



*at the Centre for Health Promotion
University of Toronto*

Conducting Survey Research

Version 2.0 March 31, 1999

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This workbook was developed as a resource guide to accompany a one-day seminar. The content is structured around the logical steps of implementing a focus group. The material is relevant and practical but not comprehensive. We encourage users of this workbook to supplement the information contained in this workbook with the more comprehensive information available from the books and articles provided in the resource list.

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Introduction

D DEFINITION OF A SURVEY

- ▶ A survey is a systematic method of collecting data from a population of interest. It tends to be quantitative in nature and aims to collect information from a sample of the population such that the results are representative of the population within a certain degree of error.
- ▶ The purpose of a survey is to collect quantitative information, usually through the use of a structured and standardized questionnaire.

ADVANTAGES OF SURVEYS

- ▶ Can complete structured questions with many stakeholders within a relatively short time frame.
- ▶ Can be completed by telephone, mail, fax, or in-person.
- ▶ It is quantifiable and generalizable to an entire population if the population is sampled appropriately.
- ▶ Standardized, structured questionnaire minimizes interviewer bias.
- ▶ Tremendous volume of information can be collected in short period of time.
- ▶ Can take less time to analyse than qualitative data.

Overview of Surveys

- ▶ Definition of a Survey
- ▶ Advantages of Surveys
- ▶ Disadvantages of Surveys
- ▶ Steps in conducting Surveys

DISADVANTAGES OF SURVEYS

- ▶ More difficult to collect a comprehensive understanding of respondents' perspective (in-depth information) compared to in-depth interviews or focus groups.
- ▶ Can be very expensive.
- ▶ Requires some statistical knowledge, sampling and other specialized skills to process and interpret results.

STEPS IN CONDUCTING A SURVEY

- | | |
|---|--------------------------------------|
| 1 Clarify purpose | 5 Pilot test/Revise questionnaire |
| Why conduct a Survey? | Pilot test the questionnaire |
| Who are the stakeholders? | Revise the questionnaire |
| Who is the population of interest? | 6 Prepare Sample |
| What issues need to be explored? | Decide on the sample design |
| 2 Assess Resources | Identify sources of sample |
| What external resources will you need? | 7 Train interviewers |
| Which in-house resources can you make use of? | 8 Collect data |
| 3 Decide on Methods | 9 Process data |
| Select the method which is most appropriate | Code the data |
| 4 Write Questionnaire | Data enter the information |
| Decide on what questions to ask | 10 Analyse the Results |
| Set the types of response formats | 11 Interpret and Disseminate Results |
| Set the layout of the questionnaire | 12 Take Action |

Step 1 *Clarify Purpose of the Survey*

C LARIFY THE PURPOSE OF THE SURVEY— DEFINITION AND IMPORTANCE

- ▶ This step will identify the reasons for undertaking the survey and who will be involved in the design and data collection phases.
- ▶ This step is important in ensuring that conducting a survey is the best way to collect the information needed and will guide the planning phases of the project.

WHY DO YOU WANT TO DO THIS SURVEY?

- ▶ Why have you chosen to conduct a survey? What did you want to learn from the results and/or what decisions need to be made from the results? Clearly write down your survey research questions.
- ▶ When considering why you want to do this survey
- ▶ Be very specific
- ▶ Focus on the 'need' to know, not the 'nice' to know
- ▶ Does your reasoning fit the following description for uses of surveys? If not, perhaps you should consider a different method.

Step 1: Clarify Purpose of the Survey

- ▶ Why conduct a survey?
- ▶ Who are the stakeholders?
- ▶ Who is the population of interest?
- ▶ What issues need to be explored?

Use of Surveys

- ▶ Surveys are primarily used to collect quantitative information on the perceptions and opinions of a sample of people which adequately represent the population of interest. They are appropriate for:
 - ▶▶ Measuring peoples perceptions, opinions, knowledge, attitudes, behavioural intentions, and behaviour using primarily closed-ended questions.
 - ▶▶ Conducting a needs assessment.
- ▶ Surveys *should not* be used to:
 - ▶▶ replace qualitative techniques
 - ▶▶ explore opinions in-depth

HOW WILL THE RESULTS BE USED?

- ▶ Knowing what decision needs to be made from the results will help you to determine how rigorous and comprehensive your survey will need to be.
- ▶ The more crucial it is for your decision to have accurate and precise information, the more rigorous your survey will need to be.
- ▶ Similarly, what you plan to use your results for will also have an impact on the design of your survey. If you plan to use the results to justify a program, the survey may need to be more rigorous than if you need the information for directions on how to revise your program.

WHO ARE THE STAKEHOLDERS?

- ▶ Who are your stakeholders and what is their interest in the survey results?
- ▶ It is important to clearly identify who your stakeholders are and what their interests are in the survey results. This will ensure that your design and the questions asked of respondents will reflect all stakeholders' interests and avoid missing information.
- ▶ Stakeholders are all those individuals who would have an interest in the questions you are asking and the results obtained (i.e. Stakeholders of the program/service/product)

WHO IS THE POPULATION OF INTEREST?

- ▶ Describe the population you are interested in surveying.
 - ▶▶ What is 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 are there unique differences?
- ▶ Are you interested in any sub-groups of this population?
- ▶ Determining the characteristics of your population of interest gives you some indication of how you can get a sample of respondents, whether you need to set quotas for subgroups, and how many people you would need to survey.

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.

Step 2 *Assess Resources*

A

ASSESS RESOURCES

- ▶ This step explores the resources you have available so that you can design a survey that is within your budget.
- ▶ Assessing your resources allows you to evaluate which resources you have available “in house” and which you will need to contract out.
- ▶ The evaluation of resources is crucial to ensuring that the questions you want to address can be answered within the budget allotted to the project.

ASSESS INTERNAL RESOURCES

- ▶ When planning a survey, there are a number of considerations to be made with respect to the resources needed. If conducting the survey using in-house resources, the following will have to be assessed:
 - ▶▶ Budget
 - How much money has been allocated for this project?
 - ▶▶ Staff availability
 - How many staff are available?

