

Training Guide #2: Logic Models



Where are we going? How will we get there?



WHAT IS A LOGIC MODEL?

A logic model is a visual representation of how your MRC unit works. It provides the logic for why you do what you do, and how your activities relate to the outcomes you are hoping to accomplish. It can take the form of a map, diagram, flow chart, or some other visual schematic that links program resources and activities to the desired results. The purpose of a logic model is to provide stakeholders (internal and external) with a road map that links the goals, objectives and strategies with the performance measures by specifying the resources and activities that are expected to lead to desired short- and long-term outcomes.

That means the utility of the logic model is not limited to program planning, but extends to implementation and performance measurement as well. In fact, the logic model can serve as a guide to performance measurement by showing what is important to measure and when (*see Guide #3: Performance Measurement*).

Get Ready ...

... Get Set ... Go!

Logic models provide a framework for understanding:

- Your current situation,
- Your desired end state, and
- How your resources link to activities to achieve results.

BENEFITS OF DEVELOPING A LOGIC MODEL

- Create a shared understanding of methodologies used to achieve program goals
- Visualize the pathway by which program resources will lead to desired results
- Identify program actions that are critical for goal attainment
- Build a common reference point for stakeholders, partners, and MRC volunteers
- Identify areas where performance measurement can be used to assess success.

Why Use a Logic Model?

The process of developing a logic model requires program planners and stakeholders to think systematically about what it is they want to accomplish and how they plan to do it. It also gives planners and stakeholders the flexibility to think through many different strategies or scenarios until they find the one that seems to work best. As with strategic planning, logic model development is meant to be an iterative process that is revisited when new information is obtained, lessons are learned, or operating conditions change.

As noted earlier, the benefits of logic models extend from program planning to implementation to evaluation.

- In program **planning**, the logic model is a useful tool to help further develop a program strategy that links goals to the resources needed and activities. It helps identify those activities most likely to lead to desired outcomes. It can also enhance your ability to clearly explain and illustrate program concepts to key stakeholders. This can be critical to securing the buy-in needed to get your program up and running.
- In program **implementation**, the logic model forms the core for a focused management plan that helps you create an effective action plan. It also guides you in setting priorities for your resources and provides information to facilitate making adjustments as necessary.
- In program **evaluation**, the logic model helps to define what is important to measure and when. It also allows for presentation of information and progress towards achieving your goals in a way that is relatively transparent and easy to understand.

TIP

Ideally, a logic model should fit on a single page but still include sufficient detail so that it can be explained and understood easily. Depending on the needs, sizes, and complexity of the MRC unit, more elaborate logic models might need to be developed by identifying key phases of a program or initiative and depicting them on separate pages. A less detailed full model can then be provided to show how the parts fit together.

LOGIC MODEL VERSUS ACTION PLAN

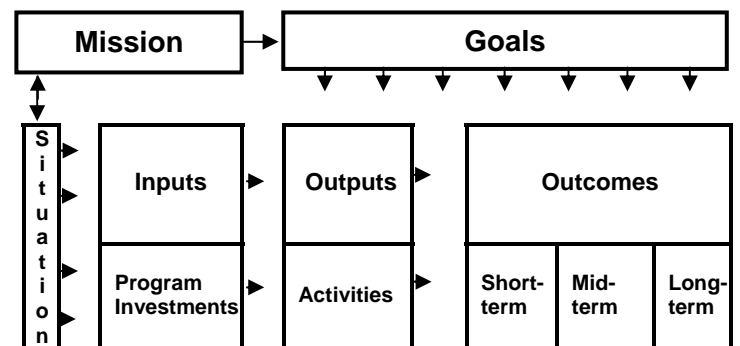
Logic models should not be confused with action plans. The difference is important.

An **action plan** is a guide for running a project. It shows, through a set of program objectives and a timeline or task outline, what needs *to be done* to implement a project (e.g., launch media campaign to increase awareness of MRC in the community).

A **logic model** illustrates the presumed effects of a project or initiative. For example, “if we launch a media campaign, we expect that we will foster public knowledge about the MRC and this knowledge can enhance emergency preparedness (e.g., by making the public aware of services that would be available, by helping recruit volunteers).”

Components of a Logic Model

A basic logic model looks like this:



Reading from left to right, the logic model describes a basic strategy by which a program’s resources and activities are expected to lead to desired results. One way to think about it is to apply a series of “if/then” statements moving from one box to the next. For example:

- If we invest or use these resources, then we can accomplish these program activities.
- If we conduct these activities, then we produce outputs for targeted groups.
- If we deliver these outputs, then we can change important outcomes, such as knowledge skills, attitudes, behavior, status, or level of function.

