A B S T R A C T

Program planning and evaluation are critical steps in using a population health approach. This paper outlines how logic models have been adapted within a health promotion framework to guide public health programs and facilitate program description. It is important that we take the time to describe clearly what we are doing, reflect on practice and elaborate the conceptual base for the new public health programs so that we can evaluate the impact of our work. Ongoing research is required to identify appropriate and measurable indicators that capture the process, as well as the outcome, of population-based health promotion.

A B R É G É

La planification et l'évaluation de programmes constituent des étapes importantes d'une approche axée sur la santé de la population. Ce document décrit comment les modèles de logique ont été adaptés à un contexte de promotion de la santé afin de servir de guide aux programmes de santé publique et de faciliter la description des programmes. Il est important que nous prenions le temps de décrire clairement ce que nous faisons, de réfléchir sur la pratique et d'élaborer la base conceptuelle des nouveaux programmes de santé publique; nous pourrions, de cette manière, évaluer l'impact de notre travail. La recherche continue est nécessaire afin d'identifier les indicateurs appropriés et mesurables qui cernent le processus, ainsi que le résultat, de la promotion de la santé axée sur la population.

Facilitating the Shift to Population-based Public Health Programs: Innovation Through the Use of Framework and Logic Model Tools

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Public health units are adapting programs to align them with policy directions that endorse a population health approach. This shift presents a considerable challenge to public health professionals. Recent research suggests that practitioners are beginning to change in accordance with new directions but feel the need for additional preparation.¹ A related concern, in these times of economic constraint, is the pressing need to demonstrate that the new approaches are effective. Practitioners require tools to meet these challenges. Over the past five years, the Ottawa-Carleton Health Department has adapted many of its programs to meet changing needs in a way that is consistent with the new public health.² This paper describes the use of an intervention framework based on the *Ottawa Charter for Health Promotion*³ and logic models adapted to demonstrate accountability for program planning and evaluation. The benefits and challenges of using such tools in the context of public health in Ontario are addressed.

Background

In recent years, attention has been drawn to the need to promote health and prevent disease by addressing the social determinants of health.^{4,5} As Mustard and Frank⁵ argue, ill health is the expression of social inequalities. Unless actions are directed toward reducing these inequalities, the overall incidence of disease will

not change, merely the pattern of disease in populations. For this reason, it is important to dedicate resources to helping people attain higher levels of wellness or positive health. This entails building capacity as well as preventing illness.

The *Ottawa Charter*³ expands the notion of health to include capacity:

To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and realise aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living.

In keeping with this definition of health as capacity, the goal of health promotion becomes one of enabling people to increase control and exercise choice. This perspective underpins key health strategy documents for Ontarians.⁶⁻⁸ Public health units are shaping programs in line with the new policy direction. Building the capacity of populations is an important goal in the new public health.

Mandatory Health Programs and Services Guidelines

The *Ottawa Charter* endorses the need to reorient health services as a means of promoting the health of populations. The Mandatory Health Programs and Services Guidelines (MHPSG)⁷ translate this philosophy into public policy. Described as "an ambitious and progressive agenda for public health in Ontario," the MHPSG set a clear direction for boards of health, tasking them with ensuring the delivery of essential health promotion and disease prevention programs. Four broad health goals are delineated, setting program standards

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in the domains of healthy growth and development, healthy lifestyles, communicable disease control and healthy environments. Two general standards concerning equality of access and the collection of community health status information attest to the broad scope of the policy directives. Companion documents provide additional theoretical underpinnings for the intersectoral partnerships and community-initiated efforts that are outlined in the MHPSG.⁸ In effect, since they identify the target populations, the role of the health care provider, key strategies and essential goals, the policy documents can be perceived as a blueprint for the new public health in Ontario.

The following section describes the process of translating the philosophy of the *Ottawa Charter*, health promotion theory and the legislation into a program reality.

FRAMEWORK AND LOGIC MODEL TOOLS

Tailoring programs and services to local needs is a key expectation of the Mandatory Health Programs and Services Guidelines. In Ottawa-Carleton, this was accomplished through strategic planning. Health issues were identified and health goals prioritized taking into consideration factors such as the magnitude of the health issue and the probability of effecting change.^{9,10} Two key innovations facilitated the process of translating population needs into programs: the development of a Framework for Health Department Programs¹¹ and the use of logic models to guide program planning. A brief overview of the Framework and an introduction to logic models follows.

Framework for Health Department Programs

The purpose of the Framework¹¹ is to assist with the design of public health programs for the achievement of optimal individual, family and community health. Grounded in our experience, the Framework describes three broad types of strategy: 1) building self-care capacity and action; 2) building collective capacity and action, and 3) creating supportive environments. In the short term, the strategies aim

to increase healthy lifestyle practices, strengthen community partnerships, and foster environments in which healthy choices are easy choices. This is based on the assumption that such changes are linked to long-term health and community capacity. For use in conjunction with a program planning model such as Precede-Proceed,¹² the Framework directs attention to the importance of using diverse and complementary strategies. The particular strategy combination is dictated by the health issue.