Step 2: Assess Resources

- ▶ Internal resources
- ▶ External resources

Chapter 2

- ▶ These are the types of skills your staff will need in order to conduct a survey:

Questionnaire writing

Ability to format a questionnaire for the chosen medium (e.g., mail, telephone or fax)

Sampling design and methods of recruitment

Word processing

Collating (if mail)

Telephone interviewing (If telephone)

Management of data collection staff

verification of data

Coding of open end responses

Data processing (how to enter the data so that it can be analysed)

Analysis

How to present the data in the most effective ways

Report writing

Presentation skills

Do they have the skills you need?

Are they interested in the project?

- ▶▶ Facilities/equipment availability

Do you have computers and the appropriate software available?

Do you have a photocopier?

Do you have phones?

- ▶▶ Time available before you need results

How much time do you have before you need the information?

How much time do you have to put towards organizing and conducting the survey?

EXTERNAL RESOURCES

- ▶ After assessing internal resources, if any gaps are identified in the resources required, they can be filled by external resources.
- ▶ There are a variety of external resources available. Some services you may be able to obtain for free but others you may be required to pay for.
- ▶ Contact the Health Communications Unit for a list of potential suppliers of survey research. There are consultants and data collection experts available through Universities Not for profit organizations and the private sector.

Step 3 *Decide on the Method*

S

DECIDING ON THE METHODS AND PROCEDURES

- ▶ Decisions regarding the protocol for the survey are based on the type of information being sought, the budget available for the project, timing considerations, and the target population.
- ▶ The method of administration will affect costs and response rate, and will also influence which questions may be asked and how they are asked.

TYPES OF METHODS

- ▶ There are three primary methods for obtaining survey research:
(1) face to face interviews, (2) telephone interviews and
(3) mailed questionnaires.
- ▶ Some alternative methods have more recently been developed using more advanced technology like the Internet and computerized telephone interviews.

Step 3: Decide on the Method

- ▶ Types of methods
- ▶ Select the method which is most appropriate

Chapter 3

► Advantages and disadvantages of the 3 methods:

Method	Advantages	Disadvantages
Face to face	<p>Interviewers can document characteristics of non-respondents and reasons for refusal.</p> <p>Usually results in a higher response rate</p> <p>Preferable for survey addressing complex issues where some explanation may be needed.</p> <p>Reduces non-response to individual questionnaire items</p>	<p>A social desirability bias may affect the accuracy of responses, especially when survey is addressing sensitive issues.</p> <p>Recruitment and training of interviewers is time consuming and expensive.</p> <p>Cost per interview is expensive.</p>
Mail	<p>Social desirability bias is minimized</p> <p>Administrative costs and costs per respondent are significantly reduced.</p>	<p>It is often not possible to determine the demographics and characteristics of non-respondents and/or reasons for refusal.</p> <p>Some questions may not be complete on returned questionnaires.</p> <p>The time elapsed before receiving completed questionnaires can be long (1-3 months).</p>
Telephone	<p>It is possible to achieve high response rates.</p> <p>Interviewers are able to document characteristics of non-respondents and reasons for refusal.</p> <p>The amount of non-response to questionnaire items can be minimized.</p> <p>Able to obtain results quickly</p> <p>Less costly than face to face interviews (but more expensive than mail surveys).</p>	<p>Sometimes difficult to reach a selected resident of a household.</p> <p>Long and/or complex questions should be avoided, as it is difficult for respondents to retain the questions and response categories.</p>

SELECT THE METHOD WHICH IS MOST APPROPRIATE

- ▶ Cost and the best way to communicate with potential respondents are the two main factors that are considered when choosing the most appropriate method. However, skills of staff, the availability of internal resources and time available may also influence your decision.
- ▶ The key is to choose a method that will:
 - ▶ give you the highest response rate with your particular target population
 - ▶ be the most convenient for them
 - ▶ fit your time line (mail surveys take much longer)
 - ▶ fit within your budget
 - ▶ fit your staff and resources

Step 4 *Write the Questionnaire*

W

RITE THE QUESTIONNAIRE

- ▶ The first step in writing a questionnaire is to determine if there is an existing questionnaire that can be used to collect the information you want. Access to many questionnaires is possible through various publications of survey questions or from researchers in the field. The first place to look for an existing questionnaire is through the published literature and through other organizations similar to your own.
- ▶ A list of current resources containing this type of information is available from the Health Communications Unit.
- ▶ If there are no existing questionnaires available, then it will be necessary to design a new instrument to collect the data for your survey.
- ▶ When writing a questionnaire, it is important to remember that the quality and usefulness of the information collected will depend on how the questions are worded.
- ▶ Well constructed questionnaire items will:
 - ▶▶ motivate respondents to answer
 - ▶▶ facilitate recall
 - ▶▶ keep respondents interested

Step 4:

Write the Questionnaire

- ▶ Decide on what questions to ask
- ▶ Open-ended vs. closed questions
- ▶ Types of response formats
- ▶ What is being measured?
- ▶ Layout of the questionnaire
- ▶ Reliability, Validity and Responsiveness

DECIDING ON WHAT QUESTIONS TO ASK

- ▶ Focus on the 'need' to know
- ▶ Each question should have an explicit rationale. Why is it being asked and what will be done with the information?
- ▶ Determine sections based on purpose of the interview. Sections should flow logically. The questionnaire should begin with an introduction and end with a closing. The following is an example of some of the sections you may include.
 - ▶▶ Introduction
 - ▶▶ Awareness of program
 - ▶▶ Health Behaviours
 - ▶▶ Evaluation of program services
 - ▶▶ Interests in other services
 - ▶▶ Demographics
 - ▶▶ Closing
- ▶ To begin writing the questionnaire, list the issues you want to know about under each section. Remember, you only need to ask questions that answer your original research objectives discussed in chapter 1.

USING OPEN END QUESTIONS VS CLOSED QUESTIONS

- ▶ Open-ended questions are asked without specific response options. Respondents need to create their own answer.
- ▶ The questions are great for depth and unbiased opinions
- ▶ Open-ended questions are best used when having multiple response options may be too leading and result in biased answers (e.g., types of services they would like).
- ▶ Sometimes you can pre-code an open ended question if you know the type of responses you will get.
- ▶ In closed questions, response categories are provided and interviewers/respondents simply have to circle or choose an option

TYPES OF RESPONSE FORMATS

Ratings (scales)

e.g., On a scale of 1 to 5 where 5 is strongly agree and 1 is strongly disagree how would you rate your agreement or disagreement with the following statement.