As you do this, think about what assumptions are involved at each step and if they are reasonable. Is it reasonable to expect that the proposed outputs will lead to the long-term outcomes that are specified in your goals?

HOW TO BUILD A LOGIC MODEL STEP-BY-STEP

The process of developing a logic model can be broken down into seven basic steps (described below). Also, two example logic models are provided at the end of this guide to show what a final product might look like. In developing your logic model, keep in mind that not every program detail has to be cataloged, just those that are vital to understanding how your unit works. A logic model is like a road map; the important elements—the towns and main streets—should be depicted but not every side street needs to be included.

STEP I: Get Ready

Start by making a template to help you identify and organize important information about your program. Using the graphic on Page 2 as a guide, turn a piece of paper sideways and write your unit's goals across the top. Divide the rest of the paper into four columns labeled situations, inputs, outputs, and outcomes. Writing your goals at the top of the page will be a reminder that your program's inputs, outputs, and outcomes need to align with these goals. If you have not done strategic planning to develop goals and objectives, see *Guide #1: Strategic Planning* (Step IV).

STEP II: List the Situations (Needs)

In the first column, list situations your MRC unit wants to address. These will likely have been identified as part of your strategic planning process. Remember, a situation refers to a statement of a need or issue that the MRC unit seeks to address, given the unit's overall mission and the sociopolitical, environmental, and economic conditions in which it operates. As discussed in *Guide #1: Strategic Planning* (Step III), identifying community situations or needs is a precursor to developing your goals and objectives. These situations (needs) form the basis of the logic model. For example, a situation may be that the incidence of seasonal influenza in XYZ County is among the highest in the state. The county health department needs additional personnel to administer flu shots at clinics to be held in the county.

NOTE

If your goals involve multiple situations, start by building a logic model focused on just one of these situations. Once you have gone through these steps for one situation, go back and complete these same steps for the remaining situations (needs).

STEP III: Define your Inputs (Resources)

Think about the resources your MRC unit has. Resources for conducting activities include:

- People
- Equipment
- Money

List the resources you currently have available in the second column. Examples of inputs that are likely to be common to many MRC units include:

- Volunteers
- Infrastructure (or the “housing” organization)
- Equipment and supplies
- Partnerships
- Funding

STEP IV: Define your Outputs (Activities)

Outputs are activities, products, or services that the MRC unit produces for a targeted population. Outputs are intended to lead to specific outcomes. For example, the XYZ County MRC staffs flu clinics to provide flu shots to residents who lack health insurance. The main output is staffed vaccination clinics and specific outputs might include the number of clinics and number of hours worked. List the outputs you intend to produce.

If the activities occur in stages, there is a sequential order to them, and the items should reflect that order reading from top to bottom. When an outcome from one activity serves as a resource for another activity, an arrow is drawn from that output to the next activity.

STEP V: Link your Inputs and Outputs

For each input you have available, consider which outputs it will support. For instance, in our example above, volunteers (inputs) are needed to support flu vaccination clinics (outputs). Do you have sufficient inputs/resources to support your activities, and are you using your resources wisely? For example, do you have enough volunteers to staff one clinic or multiple clinics?

Every input should be linked to at least one output or it is irrelevant and not being utilized. Similarly, every output should be linked to at least one input; otherwise, it clearly cannot be produced. This linking process may reveal that your inputs and outputs do not connect well and you may have to obtain additional inputs or change your intended outputs.

STEP VI: Define the Outcomes you Expect

Consider the outcomes you expect to occur as a result of your program's efforts. Outcomes are the changes or benefits you expect to result from outputs provided by your program. Generally, outcomes are defined as changes in attitudes, behaviors, skills, knowledge, status, or level of functioning. They may be grouped into short-term, intermediate, and long-term.

- **Short-term outcomes** are changes that are most closely associated with your program's outputs. For example, using MRC volunteers to augment flu clinic staffing might result in an increase in the number of people receiving vaccinations.
- **Intermediate outcomes** are changes that result directly from the short-term outcomes. For example, public health surveillance in XYZ County reveals a marked reduction in the number of influenza cases reported.
- **Long-term outcomes** are changes that follow from the benefits accrued through intermediate outcomes. They are generally synonymous with the program's goals, which are identified during strategic planning.

Link each output (activity) with the expected outcomes. If an output does not link to at least one outcome your program is trying to achieve, you might consider whether the activity is one in which your MRC unit should be engaged. It may not be well aligned with your goals and the situations your goals address.

STEP VII: Verify the Model

It is important to check each element of your logic model for accuracy and completeness. Every input should feed an output (activity) and every output should lead to an outcome. Show your logic model to *stakeholders*; ask if they understand the logical flow of the program. Ask these questions:

1. Is the level of detail sufficient to illustrate the interrelationship of the elements?
2. Is it complete, that is, are all key elements included?
3. Is the program logic theoretically sound? Are there other ways to achieve the desired outcomes?
4. Are important external contextual factors identified and their potential influences described?