Logic models

Health professionals have increasingly become interested in the use of logic models to facilitate program evaluation. Over the past 30 years, several conceptual guides to their use have been developed. Early work by Suchman¹³ highlighted the importance of organizing short- and long-term goals, as well as the underlying assumptions of a program, as a hierarchy of objectives. Weiss¹⁴ expanded on this by depicting the assumptions in a way that is similar to path analysis models. The program logic model described by Wholey¹⁵ had utility for the initial planning phase of an evaluation, connecting two central elements: 1) program components and 2) goals and effects. With further refinement, the model evolved as a program planning tool ensuring that program evaluation was considered in program design.¹⁶⁻¹⁸ The addition of program outputs into the conceptual model provides a more explicit picture of the linkages between program components, outputs and the short- and long-term outcomes, thereby enabling program managers and evaluators to see more clearly the underlying rationale or logic of a program.¹⁹

It follows that a program logic model has utility for program planning and evaluation in public health at a variety of levels: Ministry of Health, Public Health Department, program or special project. The Ottawa-Carleton Health Department introduced the use of logic models to program evaluation in 1991.²⁰ Recent work, described in more detail below, adapted the original program evaluation logic models so that they are now used in the planning of health promotion programs.

Consistent with the Framework, the new logic models incorporate strategies to promote optimal individual, family and community health. The next section describes a program logic model currently in use and discusses how it guides program planning and service delivery.

Community Action for Tuberculosis Prevention (CATBP)

The logic model for CATBP, an innovative tuberculosis prevention program, is shown in Figure 1. This program, which was offered by the public health department in partnership with a community health centre and a school board, promoted the successful completion of TB prevention treatment by students attending English-as-a-Second-Language (ESL) courses. The logic model specifies key information extracted from a program planning process. The form provides a profile of the program and shows the logical flow from program activities to the anticipated short- and long-term outcomes. When using the tool for program development, the sections of the logic model are not always completed in a linear sequence from the top to the bottom of the page. In the following section, the numbers in parentheses link the discussion to the logic model form.

The first step in program development is to specify the **long-term outcomes or benefits (1)**. These are the changes in health status or community function anticipated as a result of the program. Here, the outcomes are expressed in terms of reduced morbidity and more effective community approaches to TB prevention. Behavioural or environmental changes that act as stepping stones to the long-term outcomes are specified as **short-term outcomes or benefits (2)**. The **program goals (3)** encompass the outcomes, stating in general what the program is trying to accomplish. The goals drive program development and further define the scope of the program by identifying the **target population (4)**. For instance, CATBP targets ESL students and has a secondary goal of systematically identifying barriers to TB treatment in the region. The Framework for Public Health Programs, meshed with the logic model to ensure a more comprehensive approach,

Figure 1. CATBP Project Logic Model

ensures that deliberate efforts are made to direct health promotion activities toward the individual, the collective and the environment (5abc). CATBP program strategies

included building partnerships to ensure a consistent approach to the high risk population; comprehensive case-finding and case management; and educating multicultural

outreach workers to provide culturally sensitive support during testing and follow-up. The program strategies should be appropriate to the target population and theoretical-

ly sound. Within each framework strategy, program **components** (6) are amplified in **implementation objectives** (7).

A critical element of program planning and evaluation is determining which **program outputs** (8) will be used as indicators that program activities or services have actually been delivered. Particularly in the formative stages of a program, the analysis of program outputs provides evidence of progress toward the achievement of the short-/ long-term outcomes, and permits mid-course adjustments. Generally, the planning process necessitates an iterative approach: **program resources/support** (9) have implications for the size of the program and therefore should be considered at the outset and finalized once the program is fully developed. Specifying the **Mandatory Health Program(s)** (10) addressed by the logic model makes it easier to roll up information across programs.

DISCUSSION

Over the past five years we have gained experience in using logic models as program planning tools. They have much to offer in this regard, enabling us to construct programs that are logically consistent with clear program outputs and achievable program goals. Constructing logic models that incorporate the departmental framework broadened our perspective and encouraged the explicit use of diverse and complementary health promotion strategies. The challenge of translating complex health-promoting approaches into effective programs and services stimulated reflection on what is being done and why. As a consequence, the increased questioning has led to greater insight into how public health programs can be designed to achieve population-based health goals outlined in the MHPSG. Using the Framework and logic models has allowed us to conceptualize health promotion and risk reduction approaches more clearly and design programs accordingly. Differentiating program approaches, an important decision point in program design, is essential for the

delivery of theoretically sound, evidence-based interventions.

In the next stage of our development, the logic models will be used more fully to guide program evaluation. There are still issues to be resolved. First, it is clear that partnerships and the creation of supportive environments are integral to the success of all community programs. If they are not in place the program may not reach its goals. Developing the infrastructure for health takes time and effort, and should be properly accounted for in program planning and implementation. Otherwise, program logic models do not reflect the realities of the program. Second, regardless of the program approach, we need to measure success in building collective capacity and supportive environments in addition to measuring success in changing lifestyle. The absence of appropriate indicators in these two areas has important repercussions for programs which employ a broad array of strategies to address social and environmental determinants of health.

Program planning and evaluation are critical steps in using a population health approach. This paper has outlined how logic models have been adapted within a health promotion framework to guide public health programs and facilitate program description. It is important that we take the time to describe what we are doing, reflect on practice, and elaborate the conceptual base for the new public health programs so that we can evaluate the impact of our work. Ongoing research is required to identify appropriate and measurable indicators that capture the process, as well as the outcome, of population-based health promotion.

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