THE HEALTH COMMUNICATION UNIT

at the Centre for Health Promotion
University of Toronto

Evaluating Health Promotion Programs

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The following workbook has been developed by The Health Communication Unit at the University of Toronto. Using a logical, ten-step model, the workbook provides an overview of key concepts and methods to assist health promotion practitioners in the development and implementation of program evaluations.

WHAT IS PROGRAM EVALUATION?

Health promotion initiatives are often delivered through structured programs. A **program** is any group of related, complementary activities intended to achieve specific outcomes or results. For example, community gardens, shopping skill classes and healthy cooking demonstrations could be components of a program developed to improve the nutritional status of low-income families.

To be successful in achieving their goals, health promotion practitioners need to make ongoing decisions about the programs they deliver. These include decisions about the following issues:

- the optimal use of time and resources;
- determining if the program is meeting the needs of participants;
- ways of improving a program; and
- demonstrating the effectiveness of a program to funders and other stakeholder groups.

In some cases, health promoters base their decisions on informal feedback from participants, their own observations, or their previous experience with similar programs. While subjective judgments can be useful in arriving at decisions, they are often based on incomplete information and are, therefore, prone to bias. The overall quality of decision making can be improved through a more structured approach to understanding the impact of programs. Program evaluation provides a structured approach to examining health promotion initiatives.

Program evaluation is "the systematic gathering, analysis and reporting of data about a program to assist in decision making." (Ontario Ministry of Health, Public Health Branch, 1996). Specifically, program evaluation produces the information needed to improve the effectiveness of health promotion efforts.

WHY EVALUATE?

Health promotion practitioners undertake program evaluation for the following reasons:

- To collect evidence on the effectiveness/impact of a program.
- To be accountable to stakeholders: funders, clients, volunteers, staff, or community.
- To identify ways to improve a program:
  - determining what works, what doesn't work and why
  - assessing needs of target population
  - improving the usefulness of program materials
- To compare programs with other programs.
- To assess the efficiency of a program (cost-benefit analysis).
- To test a hypothesis for research purposes.

In the past, program evaluation was used mainly to determine whether or not a program was effective (i.e., did it work?). Today program evaluation is more often used to ensure continuous quality improvement (i.e., what needs to be changed to improve the effectiveness of a program?)

TYPES OF EVALUATION

Program evaluation has been separated into three main categories based on when the evaluation is being conducted and the type of information collected.

1 Formative evaluation

Formative evaluation focusses on programs that are under development. It is used in the planning stages of a program to ensure the program is developed based on stakeholders needs and that programs are using effective and appropriate materials and procedures. Formative evaluation includes such things as

- needs assessments,
- evaluability assessment (analysis to determine if your program's intended outcomes are able to be evaluated),
- program logic models,
- pre-testing program materials, and
- audience analysis.

You may have heard of the term 'implementation evaluation.' This type of evaluation could fall under formative or process evaluation because it assesses how well a program is implemented and determines ways to improve program delivery. It is carried out after the initial implementation of a program.

2 Process evaluation

Process evaluation focusses on programs that are already underway. It examines the procedures and tasks involved in providing a program. It seeks to answer the question, "What services are actually being delivered and to whom?" Process evaluation includes such things as

- tracking quantity and description of people who are reached by the program,
- tracking quantity and types of services provided,
- descriptions of how services are provided,
- descriptions of what actually occurs while providing services, and
- quality of services provided.
- implementation evaluation

3 Summative evaluation

Summative evaluation focusses on programs that are already underway or completed. It investigates the effects of the program, both intended and unintended. It seeks to answer the questions "Did the program make a difference?"(impact evaluation) and "Did the program meet its stated goals and objectives?"(outcome evaluation). In its most rigorous form the design of an outcome evaluation can become very complex in order to rule out any other plausible explanations for the results.

Outcome evaluation can assess both short term outcomes, immediate changes in individuals or participants (such as participation rates, awareness, knowledge, or behaviour) and long term outcomes (sometimes referred to as impact evaluation) which look at the larger impacts of a program on a community.

An outcome evaluation can also analyze the results in relation to the costs of the program (cost-benefit evaluations).

Summative evaluation includes

- changes in attitudes, knowledge or behaviour;
- changes in morbidity or mortality rates;
- number of people participating or served;
- cost-benefit analysis;
- cost-effectiveness analysis;
- changes in policies; and
- impact assessments.

These types of evaluations are called different names by different people but basically have the same meaning. For example, you may have heard the terms 'outcome evaluation' and 'summative evaluation' in the same context. We encourage you not to get stuck on terminology but to describe your evaluations in a way that is understandable to you and your stakeholders. Here are a few definitions that may help to distinguish between the different types of summative evaluation.

Outcome Evaluates what occurred as a result of your program. It determines whether you achieved the programs short-term and/or long term objectives.

Impact Evaluates the impact your program had on the participants or other stakeholders of the project. Impact evaluation goes a little further than outcome. It measures outcomes but also measures what changes occurred as a result of those outcomes.

Cost-benefit Evaluates the program in terms of costs. It measures both the program costs and the results (benefits) in monetary terms. This means that the results of the program or benefits must be translated into a dollar value.

Cost-effectiveness In this type of evaluation only program costs are expressed in monetary terms. Benefits are expressed only in terms of the impacts or outcomes themselves (they are not given a dollar value). Interpretation of this type of analysis requires stakeholders to decide if the benefit received is worth the cost of the program or if there are other less expensive programs that would result in a similar or greater benefit.

FACTORS TO CONSIDER WITH DOING COST ANALYSIS EVALUATION

- It works well for results that have a short time frame measurement like missed work days, disability claims, time in therapy, etc..
- It doesn't work well for outcomes like morbidity, mortality rates or health care system cost savings which are all very long term. For example epidemiological evidence about smoking suggests that preventing smoking and helping people quit smoking would decrease heart disease and cancer resulting in lower health care costs. But these costs savings are so far away that we cannot determine how much would be saved.
- There may be difficulty in obtaining consensus on the value of some benefits.
- It is necessary to consider the benefits and costs to 'whom'. Is it the participants, sponsors, general public or all three?
- Sometimes it is difficult to anticipate all the costs and benefits associated with an intervention.

- When comparing programs there can be benefits that are not comparable to benefits of other programs. For example even though a smoking cessation program may cost less than a group program, people may want the option of a group program.

PROGRAM EVALUATION AND HEALTH PROMOTION: SOME KEY CONSIDERATIONS

Health promotion is "the process of enabling people to increase control over, and to improve, their health" (Ottawa Charter for Health Promotion, 1986). This definition encompasses a number of key principles and values that guide the implementation of health promotion initiatives (Rootman et al., 1996).

- **Empowering** - Health promotion initiatives should enable individuals and communities to assume more power over the personal, social, economic and environmental factors affecting their health.
- **Participatory** - Health promotion initiatives should involve people in an open and democratic way.
- **Holistic** - The scope of health promotion initiatives should extend beyond the parameters of disease prevention to address the physical, mental, social and spiritual dimensions of health.
- **Intersectoral** - Health promotion initiatives should involve the collaboration of agencies from relevant sectors.
- **Equitable** - Health promotion should be guided by a concern with equity and social justice.
- **Sustainable** - Health promotion initiatives should bring about changes that individuals and communities can maintain themselves.
- **Multi-strategy** - Health promotion initiatives should use a variety of complementary approaches to bring about healthy changes in individuals, organizations and communities. Key health promotion strategies include health education, communication, community development, advocacy, policy development and organizational change.

These principles also have implications for the way health promotion programs are evaluated. To ensure compatibility with health promotion concepts and values, evaluations of health promotion programs should:

- ensure the meaningful participation of all stakeholder groups in the planning and implementation of the evaluation (see Section 2 for more information on the benefits of stakeholder involvement);
- focus on assessing changes in the basic prerequisites for health (i.e., the extent to which participant access to the **determinants of health** (e.g., a safe work environment) improved as a result of taking part in the program);
- assess the extent to which the program facilitated the process of **empowerment** (i.e., did participants achieve greater control over the conditions affecting their health and well-being as a result of taking part in the program?);
- focus on the extent to which a program built on existing strengths and assets, not just the extent to which a program addressed needs and deficits;
- ensure that the results are shared with participants in a way that meets their requirements (e.g., reading level, cultural appropriateness);
- provide participants with an opportunity to review evaluation results and make suggested revisions;
- include evaluation measures focusing on the barriers to program access (transportation, childcare, etc.); and
- utilize multiple evaluation methods (both quantitative and qualitative) to understand the holistic, multi-component nature of health promotion programs.

SUMMARY

- In the ideal situation, a program is developed based on the needs and strengths/assets of the community or population it is intended for.
- Formative evaluation is used to design the most effective program, ensure that the activities logically link to the intended outcomes and the materials used are pre-tested for the intended audience.
- When a project is implemented, process evaluation is used to measure how it is implemented and who participates. It can identify ways to improve the delivery of the program.
- An outcome evaluation is used both to help improve a program and to determine whether it is effective at meeting its objectives and

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GUIDING PRINCIPLES FOR PROGRAM EVALUATION IN ONTARIO HEALTH UNITS

The Guiding Principles for Program Evaluation in Ontario Health Units provide a framework for strengthening the evaluation of public health programs. The Principles outline when, how, and why evaluations should be conducted and who should be involved. Evaluation activities in Ontario health units should be based on the ideals represented in the Principles.

Definitions

A **principle** is defined as a general law which guides action.
A **program** is defined as a series of activities supported by a group of resources intended to achieve specific outcomes among particular target groups.
Program evaluation is the systematic collection, analysis and reporting of information about a program to assist in decision-making.
Stakeholders are individuals and groups (both internal and external) who have an interest in the evaluation, that is, they are involved in or affected by the evaluation. Stakeholders may include program staff or volunteers, program participants, other community members, decision-makers, and funding agencies.

Guiding Principles

WHEN

Integrated Program Planning and Evaluation

- Evaluation should be an integral part of program management and should occur during all phases of a program.
- All program plans should include how and when programs will be evaluated.

HOW

Clear Description of the Program

- The program being evaluated should be clearly described, especially the process and outcome objectives, as well as the intended target groups. Program logic models should be used when appropriate.
- Program objectives that are not specific should be clarified before continuing with further evaluation activity.

Explicit Purpose for Identified Need

- The purpose of any evaluation should be explicit and based on identified decision-making needs.

Specific Evaluation Questions

- Evaluation questions should be specific and clear.
- Evaluation questions should be based on the need to answer key management questions.
- The developmental stage of a program, its complexity and the reason for evaluating should be considered in formulating evaluation questions.
- Evaluation questions directly reflect a program's process and/or outcome objectives.

Ethical Conduct

- Members of the evaluation team should consider the ethical implications of program evaluation to ensure the rights of participants in the evaluation are respected and protected.

Systematic Methods

- The evaluation questions should drive the evaluation methods utilized.
- A review of the literature and a scan of evaluation activity in relevant program areas in other health units should be carried out at the outset of the evaluation.
- New data should not be collected if existing information can adequately answer evaluation questions.
- The most rigorous evaluation methods should be used given time and resource limitations.
- Evaluation should employ information (quantitative, qualitative or both) gathered from a variety of sources with varying perspectives.

Clear and Accurate Reporting

- Evaluation reports should include a description of the program and its context, the purpose of the evaluation, information sources, methods of data analysis, findings and limitations.
- Evaluation reports should be presented in a clear, complete, accurate, and objective manner.

Timely and Widespread Dissemination

- The dissemination of evaluation findings to stakeholders should be timely.
- Evaluation findings should be shared with other Ontario health units when appropriate.

WHO

Multidisciplinary Team Approach

- The evaluation team should include a variety of people who have adequate knowledge of the program, its participants, and program evaluation.
- Responsibilities should be agreed upon at the beginning of the evaluation. One person should be responsible for the overall management of the evaluation.
- The evaluation team should seek technical advice, support, and/or training, when necessary.
- Members of the evaluation team should continuously work toward improving their program evaluation skills; team members with evaluation expertise should support this learning.

Stakeholder Involvement

- Stakeholders should be consulted and, if appropriate, involved directly, throughout the evaluation process, within time and resource limitations.
- Stakeholders' interests, expectations, priorities, and commitment to involvement should be assessed at the outset of the evaluation.
- Communication among stakeholders should be honest and open.
- Evaluation should be sensitive to the social and cultural environment of the program and its stakeholders.

WHY

Utilization of Evaluation Findings

- Program managers should formulate an action plan in response to evaluation findings.
- Evaluation findings should be used to support decision-making.

STEPS IN EVALUATING HEALTH PROMOTION PROGRAMS

1 Clarify your Program
- Define your program goals, population of interest, and outcome objectives
- Define your programs activities & outputs
- Establish measurable program indicators
- Ensure prerequisites for evaluation are in place

2 Engage Stakeholders
- Understand stakeholders' interests and expectations
- Engage stakeholder participation
- Develop evaluation questions (based on program goals and objectives and stakeholders' interests/expectations)

3 Assess Resources for The Evaluation
- Determine availability of staff and resources
- Determine amount of money allocated for evaluation

4 Design the Evaluation
- Select type of evaluation to be conducted
- Design evaluation framework
- Consider ethical issues and confidentiality

5 Determine Appropriate Methods of Measurement and Procedures
- Your evaluation toolbox
- Qualitative versus quantitative methods
- Select your sampling design

6 Develop Work Plan, Budget and Timeline for Evaluation

7 Collect the Data Using Agreed-upon Methods and Procedures
- Pilot test
- Data collection techniques
- Tips for data collection

8 Process and Analyze the Data
- Prepare the data for analysis
- Analyze the data

9 Interpret and Disseminate the Results
- Interpret results
- Present results
- Share results

10 Take Action

Step 1 Clarify Your Program

Define your program goals

Define your population of interest

Define your outcome objectives

Define your programs activities & outputs

Establish measurable program indicators

Ensure prerequisites for evaluation are in place

Define the Goals of Your Health Promotion Program

Goal: Purpose or mission. What you wish to achieve. In health promotion, goals tend to be stated as positive outcomes that health promoting actions are intended to achieve. These goals are directions and are not necessarily measurable. Example **program goals** are

'A goal is a broad, direction-setting positive statement describing what we want to achieve through our efforts.....goal statements tend to be descriptive, global statements of what is intended. (Dignan & Carr)

- Mothers will breastfeed their babies exclusively from birth until they double their weight
- Seniors living in the community will receive the support they need to cope with special challenges they may have associated with aging

Define your Population of Interest (i.e., Program Participants)

Who is your program trying to reach?

- Describe the population your program is intended for:
  - What are their demographics (age, gender, ethnicity)?
  - Where do they live?
  - What is the best way to communicate with them?

    Medium (phone, fax, mail, e-mail)
    Time of day
    Time of week
  - What is the best way to reach them?
  - Are they all very similar, or do they have differences?
- Are you interested in any sub-groups of this population?

The characteristics of your population of interest influences your choice of data collection methods.

