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HOW TO USE LOGIC MODELS FOR PLANNING EVALUATIONS OF INJURY PREVENTION PROGRAMS AND PROJECTS

BACKGROUND:

Evaluators in Canada have been recommending the use of program logic models for the purpose of evaluation planning since the late 1980s (Corbeil, 1989; Rush & Ogbourne, 1991). Originally known as “logic charts” (Corbeil, 1989), they were constructed by the evaluator to document their understanding of the program’s components and the relationship of these components to intended program effects and impacts. Also originally, the evaluator, working alone, constructed the logic chart during the process of determining if the program or project was ready to be evaluated, an evaluation process known as evaluability assessment.

Rush & Ogbourne (1991) later used the term “program logic model” to describe a schematic representation of a program that was used to clarify a program’s purposes and causal assumptions. They suggested that the development of the program logic model should be an iterative process, with the evaluator taking drafts to program managers to verify the accuracy of the model from the perspective of these program stakeholders. Rush & Ogbourne (1991) were among the first to recommend that program logic models be used to plan subsequent evaluation activities.

Since that time, a number of refinements to the structure of logic models have been suggested (Unrau, 1993; den Heyer, 2002; Goertzen, Fahlman, Hampton & Jeffrey, 2003) and their use as a tool for planning and evaluating programs have been widely promoted (Wong-Rieger & David, 1995; Porteous, Sheldrick & Stewart, 1997; Rowan, 2000).

In early 2007, in the field of injury prevention (IP), the use of logic models as a tool for evaluation planning is becoming widespread. In and of itself, the development of a logic model for a new IP program or project can be an important step in program planning as it leads to improvements in the clarity of program plans and more effective program implementation.

The development of a logic model for an existing program or project can produce the very important result of increased consensus among staff with regard to the relationship between activities and intended outcomes for program participants as well as more accuracy in the process defining intended outcomes. For example, at SMARTRISK, the staff members of all new programs and projects are required to produce a logic model with the assistance of the internal evaluation personnel, a policy that has resulted in the effective implementation and informative documentation of these programs and projects. In addition, all this IP organization’s existing programs have had logic models developed, resulting in the increased clarity of operations and intended outcomes of these programs and projects.

However, logic models for IP programs and projects are also a critically important input into the process of evaluation planning. Having a logic model as an input into the creation of an evaluation plan improves the quality of the plan in a number of important ways. For example, the intended targets of the IP program or project (e.g. program participants, members of the general public, staff of IP organizations) are clearly specified and documented. In addition, the outcomes or changes that the program or project intendeds to produce in it's targets (e.g. increased awareness of injury risks for participants, decreased performance of behaviours that increase the risk of injury) are specified, assisting the selection of appropriate evaluation methods and tools for measuring these outcomes.

RECOMMENDATIONS FOR CREATING LOGIC MODELS FOR USE IN EVALUATION PLANNING

There are a number of recommendations with regard to the development process for logic models in this context that are important to consider.

First, as noted earlier, logic models can be developed for either a new IP program or project that is still in the planning stages or for an existing IP program that is already operational but may be in need of program developments in order to more effectively meet the needs of program participants or produce intended outcomes. In the case of new programs or projects, the creation of the logic model should take place as early as possible in the planning process so that any errors in program logic, the relationships between program activities and intended program outcomes, can be identified and rectified before the program is implemented. In the cases of creating a logic model for an existing IP program or project, the development could take place as part of a process of program review or process evaluation and is recommended whenever questions arise with regard to changes in the characteristics of target populations or in the needs of the intended participants of the program or project.

Second, it is possible for either evaluators or program staff to independently create the logic model of a program or project. However, neither of these methods is recommended. Logic models are most accurate and useful if they are developed by a program staff team that includes both management and line staff. In addition, the facilitation of this group process by an evaluator that is experienced in the development of logic models will ensure that model meets the needs of both program personnel and evaluators.

Third, as noted earlier by Rush and Ogbourne (1991), the process of developing a logic model is iterative. The group produces a rough draft with the help of the internal evaluator and it is then reviewed. The second, revised draft, is produced and then reviewed. This process goes on for as many repetitions as required until all of the program staff members are satisfied with the final product.

Fourth, it is our experience that it is best to keep it simple when it comes to which structure of logic models is used. Specifically, it is recommended that the logic model be comprised of the following basic elements only: components, activities, targets, short-term outcomes and, long-term outcomes. This structure for logic models is the one advocated by Porteous, Sheldrick and Stewart (1997) in their evaluation toolkit¹. This model was developed in an Ontario public health unit and is widely used in that context for all types of public health programs.

Fifth, it is our experience that it is most effective if three separate group sessions are used to create the two major sections of a logic model and to finalize the logic model diagram. When creating a logic model that is to be used primarily for evaluation planning, the first session should be used to identify and document the program or project's components (e.g. categories of program activities such as training, risk awareness raising), activities (e.g. an information session on how to properly install and use an infant car seat, a television advertisement designed to raise awareness of the injury risks of baby walkers) and intended targets (e.g. program participants who are at risk for a particular injury such as seniors and injuries from falls). This draft should then be reviewed and finalized before moving on to the next stage. A second group meeting should then be used to draft and document the intended program outcomes, both short and long-term, of each activity with each target. This draft should then go through the same process of review and revision as described earlier resulting in the finalization of the second worksheet. Finally, the evaluator or another staff member that is skilled in the use of software for figure construction (e.g. Microsoft Visio, Adobe Illustrator, OmniGraffle) should produce the draft of the visual logic model. A third group session should then be held to finalize and approve the logic model for external viewing and use in evaluation planning.

Sixth, it should be emphasized that logic models that were created during the program or project planning process are not written in stone. Implementation of a new program or project often leads to the identification and performance of needed changes in structures and processes. In addition, programs change over time for other reasons (e.g. new staff with different skills, changes in the needs of characteristics of clients, the addition of new activities). As a result, it is recommended that a program logic model that was created more than six months earlier be reviewed before using it for evaluation planning in order to capture new program developments in activities and the resultant changes in intended outcomes. Furthermore, if an existing program or project that is to be evaluated does not have a logic model, a new one will need to be created.

In summary, a number of process recommendations have been made for the development of logic models to be used as inputs into planning evaluations of IP programs and projects. Following these recommendations will result in the creation of a logic model that is particularly useful for the purpose of developing evaluation plans.

REFERENCES

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ⁱ The purchase of this toolkit is also recommended as it contains an excellent description of the development process, comes with a computer diskette that has two useful worksheets for logic model creation, and is available from the Ottawa Public Health Unit for around \$20.