1 It is O.K. to smoke in your house?

SA				SD	
5	4	3	2	1	9DK

Rankings

e.g., Of the following 3 services, which one would you feel is most important? Which one is second-most important? and which one is third-most important?

1 Weekly glass and plastic recycling

2 Monthly large appliance pick-up

3 Hazardous waste disposal days

9 DON'T KNOW

Most
important

Second-most
important

Third-most
important

Multiple choice

e.g., Which of the following best describes the food in your household?

1 Enough food, and the kind of food we want to eat

2 Enough food, but not always the kind we want to eat

3 Sometimes not enough food

4 Often not enough food

9 DON'T KNOW/REFUSED

Yes/no

e.g., Is this your primary residence?

YES 1

NO 2

DON'T KNOW 9

Open-ended question

e.g., How many people, including yourself, live in your household?

or,

Why did you decide to drop out of the smoking cessation program?
Anything else? (Allow 3 responses)

.....
.....
.....

precodes

- 01 Didn't have time
- 02 Couldn't get to the program
- 03 Was discouraged
- 04 Didn't like the facilitator
- 05 Decided I didn't want to quit
- 06 Started smoking again

TYPE OF MEASUREMENT

- ▶ Items in the questionnaire can be classified according to the type of information you are trying to obtain. Questions can seek to acquire different types of responses:
 - ▶▶ *attitudes.* What people feel
 - ▶▶ *knowledge.* What people know
 - ▶▶ *beliefs.* What people think is true: their beliefs
 - ▶▶ *behaviours.* What people do or have done
 - ▶▶ *evaluation.* Peoples perception of thing are/were

LAYOUT OF THE QUESTIONNAIRE

- ▶ The way a questionnaire is laid out can impact on the response rate and the accuracy of the data received. If the format of the questionnaire is clear and easy to follow, completing the questionnaire will be easier for respondents
- ▶ The questionnaire should be neat, attractive, and convenient for the interviewers to use.
- ▶ Layout should be easy for data entry with the least chance of error.
- ▶ Each questionnaire should have a unique identifying number.

VALIDITY, RELIABILITY AND RESPONSIVENESS

- ▶ *Validity.* Whether you are measuring what you intended to measure.
 - ▶▶ *Face Validity.* The extent to which your questionnaire is measuring what it appears to be measuring
 - ▶▶ *Content Validity.* The extent to which items on the questionnaire are representative of the domain under study.
 - ▶▶ *Construct Validity.* The extent to which an instrument measures the construct or trait under study. Regardless of the trait under study you can identify some theoretical constructs about that trait which your questionnaire should be able to measure and you can test by administering your questionnaire in situations where you know those constructs to be true.
 - ▶▶ *Criterion Validity.* The extent to which the questionnaire is measuring similar to a 'gold' standard, another measure that has been used and accepted in the field. There are two types concurrent and predictive validity.
- ▶ *Internal Reliability.* Questions measuring the same construct are correlated to each other and not to other constructs.
- ▶ *Test-retest Reliability.* If you were to do the survey exactly the same way, under the same conditions you would get the same results.
- ▶ *Responsiveness.* The questions can detect change.

Chapter 4

- ▶ Ideally you want your questionnaire to be both valid and reliable. Testing your questionnaire for validity and reliability can be cost and time prohibited. It is important to test your questionnaire as much as possible. At the very least you should be able to test your questionnaire for face and content validity.
- ▶ If your questionnaire is going to be used repeatedly it would be worthwhile to spend the resources to test your questionnaire thoroughly.
- ▶ For more comprehensive and detailed information 'Health Measurement Scales: A Practical Guide to their development and use' 2nd Edition David L. Streiner and G.R. Norman. (1995) is one of the best books available for questionnaire development and testing.

OTHER TIPS AND GUIDELINES

- ▶ Use language of target group.
- ▶ Only ask "need to knows."
- ▶ Involve target group/stakeholder in design.
- ▶ Avoid double barrel questions.
- ▶ Keep it simple.
- ▶ Consulting the literature related to the topic or other specialists in the field can be helpful in constructing the questionnaire.

Step 5 *Pilot Test*

P

PILOT TESTING

- ▶ A pilot test is an evaluation of the specific questions, format, question sequence and instructions prior to use in the main survey. Questions answered by the pilot test include:
 - ▶▶ Is each of the questions measuring what it is intended to measure?
 - ▶▶ Are questions interpreted in a similar way by all respondents?
 - ▶▶ Do close-ended questions have a response which applies to all respondents?
 - ▶▶ Are the questions clear and understandable?
 - ▶▶ Is the questionnaire too long?
 - ▶▶ How long does the questionnaire take to complete?
 - ▶▶ Are the questions obtaining responses for all the different response categories or does everyone respond the same?
- ▶ Pilot testing is a crucial step in conducting a survey. Even modest pre-testing can avoid costly errors.

Step 5: Pilot Test

- ▶ Pilot testing the questionnaire
- ▶ Revising the questionnaire

REVISING THE QUESTIONNAIRE

- ▶ The results of the pilot test are used to indicate:
 - ▶▶ questions in need of revision because they are difficult to understand.
 - ▶▶ questions that need to be removed (either they do not provide useful information or they are redundant).
 - ▶▶ whether the questionnaire is ordered correctly.
 - ▶▶ if the questionnaire is the appropriate length.
 - ▶▶ whether the appropriate response options or scales are being used.
- ▶ Three behaviours during pilot testing have been identified as key indicators that there is a problem with a question:
 - ▶▶ The question is consistently misread by the interviewer or they have difficulty reading it.
 - ▶▶ Respondents consistently request clarification on a particular question.
 - ▶▶ The respondents consistently answer in an inadequate way.
- ▶ If a question is always responded to in the same way it may not be telling you anything new about your population. Unless there is some rationale for why everyone would respond similarly to a question it may not be useful.
- ▶ The people administering the questionnaire and the respondents themselves are the best people to evaluate how well the questionnaire works.
- ▶ If a lot of revisions are made, the revised version of the questionnaire should then be pilot-tested again. Revisions may cause new and serious problems if they are not tested.

OTHER TIPS AND GUIDELINES

- ▶ Use a final, open-ended item to learn if additional questions are needed.
- ▶ Pilot test should take place with actual respondents.

