



Programme Manager's Planning Monitoring & Evaluation Toolkit

Division for Oversight Services

August 2004¹

Tool Number 5 : Planning and Managing an Evaluation

Part III: The Data Collection Process

I. Introduction

The toolkit is a supplement to the UNFPA programming guidelines. It provides guidance and options for UNFPA Country Office staff to improve planning, monitoring and evaluation (PM&E) activities in the context of results based programme management. It is also useful for programme managers at headquarters and for national programme managers and counterparts.

Part III of tool number 5 discusses the “how” of programme evaluation, namely the data collection process, including determination of data collection methods, data analysis and interpretation. The content is based on a review of evaluation and other literature from bilateral and other development agencies such as such as Danida, Management Sciences for Health, Save the Children, UNFPA, UNICEF, USAID, and the W.V. Kellogg Foundation.

II. Determining information needs

Once the evaluation purposes, objectives, questions and standards for assessing the programme have been selected², **the adequacy of existing information** to provide answers to the evaluation questions which meet the selected measurement standards **should be reviewed**. Up to date programme results statements (outputs, outcomes and impact) and corresponding indicators as stated in the programme results and resources frameworks (RRFs) are some of the readily available information on standards established for UNFPA's programmes and their components. It is important to ensure that indicators and means of verification are regularly reviewed and updated to enable effective assessment of programme progress and performance.

¹ This tool was first published in May 2001.

² For a detailed discussion of these concepts, see Tool Number 3: Purposes of Evaluation and Tool Number 5, Part II: Defining Evaluation Questions and Measurement Standards.

Additional information to be used by the evaluation, including analysis of implementation processes to achieve planned results, can be obtained from programme work plans; progress and evaluation reports; field monitoring visit reports; technical assessments and survey reports; clinic statistics; research reports; government policy documents and the like. Analysis of existing data can be helpful to refine evaluation questions, identify informants for subsequent interviewing, develop interview protocols, and determine what data important to the evaluation is missing and should be collected by the evaluator(s). **Box 1** highlights some useful criteria for determining the need for additional data.

Box 1. Useful questions to help determine the need for additional data.

- What level of detail is required? What difference would it make if additional information is or is not obtained?
- How will the additional information be used? It is important to collect only the information, which will be used and to use all the information collected.
- How credible are different types of data to the intended users of evaluation results? The level of credibility of data sources and data collection methods determines the acceptance and use of evaluation conclusions and recommendations by the intended users.
- When is the information needed? Time constraints may determine the length and nature of additional data collection exercises.
- What resources are available for the evaluation? The availability of expertise and financial resources determines the sophistication of additional data collection.

Source: Adapted from UNICEF, 1991.

III. Determining methods for collecting additional data

The next step is to identify how to collect the additional data required. **Quantitative and qualitative data collection methods** as well as **deductive and inductive analytical approaches** can be used for this purpose.

Quantitative and Qualitative data collection methods include:

- ⇒ questioning people through individual and group interviews such as focus group discussions and community interviews;
- ⇒ conducting surveys;
- ⇒ observing people, processes, objects, conditions, and situations.

Annex 1 further describes data collection methods.

Quantitative and qualitative data collection methods each have their strengths and weaknesses and are suited to answer different types of questions as highlighted in **Table 1**.

Table 1. Characteristics of Quantitative and Qualitative Data Collection

	Quantitative Methods	Qualitative Methods
Use	To numerically measure “who, what, when, where, how much, how many, how often”	To qualitatively analyse “how and why”
Examples	Standardized interviews; surveys using closed-ended questions; observation.	Free and guided interviews (including focus group); surveys using open-ended questions; observation; interpretation of documents.
Strengths	<ul style="list-style-type: none"> ▪ Provide quantitative, accurate and precise “hard data” to prove that certain problems exist ▪ Can test statistical relationships between a problem and apparent causes ▪ Can provide a broad view of a whole population ▪ Enable comparisons ▪ Establish baseline information which can be used for evaluating impact. 	<ul style="list-style-type: none"> ▪ Useful when planning a programme concerned with social change ▪ Provide a thorough understanding of programme/project context in order to interpret quantitative data ▪ Provide insights into attitudes, beliefs, motives and behaviours of a small sample population (families, communities) ▪ Establish baseline information which can be used for evaluating qualitative outcomes (changes in knowledge, attitudes, behaviours, institutional processes etc.) ▪ Useful in case of money and time constraints ▪ Useful for getting feed-back from stakeholders.
Weaknesses	<ul style="list-style-type: none"> ▪ May be precise but not measure what is intended ▪ Cannot explain the underlying causes of situations. 	<ul style="list-style-type: none"> ▪ Are generally not representative; do not allow generalizations ▪ Susceptible to biases of interviewers, observers and informants.

