This manual is a tool aimed at helping organisations to monitor and evaluate sexual and reproductive health interventions, whether they be individual projects or part of larger programmes like the EC/UNFPA Initiative for Reproductive Health in Asia (RHI).

The handbook acquaints the reader with concepts and terminology underlying the objectives of the RHI and ICPD/POA, the scope and focus of project monitoring and evaluation and their different functions, the use of a conceptual model for monitoring and evaluation and its relationship with the logical framework and the systems analysis framework. It furthermore elucidates the formulation and selection of appropriate indicators, the sources and methods of data collection, the monitoring and evaluation plan and the use of findings for planning and policy formulation.

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Monitoring and Evaluation of Sexual and Reproductive Health Interventions

A Manual for the EC/UNFPA Initiative for Reproductive Health in Asia

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Preface

The process of monitoring and evaluation is an essential element in any programme that seeks to achieve its objectives in the most effective and efficient way. It is a tool that enables managers to adjust strategies and adapt to the means available, to follow the progress made in project implementation and provide vital information to decision-makers.

The EC/UNFPA Reproductive Health Initiative (RHI) in Asia is aware of the critical importance of this element. From the outset, the RHI has been keen to build an integrated system that will collect, analyse and use solid evidence of practices and approaches that are most effective in improving reproductive health information, education and services. To this end, the RHI uses comprehensive monitoring and evaluation techniques at the programme, country and sub-regional levels.

The RHI coordinates several stakeholders with varied levels of training and different backgrounds from many countries. Although all part of the same initiative, the component projects display some fundamental differences in terms of country specificity, focus, goal and strategy. This creates challenges in developing universal tools for monitoring and evaluation applicable to all RHI projects.

Given these challenges, the RHI is most fortunate to have a set of tools for monitoring and evaluation developed by the London School of Hygiene and Tropical Medicine and the Netherlands Interdisciplinary Demographic Institute specifically for the project. While they may also serve as a model for other programmes, these tools are customised to address specifically the RHI goals and objectives. They are expected to enhance the programme's capacity for information gathering considerably, and ultimately contribute to improving the quality of the programme itself. Their standardisation will facilitate inter-programme comparison, and assist in identification of best practices. They will also serve to foster communication among projects and the collection of accurate data.

The present guidelines give a detailed description of the methodology and concepts that underpin the monitoring and evaluation system designed for the RHI. They provide practical information and clear instructions on how to use the data collection tools of the system. As such they serve to enhance the skills of local NGOs, enabling them to gather efficiently, and interpret sensitively, programme data for the RHI and for their other projects. This is undeniably a critical component in national capacity-building and a sustainable skill that will continue even after the RHI programme has ended.

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Finally, we are grateful to the staff at the Netherlands Interdisciplinary Demographic Institute and the London School of Hygiene and Tropical Medicine, who worked hard to bring this handbook into being.

How to use the handbook

This handbook is a tool aimed at helping organisations to monitor and evaluate sexual and reproductive health interventions, whether they be individual projects or part of larger programmes like the EC/UNFPA Reproductive Health Initiative in Asia. Many handbooks and guidelines have been written on monitoring and evaluation (M&E). What is the rationale for writing another one? The following reasons can be given:

- To emphasise the importance of M&E for effective and efficient project implementation in sexual and reproductive health
- To make clear that monitoring and evaluation have distinct functions
- To illustrate that planning, monitoring and evaluation are interlinked and that the formulation of appropriate logical frameworks can play an important role in project design and implementation, monitoring and evaluation
- To demonstrate the distinction between levels of indicators (input, process, output, effect, impact) and how these relate to the hierarchy of project aims (goals, purpose, outputs, activities); thus facilitating the design of logical frameworks and introducing a way of standardising them
- To create a common understanding of how sexual and reproductive health indicators can best be formulated and selected, and how they can be measured

In short, the handbook acquaints the reader with:

- The concepts and terminology underlying the objectives of the RHI
- Different functions of programme and project monitoring and evaluation
- The scope and focus of monitoring and evaluation of the RHI
- The relationship between the RHI conceptual model for monitoring and evaluation and the use of logical frameworks
- The formulation and selection of appropriate indicators
- Sources and methods of data collection
- The monitoring and evaluation plan
- The use of findings for planning and policy formulation

Who are the guidelines aimed at?

In general, the handbook is intended for the use of volunteers and professionals with varied levels of training and experience in programme and project monitoring and evaluation.

In particular, the guide is meant to be used by project managers and researchers from executing and implementing partners of the RHI, including European NGOs, national NGOs, UNFPA field offices, and organisations operating at district and village level.

The handbook may be used in workshops and training sessions on project design and the preparation of project and programme logical frameworks. It may also be of use to others not directly involved in the RHI, including students, planners, and policy-makers.

Using the guidelines

The handbook is not meant to be read cover to cover. Some of the sections may be more useful and interesting, for example, for project managers or directors of service outlets, other sections for researchers and evaluation professionals, and still other parts for policy-makers.

The handbook contains eight chapters. Background information on the RHI in terms of its goals, objectives and strategy is provided in Chapter 1. Chapter 2 elucidates the concepts and terms useful in reproductive health and particularly useful within the RHI. It handles reproductive and sexual health and rights, gender equity and equality, community participation, quality of reproductive health care, adolescent reproductive health, community participation and NGO management capacity and sustainability.

Chapter 3 describes what is meant by monitoring and evaluation at programme/project level. This chapter also indicates three essential elements for defining the focus and scope of monitoring and evaluation. These are first, a conceptual model that addresses the goals and objectives of programmes and links these to causal paths between key programme components; second, indicators that specify precisely what we are trying to measure; and third, methodologies for gathering and analysing appropriate data. A chapter is also dedicated to each of these elements. Chapter 4 shows how the programme goals and objectives of the RHI can be transformed into a conceptual model. The selection and construction of indicators is explained in Chapter 6, and Chapter 7 elucidates the selection and application of data collection methods, data sources and instruments.

Logical frameworks are a programme design and management instrument that is commonly used nowadays. They contain all the above-mentioned essential elements for monitoring and evaluation. Chapter 5 outlines the logical framework for planning, monitoring and evaluation and brings this framework together with both the framework for systems analysis and the conceptual model of the RHI. Input, process, output, effect and impact terminology are explained and the monitoring and evaluation plan is introduced.

Finally, in Chapter 8, the importance and methods of disseminating and using monitoring and evaluation findings are outlined.

Boxes and Figures

Abbreviations

The following abbreviations have been used in the text:

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
CIDA	Canadian Institute for Development Assistance
EC	European Community
EOC	Emergency Obstetric Care
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
HERA	Health Empowerment, Rights, and Accountability
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development in Cairo
IEC	Information, Education, Communication
IPPF	International Planned Parenthood Federation
IUD	Intra-Uterine Device
LSHTM	London School of Hygiene and Tropical Medicine
M&E	Monitoring and Evaluation
MIS	Management Information System
NGO	Non-Governmental Organisation
NIDI	Netherlands Interdisciplinary Demographic Institute
QQTT	Quantity, Quality, Time, Target
RH	Reproductive Health
RHI	Reproductive Health Initiative
RTI	Reproductive Tract Infection
SM	Safe Motherhood
SMART	Specific, Measurable, Appropriate, Realistic, Time-bound
SRH	Sexual and Reproductive Health
STD	Sexually Transmitted Disease
UN	United Nations
UNAIDS	United Nations AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organisation

Contents

Chapter 1

Background to the Initiative for Reproductive Health in Asia

During the 1994 International Conference on Population and Development (ICPD) in Cairo, representatives of 180 countries committed themselves financially and morally to improving the reproductive health of men and women around the world. Following the conference, the European Community (EC) developed a strategy to tackle the global challenge of reproductive health for all within a more holistic approach. International funds were mobilised to enable local non-governmental organisations (NGOs) to respond to specific local reproductive health needs within the framework of regional projects. As the EC on its own was unable to deal with the full scope of administration responsibilities generated by this strategy, it teamed up with the United Nations Fund for Population Activities (UNFPA).

On 30 January 1997 the EC and UNFPA signed a Financing Agreement, marking the launch of the Initiative for Reproductive Health in Asia - a four-year partnership between the EC, UNFPA and NGOs. More than 60 local organisations, in co-operation with 22 Euro-pean NGOs, are implementing over 40 projects in Bangla-desh, Cambodia, Nepal, Laos, Pakistan, Sri Lanka and Vietnam. In order to help those executing and implementing agencies to attain the desired quality of interventions and to promote a minimum level of harmonisation and cohesion between interventions under the Reproductive Health Initiative (RHI), three projects of a regional dimension were added. Each supports a different aspect of the RHI: communication and publicity support, promotion of gender aspects, and monitoring and evaluation.

1.1 Goal, Objectives and Strategy of the Reproductive Health Initiative

The goal of the RHI is to "enhance/accelerate implementation of the ICPD Programme of Action in South and South East Asia, through interventions of non-profit organisations, with focus on reproductive health and the development of local capacities and participatory mechanisms" (EC/UNFPA, 1997). The specific objectives of the RHI are to:

- Expand access to and improve the quality of reproductive health services in un-served and under-served areas and for vulnerable population groups, and increase community participation and local initiatives
- Develop local capacities for improved management and its integration within primary health care for better quality services
- Strengthen the capacity and sustainability of local NGOs to manage and implement

reproductive health programmes that are coherent and complementary with national policies and interventions
- Promote gender equity and equality in health services, including sexual and reproductive rights

The RHI promotes the development of new structures and the strengthening of existing structures that will enrich the current national health care systems in each of the seven partner countries. In at least two respects, the RHI is treading new ground: firstly, it links international agencies with European and Asian NGOs, enabling each partner to concentrate on those ICPD commitments they have the expertise to fulfil. Secondly, it aims at mobilising the countries' civil societies by making capacity-building of local NGOs an integrated aspect of the RHI. Strengthening the civil society should help to make these efforts sustainable.

The partners made sure that the RHI initiative, despite its complex institutional structure, adjusted to the varying needs of the seven politically, culturally and economically heterogeneous countries. Consequently, different country strategies were developed: four countries focus on adolescent and youth reproductive health (Sri Lanka, Laos, Cambodia, Vietnam), two countries on com-munity-based reproductive health (Pakistan, Nepal) and one (Bangladesh) on improving quality of reproductive health care. In all seven countries vulnerable groups are targeted as a priority. Country strategic frameworks were prepared accordingly, with specific projects in each country addressing the country strategy and objectives. While projects within a specific country are unified by a particular focus, each project has a unique organisational structure and implements varied activities. A summary of the goal and purposes applicable to each of the participating countries can be found in Appendix 1.

To ensure that project activities are well embedded in existing population and reproductive health programmes and policies - thus avoiding duplications and facilitating contacts with national authorities - the country-level RHI process is locally supervised by the UNFPA representative, assisted for day-to-day monitoring and co-ordination by the Umbrella Project Advisor. This advisor co-ordinates the activities of the umbrella project that has been created in each of the countries to promote communication and linkages between RHI projects and other stakeholders. It also helps to strengthen the capacity of the local NGOs.

1.2 Monitoring and Evaluation of the Reproductive Health Initiative

In order to establish an efficient and effective monitoring and evaluation (M&E) data collection system for any programme, it is important at the planning stage to design a clear M&E strategy alongside programme/project aims and objectives. It is equally important to devise a conceptual framework or model that guides the formulation and selection of standard indicators and measurement tools. Planning and monitoring instruments, such as the project logical framework, are valuable to this process and are best applied in a standard manner across projects (Douthwaite and Horstman, 2001).

In practice, uniformity is not always possible. Project-specific M&E systems and varied capacity at project level present considerable challenges to the standardisation of indicators and the establishment of a regional data collection system. Indicators of input, process, output and effect vary, partly as a result of the lack of international consensus on indicators in the field of reproductive health. In addition, differences exist in data collection methods, which range from quantitative methods such as surveys and record-keeping to qualitative in-depth and participatory methods. Differences in how data are aggregated also mitigate against standardisation. For example, age of clients may be collected by single years or in age groups, (such as 15-19 year-olds). The quality of the data may also differ, depending on local capacity to collect, report and analyse information (Horstman, 2000).

As already mentioned, the M&E project is one of three regional projects of the EC/UNFPA Reproductive Health Initiative in Asia. The M&E project designs and co-ordinates monitoring and evaluation of RHI projects and ensures the collection of data from all 40 projects for regional and country analysis. For monitoring and evaluation, four levels of the RHI programme apply:

- Regional level
- Country level
- Project headquarters level
- Service outlet/community-based level

Building on existing project M&E systems designed by partner organisations, the M&E regional dimension project (which is implemented by the Netherlands Interdisciplinary Demographic Institute and the Centre for Population Studies at the London School of Hygiene & Tropical Medicine) has set up a regional data collection system.

The two prime purposes of this regional system are, firstly, to enhance local M&E systems and thereby strengthen project decision-making from grassroots to NGO organisational levels, and, secondly, to inform programme decision-makers at national and regional levels. (Douthwaite and Horstman, 2001)

At the end of the implementation period of the RHI all data will be collated and analysed to provide inputs into an end-evaluation. Routine data will be complemented by qualitative information describing the context within which implementation of RHI projects occurs. The qualitative information includes the collection of non-routine data and an in-depth study conducted in selected countries investigating the role of civil society in reproductive health interventions. These data enable an assessment to be made of how effectively funds have been used by RHI partners to create or improve information and services for vulnerable groups. They will also be used to examine the role of the RHI in enhancing NGO capacity and sustainability. However, evaluation of the RHI in terms of its overall impact on reproductive health is beyond the remit of the M&E project.

Chapter 2

Concepts and Terminology

The stated objectives and purposes of the RHI employ phrases and terms which may not be universally understood. Clear definitions of such concepts and terminology are needed in order to determine whether the interventions undertaken under the auspices of the RHI have been successful in fulfilling their goals. Drawing on a number of international authorities, the following key concepts will be clarified: reproductive and sexual health and rights, gender equity and equality, quality of reproductive health care, adolescent reproductive health, community participation, and management capacity and sustainability of non-governmental organisations (NGOs).

2.1 Reproductive and Sexual Health and Rights

'Reproductive health' is defined as complete physical, mental and social well-being, and not merely the absence of disease and infirmity, in all matters related to the reproductive system and to its functions and processes (HERA, 1998; UN, 1995; WHO, 1998b). In general, it implies that people can enjoy a satisfying and safe sex life and have children, with the freedom to decide whether, when and how often they will have them. From this follows a right to information about and access to safe, effective, affordable and acceptable methods of family planning. It further implies a right of access to health care services which will enable women to undergo pregnancy and childbirth safely and provide the best chance of having a healthy infant. More specifically, this group of rights involves the following:

Reproductive rights are the rights of couples and individuals to:

- Attain the highest standards of reproductive health
- Decide freely and responsibly the number and spacing of their children and to be offered the information and education to do so
- Make decisions about reproduction free of discrimination, coercion and violence

Sexual rights are the rights of all people to:

- Decide freely and responsibly on all aspects of their sexuality, including protecting and promoting their sexual health
- Be free of discrimination, coercion or violence in their sexual lives and in all sexual decisions
- Expect and demand equality, full consent, mutual respect and shared responsibility in sexual relationships

Reproductive and sexual health care includes at a minimum:

- Family planning services
- Prenatal, delivery and postnatal care
- Health care for infants
- Treatment for reproductive tract infections (RTIs) and sexually transmitted diseases (STDs)
- Safe-abortion services where legal, and management of abortion-related complications;
- Prevention of and appropriate treatment for infertility
- Information, education and counselling on human sexuality, reproductive health and responsible parenthood
- Discouragement of harmful practices like female genital mutilation
- Treatment of breast and reproductive system cancers and HIV/AIDS or, where unavailable, a system to provide referrals for this type of care

2.2 Gender Equity and Equality

At the 1994 ICPD, gender equity, equality and empowerment of women were recognised as essential for the elimination of all forms of violence against women, and to enable women to control their fertility. To adopt and institutionalise a gender perspective in reproductive health programmes will take time. It requires the application of gender analysis both in the formulation of policies and in the development and implementation of programmes. Yet so far this has been hampered by an inadequate understanding of how to interpret concepts related to gender issues in different social and cultural contexts. Again, the basic terminology needs clarification (see also CIDA, 1995; ICPD, 1994; HERA, 1998; UNAIDS, 1998; WHO, 1998a). The following are generally accepted definitions:

Sex refers to the biological differences between men and women.
Gender refers to the socially defined roles and responsibilities of men and women and boys and girls. Male and female roles are learned from families and communities and vary by culture and generation.
Gender equality means the absence of discrimination on the basis of a person's sex, whether in opportunities, in the allocation of resources or benefits, or in access to services.
Gender equity means fairness and justice in the distribution of benefits and responsibilities between women and men. It often requires the implementation of women-specific projects and programmes to end existing inequalities.

It is most important that indicators designed to measure the gender implications of any project or programme are disaggregated by sex and preferably by age, socio-economic status and ethnicity. Indicators to measure gender equity and equality will overlap in some cases with indicators of equity and equality in general. An example would be the distance of clients from services, or levels of use of services in different population groups (Liverpool School of Tropical Medicine, 1999).

2.3 Quality of Reproductive Health Care

'Quality' will mean different things to policy-makers, donors, clients and providers, among many other observers and participants in the reproductive health care process. Providers, for example, may be anxious to ensure technical correctness, whereas clients may put greater value on confidentiality and privacy. In general, quality of care is not about reaching targets. Instead it emphasises the creation of services tailored to the needs of clients, and which take into account aspects of gender and life cycle, as well as their social situation.

Attention to quality of care has been growing in the arena of reproductive health, and significant efforts have been made to define criteria and develop methodologies to assess the quality of reproductive health services. Key determinants of quality of care include:

- Professional and technical competence of providers (this addresses the biomedical effectiveness of clinical action)
- Interpersonal skills of providers
- Availability of basic supplies and equipment, and logistics
- Accessibility of services (for example, distance of client to service, level of fees for services charged)
- Quality of physical facilities and infrastructure
- Linkages to other health services, integration of services
- Existence of functional and effective referral systems
- Continuity of care
- Informed decision-making

Certain functional elements are also of central importance to quality of care, and are relevant at various levels in the service hierarchy (hospital, clinic and outreach). They include:

- Staffing
- Training
- Supervision
- Information, education and communication (IEC)
- Record-keeping and management information systems (MIS)

Key elements of quality of care in safe motherhood and family planning programmes are shown in box 2.1 and box 2.2.

Box 2.1

Quality of care in safe motherhood programmes

In this context quality of care encompasses the provision of a minimum level of care to all pregnant women and their new-born babies, and a higher level of care to those who need it, while obtaining the best possible clinical and emotional outcome. This includes using a transparent managerial system (involving clear standards or guidelines), providing care which satisfies users and providers, maintaining sound financial performance, and developing existing services so as to raise the standards of care provided to all women (Campbell and others, 1997).