Step 6 *Prepare the Sample*

P

REPREPARE THE SAMPLE

- ▶ 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 participating in the survey be large enough to produce results that are reliable and valid and truly represent the target population.
- ▶ The main questions in selecting your sampling design are:
 - ▶▶ How many will be included?
 - ▶▶ How the survey respondents 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

Step 6: Prepare the Sample

- ▶ Sample design
- ▶ Simple random samples
- ▶ Convenience samples
- ▶ Other sampling designs
- ▶ Sources of sample

analyse. You want to ensure that you have sampled enough people to obtain in an adequate number of respondents in your subgroups so you can 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 simple random sample is a sample where everyone in the population has equal opportunities to be surveyed.
- ▶ Sampling error can be calculated fairly easily 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.

Note that this table is for a simple random sample only and 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 any error that may occur as a result of non-response or measurement errors.

CONVENIENCE SAMPLES

Convenience samples are samples that are not randomly selected from the population. It is a method that 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. However, 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 the population has been divided 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.
- ▶ Sampling is quite complicated and enlisting the services of a researcher familiar with sample design is recommended.

SOURCES OF SAMPLE

- ▶ There are a number of sources to obtain samples for a general public survey
 - ▶▶ 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)
- ▶ Surveys of professional (e.g., dentists) can be easier to obtain sample information for because there are available professional directories, phone books and associations to select people from.
- ▶ When doing a mail survey you will need addresses and postal codes and ideally first and last names.
- ▶ When doing a telephone survey you will need, at the very minimum, phone numbers with area codes.
- ▶ When doing intercept surveys you only need to pick representative locations.

Step 7 *Train Interviewers for Telephone and Intercept Surveys*



TRAINING INTERVIEWERS

- ▶ Training interviewers involves providing them with the skills needed to undertake successful interviewing.
- ▶ Having trained interviewers is imperative as the interviewer is the interface between your organization and the respondents. Interviewers have a tremendous amount of influence on the quality of the research. A good interviewer can make all the difference in the world to the usefulness of the data collected

WHAT IS A STRUCTURED INTERVIEW?

- ▶ A structured interview is a systematic way to collect information about a group of people
- ▶ Questions are asked of various members of the group in exactly the same way, and the information is recorded in exactly the same way
- ▶ The survey is structured to ensure that we are asking the same questions of everyone from the group.

Step 7: Train Interviewers for Telephone and Intercept Surveys

- ▶ What is a structured interview?
- ▶ Interviewing terms
- ▶ What makes a great interviewer?
- ▶ Interviewing methodology
- ▶ Sample lists and recording

INTERVIEWING TERMS

interviewer. The person who is collecting data by conducting interviews.

respondent. The person who is answering the questionnaire.

researcher. The person who is analysing the data collected.

sample. The list of people who will be phoned or visited. The list of potential respondents.

survey. An instrument designed to gather information from a specific group of people (employees, customers, all people in a province or country, women, children, etc.)

questionnaire. A set of questions designed for a specific purpose (evaluation, polling, market research, etc.). Can be either printed on paper, or programmed into a computerized interviewing system.

closed-end. A type of question that allows only for specific responses (Yes or No, rating of 1 to 5, etc.). The interviewer circles the response on the questionnaire.

open-end. A type of question that allows the respondent to give any answer they wish. The interviewer writes in, verbatim, the response.

verbatim. Exactly what is said. To record a response verbatim is to write down exactly what the respondent said.

clarification. Asking for more detail to ensure that a response is clearly understood.

probe. Asking for more responses.

precodes. A list of possible responses to a question. The instructions on the questionnaire will inform the interviewer whether they should read the list or not.

THE INTERVIEWER'S ROLE

The interviewer plays a critical role in any research. S/he is the interface between the respondent, who is the source of the needed information, and the researcher, who will apply analytical techniques to the data received. The interviewer has tremendous influence on the quality of research; good interviewers can make all the difference in the world to the usefulness of the data collected.

WHAT MAKES A GREAT INTERVIEWER?

A great interviewer follows a few simple guidelines which ensure detailed, accurate, and unbiased data.

Read the Questions as Written

It is essential that the interviewer read the questions exactly as they are written. The questions are designed to focus respondents on specific issues. Changing the wording even slightly may change the subject of the response. Because there are usually multiple interviewers working on a project, if each interviewer changed the wording slightly, the result would be a mess of information that is not completely related, and therefore not useable.

Do Not Suggest Responses

Allow the respondent to answer without input from you. If the question has a list of precodes, read the list without bringing attention to any specific answer. Focus on your manner of speaking. Are you giving each response the same volume? The same tone? If the question is open-ended, allow the respondent to voice his/her opinion without your influence.

At times this may be frustrating for you because respondents may get off topic, or have difficulty thinking of a response. If they get off topic, it is fine for you to remind them of the question. Sometimes repeating the question will help focus them. If the respondent has difficulty thinking of a response resist the temptation to “help” them. It is better for the respondent to say they do not know than to have a response that is influenced by the interviewer.

Help the Respondent Answer the Question You are Asking!

We have all had conversations in which other people don't seem to understand what we are saying. I may think what I am saying is very clear, but others can reply in a way that shows me they didn't understand what I meant. This can happen in an interview as well. Listen carefully to the responses, especially to open-ended questions. Is the respondent answering the question you asked? If you doubt that they understood the question, it is fine for you to say something like, “Just to remind you ma'am/sir, the question was....” If you attempt to clarify the question, and they still give an answer that seems off-topic, then record the answer as they give it.

Clarify Responses

One problem that sometimes occurs is that the interviewer will record a response that they don't really understand, or is very unspecific. Perhaps the respondent has been vague, or a bit off-topic. If the answer doesn't really make sense to the interviewer, imagine the confusion that the researcher will have! A great interviewer clarifies any response that is ambiguous, or doesn't make sense. Effective clarification techniques are to ask, "could you please tell me a bit more about that?" or "could you give me an example of that?". This give the interviewer the opportunity to record a clearer and more accurate response.

Probe for Responses

Open-ended questions usually ask for more than one answer. Many times a respondent will say the first thing that comes to mind, but not "dig deeper." A great interviewer always asks "Ok. Anything else?" or "Does anything else come to mind?". You will be amazed at how often people will provide more information simply because you asked them for it. Effective probing can double or triple the amount of information collected on a survey!

