



PRESIDENT'S MALARIA INITIATIVE



## INDOOR RESIDUAL SPRAYING FOR MALARIA CONTROL

# Trainers Guide

## Indoor Residual Spraying (IRS 2) Task Order One



Contract GHN-I-00-09-00012-00

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United States Agency for International Development

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### November 2012

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## **Acknowledgement**

The technical content and structure of this guide are based on previously published material. We are indebted to the works of the World Health Organization, John Snow Incorporated, Malaria Control Partnership, the U.S. President's Malaria Initiative, and others, including RTI's *IRS Training Manual* (December 2009), RTI Kenya IRS training materials, and the Zambia IRS communications guide.

## Preface

The U.S. Agency for International Development (USAID) and the U.S. Centers for Disease Control and Prevention (CDC), under the President's Malaria Initiative (PMI), have offered technical and financial support to a number of African countries to undertake malaria prevention and control using all effective interventions, including indoor residual spraying (IRS).

“In June 2005, President George W. Bush launched PMI, pledging to increase U.S. malaria funding by more than \$1.2 billion over five years, with the objective of reducing deaths due to malaria by 50 percent in 15 African countries. This goal will be achieved by reaching 85 percent of people in the most vulnerable groups—children under 5 years of age and pregnant women—with proven and effective prevention and treatment measures.”<sup>1</sup>

Since 2006, RTI has been the lead implementer of USAID's IRS program, which has protected more than 128 million people in 15 African countries from malaria-carrying mosquitoes. “IRS with WHO-approved chemicals (including DDT) remains one of the main interventions for reducing and interrupting malaria transmission by vector control in selected epidemiological settings. In 2008, 44 countries, including 19 in the African Region, reported implementing IRS.”<sup>2</sup> IRS is one of four key interventions for malaria control supported by PMI. In many of the 15 PMI focus countries, IRS is a very significant part of the national program. In most cases, overall operations are being implemented through cooperation between PMI and the host government. At the national level, the NMCP is the lead partner agency responsible for policy and programs targeted at malaria control and prevention. IRS is implemented within the framework of existing national policy and priorities, which include the use of treated nets, early diagnosis, treatment, and special attention to pregnant women and children affected by malaria. The NMCP, in consultation with key stakeholders, also determines the target sites for spraying, determines the insecticide class to be used, and sets the IRS operational objectives to be realized.

Malaria control on the African continent has been hampered by a number of factors, including lack of financial resources, emergence of drug resistance to inexpensive drugs, weak health systems, poor infrastructure, and a critical lack of skilled human resources, particularly in the area of vector control at the operational level. As a result, many IRS programs in the region have been implemented without sufficient numbers of well-trained staff with the right skills, diminishing the potential effectiveness of IRS. To help address this gap, capacity building in general malariology, vector control program management, and especially in practical field entomology is a prerequisite for effective IRS implementation.

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<sup>1</sup> <http://www.pmi.gov/about/index.html>

<sup>2</sup> 2009 World Malaria Report, [http://www.who.int/malaria/world\\_malaria\\_report\\_2009/en/index.html](http://www.who.int/malaria/world_malaria_report_2009/en/index.html)

## Acronyms

CDC	Centers for Disease Control and Prevention
DDT	dichloro-diphenyl-trichloroethane
DQA	data quality assurance
FIFO	“first-in-first-out”
IEC	information, education, and communication
IRS	indoor residual spraying
IVM	integrated vector management
MACEPA	Malaria Control Partnership
MOH	Ministry of Health
MSDS	material safety data sheet
NMCP	National Malaria Control Program
PMI	President's Malaria Initiative
PPE	personal protective equipment
QA	quality assurance
TOT	training of trainers
USAID	U.S. Agency for International Development
VIPP	visualization in participatory programs
WHO	World Health Organization
WHOPES	World Health Organization Pesticide Evaluation Scheme

# Introduction

The purpose of this Trainers Guide is to provide a tool for public health officers to utilize in learning essential, hands-on skills and practical knowledge needed to deliver an effective indoor residual spraying (IRS) training. Through this guide, IRS program staff at national and sub-national levels will be prepared to plan, implement, and evaluate IRS training at the sub-district level.

The training guide is designed primarily to assist trainers who are responsible for developing skilled human capabilities for conducting effective IRS operations. It should be valuable for more experienced trainers because it adopts pedagogical approaches to adult learning.

Training using these modules uses a practical problem-solving approach. The training should include only minimal theory and classroom-based learning. IRS requires meticulous logistics planning and management, technical knowledge of community mobilization and methods to enhance community acceptance, technical knowledge of how to safely apply insecticide to walls, and data management and reporting skills. The trainers will need to determine very quickly which of the participants are likely to have difficulties in the training; trainers then should be prepared to work with these individuals during practical sessions and to prepare a follow-up plan for these participants.

It is helpful to have at least three to four master trainers who are experienced in one or more elements of the following IRS operations: logistics planning and environmental safety, IRS data management, insecticide application, and community mobilization. It is also imperative that all trainers review available resources to ensure that the information is up to date and appropriate to the country's context.

## **This training guide has seven modules:**

- Module 1: Teaching and Learning Techniques
- Module 2: Introduction to Malaria Control and Basic IRS Principles
- Module 3: IRS Logistics Planning and Management
- Module 4: Environmental Safety and Compliance
- Module 5: Advocacy, Communication, and Social Mobilization
- Module 6: Insecticide Application Techniques
- Module 7: IRS Data Management and Quality Control

# I Module I: Teaching and Learning Techniques

## I.1 Training administration

The training of trainers (TOT) will be administered by master trainers who are public health practitioners (environmental health professionals, entomologists, health communication practitioners, etc.) and who have experience with IRS technical skills and soft skills training. The TOT trainees will be district-level staff selected in consultation with district health teams and relevant stakeholders.

## I.2 What is the ideal educational and professional experience level for TOT trainees?

TOT trainees should be health workers with tertiary level education and basic experience handling community-level health activities.

Apart from the educational profile, it is important that the trainees:

- Have had experience in implementing the malaria control program, or aspects of it, within communities;
- Are capable of being part of a team, coordinating and conducting sub-district level trainings;
- Will be available to offer support, supervision, and follow-up during spray activities;
- Are able to formulate a training plan, which they must then be able to implement, monitor, and evaluate; and
- Are able to report on training activities.



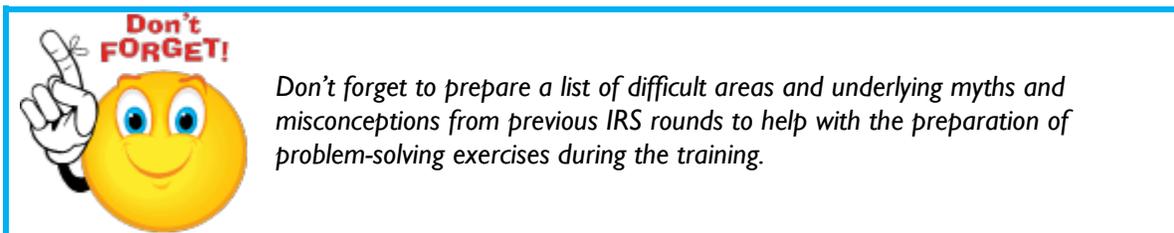
*IRS supervisors and team leaders who excelled in a previous IRS round can be promoted to TOT facilitators.*

## I.3 How will the training be designed?

The key objectives of the training modules are listed at the beginning of each module in the guide and also in the *Standard IRS Curriculum*. An important part of a TOT session is to help the TOT participants develop their own training plan for that session. Trainees should be taught the salient features of planning training sessions and should review the process, step-by-step, learning how to conduct their own sub-district level trainings as a way of reinforcing practical learning. It is very important that all learning objectives are obtained, because the mastering of each module is necessary for participants to develop the competencies necessary to implement any aspect of IRS operations.

