equipment for program activities (e.g., ingredients, stationary, equipment) | Menu planner and information sessions  
Nutrition education and food purchasing workshops  
Recipe demonstrations and food sampling | Parents of primary school students  
Primary school students | # of menu planners distributed  
# of information sessions held  
# of nutrition education and food purchasing workshop sessions  
# of recipe demonstrations held  
% of recipes sampled | Short-term  
Increased awareness of healthier food options and use of menu planner  
Increased use of healthier food alternatives in student lunch boxes  
Medium-term  
Improved nutritional intake among students  
Long-term  
Establish healthy eating habits in childhood |
Larger, more complex programs can utilize a nested model to better manage program details. Nested models refer to a group of logic models that are related, but offer varying levels of detail about the program often ranging from high level general overview to specific information. For example, a logic model for a physical activity program targeting children and adolescents may provide a high level overview of the programs underlying theory, which may be of interest to program funders and community partners. To offer program staff and volunteers detailed information, subsequent logic models would be created; these models may provide additional information on the specifics of the program, with one focusing on interventions for younger children, and another for adolescents. In total, the program would have three logic models, all providing related but different information. Figure 3 shows an example of an adapted nested logic model.

**Figure 3. Example of an adapted nested logic model**

Adapted from: University of Wisconsin Extension. Enhancing program performance with logic models. Multiple logic models: multi-level management system [Internet]. Madison, WI: University of Wisconsin Extension; 2010 [cited 2016 Jul 14]. Available from: [http://www.uwex.edu/ces/imcourse/Module_1_pages/M1_Section4/HTML/m1s4p04.htm](http://www.uwex.edu/ces/imcourse/Module_1_pages/M1_Section4/HTML/m1s4p04.htm)

**Logic model as a tool**

As a tool, a logic model serves multiple purposes and can be utilized throughout the lifecycle of a program, from the planning stage to evaluation, and all steps in-between. It is never too late to introduce a logic model into a program or initiative.

In the planning phase of a program, a logic model can serve as a planning tool by shaping program strategies, clarifying and setting priorities, and illustrating program approaches to stakeholders. It can
help to identify gaps in program logic while also being used to negotiate roles and responsibilities of partners and staff. In addition, logic models can be used as a communication tool to gather support or funding for an initiative. During implementation of an initiative, a logic model can help with program management by maintaining accountability to the activities or areas identified in the logic model. It can also support program monitoring ensuring the program stays on track or identify areas in need of adjustment. The logic model provides guidance on possible evaluation questions and what measures or indicators to use to identify program success. It also aids in identifying how program components should affect each other and facilitates measuring the degree to which an intervention is delivered as intended.

Logic models should be responsive to program changes. Significant changes that are made to a program which influence model components, such as changes in strategy, should be reflected in an updated logic model. Periodic updates and revisions not only keep logic models current, but also helps staff and stakeholders stay focused on program outcomes.

**Conclusion**

In the field of public health and health promotion, logic models continue to be viewed as a valuable tool. Logic models illustrate the relationship between program input and activities and desired outcomes. Logic models are dynamic and responsive to the particular needs of programs and initiatives. As a planning and evaluation tool, logic models offer a clear and continuous method for establishing logical flow of a program and serve as a tool for identifying progression towards program goals.
Resources

Health Promotion Capacity Building Resources

- At a Glance: The six steps to planning a health promotion program

- At a Glance: The ten steps for conducting an evaluation

- Evaluating Health Promotion Programs: Introductory Workbook

- Planning and Evaluating Health Promotion Programs: Audio Presentation Series
  http://www.publichealthontario.ca/en/LearningAndDevelopment/OnlineLearning/HealthPromotion/Pages/HP-Essential-Skills.aspx

- Planning Health Promotion Programs: Introductory Workbook

- Webinar: Logic models–theory to practice

- Webinar Q and A: Logic models–theory to practice

Additional Resources

- WK Kellogg Foundation: Logic model development guide

- Taylor-Powell E, Jones L, Henert E. Enhancing program performance with logic models.
  http://www.uwex.edu/ces/pdande/evaluation/pdf/lmcourseall.pdf

- Community Tool Box: Chapter 2 Other models for promoting community health and development.

- Center for Theory of Change
  http://www.theoryofchange.org/library/publications/

References


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- health promotion, chronic disease and injury prevention
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