Sources: UNICEF, 1991; Gosling, 1995. USAID TIPS Number 2, 1996.

In answering evaluation questions, to avoid dependence on the validity of any one source, it is highly recommended to use a combination of different types of qualitative and quantitative data collection methods such as review of statistics, small-scale surveys, interviews and observation (also called **data triangulation**). Observation is an invaluable methodology to collect data that surveys and interviews cannot accurately capture. For instance, observation is necessary to assess client/provider or

student/teacher interaction on sensitive subjects such as sexual and reproductive practices. Relying only on surveys and interviews in this situation may not yield accurate information as respondents tend to report ideal not actual behaviours.

Similarly, carefully study of various materials produced by the programme such as IEC materials (on sexuality, HIV/AIDS prevention etc.), training modules, policies, and guidelines, can provide valuable information and insights on how the issues are tackled. For example, by reviewing IEC materials, an evaluation of a UNFPA funded HIV/AIDS prevention project found that brochures designed to increase awareness on ways to avoid becoming HIV infected did not mention condoms but recommended that “people not go dancing in places where one can catch HIV/AIDS!”

Finally, quantitative surveys do not enable exploration of underlying causes. Thus, a combination of methods provides a more complete analysis of the subject matter being evaluated thereby enhancing the credibility of the evaluation conclusions and recommendations. **Box 2** summarizes a few criteria to guide selection of methods to collect additional evaluation data.

Box 2. Criteria for selecting data collection methods

- Determine which data-collection methods best answer key evaluation questions.
- Tie method selection to available resources. This may mean revising the evaluation design and methods, or determining other options to stay within budget. It may also mean finding additional resources to fund the most effective and useful evaluation design.
- Choose methods, which will facilitate the participation of key programme stakeholders in the evaluation.
- Strengthen the credibility and usefulness of evaluation results by mixing evaluation methods where appropriate.

Source: W.K. Kellogg Foundation, 1998.

Evaluator(s) are not only concerned with what data collection methods to use in order to adequately address evaluation objectives and question. They also need to select a certain analytical approach to gathering information. When using a **deductive** approach, evaluator(s) formulate hypothetical answers to the evaluation questions at an early stage of the evaluation process based on available information and the evaluator(s) accumulated knowledge of the subject matter being evaluated. Data is then collected to confirm or refute these hypotheses. When using an **inductive** approach, the evaluator(s) start with an open, questioning mind. They gradually uncover issues and themes through iterative field observation, interviews and data analysis thus leading to a deeper understanding of the subject matter.

While most evaluations rely on a combination of the two approaches, a deductive approach would be suitable for addressing evaluation objectives of efficiency and effectiveness. A deductive approach would, for instance, be used to examine whether the best results were achieved with the inputs provided and activities implemented and whether the planned results were achieved. An inductive approach would be very useful for addressing evaluation objectives of relevance, impact and sustainability. It is particularly useful for evaluating socio-cultural aspects of a programme because there is limited knowledge about the cause-effect relationships among programme inputs, outputs and outcomes.

IV. Analyzing and Interpreting Data

The evaluation information collected must be described, analyzed, interpreted, and a judgment made about the meaning of the findings in the programme context. Interpretation involves looking beyond the raw data to ask questions about what they mean, what the most significant findings are, and what conclusions and recommendations should be drawn from these findings. A few basic techniques for organizing and analyzing data are described below.

Quantitative Analysis

Quantitative data analysis interprets the numerical findings considering the programme context. As implementers of programme activities are most knowledgeable about the context, they should work together with the evaluator(s) to assess whether the figures make sense; whether they adequately reflect programme results; what possible explanations are for unexpected figures; what conclusions and recommendations can be drawn from the figures.