#### 1.4 Who plans and coordinates the TOT course?

The facilitators of this course must have in-depth knowledge of IRS, and each training should also have a designated lead facilitator or a training consultant. This guide will help in organizing all the training materials. Designated trainers, who will act as the lead coordinators, should be agreed upon in consultation with the National Malaria Control Program (NMCP). The lead trainer will be responsible for the overall management of the training program, designing the training work plan, and producing a detailed training report to be shared with the IRS technical team. Other facilitators' roles and responsibilities include maintaining a training plan, detailing course schedules, coordinating trainers and guest speakers, making changes and updates to the training documents, and maintaining accurate records of participants in the training courses. Facilitators should provide administrative support for modules. This support includes preparing course files, preparing practical training areas, and generating materials as required. The country IRS management team should ensure that the sub-district training outputs have been agreed upon at the end of the TOT sessions.



#### 1.5 Why provide learners with handbooks/handouts and job aids?

**Providing learners with a set of notes ensures that:**<sup>3</sup>

- All learners have the same basic materials, which will guide them through the training and instruct them on how to proceed, thus avoiding unnecessary, time-consuming, and distracting note-taking.
- Facilitators may refer to any part of the learners' handouts, knowing all learners have quick access to the materials referenced.
- There is a reduced chance of learners making errors while taking notes
- Learners can read the handouts in advance of the training sessions, allowing time for clarification, discussions, and formulating ideas and minimizing note-taking during sessions.
- After the training session, TOT participants are able to keep a copy of the trainers guide to use as a reference for lower level trainings.

<sup>3</sup> This list was adapted from WHO/CDS/CPE/SMT. (2000). *The Epidemiological Approach to Malaria Control, Tutor's Guide*. Revision I, pages 6-7.

## **1.6 How will the modules be taught?**

Teaching methods emphasize student participation rather than teacher-focused activities. There should be minimal theory/classroom-based instruction during IRS TOT training. Practical demonstration sessions, discussions, group exercises, and the sharing of experiences from previous rounds of IRS operations should be used to stimulate learning and practical skills. Instruction should cover the following:

- Practical sessions and field work on IRS operation techniques;
- Data entry, management, and reporting sessions;
- Environmental safety procedures and exercises;
- IRS advocacy, communication, and social mobilization; and
- A one-day exercise with peers on how sub-district level trainings will be conducted.

## **1.7 Course duration**

The course should last a minimum of 6 to 10 days with the last two days being reserved for sub-district trainings, micro-planning, and mock training exercises to ensure TOT trainees will have the skills to deliver quality cascaded trainings. The ideal ratio of trainers to participants should be between 1:8 and 1:10. This close ratio is especially critical to ensure close learner-facilitator interaction during practical sessions.



*Trainees conducting IRS operations for the first time may require more days (10 or more), depending on the additional needs identified for trainees to master skills required in IRS operations, whereas participants who have previously conducted IRS TOT sessions may require only 6 days of refresher trainings.*

## **1.8 How will you know the course was successful?**

Assessing the learning process is essential, both for the trainer and for the participant, to be able to evaluate whether the learner gained knowledge and competence in the subject matter. A pre-test administered before any coursework and a post-test given at the end of the training will help evaluate how much trainees learn. Pre- and post-tests by themselves present only a partial picture of learning progress. Evaluation also involves assessing the following:

- How well did trainees master skills covered? Further evaluation should be done during practical and mock training exercises to ascertain how well the trainees have mastered the practical skills needed to organize their own sub-district trainings.
- How did the learners view the training sessions? The objective of assessing this aspect of the training is to give facilitators information to improve on session planning and to address inadequate content and deficiencies in their own capacity as a trainer. Daily evaluation is necessary to provide feedback on general administration, on planning and coordination, and on how each facilitator conducted his or her sessions. This

assessment is done using a daily evaluation with a simple questionnaire completed by all participants at the end of the day.

- How did participants view the administration and coordination of trainings? This assessment will help the program to improve administrative planning and the coordination of trainings.

### **I.9 What training facilities and equipment are required for IRS training?**

Training materials should be prepared prior to beginning the course. Consumables, teaching aids, and printouts required during the training are listed below. The quantities indicated are based on a class size of 25 to 30 participants. The facilitators should not be limited by this list.

For lecture sessions	For exercise sessions
<ul style="list-style-type: none"> <li>• Ballpoint pen (30)</li> <li>• Pencil with eraser (30)</li> <li>• Pencil sharpener</li> <li>• Assorted marker pens (30)</li> <li>• Blank flipchart (three flipcharts with 20 sheets each)</li> </ul>	<ul style="list-style-type: none"> <li>• Compression sprayer (30)</li> <li>• Box of chalk (1)</li> <li>• Bucket, 10 liter (30)</li> <li>• Measuring cylinder (30)</li> <li>• Set of personal protective equipment (PPE) (30)</li> <li>• One-meter ruler (1)</li> <li>• Nylon string (100 meters)</li> <li>• Nails, six-inch (1 kg)</li> </ul>
For participants	For trainers
<ul style="list-style-type: none"> <li>• Handouts (30 copies of each) and training guides to be given at the end of the training</li> <li>• Note pad (30)</li> <li>• Course schedule (30)</li> <li>• Pre-test questionnaire (30)</li> <li>• Post-test questionnaire (30)</li> <li>• Simple calculators</li> </ul>	<ul style="list-style-type: none"> <li>• Training guides for all facilitators</li> <li>• Trainee handbooks</li> <li>• Projector</li> <li>• Laptop</li> <li>• Printer/copier</li> <li>• Printing paper (one ream)</li> <li>• Large training room</li> <li>• Outside blank wall 2½ to 3 meters high and 20 meters long</li> </ul>

### **I.10 Time management of TOT**

The facilitators need to review each of the modules and confirm the time required, based on the participants' experience level. This review also will help facilitators to decide what kinds of activities will be suitable for each topic. For example, Module 6, Insecticide Application Techniques is a practical unit that involves field work; therefore, this unit requires a demonstration of the correct IRS application procedures. Conversely, module three on Advocacy, Communication, and Social Mobilization requires group exercises and real-time scenarios on how to conduct effective household mobilization, as well as instruction in practical skills for filling out information on the IRS structure card.

The learning modules greatly facilitate planning for activities, and the sequence of the modules is very important. Because more than one facilitator is involved, the timetable should not be developed around the availability of the trainer. Instead, the trainers should avail themselves at the time allocated to them. Time will always be a constraint in this training, especially in order to allow trainees to master all of the skills required for effective IRS operations.

*A lot of time can be wasted in group work or during practical sessions; thus, facilitators and trainees need to adhere strictly to allotted times. Group work and all activities should be well organized, with clear written instructions explaining what the exercise entails.*

## **Various training techniques may be employed for teaching the content of the modules:**

### **Group Discussions**



Group discussions involve the exchange of information between participants and the facilitator. Key points for reinforcing effective learning are noted (take-home points). As people share their knowledge and experience, they are encouraged to think about the topics in new and more complex ways. This technique can be useful in discussing social mobilization and awareness creation for IRS acceptability in the community.

### **Field Work**

Field work involves understanding the practical skills necessary for performing correct insecticide application and learning how to adhere to environmental compliance.

Different sub-district trainings should be conducted focusing on the duties of community mobilizers, spray operators, data clerks, and health workers training on exposure treatment.



### **Demonstrations and Examples**

Demonstrations and examples are used to reinforce skills transfer and the learning process. For all practical areas covered in these modules, the trainees should be given ample time to practice any new skills they have learned through demonstrations. To prompt discussion on potential problem areas and solutions, trainers who have experience in practical IRS application should give examples of issues they may have faced.

### **Facilitating Adult Learning**

Facilitation is a conscious, deliberately planned effort to make the learning process easy, pleasant, and effective. Facilitating learning in adults requires a good understanding of facilitation preparation, the development of training objectives, the design of training content, appropriate learning methods, and adult learning principles.<sup>4</sup>

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<sup>4</sup> JSI Research and Training Institute, Inc. (September 2004). *Module 0: Facilitating Adult Learning* (page 1). [http://www.immunizationbasics.jsi.com/Docs/ESHE\\_Module0.pdf](http://www.immunizationbasics.jsi.com/Docs/ESHE_Module0.pdf)

Adult learners must feel comfortable and feel a part of a larger group or cause. A distinctive part of adult learning is that adult learners must be treated as adults, and as peers of the facilitator. Their ideas and contributions must be respected and cooperated with, rather than ignored or denied. Although adults enter into learning for a variety of reasons, the main motivation is to change—to change their skills, behavior, knowledge level, or attitude. The learning process must focus on how to make adult learning rewarding by focusing on the aspects that matter to the participants (i.e., their motivation, the relevance of the subject matter to their lives, and their personal experiences) while maintaining a high level of engagement and showing trainees that the skills being acquired are applicable in their future life.

