The Use of Logic Models
in Health Promotion Practice

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Contents

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1.   Introduction

A review of recent professional literature related to health promotion practice and research indicates that the use of logic models is growing in popularity for the planning and evaluating health promotion initiatives (i.e., programs, policies, or services).

Although, it is common to refer to an initiative's "***conceptual framework***", rather than to its "***logic model***", logic models and conceptual frameworks are both concerned with the "theoretical" and/or "action" components of interventions, and their expected outcomes.

For simplicity, our discussion will refer to "logic models", but it should be understood that our discussion applies in a similar fashion to the nature and use or "conceptual frameworks".

2.   Definition of "logic model"

The general purpose of logic models is exactly what their name implies, that is, to provide a summary of the underlying "logical flow" related to the planning, development, implementation, and/or evaluation of an initiative.

 A general and comprehensive definition of logic models is the following:

> "*A program logic model is a picture of how your program works—the theory and assumptions underlying the program. … This model provides a roadmap of your program, highlighting how it is expected to work, what activities need to come before others, and how desired outcomes are archived*" (W.K. Kellogg Foundation Logic Model Development Guide, 2001; www.wkkf.org).

As this definition indicates, logic models are most commonly employed in program planning and evaluation: they identify an intervention's conceptual and operational elements, and its intended outcomes.

3.   Four functions of logic models: four kinds of logic models

Logic models differ in the extent to which they focus on an initiative's "theoretical" *versus* its "action" components.

We can identify four broad perspectives that logic models can take:

1. ***Explanatory factors logic model***: this logic model (or conceptual framework) focuses on our understanding of the nature and origins of an issue/problem

2. ***Change/influence process(es) logic model***: this logic model (or conceptual framework) focuses on our understanding of processes of

change or influence that will be employed in our initiative (e.g., theories and concepts related to "stages of behavioural change")

3. ***Program/action logic model***: this logic model integrates our ***explanatory factors*** logic model with our ***change/influence process(es)*** logic model to form the ***plan for action*** for our initiative. This program logic model answers the questions: who will do what, with whom, how, when, with what resources, with what expected outcomes, etc.?

4. ***Outcomes/evaluation logic model***: this logic model focuses on our initiative's expected outcomes (both shorter-term and longer-term) and the relationships among these objectives.

The particular focus and form that a logic model takes depends on its intended use. However, as shown in Figure 1, the four possible functions of logic models are not only ***not*** independent, they are inherently inter-related. That is, there is a logical flow:

1. ***from*** the use of logic models to specify the factors that explain or describe our issue/problem

2. ***through*** a logic model that specifies our proposed processes of change/influence

3. ***to*** a logic model that identifies the components of our initiative's action plan

4. arriving ***ultimately to*** a logic model that specifies our initiative's expected outcomes.

There is also a feedback relationship from outcomes to our original assumed relationships among the "explanatory" factors, change/influence processes and program elements.

As will be apparent from the examples provided in Section 8 below, in practice, some logic models incorporate elements related to more than one of the four functions outlined above. In addition, some of the studies referenced in Section 8 employ more than one logic model (Lafferty, C. K., & Mahoney, C. A. (2003) is an outstanding example of this use of multiple logic models).

Figure 1

Relationships among four kinds (functions) of logic models
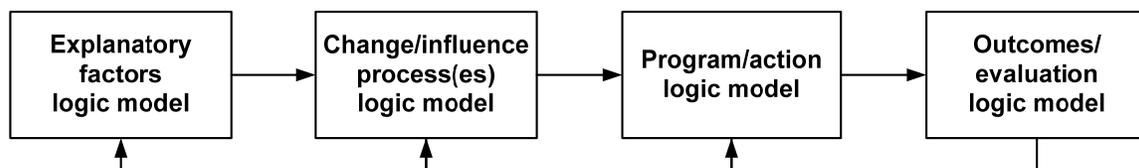
4. Relationship between planning and evaluation

Program evaluation is so closely related to program planning that evaluation can be viewed as the "flip side" of program planning. That is, program evaluation should directly follow the program logic model that underlies the planning of our initiative, assessing success in achieving the initiative's goals and objectives, its constituent activities and processes, and the inter-relationships among an initiative's elements, as specified in its program logic model.

5. Components of logic models

There is no single or uniform template for developing logic models.
Some are templates are simple, involving relatively few components. Others are more complex, involving a larger number of inter-related components.

Ultimately, the appropriate content of logic models depends on their intended purposes, and the contexts in which they are being used. In practice, for any initiative, there exists an array of possible logic models, reflecting different levels of conceptual analyses and different stages in planning and evaluating an initiative.