Qualitative Data Analysis

While some accounts resulting from in-depth interviews and focus group discussions are stand-alone illustrations of important themes of the evaluation, it is, in most cases, valuable to analyze qualitative data more systematically.

Analysis of qualitative data from interview transcripts, observation field notes or open-ended surveys can identify similarities across several accounts, as well as directions, trends and tendencies. Data can be categorized into recurrent themes and topics that seem relevant to answer the evaluation questions and to develop new or test already selected hypotheses.

However, evaluators run the risk of drawing hasty conclusions and making generalizations when breaking transcripts and field notes up into thematic categories. They can avoid this problem by writing case studies and narrative summaries, which highlight the context and particular characteristics of key pieces of the programme being evaluated.

Another problem frequently encountered when analyzing qualitative data is the excessive focus on “quantifying” qualitative data and interpreting qualitative data as if it were quantitative data. For example, when analyzing and interpreting focus group discussion data, some evaluators tend to tabulate the responses and report on them in terms of ratios and percentages rather than exploring further the

information, ideas, opinions and attitudes which can help answer the evaluation questions “why?” and “how?”

Values and Biases

Biases and values inevitably influence both quantitative and qualitative data analysis. Evaluator(s) control for biases and values by **triangulating** multiple types of data (quantitative and qualitative), data collection methods, data sources, and perspectives or theories to interpret the data for instance by involving stakeholders in analyzing and interpreting the data. Evaluator(s) can also ensure that they pay attention to the influences of biases and values through an ongoing process of writing descriptive memos about the evaluation process, their data, and their interpretations.

Annex 1. Data Collection Methods

The following list and description of data collection methods is not intended to be exhaustive. It is rather an overview of the key characteristics of the most commonly used data collection methods. These may be applied not only for evaluations but also at other stages of the programme cycle such as situation analysis, programme design, monitoring and reviews. Each method may be explored further in the referred sources.

A. Review of existing programme and other documents.

1. Programme specific information such as reports of programme progress, field monitoring visits, programme reviews, surveys, research and evaluations.

Such documents enable the evaluator to learn about the history, context, results, and outcomes of a particular programme. They also provide clues about important shifts in programme development and implementation. A document review may also be a good way to formulate questions for use in a survey or interview.

2. Other information not directly related to the programme such as research studies; government data such as clinic based statistics; and evaluations of similar programmes and projects. Evaluation databases such as the UNDP CEDAB and IFAD EKSYST³ are good sources for increasing knowledge of lessons learned on issues which are present in all development programmes such as gender, capacity-building, and collaboration with NGOs.

It should be noted that written documents do not necessarily provide comprehensive or correct answers to specific problems, as they may contain errors, omissions, or exaggerations. They are simply one form of evidence, and should be used carefully and together with other types of data.

B. Questioning People.

1. Interviews such as Key Informant, Focus Group Discussion and Community Interviews, and Nominal Group Technique.

General Characteristics

Interviews, together with document reviews, are the most frequently used data collection method in UNFPA evaluations. *Unstructured and guided interviews yield qualitative data.* In unstructured interviews, the interviewer's only guide are the evaluation objectives. Unstructured interviews are a good tool for exploring the opinions of respondents and uncovering unexpected factors. In a guided interview, the respondent is asked to provide information about items on a prepared checklist.

³ Further information on these databases can be found on the IFAD and UNDP evaluation web sites at http://www.ifad.org/list_eval.asp and <http://www.undp.org/eo/index.htm> respectively.

Standardized interviews yield quantitative data. They use a questionnaire with a fixed number of questions and sometimes a pre-selected range of possible answers.

In general, the more open-ended the interview the more deeply the respondents' feelings and perspectives can be understood; the more structured the interview, the more comparable the data. Many reports based on questionnaires provide an array of facts (percentages, breakdowns) but shed little light on people's motivations that could be built on to improve practices.

One of the first steps in interviewing is to identify knowledgeable informants, people who can provide pertinent and reliable information. Informants can be clients at service delivery points, programme implementing partners, community members, local leaders, politicians, or health professionals. Depending on the type of information needed, informants can be interviewed individually or in groups.

In-depth Interview

If the evaluator(s) are concerned about maintaining the informants' anonymity or simply want to make sure that they feel free to express controversial ideas, it is best to interview informants individually. This also allows the evaluator(s) to compare various perspectives of an event, which is particularly useful when exploring sensitive topics.