Define Your Outcome Objectives

- **Objectives**: Specific and measurable outcomes which lead to the goal
- Will your objectives help you to reach your goal? Are they **SMART**?
- You may have both short term and longer term objectives. Short term objectives may be achievable in a year, where as longer term objectives may occur after the short term objectives have been reached and take 5 or more years.
- Classifying 'activities' or 'outputs' of a program as an outcome objective is a common error when defining a program's outcome objectives.
- **Activities** are the specific actions you are going to take to achieve your **outcomes**. **Outputs** are the services or products you will develop and provide.
- Activities and outputs are **implementation objectives**, *not* **outcome objectives**. In other words they are aspects of the program you implement in order to achieve your intended outcomes.
- **Implementation objectives** explain what you are going to do or provide. For example
  - To provide 10 breast feeding classes for new moms
  - To train seniors in the required skills for peer counselling
  - To run a series of newspaper ads about the peer counselling services for seniors
  - To develop a resource manual for teachers

  These objectives are evaluated based on whether they were implemented and how well they were implemented.
- **Outcome objectives** explain what is going to occur as a result of your efforts. For example
  - All new moms who attend our breastfeeding class will understand the benefits of breastfeeding their infants until they double their weight.
  - Students in our after school program will be satisfied with the activities provided.

Objectives should be:

S pecific

Measurable

A ttainable

R elevant

T ime Limited

- The number of trained volunteer nutrition educators will increase by 50% over the next year.
- 30% percent of seniors in North York will be aware of peer counselling services in North York.

These objectives are assessed in a number of ways. For example, to measure an increase in the number of trained educators you will need to know how many there were at the beginning of the project and at the end of the project. To measure satisfaction, you may ask your students to rate their experience with the after school program.

Define Your Program Activities and Outputs. How are they Implemented?

- If you have already established implementation objectives that were discussed earlier, then you may have already defined your program activities and outputs. They include the things you plan to do or produce.
- However, it is also important to know how you are going to implement your activities and develop your outputs.
- Detailed action plans for your program including all the tasks, the persons responsible for each task and a timeline will help to ensure that your program is implemented as intended.

Establish Measurable Indicators

- Each outcome objective should have clearly defined indicators that, if measured, will tell you whether you achieved your objective. **Indicators** are specific measures indicating the point at which goals and/or objectives have been achieved. Often they are proxies for goals and objectives which cannot be directly measured. An indicator gives you the criteria to determine whether you were successful or not. You can also use the term **success indicator**. The following questions can help you to determine your success indicators:
  - How you will know if you accomplished your objective?
  - What would be considered effective?
  - What would be a success?

- What change is expected? For example
  - awareness of peer counselling in our community will increase 15% in year one
  - the majority of clients will rate our services as "excellent."
- Success indicators are easily identified for objectives that have been written well but can be more challenging for those that have not.
- At the beginning of the program you may not know what type of effect would be reasonable to expect. In these situations, it helps to consider what would not be acceptable and then to make an estimate based on that amount. For example
  - It would not be acceptable to have anyone rating the peer counselling services as "poor." Therefore a success indicator for that objective may be that all clients will rate the services as '"ood" to "excellent."

Criteria or Standards You Can Base Your Success Indicators On

- Mandate of regulating agency (e.g., % of children immunized by the year 2000);
- Key audience health status (e.g., expected rates of morbidity or mortality);
- Values/opinions expressed (e.g. , quality of service - % rating excellent);
- Advocated standards (e.g., standards set out by professional organizations);
- Norms established via research (norms established by previous evaluations);
- Comparison or control group (significant differences between intervention group and control group);
- No comparison (success indicator has direction but no value).

When there are no standards already suggested or established the success indicator may have direction but no expected value. For example, you may expect awareness to increase but are not sure by how much.

Examples of Measurable Indicators

Formative evaluations

Needs Assessment

- service utilization
- waiting lists
- availability and accessibility of services
- stakeholders' perception of their needs

Pre-testing materials

- understanding of materials
- identification of key messages
- readability
- aesthetic value
- interest
- offensiveness

Process evaluation

- work performed
- staff time
- expenditures/costs
- promotion/publicity
- participation
- inquiries
- resources distributed
- groups formed
- training sessions held
- staff turnover
- contacts made
- client satisfaction

Outcome evaluation: short term

- policy changes
- changes in awareness, knowledge or beliefs
- benefits to participants
- barriers to participants
- increase in number of people reached

Outcome evaluation: intermediate term

- changes in service utilization
- changes in behaviour

Outcome evaluation: long term

- changes in service utilization
- morbidity/mortality
- health status
- social norms

Organizational Structure

Your ability to collect and analyze information about your program will depend on whether you have a structure in place to support evaluation activities. Evaluations take time and resources. The more complex the evaluation, the more resources and support you will need.

Ensure Pre-requisites for Evaluation Are in Place

A program which is ready to be evaluated must have

- defined goals and objectives,
- clearly defined population of interest (i.e., program participants),
- well defined activities that are implemented in a prescribed manner,
- clearly specified program indicators and outcomes,
- plausible causal linkages between the activities and outcomes, and
- organizational structure that can support the collection of information.

The development of a **program logic model** is an excellent way to clarify your program and ensure that it is ready to be evaluated.

The purpose of a program logic model is to help stakeholders understand how a program's activities will contribute to achieving the intended goals and objectives.

A logic model provides a graphic depiction of the relationship between a program's goals, objectives, activities and stakeholder groups.

By using a logic model you will be able to

- identify if there are any gaps in the "theory" of the program and work to resolve them,
- focus the evaluation of your program around essential linkages,
- engage the stakeholders in the evaluation, and
- build a common sense of what the program is all about and how the parts work together.

There are different ways of developing a program logic model. For a detailed explanation of how to develop a program logic model please refer to the ***Introduction to Health Promotion Planning*** workbook available through THCU's website (www.thcu.ca).

Once you have a logic model of your program, designing an evaluation becomes much simpler. The following is an example of a program logic model framework

Goal

Population of Interest

Longer Term Outcome Objectives

Short Term Outcome Objectives

Outputs

Activities

Worksheet: Step 1 – Clarify Your Program

A. Complete the following information:

Name of organization:

Name of project/program:

Brief description of project:

Goal	
Population of Interest	
Longer Term Outcome Objectives	**Indicators**
Short Term Outcome Objectives	**Indicators**
Outputs	**Indicators**
Activities	**Indicators**

Chapter 1

Step 2 Engage stakeholders

Define who your stakeholders are

Understand stakeholders' interests and expectations

Engage stakeholder participation

Develop evaluation questions

ENGAGING STAKEHOLDERS

- This step will identify which organizations and people would be interested in the evaluation findings and what their interests would be.
- Stakeholders are individuals and groups who have an interest in the evaluation. Stakeholders may include program staff or volunteers, program participants, other community members, decision-makers, and funding agencies.
- Involve stakeholders as much as possible. The more involved they are, especially in the decision making process, the more cooperative they will be in providing information and being open to unexpected results.

DEFINING STAKEHOLDERS AND UNDERSTANDING THEIR INTERESTS

- Identify all stakeholders:
  - stakeholders of the program, and
  - stakeholders of the evaluation.
- What do they want to know from the evaluation?
- How rigorous do they expect the results to be?
- How can you meet their information needs?
- You may need to prioritize stakeholder needs due to budget limitations.

ENGAGING STAKEHOLDER PARTICIPATION

- Clearly identify and communicate the benefits to stakeholders.
- Involve stakeholders in decision making at the beginning.
- Find ways to give them "real" power.
- Only expect involvement in things they are interested in.
- Get consensus on design and division of responsibilities (especially around data collection).
- Do not burden them with unnecessary data collection or unrealistic timelines.
- Share results in formats tailored to different stakeholders.
- Celebrate your successes with stakeholders.
- Take action on evaluation results.

PARTICIPATORY APPROACHES TO EVALUATION

Stakeholder involvement will vary with the type of evaluation. Some evaluations may only involve stakeholders in decision making or information sharing while others may be completely 'participatory'. Participatory evaluations involve the stakeholders in all aspects of the project including design, data collection and analysis.

Benefits of Participatory Evaluation

It helps to:

- Ensure the selection of appropriate evaluation methods (e.g., reading level, cultural appropriateness).
- Ensure that evaluation questions are grounded in the perceptions and experiences of the program participants.
- Facilitate the process of empowerment (i.e., giving people greater control over programs and decisions affecting their health issues).
- Overcome resistance to evaluation by project participants.
- Foster a greater understanding among project participants.

WHAT ISSUES NEED TO BE EXPLORED?

- At this stage it is helpful to begin a list, based on all the stakeholders' interests, of the issues which need to be explored.
- What are your evaluation questions?

WORKSHEET: STEP 2—Identify the Stakeholders

Who are the stakeholders of the program? What are their interests in the evaluation? Can you prioritize them? Check all that apply.

Stakeholders	*Interests in the evaluation*
❑ agencies	. . . . . /. . . . .
❑ business	. . . . . /. . . . .
❑ community leaders	. . . . . /. . . . .
❑ consumers/survivors	. . . . . /. . . . .
❑ experts	. . . . . /. . . . .
❑ funders	. . . . . /. . . . .
❑ interest groups	. . . . . /. . . . .
❑ media	. . . . . /. . . . .
❑ people involved in similar issues	. . . . . /. . . . .
❑ policy makers	. . . . . /. . . . .
❑ politicians	. . . . . /. . . . .
❑ program director/ organization	. . . . . /. . . . .
❑ program participants	. . . . . /. . . . .
❑ program staff	. . . . . /. . . . .
❑ volunteers	. . . . . /. . . . .
❑ _____	. . . . . /. . . . .

Step 3 Assess Resources

Availability of staff and resources

Amount of money allocated for evaluation

ASSESSING RESOURCES

- This step explores the resources available for designing an evaluation within your budget and capacity.
- You can obtain relevant and helpful information from a variety of evaluations. But since evaluations can become expensive and time consuming, what you can do is often limited by your resources.
- If this step is missed, you risk starting an evaluation you can't finish as time or money runs out.

THINGS TO CONSIDER WHEN ASSESSING YOUR RESOURCES

- Budget $$$$—How much money has been allocated for this project?
- How many interested staff are available with the skills you need? Consider the
  - amount of time available to devote to evaluation activities,
  - special skills of staff,
  - interest in project, and
  - interest in learning new skills.
- Support of partner organizations: are they willing to provide resources and staff towards evaluation activities?
- Available equipment, such as a photocopier, phones, computers and software.
- Are volunteers available to participate and can they be trained?
- How much time do you have before you need the information? How much time do you have during the project to put towards evaluation activities?

WORKSHEET: STEP 3—Assess Resources

Staff

- ❑ Focus group facilitator
- ❑ Transcriptionist
- ❑ Data entry
- ❑ Collating/Mailing
- ❑ Telephone interviewers
- ❑ In-person interviewers
- ❑ Data analyst
- ❑ Report writer
- ❑ Word processor
- ❑ Questionnaire writer

Information

- ❑ Existing questionnaire(s)

  Sample information:
  - ❑ Names
  - ❑ Phone numbers
  - ❑ Addresses
  - ❑ Intercept locations

Equipment

Computer with:
- ❑ Word processing software
- ❑ Statistical analysis software

- ❑ Photocopier
- ❑ High volume printer
- ❑ Telephones
- ❑ Focus group room
- ❑ Sensitive tape recorder
- ❑ Video recorder

Supplies

- ❑ Paper for printing questionnaires
- ❑ Envelopes
- ❑ Business reply mail envelopes
- ❑ Postage
- ❑ Clipboards
- ❑ Audio and/or video tapes

What resources are available to conduct the evaluation?

❑ Budget ($ available for evaluation)

Source 1:

Source 2:

Source 3:

❑ Other special skills of staff/volunteers

❑ Other resources available

Step 4 Design the Evaluation

Select type of evaluation to be conducted

- *What are your stakeholders' evaluation questions?*
- *What is your program's stage of development?*
- *What evaluations have already been done?*

What resources do you have available?

Design the evaluation approach

Select Type of Evaluation to Be Conducted

This step brings together all the information you have learned about your program in steps one, two and three. Now you can decide on the best type of evaluation(s) to conduct and the approach you will take.

The type of evaluation (formative, process, summative or a combination) you choose will depend on your evaluation questions. Each of your stakeholders will have questions they want the evaluation to address. Your program's stage of development, what evaluations have already been done and the resources available will influence which questions can be answered.

What are your stakeholders' evaluation questions?

During step 2 you identified your stakeholders and their interest in the evaluation. This is also a very important step for both getting your stakeholders involved in the evaluation and ensuring that they will act on the results.

These interests can be worded in the form of evaluation questions. Chances are your evaluation will not be able to answer all of the evaluation questions, so you may need to set priorities in order to focus the evaluation.

The following checklist was developed by N. Porteous, B. Sheldrick and P. Stewart for the Public Health Branch of the Ministry of Ontario and can also be found on page 16 of the Program Evaluation Tool Kit for Public Health Management (1997).

Think about which activities contribute the most towards the program's outcomes. Are there any activities you are particularly concerned about?

Think about who the program is designed for. What do you need to know about who you are reaching and who you are not?

Think about which outcomes are crucial. Which outcomes are the most difficult to achieve?

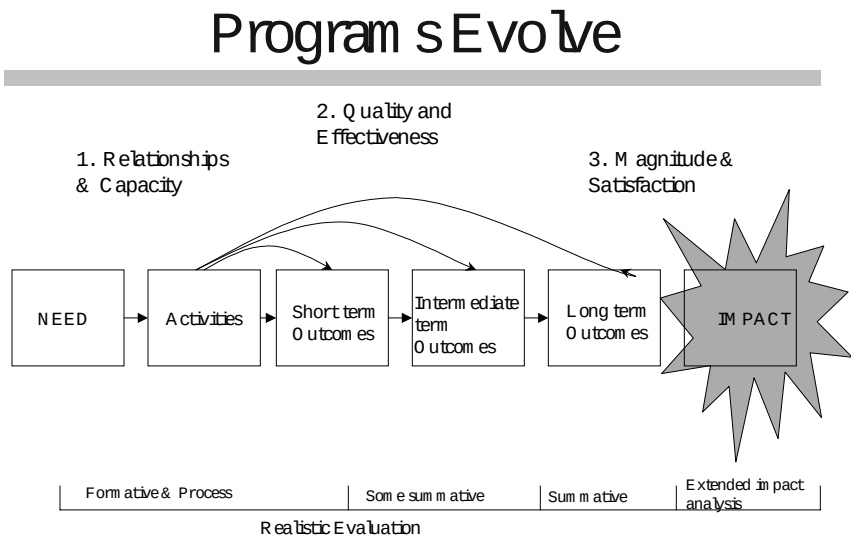
EVALUATION QUESTIONS CHECKLIST	Who needs to know? H=high priority L=low priority		
Activities	Manager of Program	Other stakeholders Internal	External
Were activities implemented as planned? (how often, when, where, duration)	H	H	H
How did the activities vary from one site to another?	L		
Were required resources in place and sufficient?			
Did staff think they were well prepared to implement the activities?	H	H	L
Did staff think they were able to implement the activities as planned? If not, what factors limited their implementation?			
Did staff and community partners think the partnership was positive?			
Did community partners think the activities were implemented as planned?			
What activities worked well? What activities did not work so well?			
What was the cost of delivering the activities?			
Target Groups			
How many people were reached?	H	H	H
Did the program reach the intended group?	L		L
To what extent did activities reach people outside the target group?			H
What proportion of people in need were reached?	L		
Were potential participants (non-participants) aware of the program?	H		H
Were participants satisfied with the program?			
Does the program have a good reputation?	H		H
How did participants find out about the program?	H	H	H
How many people participated in the program?			
Outcomes			
Have the short-term outcomes been achieved? (List the short-term outcomes of the program from the logic model.)			
Knowledge about parenting	H	H	H
Parenting skills (including communication)	H	H	H
Have the long-term outcomes been achieved? (List the long-term outcomes of the program from the logic model.)			

