Implementation Research Toolkit

Facilitators' guide

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Acknowledgements

ABBREVIATIONS

ACT	artemisinin-combination therapies
ANC	antenatal care
ART	antiretroviral therapy
BCC	behavior change communication
BMI	body mass index
CAS	complex adaptive system
CHW	community health worker
CMS	Cooperative Medical Scheme
COS	Community of Science
DOT	directly-observed therapy
ERC	ethics review committee
FGD	focus group discussion
HDI	Human Development Index
HIV	human immunodeficiency virus
HRP	Special Programme of Research, Development and Research Training in Human Reproduction
IC	informed consent
ICF	intensified case finding
IDRC	International Development Research Centre
IEC	information, education and communication
iKT	integrated knowledge translation
IR	implementation research
IRB	institutional review board
IRP	Implementation Research Platform
KT	knowledge translation
KZN	KwaZulu-Natal
LLIN	long-lasting insecticide-treated net
LOI	letter of intent
LSHTM	London School of Hygiene and Tropical Medicine
LTFU	loss to follow-up

M&E	monitoring and evaluation
MDR-TB	multidrug-resistant tuberculosis
NGO	nongovernmental organization
NSF	National Science Foundation
NTBCP	national TB control programme
OER	Office of Extramural Research
PI	principal investigator
PLHIV	person/people living with the human immunodeficiency virus
PMTCT	prevention of mother-to-child transmission
QDA	qualitative data analysis
RFP	request for proposals
SAGE	Strategic Advisory Group of Experts
SARS	severe acute respiratory syndrome
SMART	specific, measurable, achievable, realistic and timebound
SOP	standard operating procedure
SWOT	strengths, weaknesses, opportunities and threats
TB	tuberculosis
TDR	Special Programme for Research and Training in Tropical Diseases
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Contents

Background and introduction to the implementation research toolkit

Overall aim and rationale

Effective implementation research "requires a broad, systemic (and therefore multidisciplinary) approach, it cuts across public and private sectors, and it needs researchers from biomedical, pharmaceutical, the social sciences, public health and health economics sectors to work together. These researchers must take into account the local context of the health system, advocate for political commitment and most importantly must be driven by the needs of health care providers, control programme implementers and policy-makers. It is critical to identify these contextual conditions and build them into the research process. In addition, implementation research (IR) has to address ever more complex innovation processes at national, regional and global levels" (WHO 2011).

This toolkit is designed to strengthen IR capacities of individuals and institutions in low- and middle-income countries where the greatest need exists. It is focused on demand-driven research questions based on needs identified with relevant stakeholders/implementers in the health system. It covers the processes involved in implementation research highlighting the central paradigm of *stakeholders engagement* in identifying issues, formulating appropriate research questions, *team work* in project design, data collection and analysis, monitoring and evaluation of the project as well as *feedback and uptake of the findings* in the system.

Intended participants and beneficiaries

Implementation research is teamwork and requires people with different skills, experiences and backgrounds to come together in order to address an implementation problem and answer questions posed by health care providers, programme managers, implementers or other service providers in the execution of their duties. An IR project team can therefore include researchers and as well as, health care providers, programme managers, policy-makers, students, civil society organizations and NGOs depending on the context and the nature of the project.

This toolkit can be used as a training tool for IR research teams. It can also be adapted as instructional material on implementation research in schools of public health.

Planning and organizing the workshop

Ideally the workshop is delivered in seven modules through the whole research project from defining and contextualizing implementation research issues, to developing the research proposal, planning to conduct the research, collecting and analysing the data, communicating and feeding back findings into the health system and finally monitoring and evaluating the project. Workshops should be organized as close to the relevant research activity as possible. For example, the project planning module should be delivered after funding for the project is secured and before

undertaking any field work, the data collection and analysis module should be delivered before initiating data collection etc.

Workshop participants should be given access to the references, case studies and materials for the reflection exercises at least two weeks before the applicable workshop.

The suggested duriation for each module is provided later in this guide (page 13).

Expected outcomes

The need to address implementation bottlenecks is often greatest in settings where health systems are weak or non-existent. Unfortunately, it is in such settings that knowledge of IR and the necessary skills to frame appropriate research questions, conduct, manage, interpret and utilize research results for programme planning and policy implementation are limited. In general the curricula of public health academic programmes do not focus on research in real life context central to IR. Such training invariably does not adequately prepare researchers, practitioners, providers and decision-makers in the health system for partnerships (team approach) and interdisciplinary approaches to addressing barriers to implementation.

It is expected that utilization of the toolkit will promote the understanding of IR as teamwork involving a systematic approach to understanding and addressing barriers to effective and quality implementation of health interventions, strategies and policies. IR teams and health systems will be able to conduct and use the outcomes of research to improve/optimize health care and systems in the areas of greatest need.

Toolkit materials

The toolkit was developed and designed to be implemented mainly in a workshop setting. It is intended to be a dynamic and interactive programme in which facilitators actively engage the participant teams in the learning process. A range of materials and learning methods have been carefully developed to enable this to happen in an effective and engaging way.

Participant workbooks

A participant workbook has been developed for each of the seven modules. These are intended to provide all of the information participants need during the workshop, including all the information contained in each module's slide set. It is worth highlighting to the participants at the outset of the workshop that they do not need to reproduce or note down the content of slides. These are referred to in the respective sections of the participant workbook.

Each workbook also provides a reference list and links to suggested reading materials, as well as other resources that address specific topics in greater detail.

Slide decks

For each module a set of slides has been developed. The content of the slides has been kept intentionally brief to encourage discussion and critical thinking during the workshop sessions (and to avoid facilitators and participants 'reading from slides' rather than thinking). The slides can be adapted for a specific workshop setting or set of participants. Before each workshop, facilitators should review the relevant slides so any final modifications or customizations can be made.

Facilitators' guide

This guide provides essential information to the organizers and facilitators to plan and implement such a workshop. It includes:

- information on planning and preparing for the workshop;
- an overview of the teaching and learning methods used;
- detailed instructions for delivering individual modules.

Note: To avoid any possible confusion, all references to figures/tables and boxes in this guide have matching numbers to those used in the Participant workbooks. This does mean that in some places the order of references may seem incorrect in this guide.

The guide comprises two parts, as follows:

Part I. Planning and organizing the workshop

a. Designing the structure, timeline and content of the workshop: Contains suggestions for establishing the structure and content of an IR training workshop.

b. Inviting participants and other contributors: Provides suggestions on inviting the participants and other contributors to the workshop, with specific suggestions on:

- Drawing on the expertise of specialists.
- Planning a formal opening and closing ceremony.
- Involving team members from different sectors in individual countries.

c. Key teaching/learning methods: Discusses the facilitation of the workshop, and the teaching/learning methods used.

- Criteria for selecting facilitators.
- Role of the facilitators.
- Ground rules for participatory training.
- Planning and running the modules.

d. Planning for the IR workshop: Contains a checklist for workshop planning and preparations (e.g. facilities and equipment).

e. Evaluation methods: Provides an overview of workshop evaluation methods:

- Measuring the participants' views and reactions.
- Assessing changes in the participants' knowledge.
- Feedback on the workshop itself/facilitation.
- Follow-up questionnaire to promote understanding of changes in participants' practices.

Part II. Detailed information and materials for conducting individual modules

This part includes the workshop schedule and the 'step-by-step' instructions to conduct each sessions. It also presents all the support materials needed to run the module, such as slides with accompanying talking points, flipcharts and their contents, and case study materials with notes on issues that may arise. Finally, it includes tips to help you respond to questions that may be raised by participants, identifies matters that may be sensitive and about how to deal with them.

Part I.
Planning and organizing the workshop

a. Designing the workshop structure, timeline and content

The IR workshop modules consist of seven core elements. The developmental stage of participants' research projects and experience of the team determines the workshop sstructure and emphasis. Workshop participants should be selected/invited as a homogeneous group in relation to their IR concepts/problems. Mixed groups with proposals in different stages of development cannot be planned or facilitated effectively.

b. Selecting/inviting participants and other contributors

Participants at the workshop should be selected as research teams with a minimum of 3 and maximum of five persons in each team. The disciplines represented in the team will depend on the nature of the research problem to be addressed but in all cases each team must include at least one implementer. The team leader should list the members and their roles in the project to ensure they will be available for the whole duration of the workshop. The selection criteria should be clearly spelled out.

As much as possible, select facilitators familiar with the general local, national or regional context of the participants. The facilitators should be experienced in the subject matter to be covered and preferably active implementers/researchers. This increases the likelihood of using illustrations the participants can relate with and enhance assimilation of the concepts. Facilitators should spend time prior to the actual workshop reviewing the material and compiling appropriate illustrations.

c. Planning for the workshops

Budget: the costs for accommodation, feeding, materials, travel and any other related allowances are important considerations for a cost-effective workshop. Full funding must be available before inviting participants to the workshop.

It is essential to establish good communication with participants prior to the commencement of the workshop. The following are examples of issues participants need to be aware of ahead of time; workshop objectives, dates and venue for the workshop, the responsibilities of the participants including their availability during the workshop, completing the pre-workshop assignments. Travel arrangements should allow participants to arrive a day before the workshop. It is best for participants to all stay in the same location for the duration of the workshop. This will facilitate group learning and completion of assignments at the end of the day.

Each workshop module should be delivered prior to the corresponding research activity (for example the project planning module should be delivered before inception of the project). Use the following checklist for the first workshop session:

1. Participants and facilitators introduce themselves individually.
2. All agree to general code of conduct (ground rules e.g. respect, politeness, mode of address, speaking clearly, taking turns to speak etc.) at the beginning of the workshop.

3. Assign one participant to act as time keeper for the workshop sessions.
4. Assign teams/participants to review and present the sessions (daily – preferably first thing the following morning). Reviews should focus on what was learnt, what went well and what could be improved.

The facilitators should hold daily reviews of the progress of workshop activities and adjust accordingly.

d. Key teaching/learning considerations

You should read this section before you start conducting sessions.

Preparing your sessions

- It is important that you are thoroughly familiar with the toolkit material, and with the order of ideas in the modules. This is necessary even if you are an experienced facilitator and/or knowledgeable about IR.
- Read through all the modules rather than just focusing on those you will present. Having an idea of how the different sessions fit together will help you focus on the information for each session without duplicating material that will be presented in later sessions. It also makes it easier to draw linkages with information from previous sessions or to defer a question if the topic will be covered later on in the workshop.
- Read the session objectives from this guide to remind yourself of what the session aims to achieve.
- In coordination with other facilitators, consider splitting some sessions between two or more facilitators, particularly long sessions that involve different activities.
- Keep this guide with you at all times and refer to it throughout the course preparation, delivery and follow-up as needed.

Key concepts

The toolkit uses key concepts to emphasize specific areas of focus and principles of action. The key concepts covered in each module are clearly outlined (across all materials) and will be reinforced throughout the course (i.e. by facilitators and participants), by repeatedly writing and referring to them, using them to structure sessions and presentations, and reiterating them verbally. Key concepts from preceding days should be reviewed and reinforced at the start of each subsequent day.

Facilitating sessions

- Talk in a natural and lively way. It is preferable to present the information in a conversational manner instead of reading out the presentation notes exactly as they are written. Avoid reading from the screen if you can.
- Speak clearly and slowly, projecting your voice so that all participants can hear and understand what you are saying.
- Face the audience and maintain eye contact with participants when speaking. Move around the room to keep participants engaged.
- Explain to participants exactly what each overhead or flipchart shows, and highlight clearly the main points from which they should learn.
- Remember, slides and flipcharts are only visual aids to help your facilitation; do not expect participants to learn from them without your help.

Involving the participants

- Constantly read the mood and atmosphere of the group. Is everyone participating? Do people look interested or not?
- Use ice-breakers and warm-ups if the energy level seems low. Consider having a short break if participants appear tired or overwhelmed by the amount of information being presented.
- Involve all participants. Read and use both verbal and non-verbal cues to encourage participation. Ask questions directly to quiet individuals, without embarrassing them.
- Ensure that participants get a chance to speak one at a time; assign them an order in which to speak if necessary. People are less likely to interrupt others if they know that they will have a turn to talk.
- Encourage respectful discussion and sharing of ideas and experience. Learning is more effective and faster when it builds on what learners already know or have experienced.
- Encourage team work and a sense of belonging through active participation.
- Ensure that the discussion is not dominated by one or two persons and that all participants have a chance to pose and answer questions.
- Acknowledge all participants' responses in order to encourage continued engagement.
- Encourage succinct answers by commenting positively on the interventions of participants who give responses that are short and to the point.
- Ask participants to keep their workbooks closed while answering discussion questions so that they think about possible answers rather than read the information from their manuals.
- Re-cap and reflect on the points raised regularly throughout the sessions.
- Identify issues/observations that require follow up.

Basic requirements of facilitators and adult learning principles

In line with the key principles of adult learning, facilitators should aim to:

- Have a warm and welcoming attitude and an ability to show approval and acceptance of participants.
- Be able to develop a good rapport with the group.
- Be enthusiastic about the subject.
- Be able to create an interactive environment, i.e. by asking questions, moving around the room, always addressing the whole group, and avoiding focusing on a small group or individuals.
- Ensure to have a non-judgemental approach to participants (even if you do not share their views).
- Be able to lead without stifling participation.
- Be flexible when circumstances demand.

You also need to:

- Ensure that the appropriate visual materials, such as flipcharts or slides/projectors are available and ready.
- Keep visual aids simple and legible.
- Regularly check that participants understand the information being presented.
- Use interactive techniques (e.g. such as asking open-ended questions that require participants to explain and give detailed answers that demonstrate their comprehension).
- Give participants a genuine chance to arrive at the answers to the questions included in each session themselves. Questions are asked in such a way that participants should be able to find

the appropriate answer by looking at the relevant figures displayed or by drawing from their own experience, or from material that has been covered previously in the workshop.

- Sometimes, participants may need additional help in finding the answer; in such cases, you may opt to give them a hint. In other instances, you may find that asking the question again in a different way can help.

Quick checklist of facilitation skills

Movements	Take centre stage; avoid standing in a corner or behind a desk.
	Face the audience; do not face the board or screen when speaking.
	Avoid blocking the audience's view.
	Make eye-contact with people in all sections of the audience.
	Use natural gestures and facial expressions, while remaining culturally sensitive.
	Move around the room; approach people to get their attention and encourage their participation.
Speech	Speak clearly, slowly and loudly enough for everyone to hear; be natural and lively; vary the tone of your voice as appropriate.
	Write difficult new words on the flipchart; pronounce and explain them.
	Be mindful that some members of your audience may not be familiar with expressions and illustration from a different cultural context
Interaction	Interact with and engage all participants; address them by name as appropriate.
	Ask the questions suggested in the text; ask different participants; encourage quiet participants to speak.
	Allow time for participants to answer; do not give the answers too quickly; drop hints if needed.
	Respond encouragingly and positively to all answers; correct errors with tact and sensitivity.
	Avoid discussions which are off the point or distracting; postpone them if necessary. Give satisfactory answers to questions from participants, or promise to address them later.
Visual aids	Have the required aids and equipment ready; check and arrange them before the session.
	Make sure that everyone can see clearly; arrange the room so they can have a good view of the presenter and the screen.
	Point to what you are talking about on the projector or on the screen as appropriate.
	If using a flipchart or a board, write in large, clear letters.
	Cover, turn off, or remove visual aids that are not in use any more.
Use of materials	Follow the session plan accurately and completely; use your guide.
	Prepare thoroughly; read and obtain any materials that you need beforehand.
	Prepare your helpers (e.g., for role-plays) before the session; practise if possible.
	Do not learn the session by heart; follow the guide but talk in your own way.

Time management	Emphasize important points; try to avoid repetition unless really useful.
	Do give a few local examples; avoid introducing too much extra material.
	If it is necessary to read from the guide, look at the audience regularly.
	Keep to time: pace yourself; gauge the group regularly to ensure that you are not moving too fast or too slow; do not take too long with the early parts of the session. Be familiar with the content, the slides transition and the duration of the presentation.

e. Evaluation methods

Use anonymous self-administered questionnaires for the evaluation. The initial assessment should be conducted at the beginning of the workshop. The aim of this assessment is to establish baseline information about the participants' knowledge, skills and competences in relation to the seven modules of the tool kit. The information obtained from this assessment will guide the facilitators on areas for greater emphasis during the sessions. An identical questionnaire is administered at the end of the training workshop to assess the changes in participants' knowledge.

To assess the participants' views and reactions about the module (content, and delivery) and facilitation, a self-administered questionnaire is administered at the end of each module. The feedback can be used to improve the course and also to better plan for future courses.