A key informant interview is a form of in-depth interview often used. Key informants are selected for their first-hand knowledge about the topic of interest. For example, the head of an HIV epidemiology unit may act as a key informant on information relating to the incidence of HIV/AIDS. Traditional birth attendants would be key informants for information on traditional management of pregnancy and delivery⁴.

Group Discussion

When confidentiality is not a concern, and the evaluator(s) are interested in quickly sampling a range of opinions on a topic, a group discussion is preferable. There are several types of group discussions. Focus group discussions, community and other types of group interviews are among those frequently used.

A *Focus group discussion* is an inexpensive, rapid appraisal technique through which a facilitator guides 7-10 people in a discussion of their experiences, feelings and preferences about a topic. The facilitator raises issues identified in a discussion guide and uses probing techniques to animate the discussion and promote in-depth reflection among focus group participants. Sessions typically last one to two hours. The facilitator's discussion guide should contain few items thereby allowing some time and flexibility to pursue unanticipated but relevant issues. In order to maximize exchanges among focus group participants they should share certain common characteristics, i.e. be of same sex, age group, and social background and have similar concerns. Many participants in focus group

⁴For a stepwise explanation on how to conduct key informant interviews, consult TIPS Number 2, 1996 at http://www.dec.org/usaaid_eval/#004

discussions find the interaction stimulating and mention things they would not have thought of individually⁵.

In community interviews, which usually take the form of community meetings open to all, interaction is between the interviewer and the participants. Such meetings are susceptible to manipulation from the more powerful members of the community and are less suitable to discuss sensitive issues.

Nominal Group Technique

In this technique, from five to seven people are asked by a leader to generate ideas on a single topic. Through discussion, a consensus is reached on a list of most important ideas. A single session, which deals with a single question, usually takes about 60-90 minutes. The nominal group technique was developed to facilitate efficient group decision-making by busy private sector executives. It may also be useful in evaluation, particularly when groups composed of experts, community members, or programme staff are making recommendations for ongoing programmes.

Box 3. To ensure reliability, validity and avoid bias when questioning people:

- Pre-test interview guides and questionnaires;
- Ensure that the group of key informants selected include all the groups which can provide information of significance for the evaluation;
- Assess the reliability of informants. Their knowledge, credibility, impartiality, willingness to respond, and the presence of outsiders who may inhibit their responses are important factors;
- Check investigator bias, including tendencies to concentrate on information that confirms preconceived notions and hypotheses;
- Be systematic in note taking by recording the exact words, facial and body expressions descriptively rather than analytically, and trying not to let own perceptions of what is being said and expressed interfere while recording;
- Check for evidence that calls into question preliminary findings and thus bring out issues which may have been overlooked;
- Get feed-back from informants on major findings.

Source: W. K Kellogg Foundation, 1998.

⁵For step-wise guidance on how to conduct focus group discussions consult TIPS Number 10 at http://www.dec.org/usaaid_eval/#004

2. Surveys

There are several types of surveys:

Censuses: a complete enumeration of all units in a population.

Formal large-scale sample surveys (for instance DHS surveys): a randomly drawn representative sub-group from which researchers generalize about the whole population.

Informal small-scale sample surveys (for instance KAP surveys): a small non-random (such as purposeful selection of people in different categories on the basis of easy accessibility) sample of 30-50 individuals who are asked a few questions (10-20).

Large-scale technically complex surveys should be avoided in programme evaluation as they are expensive and time-consuming. Informal, small-scale sample surveys can, however, provide useful quantitative data, for instance, on use of and access to RH services to complement other qualitative evaluation data.

Survey questions can be open-ended or closed-ended. Open-ended questions might ask: How do you feel about the program? What do you want to see happen in your community? Open-ended questions provide relatively rich information about a topic and allow participants to report thoughts, opinions and feelings. However, there are disadvantages. Sometimes people are reluctant to express opinions, or the survey may be time-consuming to complete and analyze.

Unlike open-ended questions, closed-ended questions provide discrete, multiple-choice responses from which the respondent selects the most appropriate answer. For example:

How often do you use our center?