Excerpt from *A Blueprint for Public Health Management: A Program Evaluation Toolkit*, Public Health Research, Education and Development Program, Ottawa-Carleton Health Department, 1997. Reprinted with Permission.

What is your program's stage of development?

Programs evolve. There are times when your stakeholders may expect you to evaluate aspects of your program that are unrealistic. Help them to understand what stage of development your program is at and what impacts are realistic to expect.

The following diagram, adapted from the Kellogg Foundation, might assist you.



(adapted from the Kellogg Foundation Presentation, CES Conference 1999)

This diagram illustrates how programs evolve. When a program is starting up it takes time to develop relationships and to build organizational capacity to implement the program. At this stage of development formative and some process evaluation is realistic.

In the next stage program leaders are learning how to implement the program effectively and are learning how to develop a quality program. Again, formative and process evaluation are most helpful and realistic. At this stage some summative evaluation measuring the short term and intermediate term outcomes is possible.

It is not until these two phases are established that we can expect a program to achieve its intended long term outcomes and impacts both in magnitude and in terms of client satisfaction.

It takes time for a program to evolve enough to realistically expect to achieve the intended long term impacts.

Evaluation during the initial phases of a program is most useful for the purpose of quality improvement and efficiency. As we utilize what we learn from these initial evaluations and improve our program, it becomes more probable that the short and long term outcomes will occur. However, even at the stage where you are ready to do some summative evaluation it is still important to measure processes so that you can determine the reasons why outcomes may not be reached.

Similarly, even though you may not be utilizing summative evaluation results at the beginning of your program it is still helpful to include methods of measuring these outcome indicators.

What evaluations have already been done for your program?

It is helpful to build on previous work. For example, you may focus your evaluation resources on developing a logic model for your program and conducting a needs assessment during the first year. Then in subsequent years you may want to focus on process or outcome evaluation. However, if your program has been operating for many years and these types of formative evaluations have not been done, you may want to consider doing them.

What resources do you have to put towards evaluation?

Your evaluation budget may limit your ability to design your ideal evaluation. You will need to consider what resources you have available to put towards your evaluation and choose a design that fits.

The WHO European Working Group on Health Promotion Evaluation recommended in its document to policy makers that 10% of the total financial resources for a health promotion initiative be allocated to evaluation (Health Promotion Evaluation: Recommendations to Policy Makers, 1998 p. IV)

- Completing the chart on the following pages will help you to identify gaps in evaluating your program. The stage of development of your program, the length of time it has been in operation, your stakeholders' interests (step 2), and the resources available to support your evaluation (step 3) will help determine what 'type' of evaluation is necessary.
- A general rule is that formative evaluations are most useful during the developmental or restarting stages of a program. Process evaluations are most useful during the first and second years of program implementation. Outcome evaluations are most useful when a program has been operating for a few years and the processes are running smoothly.
  - Formative (development or restarting a program)
  - Process (during first two years of implementation)
  - Summative/Outcome (after program has been operating for a few years)
- Keep in mind that although outcome evaluations are conducted during or after a program has been implemented, they need to be planned when a program is just starting. In some cases baseline measures must be taken before a program is implemented.

FACTORS TO CONSIDER WHEN DECIDING WHICH EVALUATION TYPE IS NEEDED FOR YOUR PROGRAM

Length of Time in Operation	Stage of Program Development	Type of Evaluations Already Done	Amount of Resources	Stakeholders' Interests
Planning	Development	Formative Needs assessment Logic model Pre-testing materials Audience analysis	Minimal	Information seeking Program improvement
Under 1 year	Implementation	Implementation evaluation	Modest	Advocacy/lobbying
1–2 years	Running			Considering expanding program
3–5 years	Sun setting (winding down)	Process evaluation	Substantial	Cost concerns Considering terminating the program
over 5 years	Completed	Summative Evaluations Outcome—short term object. descriptive pre/post comparison group		Research interests to prove effectiveness
	Restarting	Outcome—long term object. descriptive pre/post comparison group Cost-benefit analysis Impact evaluation		

- Once the type of evaluation (formative, process or outcome) has been decided you can then consider the approach you will take to your investigation.

Design the evaluation approach

Health promotion interventions are complex. Health promotion programs are very different from programs following a medical treatment model, where a client may be given a drug prescription or surgery and there is measurable physiological changes.

Health promotion involves strategies like changing public policy, creating supportive environments, strengthening community action, developing personal skills, and reorienting health services. These strategies are more complex to measure and can be influenced by a wide variety of external factors that you may not be able to control. In addition, there are many determinants of health and many factors which can influence an individual's health-related actions.

As a result, it is very difficult to create an evaluation design for health promotion that utilizes the scientific method of a fully controlled experimental design. Not only is it difficult, it is not suited to the philosophy and principles of health promotion.

Instead of focusing on 'attribution' (your program caused the effect) it may be more realistic to focus on 'contribution' (how your program contributed to the effect).

Having said that, it is still important to design an evaluation that is as rigorous as possible in order to feel confident that your results are valid.

The following guiding principles may assist you with designing an evaluation grounded in the practice of health promotion.

- The evaluation should
  - encourage voluntary participation,
  - aim to strengthen and improve the program,
  - use multiple approaches,
  - address real community issues,
  - utilize a participatory process as much as possible,
  - allow for flexibility,

- be adaptable to fit different cultural groups,
- build capacity within the community,
- use processes that are consistent with health promotion values (e.g., equity, empowerment), and
- be designed to detect what does/does not work well.

- Depending on your evaluation needs you can use a descriptive design approach or an analytical (experimental) approach (see below for explanation).
- Ideally, you want to choose a design that will give you the most valid and reliable information about your program.
- Most formative and process evaluations are descriptive in nature and do not require a comparison group or pre/post measurements. However, there are some situations where these types of designs would be appropriate for answering formative or process evaluation questions.
- If you are planning on conducting an outcome evaluation you will want to choose a design that controls for as many extraneous factors as possible that might cause your outcomes.

DESCRIPTIVE VS ANALYTICAL DESIGNS

Descriptive/Non-experimental

- Descriptive studies are concerned with describing the general characteristics of the population and environment of interest.
- These types of designs are the most commonly used — mainly because they are the easiest to implement and the least expensive.
- They are used for all types of evaluations.
- It is important to remember that these types of designs do not prove cause and effect.
- They do not involve comparisons between different groups or programs, but may involve looking at relationships between some of the characteristics measured. Remember, the presence of a relationship does not confirm cause and effect.

Examples of Descriptive Evaluations

1. **Case Study** - This is the most basic type of study. It describes the program, participants, and outcomes. It may describe the program at one point in time, or what is occurring over time.

2. **Cross Sectional Design** - A cross sectional design measures your population or a sample of your population at one point in time in order to describe their characteristics. It is a 'cross sectional' view of your population. For example:

   Survey to assess needs of a community

   Audience analysis (e.g., what TV stations is your population watching?)

   Pre-testing materials

3. **Correlational Design** - This design relates characteristics of your program to outcomes of your program at the same point in time. For example:

   Awareness of PSA on local Active Living Event and attendance at the event.

4. **Pre/post Design** - This design measures a program before and after implementation.

Analytical/Experimental:

- Analytical studies go beyond simply describing general characteristics. They involve a comparison of groups assembled for the specific purpose of systematically determining whether or not the intervention has an effect or which program design works better by comparing groups receiving different programs.

- The distinguishing feature of the analytical design in program evaluation is that the investigator assigns who receives or does not receive the intervention (program). There are two types of experimental designs. The true experiment and the quasi-experiment.

- **True experiments** - The researcher *randomly* assigns participants to treatment (those receiving the program) and control conditions (those who do not receive the program). The researcher can also control who will be measured and when the measures will take place.

- Because of the randomization, the experimental design allows you to attribute differences between groups or changes within the program group to the program itself.
- This design is usually more difficult to implement and more expensive, so it is rarely used in an applied setting.
- **Quasi-experimental designs** - The researcher can determine who will be measured when but cannot *randomly* assign participants to the program.
- The absence of random assignment increases the possibility that observed differences between groups are not caused by the program.
- They are often more feasible than a true experiment, usually easier to implement and less expensive.

Designing Evaluations to show cause and effect

How can we prove beyond a doubt that the outcome was caused by our program?

- Most studies show relationships, not cause and effect. To show cause and effect you need
  - a high degree of association between the causal factor and the effect,
  - a logical time sequence where the program precedes the effect,
  - the elimination of other possible causes,
  - an association that remains consistent when studied in different groups and at different times,
  - agreement with known facts or theory, and
  - (in some cases) a close response relationship (the more exposure, the greater the effect).
- Most single studies alone do not show cause and effect beyond a doubt. By demonstrating the same results by different researchers over several studies, you can feel more confident in the findings.

- Every design has its strengths and limitations. But as evaluators we must be aware of what those limitations are before drawing any firm conclusions.
- The most powerful experimental designs are those where the evaluators have full control over the influencing factors. But these studies are difficult to create due to cost, time and limited resources. We also have to question the generalizability of the results to non-experimental settings.

Designing evaluations to increase the validity of the results

- Even though full experimental control is lacking, by choosing the best design possible you can maximize the validity of the measurement and increase your confidence that it is your program that caused the desired outcomes.
- The research design and protocol (how you conduct your research) aim to minimize alternative explanations for your results.

When considering the limitations of your evaluation ask yourself the following questions:

1 Did everyone in the program have equal chance of being measured?

2 Were participants choosing (self selecting) to take part in your evaluation?

3 Did participants drop out of your program before you were able to collect the information you needed for the evaluation?

4 Were standardized and valid methods of measurements used? If not, could your results have been caused by how you were measuring?

5 Were there other factors happening at the time of your program that may have caused the outcome?

6 Is it possible that the results you obtained were due to chance?

THREATS TO THE INTERNAL VALIDITY OF A STUDY

(Campbell and Stanley, 1966. This is an old, but very well written, text on evaluation design that is still relevant for program evaluations today.)

History other events occurring between the first and second measurement in addition to the intervention.

Maturation changes within the respondent as a result of the passage of time per se (not specific to the particular program or events), like growing older, growing hungrier, or growing more tired.

Testing the effects of taking a test upon the results when the test is repeated.

Instrumentation changes in the calibration of a measuring instrument or changes in the observers or scores from one measurement to the next results in changes in the obtained measurements.

Statistical regression this bias will occur when groups have been selected on the basis of their extreme scores (applies primarily to longitudinal studies).

Differential selection bias that may result due to differential selection of respondents for the comparison groups.

Experimental mortality or differential loss loss of respondents from the comparison group.

Selection-maturation interaction a concern for the multiple-group designs where one group selected experiences a maturation process, this effect may be mistaken for the effect of the experimental variable.

THREATS TO THE EXTERNAL VALIDITY OF A STUDY

Reactive or interactive effect of testing where a pretest might increase or decrease the respondent's sensitivity or responsiveness to the experimental variable and thus make the results obtained for a pretested population unrepresentative of the effects of the experimental variable.

The interaction effects of selection biases and the experimental variable Selection biases:

- Self selection
  (differences between respondents and non-respondents)
- Nonresponse

Reactive effects of experimental arrangements would preclude generalization about the effect of the experimental variable to persons being exposed to it in nonexperiemental settings.

Multiple-treatment interference can occur whenever multiple treatments are applied to the same respondents, because the effects of prior treatments are not usually erasable.

EXAMPLES OF DIFFERENT TYPES OF DESIGNS

The following symbols are used to describe designs:

X = Program or intervention
R = Random assignment
O = Observation

These diagrams give some examples of different types of designs. You can create your own designs, each of which will have its strengths and weaknesses.

For more information on different types of designs and their strengths and weaknesses we refer you to Campbell and Stanley, 1966.

One shot case studies/descriptive—Cross Sectional

Describing characteristics of one group at one point in time.

X O (After program has been implemented; post test only)

O X (Before program has been implemented, e.g. , needs assessment, pretesting materials)

Pre/post design

O X O — Describes population characteristics of one group before and after program has been implemented

Quasi-experimental designs

O X O
O O — Two groups, one which participates in the program and one that doesn't. Both groups are measured at the same time before and after the program has been implemented.

O X O
O O X O — Two groups, both receive the program but at different times, they may be measured at multiple time points.

Time series

O X O X O X O — Measurements are made at various intervals over the lenght of the project.

Experimental designs

R O X O Same as above but the participants are randomly

R O O assigned to whether they receive the program or not.

KEYS TO SUCCESSFUL EVALUATION DESIGN

- Know the underlying assumptions of the design
- Limit as many biases as possible
- Acknowledge the evaluation's limitations. Do not over generalize.
- Cause and effect can be very difficult to show without an experimental design

ETHICAL ISSUES AND CONFIDENTIALITY

- Similar to basic scientific research, evaluations often face ethical dilemmas. As evaluators we have responsibilities for maintaining respect for participants, ensuring the integrity of the data and being honesty about costs.
- In addition evaluators also have the responsibility for providing clear, useful, and accurate evaluation information to the stakeholders to whom they work. (Posavac and Carey 1997)
- In 1996, the Canadian Evaluation Society(CES) published guidelines for Ethical Conduct (see opposite).

Informed Consent

- Obtaining informed consent is one way of protecting evaluation participants. Informed consent means that the people who agree to participate understand the project and their role in the project, as well as what the information will be used for. They should be told that their participation is voluntary.
- With this clear understanding they then agree to participate. Agreement can be obtained in writing through a consent form or verbally prior to doing a telephone interview or focus group.

A Consent Form should include:

- ❑ the purpose of the evaluation
- ❑ information about the organization/ persons performing the evaluation
- ❑ their participation is voluntary and they can choose not to participate
- ❑ what information will be requested
- ❑ whether there is any risk to them
- ❑ how the information will be gathered
- ❑ who will have access to the information
- ❑ how confidentiality will be assured
- ❑ how the information will be used
- ❑ who is their contact

Confidentiality

- Participants should be told whether their information will be kept confidential or not. If it is, then the utmost care must be taken to ensure that confidentiality is maintained.
- There is rarely any need to have participant names attached to their information. Identification codes should be used to maintain confidentiality and if any matching is required only the evaluator should have access to that code list.

Ethical Considerations When Designing Your Evaluation

(Posavac and Carey 1997)

- Protection of the people being studied (participants, staff, etc.)
- Varying needs of stakeholders
- Threats to the validity of the evaluation
- Possibilities of negative side effects that may be related to the program or the evaluation
- Implicit values held by the evaluators
- Evaluations can sometimes be seen as threatening to staff who depend on their program for work and participants who benefit from the program. Conflicts can arise between evaluators and stakeholders and between different stakeholders. To address this it is important that evaluations not only 'assess' the current program but also offer recommendations and ideas for improvements and changes that would benefit all stakeholders involved.
- Framing evaluations in the context of continuous quality improvement helps to reduce the threat evaluation brings and provides added benefit to the stakeholders.

These guidelines were developed by, and are available from, the Canadian Evaluation Society:

582 Somerset Street West,
Ottawa, Ontario, K1R 5K2
Tel: 613-230-1007, Fax: 613-237-9900
www.unites.uqam.ca/ces/ces-sce.html

CES GUIDELINES FOR ETHICAL CONDUCT

Competence—Evaluators are to be competent in their provision of service.

1 Evaluators should apply systematic methods of inquiry appropriate to the evaluation.

2 Evaluators should possess or provide content knowledge appropriate for the evaluation.

3 Evaluators should continuously strive to improve their methodological and practice skills.

Integrity—Evaluators are to act with integrity in their relationships with all stakeholders.