Part II.
Detailed information and materials for conducting individual modules

Toolkit modules: Quick reference

The IR Toolkit workshop modules consist of an introduction and six core elements:

Module	Title	Suggested duration	Notes
	Introduction and basic orientation	0.5 day	Typically combined with introductions, an opening ceremony and module 1
1	**Contextualizing IR issues**	1.0 day	
2	**Developing an implementation research proposal**	5.0 days	Stand alone
3	**Planning and conducting an IR project**	0.5 day	Can be combined with module 4
4	**Data analysis and presentation**	1.5 days	Can be combined with module 3
5	**Disseminating the findings**	1.0 day	Can be combined with module 6
6	**Monitoring and evaluating an IR project**	1.0 day	Can be combined with module 5

Summary description of workshop modules

The IR Toolkit workshop modules consist of and introductory module and six core elements.

Introduction and basic orientation

The introductory module serves as a baseline introduction and quick reference for participants (and is also useful as an introduction for new facilitators). It provides a summary of the 6 core modules, their rationale, basic terms and principles, as well describes the following:

- What is IR?
- Key characteristics of IR and the IR cycle.
- IR-focused self-assessment for participants.

The module is typically combined with an introduction/formal opening ceremony) and comprises a half-day workshop with a tutorial, presentation slides and materials for further reading.

Module 1: Contextualizing implementation research issues

Module 1 has been designed to help researchers, implementers and decision-makers appreciate the value of IR, and improve their understanding of the environmental and contextual issues around IR and interventions in general. In addition, the module serves as an introduction to ethical considerations related to IR projects. The module covers the following key concepts and their application with examples:

- Understanding the environment and context.
- Understanding the intervention.
- Ethics and ethical issues in IR.

Module 2: Developing an implementation research proposal

This module builds on the premise of an understanding of the contextual nature of IR, engaging the right stakeholders, articulating the problem/barrier to be addressed and assembling an appropriate and multi-disciplinary team (i.e. covered in Module 1). It takes participants through a process of formulating appropriate research question(s), choosing the appropriate study design to answer the question(s) and preparing an outline of the project activity plan. It covers the following key concepts with examples.

- Identifying barriers to implementation and formulating the research question.
- Making your case for funding (introduction, rationale and objectives).
- Study design and appropriate methodologies.
- Planning the project (budget, personnel, timelines, monitoring and evaluation).

The module helps participants think and work through all the essential steps to develop a research proposal.

Module 3: Planning to conduct the research

Module 3 addresses the steps that take place once resources to support an IR proposal have been secured. It provides information needed to plan for the research project, including preparation of the study protocol for an ethical review process. Module 3 covers the following key concepts with examples.

- Preparing for ethical review.
- Project implementation process.
- Good practices in IR.

Module 4: Data analysis and presentation

This module has been designed to help the research team, implementers and researchers understand appropriate data analysis procedures for qualitative and quantitative data; understand the appropriate use of statistics in quantitative research; and describe and document the data analysis processes in a qualitative study. It employs examples to illustrate the applications of the underlying concepts.

Module 5: Dissemination of research findings

This module has been designed to assist the research team to:

- Appreciate the concept of knowledge transfer in the uptake and use of research findings.
- Describe the barriers and facilitators of knowledge transfer in relation to a research project.
- Understand the value of disseminating information throughout the project cycle.
- Appreciate the value of developing a comprehensive dissemination strategy in a research project;
- Appreciate the importance of tailored dissemination tools for the different target audiences.

It illustrates the key concepts of knowledge translation with examples and provides structured guidance on preparation of research reports, peer reviewed papers, press releases, conference presentations and policy briefs.

Module 6: Monitoring and evaluation

The final module has been designed to help the research team track progress against set plans, check compliance to established standards, identify trends and patterns, adapt strategies and inform decisions for project management. It also helps builds skills to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact and sustainability. On completion of this module, the research team will be able to appreciate the process involved in the development of a monitoring and evaluation plan and describe implementation process of an IR project.

FACILITATING THE INTRODUCTION AND BASIC ORIENTATION

FACILITATING THE INTRODUCTION AND BASIC ORIENTATION

Learning objectives and expected outcomes [slides 3–4]

This introductory module serves as a baseline introduction and quick reference guide. It provides an introduction to basic terms and principles, along with an orientation to subsequent toolkit modules and their rationale. By the end of the introduction, participants should gain a good overall understanding of the following key concepts and their application:

1. What is implementation research?
2. Key characteristics of IR and the IR cycle.

The module is typically combined with an introduction/formal opening ceremony and comprises a half-day workshop/tutorial, slides and materials for further reading. It also includes a self-assessment opportunity regarding the participants' current IR-related knowledge and understanding.

What is implementation research? [slides 5–7]

In this initial session, the primary facilitation goal is to ensure that all participants understand the fundamental distinction between IR and other forms of investigative research in the health and life sciences field.

The importance of research to identify solutions and options for overcoming implementation obstacles in health systems, disease control programmes and health care delivery is widely recognized. *IR addresses such implementation bottlenecks, identifies optimal approaches for a particular setting, and promotes the uptake of research findings*: ultimately, it leads to improved health care and its delivery.

The need to address implementation bottlenecks is often greatest in settings where health systems are the weakest or non-existent, including in low- and middle-income countries. Unfortunately, local institutions often have limited knowledge of IR and lack essential capacities to frame relevant research questions, and conduct, manage and interpret research results for programme planning and policy implementation. Academic public health curricula tend not to focus on such research. As

a result, most training do not adequately prepare researchers, practitioners, providers or decision-makers to use essential partnership and interdisciplinary approaches. The current IR toolkit was developed to help fill that gap.

IR has been defined in various ways by different institutions.[1] Common interpretations focus on the systematic approach to understanding and addressing barriers to effective and quality implementation of health interventions, strategies and policies. IR is demand-driven and the research questions are framed based on needs identified with relevant stakeholder/implementers in the health system.

Use these two slides to discuss and illustrate how IR is different from biomedical or other research. Allow sufficient time to explain clearly what IR is and for participants to fully consider these differences. Probe with questions/examples regarding how interventions are implemented at the community level and accessed by local populations.

Depending on your assessment of understanding and grasp of these key issues, you may spend additional time highlighting specific characteristics of IR as summarized in Table 1 (below and in participant workbook for this module). All facilitators should review this table carefully before this introduction session.

Invite/encourage participants to share their experiences with IR, and share/discuss points of views.

Table 1: Key characteristics of implementation research

Characteristic	Summary/description
Systematic	The systematic study of how evidence-based public health interventions are integrated and provided in specific settings, and how resulting health outcomes vary across communities.
	Balances relevance with rigor, strictly adhering to norms of scientific inquiry.
Multidisciplinary	Analysis of biological, social, economic, political, system and environmental factors that impact implementation of specific health interventions.
	Interdisciplinary collaborations between behavioural and social scientists, clinicians, epidemiologists, statisticians, engineers, business analysts, policy makers, and key stakeholders.
Contextual	Demand driven. Framing of research questions is based on needs identified by implementers in the health system.
	Research is relevant to local specifics and needs, and aims to improve health care delivery of the health system in a given context.
	Generates generalizable knowledge and insights that can be applied across settings.
	Mindful of cultural and community-based influences.
Complex	Dynamic and adaptive.
	Multi-scale: occurs at multiple levels of health systems and communities.
	Analyses multi-component programmes and policies.
	Non-linear, iterative, evolving process.

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1   IR is sometimes referred to as "operational research", or "implementation science"

Interacting IR domains [slide 8]

As part of the overall toolkit introduction, it is also instructive for participants to think in terms of five main interacting 'domains' that IR encompasses (Figure 2 in workbook).

The six steps of the implementation research cycle [slides 9–10]

Once participants have a solid grasp of what IR is, the next critical inflection point is that they understand that each part of the IR cycle requires a specific set of skills and knowledge. When you describe the six steps of the IR cycle you are implicitly outlining the skills/knowledge sets required to implement IR (and those imparted through the current toolkit).

Use the IR cycle diagram without main labels/text (slide 4) to explore with participants what each of the six steps represent and include. Then switch to the IR cycle diagram with labels/text (slide 5) to explain each step in more details, and highlight how the individual steps link to one another. Where possible, use examples/case studies when explaining each step.

Throughout the explanation of IR cycle steps, continuously refer to and highlight:

• each of the elements in the inner circle;
• how key stakeholders are involved in each step, including key informants.

Once the six steps of the IR cycle have been presented and discussed thoroughly, remind participants that the skills/capabilities the IR toolkit aims to develop match the six steps of the cycle [slide 6].

Self-assessment framework [slides 11–12]

The teams that come together to tackle a specific IR challenge should be multidisciplinary: with varied roles, working in diverse sectors, and largely with very different backgrounds.

An IR-focused self-assessment usefully reveals some of these differences within each team. It also allows teams to identify their relative strengths and weaknesses (including relative to other teams taking part in the workshop) and setting of team's broad learning targets.

Ask each team to use the matrix shown in slide 8/Figure 3 to identify their current level of:

• awareness;
• understanding;
• knowledge;
• skills;
• competence.

in each of the steps in the IR cycle. You can also refer participants to the more detailed matrix provided in Appendix 1 of the workbook if there are individual steps they are not clear about.

Once completed, ask teams to reveal any obvious strengths or weaknesses they identified during the exercise. Listen for, and point out, any clear differences you observe between the relative strengths of the teams, and encourage some teams to identify themselves as a resource for others in relation to a particular step.

Show this slide and explain each of the five domains using your own words to convey following descriptions:

The intervention. The characteristics of the intervention determine whether it will be adopted or 'fit' in the local health system. Here the term 'intervention' includes the core components and those elements that may be adapted to suit local needs and/or conditions. The characteristics of core components, such as complexity, cost and evidence strength, play a crucial role.

Outer setting. This includes the economic, political and social contexts in which an intervention is carried out and that are external to the implementing organization/institution. It is influenced by external policies and incentives – such as bilateral or global funding streams – as well by interactions and peer pressure between organizations.

Inner setting. This refers to the context within the implementing organization/institution. It includes the structure of the organization and its culture and networks, as well as internal climate and readiness for change.

Individuals involved. These are people who have a direct role in the implementation process. They include health care providers, managers in various parts of the organization/institution, policy-makers and many other stakeholders and beneficiaries. In addition to the traditional concerns regarding capacity to implement, their perceptions and attitudes towards the intervention have an important influence on their commitment to its success and impact.

Process for implementation. This incorporates all of the methods and approaches used in to facilitate adoption of the intervention at all levels of the organization, including the planning of strategies and activities. Processes include both those explicitly planned as well as unforeseen developments that emerge during implementation.

The audience [slides 13–14]

IR involves people with different and complementary skills, experiences and backgrounds addressing an implementation problem and answering questions posed by health care providers, programme managers, implementers and/or other service providers in the execution of their duties. An IR project may therefore include researchers and other stakeholders such as health care providers, programme managers, policy-makers, students, civil society organizations, nongovernmental organizations and any other groups or individuals interested in the IR process and results.

The tool kit includes elements relevant to health care providers, researchers, policy-makers/ managers, administrators, the media and members of ethics committees.

Ask participants to consider the various audiences and stakeholders listed in slide 10 and suggest which steps of the IR cycle are particularly critical for their respective engagement. You should inform participants that engagement may vary, depending on the context and the nature of the project, and so there is no wrong answer.

Once the discussion has taken place, use slide 11 to reveal a typical engagement scenario. This may prompt further discussion, particularly if the participants have significantly different views about engagement.

FACILITATING MODULE 1

CONTEXTUALIZING IMPLEMENTATION RESEARCH ISSUES

FACILITATING MODULE 1

Learning objectives and expected outcomes

This module is designed to emphasize the importance of contextual and environmental factors have IR projects. The module increases understanding of the relationships between the research environment, specific intervention strategies and related ethical considerations. At the end of this module, participant teams will be able to:

1. Analyse the environment in which their IR projects are conducted.
2. Understand and appreciate the context relevant to their proposed/planned intervention.
3. Describe the ethical principles related to have IR project.

Key concepts for this module

1. Understanding the IR context

The physical, socioeconomic and cultural environments, health systems, stakeholder and institutional culture are key aspects of the research context. Together they contribute to and affect the planning, implementation, monitoring and outcomes of any intervention. During the pre-implementation phase of an IR project, these factors should be analysed. It should be noted that these factors vary considerably from one setting to another, and from one project to the next.

2. Understanding the intervention

Interventions such as policy changes, projects, programmes attempt to transfer health innovations that have demonstrated efficacy in the laboratory, clinical trials or small-scale pilot studies to benefit larger populations. The paradox facing IR is that the more rigidly the implementation is controlled to ensure fidelity of a proven intervention, the more likely it is that local contextual factors will reduce its effectiveness.

A monitoring system to track changes in the implementation process and check for deviations from the original plan is essential to supporting a 'logical model' for the intervention.

3. Ethical considerations in IR

From a public health perspective, research ethics should be guided by giving due consideration to the relative risks and benefits to society in addition to the individual research participants. Situations of poverty and limited health care – conditions in which research is frequently conducted in many low- and middle-income countries – often present certain conflicts.

Before you begin…

A useful **re-cap opportunity of Module 0** (previous day) is provided by asking participants to explain what happens in step 1 of the IR cycle. This serves as a general reminder for participants of the six main stages of an IR project.

[Slide 2: IR cycle (without labels)]

This should also be followed by reiteration of the **four main interacting domains in IR**. You can ask participants to explain what is depicted in this slide.

[Slide 4: Interacting domains in implementation research]

Outline of the presentations [slide 5]

Make a general introduction of the module to participants:

e.g. Designed to emphasize the importance of contextual and environmental factors surrounding specific IR projects and introduce ethical considerations.

(Learning objectives and expected outcomes will be outlined in the next few slides).

Emphasize the module's three key concepts. You can mention that understanding the intervention is important because aligning critical contextual factors and the project is essential for an intervention to have the intended impact.

Learning objectives [slide 6]

Note that the three parts of the learning objective reflect the key concepts presented in this module.

Expected outcomes [slide 7]

Serves to translate subject this module is about into new understanding that participants will take away. Therefore, it may be a good to check with participants that they are following the main module ideas at this stage.

Key concept 1: Understanding the context [slide 8]

Why do we need to understand the context? Probe the participants on this question. Try to get a sense of their appreciation of how an intervention can be affected (positively or negatively) in different contexts.

You can also use a simple case study to dig deeper into participants' views: You are a researcher from the South and have been posted to implement an intervention in the North: Why do you need to understand the context?

The physical, socioeconomic and cultural environments, health systems, stakeholder and institutional culture are key aspects of the research context. Together they contribute to and affect the planning, implementation, monitoring and outcomes of any intervention.

Proven interventions lose impact in health systems [slide 9]

We recognize that interventions that are effective in one setting can have a diluted impact or be ineffective in other contexts. Ask participants why. How can this be possible?

> Impact/effectiveness is reduced because of the influence of various context-specific factors.

(Reveal slide, which has Figure 4 from Workbook)

Explain the figure.

One of the main purposes of analysing the context (e.g. health system) is to predict how specific considerations might potentially affect the viability and effectiveness of a given intervention.

Mention that one important example of such a factor is the health (in)equity in a given setting and the influence of relevant social determinants of health.

Analysing the four dimensions of context [slide 10]

Emphasize the importance of analysing each of the four key dimensions mentioned.

Elaborate on how environment, population, socioeconomic status, culture and politics (i.e. dimension 1) can impact on an intervention (or health system).

> **Illustrative example**: In Somali communities, the use of medical face masks presents a challenge for both patients and doctors. The doctor wearing a mask during consultation with a patient creates the perception that the patient has a highly contagious disease, such as TB. With the increased stigma associated with TB, the patient feels humiliated, disrespected and perceives the doctor as arrogant. This often affects the doctor-patient relationship and trust, and impacts the willingness of the patient to return for follow-up consultations or visits. This also presents a safety dilemma for the health worker/doctor.

Contextual factors for implementation research [slide 11]

This diagram (Figure 1 in workbook) illustrates the complexity and number of factors that can influence IR and the impact of interventions. During the pre-implementation phase of an IR project, the factors presented should be considered and analysed as required.

> It should be noted that these factors vary considerably from one setting to another, and from one project to the next.

At this stage it is helpful to ask a few participants to volunteer how the environment, population, health system, socioeconomic status, culture and/or politics may impact their own project.

Illustrative example: Political party affiliations in adjacent communities can impact on the perception/trust of the communities of an intervention. Introducing a new intervention in an election year can make or break the success of the programme (biometric ID cards for example could be associated with plans to rig elections or increase taxation).

Analysis of the environment [slide 12]

Various aspects of the physical, socioeconomic and cultural context may be relevant depending on the specific intervention. Careful planning must be conducted in order to effectively focus resources on the factors that are most likely to be critical.

Health systems [slide 13]

When it comes to health-focused interventions, one of the most critical dimensions of context is the health system, typically made up of multiple sub-systems with the primary focus being the promotion, restoration or maintenance of health.