### **1.11 The timetable**

The timetable should be organized in a logical sequence, starting with introductory issues on malaria control, and then continue to more complex areas such as IRS insecticide application techniques, data management, and quality control. Once time has been allocated for each module/topic and all the various learning activities are considered, the timetable is developed. Sometimes the timeframe for the training is limited by resources allocated. The lead trainer and NMCP/district malaria point person should agree on how to reorganize the timetable to fit available time. It is important to allocate adequate time for all of the practical application exercises and mock training plans for the sub-district roll-out trainings. The timetable should indicate when TOT participants will present their mock training schedules for the sub-district trainings. These should be part of the practical exercise they prepare with their district group toward the end of TOT training schedule.

### **1.12 Accommodation**

The TOT requires a residential training center that is equipped with rooms and materials for facilitated workshops and offers a good environment for training workshops.



### **1.13 Course introduction**

**First session:** If possible, arrange chairs in a semicircle for the first meeting with participants.

**Introduce yourself:** Tell the participants a little about yourself. Ask the facilitators to introduce themselves.

**Participants' introduction:** Introductions are a good opportunity for an icebreaker. Participants can pair off, interview each other, and introduce their partners to the larger group.

The participants should have each been given a copy of the timetable. Allow 10 minutes or so for them to review the introduction. Briefly, but carefully, review with them the goal of the training, the training objectives, and the training topics. Be sure to stress the practical skills that

must be mastered. Explain that during each module, participants should keep in mind that module's objective and should ask question if any topics are unclear.

Encourage the learners to outline their expectations for each module and what aspect of the modules they may be worried/concerned about. Explain that the facilitators will be available to welcome any feedback throughout the training period.

Talk to trainees about preparing their individual sub-district training plans and how these training plans will help participants in acquiring the skills needed before spray activities can launch.

The preparation of sub-district training plans is important to ensure that TOT trainees have mastered how they will conduct the trainings they conduct at the sub-district level. The end product should be a well-coordinated training plan. Creating these plans will also help the TOT trainees to develop confidence for the further trainings they may be expected to conduct.

After completing all of the tasks above, trainees should review the timetable, discuss identified needs, and arrive at a consensus for time utilization.

#### **1.14 Official opening**

The official opening ceremony will be organized by the government to give high-profile visibility to IRS and increase the acceptability of the campaign to the community. The NMCP, through the National Ministry of Health (MOH), will invite the chief guests. During the official opening, participants will be encouraged to keep in mind that the information they learn in the TOT will have an important impact on the quality of the IRS operations. Diligence and professionalism on the part of trainers, supervisors, and spray operators will ensure the success of IRS programs. The NMCP may reiterate the government's commitment to controlling malaria, outline the policy and strategic frameworks for malaria, and acknowledge and thank all who have made resources available for IRS operations.

## 2 Module 2: Introduction to Malaria Control and Basic IRS Principles

### 2.1 Basic principles of malaria control and indoor residual spraying

The purpose of this session is to introduce participants to the National Malaria Control Strategic Plan and National Malaria Policy (if such a policy exists). The session will also cover IRS principles in the context of integrated vector control management and the insecticides used in IRS.

#### Course syllabus

Session/Objectives	Contents	Learning Method Activities	Materials/Resources	Time
<p>The learning objectives of this unit are for the participants to be able to do the following:</p> <ul style="list-style-type: none"> <li>• Demonstrate understanding of malaria epidemiology and IRS target areas</li> <li>• Understand the current National Malaria Control Strategies</li> <li>• Understand basic concepts in malariology</li> <li>• Describe IRS principles and how they fit into national vector control efforts</li> <li>• Identify the classes of insecticides recommended by the World Health Organization Pesticide Evaluation Scheme (WHOPES)</li> </ul>	<ul style="list-style-type: none"> <li>• General malariology</li> <li>• Malaria epidemiological categorization in the target country</li> <li>• Malaria transmission, signs, and symptoms</li> <li>• National malaria strategic plans</li> <li>• Principles of IRS and its links to integrated vector management (IVM)</li> </ul>	<ul style="list-style-type: none"> <li>• Short notes and lecture</li> <li>• Small group discussion</li> <li>• Full group discussions</li> </ul>	<ul style="list-style-type: none"> <li>• Markers</li> <li>• Flip chart</li> <li>• Short notes</li> <li>• Learner's handbooks</li> <li>• VIPP cards</li> <li>• Relevant reference materials from NMCP</li> </ul>	Two hours

### 2.2 What facilitators need to prepare

Facilitators need to prepare relevant participant handouts, facilitator slides, and a sample sachet of insecticide.

**Methodology:** This session will require short lecture notes. The topics covered are informed by notes from NMCP. Preferably, a focal person from NMCP should present this section. Additional resource materials and handouts that can be obtained from NMCP include the latest copy of the National Malaria Control Strategy, IRS or IVM guidelines, and other materials.

**Start by reviewing the learning objectives as highlighted above**

**Provide** an update on the National Malaria Control Strategy, with copies of the strategy to be provided to the participants at the end of the session (if such a document exists).

**Explain** basic concepts on malariology (malaria epidemiology) and ask participants to do additional reading from the handouts.

**Explain** the broader view and definitions for IVM to help put IRS in context with other approaches that are used in malaria control and prevention, as highlighted in the national prevention and control framework. Explain IRS concepts, purpose, and objectives.

**Provide** a list and discuss categories of WHOPES-approved insecticides for IRS.

**Direct** participants to do further reading on National Malaria Control Strategy documents and student handouts, highlighting relevant pages and sections.

### 3 Module 3: Logistics Planning and Management

The purpose of this unit is to help IRS managers and logistics staff to appreciate the importance of timely procurement and distribution of IRS commodities during a spray round. It covers target area mapping, logistics needs assessment and resources estimation, management of property and inventory, storage, requisition, and transportation and maintenance of IRS equipment and supplies. Additionally, this unit is meant to prepare personnel to understand and appreciate the role that each of them plays in handling IRS property. Effective logistics lead to efficiency in work processes, improved productivity, and reduced waste. This unit requires demonstrations and field practice sessions. Facilitators should have command and expertise in this subject.

#### Course syllabus

Session/Objectives	Contents	Learning Method Activities	Materials/Resources	Time
<p>The learning objectives of this unit are for the participants to be able to:</p> <ul style="list-style-type: none"> <li>Describe IRS target area mapping, logistics needs assessment, and factors involved in IRS cycle management</li> <li>Discuss the structure surface areas to be sprayed and population to be protected</li> <li>Understand the importance of the supply chain and storage management in IRS</li> <li>Discuss IRS fleet/vehicles management standards</li> <li>Understand the property management role of all IRS staff</li> </ul>	<ul style="list-style-type: none"> <li>Logistics management</li> <li>Geographical reconnaissance</li> <li>Logistics assessment and inputs into the spray cycle</li> <li>Minimum procurement and stores standards</li> <li>Introduction to supply chain management</li> <li>Property management and inventory control</li> <li>Vehicle usage standards</li> <li>IRS equipment storage and stock control</li> <li>Identification of spray pump parts and definitions</li> <li>Vehicle handing principles and standards</li> </ul>	<ul style="list-style-type: none"> <li>Short notes and lecture</li> <li>Small group discussions</li> <li>Demonstrations</li> <li>Practical simulation exercises</li> </ul>	<ul style="list-style-type: none"> <li>Markers</li> <li>Flip chart</li> <li>Short notes</li> <li>Logistics reporting tools and checklists or templates</li> </ul>	Eight hours

**Target Group:** Logistics officers, field managers (coordinators), storekeepers, and drivers

#### 3.1 Topic 3.1: Geographical reconnaissance

This topic will introduce the participants to geographical reconnaissance, which is used to investigate the ground situation in the IRS target areas (e.g., average household size, construction types, distance between homes, road access). The details of the findings from geographical reconnaissance will enable the quantification of structures to be sprayed and inform the team on the amount of material resources required during the IRS cycle.

### 3.1.1 Learning preparations

This training requires the following equipment and materials: flip charts and stand, markers, masking tape, sample photos of different IRS sprayable structures and surfaces, and a computer with projector. Additionally, practical exercises should be prepared for calculating structure sizes.

### 3.1.2 Facilitator notes

#### Start by reviewing the learning objectives

By the end of this session, the participants will be able to do the following:

- Describe the steps and activities involved in conducting geographical reconnaissance,
- Describe the use of maps and demographic statistics for IRS planning,
- Identify which structures and surfaces should and should not be sprayed, and
- Demonstrate how to measure sprayable structures and estimate the total sprayable surface in a target area.

#### Step 1

**Explain** how IRS target sites are determined based on the National Malaria Control Strategy and country objectives for IRS campaigns (e.g., epidemic prevention or mitigation, or to reduce prevalence rates to certain levels).



**Define** what geographical reconnaissance entails, the steps involved in conducting the exercise, and the team that should be involved. The facilitator should list all of the stakeholders' meetings to be conducted prior to community entry. These meetings are important in order to gain priority information that should be used during the operation.

**Demonstrate** (using photos) typical house structures by type. Provide participants with information about each house type and how to take measurements for each type of house structure.

#### Step 2

##### **Practical session**

Using measurements from structures with different types of walls and roofs, and for structures with varying numbers of rooms, ask participants (in small groups) to calculate spray areas. When presenting their findings to the whole group, the small groups should specify which surfaces should be sprayed and which should not be sprayed.

## 3.2 Topic 3.2: Logistics assessment and inputs into the spray cycle

This topic will introduce the participants to sample logistics assessment requirements.

### **3.2.1 Learning preparation**

To undertake this session, the facilitator needs to have prepared a spreadsheet template, with each sheet detailing activities common to many IRS campaigns. The activities will serve, at a minimum, as a checklist of the elements that need to be taken into consideration when developing a budget for the campaign. These elements include the following:

- Quantification for spray surface;
- Quantification of IRS target population;
- Quantification of pesticides (this item may be skipped in this session, since this is a management function);
- Quantification of equipment and materials (PPE, spray equipment, storage requirements, transport needs projection, other critical environmental safety and compliance requirements [e.g., wash areas, soak pits, and plans for health center requirements]); and
- Quantification of human resource requirements. (A further outlined explanation for these will include IRS organizational structures, roles and responsibilities, leadership, and employee ethics.)

At this point in the training, the trainer should show trainees the diagrammatic flow of the IRS timeline and ideal timing for each activity.

## **3.3 Topic 3.3: Minimum procurement and stores standards**

This session will cover minimum standards to be observed during local procurements and minimum storage standards. The topic is meant to sensitize the IRS operation staff to levels of transparency and minimum requirements for procurement.

### **3.3.1 Learning preparations**

For demonstration and discussion with participants, facilitators should obtain an updated checklist of the minimum standards for stores.

### **3.3.2 Facilitator notes**

Introduce the team to IRS procurement standards. Use PowerPoint slides to disseminate these principles and standards.

**Provide guidelines and procedures** for the procurement threshold and transactions.

**Provide practical exercises** for best practices in store management (such as the sample checklist from the *Environmental Best Management Practices Manual*). These best practices ensure the following:

- Modern stores systems (e.g., “first-in-first-out” [FIFO] and “first-expired-first-out”) are used.
- Stock cards are used, and all inventory is properly documented.

- Every stock requisition is properly signed for, and issuance is recorded.
- Stores meet certain standards, such as the use of pallets to store items.
- Store sections are well marked.
- General cleanliness is maintained in IRS stores.
- Minimum safety standards, as required by IRS environmental compliance, are kept.

### **3.4 Topic 3.4: Property management and inventory control**

This topic will introduce the participants to perspectives on property management and inventory control.

#### **3.4.1 Learning preparations**

This session requires the following equipment and materials: flip charts and stands, markers, masking tape, a computer with presentation software and projector, sample inventory forms, property tags, different property samples, spray pumps, PPE, sachets, and a table.

#### **3.4.2 Facilitator notes**

**Group work:** Explain the importance of proper handling of property and inventory taking, providing an example for each topic. Break the participants into small groups and assign the groups different items to handle, coming up with suggestions for how to best account for each item.

**Brainstorm** about what measures should be taken in the field to enhance accountability for the management and use of IRS equipment and supplies.

### **3.5 Topic 3.5: Item identification, parts, and definitions**

This topic is meant to introduce the team to the uses and applications of IRS equipment. The aim of the topic is to enhance proper handling and maintenance of the IRS equipment the team will be using for spraying.

#### **3.5.1 Facilitator notes**

##### **Start by reviewing the learning objective**

**Introduce** the topic with clear guidelines for why it is important to know how to appropriately use and handle IRS equipment.

**Explain** the different types of IRS equipment and property. Sample equipment and items should be properly labeled and presented before the session begins. Explain who uses the items and how.

**Provide** a brief description of maintenance procedures.

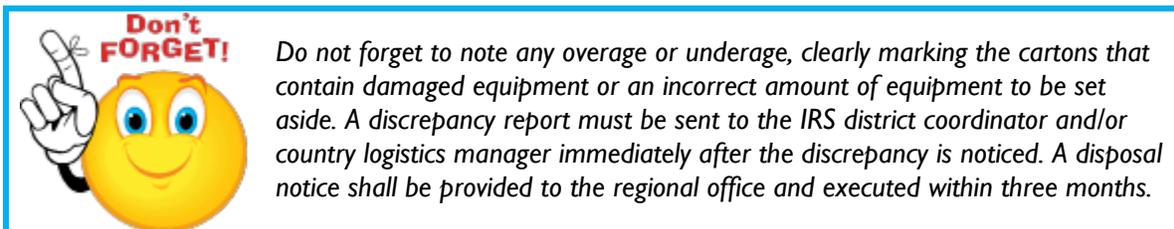
**Group work.** Divide the participants into small groups and provide practical exercises for each group, using a set of equipment. Groups should discuss the importance of the proper handling and use of equipment, as well as inventory taking, using real life examples. The teams should also come up with some suggestions for how best to account for the items their group has.

**Explain** that all commodities received should be compared against what is identified on the purchase order, invoice, packing slip, and waybill. The country field office property control officer or logistician should verify item descriptions, manufacturer names, manufacturer model numbers, and serial numbers on all equipment, to ensure that they are an exact match against the commercial invoice, packing list, and/or purchase order.

The teams should know what procedures to follow if they receive a faulty item. Reinforce that action must be taken before moving the item to the field. Any damage recorded after the item is moved to the field will be charged to the custodian of the equipment, especially if it can be established to be a result of his or her negligence.

**Describe** the major cases that require immediate reporting to the team leaders and to the logistics managers, such as shortages (quantity received is less than stated in the purchase order) and overages (quantity received is more than stated in the purchase order). These cases must be noted on the goods receipt note and reported (for store persons). Each person receiving IRS supplies must ensure that correct quantities are signed for.

**Conclude** by summarizing again the importance of proper handling and use of IRS materials and equipment, and let the teams know that it is illegal for anyone to willingly tamper with equipment or steal supplies.



### **3.6 Topic 3.6: Vehicle handling standards and procedures**

This topic is designed to disseminate the IRS hired vehicles management procedure and standards. The following procedures are considered minimum standards. Different country offices should adapt procedures to suit their local laws, needs, and conditions.

#### **3.6.1 Learning preparations**

To undertake this training, facilitators should be familiar with local regulations and laws regarding vehicle use and hire.

### **3.6.2 Facilitator notes**

#### **Start by reviewing the learning objectives**

**Introduce** the topic and share the procedures and guidelines concerning vehicle management and use.

**Show** the IRS vehicle branding stickers to the teams. These stickers will identify the vehicles used in the operation. Explain how and where the stickers ought to be placed. If possible, show photos of the branded vehicles in the PowerPoint slide.

**Explain** the basic principles that govern IRS vehicle rentals at local levels.

**Provide** a checklist of a basic vehicle equipment kit that should be available in all vehicles during IRS operations.

**Explain** and provide guidelines for the handling of general accidents. Inform participants of reporting channels to use in the event of an accident.

**Display** the accident report form that the driver (or the logistics officer/office manager if the driver is unable) must complete for all accidents, minor or major. A copy of this form should be sent to the logistics officer for filing in the respective vehicle file.

**Provide** and disseminate procedures and guidelines to be followed in the unlikely event of vehicle theft.

## 4 Module 4: Environmental Safety and Compliance

The purpose of this unit is to prepare spray personnel to comply with environmental safety regulations and standards for IRS activities. The safety and health of everyone involved during IRS is of the utmost importance. Safety, health, and environment concerns begin in the planning stages, when an environmental assessment is carried out alongside the logistics needs assessment/mapping. Facilitators should have command of and expertise in this subject.

### Course syllabus

Session/Objectives	Contents	Learning Method Activities	Materials/Resources	Time
<p>The learning objectives of this unit are for the participants to be able to:</p> <ul style="list-style-type: none"> <li>Identify the main actors susceptible to environmental concerns and inherent risk from insecticide exposure</li> <li>Understand safety and compliance with environmental regulations and laws in IRS</li> <li>Demonstrate knowledge of, and skills in, safe insecticide transportation, handling, and storage</li> <li>Demonstrate knowledge of, and skills in, safe use of insecticides to protect the safety of workers and communities</li> <li>Demonstrate knowledge and skills in waste management and safe disposal</li> <li>Demonstrate understanding of first aid requirements during IRS operations</li> </ul>	<ul style="list-style-type: none"> <li><i>Topic 1:</i> Environmental regulations and laws</li> <li><i>Topic 2:</i> Pesticide transportation</li> <li><i>Topic 3:</i> Pesticide storage, stock control, and inventory</li> <li><i>Topic 4:</i> Effluent and solid waste management and disposal</li> <li><i>Topic 5:</i> Exposure management and spill response</li> <li><i>Topic 6:</i> Health worker and residents' safety</li> </ul>	<ul style="list-style-type: none"> <li>Short notes with photos/graphic illustrations</li> <li>Small group discussions</li> <li>Demonstrations</li> <li>Practical exercises</li> </ul>	<ul style="list-style-type: none"> <li>Markers</li> <li>Flip chart</li> <li>Short notes</li> <li>Sample PPE and apparel</li> <li>Copies of best practices checklist</li> </ul>	12 hours

**Target Group:** logistics officers, storekeepers, spray operators, and drivers

## 4.1 Topic 4.1: Environmental regulations and laws

### Start by reviewing the learning objectives

By the end of this session, the participants will be able to do the following:

**Explain** laws and regulations related to pesticide management and be familiar with institutions in charge of environmental authority and policy;

**Explain** country and registration status of insecticides and the rules and regulations for use of pesticides;

**Describe** procedures for complying with national and international regulations for insecticide handling;

**Brainstorm** on what measures should be taken in the field against unintended use of the insecticides; and

**Prepare** exercises or case studies to show best practices for **preventing unintended use of insecticides** (e.g., educating households in asking spray teams to mix insecticides in front of heads of households and community monitors and in reporting injudicious use or sale of insecticides). (Participants can work in small groups to identify measures that they will take in their districts against unintended use of insecticides.)

## 4.2 Topic 4.2: Pesticide transportation

This topic will help participants to understand aspects and risk management of transporting pesticides. Typically, vehicles move pesticides from the port of entry to a central storage facility. The pesticides are then moved to district stores and on to operational site facilities.

### 4.2.1 What facilitators need to prepare

Begin the presentation by reviewing session objectives:

- Demonstrate skills and knowledge in pesticide transportation, receiving, and dispatching;
- Describe procedures for safe transportation, as well as the risks surrounding insecticide transport;
- Explain measures that should be taken during insecticide loading and measures to avoid accidental release during transportation; and
- Explain the risks associated with transportation of insecticides.

**Explain** transport route planning and the importance of providing the driver with a full list of inventory being transported, as well as the material safety data sheet (MSDS). Provide a sample of an MSDS.

**Provide** minimum requirements (size, safety) for vehicles to be used during insecticide transportation and show illustrations.

**Describe** training requirements for drivers, including how to respond in case of an accident and vehicle decontamination.

**Describe** an accident scene. Show a schematic of an accident scene and then get ideas from participants on what should be done. The facilitator should focus discussion on what steps should be taken in the event of a spill. (Summarize points as outlined in participants' handouts.)

**Describe** the requirements for transport of spray operators during spray operations (vehicle type, technical control documents, driver's license, vehicle license for transport of people, etc.).

### 4.3 Topic 4.3: Pesticide storage, stock control, and inventory

By the end of the session, participants will be able to do the following:

- Identify sound pesticide storage practices (pesticide storage, stock control forms, spill kits, and stock cards);
- Describe the risks involved in pesticide storage; and
- Identify rules and issues to look for when monitoring pesticide storage and store management.



**Timeframe: 45 minutes (10 minutes for presentation and 35 minutes for practical district stores exercises)**

#### Step 1:

**Quick practical exercise:** The pesticide storage PowerPoint should include two slides illustrating a well-managed store and a poorly managed store.



Ask participants to identify what is done right and what is wrong in the illustrated examples of storage facilities? During the large group discussion, the trainer should fill in what participants have left out.

**Discuss** what requirements must be put in place in the storage areas and what environmental inspectors will check for in the storage facility. Take the participants through the compliance checklist for the stores (see the *Best Practice Manual*, pages 81-85).

**Introduce** the inventory forms and stock cards, and illustrate how they should be used. Arrange for practical exercises in a nearby store or within the training center to demonstrate the principles of stores management.

#### 4.4 Topic 4.4: Effluent and solid wastes management and disposal

By the end of the session, participants will be able to do the following:

- Understand and discuss waste management infrastructure (soak pits, evaporation tanks for DDT, washing areas, etc.);
- Describe processes for IRS effluent waste management;
- Identify risks associated with IRS insecticide waste for the environment and for human health; and
- Identify appropriate and sound disposal methods and clean-up procedures for pesticide solid waste in IRS.



**Timeframe: 25 minutes**

**Explain** the importance of effluent and solid waste management.

**Provide definitions** for effluent and solid wastes in IRS, as well as systems for dealing with this waste: progressive rinsing steps, soak pits, evaporation tanks, and wash areas. Show schematics and photos of these systems.

**Explain** site consideration for locating all IRS cleaning and waste facilities (progressive rinse, soak pits, evaporation tanks, and wash areas).

**Take** participants through the effluent and solid waste disposal checklist (refer to the *Best Practice Manual*, Checklist 3).

**Discuss** (in small groups) challenges that may arise from waste disposal, as well as mitigation actions to be taken. The facilitator will add and reinforce key points.

#### 4.5 Topic 4.5: Spill response

By the end of the session, participants will be able to do the following:

- Identify causes of spills;
- Understand measures to be taken in the event of natural disasters or accidents;
- Explain the principles of implementing the three “Cs”: Control, Contain, and Clean; and
- Provide information on how to decontaminate spills or leaks during transportation.

**Provide** information on and demonstrate decontamination procedures to be used when insecticide is exposed to any part of the body.

**Provide** a list of first aid kit items and other anti-exposure drugs, as well as instructions on how to access and use the kit.

**Discuss** what should be done in cases where residents (households) are exposed.

**Explore** options, steps, and measures to be taken in major emergencies.



Ask the participants to identify and share possible major emergencies they have experienced during IRS operations in the past, and explain how these were dealt with. Participants should participate in the **problem-solving approach exercise**, describing an emergency preparedness plan for major emergencies.

**Outline** procedures that are required for reporting adverse events and timelines for report submission.

#### **4.6 Topic 4.6: Health workers' and residents' safety**

By the end of the session, participants will be able to do the following:

- Describe safety procedures for health workers during spray operations,
- Explain safety procedures for household protection, and
- List additional safety materials required for residents' safety during structure spraying.

##### **Step 1:**

**Provide** an illustrative description of all PPE required during spray activities.

**Explain** safety procedures and compliance requirements for female operators.

**Explain** necessary precautions households should take before, during, and after spray applications.

**Provide illustrative graphic photos** of good practices versus poor practices before, during, and after spray applications.



Ask participants to discuss, in small groups, what is to be done in the case of a sick person in a house during spray activities. Small group discussion should take, at most, 5 minutes; the facilitator should then review the procedure to be taken and emphasize the most important points.

##### **Step 2: Practical simulation game**

**Divide participants into two groups** and let each group discuss, and write on flip charts, all of the safety procedures for health workers' and residents' safety. (*Strictly time the exercise.*) After the group presentations, the group with the most correct procedures will receive an award. (*Facilitators decide on the award during session planning.*)

**List extra materials** to be carried by spray operators for safety measures (e.g., drop cloths for covering furniture, plastic sleeves for spray cards, a funnel with a strainer, and personnel ID cards).

**Demonstrate and reemphasize general safety procedures for spray operators**

## 5 Module 5: Advocacy, Communication, and Social Mobilization

The purpose of this unit is to ensure that participants are informed of the importance and benefits of IRS and acquire the appropriate skills and knowledge to persuade target households to accept IRS activities. They should also be informed of the necessary preparations required before, during, and after spraying to ensure human and environmental safety during the spray campaigns. This unit provides useful information for sensitization and awareness creation among key stakeholders and households to guarantee adherence to, and support for, the program.

The following key issues will be addressed through this unit:

- The role of the beneficiaries in the program's success (before, during, and after spray activities);
- Beneficiary satisfaction (how to eliminate myths and misconceptions, demonstrate effectiveness, and address health and environmental concerns);
- Simple, low-literacy messages; and
- Thematic approaches (related to IRS in general) versus tactical approaches (related to a specific spray round).

### Course syllabus

Session/Objectives	Contents	Learning Method Activities	Materials/Resources	Time
<p>The learning objectives for this unit are for the participants to be able to:</p> <ul style="list-style-type: none"> <li>• Describe the role and importance of communication in IRS</li> <li>• Understand the importance of advocacy, communication, and social mobilization</li> <li>• Effectively train mobilizers in communication of malaria facts, key messages, and the benefits of IRS</li> <li>• Describe the roles of IRS coordinators, supervisors, team leaders, and mobilizers in IRS communication</li> <li>• Acquire knowledge and skills in filling in IEC data forms and reporting</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Topic 1:</i> Introduction to effective communication skills</li> <li>• <i>Topic 2:</i> Advocacy, communication, and social mobilization for malaria control and prevention</li> <li>• <i>Topic 3:</i> Communication on IRS and roles of different staff and stakeholders</li> <li>• <i>Topic 4:</i> IEC data collection and reporting</li> <li>• <i>Topic 5:</i> Mobilization operation structure, roles and responsibilities of teams</li> </ul>	<ul style="list-style-type: none"> <li>• Communication games and exercises</li> <li>• Small group discussions</li> <li>• Demonstrations</li> <li>• Practical simulation exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Markers</li> <li>• Flip chart</li> <li>• Short notes</li> <li>• Prepared exercises on cards</li> <li>• IRS mobilizer card</li> <li>• Simple IRS messages and illustrations</li> <li>• National Malaria Control communication strategy on IRS</li> </ul>	Two days

**Target Group:** Supervisors, team leaders, IEC mobilizers

## **5.1 Topic 5.1: Introduction to effective communication skills**

The purpose of this session is to introduce participants to the importance of effective communication and the importance of passing correct and effective messages to households to encourage IRS support and acceptance.

### **5.1.1 What facilitators need to prepare for this session**

Flipchart, masking tape, markers, short notes, and building blocks

The presenter should start by reviewing session objectives:

- Appreciate the importance of effective communication, and
- Identify the qualities of a good communicator.



**Time: 45 minutes**

### **5.1.2 Session overview**

- Meaning of communication,
- Effective communication, and
- Qualities of a good communicator.

#### **Step 1: Speaking—the sending and receiving messages game<sup>5</sup>**

For active learning in this session, it is beneficial to start off with a practical exercise on sending and receiving messages. This will illustrate the importance of these two elements for effective communication: relaying a message and receiving a message. It is as important to communicate the message as it is to ensure that the proper message is received.

The first activity will involve the participants broken into groups of two, with each group provided a set of building blocks and a drawing of an object that can be constructed from those blocks. (To start, only the first participant will be allowed to see the drawing.) The two participants will sit with their backs to each other, with the first participant holding the drawing and the second participant having the blocks. Based only on verbal instructions from the first participant, the second participant will then use the blocks build the object in the drawing. The groups should be allowed three to seven minutes for this activity, depending on the complexity of the item.

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<sup>5</sup> Exercises in this portion are adapted from Ehow.Com. “Read More: Games for Learning Effective Communication Skills.” [http://www.ehow.com/way\\_5183464\\_games-learning-effective-communication-skills.html#ixzz13H7567AE](http://www.ehow.com/way_5183464_games-learning-effective-communication-skills.html#ixzz13H7567AE).

**When the activity is completed**, the participants will compare the constructed object to the drawing. Differences between the two will indicate issues in communication. The teams will discuss what they could have done to better communicate about the object to be built. What words would have been better suited? What kind of listening skills were required in the activity?

**To ensure that the lessons learned translate to IRS communication**, have the participants recount communication issues that they have encountered during IRS spray activities. These are instances in which the message relayed was not the same as the message received.

### **Step 2: Listening game**

Without warning, begin reading a passage to the training participants. Make sure the subject is of interest and pertinent to the class. After reading the passage: Ask the class questions about the story. Also ask the participants about their body language. Were they looking at the person reading the story? Were there distractions while the story was being read? Ask the participants if they were easily distracted.

This exercise should help participants to gauge how effective their listening skills are. It also shows them what they need to do, as a speaker, to ensure that the listeners give their attention.

### **Step 3**

When the exercise is completed, ask the participants to share their experience and find out:

- What happens during the sending and receiving of a message?
- What is difficult during the communication process? Why?
- How did this communication exercise make them feel about social interaction?

### **Step 4**

After the two exercises, write down key words in communication: message, source, sender, receiver, and channel.

**Explain** to the participants that communication is a process, and then provide a definition.

### ***Practical exercise to illustrate the communication process***



Ask participants to take out a piece of paper. Explain that you are going to give some instructions and they are to listen to these directions and draw accordingly. Do not tell participants that you are having them draw an elephant. Give them the following instructions, without telling them what they are drawing. Pause for a few seconds after each instruction.

- Draw a body
- With four legs
- Two ears
- A head
- And a trunk

### Step 5

Ask participants to look at each other's pictures. Explain that you wanted them to draw an elephant. Ask the following questions sequentially and seek responses.

- Do any of the pictures look like an elephant?
- When everyone was given the same instructions, did all the pictures drawn look the same? Why not?

**Explain** to participants that even with good communication, everyone understands messages differently.

### Step 6

Ask the participants if there is a difference between "hearing" and "listening." Allow time for participants to discuss and air their views. Summarize all responses as indicated in the IEC mobilizer handout.

### Exercise Four

**In small groups**, allow participants to brainstorm **barriers and challenges** to effective communication that they may have experienced in previous IRS rounds. Have each group appoint a group leader to summarize the consensus of group work and present outcomes to the larger group.

The facilitator should then **explain and provide additional information** on what skills are required to address communication barriers, as well as challenges that hinder successful IRS campaigns.

**Provide notes on qualities of a good communicator and explain the most important characteristics of effective communication for IRS.**

## 5.2 Topic 5.2: Advocacy, communication, and social mobilization for IRS communication

The purpose of this session is to train participants on the skills needed to disseminate basic information on malaria. It will also teach participants to understand general advocacy messages targeting different stakeholders. This activity will enable them to gain entry into the community and to respond to questions raised at the community level. Emphasize mastering key IRS messages and how to effectively communicate them in simple, local language. The trainer should enquire about the prevailing cultural issues, myths, and misconceptions surrounding IRS in the

community and ensure that participants/IRS teams are well trained to handle any communication issues.

### **5.2.1 Session objectives**

- Describe key malaria information relevant to households (definition, causes, transmission, signs and symptoms, interventions, myths, and misconceptions);
- Understand basic steps in advocacy and social mobilization for IRS;
- Determine malaria information relevant to the needs of target audiences;
- Identify and describe what concerns households or communities may have about IRS application; and
- Describe current community and health worker attitudes and explain how they impact IRS activities.

### **5.2.2 What facilitators need to prepare for this session**

The facilitator should prepare short notes on information and facts about malaria (in the local context). They should also be comfortable discussing IRS advocacy issues and social mobilization steps, national malaria communication strategy for IRS, and key IRS messages. The facilitator should obtain sample IRS brochures for the upcoming round. Be sure to prepare practical exercises in advance.



**Time: one hour**

## **Malaria Facts and Communication**

### **Step 1**



Ask participants what information on malaria would be beneficial to IEC mobilizers? What do implementers (mobilizers) need to know about malaria to enable them to communicate malaria information to the community?

### **Step 2**

Seek responses from the group and list these responses on flip chart paper. If responses are not forthcoming, probe participants by asking questions. Ask what information about malaria would be beneficial to them and to IRS communities?

### Step 3

Mention any important topics in the participant handouts that were not covered in discussing their responses. As you mention the topics, encourage discussion and understanding by asking participants whether they agree that the topics are important.

### Step 4



Ask participants how they will sensitize/educate mobilizers on malaria in a manner that is easily understandable. Create a list of topics and ask for volunteers to describe how they would explain information on the topic in simple language that would be easily understood by a layperson.

**Brainstorm** with participants about the kinds of things they have done to increase community buy-in for IRS activities. Ask them to describe some of the feedback they have received from communities/households about IRS application

**Explain** the meaning of advocacy at the community level and who should be engaged to support IRS activities.

### Myths and misconceptions associated with IRS

#### Step 1

Ask participants to name a few myths and misconceptions they have heard that are associated with IRS. List responses on a flipchart.



#### Step 2

Ask participants how they can demystify or dispel these myths and misconceptions associated with IRS. Pick some of the responses and ask how these responses can dispel misconceptions to make the community aware of factual information.

#### Step 3

**Emphasize** the need to clarify and correct any misinformation on IRS, while communicating correct information at all times when interacting with the community. Stress that myths and misconceptions that participants encounter in the community while mobilizing must be dispelled.

**Useful practical exercises that can be adapted for this session using situation cards for group discussion:**

Group 1: Household A	Group 2: Household B	Group 3: Household C
Refuses spray activity because during the last round a family member experienced itchy eyes	Refuses spray activity because the local leader talked negatively about the activities	Refused spray activity because the household experienced an increase of other insects after spray activity

**Step 5**

Tell participants that household sensitization is critical for a successful IRS spray campaign. IRS is intrusive, and therefore, community support (specifically, household support) is crucial. Households need to accept and allow spray operators, who are sometimes strangers, into their homes and allow them access to their bedrooms/sleeping areas.

**Step 6**

Distribute a copy of the laminated mobilizer guide to participants, and inform them that messages to households should focus on four key areas:

- Program introduction,
- Generic messages on malaria,
- Generic messages on IRS, and
- The role of households/beneficiaries, including instructions for before, during, and after spraying; information on dealing with side effects/adverse effects; and important things to note.

**Step 7**

Review the key IRS messages (including messages for before, during, and after spray activity) in the mobilizer guide with participants, allowing time for questions or clarifications. Explain why these steps are important to ensure full comprehension.

	<p><i>If participants are familiar with IRS, ask them to contribute by listing the steps in each category (before, during, and after spray activity) and explaining why they are important. After receiving responses, mention any steps that are left out of each category.</i></p>
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**Step 8**

Inform the participants that the guide will act as a reference for mobilizers as they conduct community mobilization activities. Mobilizers will be required to always carry the guide and refer to it as they speak to households. This will ensure that mobilizers communicate all instructions consistently.

### 5.3 Topic 5.3: Communication on IRS and roles of different staff and stakeholders during mobilization

The purpose of this session is to ensure that uniform IRS key messages are delivered to beneficiaries during project implementation. Participants will also be required to fully understand the IRS key messages and the importance of ensuring communication of these instructions to everyone (both implementers and beneficiaries).

**By the end of the session, participants will have the following:**

- Knowledge and skills in communicating IRS messages to households,
- Understanding of the importance of consistency in disseminating information on IRS to beneficiaries, and
- Familiarity with the sequence of steps in disseminating malaria and IRS information.



**Time: 30 Minutes**

#### 5.3.1 What facilitators need to prepare for this session

Flipchart, masking tape, markers, IRS household brochure with key messages, and community mobilizer guide/handout. The facilitator should also have prepared an influencer analysis card for the local context.

The facilitator will take the participants through the **process of household sensitization** and IRS message delivery.

#### Step 1:

Write the name of the primary household member who will take action in fulfilling IRS resident obligations, and encourage other household members to take action. Look at the issues that influence what action is taken once the IRS messages are delivered, and discuss these actions with participants.

A	B	C	D	E	F
Who influences the primary audience?	How much influence is exerted (strong, moderate, or weak)?	What behaviors do they need to employ during IRS application?	Why would they encourage these desired behaviors?	Why would they discourage the desired behavior?	What are the sources of information for these influencers?

## **Step 2:**

**In groups**, let the participants discuss how IRS messages are consistently delivered to households or community influencers. During plenary discussion, reinforce how a uniform message should be delivered to the target primary audience.

**Explain** the importance of consistent messaging and the sequence of message delivery.

**Discuss** IRS desired behaviors for household members before, during, and after IRS activities.

## **5.4 Topic 5.4: IEC data collection, monitoring, and reporting**

The purpose of this session is to introduce IEC data collection forms and to discuss in full detail how the mobilization operations will be undertaken. The practical sessions will enable participants to gain experience with filling out the forms and with being conversant with the data collection tools.

**By the end of this session, participants should:**

- Know the importance of data accuracy and consistency,
- Be familiar with the IEC data collection forms,
- Understand the mobilization structure and respective roles and responsibilities, and
- Be knowledgeable about the mobilization operational plan.

### **5.4.1 What facilitators need to prepare for this session**

IEC data forms, IEC data collection simulation exercises, handouts with roles and responsibilities of mobilizer teams, and mobilizer guide/handouts.

#### **Step 1**

Introduce the IEC data collection form and ask participants to list information collected through this form and how it is recorded at the household level.

During this session, participants will be issued blank IEC tools, and the trainer will walk them through each section. Ensure that participants fully understand how to fill out the mobilizer forms.

**These tools include** the IRS card, mobilizer activity form, and mobilizer daily summary record.

### **5.4.2 Mobilization structure**

#### **Step 1**

Explain the mobilization structure within the IRS program (refer to the text box below). Ensure that participants fully understand the structure in place.

#### **Step 2**

**Respond to any questions that arise.**

## **Mobilization Structure**

### **District IEC Coordinator**

The IEC coordinator is in charge of mobilization and IEC activities in the district. He or she assists in the management, administration, and provision of logistical support to the mobilization and IEC operations in the district.

### **Supervisors**

Supervisors ensure mobilizer teams are working in coordination and achieving group targets. They are responsible for monitoring mobilizer activities, supporting mobilizer teams, and performing quality assurance checks.

### **Team leaders**

A team leader is in charge of a team of mobilizers and ensures achievement of group targets, handles logistical and administrative issues, monitors team members' performance, and ensures data quality.

### **Mobilizers**

These personnel conduct mobilization activities by sensitizing households and communities on IRS. They are also responsible for the distribution of IEC materials and collecting routine data from households.



### **5.4.3 Roles and responsibilities of mobilization teams**

#### **Step 3**

Distribute the roles and responsibilities handout to participants and talk participants through the roles and responsibilities of each cadre.