1 Evaluators should accurately represent their level of skills and knowledge.

2 Evaluators should declare any conflict of interest to clients before embarking on an evaluation project and at any point where such conflict occurs. This includes conflict of interest on the part of either evaluator or stakeholder.

3 Evaluators should be sensitive to the cultural and social environment of all stakeholders and conduct themselves in a manner appropriate to this environment.

4 Evaluators should confer with the client on contractual decisions such as: confidentiality, privacy, communication, and ownership of findings and reports.

Accountability—Evaluators are to be accountable for their performance and their product.

1 Evaluators should be responsible for the provision of information to clients to facilitate their decision-making concerning the selection of appropriate evaluation strategies and methodologies. Such information should include the limitations of selected methodology.

2 Evaluators should be responsible for the clear, accurate, and fair written and/or oral presentation of study findings and limitations and recommendations.

3 Evaluators should be responsible in their fiscal decision-making so that expenditures are accounted for and clients receive good value for their dollars.

4 Evaluators should be responsible for the completion of the evaluation within a reasonable time as agreed to with the clients. Such agreements should acknowledge unprecedented delays resulting from factors beyond the evaluator's control.

Step 5 Determine Appropriate Methods of Measurement and Procedures

Your evaluation toolbox

Qualitative versus quantitative methods

Strengths and weaknesses of different methods of measurement

Developing your measurement tools

Select your sampling design

YOUR EVALUATION TOOLBOX

This step involves deciding how to collect the information you need to evaluate your program and what procedures to use.

There are many ways of collecting information. These various data collection methods are like tools. No tool is "better" or "worse" than any other. Each tool has a different purpose.

Like tools, data collection methods are only a problem when used for the wrong purpose.

QUALITATIVE AND QUANTITATIVE METHODS

Qualitative methods

- detailed, in-depth information
- not always generalizable to entire population
- provides language, context, relationships of ideas
- "deep"

Quantitative methods

- structured data collection from large number of stakeholders
- results generalizable and quantifiable
- "wide"

STRENGTHS AND WEAKNESSES OF DIFFERENT METHODS OF MEASUREMENT

These are *some* of the qualitative and quantitative methods:

Qualitative Methods

A Focus groups

B In-depth interviews

C Open-ended survey questions

D Diaries

E Consensus building (Delphi Method)

F Forums/discussion groups

Quantitative Methods

G Intercept, mail or telephone survey

H Process tracking forms/ records

I Service utilization

J Analysis of large datasets

K Direct measures of health indicators/behaviours (e.g., blood pressure)

L Direct measures of illness (morbidity or mortality rates)

To determine what methods you should use, match them to:

- the program's success indicators
- the resources available (staff, $)
- the best way to collect information from the population of interest

You need to determine:

- the best way to communicate with participants (telephone, mail?)
- when to communicate with them (evenings, daytime?)
- how to limit burden on them

Some of the more commonly used methods are described below.

QUALITATIVE METHODS

	Description	Applications	Strengths	Limitations
Focus groups	▸ a semi-structured discussion with 8–12 stakeholders ▸ lead by a facilitator who follows an outline and manages group dynamics ▸ proceedings are recorded	▸ to gather in-depth information from a small number of stakeholders ▸ to pre-test materials with a target audience ▸ to develop a better understanding of stakeholder attitudes, opinions, language ▸ often used to prepare for a survey	▸ provides in-depth information ▸ implementation and analysis requires a minimum of specialized skills ▸ can be inexpensive to implement	▸ participants influence each other ▸ subjective ▸ potential for facilitator bias ▸ can be difficult to analyze ▸ results are not quantifiable to a population
In-depth interviews	▸ telephone or in-person one-on-one interviews ▸ interviewer follows an outline but has flexibility ▸ usually 10 to 40 are completed per "type" of respondent	▸ to investigate sensitive issues with a small number of stakeholders ▸ to develop a better understanding of stakeholder attitudes, opinions, language	▸ provides a confidential environment ▸ eliminates peer influence ▸ opportunity for interviewer to explore unexpected issues ▸ more detailed information than focus groups	▸ more expensive to implement and analyze than focus groups ▸ potential for interviewer bias ▸ can be difficult to analyze ▸ results are usually not quantifiable to a population
Open-ended survey questions	▸ structured questions on a telephone or mail survey that allow the respondent to provide a complete answer in their own words	▸ to add depth to survey results ▸ to further explore the reasons for answers to closed-ended questions ▸ for exploratory questions	▸ can provide depth with the potential to be quantified ▸ adds depth to quantitative data ▸ generalizable to population	▸ time-consuming to analyze properly ▸ adds considerable time to the survey ▸ not flexible
Diaries	▸ detailed account of aspects of your program ▸ on-going documentation by one or more stakeholders	▸ used primarily for process evaluation	▸ puts other evaluation results in context ▸ captures information you may not have thought of before ▸ very inexpensive to collect	▸ can be difficult or expensive to analyze ▸ observations are subjective

QUANTITATIVE METHODS

	Description	Application	Strengths	Limitations
Surveys	▸ completion of structured questionnaire with many stakeholders within a relatively short time frame ▸ can be completed by telephone, mail, fax, or in-person	▸ to collect feedback that is quantifiable and generalizable to an entire population	▸ results are generalizable to an entire population ▸ standardized, structured questionnaire minimizes interviewer bias ▸ tremendous volume of information collected in short period of time	▸ rarely provides comprehensive understanding of respondents' perspective ▸ can be very expensive ▸ requires some statistical knowledge and other specialized skills to process and interpret results
Process tracking forms/records	▸ collection of process measures in a standardized manner ▸ usually incorporated into a project/program routine	▸ to document the process of a project/program ▸ to identify areas for improvement	▸ can be incorporated into normal routine ▸ fairly straight-forward to design and use ▸ can provide very accurate, detailed process information	▸ can be seen as extra burden on staff/volunteers ▸ risk that they will not be completed regularly or accurately
Large data sets	▸ accessing existing sources of research data for information about your population of interest	▸ to position your program/project within a broader context ▸ to monitor trends in your population of interest	▸ can be inexpensive or free to access ▸ provide accurate, well-researched information ▸ can lead to networking/information sharing opportunities	▸ minimal usefulness for evaluating your program/project ▸ can be difficult to relate to your program/project

CHOOSING

For each success indicator you plan to measure, you must decide on which method of measurement you will use.

The worksheets at the end of this chapter help you to summarize your design and which methods of measurement you will use to measure each objectives indicators.

DEVELOP YOUR MEASUREMENT TOOLS

Once you decide on the methods of measurement you then must consider what measurement tools you will use. Measurement tools include questionnaires, moderators guide, recording forms, observation forms, diaries, etc.

For specifics on designing questionnaires and moderators guides we refer you to the 'Conducting Survey Research' and 'Conducting Focus Groups' workbooks.

Here are some tips to consider when designing your measurement tools:

- Select or develop your tools in collaboration with the people who will use them.
- Use an existing tool, if one is available, that is appropriate for your population of interest and your research questions.
- Keep questionnaires short and simple.
- Collect information that you 'need' to know and avoid the 'nice' to know information.
- Use the language of the people who will be providing the information. Avoid jargon.
- For tools requiring written responses
  - use large print,
  - avoid putting too much information on a page,
  - leave lots of white space,
  - be as specific and direct as possible with your questions, and
  - provide ample room for written responses.
- Use a format which is easy to read and complete.
- Pilot test your tools with the population of interest.

SELECT YOUR SAMPLING DESIGN

- Sampling is used to cut costs and effort while still obtaining information from a representative sample of the target population. It is essential that the number of individuals providing information for the evaluation be large enough to produce results that are reliable and valid and truly represent the target population.
- The sampling design and methodology must be determined for each specific data collection method employed. The design depends on the data collection method and the purpose of collecting the data.
- Regardless of the method of measurement (e.g., survey, focus group, in-depth interviews, etc.) the main questions in selecting your sampling design are
  - How many will be included?
  - How will the people be selected?
- Some questions to consider in deciding on the size of your sample include:
  - What is the size of your target population?
  - What can the budget allow?
  - How confident do you need to be with the results?
  - Do you need to look at any subgroups?
- Deciding on the sample size is primarily driven by the budget (how much can you afford?) and the size of the subgroups you wish to analyze. Be sure that you have sampled enough people to get an adequate number of respondents in your subgroups to accurately draw conclusions about that group.
- If your target population is relatively small you should probably consider doing an audit (including everyone). If your target population is very large (i.e., millions) you will not improve the accuracy of your results by interviewing more and more people. Once you get up to a thousand interviews, the improvement in accuracy is minimal and the cost is very high.

Simple random samples

- The least complicated sampling design is a simple random sample. A sample where everyone in the population has equal chance of being surveyed.
- Sampling error can be calculated fairly easy for this type of sampling. In fact, confidence ranges for the variability in responses due to sampling have been calculated and put into a table for simple random samples.

  This table is for a simple random sample only. It is a measure of confidence that 95 in 100 chances that the real population figure lies in the range defined by +/- number. This calculation does not take into consideration non-response or measurement errors.

MARGINS OF ERROR FOR SIMPLE RANDOM SAMPLING (19 times out of 20)

Sample Size	Range	5/95	10/90	20/80	30/70	50/50
35	7-17%	7%	10%	14%	15%	17%
50	6-14%	6%	8%	11%	13%	14%
75	5-10%	5%	7%	8%	9%	10%
100	4-10%	4%	6%	8%	9%	10%
200	3-7%	3%	4%	6%	6%	7%
300	3-6%	3%	3%	5%	5%	6%
500	2-4%	2%	3%	4%	4%	4%
1000	1-3%	1%	2%	3%	3%	3%
1500	1-2%	1%	2%	2%	2%	2%
2000	1-2%	1%	1%	2%	2%	2%

Convenience Samples

- Convenience samples are samples that are not randomly selected from the population. This method involves simply 'taking what is convenient'. In this type of sampling you cannot measure the degree of confidence you have in your results because the group selected may not be representative of the entire population. Still, sometimes representativeness is not as important as ensuring that you have specific individuals selected into your survey.

Other Sampling Designs

Stratified random sample the population is divided into groups of individuals that are similar in some respect. After dividing the population into these two or more strata, a random selection of a proportion of individuals from each strata is made (e.g., you want to survey a random selection of students who attend a private school and a random selection of students who attend a public school in your area).

Cluster sample this approach is used if the target population is dispersed or spread over a large geographic area. The survey area (such as a district) is divided into clusters. A random sample of these clusters is drawn and all individuals within the cluster are included in the survey.

- Since sampling is quite complicated, enlisting the services of a researcher familiar with sample design is recommended.

Sources of Sample

- These sources can be used to obtain samples for measuring the general public:
  - Phone books provide phone numbers for all listed telephones by area
  - CD-ROMs also provide phone listings
  - Research companies can be employed to select phone numbers or addresses from your target population (Standard Research, Statplus)
- Sample information for professionals is easier to obtain because there are professional directories, phone books and associations to select people from.
- When doing a mail survey you will need addresses, postal codes and ideally first and last names.
- For a telephone survey, you will need phone numbers with area codes at the very minimum.

WORKSHEET: STEP 4 AND 5

A Deciding on your evaluation design

Complete the 'Factors to consider when deciding on an evaluation' form and identify which type(s) of evaluation is required.

Type of Evaluation:

. . . . . .

. . . . . .

. . . . . .

What would be the most appropriate design?

- ❑ case study (descriptive)
- ❑ cross-sectional (descriptive)
- ❑ correlational (descriptive)
- ❑ pre-post comparison with one group (descriptive)
- ❑ comparison between two or more groups (quasi-experimental)
- ❑ time series (tracking group over time)(quasi-experimental)
- ❑ a comparison control group where you randomize (experimental)

What would the design look like?

. . . . . .

. . . . . .

. . . . . .

. . . . . .

B Choose methods of data collection

Review your program and consider:

How much money do you have available?

How many internal resources are available?

Who is your target population?

What is the best way to communicate with potential respondents?

Which methods will give you the highest response rate with your particular target population?

Which methods would be the most convenient for them?

Which methods best fits your time line?

Which methods can you afford?

Which methods fits your staff and resources?

Overall, which data collection methods would be best for this project?

C. Choose your sampling designs

What type of sampling design would you choose?

- ❑ simple random sample
- ❑ convenience sample
- ❑ stratified random sample
- ❑ cluster sample
- ❑ other

Why did you choose this design?

. . . . . .

. . . . . .

How many people will you measure? . . . . . .

Consider:

What is the size of your target population? . . . . . .

What can your budget allow? . . . . . .

How confident do you need to be with the results? . . . . . .

Do you need to look at any subgroups? . . . . . .

What percent of the population are your subgroups? . . . . . .

Where and how will you get your sample? . . . . . .

Use following 'Evaluation Summary' form to summarize your information.

EVALUATION OPTIONS BASED ON AVAILABLE RESOURCES

Type of Evaluation	Minimal Resources	Modest Resources	Substantial Resources
Formative	literature review face validity tests for resources readability test logic model record keeping of program activities (paper) diary logic model	pre-test materials focus groups (not sophisticated) intercept interviews forum-needs assessment survey of experts computerized record keeping standardized data collection quantified Knowledge, Attitudes, Beliefs and Behaviour studies (KABB)	focus groups, individual in-depth interviews community needs assessment (survey) management audit
Process	evaluability assessment description of outcomes (what was achieved) description of outcomes changes over time	pre/post measures (survey of perceptions) public survey (self-reported behaviour)	pre/post measures (measure of behaviour or health status) comparison group pre/post measures (measure of behaviour or health status)
Outcome: short- term objective			
Outcome: long-term objective		external review (retrospective) comparison group	

SUMMARY OF EVALUATION DESIGN

Program

Stakeholder Interests

Evalulation Design

Program Objectives	Success Indicators	Methods of Measurement	Measurement Timeline

	Designing the evaluation	Developing measurement instruments	Pilot testing measurement instruments	Collecting the data	Processing the data	Analyzing the data	Writing the report
Cost Range	$300-$1000	$500-$2,000	$200-$1,000	$2,000-$10,000	$300-$3,000	$400-$2,000	$700-$2,500
Tips	▸ Focus on key questions ▸ Invest in planning ▸ Assess in-house resources	▸ Find out if there is an existing instrument/revise ▸ Time test questionnaires ▸ Focus on the 'need to know'	▸ Are the questions clear and understandable? ▸ Is the questionnaire too long? ▸ Use final open end to learn if additional questions are needed ▸ Revise instruments if necessary	▸ Invest in planning ▸ Train staff thoroughly ▸ Be aware of outside variables that may influence your data collection or bias your results ▸ A mistake here is very costly	▸ Use computers ▸ Ensure that coder is aware of subject matter and terminology ▸ Verify data entry ▸ Design your instrument for easy data entry	▸ Combine statistical expertise with stakeholder interpretation ▸ Qualitative analysis is expensive ▸ Keep your purpose in mind	▸ Who is the report intended for? ▸ Know the differences between reporting, interpreting, and recommending ▸ Present information clearly in a useable format

Total cost range
$4,400–$21,500

Step 6 Develop the Work Plan, Budget and Timeline for Evaluation

Elements of the evaluation to consider for costs and timelines

Qualitative studies

Getting the most for your evaluation $

In-house vs. out-sourcing

Designing your budget and timeline

This step will outline the creation of a detailed action plan and the associated costs for your evaluation. Conducting an evaluation takes time and resources that are sometimes easily forgotten. It is essential when designing your health promotion program that you include the detailed evaluation steps and costs as part of your project action plan and budget.