Record Information Neatly and Thoroughly

A great interviewer keeps in mind that the researcher must be able to read and understand the information on the questionnaire or it is useless. This point may seem trivial, but on every project there is data lost due to indecipherable handwriting or incomplete information. This is especially important with open ended questions. A great interviewer takes the time to record exactly what the respondent says. A lazy interviewer simply jots down disjointed phrases that are of little to no use. One method that can be used is to record verbatim answers on a pad of paper during the interview so that you can write quickly, and then copy the information neatly onto the questionnaire upon completion of the interview.

Complete the Interview!

Occasionally, a respondent will want to terminate an interview before completion. A good interviewer will make sure the interview gets done. This can be accomplished by telling the respondent how important his/her opinions are and working together to get through the interview quickly. Speak a little faster, show the respondent that you

are being sensitive to his/her wishes. If it is impossible to complete the interview, arrange a time to call back at the respondent's convenience to complete the interview.

Turn Around Refusals

The best interviewers will not simply hang up when someone says they are not interested in participating in a survey; they will attempt to turn the refusal into a complete! This can be done by politely asking the respondent why they do not wish to take part. Often, they have a concern that can be addressed. If they are busy you can arrange a more convenient time to call back. If they are concerned about the nature of the study, you can answer their questions, or give them Smaller World's phone number for more information. If they are nervous about offering their opinions, you can reassure them that all information is strictly confidential. Many interviewers find this intimidating at first, but those with the courage to try to turn around refusals find that it is much easier than they thought, and that it works!

Maintain Strict Confidentiality

A great interviewer respects the respondents right to privacy and confidentiality. It is imperative that interviewers do not discuss individual responses with anyone outside of the company. When a respondent entrusts his/her opinions with you, you are obligated by professional standards, and by law, not to give that information to anyone outside of the company conducting the research. Breach of confidentiality is unethical behaviour and will lead to termination.

Be Polite and Professional

The attitude of the interviewer has an amazing impact on the quality of the project. Speaking in a pleasant and unthreatening manner helps increase the response rate to a survey (more people will answer the questionnaire). Being friendly yet objective can be difficult. Let the respondent know that any answer is Ok, but try to avoid becoming too friendly. You don't want the respondent to be concerned about pleasing you with their responses. As an interviewer you are an ambassador for the organization for which you are doing the interviewing. A polite attitude can help turn around the most belligerent respondent. Your way of interacting with respondents will influence the way they feel about the sponsoring organization. Remember, always thank each respondent for completing an interview!

Chapter 7

INTERVIEWING METHODOLOGY

- ▶ For telephone interviews, each interview should attempt to reach each number selected by calling back 3 to 5 times before assuming they cannot reach the person at that number. Research has shown that the demographics of people reached on a first call are different to those reached on second or third calls.
- ▶ For intercept interviews, randomly selecting every 5th passerby eliminates interviewer bias for approaching potential respondents.

SAMPLE LISTS AND RECORDING

- ▶ A sample list is the list of names or phone numbers an interviewer is to use to attempt to complete their interviews.
- ▶ To ensure that you are adequately using your sample list correctly, interviewers should record on the sample list what happens every time they attempt to do an interview with that person.
- ▶ For a telephone interview, a phone number is considered resolved when:
 - ▶▶ an interview is complete
 - ▶▶ a respondent refuses to participate
 - ▶▶ Wrong#/disconnected/fax
 - ▶▶ respondent is not available
 - ▶▶ respondent is not eligible
- ▶ Interviewers should consider a record to be unresolved when the following outcomes occur:
 - ▶▶ The line is busy
 - ▶▶ No answer
 - ▶▶ A call back is scheduled

Example of a sample list

ID#	Name	Phone Number	Try 1	Try 2	Try 3	Try 4	Try 5
03	Joe Smith	905-888-8888	n/a	n/a	n/a	n/a	inelig.
04	Don Clark	705-888-8888	Comp.				
05	Carol Janes	705-999-9999	n/a	busy	n/a	Refused	

Step 8 *Collect Data*

C OLLECT DATA

- ▶ This step describes how the information is collected for the different survey methods.
- ▶ This is an important step, that must be done right in order to ensure the integrity of the information collected.

PROCEDURES FOR THE 3 MAIN METHODS

Face to face interviews

- ▶ Select location(s) to conduct interviews—The most appropriate location to conduct a face to face interview is a place where members of your population frequent and is comfortable for them to participate at that location.
- ▶ If you are randomly selecting respondents for a face to face intercept interview it is important to utilize more than one location in order to ensure a better representation of the population.
- ▶ Train interviewers in how to conduct a structured questionnaire face to face and how to intercept respondents if they are doing intercept interviews. It is quite difficult to ensure the interviewers randomly select people to participate in intercept interviews. Interviewer and

Step 8: Collect Data

- ▶ Face to face interviews
- ▶ Using telephone surveys
- ▶ Using mail surveys
- ▶ Tips on increasing response rate

respondent biases may influence the people who are selected to participate and those who agree to. Interviewers should follow a standardized and systematic approach to selecting people who pass by to be interviewed.

- ▶ If you require a particular group for your survey you may have to develop a questionnaire screener which would be used to find eligible respondents. A questionnaire screener is a series of one or two questions (usually demographics like age or family status) which help you to identify people who are in your target population before doing a full interview. If a person is not eligible the interview is ended after the screening questions.

USING TELEPHONE SURVEYS

- ▶ It is important to supervise interviewers when they are calling respondents to monitor whether they are following the interviewing protocol.
- ▶ It is important to verify a sample of completed interviews by calling a sample of respondents who completed interviews to ensure they did complete the interview.
- ▶ Do not distribute your sample to interviewers all at once; give each interviewer chunks of sample as needed.
- ▶ Use a 3-5 call back design in telephone interviews
- ▶ If you require a particular group for your survey you may have to develop a questionnaire screener which would be used to find eligible respondents. A questionnaire screener is a series of one or two questions (usually demographics like age or family status) which help you to identify people who are in your target population before doing a full interview. If a person is not eligible the interview is ended after the screening questions.