Provide a clear explanation of health system and linkage with other sectors.

WHO has identified six key 'building blocks' that make up health systems: leadership/governance; health care financing; health workforce; medical products, and technologies, information and research, and services delivery (Figure 2).

System building blocks

- Leadership / governance
- Health care financing
- Health workforce
- Medical products, technologies
- Information and research
- Service delivery

Access

Coverage

Quality

Safety

Goals/outcomes

- Improved health (level and equity)
- Responsiveness
- Financial risk protection
- Improved efficiency
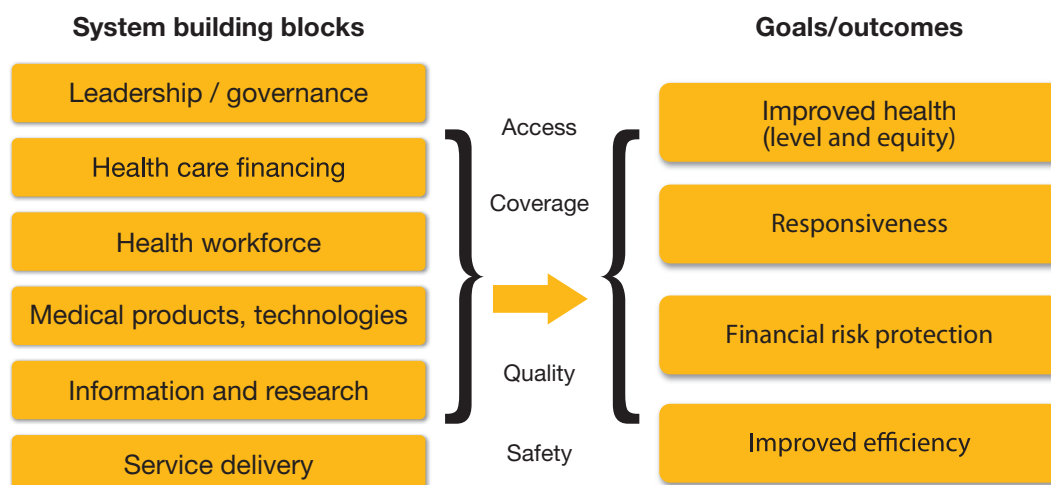
Figure 2: Building blocks of a health system

Other factors, such as self and community care, also contribute to health systems. For each component relevant to an IR project, it is helpful to undertake a systematic descriptive analysis to help identify the relevant decision-making agents and the (formal and informal) institutions that govern its operation.

Stakeholder analysis [slide 14]

You should emphasize the importance of involving multiple stakeholders (and their institutions) at the beginning of any IR project (i.e. identifying the problem, defining the research question(s) etc.) and subsequently throughout the entire IR project.

Probe participants for their responses to the four questions highlighted:

• Who are the most important stakeholders for your project?
• Why do you need them?
• How can you identify and engage them?
• What role should they play in your research project?

Stakeholder analysis aims at identifying all relevant stakeholders, assessing how they are likely to be affected by or influence the research, and how they might respond to the research outcome. Draw the attention of participants to the fact that full involvement of the different stakeholders will not happen overnight but will involve painstaking, face-to-face consultation.

> Stakeholder analysis is one of the most important activities undertaken by researchers in terms of understanding the context of the intervention, and should be done in a systematic and comprehensive way.

(Examples of stakeholder analysis are presented in the relevant section of the workbook).

Institutional analysis [slide 15]

Institutional/organizational analysis (a systematic study of the behaviour of organizations) is another important dimension to consider when planning for IR. This can be achieved through an analysis of strengths, weaknesses, opportunities and threats ('SWOT') to establish the factors potentially affecting the success or failure of an intervention.

Reflection activity [slide 16]

Invite participants to reflect on their own IR projects and identify the environmental factors they should take into account before and during implementation. Encourage them to consider the cultural beliefs and practices, the political structure, the way the health system is organized and the wide range of stakeholders in the environment.

Organize a short breakout session (~15 minutes) to allow the teams to individually brainstorm and write down responses to these six questions.

Return to plenary to review each question (depending on time available, ask two teams to provide responses to the questions). Give each team 5–10 minutes to present, during which try to encourage participant discussion.

Key concept 2: Understanding the intervention [slide 17]

Interventions such as policy changes, projects and programmes attempt to transfer health innovations that have demonstrated efficacy in the laboratory, clinical trials or small-scale pilot studies to benefit larger populations. The paradox facing IR is that the more rigidly the implementation is controlled to ensure fidelity of a proven intervention, the more likely it is that local contextual factors will reduce its effectiveness. The more that interventions are adapted to local conditions, the more difficult it will be to argue that findings can be generalized to other localities or populations because outcomes may depend on detailed processes and pathways that may not be well understood.

> Conduct of meaningful IR requires an in-depth understanding of: (i) the intended intervention; and, (ii) the planned implementation process (with particular attention to modifications driven by a perceived need for adaption to a specific local context).

A monitoring system to track changes in the implementation process and check for deviations from the original plan is essential. Such a system can support a 'logical model' for the intervention. Such models are commonly required by international donors as a simplified explanation of how a specific intervention is intended to work.

Phases in the implementation research process [slide 18]

The logical model for an intervention is based on the relationship between sequential phases:

- Pre-intervention (i.e. setting research questions and objectives, planning etc.
- Implementation
- Post-implementation (i.e. evaluation, what happened?)

Explain the diagram phase-by-phase.

The logic model [slides 19–20]

Logic models are also known as 'logical frameworks', 'causal pathways', 'theory of change', or 'programme matrices'. They are depictions of the logical relationships between the inputs, activities, outputs, outcomes and goal(s)of an intervention. While there are many ways in which logic models can be presented, the underlying purpose of their construction is to assess the 'if-then' (causal) relationships between the various intervention elements.

Logic model examples

- **If** activities are undertaken **then** outputs should be produced.
- **If** outputs are produced **then** outcomes that serve the purpose should result.
- **If** outcomes result **then** they should contribute towards achieving the goal(s).

Those managing an intervention are considered responsible for producing a defined and quantified set of outputs. The output → outcomes step is frequently founded on assumptions about existing evidence and on a thorough contextual understanding.

For each step in the logic model to function effectively, relevant assumptions relating to the intervention and the external context must be accurate. More certainty regarding the resilience of individual steps generates more likelihood that overall implementation of the intervention will be successful.

Emphasize the fact that there are internal **and** external factors outside the control of the management, which can impact on the intervention at different levels (activities, outputs, outcomes and goal).

Compiling the logic model as a matrix [slide 21]

Set aside ~15 minutes to allow each team to complete the matrix according to their own project.

Note: You should emphasize that each project's matrix will be unique to that given project, and should adjust the number of activities, outputs, outcomes and goal(s) accordingly. Mention that assumptions can relate to positive and/or negative factors. An example of a completed matrix is provided in the Participants' workbook (for guidance only).

In plenary, ask one team to talk respectively about their activities, outputs, outcomes and goals. Encourage feedback/comments as appropriate.

Complex adaptive systems [slide 22]

It has been suggested that many health initiatives give rise to what can be described as 'complex adaptive systems' (CAS), in which myriad systems interact with and consequently adapt to the immediate environment. The idea proposes that systems adapt in response to a changing environment – in the current example, particularly in response to changes induced by a given intervention. One common adaptation, for example, might be the formation of new organizational alliances.

This partly explains why interventions can succeed in one context and are less effective in another. It also highlights that implementation may not proceed as planned because of changed behaviours etc.

The ultimate implications of the CAS notion is that there is no easy way to 'control' agent behaviour. CAS are typically and intrinsically unpredictable and unintended responses to interventions are common.

Feedback loops in the demand for immunization [slide 23]

There are different complex adaptive system behaviours that are relevant to health interventions (path dependency, emergent behaviour and feedback loops). The example shown is on feedback loops in an immunization programme, which can have either positive or negative effects.

Let one or more participants volunteer to explain the diagram.

Reflection activity [slide 24]

This assignment should be given to the participants prior to attending the current module. Ask 2–3 teams to volunteer to present their reflection.

Key Concept 3: Ethical considerations in IR [slide 25]

Research involving human subjects should be bound by the basic ethical principles to safeguard individuals, communities and society at large against unnecessary risks.

In practice, the principles may assume different weights according to the context, but there is universal consensus as far as their validity and the need for use in guiding proposals for research projects.

This section outlines the main ethical dilemmas and considers their relevance to IR.

Ethical issues and principles in IR [slide 26–27]

After introducing this slide and the three principles on ethical issues involving human subjects, discuss with participants some of the ethical dilemmas in IR. For example: language barriers, poverty, low access to health services, conflict of interest etc. Then move on to the following three slides that give details of ethical dilemmas and the principles that were flawed.

Case study [slide 28]

Present the case study and invite participants to share their opinions and perspectives in relation to ethical dilemmas raised by the case study.

Allow 15 minutes for the group work and 5 minutes for presentation.

Characteristics of the participants/setting that may undermine ethical principles [slide 29–33]

Work through each of these slides with the participants, asking them to suggest the consequences and ethical principles that may be undermined by the participant/setting characteristics that are described.

Reflection activity [slide 34]

Ask participants to complete this activity using the information presented in slides 26–30 (also reproduced in the participant workbook). Ask for one volunteer to present their conclusions.

Application of key concepts [slides 35–36]

Shuffle the participants/teams into groups of five. Ask groups to read the case study in the workbook and discuss the three concepts which have been described in Module 1. Each concept should be analysed by one group.

Allocate 15 minutes for the group work and 5 minutes for presentation of each concept..

End of Module 1 [slide 37]

The following morning before the next session, request two teams to present a summary of:

- One thing they learnt.
- One thing that was done well.
- One thing that could be improved about this module.

FACILITATING MODULE 2

2

DEVELOPING AN IMPLEMENTATION RESEARCH PROPOSAL

FACILITATING MODULE 2

Introduction

The purpose of this module is to support research teams to develop a high quality implementation research (IR) proposals so they can be competitive in securing research funding. It is longer than other modules in the toolkit, and is intended to support a five-day workshop process, which may be organized as a separate event to the overall IR workshop schedule.

Before you begin…

A useful **re-cap opportunity** is provided by asking participants to explain what happens in step 2 of the IR cycle. This serves as a general reminder for participants of the six main stages of an IR project. Explain each step and how they link to one another, including the elements in the inner circle. Remind participants of the varied stakeholders involved in the IR process, including key informants.

[Slide 2: IR cycle]

At this stage it is useful to point out to participants that although proposal development is a discreet step in the IR cycle, the proposal they are about to develop covers all parts of the cycle and presents their entire IR project.

This can also be followed by reiteration of the **four main interacting domains in IR**. You can ask participants to remind one another what is depicted in this slide.

[Slide 3: Interacting domains in implementation research]

As a result of the broad coverage of this module, the content and activities provided are organized differently to other modules in the toolkit: as six distinct sessions, with each one addressing specific aspects of proposal development, in a stepwise process. Each session consists of the following elements [slide 4]:

- *Learning objectives*: identifying what teams will accomplish by the end of each session.
- *Content presentation*: providing the information/examples necessary to understand the specific aspects of proposal writing.
- *Activities*: exercises facilitating the understanding of the content and putting theory into practice.
- *Group work*: discussions providing participants with an opportunity to ask questions, and consider specific issues in relation to their individual projects.
- *Write-shops*: provides an opportunity for teams to work together each evening in drafting elements of their proposal, as covered each day.

Pre-module preparation

This module is also organized into three separate phases: before, during and after the workshop (Figure 1 and Slide 5).

Figure 1. Three stages of the current module

Before the workshop, participants/teams should have completed an online component that introduces key IR terminology, IR core concepts, research frameworks, programme components and appropriate IR questions. The online course takes approximately three hours to complete and its specific objectives are:

- Identifying characteristics of IR.
- Describing implementation/scale up and relating IR to these processes.
- Classifying research questions and associated research that falls under the umbrella of IR.
- Summarizing framework characteristics and identifying strategies for applying them to IR.
- Recognizing how IR is applied to different implementation problems.
- Classifying IR priorities for grant applications.
- Reviewing the roles of various IR stakeholders and identifying appropriate means for integrating stakeholders in IR planning and in communicating and disseminating results.

Teams should have also completed an initial literature review, to enable them to frame their IR problem and goals in a broader context.

A pre-module assessment questionnaire should also have been completed by participants. This will be shared with you/other facilitators so that you can assess the level of knowledge of participants prior to starting Module 2. Depending on what you discover from the participant responses, you may decide to adapt the module content to take advantage of the experience of the group and to best meet their needs. This must be decided jointly, and on a case-by-case basis, by the facilitation team.

Teams will also have specific steps to complete after the workshop, such as additional literature review, finalizing incomplete sections of their proposals, obtaining supporting letters/statements, as well as obtaining ethical approval and other essential clearances for their research. Pre-Workshop Assessment Questionnaire (Appendix 1).

Initial group refresher activity [slide 6]

Organize participants into smaller groups, members of each team separated into different groups. Assign each group one of the seven topics (see slide) and ask individual groups to prepare a two-minute presentation summarizing their assigned topic, drawing on content from the pre-workshop online module/previous modules.

Each group should choose a spokesperson to present their key points in plenary (in two minutes).

Funding an IR proposal [slides 7–9]

One of the most fundamental reasons for preparing a high quality proposal is that it allows teams to identify and secure sufficient funding/resources to conduct their research.

Explain to participants that while there may be several categories of funders/donors (i.e. multilateral organizations, bilateral government donors, private foundations and trusts [slide 7], the most important dimension of funding/resource mobilization is finding the right 'fit' between the proposed research and a donor interested in/willing to find research in a given area [slide 8]. A good fit or compatibility extends beyond the area of interest or traditional support for a given donor, and also includes matching the characteristics of potential donors with the proposed research in several other ways:

- *Level of team experience*: Donors frequently have a preference for very established or up-and-coming research institutions/individuals.
- *Resources*/*funds needed*: Funders tend to stick to certain ranges of funding requests, to suit their scale of investment and the requirements for administrative engagement by a donor. This is not generally about requests being 'small enough' and within the capacity of the funder, as many organizations have *minimum* limits for applications that they are willing to consider, and that make their administrative investment worthwhile.
- *Timing and deadlines*: Donors often have specific timeframes that apply to specific pools of resources. Projects may need to find funders with a funding cycle that either matches their own research timeline, or that offers a degree of flexibility. For example, completion schedules.
- *Research location*: Most funding mechanisms have some form of geographic criteria. For smaller donors this might be a regional or national support preferences, and for larger ones this might include a specific list of priority countries that are eligible for support.

> The more preparation/searching that research teams do in order to identify compatible donors/resources, the more likely it is that their research will be funded [slide 9]. Mobilizing the resources needed to conduct a research project is first about how well researchers know their potential donors, and only later dependent on what donors know about them.

What are donors/funders looking for? [slides 10–12]

There is one certain way to ensure that research proposals provide what funders require: listen to them and do what they say! Once potential funders have been identified, preparing a proposal should always begin by reading their proposal submission instructions carefully [slide 10].

Work through the list of broad recommendations to participants in slide 10. Remind them that these are more like 'good professional habits' for researchers than 'winning formulas' that apply only to proposal writing.

> On a general level, good research proposals look a lot like good research: Rational. Clear. Detailed. Innovative. Coherent.

Assuming donor compatibility is good, reviewers are more likely to be receptive to proposals that demonstrate a potential significance and depth of impact. Explain to participants [using slide 11] that these can be communicated through proposals that:

- present exciting innovative/ideas;
- avoid assuming too much knowledge or familiarity with a subject;
- outline realistic aims and timelines – and are not overly ambitious;
- limit widely known information;
- note the limitations of the study in an honest way;
- provide clean, well-written applications with well justified budgets.

IR proposals are typically rated on the basis of scientific merit and policy relevance using a specific scale.

Just as importantly, you should also review slide 12 with the group in order to highlight some of the pitfalls that a surprising proportion of proposals suffer from. Point out that proposal reviewers are often experienced researchers themselves, and can easily spot such weaknesses.

Session 1: Writing the Introduction section

This session provides participants with an initial orientation to IR proposals as a whole, before considering the content of the Introduction section in greater detail.

Learning objectives and expected outcomes [slide 2]

After completing this session, participants will be able to:

- Describe the overall components and organization of a typical IR proposal.
- Write an introduction to their respective proposals.
- Write the research question(s) for their proposals

What makes an IR proposal unique? [slides 3 and 4]

Slides 3 and 4 are intended to highlight the main differences between a 'conventional' research proposal and an IR proposal. First walk through the contents of slide 3, without making this comparison the obvious goal. Highlight the main characteristics of a research proposal. When

you transition to slide 4, it will make highlighting the unique features of an IR proposal more memorable for participants.