More specifically, the following quality of care elements of a safe motherhood programme have been outlined (Campbell and others, 1995).

First referral level facilities (district hospitals) to provide:

- Surgical obstetrics (for example, caesarean section)
- Anaesthesia
- Medical treatment of sepsis, shock, eclampsia and so on
- Blood replacement
- Manual procedures and monitoring labour (for example, vacuum aspiration, partograph)
- Management of women at high risk
- Family planning support (including surgical methods for men and women)

Effective referral to include means of:

- Communication (for example, telephone, radio) between staff at peripheral level and at the referral level for medical advice or feedback
- Transportation for complicated cases to referral services
- Coordination of care among levels of health providers (for example, case management protocols)

Information, education and communication strategy aimed at:

- Increasing appropriate and timely use of family planning, prenatal, delivery and post-partum services
- Increasing awareness of danger signs during the maternal period
- Mobilising communities for transporting women with obstetrical problems

Community-based family planning and obstetrics with staff (midwives) or outreach by staff trained to provide:

- Management of family planning and safe abortion
- Case detection of complications or medical problems
- Normal delivery
- Obstetric first aid (for example, initial treatment of eclampsia, skills for manual removal of the placenta)

Box 2.2

Quality of care in family planning services

Donabedian (1988) distinguished two main dimensions to quality: structure and process. Building on his work, Bruce (1990) developed an influential framework for measuring quality of care that includes not only the clinical aspects of family planning services, but also patient-provider interactions and informed choice. Known as the Bruce-Jain framework, it consists of six core elements:

Choice of methods
This refers to the number and types of methods available for different groups such as men, and women who wish to space births.

Information given to clients
Examples of such information are how suitable a method is for a potential user, details on how to use the method and its possible side effects.

Technical competence
Issues as maintaining aseptic conditions, observing protocols and having staff competent at performing clinical techniques are relevant here.

Interpersonal relations between provider and client
This centres on how clients perceive their interaction with providers, for example, the degree of empathy shown in the provider's manner and the amount of time spent with the client.

Mechanisms to ensure continuity
Included in this are ways of encouraging clients to continue effective contraceptive use, such as reminder cards and home visits.

Appropriate constellation of services
Most relevant here is the integration of family planning with maternal and child health, postpartum services or other reproductive health services.

2.4 Adolescent Reproductive Health

The physical and emotional well-being of adolescents in the context of reproductive health includes their ability to remain free from too early or unwanted pregnancy, unsafe abortion, STDs including HIV/AIDS, and sexual violence and coercion. In recent decades it has gradually become clear that huge benefits are to be gained from investing in adolescents. Young people exist in greater numbers than ever before; they face unprecedented social change and are frequently at risk of adverse sexual and reproductive health outcomes. After the 1994 ICPD, where adolescent reproductive health was a key issue, recognition of the special needs of adolescents gathered pace. Adolescent programmes are, therefore, relatively new, and to date there has been little systematic evaluation of their effectiveness in developing countries (Senderowitz, 1995).

Defining adolescence

Adolescence is a time of transition from childhood to adulthood, in which important physical, psychological and social changes take place. The specific characteristics of these changes vary in different cultural contexts. Even biological maturation is subject to change. Some evidence indicates that the age of menarche is decreasing in many parts of the world. Even within the same geographical area and the same social class, a young man and a young woman who are both described as adolescents, may actually be very different ages (Gorgen, 1997). In many areas 15-year-old women are considered old enough to be wives and parents; in others women of the same age are deemed too immature for the responsibilities of marriage and parenthood. No one definition is appropriate to all situations. With those reservations, the following working definitions are accepted as the most useful in practice.

The term ‘adolescence’ is defined as people aged 10-19 years. A distinction is drawn between early adolescence (10-14 years) and late adolescence (15-19 years). The term ‘youth’ refers to those aged between 15 and 24 years, and ‘young people’ covers both age groups, namely all those aged 10-24 years. The term ‘teenager’ refers to those aged 13-19 years. (WHO/UNFPA/UNICEF, 1989)

Marital status is another important dimension in defining target populations for adolescent programmes. In many countries adolescent programmes have evolved to meet the reproductive health needs of young unmarried women. However, in parts of South Asia services for young married couples are also needed.

2.5 Community Participation

‘Community participation’ is a term frequently employed in development rhetoric over recent decades and community participation strategies have been promoted by most of the major aid agencies. However, little consensus exists about the precise meaning of the term and its practical implications for programme implementation. Different interpretations are linked to different development paradigms, thus no single operational definition of community participation can be advanced. Just two of many existing definitions follow:

- "Community participation refers to the involvement of community members and resources, i.e. time money, labour, materials, ideas, as an integral component of programs." (UN, 1999)

- "Community participation is an educational and empowering process in which people, in partnership with those able to assist them, identify problems and needs and increasingly assume responsibility themselves to plan, manage, control and assess the collective actions that are proved necessary." (IPPF and others, 1996)

An outline of the principles underlying community participation that were established by the IPPF International Programme Advisory Panel is given in Box 2.3.

Box 2.3

Seven essential propositions for community participation

- Community participation is *educational* because a "dialogue" - a two-way exchange of knowledge - takes place in the interactions between communities and agencies. The interactions should be characterised by learning through doing.

- Community participation is *empowering* because experience of how to influence, implement and control activities which improve the quality of life is gained by the people.

- Community participation is a *process* because education, empowerment and increasing responsibility require time. Meaningful participation cannot be manipulated within the context of pre-established time limits. Progress can only be made gradually if the changes are to be permanent.

- Community participation must be a *partnership between community and agency* because in most services, especially family planning, there will always be resources (for example, contraceptives), which must be provided from outside the community.

- *Problems and needs must be identified by the intended beneficiaries* and not assumed to exist by the agencies. Only when problems and needs are recognised by the community will participation in programmes be feasible.

- *The community must bear responsibility for planning, managing*, and assessing their actions if they are to control them. This will also ensure maximum self-reliance and continuity of activities when outside support is withdrawn.

- *Collective action* is necessary to address collective problems. It should be undertaken *through an organisational structure which is broadly-based, flexible and ensures continuity of action independent of individual leadership.*

Source: IPPF (1996) (author’s emphasis).

In the context of community participation, three important issues need clarification. The most fundamental is whether community participation is a means to achieve something else or an end in itself. Also crucial is the definition of the word ‘community’. Finally, it is necessary to distinguish between ‘community participation’ and ‘community-based distribution’, expressions which are frequently confused with each other.

Means or ends

Where community participation in a project is envisaged as a means to an end, it enables the organisation to increase its capacity to deliver services and thereby improve its ability to satisfy the needs of that community. Participation, in this context,

is largely passive; people participate in the benefits of the programme and sometimes in its implementation by helping to identify needs and define appropriate services. Where community participation is an end in itself, it implies setting in motion an empowering process that creates a mechanism which enables people to gain increased influence over the use of resources. Here, participation refers not to controlled collaboration, but to a process of empowerment and liberation.

These two perspectives are not necessarily incompatible. Ideally, participation is seen as a continuum: community involvement and mobilisation leading over time to community empowerment, structural change and independent action (IPPF, 1996). A methodology has been advanced to define indicators for participation in health care programmes (Rifkin and others, 1988). It distinguishes five factors that influence community participation: leadership, organisation, resource mobilisation, management and needs assessment. Each of these five factors is measured along a scale ranging from a low to a high level of community participation. The scale grades each factor from 1-5 as follows: narrow/nothing; restricted/small; mean/fair; open/much/good; wide/very much/excellent. Thus the scale for each factor emerges as follows:

- **Leadership wealthy** minority (1) → variety of interests (5)
- **Organisation** created by planners (1) → community organisation (5)
- **Resource mobilisation** small commitment and limited control (1) → good commitment and committed control (5)
- **Management** carried out by professionals (1) → community interests (5)
- **Needs assessment** professional view (1) → community involved (5)

Community

Some people argue that the use of the word 'community' in 'community participation' assumes that a community is definable not only as a geographical entity, but also one that is politically and socially homogenous and conflict-free. Yet many, perhaps most communities are very diverse; even the smallest villages may comprise different ethnic groups with different development objectives. It is crucial to define what is meant by 'the community' in a programme because the existing social and political structures will have an overriding influence on the implementation of a participation project. In many cases, the existing community structure will define who is able to participate and in what way. Care must be taken to ensure an equal and equitable opportunity for participation by as many members of the community as is appropriate, at the same time ensuring compatibility with the existing political structure (IPPF, 1996).

Community-based distribution

A clear distinction needs to be made between 'community participation' and 'community-based distribution'. The latter refers to the distribution of services and supplies through stores, special depots or agents other than clinics, physicians, or medical personnel (UN, 1999). Community-based distribution lacks a crucial ingredient of the participatory approach, in that it does not usually entail the active involvement of community members in the planning, management and financing of the service provision programme and consequently their ability and capacity to influence it. Essentially, it is an extension and decentralisation of a delivery system, whereas community participation is envisaged as a restructuring of that system so that it becomes a support and enabling system for community self-help (IPPF, 1996).

2.6 NGO Management Capacity and Sustainability

Sound management of interventions carried out by NGOs is vital to achieving the reproductive health goals of individuals, communities, governments and donors working within the RHI Asia. Management can be defined in many ways, but it is essentially about co-ordinating the planning, implementation, monitoring and evaluation activities within an organisation. This is, of course, an on-going process in which the results of monitoring and evaluation activities feed into planning activities and so on.

In order to ensure that planning, implementation, monitoring and evaluation activities are carried out, carried out well and carried out on time, NGO managers need to co-ordinate people, other resources and processes. Their job may be summarised as the requirement to manage employees, volunteers, income and finances, equipment and supplies, time, external relations, information, quality and strategy.

Managing employees and volunteers

Employees are, essentially, paid staff. Staff who are not paid (namely, volunteers) in NGOs include, of course, the members of the board of directors, but also those doing any of the jobs that might also be carried out by paid staff. Personnel management includes the following responsibilities:

- Hiring staff for positions, the responsibilities of which are defined in job descriptions and in the organisation's personnel policies
- Providing training for staff in accordance with staff development policies
- Supervising staff and providing feedback to enhance their effectiveness
- Appraising performance
- Providing remuneration for employees according to salary scales
- Setting objectives
- Providing leadership and vision

Managing income and finances

Managing an NGO's income and finances involves:

- Raising income (from donations, dues, fees, contracts or other sources)
- Planning and co-ordinating budgets
- Monitoring and controlling expenditure
- Keeping accounts and ensuring financial rectitude
- Arranging for the auditing of accounts
- Reporting on financial status to donors and others

Managing equipment and supplies

Co-ordinating equipment and supplies for an NGO might include managing a logistics system for drugs, commodities and perishable supplies, and regular maintenance of equipment and facilities.

Managing time

Managers must organise their own and other people's time by facilitating the development of annual plans, schedules and duty rosters, and by setting deadlines for tasks.

Managing external relations

The coordination of an NGO's interaction with the outside world is also a management responsibility. It may be accomplished through:

- Public and press relations
- Political and legal advocacy and lobbying
- Community mobilisation of key constituencies
- Donor relations for enhanced fund-raising
- Advertising

Managing information

A management information system encompasses all management domains (personnel, finances, logistics and so on). It should be designed to collect, analyse and report only such information as is needed for decision-making as part of the assessment and evaluation of programmes, and of planning improvements and next steps.

Managing quality

Seeking to do things well, and striving to improve how well things are done, is an on-going process and requires the setting of agreed standards and protocols in a range of areas (people's skills, physical facilities and equipment, and overall processes and performance). Essential elements in managing quality are:

- Facilitating agreement on what changes are needed
- Motivating personnel and ensuring their ownership of the process and the results
- Measuring achievement and feeding it back towards standards in order to implement the improvement process

Managing strategy

Without strategic direction, an organisation cannot survive in a constantly changing world. To provide such direction, NGO managers with their board of directors must:

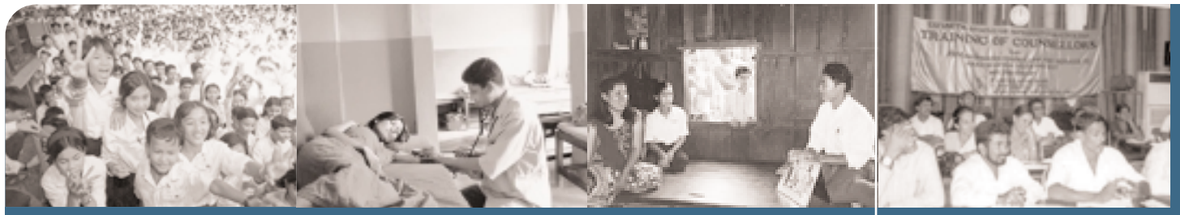
- Develop a strategic vision
- Define the organisation's purpose succinctly in a mission statement
- Write regular strategic plans for the future
- Translate strategic plans into annual plans, project plans and other operating documents

Management capacity

People with the knowledge and skills to facilitate all the above and thereby achieve the specific goals and overall mission of the organisation are essential to a well-managed NGO. An organisation's management capacity is assessed by the extent to which it can do these things.

Sustainability

An NGO will be interested in management capacity for its own sake, but it is particularly interesting to international aid donors because of their concern with sustainability. The term 'sustainability' is often used loosely. For donors, it usually refers to whether the cessation of a particular source of funding will lead to the collapse of the organisation and the end of its activities. A sustainable organisation, for them, is one with the management capacity to develop and broaden the revenue base (to avoid being over-reliant on one or two donors) and actively to strengthen the organisation and its activities in the context of a changing environment. A sustainable organisation or programme does not exist solely as a result of donor funding; rather it seeks donor funding to help it achieve its mission.



Chapter 3

Monitoring and Evaluation of the Reproductive Health Initiative

Evaluation is the application of research procedures to assess and improve the ways in which policies and programmes are conducted, from the earliest stages of defining and designing programmes through their development and implementation (Rossi and Freeman, 1993). The results of evaluation exercises should inform programme management, strategic planning, the design of new projects or initiatives, and the allocation of resources.

Programme management

The results of programme monitoring and evaluation are indispensable for effective programme management because they inform the manager whether the programme is on track, what and where the problems are, and what unforeseen consequences may have occurred. Monitoring the progress of programmes and evaluating the procedures used in their implementation enables managers to take corrective action in good time (Bertrand, Magnani and Rutenberg, 1996).

Strategic planning and project design

The results of evaluation procedures also form important inputs into strategic planning and programme design. Information that links inputs and activities to programme outputs and to changes at the population level can demonstrate what has worked in the past and suggest potential directions for the future. Interventions that have proved to be successful can be scaled up or replicated in future phases of the project or in new programmes, and activities that do not produce favourable results can be phased out. Programme evaluation can also be helpful in exploring the reasons why particular interventions were not effective (Bertrand, Magnani and Rutenberg, 1996).

In short, evaluation should be an integral part of any intervention. For maximum benefit, evaluation procedures should be built into the programme design from the beginning, so that they can provide information to managers over the full duration of the programme. In the current climate of budgetary constraints, evaluation results point to the most rational use of scarce human and material resources to achieve results. (Bertrand, Magnani and Rutenberg, 1996).

Distinguishing between monitoring and evaluation

‘Monitoring’ and ‘evaluation’ are often used interchangeably, but their functions are, in fact, quite different. These functions are determined by a number of factors including coverage (population or project level), the period of measurement (short, intermediate or long-term), and whether association or causality is being measured.

3.1 Monitoring at Programme/Project Level

Monitoring is a routine process used to determine the extent to which a project has been effectively implemented at different levels, in time and at what cost. It is part of the management information system (MIS), and is basically an internal activity. It should be conducted by those responsible for project implementation at every level of the management hierarchy. It should be carried out regularly, for example, monthly, quarterly, half-yearly or annually. Its primary purpose is to achieve the best possible project performance by providing feedback to project management at all levels. This enables management to improve operational plans and to take corrective action in the case of shortfalls and constraints.

The task of monitoring is to track change that occurs over time in inputs, processes and outputs by means of record-keeping and regular reporting systems as well as health facility surveys. The following cases are examples of such changes:

- **Inputs** As part of its project logistics an organisation is required to monitor the number of condoms or injectables it purchases or the number of information materials received for distribution.

- **Processes** As part of managing human resources an organisation is required to monitor the number of midwives who passed a refresher training test, or the number of volunteers recruited for peer counselling.

- **Outputs** As part of managing the response to reproductive needs in the community an organisation is required to monitor the number of pregnant women attending prenatal services, or the number of young men seeking family planning assistance.

It analyses these changes against the project's logical frameworks, workplans, time schedules and budgets. Monitoring can also include measuring changes in immediate project effects. This would include monitoring, for example, the proportion of people in the community who are practising safe sex. (See Chapter 5 for definitions of inputs, outputs, processes and effects.)

Monitoring efficiency

This is a particular kind of monitoring that aims to determine whether optimal use of resources (human, financial and technological resources and time) is being made to achieve programme or project objectives. Programmes can be effective, yet at the same time inefficient. For example, a project may have reached the target number of young people in a certain area by campaigning on the prevention of HIV/AIDS, but used an excessive number of fieldworkers to achieve that result. This means that resources have been used inefficiently. Programme resources are often expressed as costs and costs per 'family planning acceptor', for example, are frequently calculated as efficiency measures, in other words as the inputs required to produce a unit of output (acceptor, beneficiary, etc.). This type of evaluation of efficiency is often confusingly called 'cost-effectiveness'. Cost-effectiveness is defined as the assessment

of relative costs of two or more ways of achieving the same desired outcome.
Monitoring of efficiency often becomes important after the programme has been in operation for some time. In the early phases of a programme, attention usually focuses on achieving a certain level of outputs and effects. After the programme has shown itself to be effective, more attention is paid to increasing efficiency, that is, to deliver the same amount of output with less manpower and lower funds.

Monitoring and supervision

These terms are sometimes used synonymously, and, in practice, supervisory and monitoring activities do overlap to some extent. However, there is a difference. The direct supervisor 'on the floor' carries out daily supervision of project inputs and operational processes, and reports to the project manager. Monitoring, on the other hand, aims to assess the overall implementation of the project at different levels, and focuses not only on inputs and processes, but also on project outputs. It is the responsibility of overall project management and provides feedback to that management.

3.2 Evaluation at Programme/Project Level

The National AIDS Programmes (UNAIDS, 2000) define evaluation as "a collection of activities designed to determine the value or worth of a specific programme or project", that is, it links a particular output or outcome directly to a particular intervention. They distinguish three sequential levels or phases of evaluation: process evaluation, effect or outcome evaluation and impact evaluation.