The most common template for developing logic models involves identifying a logical flow such as is shown in Figure 2.

Figure 2

General components of a logic model
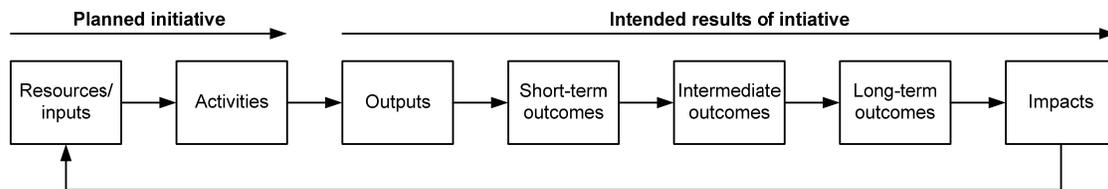
A more complex template for developing logic models is provided in the elaborated logic model in Figure 3.

Figure 3

Components of an elaborated logic model
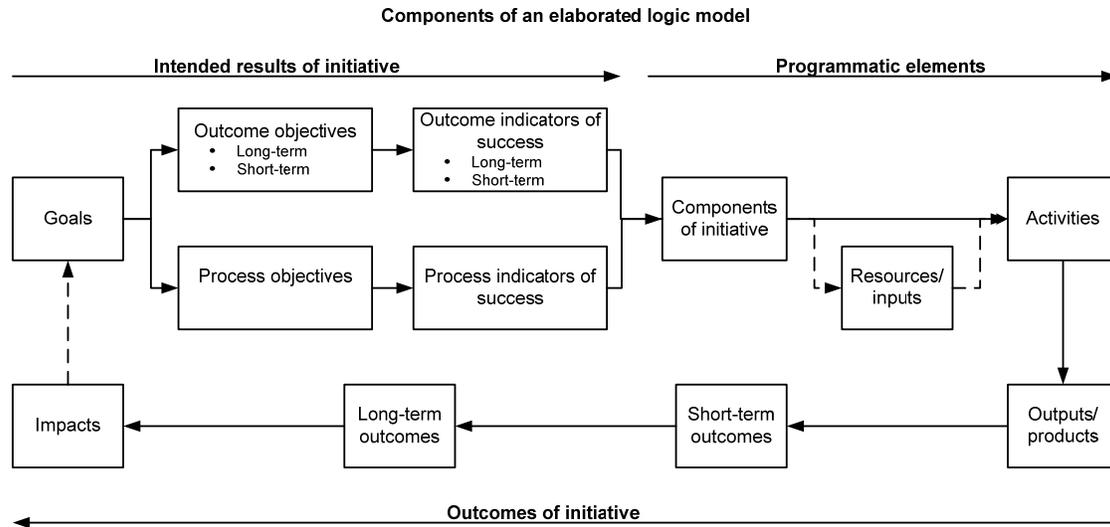
The different components of this logic model should be spelled out in greater detail, often in the form of their own logic models.

Thus, our understanding of the "assumptions" component underlying our initiative could (and should) be represented by its own elaborated logic model (or "conceptual framework") (see discussion of "***explanatory factors logic model***" and "***change/influence process(es) logic model,***" above).

Similarly, the broad components of our initiative, and their required resources/inputs and associated activities, would be specified in greater detail in our "***program/action logic model***" (see above).

Finally, the components related to outcome/process objectives and outcomes should reflect the elements of the fully specified "***outcomes/evaluation logic model***" (see above).

6. Using logic models in health promotion

Using logic models in planning and evaluating health promotion initiatives requires a further elaboration of the generic logic models identified above. Health promotion, as understood by the *Ottawa Charter for Health Promotion*, is expected to give attention to a particular set of goals, values, and strategies (see, for example, www.bestpractices-healthpromotion.com/coursereadings/id1.html). To accommodate this particular perspective, the generic logic model in Figure 4 is suggested for the planning and evaluation of health promotion initiatives.