Emphasize that the distinctive characteristics of an IR proposal directly reflect the specific features of the IR process, in particular the origin and prioritization of the research problem, and engagement of key stakeholders in the research process.

Characteristics of an IR proposal [slides 5–12]

The components of an IR proposal vary slightly depending on the preferences outlined by the funding agency to which it is being submitted.

> *Note: As each funding agency has its own format and requirements, some of the elements covered in this session may not be required in every IR proposal and are provided here as a generic guide.*

The Participant workbook contains a list of the components for an IR proposal with detailed explanations of what each component entails.

The overall components of an IR proposal are summarized in Figure 2. This diagram is included in the participants' workbook, and is presented in slides 7–12 of this session. As you show this sub-set of slides, which outlines the components of an IR proposal, be BRIEF. Each section will be covered in detail within the module – this is just a quick overview of the entire structure to give participants the 'big picture'. If questions are too detailed, you can place in them in the parking lot for discussion when you get to the session that deals with the specific section in-depth.

Present these slides in sequential order, prompting participants to comment and ask questions for clarification in relation to individual proposal elements. Remind participants that more detailed descriptions are provided for each element in their workbooks.

If anything is unclear to participants during this general description, they should ask for clarifications from you/other facilitators. A sound understanding of the general structure and purpose of individual proposal elements is essential to the remainder of module 2.

Introduction [slides 13–33]

In this session, participants take the first steps in writing their proposal by drafting the introduction section. This includes writing two of the most important parts of an IR proposal: an overview of the research problem and corresponding research question(s).

> The introduction of an IR proposal provides a clear, succinct description of what the research is and a rationale for why the project should be funded. It builds an argument for conducting the study, as based on a need identified by the community, health care providers, programme managers or policy-makers.

The Introduction comprises the following sub-sections:

• Title page
• Rationale
• Statement of the problem
• Objectives and research question(s)
• Literature review

The session aims to provide a combination of definitions and basic descriptions of each element, outlines the purpose and reasoning for each, and provides examples from real-life IR proposals as practical guidance. You should bear in mind that the focus and scope of this session will partly set the tone/mood for the remainder of the module.

Before you (and other colleagues) facilitate the session, you should be very familiar with the material presented in slides 13–33, as well as the detailed information and additional resources included in the corresponding section of the participants' workbook. This includes examples of real proposal texts, which you should select/use to illustrate specific points in the presentation. If helpful, you can also pause the discussion/presentation at a given point, and ask participants to read/consider one or more of these examples in the workbook to reinforce a specific point.

This session covers a relatively lengthy series of topics and issues for participants to absorb, and although they will relate them to their own projects to some extent, the group overall will pass through them largely in the abstract. For this reason, as you guide the group through each theme, you should try to refer to some of the examples used in the participants' workbook to illustrate specific areas. You can also ask the participants to relate each topic/theme to their own projects and/or previous experience, raising real-life experiences as they/you progress. This will help to promote a more varied rhythm to the session.

Towards the conclusion of the session, teams will be asked to focus more directly on their own specific projects and proposals, and in particular on the title, the statement of the problem (~1/2 page), the research questions and the specific objectives.

Group activity [slide 34]

To bring this session to a close, ask each team to draft their unique statement of the problem their research project sets out to address. This is intended to ensure that respective teams are focused back on their own projects, and that they have fully understood the day's discussions of the Introduction as a whole.

Ask each team to briefly read their statement of the problem and encourage open discussion and clarification.

Evening Write-shop briefing [slide 35]

After a fairly long session/day, each team will be asked to work into the evening on developing some further short parts of their introduction. You should bear this in mind as you track time progress throughout the day, and ensure that the day concludes so teams have adequate time for a short break before they continue working on these important elements.

Request the members of each team to work together on the following parts of their Introduction, and be ready to present them briefly at the start of the following day's meeting:

- Working title.
- (Complete the draft) Statement of the problem for the proposal (1/2 page).
- Research question(s).
- Specific project objectives (4 to 6 objectives).

Session 2: Research design

This session aims to build research team capacities to allow them to determine the specific research design that will be most effective in meeting their research objectives and corresponding research question(s), and build these elements into their proposals.

Note: This session is also relatively long and will likely span most of two days. There is only one write-shop, which should be divided into two parts depending upon where you break at the end of the section day – participants should complete as much of the research design section of their proposal as they can on the evening of Day 2.

Learning objectives and expected outcomes [slide 2]

After completing this session, participants will be able to:

- Develop and write up a research design outlining the procedures that will be used to collect and analyse the data in a research project.
- Identify and describe the research method (qualitative, quantitative or mixed methods) that will be most effective in attaining the research objectives and answering the corresponding research question(s).
- Describe the quality management plan that their team will put in place to ensure quality.
- Describe the participants in the research project.

Explain the steps they will take to ensure all ethical issues and procedures will be addressed.

Research design

The Research design section the proposal draws on elements from several stages of the IR process, including: identification of study participants; choosing the most appropriate research methods; as well as data collection and data analysis [slide 3].

The four broad research design options can be defined in relation to the general knowledge gap/ need they each address in the selected community, and the characteristics of the corresponding research approaches. Using slide 4 to guide the discussion, summarize the four types of research design (i.e. before-after series, cross-sectional studies, cluster-randomized controlled trial and direct measurement/observation). Ask participants how they understand the relationship between the needs and design options, and whether they are clear about the best way to make these decisions before they can determine/describing their selected research design.

Explain that it is only once the most appropriate research design has been determined, that the methods to be used are apparent and can also then be outlined [slide 5].

Study participants

Because the range of participants is one of the most important distinguishing features of IR projects, it is important that proposals include a full description of the subjects/participants, how they will be selected and criteria that will be used [slide 6].

Group activity [slide 7]

Ask the research teams to sit together and briefly share/discuss their selected research designs and outline their range of participants. Encourage groups to share doubts and for all participants to comment/offer helpful critique on design of other projects as they are described.

Research methods

It is important that the proposal makes a sound and convincing case in relation to the research methods and approaches that will be used as part of the research design. Slide 8 provides useful summary and reminder of the main differences between qualitative and quantitative approaches. Use this slide to discuss each criteria and how they differ between the two methods. To do this, you can ask specific teams to explain what they understand by a given criterion, and how that differs between qualitative and quantitative methods. This gives the individual teams an opportunity to begin discussing and working together with these important concepts.

Slides 9–15 and 16–21 then provide the platform to consider qualitative and quantitative research approaches respectively, and in greater detail, before mixed methods are described [slides 22–27].

As you progress through these sub-sets of slides/themes with the group, remind them of the wealth of information that can be obtained using the different data collection strategies and analysis plans, as well as real-life examples that are provided in the participants' workbook, and that these are related in some detail to the pros and cons of the various research methods. Before facilitating this session, you should make a point to review that section of the workbook yourself, so that you are familiar with the content and the examples that can be referred to in group discussions.

Guide research teams to discuss which research design will work best for their IR project. This is similar to the group activity earlier in the same session but now, having reviewed the different research designs and approaches in more detail, a more in-depth and definitive discussion should be possible within individual teams. Some teams may have come to the session with pre-existing ideas about which methods they would use to collect data. Now they may be re-examining those choices and the possibility of adjusting their thinking once more.

Teams can use the examples presented in the workbook to help them create a table containing their research objective(s) and research question(s) and identify which data source(s) will be used to collect the data to meet the objectives of the research and answer the research questions determined earlier.

Evening Write-shop briefing [slide 29]

During the evening, participants should continue to work in their teams to develop the following elements of their team's project proposal:

• Research design.
• Research methods including:

- step-by-step procedures for your data collection;
- data analysis;
- trustworthiness, validity, reliability;
- participants.

Teams should be prepared to present their drafts of these proposal sections at the start of the following day.

Note: Depending on the time available and your sense of team progress with their own proposal development, you might adjourn the session for the day now or progress to the brief remaining session on quality management.

Quality management [slides 30–32] and research ethics

Quality management is often an elusive idea to new researchers, and so it is worth stressing that the performance of IR proposals may be significantly affected by not clearly describing how quality management will be achieved in IR projects.

Quality management is essential to ensuring that research meets or exceeds scientific, ethical and regulatory standards.

In their proposals, participants should outline exactly how they will show that the research team will take consistent, ongoing measures to monitor and evaluate quality and rigour of the research. They should indicate how they will evaluate quality at various stages.

Slide 31 provides a useful model/diagram for highlighting where and how quality management is an essential part of the IR process. You can ask different teams to highlight what the quality issues and challenges might be at different stages of the process, what potential solutions might be, and how they would serve to monitor/improve quality.

Impress on the teams that attention to quality management expresses a consistent concern for research participants. How their privacy will be protected, for example. What measures will be taken to protect them from harm (e.g. train staff, adhere to ethical standards in the research ethics application etc.)? These are all important influences on proposal review by prospective donors.

In closing, use slide 33 to remind participants that similar to quality management, IR proposals should convey a demonstrated commitment to research ethics. Teams should be able to briefly suggest some ways in which the three elements outlined in this slide can be achieved.

Evening Write-shop briefing [slide 34]

Depending on your decision above re. when to conclude the current session (see note above), you will need to remove either slide 29 or 34 accordingly.

Session 3: Project planning

This session participants will work on developing the overall plan for their research projects and incorporating those plans into their proposals. A clear project plan not only conveys the details of the research to potential funders and supporters, it also sends the message that the project has been well thought out from an implementation and activity/resource management perspective. If done well, it can also help demonstrate the feasibility of the project in a very visible way.

Learning objectives and expected outcomes [slide 2]

After completing this session, teams will be able to:

- Develop a project plan (work plan/timeline) to guide the implementation and monitoring of their project.
- Develop a work schedule (i.e. GANTT chart) to effectively implement and monitor the project including the tasks and activities to be performed, roles and responsibilities of team members and milestones and deadlines to be met.
- Describe the research team (including the knowledge and skills that each team member possesses and how they will contribute to the success of the project).
- Develop a realistic, itemized budget linked to the project specific objectives and the project activities.
- Provide information required for the justification of various budget items.

Planning IR projects [slides 3–5]

Project planning includes work scheduling, compiling plans and requirements for the research team, as well as creating and anticipating realistic estimations of resource needs throughout the project [Slide 3]. Work through these general description of a project plan with the group, and ask participants to highlight any points that are not clear.

A project plan identifies each task and activity that will be completed throughout the duration of the project.

> Without a realistic plan, it is impossible to anticipate or identify potential barriers or constraints in adhering to the timetable, implementation and/or completion of the project or to suggest possible solutions. The project plan also establishes the magnitude of the project in order to be able to develop an appropriate budget to carry it out.

The plan is a document that also facilitates communication between and among stakeholders, coordinates procedures, teamwork and collaboration. Your research design and procedures will be instrumental in identifying the tasks and activities that need to be completed in your project plan.

It is important that participants also appreciate the rationale for their project plans [which are summarized in Slide 4]. A table providing further details of the main activities associated with the three project planning phases [slide 5] are presented in the participant workbook.

Project timelines [slides 6–8]

A project's total duration should realistically reflect the time needed to carry out each phase of the project plan. This must be clearly and accurately described in any proposal, and has consequences in terms of meeting deadlines for deliverables and the final research report. Clear, feasible timelines reassure funders that projects follow rigorous project management standards.

Project plans can be presented in a variety of ways [slides 7 and 8] and teams should choose the most appropriate style for their particular project needs.

Research team [slides 9–10]

The Research team section of proposal should succinctly describe the team members and the skills/strengths they contribute to the project. This section aims to persuade reviewers that the expertise on a team is sufficient to conduct the proposed research effectively. In IR projects, teams are multidisciplinary and diverse, and proposals need to match backgrounds and experience with the essential project roles and responsibilities as far as possible.

Starting with the principal investigator (PI), help the teams to list the names of all individuals who will be involved in their study. Examples in the workbook will offer reminders to participants.

Proposals should also include outlines/summaries of the planned research team management structure [slide 10]. Ask participants to compare the example given with their respective team structures. Ask them what this exercise suggests to them in relation to their own human resource planning.

Group activity [slide 11]

Teams should use the examples from real IR proposals to reflect on the content presented during the past hour or so, and prepare initial drafts of the following sections of their proposals:

• The three phases of IR planning.
• The work plan/time line of activities.
• The research team, including expertise and roles.

Budget and justification [slides 12–14]

The proposal budget should outline the funds required to be able to effectively conduct the proposed research.

Participants/teams need to carefully think through what they realistically need from the funding agency(ies) to carry out the project. If the budget is too low or inflated, it can negatively influence the judging of proposals.

Once you have presented/discussed the overall description of a project budget [slide 12], you should ask participants to begin listing/suggesting the various categories of budget elements. They can do this by thinking through the activities they propose to carry out and ask themselves: "What resources/types of resources will we need to carry this work out?"

Once this discussion is partly completed, use slide 13 to remind participants of categories they may have overlooked.

Remind participants that once each resource is itemized, the unit cost and total cost for the resource can then be explored and included. It is important to also budget for dissemination and evaluation of related activities and outcomes, which may be overlooked in the early stages of project planning.

Finally, explain the budget justification points [slide 14] and why these are critical to bear in mind.

Group activity [slide 15]

In teams, ask participants to review the sample proposal budget [to be provided by facilitators/ organizers]. Using the information in this session and the example budget as a guide, teams should be able to develop a budget for their team's proposal. Of all the sections in the proposals, the budget description and justification is likely to change a lot over time, so getting and early draft down on paper is an important step to take.

Session 4: Measuring impact

IR proposals must clearly demonstrate how research findings will have an impact on the health and/or health care of the communities/populations concerned, policy-making, and on research communities.

When developing a typical research/academic proposal, the intent is to generate new knowledge and ideas. Conversely, when developing an IR proposal, the intent is to generate research evidence to improve programme implementation.

Why is there such a wide gap between what we know and what we do? The fact that it can take years or even decades for research findings, best practices and guidelines to be implemented into health care workers' daily practice is one of the stimuli behind the increased focus on an promotion of IR.

> Despite the growing knowledge base on evidence-based practices in health care, there is a large gap between what is known as a result of research and what is consistently implemented in practice. Scale up of research results and effective access to, and delivery of interventions are the core purposes of IR.

Continuous learning and improvement of the health system requires a monitoring and evaluation process to track progress and correct course as necessary. IR proposals have to clearly demonstrate this as a core value and consideration.

Learning objectives and expected outcomes [slide 2]

After completing this session, teams will be able to develop a monitoring and evaluation plan, a capacity-building plan and a dissemination plan for their IR projects.

Monitoring and evaluating activities [slides 3–6]

First ask participants what they think the main purposes of a monitoring and evaluation plan are.

Then reveal slide 3, and allow the group to compare the responses they gave to this list of suggested purposes:

- Describes how whether an IR project meets its objectives and delivers what has been promised in the proposal will be assessed.
- Informs the prospective funding agency their investment will be/is/was sound.
- Facilitates the use of research findings in the health system for improved health outcomes.

> By definition, it is impossible to conclude an IR project successfully without a rigorous and fully implemented *monitoring* and *evaluation* plan.

You can use the list on slide 4 to explore whether participants can suggest approaches to monitoring the activities described. By now, the *'Why monitor?'* question should be obvious, but 'How?

How to monitor such activities is important to consider as the teams begin to formulate their own M&E plans.

An evaluation plan should also be included in the proposal. It must outline how an assessment will be made of whether a project meets its research objectives and is 'successful', or not. It should also indicate how any changes in the project plan and any problems will be tracked.

In general terms, an evaluation plan should consider the following [slide 5]:

- Identifies who will use the evaluation findings.
- Describes information needed, sources and evaluation methods/instruments.
- Examines how the project objectives will be met.
- Tracks the expected impact of the intervention.
- Demonstrates that the scope of the evaluation is appropriate.

> Monitoring and evaluation assesses the success and impact at various stages of a project.

Evaluation plans should also include a sense of concern for what will follow the conclusion of the funding period, and related sustainability.

Building team and local capacities [slide 7]

When writing an IR proposal, two specific considerations may help address capacity building:

How the project can help improve the research capacity of national and local institutions involved, via training, mentorship, etc.

- How the project, via the process of the implementation, can help increase the capacity to conduct and demand for implementation research within the health system.
- These two considerations should be referred to and elaborated as possible in proposals.

As you explain these two points, ask participants/teams to consider and comment on how their specific projects contribute towards national and local research capacities, as well as helping to promote the uptake of research outcomes and results.

Dissemination plan [slides 8 and 9]

Dissemination of research findings is the subject of a dedicated module in this toolkit. This reflects the importance of describing the plan for disseminating information from projects in IR proposals. Most funding agencies are keen to see how their financial support of projects extends to key audiences and stakeholders.