The first phase - process evaluation

Process evaluation aims to assess:
- Programme/project content
- Scope and coverage
- Quality and integrity of implementation

If the process evaluation reveals that the project is not actually being implemented, or is not reaching its intended clientele, then it is not worth going on to the next phase, namely, effect evaluation. However, if it finds that there has been progress in implementing the programme as planned, then it is worth going ahead and evaluating short-term effects or outcomes.

The second phase - effect (or outcome) evaluation

Once findings from the process evaluation phase are deemed adequate, then the programme/project's immediate or short-term effects or outcomes can be evaluated. With reproductive health interventions, immediate effects or outcomes are often related to behaviour changes and underlying changes in knowledge, attitudes and beliefs.

The main difference between monitoring effects and evaluating effects is that in order to carry out the latter successfully, it is necessary to design special studies. As described

above, effect monitoring simply *describes* changes in effects and cannot alone produce evidence that a specific programme caused the change. To do that, a specific effect evaluation design must be applied.

An example of an effect-evaluation design is a before-after or baseline-endline design. A measure of the desired effect or outcome (for example, contraceptive use or condom use in non-marital sex acts) is taken before the start of the project in the target population, and another measure is taken at the end of the project. Changes between the 'before' and 'after' measures are assumed to be the result of the project. This assumption about causality becomes more convincing if it can be shown that no such change (or less change) occurred in populations *not* served by the project (that is, in control or comparison populations). Sometimes national data can be used for this purpose. An alternative but more expensive option is to conduct before-after measures in the control populations. The only way of proving beyond reasonable doubt that a project has had an effect is by means of a randomised control trial in which several project populations or areas and several control or comparison areas are selected at random and changes in outcomes measured in both types of area. However, the considerable costs of a true randomised control trial prevent their use except where high levels of scientific proof are considered a top priority.

The third phase - impact evaluation

Impact evaluation aims to assess the longer-term effects of a programme/project against its ultimate purpose. Once adequate evidence is available that a programme/project has achieved or is achieving (if the project is ongoing) its immediate or short term-objectives, then the longer-term impact can be evaluated. Impact evaluations per se are rarely done largely because they take a long time and are expensive and complex. Impact evaluation cannot always be easily distinguished from effect (or outcome) evaluation, but the following examples should help to clarify the distinction:

- In many family planning projects, contraceptive use is often taken as a measure of effect, but a reduction in unwanted or unintended pregnancies might be taken as an appropriate measure of impact.

- In safe motherhood projects, the percentage of births attended by a trained medical or paramedical staff could be a key measure of effect, but the ultimate impact should be defined in terms of reductions in the proportions of pregnancies that result in severe complication or the mother's death.

- In HIV/STD prevention projects, the use of condoms in non-marital sexual encounters is often a good measure of effect, but a reduction in the incidence of new infections would be the preferred measure of impact.

3.3 Scope and Focus of Monitoring and Evaluation of the Reproductive Health Initiative

Ideally, the goals and purposes of a programme or project would be clearly stated and monitoring indicators, the means of measuring them and evaluation design (if considered necessary) would be clearly defined before a programme starts.

This manual aims to design the essential components for monitoring and evaluation of the RHI in Asia and shed light on the complex and multi-faceted structure of the RHI programme. Three essential components define the focus and scope of monitoring and evaluation of the RHI:

- **Conceptual models** that addresses the goals and objectives of programmes, linking the causal paths between key programme components

- **Indicators** that specify precisely what we are trying to measure

- **Methodologies** for gathering and analysing the appropriate data

These components are important interrelated elements of any logical framework. They are explained in detail in Chapters 4, 6 and 7.

Chapter 4

A Conceptual Model of the Reproductive Health Initiative

A conceptual model (or conceptual framework) can be thought of as a theoretical map of a project or plan that sketches the relationship between different components and helps users find their way around. Just as a map lays out roads between cities and towns and guides travellers to their destination, a conceptual model defines pathways between key components and helps to clarify the processes that lead to the desired effect or outcome.

Conceptual models are successful organising tools when:
- They are applied to a project whose ultimate purpose is known and clear
- They identify the key factors that will determine success or failure
- They identify components that can be operationally defined and measured through indicators
- They represent a shared perspective among stakeholders (for example, donors, target populations, project staff)

Although conceptual models can be very elaborate and dense with theoretical components, they can also be very simple, linking together only the broadest of concepts. In the context of the RHI, the following statement is applicable: "the linkages infer that increasing the availability, quality and acceptability of reproductive health services, where there is popular and political support and demand for them, will lead to improvements in reproductive health status" (Bertrand and Tsui, 1995).

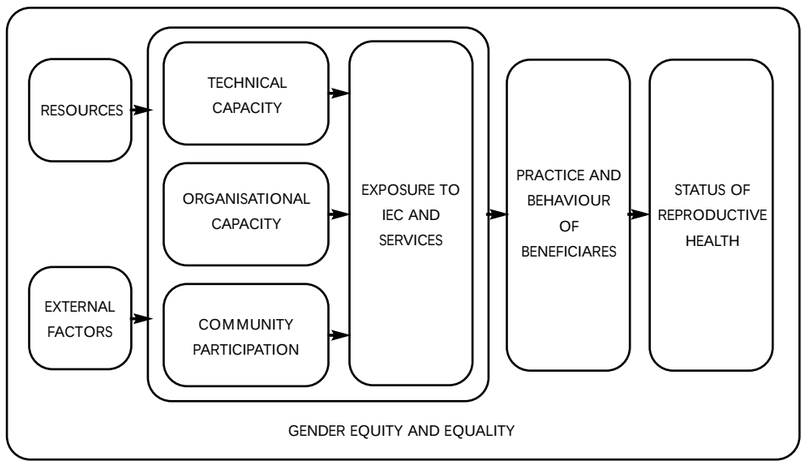
4.1 How the Model of the RHI Works

The first step in building a model of the RHI is to itemise the objectives outlined in Chapter 1, namely:
1) Expand access to and improve quality of reproductive health services
2) Increase community participation in projects
3) Enhance management capacities of local NGOs
4) Strengthen sustainability of NGOs
5) Promote gender equity and equality in reproductive health services

These objectives can be incorporated into four overall programme dimensions:

- Technical capacity (involving objective 1)
- Community participation (2)
- Organisational capacity (3 and 4)
- Gender equity and equality (5)

Figure 4.1 Conceptual model of the RHI for use in monitoring and evaluation



A conceptual model for monitoring and evaluation of the RHI in figure 4.1 shows how these programme dimensions are interrelated and embedded in the RHI programme. The model assumes that the ultimate goal of the RHI is improvement in reproductive health and this is achieved by means of changes in the practice and behaviour of the ultimate beneficiaries of the programme. What is meant by these behavioural changes is that individuals will take preventive and curative actions with greater frequency or greater effectiveness; examples of such actions are more frequent use of better quality condoms, or reduced risk behaviour among adolescents. Such behavioural changes take place when improved provision of services and information leads to alterations in the levels of knowledge of reproductive health issues and enhanced access to high quality services. The improvements in provision depend on the technical and organisational capacity of service providers. It also depends on the degree of involvement of community members in the programme. The level of technical and organisational capacity as well as community participation are themselves determined by the availability of resources and the influence of external factors, for example, public policy, legislation, and so on. Gender issues cut across all levels.

Not shown in the model is the significant role played by contextual factors of a biological, social and cultural nature. They have not been explicitly included in this evaluation framework because these are not directly or usually amenable to change by health programmes.

Chapter 5

The Logical Framework for Planning, Monitoring and Evaluation

A logical framework, sometimes called a logframe, is a management tool for strategic planning and project management, and plays a key organising role in monitoring and evaluation. The logical framework method is an analytical process and a way of presenting the results of that process, making it possible to set out systematically and logically a project's objectives, outputs and activities.

For further planning and project design, outputs and activities can serve as a starting point for producing other planning tools such as a work breakdown structure, a time-activity chart (gantt chart), an organisation responsibility chart, stakeholder analysis, project budget and descriptions of individual tasks (Team Technologies Inc, 2000).

The logical framework technique is nowadays used by many multi- and bi-lateral organisations including the European Commission, UN organisations, USAID, CIDA and GTZ. UNFPA uses logical frameworks for programme planning. Both the UNFPA country programme as well as individual projects of the RHI make use of logframes. In order to facilitate the formulation of RHI logframes at both country and project levels, the logframe technique is described in this chapter. The logframe will be linked to the conceptual model of the RHI, thus demonstrating how the more general RHI objectives and the project dimensions derived from them relate to individual project and country logframes.

5.1. Advantages and Limitations of Logical Frameworks

The advantages of logical frameworks are principally that they:

- Ensure that fundamental questions are asked in order to provide the project team and other stakeholders with better and more relevant information
- Guide systematic and logical analysis of the key elements that make up a well-designed project
- Improve planning by highlighting the impact of factors which are outside the control of the project team
- Facilitate common understanding and better communication between the project team, the client and other stakeholders

- Ensure continuity of approach when project team members are replaced
- Provide clear ways of assessing progress towards ultimate purposes and goals

The limitations of logical frameworks are principally that they:

- Do not replace stakeholder analysis, activity scheduling, breakdown of costs, etc.
- Are policy-neutral as a management tool for strategic planning and project management; if the policy is misconceived, the logical framework cannot itself change or improve that policy
- Demand quantifiable indicators, which makes it sometimes difficult to accommodate the more qualitative dimensions of change that a programme may bring about
- Can be confusing for some stakeholders and so tend to reduce participation and ownership
- May understate knock-on and unexpected effects

5.2 The Logical Framework Matrix

The logframe matrix takes the form of a 4 x 4-cell table as shown in figure 5.1. The first column lists four types of aims, sometimes called the intervention logic – goal, purpose, output and activities. The second, third and fourth columns are headed by indicators, means of verification, and risks and assumptions, in that order.

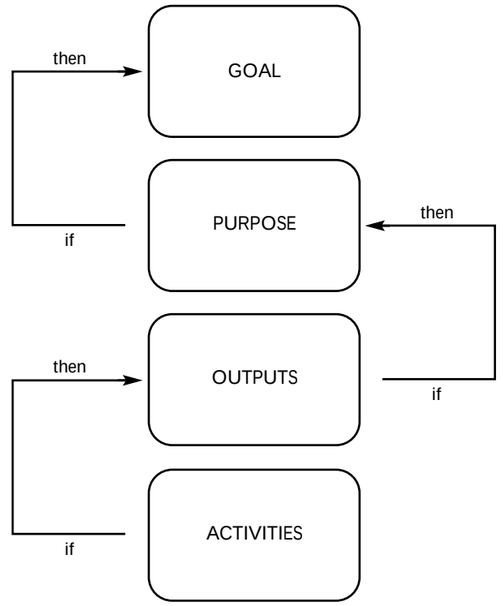
Figure 5.1 The logical framework matrix

Aims of the project	Objectively verifiable indicators	Means of verification verification	Risks and assumptions
Goal			
Purpose			
Outputs			
Activities	(costs and resources)		

Vertical logic

The listing of the project's aims is hierarchical in that the achievement of aims at each level contributes directly to the achievement of aims at the level immediately above: in other words, activities contribute to outputs, which contribute to purposes, which contribute to goals. This underlines the main principle of the logical framework, namely cause and effect. The stronger the cause and effect links between the aims, the better the project is designed. Logical frameworks force the project team to make the if/then logic of their programme explicit (see figure 5.2).

Figure 5.2 Cause and effect in a logical framework



Further explanation of 'aims' follows:

The goal is an objective greater than that of the project itself. Other projects will also contribute to the achievement of the goal. Examples of goals include improvements in reproductive and sexual health of adolescents; reduction in unwanted pregnancies; reduction in new cases of sexually transmitted infections; and reduction in maternal morbidity and mortality.

The purpose is the objective to be reached by implementing the project and is likely to outlive the project. The achievement of the purpose contributes to the overall goal. The purpose is usually defined in terms if sustainable benefits for the target population or clients of the project. Examples include increased contraceptive use; greater use of condoms in non-marital sex acts; increase in proportion of deliveries that take place in 'safe' conditions.

The outputs are the 'products' or 'deliverables' of the activities undertaken, the combination of which will achieve the purpose of the project. Examples include increases in the number of clients served; the amount of contraceptives distributed; and the number of midwives trained and supplied with safe delivery kits.

The activities are those things which must be done to achieve the outputs. Examples include training outreach workers; creating condom distribution points; upgrading clinics.

Horizontal logic

The aims of the projects set out in the first column are related horizontally across the matrix to the following items:

Objectively verifiable (or measurable) indicators, or the means of measuring what we are trying to achieve, are set out in the second column. The goal, purpose and outputs in the first three rows of the matrix should be measured by indicators selected according to the principle of Quantity, Quality, Time and Target (QQTT) (see Chapter 6 for an explanation of this principle). These measurable indicators are placed in the second column.

In the fourth row the activities are related not to indicators, but to a description of the costs and resources required for carrying them out. For example, the activity 'training of 14 district level counsellors' might require US$500.

Means of verification Where and in what format can information be found to measure what we are trying to measure? The source of information needed for the measurement of goal, purpose, outputs and activities is written down in column three. If the information cannot be derived from suitable existing sources, such as routine statistics and administrative records, other sources and methods for data collection need to be built into the project, with likely consequences for budget and resource allocations. This could be, for example, a community-based survey. In this case the associated activities should be included in the matrix, and the costs added to the budget. (For a further information on data sources and collection methods and instruments, see Chapter 7.)

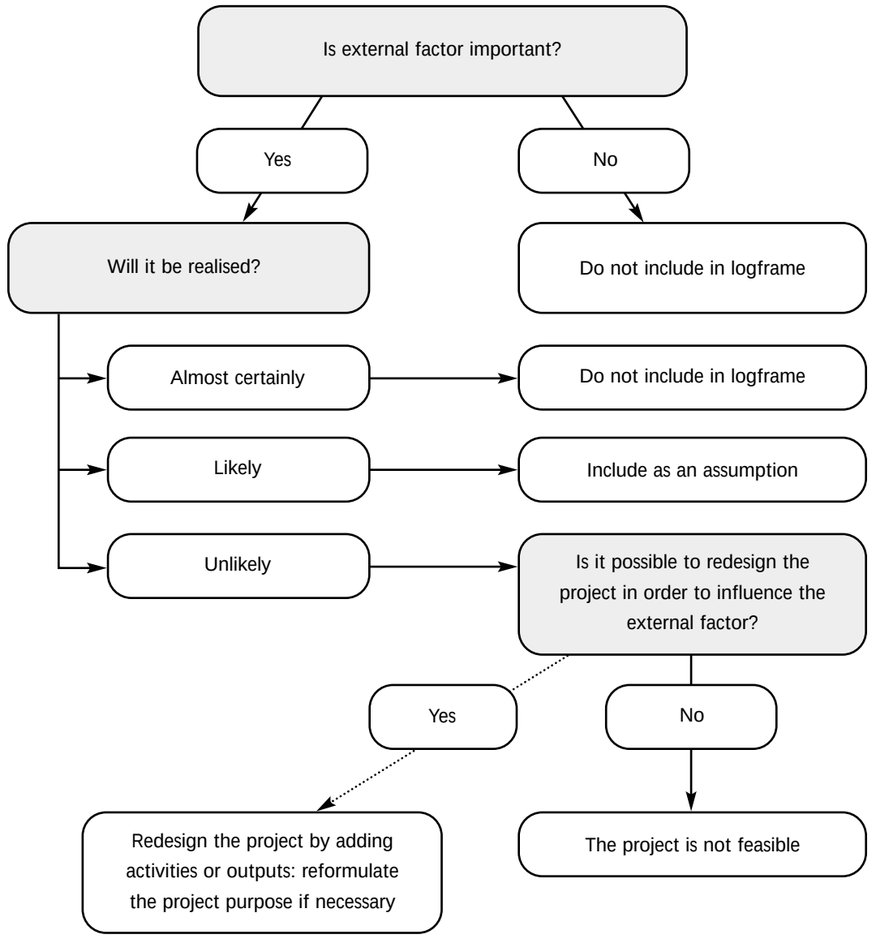
Risks and assumptions refer to any key external factors that could harm project achievements. Every project is faced with factors outside its control, which can influence the success or failure of the project and must be taken into account. The logical framework method makes such external factors explicit, thus expressing the uncertainty every project faces. Even when a project team has carried out its responsibilities completely, external factors, about which assumptions are being made, can derail the project. Examples include organised opposition to project activities; political unrest; regular supplies of commodities disrupted; inability of collaborating organisations to fulfil commitments. Figure 5.3 shows how assumptions and the risks that arise from them can be assessed.

Managing risks

Risks cannot be entirely eliminated but they can be managed and if possible minimised. The following four steps provide a useful strategy:

1. Identify important assumptions and risks (see figure 5.3)
2. Refine assumptions that are too general
3. Analyse how critical and probable they are
4. If possible, redesign the project to deal with the risk, if not warn the client/donor about the assumptions you are making

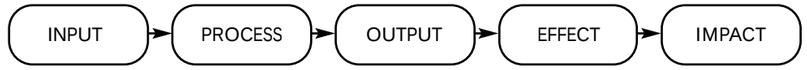
Figure 5.3 Assessing risks and assumptions



5.3 The Relation between the Logical Framework, the Systems Analysis Framework and the RHI Conceptual Model

It may be helpful to describe how the terms used in the logical framework relate to those in the systems analysis framework that has been widely used for many decades for project evaluation. This framework is shown in figure 5.4.

Figure 5.4 The systems analysis framework



The following definitions apply:
Input refers to the resources invested in a programme and includes financial, technological resources and manpower.

Process refers to activities carried out to achieve the programme's objectives; they show what is done and how well it is done.

Output refers to the results of activities achieved at the programme level, that is, the deliverables of the programme/project. It thus also includes, for example, exposure indicators such as knowledge and attitudes of the target group.

Effect refers to immediate changes observed among clients of the project (project-based) or among members of the target population (population-based) as a result of a given programme or intervention. This usually means change in the short- to medium-range (for example two to five years) in a behaviour promoted by the programme (such as use of condoms, birth delivery in a supervised setting). Effect indicators measure the direct and immediate results of programme processes and outputs, and are regarded as proximate determinants of the status of reproductive health within the target area. In this framework an effect must have two features: it can be influenced by the intervention, and if it changes it should have a direct effect on the status of reproductive health in a population.
For most reproductive health projects behavioural change will be the most appropriate type of indicator of effect. This can be illustrated by comparing change in behaviour to change in knowledge as a result of a HIV/AIDS advocacy campaign. Increase in knowledge of the population on how HIV is transmitted does not have a direct effect on HIV transmission in the population (reproductive health status). Only if better knowledge leads to the adoption of safer sexual practices (behavioural change), can a reduction in HIV transmission be achieved (UNAIDS, 2000). Thus, safer sexual practices are regarded as the effect of the intervention, and increase in knowledge on HIV transmission an output of the intervention.