ELEMENTS OF THE EVALUATION TO CONSIDER FOR COSTS AND TIME LINES

Consider a budget and timeline for each of the following steps:

1. Designing the evaluation
2. Developing measurement instruments
3. Pilot testing measurement instruments
4. Revising measurement instruments
5. Collecting data
6. Processing the data (coding/data entry, etc.)
7. Analyzing the data
8. Writing the report
9. Disseminating your results

QUALITATIVE STUDIES

	Focus group (one)	In-depth interview (ten)
Questionnaire Development	$150–$500	$500–$1,000
Recruitment	$400–$800	$200–$600
Respondent Incentives	0–$400	0–$400
Facilities, Travel	$300–$800	$50–$500
Moderator/Interviewer	$250–$600	$400–$600
Analysis and Report	$500–$1,000	$500–$2,500
Total	$1,600–$4,100	$1,650–$5,600

GETTING THE MOST FOR YOUR EVALUATION $

- Invest in planning
- Combine materials testing with summative pretest

  Sometimes you can combine the uses of a survey for both collecting baseline data on your population and testing out the materials you plan to use during your project.
- How and when to utilize students and volunteers

  Volunteers and students are a great way to save money. But if they are not properly trained or do not have the commitment to the project the use of volunteers could backfire on you.
- In-house vs. out-source

  Determine what you have the expertise to do internally and what you would be better off contracting to a company.
- Assess your internal resources
  - skills of staff
  - availability of staff
  - interest/buy-in of staff
  - computers and software
  - budget

WHEN TO OUT-SOURCE

- When you need objectivity
- When you lack the necessary skills with in your organization
- Lack of time or interest among staff
- If the budget is available

DESIGNING YOUR BUDGET AND TIMELINE

- At this stage you are ready to develop a detailed action plan that would include all the tasks, the persons responsible, the costs and expected completion dates.
- It is helpful to divide up your action plan into the main steps. The following table is an example of what an action plan form would look like.
- Using an action plan helps you to organize your evaluation and ensure that all steps are considered.
- If multiple data collection techniques are used you may want to do an action plan for each of the different data collection methods as well as an overall plan. For example, if your evaluation design has a survey component and a focus group component you may want to do an action plan for each of them.

Example of an Action Plan Form

Tasks	Person Responsible	Costs/ Staff time	Expected Completion Date
Designing your evaluation			
▸	▸	▸	▸
▸	▸	▸	▸
Developing measurement instruments			
▸	▸	▸	▸
▸	▸	▸	▸
Pilot test measurement instruments			
▸	▸	▸	▸
▸	▸	▸	▸
Revise measurement instruments			
▸	▸	▸	▸
▸	▸	▸	▸
Collect the data			
▸	▸	▸	▸
▸	▸	▸	▸
Processing the data			
▸	▸	▸	▸
▸	▸	▸	▸
Analyzing the data			
▸	▸	▸	▸
▸	▸	▸	▸
Writing the report			
▸	▸	▸	▸
▸	▸	▸	▸
Disseminating the results			
▸	▸	▸	▸
▸	▸	▸	▸

Worksheet Step 6: Develop work plan, budget and timeline for the evaluation

Tasks	Person Responsible	Costs/ Staff time	Expected Completion Date
Designing your evaluation			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
Developing measurement instruments			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
Pilot test measurement instruments			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
Revise measurement instruments			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
Collect the data			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸

Tasks	Person Responsible	Costs/ Staff time	Expected Completion Date
Processing the data			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
Analyzing the data			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
Writing the report			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
Disseminating the results			
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸
▸	▸	▸	▸

Step 7 Collect the Data Using Agreed-upon Methods and Procedures

Pilot test

Data collection techniques for surveys

Data collection techniques for focus groups

Data collection techniques for process tracking

Tips for data collection

PILOT TEST

- A pilot test assesses data collection methods and measurement instruments to be used before full implementation.
- Pilot testing is a crucial step to ensuring that you collect the right information in the right way. Even modest pre-testing can avoid costly errors.

DATA COLLECTION TECHNIQUES

How you go about collecting your data is dependent upon your selected method of measurement. For example:

Surveys

- There are three primary methods for obtaining survey research:
  - face-to-face interviews,
  - telephone interviews, and
  - mail questionnaire formats.
- Some alternative methods have recently been developed using more advanced technology like the Internet and computer-aided/ assisted telephone interviews (CATI).

- Please see The Health Communication Unit's *Conducting Survey Research* workbook for more detailed information about implementing these three techniques.

Focus Groups

- Focus groups are facilitated by a moderator.
- There are a number of options for recording a focus group, such as to
  - audio record the session and transcribe tapes at completion,
  - use an audio recording system as well a person to record in the room live,
  - have a person recording in the room only, or
  - to use a recording system only without transcription (not recommended).
- If audio taping the session, the audio recording device should be placed in the middle of the table in a visible location. Recording should be explained to participants at the outset of the discussion (e.g., it is too difficult to remember everything said). Consent to record the session should also be obtained.
- The moderator should not record the discussion while they are moderating.

Process tracking

- Collecting information through process tracking requires the development of a standardized recording form and standardized procedure.
- In order for a process tracking system to work effectively, involve staff and volunteers who are required to record the information in the development of the form and procedures.
- Have everyone decide on the terminology and operational definitions.
- Staff and volunteers recording the information must be thoroughly trained and continuously updated on the tracking system.
- Provide periodic analysis of the results to motivate people to participate and help them to understand how the information will be used.
- Put recording forms on a computer in a database to make the analysis of the data easier and quicker. Train staff on how to use the database

system.

TIPS FOR DATA COLLECTION

- Ensure that the people collecting the information are *trained* in the appropriate data collection procedures.
- Prepare your data collection forms in a format that is easy for people to complete and that is also easy to analyze later.
- Support and encourage volunteers and staff doing the data collection throughout. Data collection can become frustrating and boring at times.
- When collecting qualitative data be sure the people providing the information or filling out the forms write neatly and in complete sentences as much as possible.
- Audio tape interviews and focus groups.
- Computerize data collection as much as possible to make it easier for participants and easier to analyze later.

Step 8 Process Data and Analyze the Results

Prepare the data for analysis

Analyze the data

Use of Statistical Analysis

PREPARE THE DATA FOR ANALYSIS (DATA PROCESSING)

Process Data

- Processing the data involves preparing and translating the data for analysis. It involves taking the completed databases, questionnaires, forms or transcripts and putting them into a format that can be summarized and interpreted.
- Many errors can be made during this step—it is essential that the quality of the data be preserved.

Coding

- Preparing qualitative data for interpretation usually requires some form of coding or theming. Coding is the process of assigning a word or a phrase to similar comments in order to determine how often the ideas appear in your data set.
- Coding a respondents' qualitative answers on a questionnaire involves:

1 Familiarizing yourself with the questionnaire and topic area

2 Dividing open-ended questions into groups that can share a code list (not always possible)

3 For each question (or group) read through at least 15% of the questionnaires writing down all the unique responses (this is a rough code list)

4 When no new responses are found, rewrite codes and assign a number to each code (master code list)

5 Write the corresponding code number(s) beside each open-ended question on each questionnaire.

6 Repeat this for each open-ended question.

- Coding qualitative data also allows you to quantify your qualitative results because once your questions are coded you can count how many respondents said the same things. However, quantifying your qualitative data may not always be appropriate.
- Analysis of focus groups and in-depth interviews require more detailed coding. Please see The Health Communication Unit 'Conducting Focus Groups' workbook.

Data Entry

There are two approaches to data entry:

Indirect data entry Previously collected data is coded and then data entered into a computer for analysis.

Direct data entry Data is entered directly into a computer at the point of data collection (e.g., computer-assisted telephone interviewing [CATI] where interviewers enter responses directly into a computer).

Ways to avoid data entry errors

- Data entry errors are minimized when the data is verified. You should check 10% of the data entered. This will increase the accuracy of the data.
- Another way to reduce the incidence of data entry errors is to set up your data entry program to check each field for out-of-range data. When errors or inconsistencies are identified, the ID number of the record is used to locate the questionnaire. The source of the error can be identified and the correct data entered.

Use of Computers

- Data can be entered into most spreadsheet packages like Microsoft Excel. There also specific data-entry programs, such as SPSS and others.
- Most statistical applications have data entry capabilities.
- For qualitative data analysis it is helpful to use the table function in a wordprocessor. It allows you to sort and organize your information in different ways. There are computer software applications for qualitative analysis (NU*DIST, Enthnograph, NVivo)

ANALYZE AND INTERPRET RESULTS

- Once the data have been entered into your statistical package, the analyses to answer your research questions can be performed.
- An analysis is basically a summary of the information you collected, organized to answer your research questions.
- Analysing the results is done to answer the original questions posed for the evaluation. It allows you to draw conclusions.
- Analysing the results is one of the most crucial steps in getting useful findings that accurately reflect the opinions and views of the participants involved. It also answers the original questions.

USE OF STATISTICAL ANALYSIS FOR QUANTITATIVE DATA

- For most evaluations simple descriptive statistics (frequencies, means, ranges, etc.) are all that is needed to interpret your results. This involves determining how many of the respondents answered a particular way for each of the questions.
- More complex analyses may be required to compare subgroups of the population or measurements taken at different times.
- Statistical analysis aims to show that your results are not just due to chance or the 'luck of the draw.'
- It provides a way to determine if the differences observed can be repeated. If the same outcome is found when a study is repeated over and over, we don't need a statistical analysis.
- Similarly when we study a 'sample' of the population, statistical analysis can help us decide whether it is likely that these same differences would be found if we repeated the experiment in multiple samples or in the entire population.
- Confidence intervals, T-tests (to compare results for continuous data), or Chi-squares (to compare results for categorical data) are some of the most common analyses performed.
- It is recommended that a person with specific training in statistical analysis be used for any complex analyses that need to be performed.

Qualitative Analysis

- The results of focus group interviews or in-depth interviews should be interpreted carefully. In interpreting the findings from individual or group interviews, look for trends and patterns in participants' perceptions rather than using a "he said...she said" kind of analysis.
- Consider the following when interpreting your data:
  - In how many interviews/groups did each theme appear?
  - Are there common trends/concerns across multiple interviews/groups?
  - It is important not to ignore themes that emerge in just one or two interviews/groups—they should also be considered when interpreting your results.
- The description of each theme should give insight/answers to the original evaluation questions.

Guidelines

- Combine statistical expertise with stakeholder interpretation. Even though your results may be statistically significant, the differences seen may not be very meaningful in terms of the decisions to be made. Results should not only be interpreted through statistical tests but also through discussion with stakeholders about possible explanations of the results.
- Keep your original purpose/research questions in mind. Organize your results by the original research questions and use the results to answer those questions.
- Simple descriptive analyses are usually all that is required. Avoid getting bogged down in detailed analyses that may not help to answer your research questions.

Step 9 Interpret and Disseminate Results

Interpretation of results

Presenting results

Sharing the results

INTERPRET AND DISSEMINATE RESULTS

- The results of an evaluation should be provided back to the stakeholders of the survey through written reports, and/or presentations.
- Feed back the results of the evaluation to management, staff, interested participants and other stakeholders to keep them informed and establish buy-in for any changes recommended from the results of the evaluation.

INTERPRETATION OF RESULTS

- Interpret evaluation results with the purpose of the project in mind.
- Keep your audience in mind when preparing the report. What do they need and want to know?
- Consider the limitations of the evaluation:
  - possible biases (selection, non-response, measurement, etc.),
  - validity of results,
  - reliability of results, and
  - generalizability of results.
- Are there alternative explanations for your results?
- How do your results compare to other similar programs?
- Are different data collection methods used to measure your program showing similar results?

- Are your results consistent with theories which have been supported through previous research?
- Are your results similar to what you expected? If not why do you think they may be different?

The report

An evaluation report should contain the following information:

1.0 Executive Summary/Abstract

2.0 Background and Purpose
- 2.1 Background to the evaluation project
- 2.2 Rationale for the evaluation
- 2.3 Literature review (if done)
- 2.4 Description of the program/service/ resource

3.0 Methodology and Procedures
- 3.1 Instrument/Questionnaire development
- 3.2 Sampling Protocol
- 3.3 Data Collection Procedures
- 3.4 Data Processing Procedures
- 3.5 Analysis
- 3.6 Limitations of the Evaluation

4.0 Results
Different findings logically organized 4.1.....4.8, etc.

5.0 Discussion and Recommendations

Appendices. For example,
- Instruments Used
- Consent form

PRESENTING RESULTS

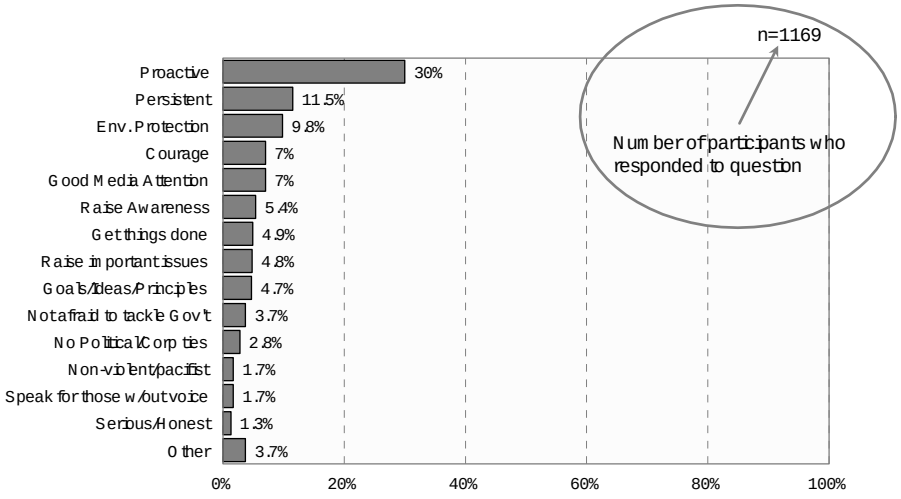
- It is easy to become overwhelmed with too much information. Focus on the research questions and only present the information that answers those questions.
- Choose a format that highlights the key results.
- Keep it simple.
- Pictures are worth a thousand words.
- Watch for presentation formats that make your results misleading. Present your results similar to the way the information was collected.

Use tables and charts to present results. Provide written descriptions that highlight the important information in the charts.

The following charts illustrate how data can be presented graphically.