Slide 8 provides a useful summary of the main characteristics of a dissemination strategy. You should first walk the group through these points to give them a general orientation.

This should be followed by showing slide 9, which asks a series of useful questions that you can use to probe further how the participants' projects already/should integrate planning for dissemination, who their target audiences might be, and how they can engage stakeholders as early in the research process as possible.

You should point out that the dissemination process must be part of the IR project cycle, and not an 'add-on' activity conducted at the end of the research. Involving stakeholders in the dissemination process early will enhance greater ownership of the research process and the ultimate uptake of the research findings.

The participant workbook includes a series of specific steps that are recommended for research teams as they discuss and identify their dissemination strategies and related needs. This is intended as generic guidance that can be modified and customized for specific projects. The end result should be a context-sensitive strategy designed to disseminate particular research findings to specific audiences.

Research teams should focus on the creation of particular information products. This is revisited in greater detail in Module 5.

> Strong dissemination strategies feature: two-way dialogue; precisely tailored and targeted messages suited to particular audiences; and mechanisms to evaluate relevant indicators, so that the strategy and its products can be revised and improved.

Group activity [slide 10]

Ask the group to review the sample dissemination plan (see workbook) and consider what aspects of this dissemination plan may be helpful to consider for their proposal?

What aspects would not be appropriate?

Evening Write-shop briefing [slide 11]

Instruct teams that during the evening they should develop the following critical parts of their IR proposals:

- Monitoring and evaluation plan.
- Capacity building plan.
- Dissemination plan.

They should also make any changes necessary to improve, update, or align all sections of their proposals.

Session 5: Supplements

In this session teams will develop several of the final sections of their proposals. This includes information on the project summary, table of contents, appendices and researcher CVs.

At the end of the session, there will be a final Write-shop to prepare these elements, review existing sections and update/align the overall proposal.

Finally, teams will prepare/make a 20-minute presentation and receive feedback on their IR proposals.

Learning objectives and expected outcomes [slide 2]

By the end of the session, teams will be able to:

- Develop a summary for their proposals.
- Develop a Table of Contents.
- Identify which Appendices need to be included in their proposal.
- Develop a template for researcher CVs.
- Prepare a 20 minute presentation summarizing their proposal.

Project summary [slides 3 and 4]

The project summary (also sometimes called an abstract or an executive summary) briefly describes the entire proposal. Researchers often write their summary or abstract last, when they are best able to concisely describe their research proposal.

Depending on the requirements of the funding agency, a summary/abstract may be limited to anywhere from 150–200 words (abstract) to a page (summary).

A proposal summary or abstract might be the most important paragraph/ page because it creates the 'first impression' with reviewers and may influence whether they choose to fund a given proposal or not.

Guide the teams through the description of a project summary [slide 3] and ask them to describe one point each as they review the summary checklist [slide 4].

Table of contents [slide 5]

The table of contents organizes the proposal by outlining 'what' is in the proposal and where each item can be found. The table of contents presents a convenient list of the proposal topics and sections in a logical sequence 'at a glance'.

Appendices [slide 6]

Appendices include those aspects of the project that are of secondary interest to the reader/ reviewer. Appendices assume that the reader can obtain all the necessary information from the body of the proposal and will go to the appendices if they need or want additional information. This may include things such as investigators CVs, research instruments, or letters of support attesting to the capacity of the team to undertake the proposed research or confirming collaboration of a key partner involved in the proposed resaerch.

CVs of investigators [slide 7]

Teams may want to ensure at least one member has IR experience, a good track record and a strong publication record. Complementary qualities such as credibility in the community are equally important.

Evening Write-shop briefing [slides 8 and 9]

Instruct teams that they should develop the following aspects of their proposals:

- Project Summary (one page).
- Title page.
- Appendices (make a list of all the appendices and add the ones that are ready).
- Researchers' CVs (create a template of the CV components so that all researchers have a similar look and format).
- Review all components of proposals and update/align.

As an extension of the Write-shop activity, teams should prepare a 20-minute presentation (slide or poster presentation) covering all elements of their IR proposals.

Group presentations [slide 10]

Teams will each present their proposals in plenary for 20 minutes. This will be followed by 20 minutes of comments, questions, suggestions and comments from the large group and facilitators.

WORKSHOP FORMS

This section contains workshop forms. When indicated during the workshop, select and complete the appropriate form. Return the form to the facilitators.

Pre-Workshop Assessment Questionnaire

The purpose of this survey is to obtain pertinent information from you that will be used by the pedagogy team to guide the development and delivery of a quality Developing an Implementation Research Proposal.

What motivated you to attend the workshop?

_____

_____

Are there any personal, cultural or learning characteristics of the participants that need to be considered when designing the workshop? Please elaborate:

_____

_____

What are you hoping to learn or gain by participating in the workshop?

_____

_____

What specific content would you like to see covered during this workshop?

_____

_____

What teaching/learning strategies would you recommend we consider when designing this workshop?

_____

_____

What support do you feel you (and your colleagues) need to obtain in order to make the workshop successful?

50

Do you have any other comments that may help in the design and delivery of the programme?

Thank you

Proposal Checklist

As you work through the course, use this checklist to track your progress.

Front Matter

Title

Introduction

Overview of the Problem

Rationale

Statement of the Problem

Research Objectives

Research Question(s)

Review of Literature and Referencing

What a review of literature is

Steps to take to conduct a review of literature when I return to my community

Why it is important to reference properly

How to cite references

Research Methods

Qualitative

Quantitative

Mixed Methods

Research Design

    Describe the Participants and sites

    Describe Data Collections Procedures

    Describe Data Analysis Procedures

    Describe Ethics Procedures

Project Plan

    How to develop a project plan

    Who to include on the project team and how to describe their assets

    How to develop and justify a project budget

    How to develop Quality Standards strategies

    How to develop a Monitoring and Evaluation Plan

    How to develop a Capacity Building and Dissemination Plan

Impacts

    How to write an IR proposal Summary (one page)

    How to develop a Table of contents (use a software package)

    How to develop the Appendices

    How to develop the Researchers' CVs (create a template)

    How to Prepare a Covering Page

    How to Write an Abstract

    IR Proposals & Funding Opportunities

Session 1 Evaluation Form

Workshop Session 1 – The Components of an IR Proposal

Please indicate how strongly you agree with each of the following statements regarding the workshop session.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not applicable
I enjoyed the session	O	O	O	O	O	O
I learned useful knowledge and skills about how to write an IR proposal in this session	O	O	O	O	O	O
The length of the session was appropriate	O	O	O	O	O	O
The topic(s) covered was/were relevant	O	O	O	O	O	O
The learning objectives were clear	O	O	O	O	O	O
The session was organized	O	O	O	O	O	O
The teaching strategies were effective	O	O	O	O	O	O
The balance of theory and practical skills was appropriate	O	O	O	O	O	O
The facilitator was knowledgeable	O	O	O	O	O	O
The facilitator conveyed the information effectively	O	O	O	O	O	O
The facilitator was supportive	O	O	O	O	O	O
Useful resources were provided	O	O	O	O	O	O
The knowledge gained during the teaching session will be useful in my workplace in the future	O	O	O	O	O	O

Please provide comments particularly on areas you see in need of improvement; examples, constructive suggestions and ideas are very welcome!

54

1. What was the most valuable aspect of this workshop session?

_____

_____

_____

2. How could this workshop session be improved?

_____

_____

_____

Session 2 Evaluation Form

Workshop Session 2 – Research Process

Please indicate how strongly you agree with each of the following statements regarding the workshop session.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not applicable
I enjoyed the session	O	O	O	O	O	O
I learned useful knowledge and skills about how to write an IR proposal in this session	O	O	O	O	O	O
The length of the session was appropriate	O	O	O	O	O	O
The topic(s) covered was/were relevant	O	O	O	O	O	O
The learning objectives were clear	O	O	O	O	O	O
The session was organized	O	O	O	O	O	O
The teaching strategies were effective	O	O	O	O	O	O
The balance of theory and practical skills was appropriate	O	O	O	O	O	O
The facilitator was knowledgeable	O	O	O	O	O	O
The facilitator conveyed the information effectively	O	O	O	O	O	O
The facilitator was supportive	O	O	O	O	O	O
Useful resources were provided	O	O	O	O	O	O
The knowledge gained during the teaching session will be useful in my workplace in the future	O	O	O	O	O	O

Please provide comments particularly on areas you see in need of improvement; examples, constructive suggestions and ideas are very welcome!

56

1. What was the most valuable aspect of this workshop session?

_____

_____

_____

2. How could this workshop session be improved?

_____

_____

_____

Session 3 Evaluation Form

Workshop Session 3 – Project Plan

Please indicate how strongly you agree with each of the following statements regarding the workshop session.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not applicable
I enjoyed the session	O	O	O	O	O	O
I learned useful knowledge and skills about how to write an IR proposal in this session	O	O	O	O	O	O
The length of the session was appropriate	O	O	O	O	O	O
The topic(s) covered was/were relevant	O	O	O	O	O	O
The learning objectives were clear	O	O	O	O	O	O
The session was organized	O	O	O	O	O	O
The teaching strategies were effective	O	O	O	O	O	O
The balance of theory and practical skills was appropriate	O	O	O	O	O	O
The facilitator was knowledgeable	O	O	O	O	O	O
The facilitator conveyed the information effectively	O	O	O	O	O	O
The facilitator was supportive	O	O	O	O	O	O
Useful resources were provided	O	O	O	O	O	O
The knowledge gained during the teaching session will be useful in my workplace in the future	O	O	O	O	O	O

Please provide comments particularly on areas you see in need of improvement; examples, constructive suggestions and ideas are very welcome!

1. What was the most valuable aspect of this workshop session?

_____

_____

_____

2. How could this workshop session be improved?

_____

_____

_____

Session 4 Evaluation Form

Workshop Session 4 – Impact

Please indicate how strongly you agree with each of the following statements regarding the workshop session.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not applicable
I enjoyed the session	O	O	O	O	O	O
I learned useful knowledge and skills about how to write an IR proposal in this session	O	O	O	O	O	O
The length of the session was appropriate	O	O	O	O	O	O
The topic(s) covered was/were relevant	O	O	O	O	O	O
The learning objectives were clear	O	O	O	O	O	O
The session was organized	O	O	O	O	O	O
The teaching strategies were effective	O	O	O	O	O	O
The balance of theory and practical skills was appropriate	O	O	O	O	O	O
The facilitator was knowledgeable	O	O	O	O	O	O
The facilitator conveyed the information effectively	O	O	O	O	O	O
The facilitator was supportive	O	O	O	O	O	O
Useful resources were provided	O	O	O	O	O	O
The knowledge gained during the teaching session will be useful in my workplace in the future	O	O	O	O	O	O

Please provide comments particularly on areas you see in need of improvement; examples, constructive suggestions and ideas are very welcome!

1. What was the most valuable aspect of this workshop session?

_____

_____

_____

2. How could this workshop session be improved?

_____

_____

_____

Session 5 Evaluation Form

Workshop Session 5 – Supplements

Please indicate how strongly you agree with each of the following statements regarding the workshop session.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Not applicable
I enjoyed the session	O	O	O	O	O	O
I learned useful knowledge and skills about how to write an IR proposal in this session	O	O	O	O	O	O
The length of the session was appropriate	O	O	O	O	O	O
The topic(s) covered was/were relevant	O	O	O	O	O	O
The learning objectives were clear	O	O	O	O	O	O
The session was organized	O	O	O	O	O	O
The teaching strategies were effective	O	O	O	O	O	O
The balance of theory and practical skills was appropriate	O	O	O	O	O	O
The facilitator was knowledgeable	O	O	O	O	O	O
The facilitator conveyed the information effectively	O	O	O	O	O	O
The facilitator was supportive	O	O	O	O	O	O
Useful resources were provided	O	O	O	O	O	O
The knowledge gained during the teaching session will be useful in my workplace in the future	O	O	O	O	O	O

Session 5 Evaluation Form

Workshop Session 5 – Supplements

Please provide comments particularly on areas you see in need of improvement; examples, constructive suggestions and ideas are very welcome!

62

1. What was the most valuable aspect of this workshop session?

_____

_____

_____

2. How could this workshop session be improved?

_____

_____

_____

FACILITATING MODULE 3

3

PLANNING AND CONDUCTING AN IMPLEMENTATION RESEARCH PROJECT

FACILITATING MODULE 3

Make a general introduction of the module to participants.

e.g. This module provides information on the essential steps to plan research to conduct a research project, including: applying for ethical review, planning for programme implementation, and implementing good IR principles and practices. These processes will be demonstrated using an IR project as example.

Six steps in IR process [slide 2]

Before you begin…

Reaching Module 3 in the IR workshop, most participants will have already been through the two 'induction' modules (i.e. Introduction and Module 1) and many will also have completed Module 2 on preparing a project proposal and secured funds to conduct the project.

Nevertheless, it is worth taking a short time to review the overall IR process/framework again as you begin the module.

Use the IR cycle diagram in slide 2 to remind participants that *Planning and Conducting an Implementation Research* is the third step in the cycle.

Outline of the presentations [slide 3]

Go through the outline with the participants to ensure that they understand what will be covered. This includes the learning objectives, the expected outcomes, the three key concepts of this module (seeking ethical clearance, project implementation process and good practices in IR) and the application of the key concepts in a real life setting.

Key concepts for this module

1. *Seeking ethical clearance*
2. *Project implementation process*
3. *Good practices in implementation research*

Objective [slide 4]

This module is designed to provide information on the various steps to plan for executing the research including:

- applying for ethical review;
- planning for program implementation;
- implementing good IR principles and practices.

Expected outcomes [slide 5]

Remind participants that this focuses on the essential steps to plan for the conduct of the research, including:

• applying for ethical review;
• planning for programme implementation;
• implementing good IR principles and practices.

These processes will be demonstrated using an IR project as example.

By the end of this module participants will be able to:

• Describe the ethical requirements and processes required to successfully submit a research project protocol for ethics review.
• Describe the related ethical processes in a project cycle.
• Systematically describe the steps taken to implement a research project.
• Comprehend the value of good practices in the full cycle of a research project.

Key concept 1: Seeking ethical clearance

IR presents interesting ethical perspectives as it often involves multiple perspectives and interfaces with health services. As such, an implementation researcher may find it difficult to differentiate between routine health care and the research process. When the lines blur between routine heath care and the research process, it may be difficult to identify the potential ethical considerations, especially in the case of participatory research. It is important to consider the ethical aspects of a study right from the initial planning of the project.

Experience with ethical review/clearance [slide 6]

Begin exploring this key concept by asking participants to share their own experiences with seeking ethical clearances:

• What are the institutional review board (IRB) and/or the ethics review committee (ERC) submission requirements in your institution?
• How long does it take to receive approval in your institution? What are the possible reasons for not having approval after the first review?
• Does your IRB/ERC charge a fee for review?

You can also provide an example from your own experience.

> Research-funding agencies require approval of research proposals by the appropriate ethics review committee before project funds are released. The ethics committee(s) will review the study proposal and require full details of the study plan and procedures.

Submission of the research protocol [slide 7]

The ethics review process is essential to ensure that the research project will protect subjects' dignity, rights, safety and well-being. A written approval of the research protocol, written informed consent (preferable in the local language in which it will be administered) and defined recruitment procedures are required.

Before you show this slide, ask the participants: "What should the research protocol include?"

Then show the list to see if they match. The slide summarizes the documents often required by the IRB/ ERC. Ask participants to add other things that may not have been included in this list.

Discuss why the CV of the PI and other team members is important when seeking ethical clearance.

Seeking ethical clearance [slide 8]

When the ethical committee issues an approval certificate, it will inform the principal investigator (PI) of the need for regular ethical reviews. In IR, the research team continuously monitors and reviews the intervention activities to ensure meaningful and practical outcomes for programme planning and implementation. During this process, unexpected circumstances may arise and consequently changes to the original research plan may be in the best interest of the project and the participants.

Illustrative example: When submitting a proposal for ethical review, the research team may indicate that patients be given daily injections by the nurse in charge of the facility. However during the research process, the planned injection process was not effective due to unanticipated problems. One opportunity to update the ethics proposal is during the periodic ethics reviews.

In such situations, a number of amendments are likely to be made to the original protocol submitted for ethical review. The IR team must inform the ethical committee of any major changes to the original research protocol or procedures.

Ethical issues to be considered during project implementation and clearance may be an ongoing process.

Elements of an informed consent document [slide 9–10]

Ask participants to mention the essential elements/information that must be included in an informed consent form. Ask one of the participants (volunteer) to write these on a flip chart. You can compare this list with the information on the next slide.

Informed consent (IC) ensures that individuals can freely make decisions to (or not to) participate according to personal interest, values and priorities. An IC is more than a contractual obligation and should be understood as a process that begins with the initial contact (during the recruitment process), and carries through to the end of participants' involvement in the project.