Impact refers to changes in the longer term that occur as a result of a given programme or intervention. Impact is usually observed at population level, for example, changes that occur over a period of five years or more in fertility, morbidity or mortality (including age-specific fertility rates for young adults, prevalence of sexually transmitted diseases, maternal mortality rate) and so on.

Indicators of impact can also be subject to the influence of non-programme factors. In this connection it is important to stress that indicators and the monitoring of their values over time do not provide conclusive proof that project interventions are responsible for observed improvements in reproductive health. They simply show that the direction of programme efforts and population outcomes were moving together in the expected fashion. To establish beyond doubt the independent impact of reproductive health interventions requires randomised control experiments or advanced multivariate modelling (Bertrand and Tsui, 1995).

Box 5.1 shows the linkages between the logframe aims and the systems analysis levels. The logframe 'activities' relate to systems analysis 'input' and 'process', logframe 'outputs' to systems analysis 'outputs', logframe 'purpose' generally relates to systems analysis 'effect'; logframe 'goal' to systems analysis 'impact'. Input, process, output, effect and impact are not always the same across projects; much depends on the project. An output or effect of one project can be an input to another. For example, the production of quality information leaflets on aspects of preventive reproductive health might be the ultimate purpose (output) of an IEC production (sub)project, but such leaflets will be used as input to an adolescent reproductive health outreach programme.

Box 5.1

The relationship between the logical framework and the systems analysis framework

Logical framework Project aims	**Systems analysis framework** Levels of analysis	
GOAL	IMPACT	Population-based
PURPOSE	EFFECT	Project- or population-based
OUTPUT	OUTPUT	Project-based
ACTIVITIES	PROCESS	
	INPUT	

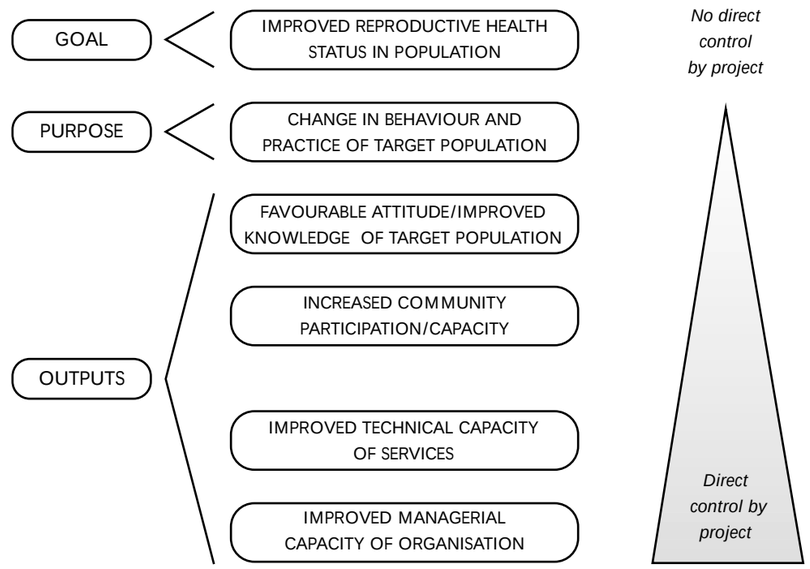
Figure 5.5 shows an example of goal, purpose and outputs. It relates the RHI conceptual model to the logical framework hierarchy of aims and thus also to the evaluation hierarchy of the systems analysis framework, whose linkages are shown in box 5.1.

In general, NGO logframes for sexual and reproductive health projects fit the relationships in box 5.1 and figure 5.5 and can make use of the suggested goal, purpose and outputs. In order to ensure consistency in logical frameworks and facilitate comparison between projects and country programmes, it is recommended that the relationships outlined in figure 5.5 be applied to sexual and reproductive health projects.

Figure 5.5 also shows that the direct control of a project over its outputs, its purpose (and effect) and its goal (and impact) operates along a continuum, whereby outputs, including improved quality and increased availability and access to services by means of better implementation of protocols, better trained (para)medical personnel, the production of appropriate information and education materials, improved logistic systems and data collection systems and so on, are more subject to direct control than, for example, increased involvement of a community in project activities or changes in attitudes and behaviour of the target population.

A common mistake in NGO logical frameworks for reproductive health projects is that elements properly considered as outputs are proposed as purposes. A consequence of this is that the logical framework simply offers what is perceived to be under the direct control of the project, but it does not address the intended effect of the project on the ultimate beneficiaries.

Figure 5.5 An example of logical framework goal, purpose and output for reproductive health interventions



This common mistake in the design of logical frameworks is understandable. Project managers (and donors to some extent) are naturally pre-occupied with what they themselves actually can do for a community. For example, if the main focus of the project is to create a new clinic or youth centre, then it is tempting to enter 'clinic/youth centre established' as the purpose in the logframe. Furthermore, it is then assumed that the creation of a youth centre or clinic will have a behavioural effect - not further specified – on the target population, and that that effect, in turn, will contribute to favourable changes in the status of reproductive health of the population.

From the example of the clinic it is clear that such a faulty logical framework does not pay explicit attention to the effect (behavioural change) the intervention may have on the target group. Consequently, there will be no mention in the logical framework of how to measure this effect (in the column indicators and means of verification). Even if behavioural change cannot be measured by the project itself because of lack of capacity, time or financial constraints, this does not justify omission of the correct purpose of the project.

In sum, changes in behaviour and practice of the target population should be included as purposes in the logical framework for the following reasons:

- It creates consistency in the hierarchy of aims of reproductive health logical frameworks, thus avoiding, for example, a repetition of the contents of the purpose into the outputs. (See Appendix 2 for a checklist that helps to verify that a logical framework has been constructed in a optimal manner.)
- It creates uniformity in the design of logical frameworks across projects
- It generates arguments to convince donors to earmark adequate funding for monitoring and evaluation
- It generates arguments to convince donors to apply longer-term funding, because behavioural change usually occurs over periods longer than three years

5.4 Illustrative Projects and Logical Frameworks

This section includes three examples of logical frameworks. They address adolescent sexual and reproductive health projects, community projects and capacity-building, and quality of care. Background information to each project is given in order to clarify the relationship between the nature of a project and its logical framework.

For the construction of indicators, quantity, quality, time and target elements are essential. In terms of targets, indicators in the illustrative logical frameworks include, where possible, baseline (x) and target (y) estimates. For more information on formulating indicators, see Chapter 6, section 6.1 and box 6.3.

An example of a logical framework for an adolescent sexual and reproductive health project

Background Country X is one of the poorest countries in the world with a host of development challenges, exacerbated by over 20 years of civil war and political instability. The health infrastructure has all but collapsed, particularly in rural areas. In recent years large numbers of people have been migrating from rural to urban areas in search of work. A large proportion of these migrants is comprised of young single men and women.

There is a dearth of reliable information on the reproductive health status of young people aged 10-25 years in country X, but anecdotal evidence suggests that they are vulnerable to a number of reproductive health problems. Surveys report low levels of knowledge about conception, family planning methods, sexually transmitted diseases and HIV/AIDS among this age group. Abortion is illegal but nevertheless thought to be common. A recent qualitative study among backstreet abortionists suggested that at least half of women seeking abortion through these providers were unmarried and under 25 years of age. Three percent of the sexually active adult population are estimated to be HIV positive, 60 percent of whom are aged between the age of 20 and 30 years.

A project has been designed whose objective is to reduce the vulnerability of young men and women to sexual and reproductive health risks, and includes their adoption of safer sexual and reproductive health practices. A network of health providers and peer educators that will operate in four areas of the capital city will be developed. Staff at two busy Ministry of Health clinics – which have recently been upgraded - situated in these locations will be trained in providing adolescent-friendly services. While young people will be encouraged to use the health centres when needed, special opening times – after school, and early evenings – will be established specifically for young people. Peer educators will be trained in reproductive health issues using the life-skills approach. They will be resident in the areas where they work and will access young people through informal networks within the communities, rather than through schools. They will use a variety of methods to provide young people in their area with reproductive and sexual health information. These will include skits, songs, games, competitions, discussion groups and house-to-house visits. Peer educators will distribute condoms to young people and refer them to the health centres for other contraceptive services, and for pregnancy, STD and HIV testing. Printed, visual and audio IEC material will be developed by the project for use by peer educators and clinic staff.

A baseline survey will provide greater insight into young people's reproductive health behaviour and an endline survey will provide valuable information to assess the effect of the intervention.

Box 5.2 illustrates a logical framework for this project concerning adolescent sexual and reproductive health.

Box 5.2

An example of a logical framework for an adolescent sexual and reproductive health (SRH) project

Objectives	Verifiable indicators	Means of verification	Important assumptions
GOAL Improved status of reproductive health in country X	Decline in rate of: • Unwanted pregnancies to women aged 15-24 years, from from x to y • Abortion, from x to y • Incidence of STDs among young men and women, from x to y • Incidence of HIV among men and women, from x to y for men and p to q for women	• Reports of periodic surveys • Behavioural and health surveillance survey	
PURPOSE Reduced vulnerability of young men and women to SRH risks, including their adoption of safer SRH health practices	Increase in % of: • Sexually active young people who used a condom during their last non-marital sexual encounter, from x to y • Young people seeking care for STD symptoms, among those reporting an STD symptom in the last year, from x to y	• Programme impact evaluation report, comparing baseline and endline survey results • Baseline/midterm and endline surveys	• Political stability • Policy-maker and planners support project activities • Sufficient capacity of health service and peer educators • RH information system effective and efficient
OUTPUT A) Increased knowledge and awareness of SRH risks among young people	• Barriers to SRH of young people understood • Health workers, peer educators and young people report IEC material understandable and relevant • Increase in % of young people who know about condoms and sources of supply, from x to y (boys) and p to q (girls) • Increase in % of young people knowing at least two strategies for practising safer sex, from x to y • Increase in % of young people who can identify at least 2 symptoms of STDs, from x to y (boys) and from p to q (girls)	• Report with findings from baseline study including key informant interviews, in-depth interviews, FGDs and structured survey interviews • Qualitative feedback from health providers, peer educators, young people • Comparison of baseline and endline survey results	• Barriers to SRH of young people are understood and can be addressed • Young people are motivated to use and pay for services
B) A network of available and accessible SRH services to young people	Increase in: • % of young people visiting SRH services satisfied with location opening times, cost, attitude of health staff, from x to y • % of young people aware of SRH services, from x to y (boys) and from p to q (girls) • Number of health providers trained and active, from x to y	• Baseline and project reports, clinical records, exit surveys • Annual, report, training workshop reports	• Health providers willing and able to attend and implement training • Contraceptives and medicines kept in stock

Box 5.2 (Continued)

An example of a logical framework for an adolescent sexual and reproductive health (SRH) project

C) A network of male and female peer educators	Increase in number of: • Young people referred to SRH services by peer educators, from x to y • Young people attending group activities/events organised by peer educators, from x to y	• Annual report, training workshop reports • Clinic records, peer educator logbooks	Peer educators have regular stocks of condoms
D) Scaling-up of innovative interventions	Increase from x to y in number of geographical areas where innovative intervention is adopted	Feedback from other programmes and project reports	Funding available for expansion of approach
ACTIVITIES 1) Conduct qualitative research with young people, health providers ,community members 2) Conduct baseline survey 3) Organise curricula development, training and implementation by health providers 4) Organise curricula development, training and implementation with peer educators 5) Upgrade service outlets and establish initial stock of contraceptives and medicines 6) Establish supply of contraceptives and medicines for each service outlet 7) Develop and disseminate IEC material 8) Conduct evaluation survey 9)Develop and distribute curricula and evaluation tools	Budget in US$ Staff $ 34,000 Research $ 21,000 Training $ 10,000 Curricula development $ 10,000 Upgrading services $ 70,000 Stock/equipment $ 15,000 IEC $ 10,000 Total $170,000	1) First annual report 2) Copy of survey tools, questionnaire and guidelines 3) Review first report and first annual report 4) First annual report 5) First annual report 7) Copy of IEC material, first annual report 8) Copy of evaluation tools, final annual and evaluation reports 9) Copy of curricula	Local currency and US$ are not devalued

An example of a logical framework for a community-based safe motherhood project

Background Country Y is a poor country and has a predominantly patriarchal society. The illiteracy rate is high (74 percent) for both males and females, especially in remote areas. Overall, the health situation is poor and high levels of maternal and infant mortality prevail (infant mortality ratio = 130/1,000; maternal mortality ratio = 539/100,000). The government lacks adequate financial and other resources to guarantee a reasonable quality of health system, especially in rural areas.

Use of antenatal and maternity care is low compared to other countries with a similar health infrastructure. Reasons include lack of knowledge regarding high risk pregnancy, cultural barriers, perceived poor quality of care, and lack of perceived health gain. Almost 90 percent of deliveries are not attended by a trained birth assistant and take place at home. About a quarter of births are attended by a traditional birth attendant, while over a half are attended by relatives or friends. Nine percent of births are not attended by anyone at all. Births to young mothers, first-order births and urban births are more likely to be attended by a doctor or nurse. Uterine prolapse is thought to be common because women in rural areas are expected to continue to do hard physical work during pregnancy and soon after childbirth.

There is urgent need to improve information regarding maternal health, as well as maternal health services in Y. The attempt to change community knowledge of and attitudes towards safe motherhood will focus on enhancing recognition of danger signs in pregnancy (for example, bleeding, convulsions), the benefits of relieving women from hard physical labour during ante- and postnatal periods, and the need for routine antenatal checks and supervised deliveries. To achieve these changes, volunteers from the community will be selected and trained, safe motherhood interest groups formed and IEC materials provided. A second important aim of the project is to improve access to emergency obstetric care (EOC), available in the sub-district hospitals. The approach here is to encourage communities to develop funds that can pay for motorised transport to the nearest hospital, thus removing the cost barrier to the use of services.

Box 5.3 illustrates a logical framework for this project concerning community-based safe motherhood.

Box 5.3

An example of a logical framework for a community-based safe motherhood (SM) project

Objectives	Verifiable indicators	Means of verification	Important assumptions
GOAL Improved health status of mothers and pregnant women and country Y	Decline in: • Maternal morbidity, from x to y cases in year 20xx • Maternal morbidity rate, from x to y in year 20xx • Incidence of acute birth complications by x% in year 20xx • Perinatal morbidity rate, from x to y in year 20xx	Reports of periodic surveys, census and health surveillance forms	
PURPOSE Reduced vulnerability of women to the risks related to pregnancy in all communities in two districts	Increase in: • % of pregnant women in community enrolled in antenatal clinic (ANC) programmes, from x to y • % of women who gave birth in the last 3 years who received at least one antenatal contact during their last pregnancy, from x to y • % of deliveries in health institutions, from x to y • % of deliveries attended by a trained birth attendant, from x to y • % of emergency cases using community-provided transport, from x to y	• Comparison of baseline /endline community survey results • Comparison of clinical records at start and end of project	• Political stability • Policy-makers and planners support project activities • Attitudinal and behavioural change will be sustained beyond duration of intervention • Supply of services sustained beyond duration of intervention • Effective scale-up of activities possible
OUTPUT A) Increased knowledge and awareness among men and women on the risks of pregnancy, and preventive measures	• Increase in % of men and women knowledgeable about SM risks and preventive measures, from x to y • Key community members report IEC materials are understandable and relevant	• Comparison of baselin /endline community survey results • Key informant interviews	Key messages appreciated and understood by community
B)Increased community involvement and strengthened capacity of community organisations	Increase in: • Number of volunteers /peers working in project, from x to y • Number of volunteers trained by project, from x to y • Community contribution to emergency obstetric care (EOC), from x to y • Number of men and women enrolled in RH interest groups, from x to y	• Comparison of baseline/endline survey results • Personnel records • Project documentation, annual reports, financial and administrative records of local organisations • Key informant interviews	• Communities motivated to be involved in project activities • Local organisations are accepted by the government without restrictions

Box 5.3 (Continued)

A logical framework for a community-based safe motherhood (SM) project

Objectives	Verifiable indicators	Means of verification	Important assumptions
	• Number of local organisations involved in the SM and community-based reproductive health programme, from x to y • Number of communities establishing an emergency obstetric transport facility, from x to y • % of people seeking advice on RH from other community members, from x to y • % of community members who know about and endorse project activities, from x to y Decline in: % of pregnant women reporting hard physical work in the 3rd trimester, from x to y		
C) Appropriate and accessible reproductive health services integrated into primary health care, including an expanded SM outreach network and EOC referral system	Increase in: • Referral rate from outreach facilities to basic EOC facilities, from x to y • Referral rate from basic to comprehensive EOC, from x to y • % of pregnant women attending ANC services taking iron and/or folate, from x to y • % of pregnant women attending ANC services immunised against tetanus, from x to y • % of pregnant women attending ANC screened for syphilis, from x to y	• Management information systems reports • Project documentation • Clinical records	Government funds are available to support SM improvements to primary health care system
ACTIVITIES 1) With the community develop IEC materials based on participatory methods. 2) Conduct IEC campaign; set up information distribution system in each community 3) Conduct baseline/endline population-based survey, plus in-depth participatory study on SM and gender issues in the community 4) Set up RH/SM community steering groups	Summary budget in US$ Staff $ 65,000 Research, M&E $ 75,000 Training $ 35,000 Upgrading services $ 120,000 Stock/equipment $ 40,000 IEC $ 55,000 Total $ 390,000		1) IEC materials appropriate 3) Gender and SM issues at community and household levels better understood 4) Members of steering group are appropriate selection of community, and are active

Box 5.3 (Continued)

A logical framework for a community-based safe motherhood (SM) project

Objectives	Verifiable indicators	Means of verification	Important assumptions
5) Design, implement and monitor community participatory action plan 6) Conduct baseline/endline facility study 7) Set up EOC referral system; recruit and train village birth attendants, design and implement new procedures for EOC 8) Recruit new staff, design and implement staff training programme for EOC, M&E and accounting			5) Action plan is supported by community. There is regular feedback on progress and action plan is adapted if necessary

An example of a logical framework for a quality of reproductive health care intervention

Background Country Z has one of the highest estimates of unmet need for family planning in the world. Over a third of women say that they want no more children but are not using any form of contraception. About 25 percent of women use contraception and the total fertility rate is estimated at 4.2. The most popular modern method is female sterilisation, followed by the pill. However, discontinuation rates for the pill are high and many women fear side effects. Traditional methods are popular. Maternal mortality is estimated to be 600 per 100,000 live births and infant mortality is estimated at 73 per 1,000 population. Forty-five percent of the population has access to basic health services.

Increasing contraceptive prevalence, and therefore reducing fertility, in Z has been a government priority for many years. However, focus has tended to be only target-oriented with little attention being paid to broader reproductive health care or quality of services.