USING MAIL SURVEYS

- ▶ Use the Dillman Method
 - ▶▶ Send out the 1st mailing (Usually results in a 40% response)
 - ▶▶ Send a reminder card 10 days after the 1st mailing to thank those participants who have already responded and to remind those who have not of the importance of the study. The card should also indicate where people can obtain another copy of the questionnaire if they have mislaid their original copy
 - ▶▶ Three to four weeks later, send a second mailing emphasizing the importance of receiving responses. Also include a new questionnaire and return envelope. (has been found to increase response rate by an additional 20%)
- ▶ The covering letter is one of the most important aspects of a mailed questionnaire. It will determine whether the recipient reads the survey and the attitude with which respondents complete the questionnaire. The letter should explain why the study is important and why their responses are needed.
- ▶ Additional methods to increase the response rate to a mail survey include:
 - ▶▶ Enclosing a self-addressed, stamped envelope will lead to a higher rate of compliance.
 - ▶▶ Personalization—Envelopes addressed to the household “occupant” are often regarded as junk mail and thrown away unread. The letter could instead be addressed to a group, such as “resident of neighbourhood” or “member of....” Additional personalization can be given with a handwritten signature.
 - ▶▶ Length of the questionnaire—shorter questionnaires lead to higher rates of return than longer ones.
 - ▶▶ Pre-coding the questions serves a number of purposes. Subjects may be more likely to check a box rather than fill out a long explanation. In addition, handwritten responses may be difficult to read and interpret.

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- ▶ Sometimes combining the above methodologies will result in a higher response rate. For example, you could send out your questionnaire through the mail and then follow-up with those who did not respond with a telephone interview.

ADDITIONAL TIPS ON INCREASING RESPONSE RATE

- ▶ Clearly explain purpose and benefit of survey.
- ▶ Offer to send/share results with respondents.
- ▶ Train interviewers well.

Step 9 *Process Data*

PROCESS DATA

- ▶ Processing the data involves preparing and translating the data for analysis. It involves taking the completed questionnaires and putting them into a format that can be summarized and interpreted.
- ▶ There are many errors that can be made during this step and it is essential that the quality of the data is preserved .

CODING

- ▶ The following are the steps involved in coding respondents' answers to your questionnaire:
 - ▶▶ Familiarize yourself with the questionnaire and topic area.
 - ▶▶ Divide open ended questions into groups that can share a code list (not always possible).
 - ▶▶ 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).
 - ▶▶ When no new responses are found, rewrite codes and assign a number to each code (master code list).

Step 9: Process Data

- ▶ Coding
- ▶ Data entry
- ▶ Methods to avoid data entry errors

- ▶▶ Write the corresponding code number(s) beside each open-ended question on each questionnaire.
- ▶▶ Repeat this for each open ended question.

DATA ENTRY

- ▶ There are two common approaches to data entry:
 - ▶▶ *Direct data entry.* Interviewers complete the questionnaires and then they are coded data entered into a computer for analysis.
 - ▶▶ *Computer assisted telephone interviewing (CATI).* Interviewers enter responses directly into a computer and the questions required coding are entered at a different time.

METHODS TO AVOID DATA ENTRY ERRORS

- ▶ Data entry errors are minimized when the data is verified. Verification of 10% of the data entered results in increased confidence in the accuracy of the data.
- ▶ An additional means to reduce the incidence of data entry errors is to program 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 is identified and the corrected data is entered.

What if you do not have a computer?

Data analysis in the past has been done with out the use of computers by hand tallying the answers for each question. For a small number of questionnaires this may not be too difficult but we highly recommend borrowing or renting a computer to analyse your data. It becomes very difficult to look at the results for subgroups when data is tallied by hand.

Use of Computers

- ▶ Data can be entered into most spreadsheet packages like Microsoft excel. There is also a SPSS data entry program that runs in dos and therefore requires very little space and processing speed.
- ▶ Most statistical applications have data entry capabilities.

Step 10 *Analyze the Results*

ANALYSE AND INTERPRET RESULTS

- ▶ Once the data has been entered into your statistical package, the analyses required to answer your research questions can be performed.
- ▶ Analysing the survey results is done in order to answer the original questions that were posed for the evaluation. It allows you to draw conclusions.
- ▶ Analysing the results is one of the most crucial steps in the process of ensuring useful findings which accurately reflect the opinions and views of the participants involved and answers the original questions.

USE OF STATISTICAL ANALYSIS

- ▶ For most surveys simple descriptive statistics (frequencies, means, ranges, etc) may be all that is needed to be able 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 when comparisons are needed between subgroups of the population or for measurements taken at different times.

Step 10: Analyse the Results

- ▶ Use of Statistical Analysis

Chapter 10

- ▶ 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 the repeatability of any differences observed. If the same outcome is found when a study is repeated over and over again, we really don't need a statistical analysis.
- ▶ Similarly when we study a 'sample' of the population, statistical analysis is used to 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 square (to compare results for categorical data) are some of the most common analysis performed.
- ▶ It is recommended that a person with specific training in statistical analysis is utilized for any complex analyses that need to be performed.

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 your decisions that need to be made. Results should not only be interpreted through statistical tests but also through discussion with stakeholders as to what the results might mean.
- ▶ Keep your original purpose/research questions in mind. Some surveys measure many different questions. It is important to organize your results by the original research questions and use the results to answer those questions.
- ▶ Usually simple descriptive analysis is required avoid getting tied up in detailed analysis that may not help to answer your research questions.

Step 11 *Interpret and Disseminate Results*

INTERPRET AND DISSEMINATE RESULTS

- ▶ The results of a survey should be provided back to the stakeholders of the survey through written reports, and/or presentations.
- ▶ It is important to feed back the results of the survey to management, staff, interested participants and other stakeholders in order to keep them informed and establish buy-in for implementing any changes resulting from the survey.