The IC process requires four basic elements: 1) accurate and appropriate information; 2) understanding the purpose of and procedures in the research process; 3) capacity to consent; 4) voluntary participation.

To have an effective consent, it may be necessary to explain the information should be explained in the local language of the participants. The team should be aware of cultural sensitivities. For example, in some countries, specific family members may demand to be involved in the IC process.

Example of comments from IRB/ERC [slide 11]

Show the participants an example of comments from IRB/IRC.

Highlight elements that were discussed in previous slides.

Reflection activity [slide 12]

A researcher was conducting a study on a patient in a half-way home. The study involved daily visits by a health worker to the half-way home to administer injections. With limited access to transportation, the health worker was unable to make the necessary daily trips to the half-way home. Should the health worker train the researcher to give the daily injections?

What are the ethical issues (if any) raised by this situation?

How can the issue(s) be addressed?

Allow 15 minutes for discussion among members of each group and ask them to report back in plenary. Discuss the ethical angles that relate to this issue, focus in particular on the issue of modifying the protocol without reverting to the ethical committee for approval.

Key concept 2: Project implementation

Implementing involves conducting and monitoring the proposed activities, as well as updating and revising the research plan accordingly as conditions dictate. The activities include assembling the research team(s), applying for the logistical needs and allocating activities and tasks.

Furthermore, the research sites, the timeline for the research activities, and the procedures for the data collection must all be established. This phase also includes closure and evaluation of the project, as well as reporting and dissemination of the research processes and findings.

What does implementation include? [slide 13]

When the project work plan is complete, agreed by all involved parties and approved by relevant management groups, the implementation of the project may begin.

Explain each of the steps outlined in the slide. As you do, ask participants to comment on when/ how stakeholders, partners and frontline workers should be involved in the implementation. What are the specific roles of the team leader during each step?

Monitoring the project [slide 14]

Show the illustration and emphasise balancing between quality, cost and time. Throughout the project, researchers must measure all three elements, analyse the outcome and respond (react) appropriately in order to increase the quality of the research in balance with cost and time.

> Regular project monitoring ensures that the team always knows whether or not the project is making progress towards its objectives.
>
> Monitoring should be led by the project leader but is a team activity. It allows anticipation and quick response to problems or opportunities and helps to ensure successful implementation.

Updating and revising the research plan [slide 15]

Plans do not always proceed as intended in IR projects. Therefore adaptations may be required as the implementation process proceeds and more information is obtained. The set procedures (e.g. sampling and data tools) should be reviewed regularly to compare what is happening in practice with the original planned procedure, so that any necessary adjustments can be made. Staff training is a critical part of this process.

> Implementation research is a dynamic process that often requires adaptations, flexibility and latitude during the course of execution. Such changes/adaptations to the research process must be documented, coordinated and monitored to ensure credibility and fidelity.

Starting the implementation process [slide 16]

The emphasis here should be on the project launch: who should be responsible for the project launch activities, who should attend, clarity on the objectives of the launch and specific roles to be played by team members, stakeholders, partners and frontline workers.

Before commencing project implementation, team members should review the project goal, objectives, indicators and work plan. They should address potential issues and set up a mechanism of communication to ensure teamwork during implementation.

The team leader/PI must ensure the work begins on time and the agreed standards of performance are followed.

The emphasis here should be on the project launch.
- Why is the launch important? (ask participants for input)
- Who should be responsible for the project launch activities?
- Who should attend?

There must be clarity on the objectives of the launch and specific roles to be played by each partner. This process should be led by the PI.

Key concept 3: Good practices in IR [slide 17]

This slide shows the basic good practices – transparency and clarity – as well as good data management in implementation research.

Implementation research must generate credible data therefore the documentation process is important. Good research practice can ensure credible data by reducing the risk of obtaining inconclusive results on account of uncertainty about the effectiveness of the intervention itself or because of unclear implementation procedures. Go through the specific questions that should underpin good documentation:
- What is happening?
- Why is it happening in this way?
- Is this expected?

It is important to be objective when documenting processes and report both negative and positive experiences.

Note: Other considerations listed on this slide are explained in more detail in the participant workbook.

Application of key concepts [slide 18]

Illustrative example project: Key findings from an evaluation of the Mothers2Mothers programme in KwaZulu-Natal, South Africa.

Make sure that the teams have read full reference.

Ask three teams to present one of each of the three key concepts they have been introduced to and summarize how it was applied in this project. Each team should refer to the detailed descriptions of each key concept (see the Participant workbook) and select the points they feel are most important for presentation.

Refer to application of key concepts on the examples in the Participants' manual (Baek et al, 2007).

FACILITATING MODULE 4

DATA, ANALYSIS AND PRESENTATION

FACILITATING MODULE 4

Make a general introduction of the module to participants.

The purpose of this module is to outline the fundamentals of IR data analysis and interpretation, which is step 4 in the IR cycle. It also describes design of data analysis, presentation and interpretation for the target audience, with a view to enhancing the uptake and use of research findings. It is not a course in biostatististics or qualitative research methods.

Six steps in IR process [slide 2]

Take a short time to review the overall IR process/framework again as you start the module.

Use the IR cycle diagram in slide 2 to remind participants that *Data management, analysis and presentation* is the fourth step in the cycle.

Before you begin…

We assume participants are already familiar with qualitative and quantitative approaches and tools. As a brief reminder, ask participants to describe the main differences between them [slide 3].

Some examples to help prompt discussion/probe participants:

- Study objective: Magnitude *vs* understanding phenomena
- Research questions: How many *vs* why or how
- Methodological differences:
  - Deductive *vs* inductive
  - Linear *vs* iterative
  - Data analysis: Numbers *vs* narrative
- Emphasize: (i) Qualitative research is concerned with developing explanations to any social phenomenon and (ii) captures the subjective aspects of our world and seeks to answer questions about:
  - Why the problem/topic is interesting, important or of policy relevance.
  - What is the aim or specific objectives.

During the discussion, remind participants that they will find the differences summarized in Table 1 of their workbook [also slide 4].

MODULE 4a: Quantitative data management analysis and presentation

Presentation outline and key concepts [slide 6]

Go through the agenda with participants to ensure that they understand what will be covered in the session. Highlight the key concepts that will be covered in the module. The brief notes below will help you to prompt participants to suggest their own understanding of each one before the session begins.

(The learning objectives and expected outcomes are explained in more detail in subsequent slides).

Key concepts for this module

1. Data analysis plan

Most IR projects use mixed methods in which qualitative and quantitative techniques are combined. Under the right circumstances, a mixed-methods approach can provide a better understanding of the problem than either approach alone.

To ensure that the analysis is undertaken in a targeted manner, an analysis plan should first be created. The analysis plan contains a description of the research question and the various steps that will be carried out in the process.

2. Quantitative data analysis

In IR, quantitative data analysis may include one or more of the following considerations:

- Frequency distribution and summary statistics.
- Relationships and confounding variables.
- Sub-group analysis.
- Statistical models.
- Generalizing from samples to populations.
- Trend analysis.

3. Data management

In order to ensure data quality and integrity, data must be collected and processed using organized, consistent and reproducible procedures and protocols. For example, raw data must be recorded promptly, accurately, legibly and indelibly.

Learning objectives and expected outcomes [slide 7]

By the end of this module participants will be able to:

- Describe data analysis planning processes.
- Understand appropriate statistical measures.
- Understand data management approaches.

Key concept 1: Data analysis plan

Point out to participants that the main considerations influencing the overall data analysis plan are requirements related to:

- stakeholder communication goals;
- the anticipated IR study outcomes;
- appropriate formats for presenting information.

The final analytical approach is a balance between designing analysis for practical use and for purpose.

Designing analysis for use [slides 8 and 9]

Designing analysis for use in an IR project is based on the premise that the IR aims to: (i) understand the implementation processes, focusing on mechanisms that support or constrain those processes; and (ii) communicate that understanding of the implementation process to multiple stakeholders, who may consequently contribute to the integration of findings into current application and/or future research.

It is therefore essential that the analysis and, most importantly, presentation of findings, be carefully considered to avoid potential misinterpretations that could lead to inappropriate conclusions and/or responses.

At slide 9, go through each category of stakeholders and ask participants for inputs on the respective information needs. Emphasise the difference between each one and elaborate on one in particular.

> Emphasis should be placed on simplicity and interpretability because stakeholders need to both understand the information provided and also be able to interpret it correctly.

Designing analysis by purpose [slide 10]

An important preliminary consideration when designing data analysis is to clearly define the primary objectives of the analysis by identifying the specific issues to be addressed.

Discuss the different terms and emphasise that effectiveness, efficiency, equity and sustainability are elements of the context of interventions. What are the different meanings of, and what makes an intervention: effective, efficient, equitable and sustainable? Use the definitions below to prompt discussion in the group:

Effectiveness: Aims to modify implementation procedures in order to improve the generation of benefits.

Efficiency: Attempts to assess the implications of possible modifications to the implementation process in order to increase the benefits in relation to resources.

Equity: Focuses on distributional issues, i.e. how benefits and resource costs are distributed.

Sustainability: Focuses on identifying essential inputs, potential constraints on their availability and other possible barriers to medium and long-term availability.

> It is important to remember that data from IR is by nature intended not to simply describe the intervention but also to improve it.

Data presentation formats [slides 11 to 27]

Data reporting should be presented in both textual and visual formats, such as:

- tables
- diagrams
- graphs
- infographics
- maps

Work steadily through slides 12 to 27 with the group, highlighting the strengths and weaknesses of the various presentation formats and reminding them that selecting presentation formats is part of the data analysis planning.

Reflection activity [slide 28]

In project teams, ask participants to discuss the results of the study that they need to disseminate and format of data presentation they will use for different groups of stakeholders.

Allow 30 minutes for discussion among members of the group and ask for a brief report back. Discuss any questions or challenges that arise.

Key concept 2: Quantitative data analysis

The form of data analysis used in IR is partly determined by the nature of the research question and the need for *descriptive* or *analytic* approaches [slide 29].

Variables in quantitative analysis are usually classified by their level of measurement, as indicated below [slide 30]:

- Rational – e.g. weight of child, number of vaccinations.
- Interval (based on predetermined equal intervals) – e.g. temperature, some disability measures.
- Ordinal (ranks) – e.g. facility levels, quality of life indices.
- Nominal (categories) – e.g. district names.

Explain the four types of measurement, and ask participants for examples to illustrate their own understanding.

In general, regardless of the descriptive/analytic needs determined by the research question, quantitative data analysis focuses on assessment of one or more of the following considerations:

- Frequency distribution and summary statistics.
- Relationships (and confounding variables).
- Sub-group analysis.

- Statistical models.
- Generalizing from samples to populations.
- Trend analysis.

Before you describe individual approaches, introduce participants to the methods that usually comprise **descriptive studies**: [slide 31]:

- Distributions and summary measures.
- Defining intervals for frequency distributions.
- Frequency distribution and summary statistics.

Introduce each one briefly, and explain that the group will proceed through each one in greater detail [slides 32–38]. Before the session, you can read ahead through the descriptions below for comments/ideas.

Distributions and summary measures [slide 32]

Quantitative research generates large volumes of data that require organization and summarization. Frequency distributions facilitate a broad understanding of how the data vary or relate to each other. The approach reveals and summarizes distributions of the values of study variables within a study population.

Illustrative examples:

- The number of children under five years of age in various households in a given population.
- Daily outpatient attendance in a health facility.
- The birth weights of children born in a particular health facility over a period of time.
- Educational levels of mothers of children born in a particular health facility.

The use of frequency distributions for this purpose has several advantages:

- They are useful for all types of variables.
- They are easy to explain and interpret for audiences without specialist knowledge.
- They can be presented graphically and in different formats to aid interpretation.

Defining intervals for frequency distributions [slide 33]

A key decision in constructing a frequency distribution is the choice of intervals. Explain the following three types, using the brief examples presented below:

- *Ordinal*: Level of health facility (e.g. primary, secondary, tertiary).
- *Interval*: Body temperature (e.g. below normal, normal, above normal).
- *Rational*: Body mass index (BMI) (e.g. <25, 25–29, 30+).

Highlight these two conflicting objectives when determining the number of intervals:

- Limiting the loss of information through the use of a relatively large number of intervals.

- Providing a simple, interpretable and useful summary through the use of a relatively small number of intervals.

> Distributions based on unequal intervals should be used with caution, as they can be easily misinterpreted, especially when distributions are presented graphically.

Summary statistics and frequency distribution [slide 34]

Careful examination of the frequency distribution of a variable is a crucial step and can be an extremely powerful and robust form of analysis.

> **Note:** It can be tempting to move too quickly to the use of simpler summary statistics that are intended (but often fail) to capture the essential features of a distribution.

Summary statistics usually indicate the overall location of a distribution (e.g. how sick, poor or educated a study population is, on average) OR to indicate the extent of variation within a population.

> The reasons for selecting a particular frequency distribution/summary statistic should relate to the purpose for which it is intended.

Suggest that participants read the example presented in their workbook (malnutrition among five year-old children).

Use of mean or median [slide 35]

The mean is the most commonly used summary measure of location. However, *because the mean is simple to calculate and manipulate it is often inappropriately used* as the standard measure of central location.

The mean is also frequently misinterpreted as the typical value in a population.

> **Illustrative example**: The gross domestic product (GDP) of a certain middle-income country was calculated as 3200 US$. Interpreting this as the income of an 'average' person in that country does not reflect reality (in fact, the average was closer to 1200 US$). The mean is often unrepresentative when the underlying distribution is skewed.

The understanding and interpretation of mean and median is significantly influenced according to whether data distribution is skewed *[slide 36]*.

[slide 37]

Measures of variation

Essentially an assessment of how much variability occurs within a given population.

- Low variability: Measures of location can be seen as reasonably representative of the overall population; limited loss of information through aggregation.
- High variability: Representative measures of location are less useful; substantial risk of losing information by aggregation (unless the nature of the distribution is well understood).
- Explain each measure of variation presented in [slide 38]. Ask participants to suggest examples related to their own experience or projects.

Briefly introduce participants to the methods that comprise **analytical studies**: [slide 39]:

- Group comparison.
- Association.
- Causality.

[Slides 40–43] describe the most common approaches in these categories.

Group comparison

- Explain the different pathways that lead to various forms of group analysis presented [Slide 40].

Association

- Explain the data requirements for the correlation analyses described [slide 41].

Causality

- In order to highlight the distinction between the various forms of regression analysis [slides 42 and 43], describe the circumstances and instances in which the following approaches should be used:

- Linear regression.
- Logistic regression.
- Cox proportional hazard model.

Measures of risk [slide 44]

Although measures of risk are widely used in health research, they are frequently misunderstood. For example, risk and odds are often used interchangeably meaning quite different things.

> ***Explain the differences between these constructs:***
>
> Risk (P): number of people experiencing an event/population exposed to the event.
>
> Relative risk (PA/PB): risk in group A compared to risk in group B.
>
> Odds: number experiencing versus number not experiencing a particular risk = P/(1-P)
>
> Odds ratio: [PA/(1- PA)]/[PB/(1-PB)]

Furthermore, 'reduction in risk' is not equivalent to 'reduction in odds':

> ***Use this example to explain the differences:***
>
> PB (malaria before intervention) = 0.5
>
> PA (malaria after intervention) = 0.1
>
> Reduction in risk = 0.1/0.5 = 0.2
>
> Reduction in odds = (0.1 / 0.9) / (0.5 x 0.5) = 0.11

The 'denominator problem' [slide 45]

When calculating risk it is essential to know the overall size of the population at risk, which in IR studies is often difficult to determine or reliably estimate. For example, we may have only an estimate of the number of children who should be immunized or should be sleeping under a mosquito net in a given district. Similarly, the catchment population of a facility or actual number of births over a period of time are often unknown.

For these reasons, denominators are usually based on *projected* populations.

Because of this uncertainty, it is good practice to provide the estimates of both the numerator and denominator alongside any proportion, percentage or risk estimate and indicate the sources used in the calculation.

Sub-group analysis [slide 46]

The outcomes of an intervention may vary substantially between different sub-groups of the target population. Sub-group analysis can be complex if the sub-groups are not pre-defined.

Data mining (i.e. exploring data sets to discover apparent relationships) is useful to formulate new hypotheses but requires great caution in IR. The context within which this sub-analysis is undertaken should be considered carefully, because relationships between inputs and outcomes may be mediated by contextual variables.

Illustrative example: We might assume that it would be useful to undertake an analysis of chronic illness by age group and sex, as shown below (and in Table 7 in the participant Workbook). For meaningful interpretation of the results, the type of chronic illness and the background of the patients experiencing them are important variables to consider.