This project aims to increase the use of quality family planning methods and effective reproductive health services by improving the quality of reproductive health care, including contraceptive services. The main emphases of the project are to retrain staff, improve management of direct outputs, technical competence and interpersonal skills of providers; increase range of contraceptives in stock; improve client confidentiality and privacy; develop a simple monitoring and evaluation system; and promote accessible and adequately staffed service outlets. The project will be implemented on

a pilot basis within the governmental health system in 5 of the 13 districts of the country, and will be a collaborative effort between the NGO X, and the Ministry of Health.

Box 5.4 illustrates a logical framework for this project concerning quality of reproductive health care.

Box 5.4

An example of a logical framework for a quality of reproductive health care project

Objectives	Verifiable indicators	Means of verification	Important assumptions
GOAL Improved RH status of women in country Z	Decline in: • Total fertility rate, from x to y in year 20xx • Rate of unwanted pregnancy, from x to y in year 20xx	Reports of periodic surveys (including demographic health survey), census, surveillance systems	
PURPOSE Increased use of quality family planning methods and effective services integrated into the primary health care system in 5 districts	Increase in: • Contraceptive prevalence rate, from x to y • % of current users using their first choice of method, from x to y • Continuation rate of hormonal methods, from x to y • Number of new clients recommended by other users by x% Decline in %: of women discontinuing method due to side effects or method failure, from x to y	• Sample survey of target group • Quarterly analysis of hospital records • Annual survey of client satisfaction	• Quality, accessibility and availability of services will be sustained beyond duration of intervention • Effective scale-up of project activities possible
OUTPUT A) Improved technical and interpersonal competence of professionals and providers in all hospitals, clinics and outreach facilities in 5 districts, particularly regarding contraceptive services and RTI diagnosis and treatment	Increase in: • % of providers who demonstrate good counselling skills, from x to y • % of providers who offer a range of contraceptive methods to new clients, from x to y • % of providers using a checklist of information to cover counselling sessions, from x to y • % of clients who correctly explain method chosen, from x to y • % of clients who are adequately counselled (informed choice and consent), from x to y • Number of service delivery points (SDPs) where confidentiality and privacy of clients are respected, from x to y • % of sterilisations conducted according to standard protocol, for men from x to y, for women from p to q • % of SDPs where written guidelines on family planning practice are available, from x to y	• Comparison of baseline/mid-term/endline situation analysis results • Provider-client observations • Exit interviews with clients • Project documentation	

Box 5.4 (Continued)

An example of a logical framework for a quality of reproductive health care project

Objectives	Verifiable indicators	Means of verification	Important assumptions
B) Service accessible to x % of clients and non-users	x% of clients and non-users perceive that: • Privacy/confidentiality for counselling is acceptable • Privacy/confidentiality for examination is acceptable • Waiting time at SDP is acceptable • Time with provider is acceptable • Opening hours/days at SDP are acceptable • SDP staff are appropriate in terms of gender, ethnic group and age	• Comparison of baseline/mid-term/endline situation analysis results • Periodic sample surveys of target group	
C) Functional and effective referral system in place	Increase in: • Number of clients referred to hospitals during last year, from x to y	Hospital and outreach workers' records, reviewed quarterly	Transportation costs are not a barrier to seeking health care
D) Improved quality of facilities and infrastructure; supplies and logistical system in place	• Decline in % of facilities reporting stock-outs of specified medicines and contraceptives, from x to y • Increase in % of facilities with specified equipment in stock and functioning	• Comparison of baseline/mid-term/endline situation analysis results	Enough resources are available
E) Management information system in place and used	• Management information system functioning properly • Results used by board and management team • M&E results fed back into programme decision-making	• Comparison of baseline/mid-term/endline situation analysis results • Project documents and progress reports • Planning tools	
F) Management capacity of organisation strengthened	• Management strategy in place • Organogram in place • Personnel policy updated and circulated • Board or steering committee in place and visible • Job descriptions created and updated for each position • Annual appraisal system introduced for all levels of staff • Education/training criteria exist for service tasks • New staff trained regarding institutional guidelines • All staff receive periodic refresher/in-service training relevant to their tasks • Finance and accounting system properly operating	• Comparison of baseline/mid-term/endline situation analysis results • Organisation strategic plans and policy documents • Personnel and training records • Institute protocols and guidelines • Staff appraisal system • Administrative and financial/accounting records • External audit report • Pre-/post-training surveys	

Box 5.4 (Continued)

An example of a logical framework for a quality of reproductive health care project

Objectives	Verifiable indicators	Means of verification	Important assumptions
ACTIVITIES 1) Develop protocols; provide training in use of medical protocols, in interpersonal and counselling skills, in range of contraceptive methods, in diagnosis and treatment of RTIs 2) Set up committee to oversee redesign of referral system; redesign referral slips; provide training in use of slips	Summary budget in US$ Staff $ 200,000 Training $ 150,000 Upgrading facilities $ 100,000 Stock/equipment $ 75,000 IEC material $ 50,000 M&E $ 25,000 Total $ 600,000	Pre-/post-training personnel surveys	
3) Upgrade facilities, buy supplies and equipment, establish and maintain logistics system 4) Design appropriate set of M&E indicators, adjust clinical records forms, provide training in record-keeping and reporting systems, design and implement reporting system, develop and install data entry software, analyse and disseminate results every three months; conduct periodic population surveys, and baseline, midterm and endline situation analysis 5) Train board and management team in management of personnel, finance and income, equipment and supplies logistics, information strategy and planning, quality of care, protocols, guidelines, norms and standards; design personnel plan; formulate job description for each employee, develop organisational chart, establish steering committee/board			

5.5 The Monitoring and Evaluation Plan

As described earlier, the logical framework is a tool for strategic planning and project management, and plays a key role in monitoring and evaluation. The logframe contains all the elements for organising monitoring and evaluation activities. In the third column of the logframe (means of verification), information can be found on data collection methods and tools/instruments that may be used for measuring indicators. For example, two sample surveys can be used to measure behavioural change in the target group between the start and end of a project, and clinical records may be consulted quarterly for calculating the number of monthly visits by male and female adolescents. In the fourth row of the logframe (activities), the main monitoring and evaluation activities and their summarised budget allocations are located.

In order to implement these activities, a detailed monitoring and evaluation implementation plan is needed. It should answer, at a minimum, the following questions:

- Who is doing what?
- When is it being done?
- How much time does it take?
- How much does it cost?

Who is doing what?

The plan outlines which persons or institutions are responsible for implementing the selected monitoring and evaluation activities. They may be staff from inside the organisation or, where a sample survey is to be conducted, an external research institute may be contracted. Within the framework of the RHI, several projects could join forces in conducting population-based sample surveys.

When is it being done and how much time does it take?

Once responsibility for activities has been allocated to particular people or institutions, the timing and duration of the activities can be mapped in a timetable. An example with different levels of detail is shown in Figure 5.6. When finalised, the timetable may be included in the overall project schedule in order to co-ordinate activities with the rest of the project.

Figure 5.6 An example of a timetable for monitoring and evaluation with activities derived from the logical framework

	Year 1												Year 2												Year 3												Year 4											
	j	f	m	a	m	j	j	a	s	o	n	d	j	f	m	a	m	j	j	a	s	o	n	d	j	f	m	a	m	j	j	a	s	o	n	d	j	f	m	a	m	j	j	a	s	o	n	d
effect evaluation																																																	
begin and end-line evaluation																																																
• preparation		x																																														
• fieldwork	x																																															
• data entry/processing		x																																														
• data analysis		x																																														
• report writing			x																																													
• report dissemination			x																																													
focus group discussions																																																
• preparatory activities, like formulation lead questions				x																																											
• conduct FGDs						x	x													x	x																											
key informant interviews																																																
• detailed activities		x	x																						x	x																					
other methods/tools																																																
routine (service/intervention) statistics																																																
design/review/improve system for routine service statistics	x																																														
•revising client cards and reporting forms	x																																														
routinely collect/report data			x		x			x					x			x				x				x			x				x				x				x				x			
•detailed activities																																																
periodic qualitative assessment service delivery																																																
direct observation of facilities and provider-client interaction																																																
•design observation plan																																																
•prepare guidelines and checklists	x																																														
•(re)train observers	x	x																																														
•conduct periodic direct observations		x																																														
exit interviews					x								x												x												x											
•detailed activities																																																
other methods/tools		x	x		x				x						x					x							x				x							x								x	
other M&E activities																																																
utilization of results for project modifications/improvements					x				x						x					x							x				x							x								x	

How much does it cost?

High-quality monitoring and evaluation costs money, especially when the organisation decides to conduct sample surveys. Large sums of money need to be allocated for hiring personnel (for example, external experts for sampling design), training and logistics in the field. Additionally, the assessment of quality of care and the collection of routine data may draw heavily on the total budget. The budget for monitoring and evaluation activities is frequently underestimated.

Steps in developing a budget include the following (Bertrand, Magnani and Rutenberg, 1996):

- Identify resources in the organisation (and if applicable in other participating agencies) that are already covered by other resources and will be made available to the activity at no additional cost. Examples are staff salaries, office space, office equipment such as computers and photocopier, vehicles for field work, etc.
- Estimate personnel and other direct costs for co-ordinating the different components of monitoring and evaluation (if not covered by the above)
- Estimate the cost of each individual data collection activity
- Estimate the cost of data processing and analysis
- Estimate the cost of dissemination of results; as there are multiple channels for dissemination, it is essential that the funds for this final step of the process be budgeted from the start

Monitoring and evaluation plans must reflect financial realities. Financial and human resources determine the scope of what is possible. A balance has to be found between the selection of key indicators, the measurement of these indicators and the resources available. It may sometimes be necessary to return to the drawing board and reduce or change indicators and/or datacollection methods in order to guarantee quality monitoring and evaluation within the available resources.

The selection and construction of indicators is explained in Chapter 6, and Chapter 7 elucidates the selection and application of data collection methods, sources and instruments.

Chapter 6

Reproductive Health Indicators

"Indicators are operational measures of the components of the conceptual framework" (Bertrand and Tsui, 1995). The conceptual framework or model for the RHI was outlined in Chapter 4. Thus an indicator is a "marker of performance" (UNFPA, 1998), and can be used to track progress in the performance of the RHI, country programmes and their component projects. On the basis that "if you can measure it you can manage it", the use of indicators is relevant to project and programme planning and to achieving management objectives. Broadly, indicators can be used to monitor the following elements (WHO, 1997):

- Changes over time (for example, the percentage increase over a period of peer educators with capacity to conduct out-reach education activities in adolescent sexual and reproductive health issues)
- Differences between population sub-groups (for example, the level of knowledge of the risks of contracting HIV/AIDS among adolescent girls compared with that among adolescent boys)
- Differences between facilities (for example, in the availability or quality of services between clinics)
- Achievements towards targets (for example, the number of clients actually served as a percentage of the number that were planned)

Population and programme level indicators

With reference to the RHI conceptual model, an important distinction exists between population-level and programme-level indicators. Population-level indicators are usually gathered from representative samples of the target population, and thus include information from individuals who have had little or no contact with the project as well as those who have had contact. They may include, for example, percentage of deliveries in the past year that were attended by trained staff, or percentage of sexually active single individuals who used a condom during most recent intercourse. They are influenced by many factors, making it difficult to attribute trends or differences directly to the project. By contrast, programme-level indicators are generated within the project, for example, the number of clients seen or supplies distributed. Consequently, programme-level indicators are more useful than population-level indicators in directly tracking inputs and outputs.

Using available indicators

The Evaluation Project, WHO, the World Bank, UNFPA and others have developed a variety of reproductive health indicators. There are two good reasons for using established indicators wherever possible, namely, comparability, and proven usefulness. However, when contemplating their use, a number of important considerations should be borne in mind:

- There is no international consensus about appropriate indicators for measuring programme performance in the field of reproductive health. Not all the indicators proposed by international organisations and other groups have as yet been thoroughly field-tested, evaluated and used for programme purposes.

- For some ICPD goals, considerable innovative thinking is required to develop appropriate indicators (UNFPA, 1998). This is the case, for example, with respect to indicators for measuring progress towards full integration of family planning and reproductive health services, or for measuring the quality of reproductive health services, interventions for adolescents, community participation and gender dimensions.

- The existence of an indicator, published in a report, does not necessarily make it the appropriate measure of a programme or intervention. Criteria for determining appropriate indicators are given in the next section.

Other key principles in the selection process are given in box 6.1

Box 6.1

Key principles in the selection of indicators

- Indicators should not impose an unnecessary burden on reporting agencies. Consequently, where the needs of the various users are similar, the demands for indicators should be harmonised as far as possible.

- Indicators should, if possible, be constructed from existing data sources. To warrant their inclusion where source materials either do not exist or are weak, programme efforts to strengthen existing sources or create new ones able to provide accurate data must be feasible.

- Indicators should provide robust measures of progress towards ICPD goals, and enable performance in delivering programme outputs at the various levels of the logical framework to be monitored.

- Indicators should be quantifiable and capable of a consistency of measurement that is repeatable. At the minimum this has been interpreted as providing two mutually exclusive response categories. More usually, it refers to the ease with which an indicator can be represented as a frequency, percentage, ratio and so on.

Source: UNFPA, 1998

6.1 Selection and Construction of Reproductive Health Indicators

What indicators should be selected? It is important to construct and select appropriate indicators. Indicators are inappropriate if they are unreasonably difficult to measure, unmanageable to compile, irrelevant to the main health issues at hand, or measured too infrequently to be helpful (Bertrand and Tsui, 1995). A number of guiding principles have been established for selecting and constructing appropriate indicators for monitoring and evaluating reproductive health programmes. One set of criteria developed by WHO (1994) is given in box 6.2.

Box 6.2

Criteria for selecting reproductive health indicators

There are a number of desired features of a good indicator. Specifically, it should be:

Valid	It actually measures the phenomenon it is intended to measure
Reliable	It produces the same results when used more than once to measure precisely the same phenomenon
Specific	It measures only the phenomenon it is intended to measure
Sensitive	It reflects changes in the state of the phenomenon studied
Operational	It is measurable or quantifiable with developed and tested definitions and reference standards

Few indicators fully fit all the criteria given in box 6.1. At the project level, it may be more practical to select so-called SMART indicators, a useful acronym that denotes indicators that are programme-Specific, Measurable (precisely defined and easily quantified), Appropriate (to local needs, capacities and culture), Realistic (can be collected with available resources) and Time-bound (relate to a certain time period).

Once the criteria for appropriate indicators have been established, the next step is to identify them. Bertrand and Tsui (1995) considerably demystified the selection process by presenting the following step-by-step example of one approach to the task of identifying indicators for a specific programme or intervention:

1) Identify a limited number of indicators that are consistent with programme objectives.
2) Identify the types of data collection needed for each indicator.
3) Construct and complete a large matrix (table): importance by ease of collection.
4) Prioritise by importance and ease of collection.
5) Group selected indicators by source of data to determine the number of different linkages that would be required if all were retained.
6) Decide what the organisation is able to do given human and financial resources, logistical requirements, and time.

The process of selecting or formulating a measurable (or verifiable) indicator should also take account of four further, very important dimensions: Quantity, Quality, Time and Target. Box 6.3 provides four simple steps for incorporating QQTT into the indicator.

Box 6.3

Constructing a measurable indicator step-by-step, incorporating quantity, quality, time and target

Step	Example
1) Basic indicator	Peer leaders trained
2) Add Quantity	Number of peer leaders trained
3) Add Quality-qualifier	Number of peer leaders trained in counselling that pass the test
4) Add Time	Number of peer leaders trained in counselling that passed the test in year 2001
5) Add Target	Increase from x to y* in the number of peer leaders trained in counselling that passed the test in 2001

*Whereby x represents baseline information and y the target for the year 2001. Instead of 'increase from x to y in the number of peer leaders...', it is also possible to use 'increase from x% to y% in the percentage of all peer leaders...' or even 'percentage increase by z% in the number of peer leaders ...'. However, the latter is less useful because it does not specify a starting point.

Step 4 assumes that baseline information is available and that the target is a realistic estimate of what can be achieved within a certain time span. The collection of baseline information is essential. It may already be available from a situation analysis, a feasibility study or an end-line study of a previous intervention. Estimates derived from other sources including local, regional or national studies may also be used. Baseline estimates are particularly difficult to obtain for indicators that relate to purposes and goals, because they are often population-based and are usually only available from a specially designed survey.

If baseline information is to be derived from such specially designed surveys conducted at the start of the project, the target (step 4) of an indicator needs to be reviewed and, if necessary, adapted again in the light of the findings. As well as adapting indicators, it may also then be necessary to modify other parts of the logical framework .

It is important to keep all these criteria in mind when constructing or selecting indicators for different aspects of reproductive health interventions in order to ensure they are appropriate. More information on the selection and use of indicators is given in Appendices 3 and 4.

Summary indicators

The tendency to develop summary indicators that encompass several aspects of service provision or its outcome is prevalent in many areas of health and development. Summary indicators are useful in that they limit the number of statistics that need to be presented at the highest policy level, or to non-specialists who simply want to know whether things are getting better or worse.

The limitation of summary indicators is that changes are more difficult to interpret. A higher score may mean an improvement across all components measured by the index, or may conceal a massive improvement in one area but an actual deterioration in another. For instance, a summary indicator of HIV-related knowledge might be constructed from items on the awareness of modes of transmission, asymptomatic nature of infected persons, and places where condoms can be obtained. But a positive change in the value of this indicator might conceal the fact that, while knowledge of modes of transmission had improved greatly, awareness of condom sources was still low and unchanged.

Disaggregation by sex, age and time

Programme managers, who are concerned about the performance of all components, will be more interested in disaggregated data that allow them to see progress in each area of service provision separately. Aggregation too early in the process of data collection or analysis may mean that disaggregated indicators cannot then be calculated to meet the needs of programme or project managers (UNAIDS, 2000).

It is important that sex and age-group disaggregation is maintained wherever feasible, particularly among the 15-19 age group for those projects focusing on adolescents. Indeed, because of the rapidity of change and the differing needs of each period of adolescence, it is preferable, subject to feasibility, to establish age groups of adolescents appropriate to adolescent realities, namely, single- or two-year periods.

Data should also be kept specific to particular time-periods, which should not be too large – for most indicators quarterly, half-yearly or annual time periods are appropriate.

How indicators are expressed

RHI indicators may focus on a number of subjects of interest, among them:

- The occurrence of an **event**, e.g. a live birth, a maternal death, a pregnancy complication
- The prevalence of a **characteristic in a population**, e.g. use of a contraceptive method by men, low birth-weight of babies
- The prevalence of a **characteristic in a service delivery point**, e.g. service delivery points providing antenatal care

- The prevalence of a **characteristic in IEC interventions**, e.g. media coverage of an HIV/AIDS information campaign
- The existence of **outcomes of collective decisions**, e.g. policies, legislation, protocols
- A qualitative assessment of **public opinion**

Most indicators are expressed in terms of absolute numbers, rates, proportions, averages, binary or categorical variables, as seen in the box 6.4.