Review the model and check that it makes sense. There should be a logical progression from left to right. One way to do this is to start in any column and ask, "How did we get here?" For example, if we select a particular short-term outcome, is there an output statement that leads to this outcome? Is the logic sound, that is, are we correct to assume that the outputs (activities) will result in the desired outcomes?

The logic model process ensures that the program design is logical and complete. It helps define the criteria for program success and how it will be measured. In fact, Steps VI and VII of the logic model development process represent the first stages of performance measurement. This is the final phase of self-evaluation and is outlined in *Guide #3: Performance Measurement*.

A NOTE ON EXTERNAL FACTORS

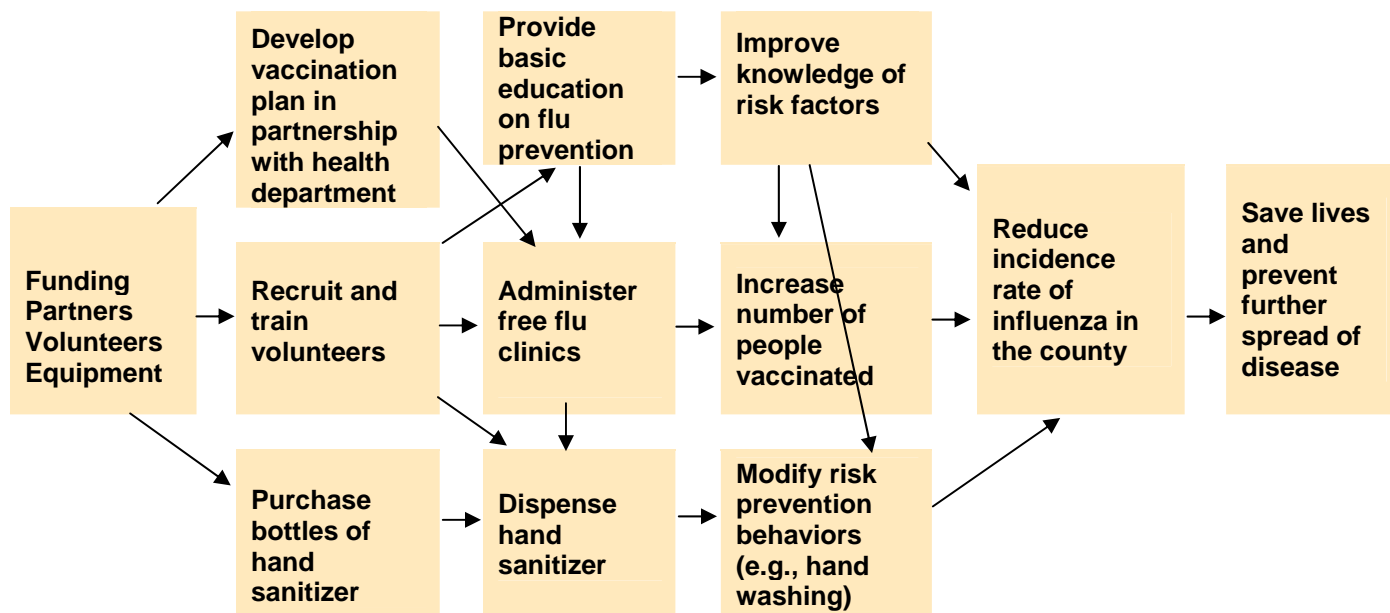
The success of a program can be influenced positively or negatively by external or "contextual" factors beyond its control. For example, an MRC unit might conduct a targeted education campaign to increase awareness among teenagers about the dangers of binge drinking. In this case, success (e.g., a reduction in reported binge drinking among teenagers) may be influenced by the legal drinking age in the community, a recent tragedy involving drunk driving, or a person's genetic predisposition to alcoholism. The MRC unit has no control over these factors.

It is important to recognize the potential effect of contextual factors on your program and outcomes and to incorporate these factors into your logic model. This becomes particularly important when determining how to best measure the program's performance in achieving its goals and objectives.