Figure 4

GENERIC LOGIC MODEL FOR PLANNING AND EVALUATING HEALTH PROMOTION (Goodstadt, 1999)
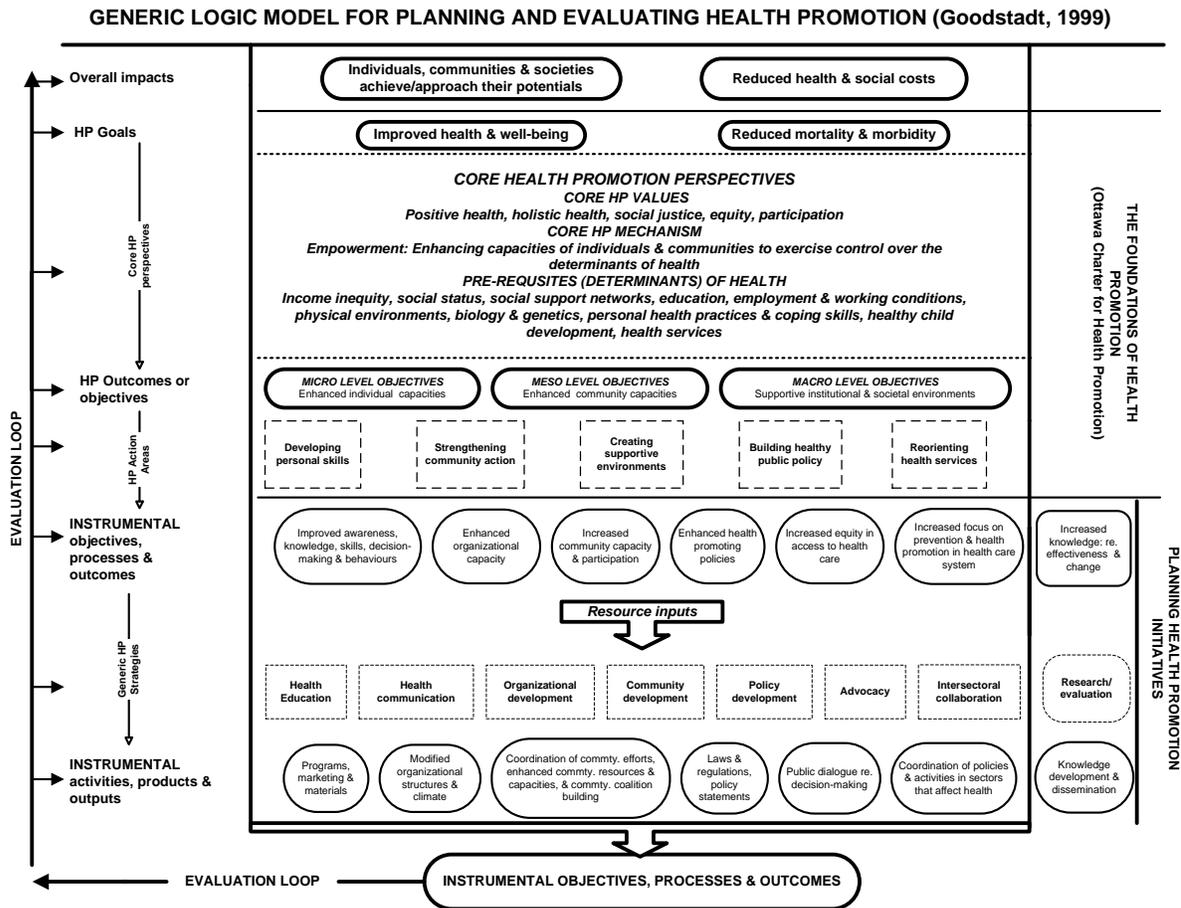
Michael Goodstadt Ph.D., Centre for Health Promotion, University of Toronto, July 12, 1999

This logic model contains all the generic elements related to the planning and evluation of health promotion inititives, as guided by the *Ottawa Charter for Heatlh Promotion.* A full discussion of the model can be found at: "A Generic Model for Planning and Evaluating Health Promotion"

7. Examples of the use of logic models in health promotion practice

Figure 5 provides an example of the use of a logic model in planning a broad strategy related to the prevention of eating disorders. This model includes components related to:

1. the assumed etiology of eating disorders

2. the continuum of risk associated with the assumed risk factors for eating disorders, domains of prevention strategies

3. an array of available strategies associated with health promotion

4. the relationships between the outcomes of these strategies and the those at different levels of risk for eating disorders

5. impact on the risk factors themselves.

(A PowerPoint presentation related to the development of this logic model is available by clicking here).