Box 6.4

▼ Types of indicators and units of measurement

Type of indicator	Unit of measurement	Examples
Number	Absolute number in a geographical area or defined population (per unit of time).	- number of maternal deaths per year - number of health facilities providing essential obstetric care
Rate[a]	Number of events per number of "persons-years of exposure to risk of the event" (per unit of time).	- tetanus incidence rate in infants per year
Ratio[b]	Number divided by another number.	- sex ratio of family planning counsellors
Proportion	Special type of ratio, where the numerator is included in the denominator (at a point in time). Often expressed as a percentage.	- proportion of all new family planning clients in last quarter who were male - percentage of births in last quarter attended by trained medical personnel
Average	In its simplest form, the sum of the values of all components divided by the number of components (at a point in time).	- average age at marriage in 1999 - average number of family planning methods known by clients
Binary	Yes/no measure at a point in time.	- existence of a policy addressing adolescent reproductive health - existence of a law against female genital mutilation
Categorical	Related to qualitative assessment.	- rating of an IEC campaign by a panel of experts ("highly effective" / "moderately effective" or "ineffective")

[a] Many demographic rates cannot be computed using person-years at risk, because the data are not available. Instead, person-years at risk is commonly approximated using the mid-year population.

[b] The term 'rate' is often used to refer to measures that are strictly speaking not rates but ratios, e.g. infant mortality rate computed as [(deaths to children aged less than one year in the year/births in the year) x 100.0]

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Chapter 7

Methods of Data Collection

Like a conceptual model and a set of indicators, data collection is a basic requirement of monitoring and evaluation. Moreover, since data collection is the most practically demanding and costly of these requirements, it sets the boundaries to what can be monitored and evaluated. In the main, financial and human resources, both internal and external to a project, determine the scope of data collection. Ideally, the allocation of these resources should be carried out in advance of any intervention, and laid down in a monitoring and evaluation plan. The use of a logical framework (see Chapter 5) can help in formulating such a plan.

As mentioned in Chapter 3, functions of monitoring and evaluation are shaped by three main measurement factors:

- Coverage (programme-based and/or population-based)
- Time period for which data are collected or the frequency of data collection
- Association or causality (for example, in the case of measuring changes in risk behaviour of adolescents, to what extent is reduced risk behaviour the result of an advocacy campaign)

These three factors are very relevant to the selection of different data sources and data collection methods.

In the following pages a variety of data sources and collection methods are described. These provide a brief overview of sources and methods of collection and analysis available to the RHI, and their advantages and limitations for monitoring and evaluating project performance. See also Campbell and others (1999) for further information on social science methodologies.

The sources and methods outlined below range from routine, quantitative, structured data gathering (see Appendix 5 for information on different interview techniques) to qualitative, unstructured, ethnographic methods. The data sources and collection methods chosen will depend on the objectives of the project and the selected indicators, but a mix of types will probably prove the most rewarding option.

For instance, structured community-based surveys are suitable for measuring the incidence of a specific behaviour during a specified time span and thus are appropriate for monitoring the magnitude of change. However, they are often unsatisfactory for fully investigating motivations, beliefs and values that may have a major influence on behaviour.

Alternative approaches, including in-depth interviews, key informant interviews, focus group discussions and various types of observation, can complement larger-scale structured community-based surveys by providing insights into why a project is succeeding (or failing). Although these alternative approaches do not necessarily form part of a regular tracking system for reproductive health issues, they are an essential link between monitoring and evaluation systems and policy formulation.

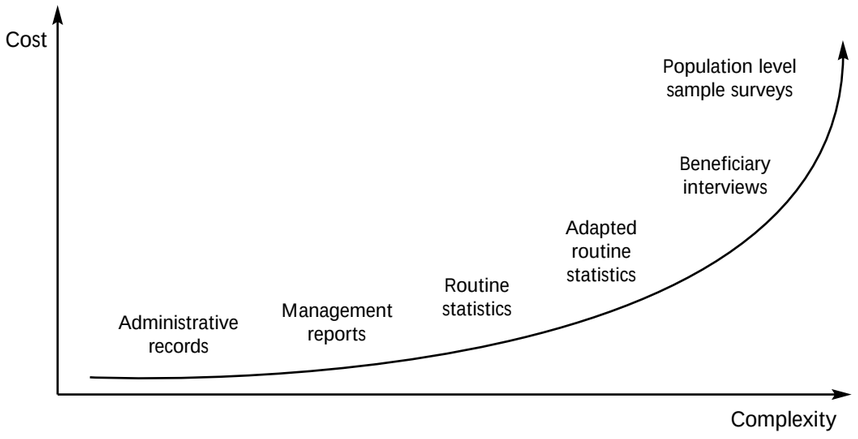
7.1 Choosing Data Collection Sources and Instruments

Data collection 'source' means the mechanism or method for collecting data, for example, surveys, focus group discussions, observations, project progress reports, routine project statistics, etc. Data collection 'instrument' means the physical tool used to collect the data, for example, checklists, tally sheets, client cards, questionnaires, etc.

Many different types of data sources and data collection instruments can be employed in the study of reproductive health issues. The focus here is on those sources and instruments that are most likely to be used to generate information for the monitoring and evaluation component of the RHI.

To a great extent, the choice of indicators and of data collection sources and instruments go hand-in-hand. For example, availability of resources will determine whether or not a population-based survey is feasible and hence whether population-based indicators may be generated or not. The complexity of the source of data (ease of collection and analysis) are often directly related to costs, as shown in figure 7.1 (ITAD, 1999).

Figure 7.1: The relationship between cost and complexity in the collection of data



Source: ITAD (1999)

However, once indicators have been identified, detailed consideration must be given to exactly how the information necessary for the indicator will be obtained. Although each data collection method involves particular issues that should be taken into account, some general points to be considered are described in box 7.1.

Box 7.1

▼ What to consider when choosing data collection sources and instruments

Objectives	What indicators can be generated from the data collection exercise? Is this an appropriate method for generating these indicators?
Units of observation/ analysis	Which clinics will be visited? How will survey respondents be sampled? How will focus group participants be selected?
Data quality assurance (there are many dimensions to this)	What procedures need to be put in place to ensure data are of high quality?
Instrument design	Will all the necessary pieces of information be generated? Will unnecessary/superfluous data be generated? Is the instrument easy to use? How long will it take and will the right amount of time be spent on the most important parts?
Data collection	How will the instrument be administered? Who will administer it? Have standard instructions been developed? What sort of training is needed? How will data collection activities be supervised?
Compiling, storing and verifying data	How will the data be stored? Will a computer be needed? How will data be checked and edited?
Analysis	How will the data generated be analysed? How will the necessary indicators be generated? Who will carry out this analysis? When will the analysis be carried out?
Reporting and making use of data	How and to whom will the information be reported? How will the information be used (for example, to change/improve project activities or to report on project performance?)
Resources	Who will need to devote time to the data collection exercise? How much will it cost?
Ethics	How will informed consent be obtained? How will confidentiality be assured? What will be the benefits to the community?

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7.2 Types of Data Collection Sources

Data collection sources and instruments can be broadly divided into three groups: programme/project-based, population/target community-based, and context-based. These and their associated data collection instruments are summarised in boxes 7.2, 7.3 and 7.4. In the following sections a number of the most important methods will be described in more detail. However, the list is by no means exhaustive.

Box 7.2

▼ Programme/project-based data collection sources and instruments

Data source(s)	Data collection instrument(s)
Routine project statistics (client-based[a] , provider-based and SDP-based records)	Client cards/clinic registers Summary tally sheets Aggregate tables and forms
Facility-based surveys	Checklists/inventories Observation guidelines
Client surveys (face-to-face structured interviews with clients/patients e.g. on exiting SDP, while waiting, at home following discharge etc)	Questionnaires
Provider surveys (face-to-face structured interviews with providers or possibly self-completed questionnaires)	Questionnaires
Unstructured or semi-structured in-depth interviews (with providers, clients or key informants)	Discussion guidelines Detailed note-taking and/or recording of discussion with transcription
Focus group discussions (FGD) (with providers, clients or key informants)	Discussion guidelines Detailed note-taking and/or recording of discussion with transcription
Direct observation (e.g. provider-client clinic interactions. time and work studies)	Checklists Observation guidelines
Mystery client (simulated client) technique	Guides for simulated client clinic visit Open-ended guidelines for debriefing interview
Management information (personnel records, project proposal documents, budgets etc)	Checklists Summary tables/figures
Project documents and reports (e.g. protocols, training curricula, policy documents etc)	Checklists

[a] At the project level there are several units of observation/analysis that are of interest including: clients, providers, provider-client interactions, service delivery points (SDPs) and the project as a whole.

Box 7.3

▼ Population/target community-based data collection sources and instruments

Data source(s)	Data collection instrument(s)
Community-based surveys (face-to-face structured interviews with probability sample of respondents from target group of interest; possibly involving collection of biological specimens, anthropometric measurements etc)	Questionnaires Reporting forms and equipment for taking specimens, anthropometric measurements etc.
Focus group discussions (FGD) (with selected individuals representing target group of interest)	Conversation guidelines Detailed note-taking and/or recording of discussion with transcription
Unstructured or semi-structured in-depth interviews (with selected individuals representing target group of interest)	Conversation guidelines Detailed note-taking and/or recording of discussion with transcription
Direct observation (e.g. daily movements of commercial sex workers, interactions between adolescents of opposite sex)	Checklists Observation guidelines
Structured qualitative and participatory methods (e.g. community mapping, diagramming; daily routine diagramming, transects, group discussions, all with selected individuals representing target group of interest	Facilitation guidelines Detailed note-taking
Population census reports/tables	Dummy tables

Box 7.4

▼ Context-related data collection sources and instruments

Data source(s)	Data collection instrument(s)
Parliamentary records	Checklists Dummy summary forms
Public libraries and databases	Checklists Dummy summary forms
Media reports, statements by local leaders, etc	Checklists Dummy summary forms

7.3 Routine Project Statistics

In reproductive health projects much information is routinely collected in order to facilitate day-to-day work and ensure that clients receive a high quality service. This information can also be used to generate indicators for monitoring purposes. Routine project statistics can be used to generate indicators of input, process and output. They include any type of information routinely collected and reported with regard to the utilisation of services, commodities/logistics, resources and so on. Routinely collected information is usually gathered at regular intervals in time, for example, daily, weekly, monthly or quarterly.

Data collection instruments are typically client/patient record cards, clinic registers and records, and logistics records (for example, stocktaking inventories). In order to use the data from routinely collected statistics, summary tally sheets and aggregate tables and forms may need to be designed specially.

Indicators that can be generated from routine project statistics include, for example, number of adolescents visiting a service outlet, percentage of family planning clients at a service delivery point who were male, percentage of patients with a sexually transmitted disease who accepted a partner notification card. Clearly, the types of indicators that can be generated depend on the existing routine data collection system and its potential for modification and/or expansion.

Data quality

Most of the data collection instruments and systems, for example, the client record cards, will have been designed and used for management purposes, and not for data collection purposes as such. The quality of the data varies from one organisation to another and one service delivery point to another. Therefore, checks on quality need to be carefully conducted before using the data for further analysis. This can be done by: examining records, observing staff completing records, talking to project staff and managers, and, if possible, by carrying out checks on the distribution of variables (for example, age structure). Guidelines for examining client/patient records are given in box 7.5. Where problems are identified, steps should be taken as far as possible to improve data quality. Data quality concerns should be reported and indicators interpreted with caution where necessary.

Box 7.5

Examining existing client/patient cards and registers for data quality

Coverage	Is a card completed for all clients? Is an entry always made in the register when appropriate? Is it possible to identify repeat visits (double counting)?
Completeness	Are cards/registers completed fully?
Clarity	Are forms completed clearly? Are mistakes clearly crossed through and correct entries written clearly alongside?
Consistency	Are entries in different fields of the cards/registers consistent? Are sums computed accurately?
Validity (subjectivity/objectivity)	Will the data recorded yield a valid indicator? (e.g. ages of patients may be very approximate if staff are not trained to probe carefully; providers may tend to record what is the protocol rather than what is actually supplied)
Consistency of definitions	Are definitions clear and consistent?
Consistency of procedures	What does a blank space indicate? (no information/ question not asked/ irrelevant/ 'no') Do all staff follow the same rules and procedures?
Open-ended sections	How do staff record information in open-ended sections? Is it consistent enough to be useful?
Timeliness	Are cards/registers filled in a timely manner? Is there a danger of recall error?

Designing new tally sheets and aggregate forms

The considerations outlined in box 7.5 should also be borne in mind when designing new forms and procedures for collecting routine information, or for aggregating data that is already collected by the project. Some additional guidelines are given in box 7.6.

Box 7.6

▼ Guidelines for designing new tally sheets and aggregate forms

Identification information	Is unique identification information included? Client/clinic/project number? Name? Date? Time period referred to?
Data required	Is all the necessary information included? Is any unnecessary information included? Does the form record sex and age and retain the necessary disaggregation by sex and age group?
Layout	Is the form easy to use? Is there enough space to write clearly? Does the layout minimise the chance of transcription errors?
Reproduction of the form	How many forms will be needed? How will the forms be reproduced (computer/by hand on squared paper/in register books) and is the format appropriate for this?
Time to complete	Who will complete the form and how often? How much time will this require? Is this a reasonable amount of time?
Clarity of instructions	Have detailed and simple instructions been prepared to accompany the form?
Consistency of definitions	Have all terms been clearly defined to avoid confusion and inconsistency?
Editing/checking	Have procedures been designed for checking the accuracy of the information?

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Reducing errors in aggregating data

It is easy to make mistakes when aggregating data and transcribing it from one place to another. Working systematically and putting in place a few simple procedures can greatly help to reduce errors. When counting numbers of cases from cards/registers, and transferring them on to a summary form, take the following precautions:

- Arrange the cards in a sensible order (e.g. by client number).
- Use bar-gate tally marks then total up (design aggregate forms with a space for the tally mark and another for the total).
- Develop a system for keeping track of cards that have been counted (e.g. by marking the corner of cards in different colours).
- In some cases it will be easier to sort cards into piles of particular types (e.g. one pile of male clients and one of females), then simply count the number of cards. Out them back into their original order afterwards so that clinic work is not hampered.
- Use a ruler/scale to guide your eye across the page.
- Be extra careful when dealing with two number systems (e.g. English and Bengali).
- If something is difficult to read, try to obtain clarification rather than guessing.
- Develop an editing checklist for use in double-checking your work (e.g. if you have tallied in age-groups, add across the ages to check the total).

7.4 Population-Based Surveys

'Surveys' in the context of the RHI are studies that obtain data by interviewing people. If the people interviewed are a representative sample of a larger population, such studies are called probability or representative 'sample surveys'. If the sample is large enough to permit statistical analysis, it is customary to employ structured rather than unstructured interviews (see section 7.6), since they lend themselves better to quantitative analysis and unstructured interviews create serious data processing difficulties, particularly if the sample is large.

Structured interviews

A standard questionnaire (or interview schedule) is employed to ensure that all respondents are asked exactly the same set of questions and in the same sequence. The exact wording of each question is specified in advance, and the interviewer merely reads each question to the respondent. The design and administration of such questionnaires should be very carefully constructed. Some basic principles of questionnaire design are shown in box 7.7. Generally, a questionnaire should be designed to meet the requirements of four categories of people: analysts, interviewers, respondents, and data managers (Campbell and others, 1999, is recommended for further reading on social science research methodology in the field of reproductive health).

Box 7.7

▼ Basic principles of designing structured questionnaires

Bear the following points in mind:

- Use simple language
- Pre-code the responses wherever possible
- Avoid embarrassing or painful questions
- Do not ask for more than one piece of information in a single question
- Avoid ambiguous wording of questions
- Include all necessary questions to provide sufficient information
- Do not overload the interview schedule
- Start with the easier questions
- Ask all respondents the questions in exactly the same way
- Avoid embarassing or painful questions
- Pre-test the questionnaire in an actual field situation
- Provide thorough training for interviewers
- Make an appointment for a call-back visit if necessary
- Instruct interviewers on how to obtain substitutes if necessary
- Provide privacy for the respondent
- Check all interview schedules as soon as possible after interviewing

See Appendix 6 for more details.

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Typically, baseline and follow-up surveys are used to measure the effect of interventions on sexual and reproductive health behaviour. In other words, structured surveys of the target population are carried out before the intervention takes place and after a certain time period, usually three to six years. Although indicators on knowledge and attitudes might change more rapidly, few indicators on behaviour or health status change quickly enough to justify a shorter interval.

7.5 Facility-Based Surveys

Typically, facility-based surveys assess the situation at clinical level. Client and provider surveys and an inventory on available facilities and services are particularly helpful in supplying information on the quality of care at a service delivery point. The so-called mystery client (or simulated client) technique is also useful in conducting facility-based surveys and is discussed separately in section 7.8.

Client surveys

Structured interviews are conducted with clients as they leave clinics; these are known as exit interviews. They are very useful in complementing interviews with providers and observational data. It is important to bear in mind that exit interviews provide information on what the client remembers about the consultation, not what actually happened. They can supply, for example, the following types of information:

- Do new and re-supply clients receive their preferred family planning method
- Do new clients receive written information
- Are new and re-supply clients satisfied with information received
- Is screening of new pill-users and IUD-users adequate (this can also be observed)
- Background data on clients (age, sex, number of children, marital status)
- Non-medical restrictions (for example, affordability of fees)

Provider surveys

Structured interviews with providers can supply background information on clinics, including the population served, days per week that services are provided, number and sex of doctors on staff, and the number and sex of paramedics on staff. They can also supply detailed information on their work and on barriers to provision of high quality services, for example, the availability of methods, the provision of information, incentives and disincentives, adequacy of facilities and materials, adequacy of training and links to other services for referral, and procedures for follow-up of clients.

Information obtained from observations of actual cases is always more reliable than data obtained from hypothetical questions, but it is generally impossible to observe enough specific cases during a rapid assessment. Structured interviews with providers are a useful means of partially compensating for this by confronting providers with hypothetical clients and asking them what they would do in such cases. The following types of information, for example, can be obtained in this way:

- Methods recommended to female clients who wish to space births
- Methods never recommended to female clients who wish to space births
- Advice given to breast-feeding clients

Facility-based inventories

The purpose of facility-based inventories is to assess the readiness of clinics or service outlets to provide services. It registers the services available, checks all equipment, supplies, materials, and commodities against a pre-designed list, and assesses by observation and checklists the functioning of several sub-systems, including physical infrastructure, staffing, IEC materials, logistics, management, supervision and record-keeping (Miller and others, 1997).