Examples: In developing a logic model for your program, it will likely be helpful to examine some examples

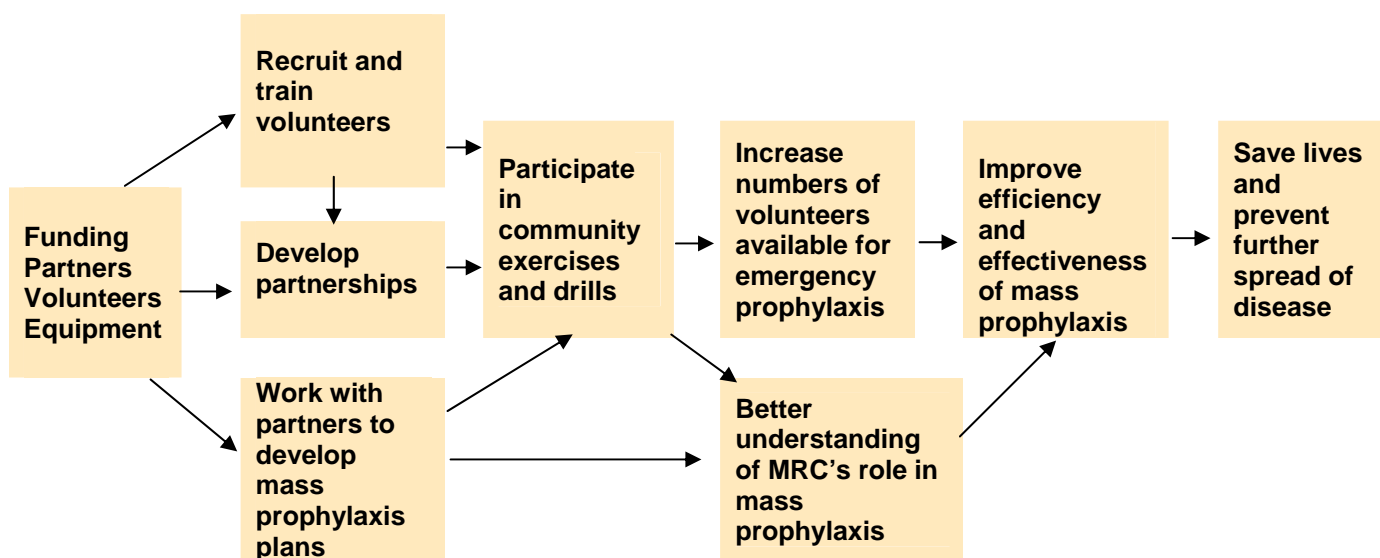
Example 1. Situation Statement: XYZ County is a rural county with an incidence rate of seasonal influenza that ranks among the highest in the state. There is a segment of the county’s population that lacks regular access to preventive health services.

Inputs	Outputs	Outcomes		
	Activities	Short-Term	Mid-Term	Long-Term



Example 2. Situation Statement: In the event of a bio-terrorist attack, ABC County needs trained health care personnel to augment staffing at Points of Dispensing (PODs) for delivery of medication prophylaxis.

Inputs	Outputs	Outcomes		
	Activities	Short-Term	Mid-Term	Long-Term



LOGIC MODEL FOR UNITS ADDRESSING MULTIPLE SITUATIONS

Above, we outlined how to develop a logic model for each situation your MRC unit is addressing. If your MRC unit is addressing multiple situations (e.g. both example 1 and 2 above), you should examine the situation-specific logic models you developed side-by-side to ensure they are consistent. You may want to combine these situation-specific models into a single overarching model to ensure the logic and consistency of all your inputs, outputs, and outcomes.

Product(s) developed at end of logic model activities:

- **Draft logic model for each of the situations your MRC unit wants to address. Each logic model will identify the inputs, outputs (activities), and outcomes (short-, mid-, and long-term) for a specific situation,**
- **Draft logic model that looks at the “big picture.” It identifies the overarching inputs, outputs (activities), and outcomes (short-, mid-, and long-term).**

Below are resources to learn more about developing logic models for your MRC program.

Board of Regents, University of Wisconsin (2004)
The Community Nutrition Education Logic Model.

Enhancing program performance with logic models. Available at:
<http://www.uwex.edu/ces/lmcourse/>. Accessed February 26, 2007.

W.K. Kellogg Foundation. Logic Model Development Guide. W.K Kellogg Foundation, Battle Creek, MI. January 2004.

McLaughlin, JA; Jordan, GB (1999) Logic Models: A Tool for Telling Your Program’s Performance Story, *Evaluation and Program Planning*, 22(1) 65-72.

Medhiros, LC; Butkus, SN; Chipman, H; Cox, RH; Jones, L; Little, D. (2005). A logic model framework for community nutrition education, *Journal of Nutrition Education Behavior*, 37, 197-202.

Wright, L; Ross, JW (undated) The Logic Model: An A-to-Z Guide to Training Development, Implementation, and Evaluation, *Training and Development in Human Services*, 153-167.

What’s Next?

This is the second in a series of training guides for MRC programs. To learn the next steps in conducting an evaluation of your MRC unit, see:

- **Training Guide #3: Performance Measures**

These guides are available at the National Medical Reserve Corps website at:
www.medicalreservecorps.gov.