Figure 5

Logic Model for a "Continuum of Care" in Responding to Eating Disorders
Michael Goodstadt Ph.D., C.Psych.   November, 2004
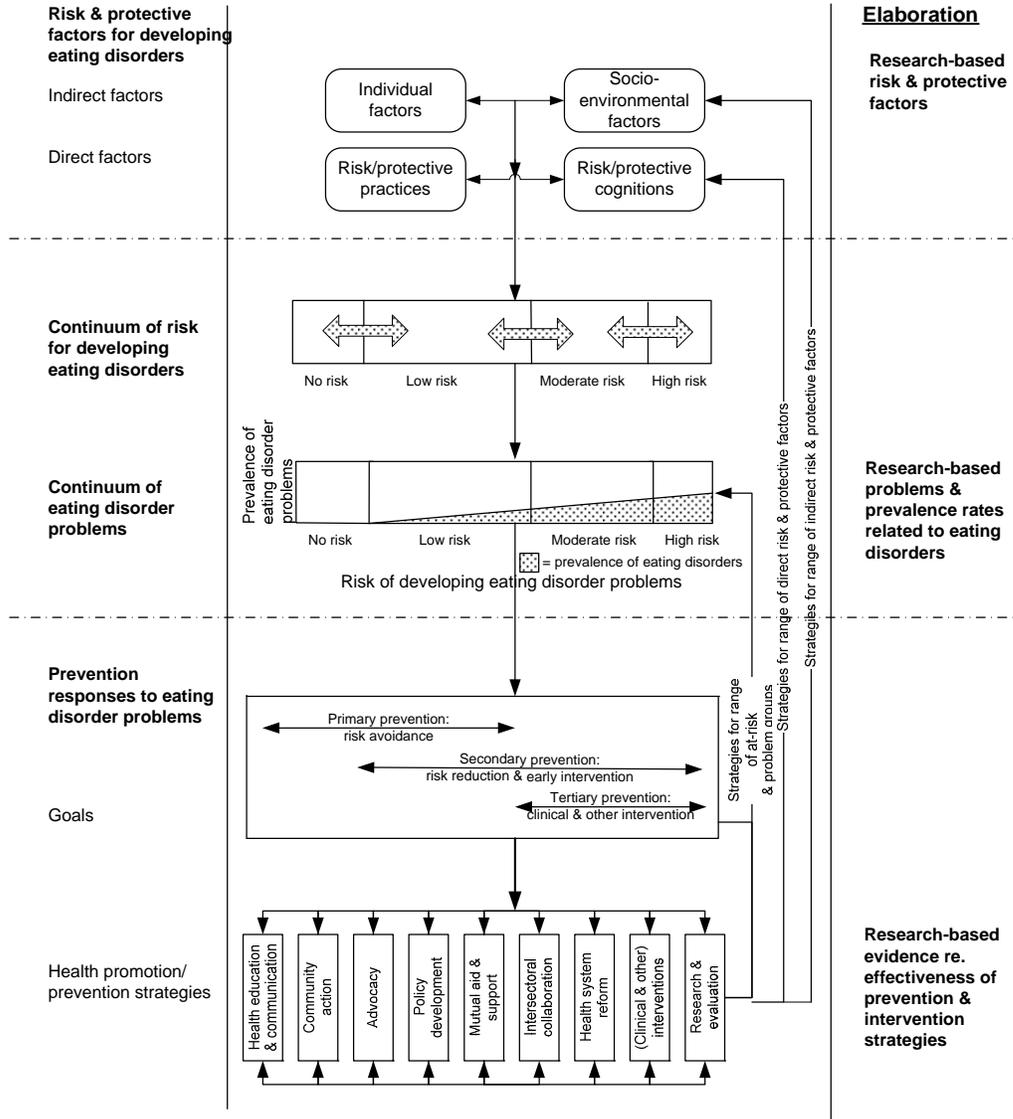
This logic model builds on those developed in the fields of alcohol/drug abuse and gambling (see, for example, *Ontario Problem Gambling Research Centre Framework* at <http://www.gamblingresearch.org/contentdetail.sz?cid=2007>)

7.1. Examples of explanatory factors logic models

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4. **"Organizational capacity for community development in regional health authorities: A conceptual model**—Germann, K., & Wilson, D. (2004). *Health Promotion International., 19*(3), 289-298.

5. **"Heart health promotion capacity-building model"**—in, MacLean, D. R., Farquharson, J., Heath, S., Barkhouse, K., Latter, C., & Joffres, C. (2003). Building capacity for heart health promotion: Results of a 5-year experience in Nova Scotia, Canada. *American Journal of Health Promotion, 17*(3), 202-212.

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8. "**Causal chain for relationship outcomes**"—in, Brinkerhoff, J. M. (2002). Assessing and improving partnership relationships and outcomes: A proposed framework. *Evaluation and Program Planning, 25*(3), 215-231

9. "**A conceptual framework for advocacy in health promotion**"—in, Carlisle, S. (2000). Health promotion, advocacy and health inequalities: A conceptual framework. *Health Promotion International*, *15*(4), 369-376.