7.6 Unstructured or Semi-structured In-depth Interviews

Unlike structured interviews, this type of interview does not employ a standard questionnaire. Instead, the interviewer should be prepared with a list of topics to be discussed. The order of topics will depend on the flow of the discussion. The interviewer acts as a moderator, guiding the respondent from one topic to another. It is best to start with a topic that is important to the respondent and not sensitive. In this way, an informal, friendly atmosphere can be created, facilitating a natural flow of ideas and opinions (Hardon and others, 1994).

These interviews are conducted with both ‘general informants’ and ‘key informants’. General informants (provider, client or individual representing the target group of interest) give information mainly about themselves and their behaviour. Key informants, on the other hand, provide information about others, specific situations, conditions existing in an area, service delivery points or about the community. Essentially, key informants are knowledgeable individuals who are in a position to provide relevant information, ideas and insights on a particular subject. They might be the head or manager/co-ordinator of a district, NGO or clinic, or a community leader, school-teacher, doctor or nurse.

Unstructured or semi-structured interviews can be recorded in various ways. The simplest way is to take short notes and expand on them immediately after the interview. It is usually advisable to capture the informant's words verbatim if possible. A tape recorder may also be used and the tapes transcribed after the interview (a one-hour interview will take about three hours to transcribe). The advantage of tape-recording is that no information is lost as a result of inattention or the selective perception of the interviewer.

In the analysis, the researcher ‘cuts and pastes’ the original inter-views into categories that are defined on the basis of the broad topics initially established, and on any other central themes that emerge during the discussions. Hypotheses that emerge from this process can be validated by interviewing people again and by cross-checking the findings with data from other sources. The process of analysis and validation requires

creativity and objectivity and should, ideally, be carried out by the person who does the interviews.

The outcome of this research method is usually in the form of tentative explanations. The results are hard to generalise as they are based on interviews with a limited number of people. Its advantages and disadvantages are set out in box 7.8 (Hardon and others, 1994).

Box 7.8

▼ The advantages and disadvantages of in-depth interviews

Advantages

- Greater depth of information
- Respondents determine the prominence of topics discussed
- Greater opportunity to understand the viewpoint of the respondent
- Possibility of discovering unexpected aspects of the issue in question
- Key informants can be asked to reflect on the researcher's observations from the study of documents and can draw attention to other documents worth reviewing

Disadvantages

- Selection of informants may be biased
- Requires trained interviewers who understand the purpose of the research and can probe without being directive
- Subjectivity: data interpretation is difficult; temptation to select only data that fits the researcher's explanatory framework
- Limited reliability and repeatability of the study - much de-pends on researcher's focus and skill
- Difficult to generalise

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7.7 Focus Group Discussions

In focus group discussions (FGDs) the researcher invites several people with a particular characteristic in common to participate. They may neighbours, teenagers, mothers with one child, people suffering from a specific disorder and so on.

Such discussions are a particularly valuable tool for studying people's different perceptions about reproductive health services. They can also be used to obtain general information about the provision of, for example, contraceptives in a community. In the context of FGDs, where people are surrounded by others in similar situations, they may be willing to express attitudes that are embarrassing or socially disapproved of. Teenage girls, for instance, may discuss what drugs they take to induce abortion, a topic that they are not likely to discuss when interviewed at home in the presence of their mothers.

FGDs are useful in the exploratory phase of research. For example, they can help to assess service delivery, to find out which elements of quality of care people consider important and to probe why some people use contraceptives and others do not. The advantages and disadvantages of FGDs are summarised in box 7.9 (Hardon and others, 1994)

Moderator

The most important requirement for a successful FGD is a skilled moderator. FGDs are very efficient data-gathering tools but are not easy to conduct. Moderators do not need high academic qualifications, but they must have good communication skills. The moderator's role is to:

- Encourage all to participate in the discussion
- Stimulate discussion between participants, particularly when new information is given, or a diverging perspective is put forward
- Guide the group from one discussion topic to another
- Remain neutral and refrain from expressing a personal opinion on a subject
- Retain control over the discussion, but not act as an expert

The moderator should be present at the venue before the partici-pants in order to begin talking with them as they arrive and create the kind of informal atmosphere that encourages group discussion. How the discussion will be conducted should be explained to the group members before it begins. They should understand that their views and experiences are important and that there are no right or wrong answers.

Venue

The venue for the FGD is also important. It should be a neutral place, and never the health centre. Small details such as providing refreshments or a snack can create a friendly, relaxed atmosphere that assists discussion.

Group members

The selection of group members requires careful planning. To facilitate an open discussion, choose homogenous groups in terms of age, sex, socio-economic status and so on; for example, a group of providers, female clients with the same socio-economic background, or a group of young boys or girls. In mixed groups, considerations of status and hierarchy can have an adverse effect. It is also generally preferable to keep the groups relatively small in size. Six to ten members should be the maximum.

Recording

Group discussions are usually tape-recorded. The recording should be made with care and participants asked for their consent. However, a researcher/observer should also take notes as it is not always clear from a tape who is talking. The observer can also record non-verbal communication.

Box 7.9

The advantages and disadvantages of focus group discussions

Advantages

- They are quick and cheap
- A greater pool of expertise is tapped than in individual interviews leading to a more diverse picture
- The way people interact with each other can also be recorded
- Individual inhibitions are lessened and people may be willing to discuss embarrassing or sensitive subjects
- Information gathered is sometimes more accurate because respondents are reluctant to give inaccurate answers when they may be contradicted by other participants

Disadvantages

- Its success is unpredictable
- In some cases, one or more participants may dominate, the views of others are not recorded and are thus under-represented
- Information may be limited in depth; it is difficult to probe one person's ideas as others must also be given a chance

7.8 Direct Observation

Direct observation is appropriate for studying client-provider interactions and for assessing conditions at service delivery points. It can be used, for example, to obtain the following information:

- Availability of key contraceptive methods
- Quality of the provider re-supply consultations
- Provision of balanced information to new clients
- Provision of adequate information to new pill-users
- Adequacy of health facilities and materials
- Adequacy of check-up during consultation with new users
- Adequacy of screening for new pill-users and new IUD-users

For the advantages and disadvantages of direct observation see box 7.10 (Hardon and others, 1994).

Mystery or simulated client technique

Observational research can be difficult to carry out because reproductive health personnel may not want to have an onlooker present. They may feel that it will disrupt their work, and that they have to perform in a more 'correct' way than they would normally. They may also fear that their professional competence is being tested. The problem of their objections can be solved by observations that reproductive health personnel are unaware of. For example, a researcher or an assistant can pose as a

client. This is known as the 'mystery client (or simulated client) technique'. As well as bypassing the objections of personnel, it has the considerable merit of minimising the problems of bias that are encountered in direct observation. Madden and others (1997) review the advantages, the considerations for design and implementation and the ethical issues raised by the mystery or simulated client method.

Approach

As is the case with interviewing, it is advisable to prepare a checklist and guidelines for researchers engaged in direct observation. The way researchers introduce themselves to those being observed can very much influence their subjects' behaviour. If researchers announce that they are evaluating the skills of the providers, for example, those providers will feel more threatened by the study than if a different approach is taken.

Recording and validating observations

It is important to record observations systematically. A checklist is helpful in doing this. However, researchers need to be alert for the unexpected and be ready to describe things in more detail, as well as noting any additional observations.

As outsiders, researchers can easily misinterpret observations, and findings from observations should be validated and complemented by informal discussions with people. For example, if a speculum cannot be seen, the researcher should ask if it is stored somewhere. In the same way, if blood pressure is not measured during a consultation, it may be because this task is assigned to the para-medic at the front desk.

Box 7.10

The advantages and disadvantages of direct observation

Advantages

- It can provide more reliable information than oral communication, especially when done unobtrusively
- Provider-client interactions can be observed in the clinic context

Disadvantages

- It is time-consuming
- It is difficult to carry out because people may be suspicious of an onlooker
- The findings need to be validated through interviews
- The presence of an observer may cause bias

7.9 Structured Qualitative and Participatory Methods

Several techniques such as free listing, pile sorting, paired comparison and rating and ranking can be used to gather information on the social and cultural background of a (sub) group or community.

Free listing is an open-ended interview technique whereby informants are asked to list specified items (for example, all reproductive illnesses they are aware of, or qualities of health services). It helps to define the domain of research and its boundaries (Campbell and others, 1999).

Pile sorting is a technique whereby informants systematically group items into categories (Weller and Romley, 1988). It helps to identify features or characteristics within the domain of research.

Paired comparisons and rating and ranking can be done after pile sorting by asking the informants to rank items on a list according to degree of severity (for example, of symptoms) or frequency (for example, of types of clients visiting sex workers). Supplementary questions can also be asked, for example, about the way one type of client differs from another (Weller and Romley, 1988).

Other participatory appraisal techniques focus strongly on visualisation, including social mapping, body mapping, wealth ranking, seasonality diagramming and daily routine diagramming (for further reading see Campbell and others, 1999; Bernard, 1995; Weller and Romley, 1988).

7.10 Management Information, Project Documents and Reports

A variety of documents may be consulted for information on project inputs, processes, implementation progress, project management and co-ordination, and quality control. They include strategic plans, work plans, logical frameworks, project proposal documents, progress reports, training reports, syllabuses, protocols, reports, budgets, organograms, job descriptions, administrative records (e.g. financial and personnel records) and training class attendance records. Where necessary and appropriate, use checklists, summary tables and figures specifically designed to monitor change. For example, in order to keep track of project personnel who received training and passed tests it is possible to design a checklist or simple table summarising the number of persons passing a test after having received training in a defined period of time.

7.11 Secondary Data Sources

Other sources may be used to obtain information essential for the collection of data for certain indicators. A good example is the national (or perhaps regional or local) census. Census reports may be a secondary data source for estimating the population

of the project target area, for example. This information can then be used in the denominator of indicators addressing coverage of services, for example, the percentage of adolescent girls knowledgeable about HIV/AIDS prevention measures in a specific target area.

Chapter 8

Dissemination and Use of Monitoring and Evaluation Data

There is absolutely no point in devoting time and resources to the collection of data on indicators unless these data are fully used. This chapter describes ways in which monitoring information should be used and suggests ways of presenting them to achieve maximum effect.

Monitoring and evaluation (M&E) systems should serve two main purposes, which are of equal importance. The first purpose relates to the need of most NGOs to demonstrate to their sponsors that funds are being put to effective use. The second concerns internal management of the NGO and the projects that it is running. In addition, M&E results can be used for advocacy purposes.

8.1 Use of Monitoring and Evaluation Results in Relation to Sponsors

Increasingly, sponsors, whether they are charitable bodies, governments or international organisations, demand accountability from the NGOs that receive their financial support. Some sponsors specify detailed reporting requirements and frequency of reporting (for example, quarterly, half-yearly, annually), and an M&E system may have to be adapted or expanded to meet the requirements of new sponsors. Other sponsors will leave the nature of reporting to the NGO itself, in which case the existing M&E system will suffice. Major problems may arise when an NGO is supported by several sponsors each of which have different reporting requirements. In this situation careful planning is required to ensure that sufficient staff time is available to meet the varying requirements.

In the case of the RHI, carefully designed logical frameworks should provide an agreed basis for reporting of progress towards targets (see Chapter 5).

8.2 Use of Monitoring and Evaluation Results for Internal Management

M&E systems should always be used as a potentially powerful tool of sound management. A cleverly designed system will help management to:

- **Assess progress** against targets
- **Identify problems** or bottlenecks in operations (e.g. staff shortages, lack of supplies)
- **Compare performance** of service distribution points or other components
- **Plan future activities**, including forecasts of logistical requirements and revision of targets

In summary, M&E data should help to improve the efficiency and effectiveness of a project by clearly identifying what is working well and which components are working badly. Such diagnosis may lead to revisions of project tactics, for instance by terminating activities that appear to be ineffective and creating new approaches to overcome problems or bottlenecks.

M&E data should not be used in isolation as the basis for management decisions because, by themselves, they do not reveal the reasons for success or failure. Rather they provide a starting point for discussion between managers and employees. In this way, M&E results can be harnessed to encourage a participatory and interactive style of management that should be conducive to long-term success.

8.3 Use of Monitoring and Evaluation Results for Advocacy

RHI projects will be most successful when the political and social context is favourable to project aims. Successful advocacy may therefore be of critical importance and M&E results may make an important contribution to communication with important stakeholders: governments, both at national and local level, leaders of religious groups, community leaders, public sector health officials, school teachers and principals, representatives of the mass media.

Examples of effective use of M&E data in advocacy activities can take many forms. For instance, the purpose may be to highlight a neglected issue, such as teenage pregnancy or sexual abuse of children. In this instance, the results of a baseline survey, or of qualitative exploratory research, can provide the basis for meetings or press briefings. Alternatively, the intention may be to demonstrate that a particular approach to provision of information about reproductive health and services is meeting a need and should be supported and expanded. In this instance, trend information on the number and characteristics of clients served may be a powerful means of demonstrating the point.

8.4 Communication and Feedback of Monitoring and Evaluation Results

Many people - be they sponsors employees or stakeholders - find it difficult to understand arrays of numbers, so managers should devise ways of presenting M&E results in visually attractive and easily comprehensible forms. The main modes of visual presentation are:

- **Bar charts** are particularly suitable when the output or activity can be split into different components
- **Line graphs** are best used to show trends over time in the value of a single indicator
- **Pie charts** are a useful device for illustrating components that add up to 100 per cent

Figure 8.1 is an example of a bar chart. It compares the number of visits made by female and male clients to two health centres, over an 18-month period. Health Centre A receives more overall visits than Health Centre B and the number increases over time, whereas in B the number is fairly stable. However, B attracts more visits from men than A and the trend in men's visits shows a sharp increase, which is not apparent in A.

To be useful for managerial decision, these figures require interpretation. Why does A attract more visits? Is it simply a matter of location - in other words, is it in a more densely populated vicinity where few alternative health centres are located? Or does it have more favourable opening hours or offer a wider range of services? Similarly why does B attract more men?

Figure 8.1 An example of a bar chart showing trends in the number of female and male clients visiting two health centres

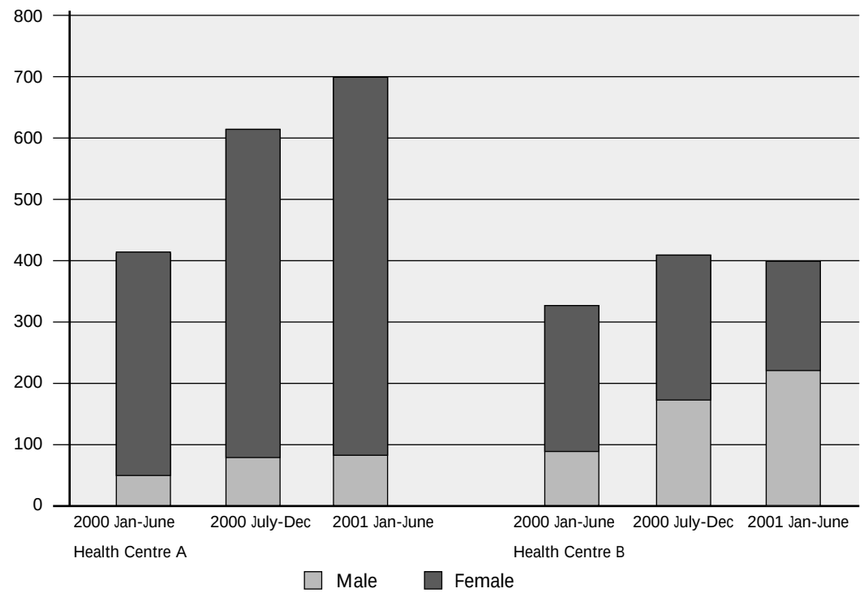


Figure 8.2 is an example of line graph. It shows monthly trends in total number of visits and in visits by teenagers. The target - 400 visits per month - is shown. The graph shows monthly fluctuations, but the overall trend is upwards and it looks likely that the target will be achieved in the near future. Something clearly happened in June, when the number of visits dropped sharply. Was the cause an external event, beyond the control of the project, such as severe flooding or a prolonged religious holiday? Or does the June drop reflect some defect in the project, such as shortage of supplies or staff?

Figure 8.2 An example of a line graph showing trends in total number of clients and number of teenage clients

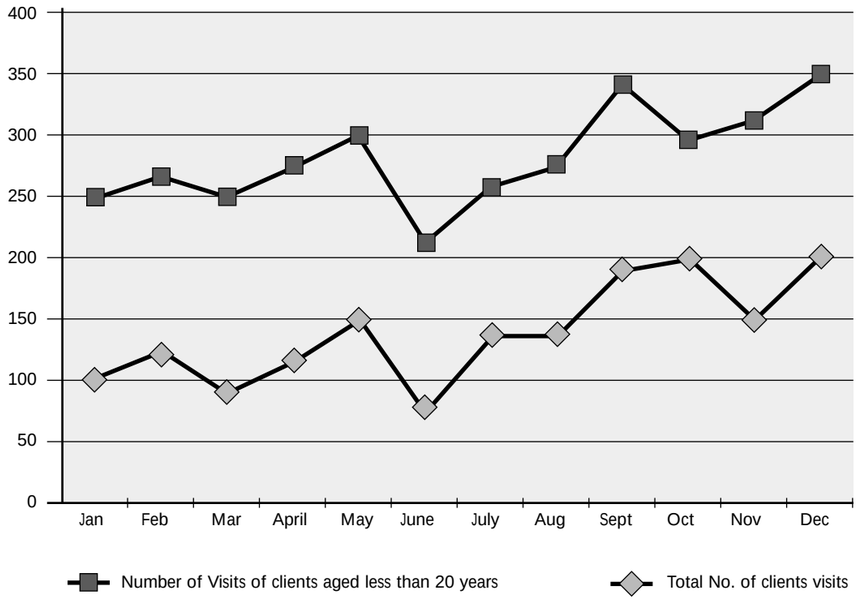
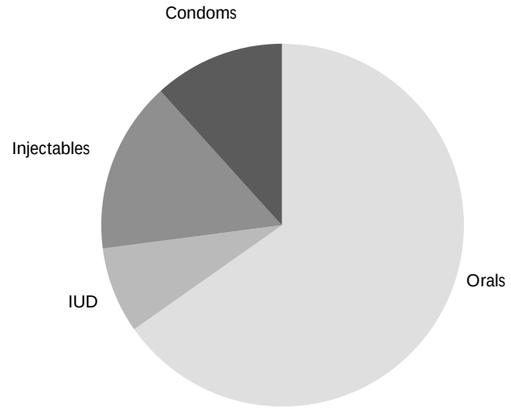


Figure 8.3 is an example of a pie chart. It shows the percentage of family planning clients who chose specific methods of contraception. Clearly oral contraceptives are the dominant choice. Condoms were chosen by only 12 per cent. In areas where HIV or other STDs are a serious problem, the small percentage of clients choosing condoms may be regarded as unsatisfactory because this is the only well-known method that offers protection against pregnancy and STDs.