INTERPRETATION OF RESULTS

- ▶ Survey results need to be interpreted within the context of the purpose of the project.
- ▶ Keep your audience in mind when preparing report. What do they need and want to know?
- ▶ Consider the limitations of the survey
 - ▶▶ Possible Biases (selection, non-response, measurement, etc.)
 - ▶▶ Validity of results
 - ▶▶ Reliability of results
 - ▶▶ Generalizability of results

Step 11: Interpret and Disseminate Results

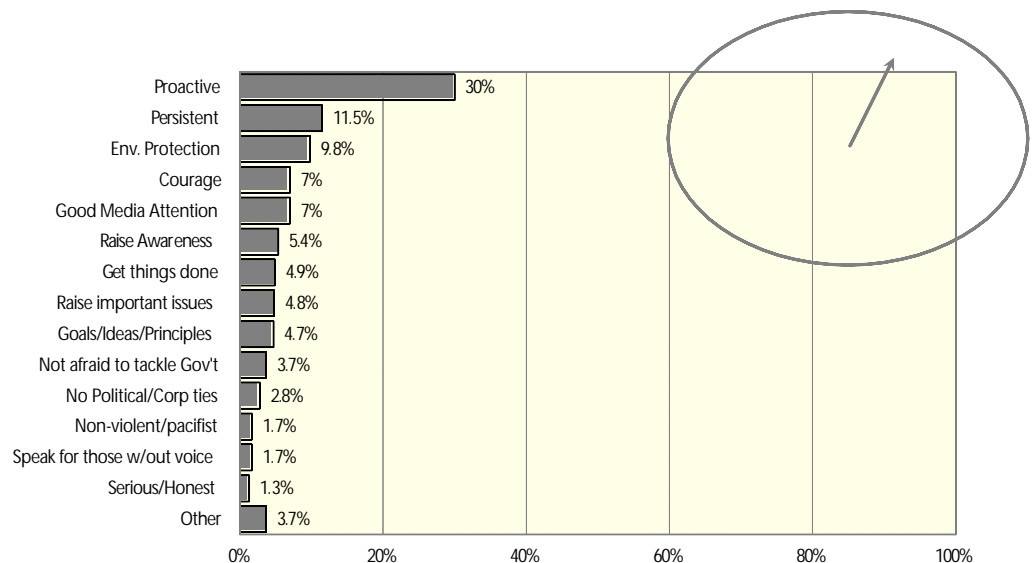
- ▶ Interpretation of Results
- ▶ Presenting results
- ▶ Sharing the results

PRESENTING RESULTS

- ▶ It is easy to become overwhelmed with too much information so focus on the research questions and only present the information which answers those questions.
- ▶ Choose a format which will highlight the key result.
- ▶ Keep it simple
- ▶ Pictures are worth a thousand words

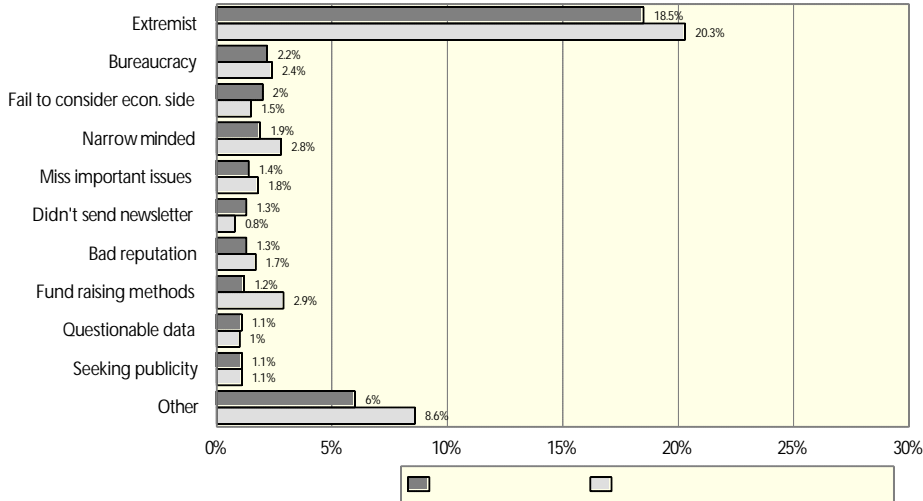
The following charts illustrate how data can be presented.

Example: Presenting Open-end Responses Things Respondents Admire Most About Organization



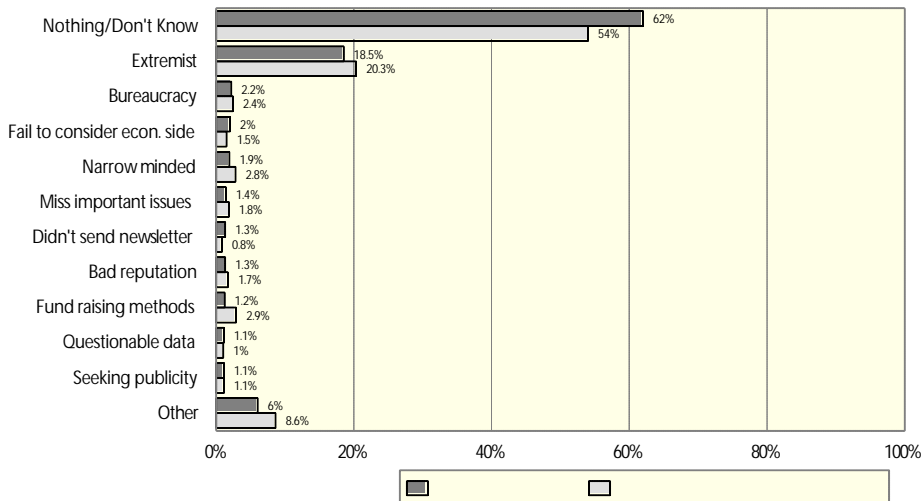
Example: Misleading Results

Things Respondents Dislike About Organization



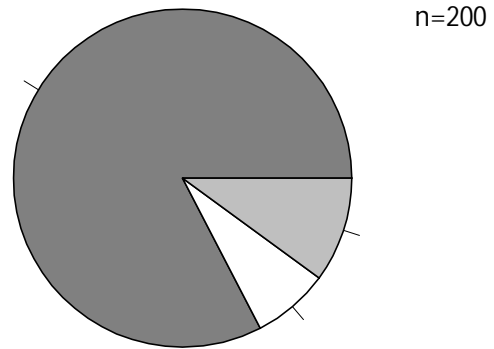
Example: How the information Should be Presented