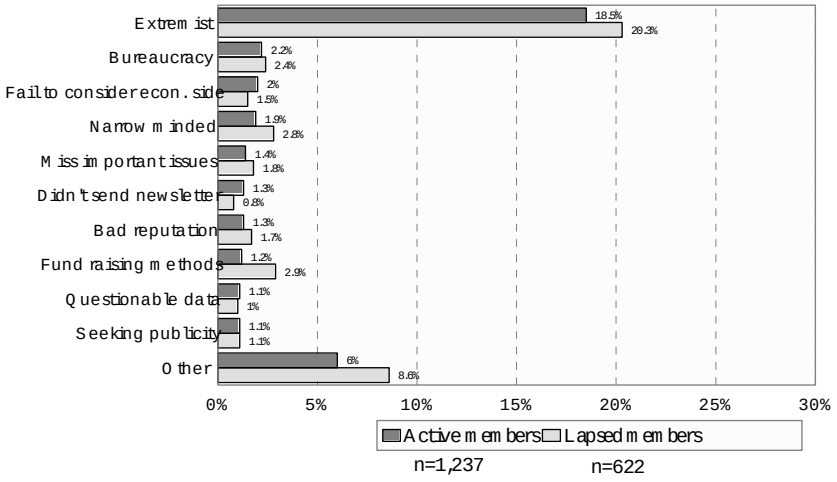
Example: Presenting Open-end Responses

Things Respondents Admire Most About Organization



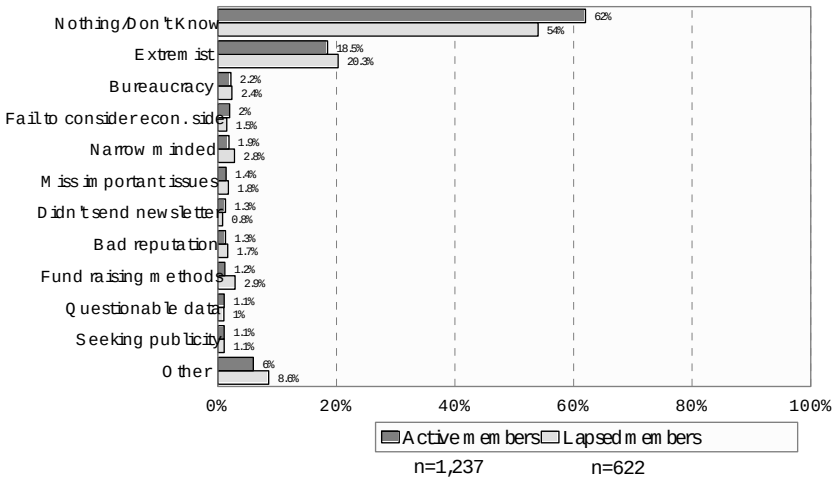
Example: Misleading Results

Things Respondents Dislike About Organization



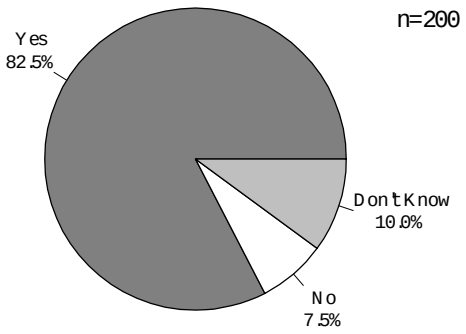
Example: How the information Should be Presented

Things Respondents Dislike About Organization



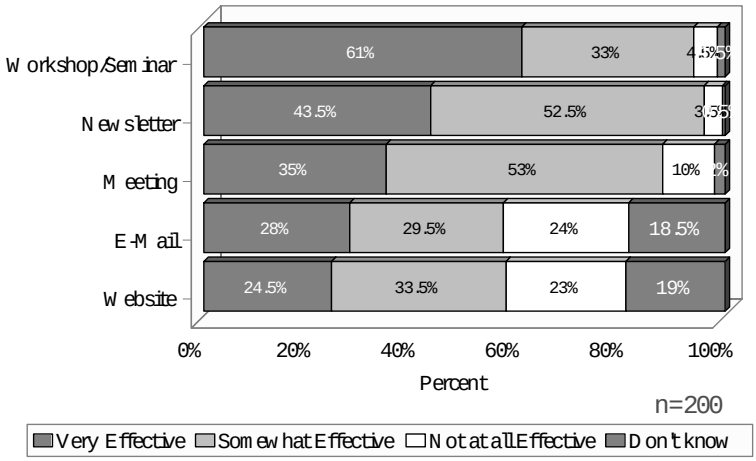
Example: Pie Chart

Figure 4: Percentage Reporting a Need for an Alliance that Provides Services and Networking Opportunities



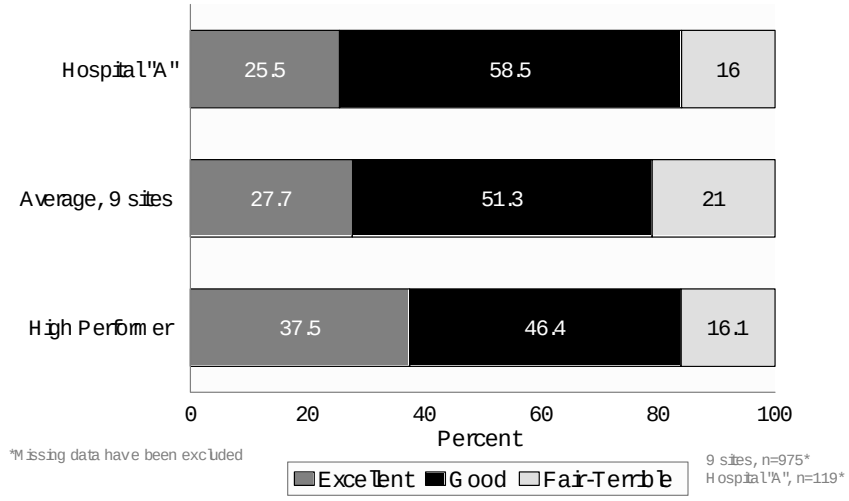
Example: Stacked Bar Graph

Figure 13: Effectiveness of Communication Channels for Sharing With Other Alliance Members



Example: Collapsing Response Categories

Overall Quality of Care and Services
Benchmarking Data



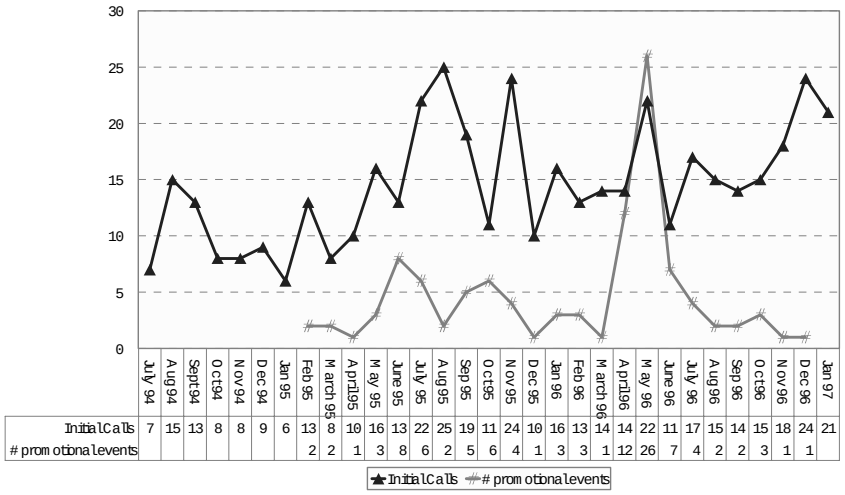
Response Rates for Each Province

	Number Sent	Number Received and Used in analysis	Response Rate %
Ontario	155	117	75.5
Quebec	173	113	65.3
British Columbia	99	72	80
Manitoba	112	70	62.5
Nova Scotia	90	54	60
Alberta	71	52	73
Saskatchewan	31	23	74
New Brunswick	31	22	71
Prince Edward Island	8	7	87.5
Newfoundland	8	6	75
North West Territories	7	2	28.6

Example: Line Graph

The Effect of the Number of Media Advertisements and Community Events on the Number of Initial Calls

July 1994 - January 1997



DISSEMINATING YOUR RESULTS

- Communicating your evaluation findings to the different stakeholders is an important step. It is essential that the results are communicated adequately so that action can be taken on the results.
- For detailed information about disseminating your results we refer you to the Sage publication called 'How to Communicate Evaluation Findings.'

  In this publication they provide a table which summarizes the communication format appropriate for different stakeholders (page 22). For example,

Funding agencies	executive summary, technical report, personal discussion
Board members	executive summary, article
Staff	technical report, executive summary, any articles or news releases, staff workshop/presentation, memo, personal discussions
Clients	executive summary, public meeting/presentation

- This list is a guideline. Stakeholders' needs and interests should be considered in deciding the most appropriate way to communicate the information to them. If you give them more than they want they may become bored and miss the important points and if you provide them too little they may be dissatisfied or confused.

Step 10 Take Action

How to decide which actions to take

Taking action refers to implementing the changes your results suggest. Take action and implement changes to improve your program/service/ product.

HOW TO DECIDE WHICH ACTIONS TO TAKE

- Involve your stakeholders in interpreting and taking action on your results.
- Revisit your original goals of data collection. Your data should provide answers to your original questions.
- Write a list of recommended actions that address the outcomes of your evaluation.
- Prioritize those changes which are most important and feasible to implement.
- Set up an action plan to implement the recommended changes.
- Implement the changes.

References

I. GENERAL EVALUATION REFERENCES

Books and Reports

Borus, M., C. Buntz and W. Tash, *Evaluating the Impact of Health Programs: A Primer* MIT Press: Cambridge, Mass, 1982.

Brinkerhoff, R.O., Brethower, D.M., Hluchyj, T., Nowakowski, J.R. *Program Evaluation. A Practitioners Guide for Trainers and Educators. Sourcebook and Design Manual* Boston: Kluwer-Nijhoff Publishing, 1983.

Dignan, M.B. *Measurement and Evaluation of Health Education*. Springfield, Illinois: Charles C. Thomas Publisher, 1995.

Green, L., American Lung Association. *Program Planning and Evaluation Guide for Lung Associations.*

Herman J.L., Morris L.L. and Fitz-Gibbon, C.T. *Evaluator's Handbook*. Newbury Park, California: SAGE Publications, 1987.

Horne, T. *Making a Difference: Program Evaluation for Health Promotion* (see Well Quest internet site for details and to order)

Hudson, J., Mayne, J. and Thomlison, R. (Eds) *Action-Oriented Evaluation in Organizations: Canadian Practices*. Toronto: Wall & Emerson Inc., 1992. (~$30)

Judd, C., Smith, E., & Kidder, L. *Research methods for social relations (6th Edition).* Toronto: Harcourt Brace Jovanovich, 1991.

Lincoln, Y.S. & Guba, E. *Naturalistic inquiry.* Thousand Oaks, CA: Sage Publications, 1985.

McKenzie, J.F. and Jurs, J.L. *Planning, Implementing and Evaluating Health Promotion Programs*. New York: MacMillan Publishing Co., 1993. ($33.95 U.S.) (ISBN #0675-22162-5)

Nagel, S. *Evaluation Analysis with Microcomputers*. Greenwich, Connecticut: JAI Press, 1989.

Posavac, E. and Carey, R. *Program Evaluation: Methods and Case Studies*. (4th Edition). Englewood Cliffs, New Jersey: Prentice-Hall, 1992.

Raphael, D. "Defining quality of life: eleven debates concerning its measurement." In R. Renwick, I. Brown, & M. Nagler (Eds) *Quality of life in health promotion and rehabilitation: Conceptual approaches, issues, and applications*. Thousand Oacks, CA: Sage Publications, 1996.

Rossi, P. and Freeman, H. *Evaluation: A Systematic Approach* (5th edition) Newbury Park, California: SAGE Publications, 1993. ($40 U.S.)

Rutman, Leonard, and Mowbray, George. *Understanding Program Evaluation*, Beverly Hills, California: SAGE Publications, 1983.

Sackett, David L. and Marjorie S. Baskin. *Methods of Health Care Evaluation: Readings and Exercises Developed for the National Health Grant. Health Care Evaluation Seminars*. McMaster University: Hamilton. 3rd Edition, 1974.

Sage Publications *Program Evaluation Kit*.(Herman, 1987) (9 volumes) ($100 U.S.)

Shortell, S. and Richardson, W. *Health Program Evaluation*. St. Louis: The C.V. Mosby Co., 1978.

Smith, M.L. & Glass, G. *Research and evaluation in education and the social sciences*. Boston: Allyn and Bacon, 1987.

Timmreck, T.C. *Planning, Program Development, and Evaluation: A Handbook for Health Promotion, Aging and Health Services*. Boston, MA: Jones and Bartlett Publishers, 1995.

Weiss, C.H. *Evaluation Research: Methods of Assessing Program Effectiveness*. Englewood Cliffs, New Jersey: Prentiss Hall, 1987.

Yin, R.K. *Case study research*. Thousand Oaks, CA: Sage Publications, 1990.

Journal Articles

de Vries, H., Weijts, W. et. al. "The utilization of qualitative and quantitative data for health education program planning, implementation, and evaluation: a spiral approach". *Health Education Quarterly*. 19(1):101-15, 1992.

Israel, B.A., Cummings, K.M. and Dignan, M.B. "Evaluation of health education programs: Current assessment and future directions." *Health Education Quarterly*. 22(3): 364-389, 1995.

Thompson, J.C. "Program evaluation within a health promotion framework." *Canadian Journal of Public Health*. 83 Suppl 1: S67-71, 1992.

Wagner, E.H. and Guild, P.A. "Choosing an evaluation strategy." *American Journal of Health Promotion*. 4(2): 134-139, 1989.

Internet Sites

Canadian Journal of Program Evaluation http:/www.ucalgary.ca/UofC/departments/UP/UCP/CJPE.html

>> provides a description of the journal, costs, how to subscribe and table of contents

Hospital Council of Western Pennsylvania—Evaluation Resources. http://www.hcwp.org/koepsell.htm

>> provides a user friendly program evaluation primer, step by step guidelines and online bibliographies and directories.

>> provides information on research, planning and evaluation, a summary of data gathering methods and a bibliography of on-line resources.

Program Evaluation Standards http://ua1vm.ua.edu/%7Eeal/progeval.html

Well Quest Consulting Ltd. http://www.web.net/~tamhorne/index.htm

>> provides evaluation standards for utility, feasibility, propriety and accuracy

How to Communicate Evaluation Results

Broughton, W. "Reporting evaluating results." *American Journal of Health Promotion* 6: 138-43, 1991.

Morris, L.L., Fitz-Gibbon, C.T. and Freeman, M.E. *How to Communicate Evaluation Findings*. Newbury Park, California: SAGE Publications Inc., 1987.

Ethics in Program Evaluation

McKenney, N.R., Bennett, C.E. "Issues regarding data on race and ethnicity: the Census Bureau experience." *Public Health Reports*. 109(1): 16-25, 1994.

Smith, N. "Some characteristics of moral problems in evaluation practice." *Evaluation and Program Planning*. 8(1): 1985.

2 TYPES OF EVALUATION

Needs Assessment

Anderson, C.L., Jesswein, W.A. and Fleischman, W. "Needs assessment based on household and key informant surveys." *Evaluation Review*. 14(2): 182-191, 1990.

Chambers, Larry W., Woodward, C. and Dak, C. *Guide to health needs assessment: A critique of health and health care information*. Ottawa: Canadian Public Health Association. 1980.

Gilmore, G.D., Campbell, M. D. and Becker, B.L. *Needs Assessment Strategies for Health Education and Health Promotion*. Indianapolis, Indiana: Benchmark Press, Inc., 1989.

Harasim, L.M., McLean, L.D., and Weinstein, J. *An Interactive Needs Assessment using Computer Conferencing*. Technical Paper/Ontario Institute for Studies in Education, Educational Evaluation Centre, 1989.

McKiillip, J. *Needs analysis: Tools for the human services and education*. Thousand Oaks, CA: Sage Publications, 1987.

Myers, A. "Needs assessment: broadening the perspective on its utility and timing." *Canadian Journal of Program Evaluation* 3: 103-13, 1988.

Neuber, K. *Needs Assessment: A Model for Community Planning*. Beverly Hills, California: SAGE Publications, 1980.

Ontario Ministry of Health. *A Guide to Needs/Impact Based Planning*. Final Report of the Needs/Impact-Based Planning Committee. In press.