- a. never
- b. a few times a year
- c. once a month
- d. a few times a month
- e. once a week
- f. more than once a week

Closed-ended questions have the advantage of uniformity and easy translation for statistical analyses. Surveys with closed-ended questions can easily be administered to large groups of people and are usually easy to complete. However, they tend to impose a set of fixed ideas or values on the respondent by forcing choices from a limited array of options. As a result, they are less likely to uncover new and unexpected information, and they limit the emergence of in-depth understandings and nuances of meanings. In general, written survey questions are inappropriate if the respondents have low literacy or are unfamiliar with the conventions of survey completion. A survey administered in person might be more appropriate for this population.

A survey is only as good as the people administering it, so care should be given to selecting, training and supervising surveyors.

C. Observation

Evaluator(s) record what they see and hear at the project site using an observation checklist. Observation may be of physical surroundings, ongoing activities, processes and discussions.

Observation may be useful:

- When performance monitoring data indicate that results are not being accomplished as planned, and when implementation problems are suspected, but not understood. Direct observation can help identify whether the process is poorly implemented or required inputs are absent;
- When details of an activity's process need to be assessed, such as whether tasks are being implemented according to standards required;
- When an inventory of physical facilities and inputs is needed and not available from existing sources;
- When interview methods are unlikely to elicit needed information accurately or reliably, either because the respondents don't know or may be reluctant to say;
- To formulate questions which can be asked in subsequent interviews.

It is important to distinguish between observation and interpretation of what is seen. An evaluator should also recognize that even the most passive, unobtrusive observer is likely to affect the events under observation. Just because you observe it, do not assume that you are witnessing an event in its "natural" state⁶.

D. Rapid Appraisal

Rapid appraisal is essentially the use of a mix of the above-described methods in order for decision-makers to obtain timely, relevant, accurate and usable information on development programmes and projects. Key informant, focus group, and community interviews, observation and informal surveys are the methods most commonly used by rapid appraisal⁷.

⁶ For useful guidance on how to improve the quality of direct observation, consult TIPS Number 4, 1996 at http://www.dec.org/usaid_eval/#004

⁷ An example of a rapid appraisal methodology used by UNFPA to assess national execution capacity is described in Evaluation Findings Issue 29, March 2000 available in English, French and Spanish at <http://www.unfpa.org/monitoring/reports.htm>. UNFPA Country Offices have also developed rapid appraisal methodologies for assessing the quality of RH service delivery.

Sources

Gosling, Luisa; Edwards, Mike. **“Toolkits – A Practical Guide to Assessment, Monitoring, Review and Evaluation”**, Development Manual 5, Save the Children, 1995.

Ministry of Foreign Affairs, Danida. **“Evaluation Guidelines”**, February 1999.

Patton, Michael Quinn. **“Qualitative Evaluation Checklist”**, September 2003. Available online in English at <http://www.wmich.edu/evalctr/checklists/qec/index.htm>

UNFPA. **“Population and Reproductive Health Programmes: Applying Rapid Anthropological Assessment Procedures”**, Technical Report Number 39, 1997.

UNFPA. **“Readings in Population Research Methodology - Volume 6, Advanced Basic Tools”**, Social Development Center, Chicago, Illinois. 1993.

UNICEF. **“EVALUATION – A UNICEF Guide for Monitoring and Evaluation – Making a Difference?”**, Evaluation Office, 1991.

USAID. Center for Development Information and Evaluation. Performance Monitoring and Evaluation TIPS. Available online in English at http://www.dec.org/usaaid_eval/#004

“Conducting Key informant Interview”, 1996, Number 2.

“Using Direct Observation Techniques”, 1996, Number 4.

“Using Rapid Appraisal Methods”, 1996, Number 5.

“Conducting Focus Group Interviews”, 1996, Number 10.

W. K. Kellogg Foundation. **“Evaluation Handbook”**, 1998.

This tool is subject to constant improvement. We welcome any comments and suggestions you may have on its content. We also encourage you to send us information on experiences from UNFPA funded and other population programmes which can illustrate the issues addressed by this tool. Please send your inputs to:

**United Nations Population Fund
Division for Oversight Services**

**Daily News Building
220 East 42nd Street
New York, NY 10017**

Telephone: (212) 297-5213

Fax: (212) 297-4938

E-mail: dos@unfpa.org

This tool is posted on the UNFPA website at <http://www.unfpa.org/>