Things Respondents Dislike About Organization



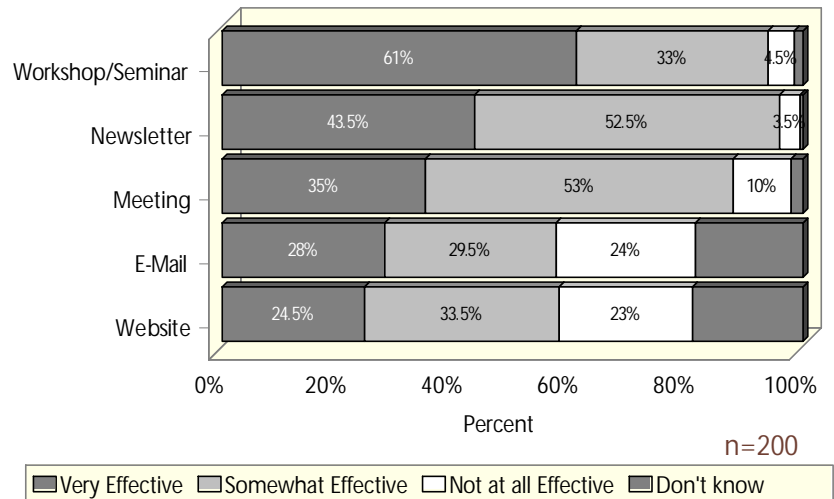
Example: Pie Chart

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



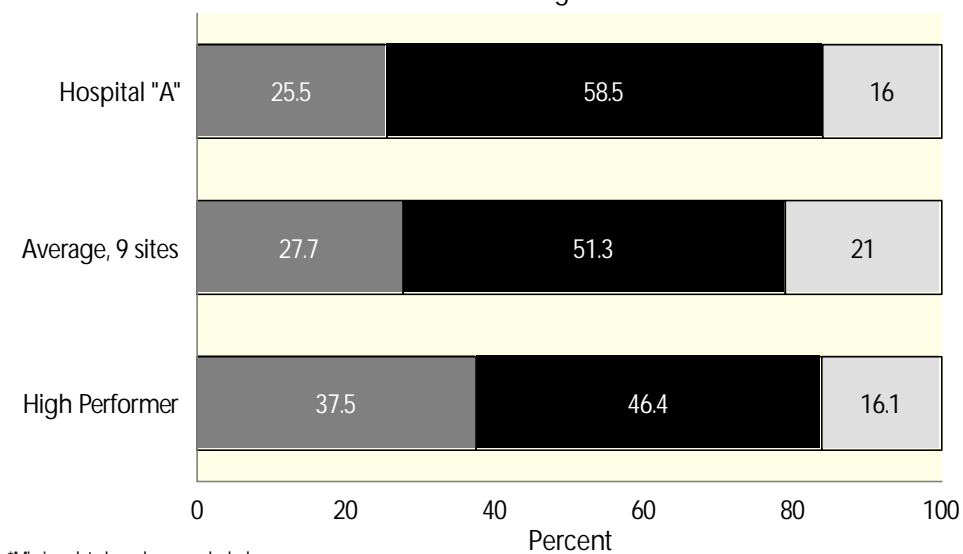
Example: Stacked Bar Graph

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

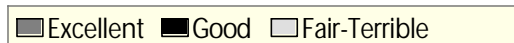


Example: Collapsing Response Categories

Overall Quality of Care and Services
Benchmarking Data



*Missing data have been excluded



9 sites, n=975*
Hospital "A", n=119*

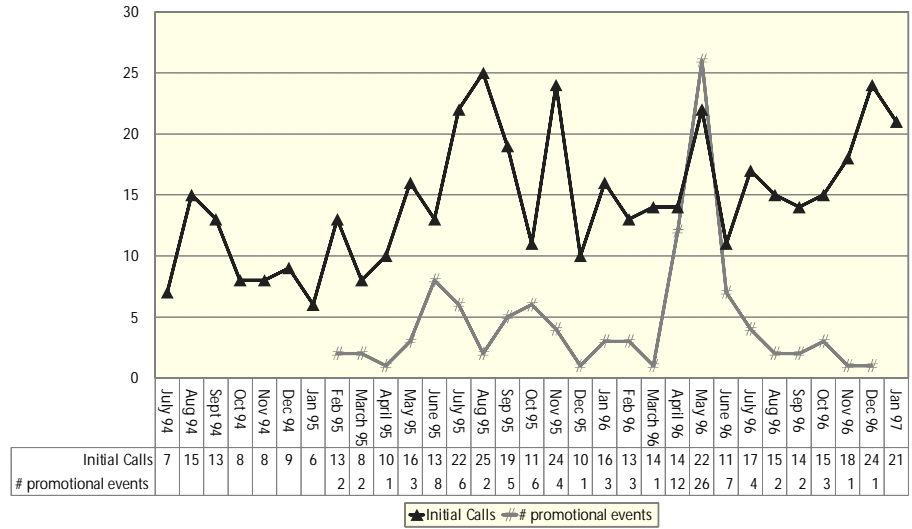
Response Rates for Each Province

	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



Step 12 *Take Action*



TAKE ACTION

- ▶ Taking action refers to implementing the changes suggested by the results of your survey.
- ▶ It is important to take action and implement changes in order to make improvements to 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 which address the outcomes of your survey.
- ▶ Prioritize those changes which are most important and feasible to implement.
- ▶ Set up an action plan to implement the recommended changes.
- ▶ Implement the changes.

Step 12: Take Action

- ▶ How to decide which actions to take

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B

Worksheets

STEP 1—CLARIFY PURPOSE OF THE SURVEY

Description of Program

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.....
.....

Why do you want to do the survey?

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.....
.....

What are your research questions? What specifically do you need to know?

- 1
- 2
- 3
- 4
- 5

How will the results be used?

.....
.....
.....

Who are your stakeholders and what are their interests?

Stakeholders	Interests
.....
.....
.....

Describe the population of interest

Age	Gender	Ethnicity
.....
Where do they live		
.....		
The best to communicate with them		
.....		
The best way to reach them		
.....		
Are they similar or different?		
.....		

List the issues which need to be explored:

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STEP 2—ASSESS YOUR RESOURCES

A. What resources are available to conduct the evaluation?

Staff

- Focus group moderator
- Transcriptionist
- Data entry person
- Telephone interviewers
- Data analyst
- Report writer
- Word processor
- Questionnaire writer

Information

- Sample information:
- Names
- Phone numbers
- Addresses

Supplies

- Audio and/or video tapes

Equipment

- Computer with:
- Word processing software
 - Qualitative analysis software
 - Photocopier
 - Telephones
 - Focus group room
 - Sensitive tape recorder

Budget (\$ available for evaluation)

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Source 1

.....
Source 2

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Source 3

Other special skills of staff/volunteers

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Other resources available

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