Table 7. Background variables of patients with chronic illnesses

Age group	Chronic illness prevalence	
	Males	Females
15–24	0.55	0.80
25–44	1.79	4.01
45–64	4.91	12.28
65	12.86	20.00
All	1.77	4.25

Work through this example with participants so they understand the reasons for caution re. data mining in IR, and the differences between controlled and confounding variables.

Reflection activity [slide 47]

15 minute exercise: In project teams, ask participants to discuss the data analysis they intend to conduct in their project and identify whether the data they will collect is suitable for the type of analysis they plan.

Encourage teams to identify specific variables that will be analysed and present the selected approach back to the group briefly.

Key concept 3: Data management

The underlying goal and importance of good overall data management is to ensure, as much as possible, the validity of data generated from a project.

Work steadily through slides 48 to 53 with the group, highlighting why it is important to have consistent and rigorous data collection, storage and management, and that data management is required at various research stages, not just the concluding steps. It is also useful to mention that there may be a need to review (or audit) the data after the conclusions have been shared/published, and that data should be stored and managed with this eventuality in mind.

Reflection activity [slide 54]

15 minute exercise: In project teams, ask participants to discuss how to improve the quality of their data management system.

Encourage teams to identify specific issues they may encounter and possible solutions. Ask 2–3 team to present their conclusions/challenges back to the group briefly.

Conclusion [slide 55]

Discuss each of the four main points in this slide with the group, and ask the participants for their interpretation of each point. As you do, it will be useful to refer back to (and verify) the expected outcomes for this sub-module:

• Describe data analysis planning processes.
• Understand appropriate statistical measures.
• Understand data management approaches.

MODULE 4b: Qualitative data collection, analysis and presentation

Presentation outline and key concepts [slide 3]

Go through the agenda with participants to ensure that they understand what will be covered in the session. Highlight the key concepts that will be covered in the module. The brief notes below will help you to prompt participants to suggest their own understanding of each one before the session begins.

Ask participants about their experience with qualitative data and the types of data they mostly intend to collect: qualitative or quantitative? Their responses may help to guide subsequent discussions and emphasis.

Also do a quick check in the room of knowledge regarding the use of qualitative methods.

Key concepts for this module

1. *Qualitative data collection*
2. *Analysis of data*
3. *Presentation of data*

Expected outcomes [slide 4]

By the end of this module participants will be able to describe:

- Appropriate qualitative data collection techniques and tools.
- Data analysis processes in a qualitative study.
- Various options for data presentation.

Key concept 1: Qualitative data collection

Ask participants to explain each of the sampling strategies mentioned [slide 5]. They should also discuss why purposive sampling is used as opposed to probability sampling. Provide feedback and comment on the examples given by participants. Some general definitions/summary notes are included below for your reference.

> It is important to select your sample in a systematic way so as to ensure that the community/users/external actors see it as a credible and indicative sample.

Purposive sampling: This means participants/subjects are intentionally selected because they are likely to generate useful data for the project.

Convenience sampling: Select whoever is easiest, closest, etc. to save time, money and effort. Information collected generally has very low credibility (e.g. focus groups based on who is available that day at the local community centre, rather than according to predefined criteria).

Snowball (chain) sampling: Locate one or two key individuals, and then ask them to name other likely informants. To facilitate the identification of hard-to-find cases (e.g. finding sex workers to interview about experiences of childhood sexual abuse by getting cases referred through friendship networks).

Maximum variation sampling: Purposely select a wide range of variation in dimensions of interest. To document diverse variations, it can help to identify common patterns that cut across variations (e.g. researching variations in norms about the acceptability of wife beating by conducting focus groups discussion with: young urban women, old urban women, young rural men, old rural men, women who have been abused, women who have not experienced abuse).

Outlier: Cases that have gone extremely right or extremely wrong. Generally considered to be a data point that is far outside the norm for a variable or population.

Intensity sampling: To provide rich information from a few select cases that manifest the phenomenon intensely but are not extreme cases (e.g. Interviewing survivors of date rape to learn more about how coerced sex affects women's sexuality).

Homogenous: Small group of similar cases to describe in depth. Used to gain information about a particular group (e.g. single fathers).

Before showing the considerations that determine data collection approaches [slide 6], let the participants brainstorm what factors they would consider in order to determine the most appropriate methods of qualitative data collection.

As the group considers the general schematic diagram of qualitative data collection [slide 7], remind them about some of the major characteristics of qualitative data:

Interviewing: Asking people questions.

Observation: Watching (and participating).

Existing documents: Official documents, personal writing, movies, songs, etc.

Visual data: Photography, film and other forms of visual recording.

Proceed left-to-right through each of the layers depicted [slide 7], discussing with the group how collection methods influence the types of data ultimately generated.

[Slide 8] highlights the various options for qualitative data collection, and reminds participants that these approaches relate to the implementation step of the IR process. Invite the participants to brainstorm the different methods listed. Using examples from the participants' projects, discuss the use of qualitative data collection techniques and their appropriateness.

To encourage discussions, use slides 9 to 14. Ask one participant to volunteer to illustrate each method with a real life example. A brief summary of each approach is included below for your reference:

In-depth interviews: Qualitative interviewing, at its most basic level, is the process of gathering data by asking people questions. Traditionally interviews involve one-on-one, face-to-face encounters. However, they can also take place on the phone or over the Internet. Structured interviews seek consistency across interviews by using a predetermined set of questions from which the interviewer does not deviate. Unstructured interviews are more like flowing conversations guided by a basic topic of inquiry, usually with open-ended questions and a focus on eliciting stories.

Transect walks: These are organized around a given community in order to observe the people, surroundings and resources. They provide an overall view of the community and help it to identify issues that might merit further exploration. They can take as little as an hour or as long as a day, depending on the size of the community and the amount of time available. Transect walks are planned by drawing a 'transect line' through a map of the community. The line goes through all zones of the community in order to provide a representative view.

Problem tree: Used to understand the basic principles of analysis of problems by identifying major problems and the main causal relationships between them.

Vignettes: Short scenarios or stories in written or pictorial form that participants can comment upon. The central feature of this method is to explore participants' subjective belief systems stories about individuals, situations and structures that can make reference to important points in the study of perceptions, beliefs and attitudes.

 ns (FGD) [slides 15–19]: All of the methods described above are used as part of qualitative data collection, but probably none so frequently as FGD.

Once again, ask one participant to volunteer to describe their experience with a real life example of an FGD.

Work steadily through slides 16 to 19 with the group, asking participants to explain their understanding of each one.

Reflection activity [slide 20]

Consider one of two possible 15 minute exercises:

1. Focus group discussion role play

- A group of 8–10 participants is selected from the entire group.
- Select the moderator and note taker.
- The FGD guide should be ready and discussed with the moderator beforehand.
- Select some dominant, docile and controversial characters for participants (these should not be known to the moderator).
- The rest of the participants should observe and give constructive feedback/observations at the end of the role play.

2. Problem Tree: group work

- List a number of health problems [preferably related to the teams' projects].

- Form groups of 5–7 participants, where two play the role of the researchers and the remainder are the local community members.
- Let them develop a problem tree in an FGD setting.
- Each group should then present their problem tree conclusion.
- Encourage constructive feedback from the participants.

Key concept 2: Data analysis

Emphasize here that qualitative data generates textual information rather than numbers. To ensure validity and reliability, triangulation (use of multiple qualitative techniques) is essential.

The three core requirements of qualitative analysis [slide 21] are:

- Detailed description of techniques and methods used to select samples and generate data.
- Carefully specified analysis, with attention to issues of validity and reliability.
- Triangulation with other data collection methods.

Indicate to the participants that they should feel free to use whatever analysis method they are comfortable with.

> Point out that whatever approach is used, all qualitative analysis involves making sense of large amounts of data, identifying significant patterns and communicating the essence of what the data reveal.

[slide 22]

Note that in this session you cannot teach participants any of the analysis software referred to [slide 23]. Mention them and generally indicate what the software does:

- Atlas-ti deals with large datasets, unstructured coding, mimic paper code and sort.
- NVivo handles relatively less data, caters for unstructured coding, finding patterns/relationships in codes.
- MaxQDA provides powerful tools for analysing interviews, reports, tables, online surveys, videos, audio files, images, and bibliographical data sets.

Analysis of textual material [slides 24–31]

Work through these slides with the participants, explaining the main concepts outlined in relation to:

- Thematic analysis.
- Coding schemes.

Slides 32 and 33 summarize the discussion on analysis of qualitative data and provide an opportunity for you to reiterate the basic steps to follow when analysing qualitative data:

- Objectives have been met (confirm).
- Transcribe (verbatim) all interviews.
- Use information from all the techniques/methodologies.

- Incorporate all notes and observations for that particular interview into the transcript. Include background information on respondents or people observed.
- Code the main segments using the interview guide.
- Recode according to sub-themes.
- Produce a matrix.

Slides 34–36 provide a brief opportunity to consider the text-based and graphical options for presenting qualitative data.

Reflection activity [slide 37]

Ask the groups to discuss the specific points highlighted and request three teams to share their conclusions/observations. Encourage other participants to comment.

Example [slide 38]

Innovative Participatory Health Education (IPHE) in South Sudan

An educational initiative solution for improving the life of girls and women worldwide funded by Women Deliver in 2011/12.

Stream the video using the URL http://www.youtube.com/watch?v=sHLfGAP0N6k

 The example summarizes the key concepts of qualitative data:

1. Data collection: observation/in-depth interviews [de-briefing]/FGDs/reflective photography.
2. Data analysis: participatory workshop.
3. Data presentation: health messages [pictures]/song/drama [all developed by the study participants].

FACILITATING MODULE 5

MODULE

5

DISSEMINATING THE RESEARCH FINDINGS

FACILITATING MODULE 5

Give a general introduction of the module to participants.

The purpose of this module is to use practical examples to highlight and illustrate the key concepts of knowledge translation as relevant to implementation research (IR). It provides structured guidance on preparation of research reports, peer reviewed papers, press releases, conference presentations and policy briefs.

Six steps in IR process [slide 2]

Take a short time to review the overall IR process/framework again as you start the module.

Use the IR cycle diagram in slide 2 to remind participants that *Disseminating Implementation Research Findings* is the fifth step in the cycle.

Presentation outline and expected outcome [slides 3–4]

Go through the outline with participants to ensure that they understand what will be covered in the session. Highlight the expected outcomes and key concepts that will be covered in the module. The brief notes below will help you to prompt participants to suggest their own understanding of each key concept before the session begins.

Key concepts for this module [slide 5]

1. *Knowledge translation (KT)*

KT is rooted in an ever-shifting context in terms of time, place, and unique situations that its practitioners must always be aware of, anticipate and adjust to. KT techniques can help researchers become more active, context-aware, and collaborative in disseminating the results of research. And by doing so, research results become more relevant, adapted to change, and ultimately more useful. In relation to IR, there are two types of KT activities: end-of-grant and integrated knowledge translation.

2. *Dissemination tools*

A wide variety of dissemination tools is available to research teams to help them promote the uptake of research findings. All these tools should be considered less as individual pieces and more as parts of a whole. The various tools should be used in concert within a larger plan that together produces a complete effective dissemination package or approach. Each tool has different strengths and weaknesses in reaching particular audiences and therefore by using

more than one in combination, the various tools can complement one another to produce a stronger dissemination plan than using any one in isolation.

The dissemination tools that will be considered include research reports, peer review papers, press releases, and policy briefs.

3. Dissemination strategy

As mentioned above, the dissemination process is an integral part of the IR project cycle. By involving stakeholders in the dissemination process early in the cycle, the greater ownership they will have of the research process and the ultimate uptake of the research findings.

Specific steps are recommended for research teams as they discuss and formulate their dissemination strategies and related needs. The end result should be a context-sensitive strategy designed to disseminate particular research findings to given audiences.

Key concept 1: Knowledge translation

Briefly highlight that knowledge translation (KT) is a two-way process [slide 6]

To be effective, it must be disseminated:

- using the appropriate tools;
- at the appropriate time;
- in the appropriate place;
- whenever there is an opportunity to engage an audience.

> Not only is KT aimed ultimately at sharing the results of IR, it also helps researchers to actively engage with stakeholders and research communities, be more aware of the context in which they are working, and encourage collaborative approaches.

Stages of KT [slide 7]

There are two types of knowledge translations that are commonly practiced:

1. End-of-grant KT
2. Integrated knowledge translation (iKT)

End-of-grant KT approaches are more frequently built into research project plans and funding proposals because they comprise the types of sharing approaches that researchers are typically most aware of and adopt. This implies that at the end of a research process, findings/conclusions – new knowledge – are packaged into effective communications tools that are disseminated to a particular audience. These include peer-reviewed papers, guidelines, conference presentations, press releases, radio spot and community dramas. Although such end-of-grant KT activities can be conducted as part of an IR project, they tend to be fairly limited (and relatively expensive).

In iKT approaches, researchers *and* key knowledge users identify research questions, determine methodologies, conduct the research, interpret findings, and then synthesize, disseminate and apply findings – together. Because the ultimate findings reflect the needs of knowledge users, they have a much greater likelihood of being relevant and being implemented.

In iKT approaches, knowledge is regarded – from its initial creation to its ultimate application – as a collective, co-productive undertaking. It respects the two-way dynamic that allows research process to be influenced by its contextual surroundings and communities, and for research evidence to be created, shaped and ultimately used by myriad stakeholders. In this way, iKT makes research evidence far more relevant and responsive for practitioners, planners and programme managers. This uniquely positions IR as a tailored, context-sensitive process that actively responds to user needs and demands.

> Integrated knowledge translation (iKT) is a more innovative approach that is multi-stakeholder and multidisciplinary in its orientation. It is far more dynamic and interactive than end-of-grant approaches.

Barriers to uptake of research evidence [slide 8]

A wide array of barriers reduces the uptake of research evidence. Many users of research evidence, such as programme managers, operate in an environment with unique pressures and imperatives. Their timelines for action can be very short, and their expertise in applying or balancing different inputs to solve problems may be limited.

Ask participants to suggest possible barriers to research uptake. You can use the five brief summaries below to prompt and/or explore individual barriers during the discussion.

Potential barriers to research uptake

Perception of research evidence by practitioners. How do they balance that evidence with other competing influences?

Organizational culture. How does an organization make decisions? How does information flow within an organization? What are its abilities to interact with research evidence?

Low skills (especially research or evidence-appraisal skills) among practitioners, either to assess research evidence or to balance it against competing sources of influence (related to no. 2 above).

Perceived costs and timelines of research. Given the short time horizons that many practitioners have to make decisions, is research too expensive, or too slow/time-consuming to have real practical value?

Information overload. Practitioners, programme managers and implementers may become overwhelmed by the sheer number of information sources.

Facilitators of research evidence uptake [slide 9]

A similar range of factors can facilitate the uptake of research. Some of these may have come up as you discussed barriers.

Once again, ask participants to suggest possible facilitators to research uptake and use the five brief summaries below to prompt and/or explore ideas. At the outset, it might be helpful to suggest that the absence of the barriers mentioned above is not what you are looking for!

Potential facilitators to research uptake

Researchers **reframing** practice issues to align with the available evidence. Framing the problem is an essential aspect of many KT activities (e.g. a policy brief) and can bring together many different types of evidence to respond to a particular practice or implementation need.

Strengthening the capacity of practitioners to **demand appropriate research** to address a specific problem.

Researchers **collaborating with practitioners** to generate essential information, encourage active sharing, and jointly identify pressing priorities.

Creating targeted messaging emphasizing the role research evidence can play in contributing to better programmes or improved interventions.

Researchers **networking with practitioners** to develop personal contact and trust.

Reflection Activity [slide 10]

15 minute exercise: Break into five groups and select two groups to present their conclusions.

Ask groups to reflect on a health programme they are familiar with in their country. Is there a policy underpinning this programme? If so, what research evidence was used to formulate this policy?

Participants can review the Uganda example presented in their workbooks for inspiration.

Key concept 2: Dissemination tools [slide 11]

There are many dissemination tools available to research teams that can be used to promote uptake of research findings.

> The various dissemination tools should be considered less as individual approaches and more as parts of a whole. The various tools should be used in combination within a larger plan, which produces a complete, effective dissemination package.

Each tool described has different strengths and weaknesses, and increasing the number of ways that research results reach key audiences increases the chances of uptake and action.

Before you begin this sequence of dissemination tool examples, brainstorm the following points among participants:

- What are the dissemination tools they are familiar with?
- What are the main features of each one?
- What are the relative pros and the cons?

Four important dissemination tools [slide 12]

Detailed summaries of the four tools mentioned in this slide are presented in the participant workbook. Work through the four tools, using some of the following points and notes:

Research report

- The content of the research report depends on the funder and their requirements.
- Ask participants to suggest typical sections (i.e. title; list of authors and preface; acknowledgement; abstract; executive summary; introduction; literature review; research design/methodology; results; discussion; conclusions; and references).
- One key question to have in mind when writing report: What other ways can we use or repackage this information?