Raphael, D. & Steinmetx, B. "Assessing the knowledge and skill needs of community-based health promoters. *Health Promotion International*, 19, 305-315, 1995.

Evaluability Assessment

Rush, B. and Ogbourne, "A. Program logic models: expanding their role and structure for program planning and evaluation." *Canadian Journal of Program Evaluation* 6: 95-106, 1991.

Rutman, L. *Planning Useful Evaluations: Evaluability Assessment*. Newbury Park, California: SAGE Publications, 1980.

Process Evaluation

Brunk, S.E. and Goeppinger, J. Process evaluation. *Evaluation and the Health Professions*. 13(2): 186-203, 1990.

Dehar, M., Casswell, S. and Duignan, P. "Formative and process evaluation of health promotion and disease prevention programs." *Evaluation Review*. 17(2): 204-220, 1993.

Dignan, M., Tillgren, P. and Michielutte, R. "Developing process evaluation for community-based health education research and practice: A role for the

diffusion model." *Health Values: The Journal of Health Behavior, Education and Promotion*. 18(5): 56-59, 1994.

Ingersol, G.L., Bazar, M.T. et.al. "Monitoring Unit-Based Innovations: A Process Evaluation Approach." *Nursing Economics*. 11(3):137-43, 1993.

King, J.A. Morris, L.L. and Fitz-Gibbon, C.T. *How to Assess Program Implementation*. Newbury Park, California: Sage Publications, 1987.

Love, A. L. Developing effective internal evaluation. In House, E. R. and Wooldridge, R. J. (Eds.) *New Directions for Program Evaluation: A Publication of the Evaluation Research Society.* San Franciscoz: Jossey-Bass Inc., Publishers, 1983

Wickizer, T.M., Von-Korff, M. and Cheadle, A. "Activating communities for health promotion: a process evaluation method." *American Journal of Public Health*. 83: 561-567, 1993.

Outcome Evaluation

Lorig, K., Stewart, A., Ritter, P., Gonzalez, V. et al. *Outcome Measures for Health Education and other Health Care Interventions*. Thousand Oaks, California: SAGE Publications, 1996.

Chapman, S. Smith, W. et.al. "Quit and win smoking cessation contests: How should effectiveness be evaluated?" *Preventive Medicine*. 22(3):423-32, 1993.

Love, A. and Shaw, R. *Impact evaluation*. Dellcrest Resource Centre, Downsview Ontario, 1981.

Miller, C.A., Moore, K.S. et. al. "A proposed method for assessing the performance of local public health functions and practices." *American Journal of Public Health* 84(11):1743-9, 1994.

Parker, S.O. "A conceptual model for outcome assessment." *Nurse Practitioner*. 1983: 41-45.

Peterson J.L., Card J.J. et.al. "Evaluating Teenage Pregnancy Prevention and other Social Programs: Ten Stages of Program Assessment." *Family Planning Perspectives*. 26(3):116-20, 131, 1994.

Sloan, P. "Evaluating a health visiting service." *British Journal of Nursing*. 2(1):22-5, 1992.

Thacker, S.B., Koplan, J.P. et.al. "Assessing Prevention Effectiveness Using Data to Drive Program Decisions." *Public Health Reports*. 109(2):187-94, 1994.

3 QUALITATIVE METHODS

Broughton, W. "Qualitative methods in program evaluation." *American Journal of Health Promotion*. 5(6): 461-465, 1991.

Fetterman, D. *Ethnography : step by step.* Thousand Oaks, CA: Sage Publications, 1989.

Kurz, D. E. "The use of participant observation in evaluation research." *Evaluation and Program Planning.* 6: 93-102, 1983.

Patton, M.Q. *Qualitative Evaluation and Research Methods*. Thousand Oaks, California: SAGE Publications, 1990.

Patton, M.Q. *How to Use Qualitative Methods in Evaluation*. Newbury Park, California: SAGE Publications, 1987.

Weitzman, E.A. and Miles, M.B. *Computer Programs for Qualitative Data Analysis: A Software Sourcebook*. Thousand Oaks, California: SAGE Publications, 1995.

Focus Groups

Books & Reports

Greenbaum, T.L. *The Handbook for Focus Group Research*. New York: Lexington Books, 1993.

Krueger, R. *Focus Groups: A Practical Guide for Applied Research*. Thousand Oaks, California: SAGE Publications, 1994.

Morgan, D.L. (ed.) *Successful Focus Groups: Advancing the State of the Art*. Newbury Park, California: SAGE Publications, 1993.

Templeton, J. *The Focus Group: A Strategic Guide to Organizing, Conducting and Analyzing*. Chicago, Illinois: Probus Publishing Co., 1994.

Journal Articles

Asbury, J. "Overview of focus group research." *Qualitative Health Research* 5(4): 414-420, 1995.

Basch, C. "Focus group interview: an underutilized research technique for improving theory and practice in health education." *Health Education Quarterly* 14: 411-48, 1987.

Brotherson, M. "Interactive focus group interviewing: A qualitative research method in early intervention." *Topics in Early Childhood Special Education*. 14(1): 101-118, 1994.

Carey, M. and Smith, M.W. "Capturing the group effect in focus groups: A special concern in analysis." *Qualitative Health Research*. 4(1): 123-127, 1994.

Feig, B. "How to run a focus group." *American Demographics*. 11: 36-37, 1989.

Morgan, D. and Spanish, M. "Focus groups: a new tool for qualitative research." *Qualitative Sociology* 7: 253-270, 1984.

Straw, R.B. and Smith, M.W. "Potential uses of focus groups in federal policy and program evaluation studies." *Qualitative Health Research* 5(4): 412-427, 1995.

White, G.E. and Thomson, A.N. "Anonymized focus groups as a research tool for health professionals." *Qualitative Health Research*. 5(2): 256-261, 1995.

In-Depth Interviews

Chirban, J.T. *Interviewing in Depth: the Interactive-Relational Approach*. Thousand Oaks, California: Sage Publications, 1996.

Seidman, I.E. *Interviewing as Qualitative Research: a Guide for Researchers in Education and Social Sciences*. New York: Teachers College Press, 1991.

4 CONSENSUS METHODS

Delphi Procedure

Adler, M. and Ziglio, E. *Gazing into the Oracle: The Delphi Method and its Application to Social Policy and Public Health*. London, England: Jessica Kingsley Publishers, 1996.

Clark, L. & Cochran, S. "Needs of older Americans assessed by Delphi procedures." *Journal of Gerontology*. 27: 275-278, 1972.

Malote, O., Myers, A. and McAiney, C. "Factors contributing to quality of life of residents in LTC facilities: a Delphi approach." *The Gerontologist*. 34(1): 61, 1994.

Nominal Group Procedure

Gallagher, M., Hares, T., Spencer, J., Bradshaw, C. et al. "The nominal group technique: A research tool for general practice?" *Family Practice*. 10(1): 76-81, 1993.

Skibbe, A. "Assessing campus needs with nominal groups." *J Counsel Develop*. 64: 532-533, 1986.

Concept Mapping

Galvin, P. "Concept mapping for planning and evaluation of a big brother/big sister program." *Eval & Prog Plan* 12: 53-57, 1989.

Trochim, W. "An introduction to concept mapping for planning and evaluation." *Evaluation and Program Planning* 12: 1-16, 1989.

Internet sites

Literature on the Concept Mapping Process
http://www.conceptsytems.com/kb/00000008.htm
Provides on-line bibliography of resources, and provides answers to the following questions; What is concept mapping, What is it used for, and What steps are involved

5 QUANTITATIVE RESEARCH

Research Design

Anker, M. Guidotti, R.J. et.al. "Rapid evaluation methods (REM) of health services performance: Methodological observations." *Bulletin of the World Health Organization*. 71(1):15-21, 1993.

Bogdan, G. and Taylor, S. *Introduction to Quantitative Research Methods* John Wiley and Sons, 1975.

Campbell, D.T. and Stanley, J.C. *Experimental and Quasi-Experimental Designs for Research*. Chicago: Rand McNally, 1963.

Cannel, C.F., Lawson, S.A. and Hanssey, D.L. *A Technique for Evaluating Interviewer Performance: A Manual for Coding and Analyzing Interviewer Behavior from Tape Recordings of Household Interviewers.* Ann Arbor Survey Research Centre, Institute for Social Research, University of Michigan, 1975.

Cook, T. D., Lomax, F. and Melvin, M. "Randomized and quasi-experimental designs in evaluation research: an introduction" in Rutman, L. (ed.) *Evaluation Research Methods: A Basic Guide*. Beverly Hills, California: Sage Publications, 103-139, 1977.

Fitz-Gibbon, C.T. and Morris, L.L. *How to Design a Program Evaluation*. Newbury Park, California, Sage Publications, 1987.

Flay, B. & A. Best "Overcoming design problems in evaluation of health behaviour programmes." *Evaluation and the Health Professions* vol. 5 no. 1 March 1982.

Guba, E. G., and Lincoln, Y.S. *Effective Evaluation. Improving the Usefulness of Evaluation Results through Responsive and Naturalistic Approaches.* San Francisco, California: Jossey-Bass Inc., 1981.

Harlow, B.L., Crea, E.C., et.al. "Telephone answering machines: The influence of leaving messages on telephone interviewing response rates." *Epidemiology*. 4(4):380-3 1993.

Koepsell T.D., Wagner E.H. et.al. "Selected methodological issues in evaluating community-based health promotion and disease prevention programs." *Annual Review of Public Health*. 13:13-57, 1992.

Nutbeam, D., Smith, C. et.al. "Maintaining evaluation designs in long term community based health promotion programmes: Heartbeat Wales Case Study." *Journal of Epidemiology and Community Health*. 47(2):127-33, 1993.

Steckler, A., McLeroy, K.R., Goodman, R.M., Bird, S.T. et al. "Toward integrating qualitative and quantitative methods: An introduction." *Health Education Quarterly*. 19(1): 1-8, 1992.

Vollmer, WM., Osborne, ML., et.al. "Recruiting hard-to-reach subjects: Is it worth the effort?" *Controlled Clinical Trials*. 15(2):154-9 1994.

Data Collection Methods

Bindman, A.B. and Grumbach, K. "Collecting data to evaluate the effect of health policies on vulnerable populations." *Family Medicine*. 25(2): 114-9, 1993.

Cartmel, B. & Moon, T.E. "Comparison of two physical activity questionnaires, with a diary, For assessing physical activity in an elderly population." *Journal of Clinical Epidemiology*. 45(8): 877-83, 1992.

Cheadle A., Wagner E. et. al. "Environmental indicators: a tool for evaluating community-based health-promotion programs." *American Journal of Preventive Medicine*. 8(6):345-50, 1992.

Dada, O.A. "Brief description on WHO protocol for data collection." *Journal of Biosocial Science*. 24(3): 379-81, 1992.

Derrickson J. Maeda, I. et. al. "Nutrition knowledge and behavioral assessment of participants of Aid for Families with Dependent Children: telephone vs mail data collection methods." *Journal of American Dietetic Association*. 95(10):1154-55, 1995.

Gilpin EA., Pierce JP., et. al. "Estimates of population smoking prevalence: Self-vs proxy reports of smoking status." *American Journal of Public Health*, 84(10): 1576-9, Oct. 1994.

Kanten, D.N., Mulrow, C.D. et. al. "Falls: an examination of three reporting methods in nursing homes." *Journal of American Geriatrics Society*. 41(6):662-6 1993.

Kaplan, E.H. "A method for evaluating needle exchange programmes." *Statistics In Medicine*. 13(19-20): 2179-87, 1994.

Mottola, C.A. "Exploring the Validity of Data-Gathering Instruments." *Decubitus*. 6(3): 52-4, 56, 1993.

Robinson, D. "Data capture using hand-held computers." *Journal of Psychiatric & Mental Health Nursing*. 1(2):126-7, 1994.

Ross, M.M., Rideout, E.M. "The use of the diary as a data collection technique." *Western Journal of Nursing Research*. 16(4): 414-25, 1994.

Searles, J.S., Perrine, M.W. et.al. "Self-Report of Drinking Using Touch-Tone Telephone: Extending The Limits of Reliable Daily Contact." *Journal of Studies on Alcohol*. 56(4): 375-82, 1995.

Spooner C. and Flaherty B. "Comparisons of three data collection methodologies for the study of young illicit drug users." *Australian Journal of Public Health*. 17(3):195-202, 1993.

Urban, N., Anderson, G.L. et.al. "Effects on response rates and costs of stamps vs business reply in a mail survey of physicians." *Journal of Clinical Epidemiology*. 46(5): 455-9, 1993.

Wagener DK., Selevan SG., et.al. "The importance of human exposure information: A need for exposure-related data bases to protect public health source." *Annual Review of Public Health*. 16:105-21 1995.

Ward J., and Wain G. "Increasing response rates of gynaecologists to a survey: A randomized trial of telephone prompts." *Australian Journal of Public Health*. 18(3):332-4, 1994.

Questionnaire Design

Books and Reports

Berdie, D.R. *Questionnaires: Design and Use*. Metuchen, New Jersey: Scarecrow Press, 1986.

Henerson, M.E., Morris, L.L., & Fitz-Gibbon, C.T. *How to measure attitudes.* Thousand Oaks, CA: Sage Publications, 1987.

McDowell, I. and Newell, C. *Measuring Health: A Guide to Rating Scales and Questionnaires*. Toronto: Oxford University Press, 1987.

Streiner, D.L. and Norman, G. R. *Health Measurement Scales: A Practical Guide to their Development and Use*. Toronto: Oxford University Press, 1987. (ISBN #0-19-504101-1)

Sudan, S. and N. Bradburn. *Asking Questions: A Practical Guide to Questionnaire Design*. San Francisco: Jossey-Bass Publishers, 1983.

Woodward, C.A. and Chambers, L.W. *Guide to Questionnaire Construction and Question Writing*. Ottawa: Canadian Public Health Association, 1986.

Journal Articles

Covert, R. "A checklist for developing questionnaires." *Evaluation News* 5(3) August: 74-78, 1984.

Feather, Joan. "Questionaire Design" in Sackett, D.L. and Baskin, M.S. (eds.) *Methods of Health Care Evaluation*. Hamilton: McMaster University, 1976, ch. 19.

Ferber, R.P. Sheatsleyl, A. Turner and J. Naksberg. *What is a Survey?*. American Statistical Association, Washington, D.C. 1980.

Henerson, M. Morris, L.L. & Fitz-Gibbon, C.T. *How to Measure Attitudes* Newbury Park, California: Sage Publications, 1987.

Mahoney, C. A., Thombs, D.L. and Howe, C.Z. "The art and science of scale development in health education research." *Health Education Research*. 10(1): 1-10, 1995.

McKillip, J., Moirs, K. and Cervenka, C. "Asking open-ended consumer questions to aid program planning: Variations in question format and length." *Evaluation and Program Planning*. 15(1): 1-6, 1992.

Orlich, D.C. *Designing Sensible Surveys*. Pleasantville, New York: Redgrave Publishing Co., 1978.

Patrick, D.L. and Beery, W.L. "Measurement issues: Reliability and validity." *American Journal of Health Promotion*. 5(4): 305-310, 1991.

Sanchez, M. "Effects of questionnaire design on the quality of survey data." *The Public Opinion Quarterly*. 56: 206-217, 1992.

Wagner, L.N. *Writing Effective Survey Questions*. Health Promotion Resource Centre, Stanford Centre for Research in Disease Prevention, Palo Alto, California, 1989.