10. "**Conceptual model of organizational characteristics explaining groups' use of diverse advocacy tactics**"—in, Zakocs, R. C., & Earp, J. A. L. (2003). Explaining variation in gun control policy advocacy tactics among local organizations. *Health Education & Behavior, 30*(3), 360-374.

11. "**Conceptual framework for organizational effectiveness of antihunger advocacy organizations**"—in, Laraia B.A., Dodds J., & E., E. (2003). A Framework for Assessing the Effectiveness of Antihunger Advocacy Organizations. *Health Education & Behavior, 30*(6), 756-770.

7.2. Examples of change/influence process(es) logic models

1. "**An integrated model for change**"—in, de Vries, H., Mudde, A., Leijs, I., Charlton, A., Vartiainen, E., Buijs, G., et al. (2003). The European Smoking prevention Framework Approach (EFSA): An example of integral prevention. *Health Educ. Res., 18*(5), 611-626.

2. "**Conceptual framework and theoretical foundations driving the culturally grounded *REAL* curriculum**"—in, Gosin, M. N., Dustman, P. A., Drapeau, A. E., & Harthun, M. L. (2003). Participatory Action Research: creating an effective prevention curriculum for adolescents in the Southwestern US. *Health Educ. Res., 18*(3), 363-379.

3. "**Peak (Program) theory of change logic model**"—in, Lafferty, C. K., & Mahoney, C. A. (2003). A framework for evaluating comprehensive community initiatives. *Health Promotion Practice, 4*(1), 21-44.

7.3. Examples of program/action logic models

1. "**The triangulation (methods and sources program) strategy**"—in, Nakkash R., Soweid R.A.A, Nehlawi M.T., Shediac-Rizkallah M.C., Hajjar T.A., & Khogali M. (2003). The Development of a Feasible Community-Specific Cardiovascular Disease Prevention Program: Triangulation of Methods and Sources. *Health Education & Behavior, 30*(6).

2. "**Integrated model showing the theoretical base and outcome variables for diabetes patient education**"—in, Cooper, H. C., Booth, K., & Gill, G. (2003). Patients' perspectives on diabetes health care education. *Health Educ. Res., 18*(2), 191-206.

3. "**Building capacity for heart health promotion"**—in, Joffres, C., Heath, S., Farquharson, J., Barkhouse, K., Hood, R., Latter, C., et al. (2004). Defining and operationalizing capacity for heart health promotion in Nova Scotia, Canada. *Health Promotion International., 19*(1), 39-49.

4. "**Heart health promotion capacity-building project logic model**"—in, MacLean, D. R., Farquharson, J., Heath, S., Barkhouse, K., Latter, C., & Joffres, C. (2003). Building capacity for heart health promotion: Results of a 5-year experience in Nova Scotia, Canada. *American Journal of Health Promotion, 17*(3), 202-212.

5. "**Peak (Program) initiative (stakeholder) components"**—in, Lafferty, C. K., & Mahoney, C. A. (2003). A framework for evaluating comprehensive community initiatives. *Health Promotion Practice, 4*(1), 21-44.

6. "**Peak (Program) logic model"**—in, Lafferty, C. K., & Mahoney, C. A. (2003). A framework for evaluating comprehensive community initiatives. **Health Promotion Practice, 4(1), 21-44.**

7.4. Examples of outcome/evaluation logic models

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2. "**Integrated model showing the theoretical base and outcome variables for diabetes patient education**"—in, Cooper, H. C., Booth, K., & Gill, G. (2003). Patients' perspectives on diabetes health care education. *Health Educ. Res., 18*(2), 191-206.

3. "**Community initiative evaluation model**" and "**Steps in the community initiative evaluation process"**—in, Wallerstein, N., Polascek, M., & Maltrud, K. (2002). Participatory evaluation model for coalitions: The development of systems indicators. *Health Promotion Practice, 3*(3), 361-373.

4. "**The getting to outcomes (evaluation) framework**"—in, Wandersman, A., Imm, P., Chinman, M., & Kaftarian, S. (2000). Getting to outcomes: A results-based approach to accountability. *Evaluation and Program Planning, 23*(3), 389-395.

5. "**Framework to assess antihunger advocacy organizational effectiveness**"—in, Laraia B.A., Dodds J., & E., E. (2003). A Framework for Assessing the Effectiveness of Antihunger Advocacy Organizations. *Health Education & Behavior, 30*(6), 756-770.

6. "**A framework for evaluating media advocacy**"—in, Stead, M., Hastings, G., & Eadie, D. (2002). The challenge of evaluating complex interventions: A framework for evaluating media advocacy. *Health Educ. Res., 17*(3), 351-364.

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