Peer-reviewed paper

- Publication in a peer-reviewed journal signals acceptance of the work within the community.
- Publication is the beginning of a new cycle of achieving influence.
- All journals have different target audiences and varied author instructions. Before writing, identify the intended journal.

Press release (an example is given in the workbook)

- Mass media is a crucial audience for research findings. Ask participants to suggest why this is important.
- A press release is similar to a sheet of 'take-home messages', but with its own style and structure that must be followed:
  - No longer than one page.
  - Strong and informative headline.
  - Summarized in several lines – justifying why the research findings deserve publication.
- A misleading coverage [slide 13] can be avoided by making a press release available by the media.
- This is an example of research information misrepresented. The reporter got the information at a conference and wrote it up with a sensational headline to catch the attention of readers.
- Point out to participants that sometimes situations like this are unavoidable BUT the chances of occurring can be reduced by providing a press realease for the media.

Policy briefs

Policy briefs are short documents that present the findings and recommendations of a research project to a non-specialized audience.

- Focused and concise
- Evidence-based
- Understandable
- Accessible content (jargon-free)
- Professional

Can participants think of other characteristics?

Other dissemination tools [slides 14–25]

Review each of the slides in this sequence with participants. For each approach, encourage discussion by asking participants to suggest pros/cons of each approach, and to share any related experiences they may have had.

Specific considerations/questions to prompt discussion:

[slide 15]: Proportions are not consistent/correct.

[slide 16]: 'Slices' are all same size, even though allocated times vary.

[slides 17–20]: Infographics are useful when they are easy to follow, and simplify complex information. Graphs/charts are often used to represent data as part of a larger infographic.

[slides 21–24]: Photographs are known to be one of the most powerful tools to convey messages. Photos that accompany targeted messages can be even more powerful.

[slide 25] Video: This clip shows the use of interactive video infographics to support the presentation of relatively complex data/evidence in an understandable and interesting way. This TED talk video can be streamed directly if the training facility has reliable internet access. It can also be downloaded ahead of time from http://new.ted.com/talks/hans_rosling_the_truth_about_hiv

The data and animation can be downloaded from http://www.gapminder.org/downloads/gapminder-hiv-presentation

Multiple dissemination platforms [slides 26 and 27]

IR involves researchers and multiple stakeholders with different capabilities and so different platforms/channels should be used to disseminate research findings. The nature, implications and audience for your findings may suggest a specific channel.

Examples of 'old media' and 'new media' platforms:
- Old media is often more familiar (i.e. print media, newspaper, magazine, journals, television and radio).
- New media (such as social media) have also become powerful dissemination platforms. Also cost-effective and rapid. Have a brief discussion on the tool(s) best suited for each platform.

Key concept 3: Dissemination strategy [slide 28]

Developing a dissemination strategy is an established process for all research, and IR is no exception.

The dissemination process should be an integral part of the research project cycle. Developing the overall dissemination strategy and planning for its implementation should take place at the start of the research process, and involve all relevant stakeholders.

Key approaches [slide 29]

Ask participants to explain what they understand by the four key approaches and dissemination strategy considerations (as outlined in this slide). You can use the following points to prompt discussion:

- Strong dissemination strategies feature two-way dialogues (not just from the researcher to an audience, but also from the audience to the researcher as well).
- Use of appropriate language is central to effectively communicating with and reaching stakeholders. This should consider local language/dialect, and also the extent of local research literacy and familiarity.
- Sensitivity to the prevailing context and culture.
- Full consideration of the strengths and weaknesses of the dissemination strategies.

Step-wise dissemination strategy approach [slide 30]

Dissemination strategies must be developed in accordance with the local context and considerations. A generic 9-step process is suggested, which can be adapted and modified to specific settings and IR projects.

Walk through each of the nine steps with participants, ask volunteers to describe how they might practically approach each of the steps in relation to their own projects:

Step 1: *Review past dissemination efforts*

Begin by looking back at what was done in the past.

Step 2: *Devise dissemination objectives*

The team should brainstorm exactly what it hopes to achieve by disseminating the research results (e.g. increase awareness, understanding, action, or support for involvement?).

Step 3: *Determine primary and secondary audiences*

The better the research team understands its audiences, the greater the chances for the dissemination approach will achieve its objectives.

Step 4: *Develop messages*

Messages should be short, direct and simple, and explain the problem the research sets out to address.

Step 5: *Decide upon dissemination approaches*

Considering what might be tight budgets/limited dissemination experience – and the dissemination objectives/audiences – decide what approaches represent the best value and prospect.

Step 6: *Determine dissemination channels*

The consideration of optimal channels helps narrow down, in very realistic ways, the types of communications tools that are practical, reach the right audiences and fit into available budgets. Above all, the choice of channel dictates who receives (and therefore who might act upon) the message.

Step 7: Review available resources

What materials are available for this work? What kinds of skills are available? Is there a defined budget? Will any of these variables change as we execute the dissemination strategy?

Step 8: Consider timing and windows of opportunity

A dissemination timeline may be obvious. Is there, for example, an upcoming conference at which the research team can distribute several different communications products, deliver a plenary presentation, and convene some face-to- face meetings?

Step 9: Evaluate efforts

Dissemination requires careful evaluation and feedback, and adjustments may be needed to ensure a maximum return.

What will change if the dissemination strategy is completely successful? This question is critical for designing appropriate evaluation metrics, but can also guide the entire dissemination strategy development.

Reflection activity [slide 31]

In the participant workbook there is an example of a dissemination strategy. The research teams should use this example and the template provided [slide 32] as a guide for developing a first draft of their dissemination strategy.

Choose two teams to report back on their strategies to the group.

FACILITATING MODULE **6**

MODULE

MONITORING AND EVALUATING AN IMPLEMENTATION RESEARCH PROJECT

FACILITATING MODULE 6

Make a general introduction of the module to participants.

e.g. The purpose of this module is to help research teams track their progress against set plans, check compliance to established standards, identify trends and patterns, adapt strategies and inform decisions for project management. The module is also designed to build skills to determine the relevance and fulfilment of objectives, developmental efficiency, effectiveness, impact and sustainability.

Six steps in IR process [slide 2]

Take a short time to review the overall IR process/framework again as you start the module.

Use the IR cycle diagram in slide 2 to remind participants that *Monitoring and evaluating an implementation research project* is the sixth step in the cycle.

Presentation outline and expected outcomes [slides 3–4]

Go through the agenda with participants to ensure that they understand what will be covered in the session. Highlight the expected outcomes and key concepts that will be covered in the module. The brief notes below will help you to prompt participants to suggest their own understanding of each key concept before the session begins.

Key concepts for this module [slide 5]

1. *Monitoring and evaluation (M&E) plan*

A monitoring and evaluation (M&E) plan is a document that outlines how an implementation research project is monitored and evaluated, and that links strategic information obtained from various data collection systems to decisions about how to improve the project on an ongoing basis. The M&E plan serves several purposes, including: (i) stating how achievements of the programme/project will be measured (ii) documenting consensus, thereby encouraging transparency, accountability and responsibility; (iii) guiding implementation of M&E; and (iv) preserving institutional memory.

Each project has different M&E needs, depending on the operating context, implementing agency capacity, donor requirements, and other factors. In preparing an M&E plan, it is important to identify these needs and coordinate the methods, procedures and tools used to meet them; this conserves resources and streamlines M&E planning.

2. Developing an M&E plan

Before setting up an M&E plan, teams should define the overall project goals and objectives, understand the context for the study and identify the key players/stakeholders. The most appropriate approach (e.g. M&E framework and data collection methods to conduct M&E) should then be selected. Six key steps should be taken when developing an M&E plan:

• Stakeholder consultation and participation
• Developing the M&E plan
• Determining the M&E methodology
• Assigning responsibilities for implementation
• Setting targets
• Defining reporting system, dissemination and utilization of results

3. Implementing the M&E plan

Implementation of the M&E plan occurs in three stages, namely: (i) checking and measuring progress; (ii) analysing the situation; and (iii) reacting to new events, opportunities and issues.

Key concept 1: Monitoring & evaluation plan [slide 6]

Define the M&E plan as a document that describes the M&E system and links strategic information obtained from various data collection systems to decisions that will improve the project [slide 5].

> The M&E plan must address the end users and their information needs in order to facilitate its use.

Key components [slide 7]

One of the primary purposes of an M&E plan is to describe how achievements of the programme/project will be measured. In order to stress this basic starting point, begin discussion of this slide by asking participants to describe the changes/impact they expect from their project. You can then ask individual teams to progress through points 2–4 of slide 6, to highlight the four key components that form the foundation upon which an M&E plan should be built.

> Answering the four corresponding questions is critical to M&E planning.

Slide 7 reinforces that any M&E plan is built on the key parameters of a given project.

Uses of an M&E plan [slides 8 and 9]

Another way to encourage participants to consider the foundations of an M&E plan from a broad perspective is to highlight why such a plan is significant/important. Before progressing to slide 8, encourage a short discussion of this point by asking participants: "What are the uses of an M&E plan?"

> **Uses of an M&E plan:**
>
> Stating how the project will measure its **achievements.**
>
> Documenting consensus thereby encouraging **transparency** and responsibility.
>
> Guiding **M&E implementation**.
>
> Preserving **institutional memory**.

An M&E plan is built on the key parameters of a project [Slide 10]

The major elements of the M&E plan must take into account and be based around overall goals, main beneficiaries and consider limitations of the project such as scope, size and budget of the project.

Explain briefly how these parameters act as the practical (and logical) 'boundary' inside which the project impact can be assessed.

Facilitators of research evidence uptake [slide 11]

Usefulness is, however, only one of the critical characteristics of an M&E plan. Remind participants that to be effective an M&E plan must conform to *each* of the following standards:

Utility [see slides 8 and 9]: It must be useful and serve the practical and strategic information needs of the intended users for decision-making purposes, which may range from assessing programme performance to allocating resources, etc.

Feasibility: Realistic and practical. Given the general scarcity of resources, the M&E plan should make the best use of existing data collection systems. However, if new data collection systems are involved, resources (cost and technical capacity) must be carefully considered.

Ethically sound: Abide by ethical principles with regard to those involved in and affected by the M&E activities.

Accuracy: Provide technically accurate and useful information for decision-making and programme improvement.

Key concept 2: Setting up or developing an M&E plan [slides 12 and 13]

Although already defined in detail earlier in this module, reiterate the main factors/issues that should be considered [slide 12] before setting up an M&E plan (in order to ensure that participants are not placing the plan itself in precedence of these considerations):

- The overall project goal.
- Understanding the context of the intervention/research.
- Identify the key players.
- Define the most appropriate approaches (frameworks and methods).

Only then should you move on to describe the key steps in developing an M&E plan [slide 13], with the following suggested emphasis:

- Stakeholders' consultation should occur regularly throughout the entire process of developing and implementing the M&E plan. This creates a greater sense of ownership and responsibility, and also increases the probability that the results will be used.
- Developing the M&E plan provides a visible linkage and relationship between activities, outputs, outcomes and impact.
- How the activities are designed, implemented and monitored translates into how the research problem, goals and objectives can be objectively measured.
- It is critical to understand from the outset what factors/variables can be/need to be measured (e.g. resources, service statistics, coverage, quality, etc.), and how the different types of information will be collected and used.
- To enable standardization and comparison with other similar projects, the 'indicators' should be consistent, as far as possible, with international/national standards.
- When considering the optimal methods for collecting and analysing data, capabilities of the existing information systems should be assessed.
- The roles and responsibilities of different players should be spelt out, as this will determine how the M&E plan is to be implemented and the reporting system to be adopted.
- The reporting system should connect the field to the centre, so those in the centre know what is happening elsewhere.
- Target-setting should be done in consultation with all stakeholders to ensure uniform understanding of what the project is committed to achieve. This should focus authentically on what can be realistically achieved given the resources and the environment in which the project is taking place.
- The M&E plan should also describe the plan for disseminating and utilizing findings (i.e. in terms of target audiences, frequency/timing of dissemination, and appropriate communication outlets and channels).

A case study (based on your experience), which describes the development of a specific M&E plan, can be a useful and intentional way to achieve this broad emphasis.

Use slides 19–22 in a flexible way to illustrate some of these key points.

Logframe objective [slide 14]

Explain how the project inputs, activities are linked to the expected output, outcomes and goal. discuss the indicators at each level.

Key steps in setting up M&E plan [slide 15]

Emphasize the following to participants:

- When considering the appropriate methods by which data for M&E will be collected and analysed, the existing information systems capabilities to address the information needs should be assessed.
- The roles and responsibilities of the different players should be spelled out, as this will determine how the M&E plan is to be implemented and the reporting system is adopted.
- Targets should be set in consultation with all stakeholders so that everyone understands what the project is committed to achieving. When setting targets, you must focus on answering the

question of "what can realistically be achieved given the resources and the environment in which the project is operating".

- The M&E plan should articulate a plan for disseminating and utilizing M&E findings, in terms of the target audience, frequency/timing of the dissemination and appropriate outlets and media channels for communicating M&E data.

Evaluation domains & data collection methods [slides 16 and 17]

Slide 16 presents an example of a matrix that can be used to map out and assess evaluation domains and data collection methods.

Present and explain this example, highlighting the relationship between the selected indicators and data collection methods. Ask participants if they agree with the choice of methods in each case.

For the group activity, ask teams to use the same matrix to begin describing the evaluation domains for their own projects, and formulating appropriate indicators and data collection methods.

Reflection activity [slide 23] (time to be determined/agreed with participants)

First explain the activity and the table. The teams should then create an initial draft of their respective M& E plans (allow up to 30 minutes). A blank template is provided for this activity in the participant workbook.

Adapted from Scott G (2008), Monitoring & Evaluation planning Guidelines and tools, American Red Cross

Emphasize that the M&E plan helps with systematic operationalization of the M&E activities. Point out that this is just a guideline.

Explain how to fill the table.

- 2nd Column: insert your pre-determined time-bound objective for project level.
- 3rd Column: list the indicators.
- 4th Column: insert a performance target for each indicator.
- 5th Column: insert the methods to collects data.
- 6th Column : insert the frequency of data collection.
- 7th Column: insert the name of the person who will be primarily responsible for the activity.
- 8th Column : list the resources you require for the activity.
- 9th Column : list the conditions that should be in place for you to carry out your activities.
- 10th column: List how the information generated will be used for decision-making.

Each team should create an initial draft of their project's M& E plan (give them 10 minutes). Invite two teams to volunteer and present their draft M&E plan (5 minutes for each team).

Key concept 3: Implementing the M&E plan [slide 24]

The following points regarding the three stages should be highlighted:

Checking and measuring progress: Ideally, monitoring focuses on the project's three main characteristics of quality, time and cost. The project manager coordinates the project team.

Analysing the situation: The status of project implementation is compared to the original plan. The causes and impact of potential deviation are identified and documented.

Reacting to new events, opportunities and issues: It is important to anticipate and react quickly to new situations, events, opportunities and issues and to identify the necessary actions to be taken.

Updating the M&E Plan [slide 25]

The entire project team (including key stakeholders/partners) should be involved in the review and adjustment/updating of the plan, and the revised plan should be circulated to all. The M&E plan should be dynamic, involve all team members and document the changes so others know what the changes are.

> The M&E plan should be seen as a 'living' document, which should always reflect reality. Any revisions should be documented accordingly.

How well is the M&E plan working? [slide 26]

Ask participants to suggest questions that might be considered to assess how well the M&E plan is working in the specified areas. Some examples follow.

- Are M&E activities progressing as planned?
- Are the evaluation questions being answered sufficiently?
- Have other evaluation questions been raised and should they be incorporated into the M&E plan?
- Are there any methodological or evaluation design issues that need to be addressed?
- Are there any outside factors (e.g. political, environment) that are affecting the M&E plan?
- Are appropriate staff and funding still available to implement the M&E plan?
- Are M&E findings being disseminated and used by stakeholders for decision-making and programme improvement?

Application of key concepts [slide 29]

An example is provided to participants (see workbook) that describes the steps taken (by the research team and the implementers) to develop the M&E plan for the use of vouchers for scaling up insecticide-treated nets in the United Republic of Tanzania (2003–2007). Table 1 (see workbook) describes the evaluation domains and data collection methods that were used. The teams should have read the summary (prior to the workshop), if not, they should read it now.

The activity comprises an analysis of the steps that were taken by the M&E team to develop the M&E plan for the voucher scheme.

Invite two teams to volunteer to present their analysis (~5 minutes for each team).

The Special Programme for Research and Training in Tropical Diseases (TDR) is a global programme of scientific collaboration established in 1975. Its focus is research into neglected diseases of the poor, with the goal of improving existing approaches and developing new ways to prevent, diagnose, treat and control these diseases. TDR is sponsored by the following organizations: