

# Designing the Data Collection Process

## STEP 3

Step 2 asked you to produce a logic model that included clarifying the strategy or theory of change connecting the objectives, activities and expected results of the program. The model is the basis for a list of changes or indicators that can be observed or measured.

Step 3 discusses methodology and means of collecting data about indicators of change and relevant factors in order to answer questions about program implementation and effects. More detail appears in subsequent steps.

Decide on evaluation methods

Seek out data sources

Make data collection accessible and convenient for collectors

Gain participant/parental support & protect confidentiality

## 3.1 Decide on evaluation methods

There are several alternative methods for evaluating the effectiveness of a particular program or program element. Determine which are most suitable for the program situation.

### Experimental studies

#### *the ideal for social science research*

With rigorous standards that include:

- randomized selection of people to receive a program,
- matched group characteristics of participants and non-participants,
- a degree of blindness so that participants do not know what elements are being tested and researchers do not know whether data come from participants or non-participants.

Encouraged for research purposes

- not yet common for evaluating community prevention and intervention programs
- usually involves the assistance of academic institutions or research departments of large agencies

### Need an example?

- In cases such as agencies with sufficiently high case loads or schools, it has been possible to *randomly select* people to participate, or not, in a program. Ensuring that evaluators are blind to whether data apply to participants or non-participants is still a concern.

## Sampled studies

- when large numbers are involved, as in national, multi-site programs, it may be necessary to **sample** participants, i.e., select a part of the population to represent the whole population. (See Glossary for Statistical samples)

Comparing participants to non-participants is problematic because of possible selection bias: whatever factors made participants decide to join a program in the first place may make them different from the comparison group of non-participants.

## Quasi-experimental studies

- more common for community groups—compares a group of participants to another group of people with similar characteristics outside the program.

## Group comparisons

- appropriate within a multi-site program if program curriculum, delivery and characteristics of participant groups are the same.

Programs may compare different elements of a program, e.g., when a program introduces a bullying awareness presentation for one session but not to a comparable group in the same program.

## Quantitative and qualitative research

### Quantitative research

- uses measurable, quantifiable data and mathematical formulas or statistics
  - Community groups most commonly use basic statistics, e.g., percentages and averages that can be turned into graphs and charts to easily show patterns of characteristics and behaviour.

- basic tools are data collection forms such as questionnaires, standardized tests and scales
- requires careful data collection, analysis and statistical methods
- findings can be used to predict similar outcomes in similar circumstances

### **Qualitative research**

- uses descriptive explanations and narrative to describe phenomena that cannot be measured easily
- provides context of a particular place and time
- may not be comparable or generalized to other or larger groups of people
- basic tools: interviews, open-ended questions, focus groups and observation notes
- gives respondents more freedom to bring up points or issues in their own words which are important to them but may not have been considered by the program developer or evaluators
- especially helpful for development or pilot-testing of programs, processes or questionnaires

### **Content analysis**

- technique for systematically pulling meaningful data from qualitative data sources,
  - e.g., volunteer observations, interview notes, focus group discussions, personal narratives and participants' comments.
  - readily available computer software packages systematically search out meaning beyond the easily recognizable anecdote
  - manual analysis possible with smaller amounts of data

Quantitative and qualitative research can both be used to good effect in community program evaluation

### **Methods:**

- 1) look for topics and patterns to emerge from the material itself

**OR**

- 2) develop a list of topics or themes first, then code and sort answers accordingly, adjusting topics to suit the information and level of detail wanted.

Ideally, two or more people discuss the probable topics then analyze data independently and compare results to overcome individual bias about importance and priorities

Some program effects may be short lived, some more long lasting, others may be delayed or perhaps even increase over time.

## Time-dependent data collection

- techniques for measuring the extent of change in a participant
- assesses where a participant rates in terms of objectives at the end of a program
- commonly a pre- and post-test method, where programmers obtain the same type of data about participants at the start of a program and again after it ends
- may include additional data collection, periodically during long programs and/or additional follow-up,
- may also assess further characteristics of participants which could also have shown change
- data collected with a standard set of questions in an interview, a custom questionnaire, standardized scale or a combination of all three

## Formative and summative methods

- complement to pre-post-test methods
- formative methods compile data over time to show development
- summative evaluation is a one-time test of the final outcome

## Follow up evaluation

- evaluations that follow participants or gather data about them over a longer time frame after the end of the program, or over several sessions
- likely to increase evaluation knowledge
- can be difficult and costly to trace and re-establish contact with participants
- try to establish a reliable method for contacting people at the outset

Think carefully about the type and timing of effects which you can expect from your program, and this will guide the type of evaluation methodology which will work best for you.

Some evidence suggests that effects of programs are generally short lived unless they are somehow reinforced by booster programs or other interventions.

## 3.2 Seek out data sources

### Data assessment

It is helpful to prepare a plan showing the process of evaluation and means of data collection to determine what you have and what you need. (See R5 & R6 in Appendix)

Assess potential data in terms of:

**Usefulness** What information will be provided?

How will the data be used to answer an evaluation question?

Can the data be used to corroborate or strengthen data from other sources or fill gaps?