Sampling

Henry, G.T. *Practical Sampling*. Newbury Park, California: Sage Publications, 1980.

Kish, L. *Survey Sampling*. New York: John Wiley & Sons, 1965.

Levy, P.S. and Lemenshow, S. *Sampling for Health Professionals*. Belmont, California: Lifetime Learning Publications, 1980.

Peters, T.J., Eachus, J.I "Achieving equal probability of selection under various random sampling strategies." *Paediatric & Perinatal Epidemiology*. 9(2):219-24, 1995.

Salmon, C.T. and Nichols, J.S. "The next-birthday method of respondent selection." *Public Opinion Quarterly*. 47: 270-276, 1983.

Statistics Canada *Survey Sampling: A Non Mathematical Guide*, Ottawa, 1983.

Survey Research

Anonymous. "Evaluation of National Health Interview Survey diagnostic reporting. Vital and Health Statistics—Series 2:" *Data Evaluation and Methods Research*. (120): 1-116, 1994.

Asch, D.A. and Christakis, N.A. "Different response rates in a trial of two envelope styles in mail survey research." *Epidemiology*. 5(3): 364-5, 1994.

Carpenter, E.H. "Personalizing mail surveys: A replication and reassessment." *Public Opinion Quarterly*. Winter, 204-208, 1974.

Deming, W.E. "Some criteria for judging the quality of surveys." *The Journal of Marketing*. 12: 145-157, 1947.

Dillman, D.A. *Mail and Telephone Survey: The Total Design Method*. Toronto: Wiley, 1978.

Fabricant SJ. and Harpham T. "Assessing response reliability of health interview surveys using re-interviews." *Bulletin of the World Health Organization*. 71(3-4): 341-8, 1993.

Fowler, F.J. *Survey Research Methods.* Thousand Oaks, CA: Sage Publications, 1988.

Fowler, J. & Mangione, T.W. *Standardized survey interviewing.* Thousand Oaks, CA: Sage Publications, 1989.

Gilbert, G.H., Longmate, J. et.al. "Factors influencing the effectiveness of mailed health surveys." *Public Health Reports*. 107(5): 576-84. 1992.

Groves, R.M.& R.L. Kahn, *Surveys by Telephone: A National Comparison with Personal Interviews*. Toronto: Academic Press, 1979.

Linsey, A.S. "Stimulating responses to mailed questionnaires, a review." *Public Opinion Quartley*. Spring, 1975.

Locker D. "Effects of non-response on estimates derived from an oral health survey of older adults." *Community Dentistry & Oral Epidemiology.* 21(2): 108-13, 1993.

McHorney, C.A., Kosinski, M. et. al. "Comparisons of the costs and quality of norms for the SF-36 health survey collected by mail versus telephone interview: results from a national survey." *Medical Care*. 32 (6): 551-67, 1994.

Mickey, R.M., Worden, J.K., et.al. "Comparability of telephone and household breast cancer screening surveys with differing response rates." *Epidemiology*. 5(4): 462-5 1994.

Paganini-Hill, A., & Hsu, G. "Comparison of early and late respondents to a postal health survey questionnaire." *Epidemiology*. 4(4): 375-9 1993.

Siemiatycki, J. "A comparison of mail, telephone, and home interview strategies for household health surveys." *American Journal of Public Health*. 69: 238-244, 1979.

Smith, A.M., Dennerrstein, L. et.al. "Costs and benefits of the use of commercial market research approaches in large scale surveys (letter)." *Medical Journal of Australia*. 157(7): 504, 1992.

Strayer, M. Kuthy R. et.al. "Elderly non-respondents to a mail survey: a telephone follow-up." *Special Care in Dentistry*. 13(6): 245-8, 1993.

Woodward, Christel A., Larry W. Chambers, Kimberly D. Smith. *Guide to Improved Data Collection in Health and Health Care Surveys,* Canadian Public Health Association; Ottawa, Ontario, 1982.

Participatory Research

Barnsley & Ellis. *Research for Change: Participatory Action Research for Community Groups*, 1992.

Cornwall, A. and Jewkes, R. "What is participatory research?" *Social Science and Medicine*. 41(12): 1667-76, 1995.

Ellis, D., Reid, G. & Barnsley, J. *Keeping on track: An evaluation guide for community groups.* Vancouver, BC: Women's Research Centre, 1990.

Health Canada. *Guide to Project Evaluation: A Participatory Approach*. 1996. (ISBN 0-662-24231-9)

Jorgensen, D.L. *Participant Observation*. Thousand Oaks, CA: Sage Publications, 1989.

Lund, L. *Citizen Participation in the Local Planning Process: Broadening the Spectrum.* Report to the Association of District Health Councils of Ontario, October, 1994. (Contact: Association of District Health Councils of Ontario, (416) 222-1445)

Selener, D. "Participatory evaluation: People's knowledge as a source of power." *Networking Bulletin*. 2(2): 25-27, 1991.

Woodill, G., Jean-Baptiste, A. et al. *Empowering Adolescents through Participatory Research: a Final Summary Report of the Project, Community Need Assessment for Base Empowerment for Health Promotion*. Prepared for the Ontario Ministry of Health, Health Promotion Grants Program (file # SD-CE-90140), 1992.

6 COST-EFFECTIVE ANALYSIS

Begley, C.E., McKinnon Dowd, C., McCandles, R. "A cost-effectiveness evaluation of primary health care projects for the poor." *Evaluation and the Health Professions*. 12(4): 437-452, 1989.

Davis, K., and Frank, R. "Integrating costs and outcomes." *New Directions for Program Evaluation*. 54: 69-84, 1992.

Levin, H.M. *Cost effectiveness: A primer*. Newbury Park, California: SAGE Publications, 1983.

Weinstein, M., and Stason, W. "Foundations of cost-effectiveness analysis for health and medical practices." *New England Journal of Medicine*. 296: 716-721, 1977.

7 MASS MEDIA COMMUNICATIONS

Flora, J.A., Maibach, E.W. and Maccoby, N. "The role of media across four levels of health promotion intervention." *Annual Review of Public Health*. 10: 181-201, 1989.

Lindsey, G.N. and Hochheimer, J. L. *Guidelines for media planning: television, radio, and newspapers*. Internal formative research report prepared for the Stanford Health Disease Prevention Program, 1980.

Ministry of Health. *Social Marketing in Health Promotion: a Communications Guide*. Toronto: Queen's Printer for Ontario. 1992. ISBN 0-7729-9865-5.

Rimer, B., Keintz, M. K. and Fleisher, L. "Process and impact of a health communications program." *Health Education Research*. 1(1): 29-36, 1986.

U.S. Dept. Health and Human Services. *Making Health Communications Program Work: A Planners' Guide.* 1992. NIH Pub. No. 92-1493.

Walters, J.L., Canady, R. et. al. "Evaluating multi cultural approaches in HIV/AIDS educational material." *AIDS Education & Prevention*. 6(5):446-53, 1994.

Media Analysis

Atkin, C.K. "Research evidence on mass mediated health communication campaigns." In D. Nimmo (Ed.), *Communication Yearbook III.* (pp. 655-669). New Brunswick, New York: Transaction Books, 1979.

Berger, A.A. *Media Analysis Techniques.* Newbury Park, California: SAGE Publications, 1991.

Stempel, G.H. "Statistical Designs for Content Analysis" In Stempel, G.H. and Westley, B.H. (Eds), *Research Methods in Mass Communications.* Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1989.

Stempel, G.H. "Content Analysis." In Stempel, G.H. and Westley, B.H. (Eds), *Research Methods in Mass Communications.* Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1989.

Internet sites

Media Analysis Toolkit
http://www.wam.umd.edu/~jlandis/mlitpf.htm
>> provides basic approaches to the analysis of a particular media "text"

8 RECOMMENDED SOURCES REGARDING EVIDENCE FOR THE EFFECTIVENESS OF HEALTH PROMOTION

Centre for Health Promotion, University of Toronto

Altman, D.G. et al. (1987). The cost effectiveness of three smoking cessation programs *American Journal of Public Health 77*, 162-165.

Anderson, K. (1995) *Young People and Alcohol, Drugs and Tobacco* WHO Regional Publications Series No. 66. Copenhagen: World Health Organization Regional Office for Europe.

Anderson, R. (1984). Health promotion: An overview. *European Monographs in Health Education Research, 6*, 1-126.

Badura, B., & Kickbusch, I. (Eds.). (1991). *Health promotion research: Towards a new social epidemiology*. Copenhagen: World Health Organization.

Appendix A

Bracht, N. (Ed.). (1990). *Health promotion at the community level*. Newbury park, CA: Sage.

Butler, P., and Cass, S. (1993, Eds.) *Case Studies of Community Development in Health* Blackburn, Australia: Centre for Development and Innovation in Health.

Castle, D. J., & VanderPlaat, M. (1996). *Issues in measuring effectiveness in health promotion activities, projects, programs: A collection of Canadian examples*. People Development Ltd. Prepared for Health Promotion Development, Health Canada.

Chu, C., and Simpson, R. (1994, Eds.) *Ecological Public Health: From Vision to Practice* Toronto: Centre for Health Promotion/ParticipACTION.

Edwards, R. (1996,). *Building healthy public policy.* Paper presented at The Symposium on the Effectiveness of Health Promotion: Canadian and International Perspectives, Toronto, Canada.

Elder, J. P., Schmid, T. L., Dower, P., & Hedlund, S. (1993). Community heart health programs: Components, rationale, and strategies for effective interventions. *Journal of Public Health Policy, 14*(4), 463-479.

Evans, R. G., Barer, M. L., & Marmor, T. R. (Eds.). (1994). *Why are some people healthy and others not? The determinants of health of populations*. New York: Walter de Gruyter.

Federal, Provincial and Territorial Advisory Committee on Population Health (1996). *Report on the health of Canadians* : Prepared for the Meeting of Ministers of Health, Toronto, Ontario, September 10-11, 1996.

Freimuth, V.S., and Kraus-Taylor, M. (1996) Are mass mediated health campaigns effective? a review of the empirical evidence. Unpublished manuscript Health College Park, Maryland: University of Maryland Health Communication Program.

Glanz, K., Lewis, F. M., & Rimer, B. K. (Eds.). (1997). *Health behaviour and health education: Theory, research and practice* (2nd ed.). San Francisco: Jossey-Bass.

Goodstadt, M. S. (1995). *Health promotion and the bottom line: What works?* Paper presented at the 7th National Health Promotion Conference, Brisbane, Australia.

Gunning-Schepers, L.J., and Gepkens, A. (1996) Reviews of interventions to reduce social inequalities in health: research and policy implications.
Health Education Journal 55, 226-238.

Hamilton, N., & Bhatti, T. (1996). Population health promotion: An integrated model of population health and health promotion. Ottawa: Health Canada.

Hansen, W. (1992) School-based substance abuse prevention: a review of the state of the art in curriculum, 1980-1990. *Health Education Research 7* (3), 403-430.

Hodgson, R. (1996). Effective mental health promotion: A literature review. *Health Education Journal, 55*, 55-74.

Hyndman, B. (1996).*Does Self-Help Help? A Literature Review on the Effectiveness of Self-Help Programs* Toronto; Centre for Health Promotion/ParticipACTiON Series.

Johnson, J. (1996,). *Reorienting health services*. Paper presented at The Symposium on the Effectiveness of Health Promotion: Canadian and International Perspectives, Toronto, Canada.

Kar, S. B. (Ed.). (1989). *Health promotion indicators and actions*. New York: Springer.

Kickbusch, I. (1989) Self care in health promotion *Social Science and Medicine 29* (2), 125-130.

Klepp, K.I., and Forster, J.L. (1985) The Norwegian nutrition and food policy: an integrated policy approach to a public health problem. *Journal of Public Health Policy* (December), 447-463.

Labonte, R. (1990) Health promotion: from concepts to strategies. In G. Eikenberry (Ed.) *The Seeds of Promoting Wellness in the 90s: An Anthology of Health Promotion* Ottawa: Canadian College of Health Services Executives, 129-146.

Millstein, S. G., Petersen, A. C., & Nightingale, E. O. (Eds.). (1993). *Promoting the health of adolescents: New directions for the twenty-first century*. New York: Oxford University Press.

Minkler, M. (1992) Community organizing among the elderly poor in the United States: a case study. *International Journal of Health Services 22* (2), 303-316.

Nutbeam, D., Haglund, B., Farley, P., & Tilgren, P. (Eds.). (1991). *Youth health promotion: From theory to practice in school & community*. London: Forbes Publications.

Pan American Health Organization (1996). *Health promotion: An anthology*. (Vol. 557). Washington, DC: Pan American Health Organization.

Pederson, A., O'Neill, M., & Rootman, I. (Eds., 1994). *Health promotion in Canada: Provincial, national & international perspectives*. Toronto: W.B. Saunders Canada.

Pelletier, K. (1996) A review and analysis of the health and cost effective outcome studies of comprehensive health promotion and disease prevention programs at the worksite: 1991-93 update *American Journal of Health Promotion 10* (5), 380-388.

Pine, Cynthia, M. (Ed., 1997). *Community oral health*. Oxford: Wright.

Potvin, L., & Richard, L. (1996). The evaluation of community health promotion . Paper prepared for WHO -EURO Working Group on Evaluation.

Pransky, J. (1991). *Prevention: A case book for practitioners*. Springfield, MO: Burrell Foundation (Paradigm Press.

Puska, P. et al. (1985) The community-based strategy to prevent coronary heart disease: conclusions from ten years of the North Karelia project. *Annual Review of Public Health 6*, 147-193.

Raeburn, J. (1996). *How effective is strengthening community action as a strategy for health promotion? An empowerment/community development perspective.* Paper presented at The Symposium on the Effectiveness of Health Promotion: Canadian and International Perspectives, Toronto, Canada.

Renwick, R., Brown, I., & Nagler, M. (Eds.). (1996). *Quality of life in health promotion and rehabilitation*. Thousand Oaks, CA: Sage.

Rootman, I. (1997). Evidence on the effectiveness of health promotion. *Health Promotion in Canada*(Winter), 14-17.

Rootman, I., & Goodstadt, M. (1996). Health promotion and health reform in Canada .

Rootman, I., Goodstadt, M. , Potvin, L., & Springett, J. (1996). *Background paper for WHO workgroup on evaluation of health promotion approaches: A framework for health promotion evaluation*. (Mimeo)

Tudor, K. (1996). *Mental health promotion*. New York: Routledge.

Wallerstein, N. (1993) Empowerment and health: the theory and practice of community change *Community Development Journal 28* (3), 218-227.

Whitehead, M. (1996,). *The effectiveness of healthy public policy.* Paper presented at The Symposium on the Effectiveness of Health Promotion: Canadian and International Perspectives, Toronto, Canada.

Winett, R. A., King, A. C., & Altman, D. G. (1994). *Health psychology and public health: An integrative approach*. Needham Heights, MA: Allyn Bacon.

World Health Organization. (1986) *Ottawa Charter for Health Promotion*. Ottawa: Canadian Public Health Association, and Health & Welfare Canada.

9 GENERAL HEALTH PROMOTION REFERENCES

Health Promotion Resource Centre. *How-To Guides on Community Health Promotion*. Stanford Centre for Research in Disease Prevention.

Resources

Health in Action
http://www.health-in-action.org/
>> provides online access to health promotion and injury prevention information in Alberta

The National Clearinghouse for Alcohol and Drug Information
http://www.health.org
>> provides resources and referrals, research and statistics, searchable databases, publications, conference calender etc.

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