Figure 8.3 An example of a pie chart showing percentage of clients choosing specified methods of family planning



For internal management purposes, regular feedback to all staff in such visual ways is absolutely essential. If this is done, employees who have to compile the raw data will see the purposes to which the data are put and thus undertake this part of their duties responsibly.

Conversely, when information reported by peripheral units in a project are not fed back from headquarters, the entire M&E function may seem to peripheral employees to be a pointless exercise and the effort put into it will decline accordingly.

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Appendices

Appendix 1

EC/UNFPA Reproductive Health Initiative 1997-2002 - Country-Specific Goals and Purposes

Countries with a focus on adolescent reproductive health (RH)

Country	Goal	Purposes
Sri Lanka	Strengthen community-based RH information and services for adolescents.	• Increase availability, accessibility, and utilisation of integrated quality RH information, counselling, and services for adolescents and youth • Increase community awareness and involvement in providing RH information and services to adolescent and youth in rural areas with some urban and peri-urban communities also covered
Laos	Contribute to the improved RH status of all young people in Laos.	• Increase availability and utilisation of quality adolescent RH services • Improve knowledge and awareness of gender-sensitive RH among young people, resulting in behavioural changes in RH practices • Improve commitment and capacity of national organisations and institutions to deal with adolescent RH concerns, leading to increased sustainability of adolescent RH activities
Vietnam	Improve the RH (including sexual health) status of young people by improving RH services for young people, and by developing and promoting information, communication and knowledge of adolescent RH through NGOs.	• Improve availability, accessibility and quality of RH services for adolescents • Improve overall RH situation of adolescents, both in terms of increased knowledge and use of reproductive health services • Decrease use of medical termination of pregnancies by adolescents • Increase male participation and understanding of family planning and reproductive/sexual health issues • Increase gender equality among adolescents and increased gender sensitivity among health and community service providers • Improve knowledge and understanding among key groups in society (including young people themselves) of the physical, psychological and social aspects of adolescent RH • Improve counselling and communication skills of health workers and community workers to enable them to respond to specific needs of adolescents • Increase local capacity to develop and implement adolescent RH programmes, and achieve self-reliance and sustainability

Countries with a focus on adolescent reproductive health (RH) (Continued)

Country	Goal	Purposes
Cambodia	Contribute to improved RH conditions in a sustainable manner in Cambodia.	• Increase knowledge and awareness of RH • Improve reproductive and sexual health practices and behaviour • Increase availability and utilisation of quality adolescent RH among young people in health services • Build national capacity to meet the reproductive and sexual health needs of young people • Empower young people to make informed decisions about their reproductive and sexual well-being • Promote gender equity and equality • Complement the national health programme through interventions targeting young people

Countries with a focus on community-based reproductive health (RH)

Country	Goal	Purposes
Nepal	Improve the RH status of women, men and adolescents in under-served areas in Nepal.	• Improve community-based RH services through NGO linkages with community-based organisations, women's groups, local leaders and the government health system and other appropriate health services • Enhance accessibility to community-based reproductive health services and information • Provide RH information services to adolescents • Increase involvement of men in RH/family planning and promotion of gender equity • Strengthen NGO partnership with the government for expanded coverage and quality of community-based RH
Pakistan	Improve the acceptance, availability and accessibility of RH information and services in under-served areas and among marginalised groups.	• Strengthen community-based RH information and services in rural areas, peri-urban and marginalised urban populations, with special emphasis on adolescents, gender issues, including male participation, and populations below the poverty line • Strengthen capacities of national NGO's and community-based organisations to strengthen their capacity to carry out and support RH services • Establish inter-linkages and collaboration among national NGO's in the area of RH information and services

Country with a focus on quality of reproductive health (RH) services

Country	Goal	Purposes
Bangladesh	Expand (quantitatively and qualitatively) RH services to make them more accessible by vulnerable groups, as well as of the capacity of the NGO and non-profit sector to deliver quality RH services and programmes.	• Expand and strengthen quality RH care for disadvantaged populations in rural, peri-urban and urban settings, with emphasis on clinical contraception, adolescents and gender issues/male participation through the NGOs and non-profit private sector • Strengthen capacity of NGOs and the non-profit private sector to carry out and support RH services • Establish inter-linkages and collaboration among the RHI partners and potential national NGOs in the area of RH information and services

Source: EC/UNFPA (1998/99).

Appendix 2

Checklist to Assist in the Design of Logical Frameworks

This checklist provides a means of verifying that a logical framework has been constructed in an optimal manner, thus avoiding repetition of information and ensuring relationships are realistic.

- The project has one purpose.
- The purpose is not a reformulation of the outputs.
- The purpose is outside the direct management control of the project team.
- The purpose is clearly stated.
- All the outputs are necessary for accomplishing the purpose.
- The outputs are clearly stated.
- The outputs are stated as results.
- The activities define the action strategy for accomplishing each output.
- The goal is clearly stated.
- The if/then relationship between the purpose and goal is logical and does not skip important steps.
- The assumptions at the activity level do not take for granted any pre-conditions necessary for carrying out the activity (for example, government approval may be needed in certain circumstances)
- The outputs plus the assumptions at that level produce the necessary and sufficient conditions for achieving the purpose.
- The purpose plus assumptions at that level describe the critical conditions for achieving the goal.
- The relationship between the outputs and the purpose is realistic.
- The relationship between the activities and inputs/resources is realistic.
- The vertical logic among activities, outputs, purpose and goal is realistic as a whole.
- The indicators at the purpose level are independent of the outputs. They are not a summary of outputs but a measure of the purpose.
- The purpose indicators measure what is important.
- The purpose indicators have quantity, quality and time measures.
- The output indicators are objectively verifiable in terms of quantity, quality and time.
- The goal-level indicators are objectively verifiable in terms of quantity, quality and time.
- The inputs described at the activity level define the resources and costs required for accomplishing the purpose.
- The means of verification column identifies where the information for verifying each indicator will be found.
- The activities identify any actions required for gathering means of verification.
- The outputs define the management responsibility of the project.
- When reviewing the logical framework, you can define the evaluation plan for the project.

Source: Team Technologies, Inc. (2000).

Appendix 3

Key Principles Concerning the Selection and Use of Global-Level Indicators

Indicators play an important advocacy role. Global level indicators play an important advocacy role, drawing attention to serious problem areas within reproductive health.

Indicators have inherent limitations. Indicators are not specific diagnostic tools. Regard them as indicative or suggestive of problems or issues needing action. A number of more detailed diagnostic, action-oriented tools are available such as maternal/perinatal audits. In general, such tools are qualitative in nature.

Indicators should be based on readily available information. In selecting indicators, wherever possible use information that is already being generated, rather than burdening health services with requests for additional information. If possible, refine existing indicators rather than create new ones.

Indicators should be action-oriented. Do not request indicators to be reported at the global or national level unless they are relevant and useful for programme or case management at the level of data collection.

Qualitative and quantitative approaches should be considered. Do not neglect methodologies other than those providing numeric information in monitoring and evaluating strategies. They are important complements to quantitative indicators.

Use more than just scientific criteria for selection. In addition to scientific characteristics, consider criteria relevant to the use of the indicator, its weaknesses and collection methodology.

Indicators must be clearly defined. Define each indicator both textually or, in the case of proportions, rates or ratios, by specifying the numerator and denominator. Provide clear recommendations of data collection methods and formats of presentation with each indicator, as well as appropriate uses.
Disaggregation of indicators. The indicators should allow for disaggregation by sex, age, urban/rural areas and special groups as appropriate.

Periodicity of reporting. Consider the question of periodicity of reporting. If significant changes are likely to occur from one year to the next, the indicator should be collected annually. If however, the change is not statistically significant then an appropriate frequency of collection must be identified.

Stratification of indicators. There are many different bases on which indicators can be categorised, for example:

- **Organisational level** - individual, community, country
- **Variable of primary interest** - disease case, person, health programme function - priority setting, planning, implementation
- **Type of phenomenon** - health status, health services
- **Logical framework approach** - inputs, direct outputs, intermediate effects, impact

New and emerging issues in reproductive health. Identify suitable indicators for new and emerging issues in reproductive health. Develop and improve information systems providing information on these areas.

The identification of indicators should be an ongoing process. The selected minimal list of indicators should not be finite. Changes in our understanding of what we mean by reproductive health, in epidemiological situations and in health care and service delivery, are inevitable. Therefore, the list will need to be periodically updated as new indicators are tested and found useful. Also needed will be mechanism for dropping indicators that are not useful or that require unrealistic and unsustainable resources for their collection.

Source: WHO (1997a).

Appendix 4

Practical Criteria for the Selection of Indicators

Which indicators are useful?

A useful indicator is one for which follow-on action within the district is immediately apparent. For example, the indicator 'case fatality rate among women with post-partum haemorrhage' could be used to monitor improvements in the blood transfusion service or the referral system for obstetric emergencies.

Which indicators are accessible?

An accessible indicator is one which is readily available in a usable format and at appropriate time intervals. For example, information may be reported to different sections of the district health administration, so making an indicator constructed from these data less accessible. The criteria of accessibility will reflect closely the source of data. These guidelines highlight the importance of using routine sources since, generally speaking, these will be the most readily accessible to the district health manager. Routinely collected data do, however, have drawbacks - sometimes related to representativeness (see criteria below) and sometimes the data are not aggregated or summarised to a point where indicators can be produced.

Which indicators are ethical?

An ethical indicator is one for which the gathering, processing and presentation of the data it requires are ethical in terms of the rights of the individual to confidentiality, freedom of choice in supplying data, and informed consent regarding the nature and implications of the data required. Reproductive health encompasses many sensitive issues and the data needed to reflect these issues also requires a level of sensitivity, particularly during the collection process. Judging whether an indicator is ethical or not thus depends not only on an understanding of the process of generating the basic data, but also of the context in which this will take place and the safeguards needed to preserve the rights of individuals. Surveys on sexually transmitted infections, sexual behaviour and HIV require special attention to issues of informed consent and confidentiality. Where an indicator requires screening for a condition, for example, for cervical cancer, this may also be regarded as unethical if there are no resources available for follow-up and treatment, since the data collection is unlikely to have secured informed consent.

Which indicators are robust?

Robustness reflects the scientific qualities of an indicator in terms of whether it is valid, specific, sensitive and reliable. A robust indicator is one which actually measures the issue or factor it is supposed to measure. A specific indicator is one which only reflects changes in the issue or factor under consideration; for example, the indicator 'the existence of a national policy statement on the need to address female genital mutilation' specifically indicates the government's position on this reproductive health issue. A sensitive indicator is one which has the ability to reveal changes in the issue

or factor of interest; for example, the indicator 'the perinatal mortality rate' is sensitive because it can pick up changes in the frequency with which perinatal deaths occur. Unfortunately, it is not possible to have indicators which are both highly sensitive and highly specific, since these qualities work in opposite directions. For example, although the proportion of live births which are low birth weight is a sensitive indicator (being responsive to trends over time). it is not very specific since a whole of range of factors could have been responsible for the change. A reliable indicator is one which would give the same value if its measurement was repeated in the same way on the same population and at almost the same time.

Which indicators are representative?

A representative indicator is one which adequately encompasses all the issues or population groups it is expected to cover; for example, the indicator 'percentage of health facilities in the district providing antenatal care' is a representative indicator since it reflects the situation across all facilities. The indicator 'prevalence of severe anaemia in pregnant women' would not be representative unless all pregnant women had their blood tested during pregnancy. One of the biggest drawbacks to using routinely-gathered information from health facilities in order to generate indicators is selection bias. In situations where services are not accessible, affordable and acceptable to particular groups of the population, routine data will not reflect their health problems or needs, and it is easy to see how these groups can become essentially invisible. This is one of the reasons why it is important to have some data from community-based sources, such as surveys, and to have an estimate of the total population of the district since this should form the denominator of any population-based indicators.

Which indicators are under-standable?

An understandable indicator is one whose meaning you would find easy to define and describe, and which is easy to interpret; for example, the indicator 'couple years protected' is an indicator often used to monitor or evaluate family planning programmes but many users find it hard to understand. The indicator 'contraceptive prevalence rate', on the other hand is more straightforward, both to define and interpret.

Source: WHO (1997b).

Appendix 5

Interviewing Methods

There is a continuum of interviewing methods based on the amount of control the researcher tries to exercise over the responses of informants. For convenience, the continuum is divided into four types.

At one end there is the **informal interviewing,** characterised by a total lack of structure or control. The researcher simply tries to remember conversations heard during the course of the day 'in the field'. Informal interviewing is the method of choice during the first phase of participant observation, when you are just settling in and getting to know things. It is also used throughout fieldwork to build greater rapport and to uncover new topics of interest that might have been overlooked.

Next comes **unstructured interviewing.** There is nothing at all 'informal' about unstructured interviewing. Unstructured interviews are based on a clear plan kept constantly in mind during the interview process, but they are also characterised by a minimum of control over the informant's responses. The idea is to encourage people to open up and to express themselves in their own terms and at their own pace. Unstructured interviewing is used in situations where there is no time constraint.

In situations where there is only one chance to interview someone, **semi-structured interviewing** is preferable. It has much of the freewheeling quality of unstructured interviewing, and requires similar skills, but semi-structured interviewing is based on the use of an interview guide. This is a written list of questions and topics that need to be covered in a particular order. Formal written guides are mandatory if several interviewers are being used to collect data. But even if one person is doing all the interviewing, a guide should be built and followed in order to produce reliable comparable data. Semi-structured interviewing works very well when dealing with managers, bureaucrats and elite members of a community – people who are accustomed to efficient use of their time. It demonstrates that the researcher is prepared and competent, but is not trying to exercise excessive control over the informant.

Finally, there are fully **structured interviews** in which all informants are asked to respond to as nearly identical a set of questions as possible. One variety of structured interview involves the use of an interview schedule – an explicit set of instructions to interviewers who administer questionnaires orally. Another example are self-administered questionnaires.

Source: Bernard, H. Russel (1995).

Appendix 6

Structured Interviewing - Questionnaire Design and Using Interviewers

In designing a questionnaire and using interviewers to administer it, a number of important guidelines should be borne in mind:

- **Use simple language** that will be understood easily by the respondent.

- **Precode the responses** to the questions, whenever possible, so that the information can be transferred easily to computer cards or otherwise tabulated. This requires more effort when designing the interview schedule, but the savings of time and effort during the processing and analysis will more than compensate for it.

- **Avoid asking for more than one item of information in a single question.** For instance, do not ask, "Do you and your husband want another child?" If the respondent and her husband disagree about having another child, an answer of either "yes" or "no" will be impossible to interpret accurately. A response of "yes" could mean, "I want another child", "My husband wants another child" or "Both of us want another child". It would be better to ask two separate questions: "Do you want another child?", "Does your hus-band want another child?"

- **Watch out for ambiguous wording of questions.** For instance, if family planning has already been defined, a question such as "Which method or methods of family plan-ning do you use?" may seem clear enough. But if the respondents are wives, they may not mention use of vasectomy or condoms, since these are male methods. The question should be "Which method or methods of family planning do you and your husband use?"

- **Include all questions necessary to provide sufficient information** on the variables being studied. Also, be sure that the data necessary to test the hypotheses of the study can be obtained from the data collection instru-ments. It is often helpful to prepare a list of key study variables with an indication of where the data for the variable will be obtained.

- **Do not overload the interview schedule** with items that are not essential for the study. Keep it as short as possible to avoid tiring the respondent and to simplify the data processing and analysis.

- **Start with the easier questions,** moving on to the ones that are more sensitive or difficult to answer only after the respondent has had an opportunity to become accustomed to the interview situation. Respondents are likely to be somewhat tense or even suspicious at first, and a major task of the interviewer during the first few minutes is to establish rapport - to place the respondent at ease. This task is easier if the initial questions are unlikely to cause embarrassment or be difficult to answer.

- **Try to avoid embarrassing or painful questions.** If it is necessary to ask a sensitive question, word the question as tactfully as possible and avoid asking it near the beginning of the interview, when the respondent may not yet be completely relaxed.

- **Ask all respondents each question in exactly the same way.** If the interview is to be conducted in more than one language, prepare full written translations into all major languages and instruct interviewers to use those translations word for word. Do not permit free translations, except for languages with too few respondents to justify the cost of preparing written translations. To ensure comparability of wording among the various written translations, have them back-translated into the original language to verify that the meaning is retained. The back translation should be done by persons who are not familiar with the original wording of the questionnaire.

- **Pre-test the questionnaire in an actual field situation.** There are several principles of pre-testing:
  a)The pre-test need not involve large numbers of respondents; 30-50 is often enough if the respondents are sampled (purposively) in such a way as to ensure that the expected heterogeneity of the study sample is reflected in the pre-test sample. This means making sure that the pre-test includes old and young, urban and rural, less educated and more educated, contraceptors and non-contraceptors, and so on.
  b) Be prepared to conduct more than one pre-test. If a pre-test results in major revisions, it is a good idea to conduct a second pre-test to be sure the revisions are satisfactory.
  c) Pre-testing should be completed before the training of interviewers. Often it is possible to use field supervisors to do the pre-test. This gives them a clearer understanding of study objectives and better prepares them to assist in the training of interviewers.
  d) The main purpose of the pre-test is to ensure that respondents are able to understand the questions and answer them usefully. Hence, it is not enough simply to interview the pre-test respondents; each interview should be followed by a debriefing, in which the interviewer asks about the respondent's understanding of questions that are thought likely to be misunderstood, or that appear to have caused difficulty during the interview.

- **Provide complete training for all interviewers.** The training should be designed to familiarise the interviewers with the intent and meaning of the questions, let them role-play interview situations, and give them experience in actually conducting interviews in the field under supervision.

- **Make an appointments for a call-back visit** if a prospective respondent is not available during the interviewer's first visit. It is common to require at least two call-backs before dismissing a sample case as unavailable for interview.

- **Give interviewers clear instructions for obtaining substitutes** if the sample is small, and some cases cannot be located. The instructions must ensure either a random sampling of substitutes or selection of substitutes who are similar to the cases originally selected. If the sample is large enough to tolerate some loss of cases, it is usually better not to draw substitutes.

- **Provide privacy for the respondent** during the interview if at all possible. If others are present, the respondent's answers may be influenced. For example, a respondent whose husband does not know she is using oral contraceptives may give the inter-viewer one type of answer to a question if she is interviewed alone, but quite another type of answer if her husband is present.

- **Check all completed interview schedules** for errors, omissions, and discrepancies as soon after interviewing as possible. Revisit respondents to correct errors that cannot be otherwise resolved. It is best if the interviewer can check the question-naire immediately after the interview so that the respondent can be consulted. After the interviewer has checked and corrected the questionnaire, it should be rechecked by the field supervisor. This checking process is known as ‘field editing’.

Source: Fisher, A.A. and J.E. Laing, J.E. Stoeckel, J.W. Townsend (1991).

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