**Ease of collection** What do you have to do to get the data?

Is the data in a form that makes it easy to extract the necessary information?

**Cost** Is there a cost for obtaining, handling or transforming data?

e.g., amalgamating records from multiple sites, photocopying, electronic data entry, programming?

**Sensitivity** Will permission be needed to obtain data or safeguards be needed for use by volunteers/staff?

**Credibility** Is the data accurate and seen as credible by others, especially stakeholders?

### Usefulness of data

Consider what can be learned from existing program records:

- **attendance records** of participants recorded by individual name provide:
  - overall sustained participation rates,
  - consistency and duration of attendance,
  - data that should be associated with levels of effectiveness
- **registration records** provide
  - demographic information for comparison purposes and targetting
  - contact information for follow up.

- **intake interviews** provide
  - baseline information about extent of knowledge, achievement prior to program participation for comparison with post-test.
- **intake questionnaires** asking why participant joined or how they learned about the program can provide data for comparison with non-participants.
- **attendance records** correlated with data about age and gender
  - can show overall patterns among sessions and multiple sites about age groups attracted or not attracted to the program

### Need examples?

Examples of ongoing or periodic record-keeping

- attendance records by full name
- checklists of participation in activities
- checklists, badges, tests, lists of program achievement , e.g., skill levels
- volunteer notes from observations, with systematic categories, e.g., social skills, “following instructions”, “volunteering assistance”, “conflicts with peers”
- tutors’ workbooks, logs
- notes of regular volunteer/staff meetings to discuss observations

## 3.3 Make data collection accessible and convenient for collectors

Usefulness of records for data collection depends not only on planning but on their completeness, consistency and accuracy.

### Simplify the collection process

- ensure as much consistency as possible,
- provide sufficient time and staff to allow timely, on-site recording of data, observations etc.

### Use trained collectors

- provide training for special skills, e.g., interviewing techniques, facilitating focus groups,
- or hire experienced volunteers/personnel

The old computer adage of ‘garbage in, garbage out’ applies equally to data collection and evaluation.

## Ask for regular feedback

- what is working well
- what procedures need to be modified to ensure good data collection.

## Monitor data collection

- check regularly that data is being collected in the form requested
- make timely adjustments if difficulties or gaps are apparent

## External data sources

- What data would be helpful?
  - to evaluate broader program objectives or
  - to add to or confirm data from internal sources, e.g., family, classroom, neighbourhood characteristics
- Assess the factors mentioned previously (usefulness, ease of collection, cost, sensitivity and credibility)
- Regarding ease of collection, consider convenience for informants as well as data collectors
  - timing of interviews, surveys, data pick-up, venues, permission from parents and authorization of superiors, other authorities (principal, social agencies.) Agencies that depend on teachers to complete questionnaires find data collection more difficult if the timing coincides with periods when teachers are busy with exams and marking.
  - police or other municipal bodies may have useful data to use as baselines for neighbourhood profiles but it may be time-consuming to find the right channels and obtain access.

A welcoming atmosphere, time to chat with parents after the program, approachable, multi-cultural, multi-lingual volunteers and staff, a suggestion box, telephone 'progress' chats, inclusive programming, outings and get-togethers with parents are all methods used by some programs to include parents and make it easier to include them in program evaluation.

## Need examples?

Examples of possible external data and uses

- school attendance records could show program effects re. increased school engagement leading to improved attendance, fewer skipped classes
- school promotion/report data could show improved academic performance, possibly related to, e.g., literacy, homework completion, tutoring programs
- school intake data could show community rates of transiency for context with programs building school-community links
- community data e.g., fire and police calls for rates of community dysfunction, disturbance related to community-building, youth pro-social programs
- tenants' association, condominium association data, e.g., incidents of vandalism as above
- public health data re. incidence rates of problems, health concerns related to specific initiatives, e.g., teen smoking, eating disorders, teen pregnancy
- national youth survey data – context/comparison figures on a variety of characteristics related to family functioning, recreation, substance use, education, employment etc. (Ontario Child Health Survey (OCHS), National Longitudinal Survey of Children and Youth (NLSCY).)
- census data can provide aggregate information on neighbourhoods

## 3.4 Gain participant/parental support & protect confidentiality

### Provide appropriate information

- at the beginning of a program or each session
- explain what information will be collected (and questionnaires they and/or their children will be asked to complete)
- that activities will be monitored as part of program evaluation
- information you wish to collect outside the program about individuals, (type of information, informants, purpose, eventual destination of data )

### Obtain consent

- tailor explanations or translate written material so it is easily understood by all participants and/or families.
- Check requirements for data collection:
  - schools may require written parental consent before releasing any data or permitting teachers to comment on students
  - the active support of leaders in an organization, such as school principals, and of opinion leaders in a community can increase cooperation for data collection
  - parental cooperation is more likely if parents know what to expect and are assured that their opinions and data about their families will be kept confidential and/or anonymous.

### Protect confidentiality

- develop a system to provide security and protect confidentiality for any data collected e.g. password protection on computers, locked filing cabinets (See Step 6)