#### **Step 4: Mobilization operational plan**

Explain to participants what an operational plan and operational sites are, and review the mobilization plan in detail (per the participants' handouts). Ensure that participants familiarize themselves with mobilizer stickers, material inventory forms, and delivery notes for data forms. Make them aware that it is important to account for all materials given and to keep track of who they submit their completed data collection forms to.

## **Supervisor and Team Leader Data Forms**

### **Daily attendance register**

- *The attendance register is used to monitor the daily attendance of the mobilizers.*
- *It is used as a reference in verifying payroll information.*
- *On a daily basis, the team leaders should record whether each member was present and worked.*
- *If a person is marked absent, then the comments column needs to indicate the reason.*

### **Mention that the program will run on a six-day workweek schedule.**

- *Completed forms are then submitted to the divisional supervisor on a bi-weekly basis, together with the signed payroll sheet, for transmission to the district IEC coordinator.*

### **Materials inventory**

- *Using the material inventory form, supervisors and team leaders need to keep track of the number of brochures and mobilizer stickers issued to team members and reconcile records on a daily basis. All mobilizers will ensure recording of all household brochures in the MOI form, and this number should tally with the amount the team leader issued to them. Any unused materials are to be returned and recorded accordingly.*
- *IEC-related materials (e.g., posters and banners) should be placed at strategic points in the district for public consumption.*
- *A materials inventory must be maintained, providing details on the areas in which these posters or banners have been placed.*
- *Each district will be required to submit a report indicating materials issued per division and detailed descriptions of numbers of materials and sites where posters were placed.*
- *All material inventory records are then consolidated by the supervisor and submitted to the IEC coordinator.*

### **Delivery Note for Data Forms**

- *Mobilizers, team leaders, and supervisors use this note to track the number of data forms received and the chain of submission up to data entry at the district level.*
- *At the end of each day, mobilizers submit their MOI forms to the team leader for review.*
- *Any errors noted should be rectified or queried and corrections made where possible. Retraining is undertaken at this point for those identified as requiring it.*
- *Any missing or misplaced forms can be tracked using the information in the delivery note form.*

## 6 Module 6: Insecticide Application Techniques

The purpose of this unit is to prepare spray operators to demonstrate correct insecticide application procedures and respect for human health and environmental safety regulations and to educate them on standards for IRS operational activities. The effective delivery of this unit requires demonstrations and practical field sessions, as will be suggested in the guide. Facilitators should have command and expertise in this subject.

### Course syllabus

Session/Objectives	Contents	Learning Method Activities	Materials/Resources	Time
<p>The learning objectives of this unit are for the participants to be able to:</p> <ul style="list-style-type: none"> <li>• Demonstrate IRS safety procedures during IRS operations</li> <li>• Describe the functioning, assembly, and pressurizing of the compression pump</li> <li>• Describe the handling of spray pumps and calibration of nozzle tips for uniform insecticide dosage delivery</li> <li>• Demonstrate the application of the correct dosage of insecticide on wall surfaces, through maintaining uniform swath width and spraying speed</li> <li>• Demonstrate understanding of immediate post-spray activities</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Topic 1:</i> General safety procedures for spray operators</li> <li>• <i>Topic 2:</i> Assembling and pressurizing the compression pump and mixing insecticide</li> <li>• <i>Topic 3:</i> Correct spray techniques and immediate post-spray procedures</li> <li>• <i>Topic 4:</i> Waste management and disposal</li> <li>• <i>Topic 5:</i> Equipment maintenance and decontamination</li> </ul>	<ul style="list-style-type: none"> <li>• Short notes to provide brief information</li> <li>• Graphic illustrations</li> <li>• Small group discussions</li> <li>• Demonstration</li> <li>• Practical simulation exercises (real-time practice of application techniques for different structure surfaces)</li> </ul>	<ul style="list-style-type: none"> <li>• Markers</li> <li>• Flip chart</li> <li>• Short notes</li> <li>• Prepared exercises on cards</li> <li>• Spray canisters (out of boxes dismantled for reassembling)</li> <li>• Water</li> <li>• PPE and all associated apparel</li> <li>• Prepared wall areas for spraying techniques practice</li> </ul>	Two days

**Target Group:** spray operators, team leaders, and supervisors

### 6.1 Topic 6.1: General safety procedures for spray operators

#### Start by reviewing the learning objectives

By the end of this session, the participants will be able to:

- Identify all items required for personal protective equipment for IRS and their importance
- In practice sessions, correctly apply World Health Organization (WHO) IRS personal hygiene standards
- Explain health and safety procedures for spray operators and residents

### Step 1:

**Explain** how and when absorption of insecticides into the body may occur and the importance of protective clothing.

**Illustrate** the PPE that spray operators should wear, stressing WHO standards (show photo illustrations).

### Step 2: In small groups



**Ask** the participants to brainstorm on Do's and Don'ts during spraying activity. This should take five minutes. Let participants report back, and then summarize, using illustrations, the Dos and Don'ts, using the precaution list. The facilitator should prepare this precaution list according to WHO standards and in line with *Best Practices Manual* checklist 2.

**Step 3:** In a practical session, the trainer should ask participants who have trained spray operators in the past to lead small group exercises in donning and doffing PPE. Ensure that each person can demonstrate the correct procedure.

**Demonstrate** how to attend to personal hygiene during spray operations and the material requirements for this process (see the handbook page for the list of requirement).

**Explain mandatory requirements for female spray operators** (i.e., screening for pregnant and nursing women).

**Discuss safety procedures** for residents; this involves brainstorming key messages on household preparation, which are delivered before spraying.

Perform a **practical exercise** on how to prepare and handle emergencies during spraying.

Divide participants into four groups; ask each group to discuss how they would prepare for and handle the following emergencies:

- Group 1—Motor vehicle accident
- Group 2—Fire
- Group 3—Insecticide spill (in a vehicle during transportation, in the stores, and during spray activity)
- Group 4—Accidental exposure and bodily contamination

This activity should take 10 minutes for group work and 20 minutes for discussion with the full group. Summarize and highlight important points for emergency preparation and management, including guidance for basic first aid procedures and reporting of incidences.

## 6.2 Topic 6.2: Assembling and pressurizing the compression pump

This topic will help participants master knowledge on parts of the spray pump and skills in handling different parts.

### 6.2.1 What facilitators need to prepare for this session

Spray canisters (out of boxes, dismantled for reassembling), stopwatch, and supervisor checklist form.



**Time: 1 hour**

Presentation starts by reviewing session objectives.

**By the end of this session, the participants will be able to:**

- Identify all parts of a functional IRS compression sprayer,
- Demonstrate the correct steps to test a spray tank according to the manufacturer's specifications,
- Identify spray nozzles and determine the correct nozzle for a specific insecticide,
- Demonstrate the nozzle calibration procedures, and
- Demonstrate proper handling of the sprayer and positioning of a sprayer that is not in use.

#### **Step 1: Practical demonstration**

Using illustrations, and then real pump parts of the compression sprayer, the facilitator should start this section by conducting a practical demonstration showing participants how to check that the equipment is operating properly and does not leak. Short notes on the proper steps for the process should be provided to allow participants to master correct procedures for tank testing. Ensure that participants master all of the functional parts of the sprayer.

#### **Step 2:**



Ask participants to discuss the most important parts of the sprayer and illustrate correct steps for pump testing. Demonstrate skills in checking nozzle function and stress key points on testing nozzle discharge per minute, using a stopwatch. Demonstrate practical application skills, including knowledge on nozzle type and characteristics, flow regulation, and nozzle output. Stress the importance of **weekly nozzle calibrations** and care. Provide instruction on what to do with a blocked nozzle.

*Review all steps for routine maintenance and handling of equipment.*

**Each participant must conduct individual demonstrations during a practical session.**

### 6.3 Topic 6.3: Correct spray techniques

This topic will help participants to master knowledge and skills in using correct spraying techniques.

#### 6.3.1 What the facilitator should prepare

Spray canisters filled with water and with all parts tested for required functionality, practice wall, and PPE



**Timeframe: 4 hours**

The presentation starts with review of the session objectives.

**By the end of this session, the participants will be able to:**

- List steps and procedures to be followed prior to insecticide application,
- Demonstrate the correct method to agitate a spray can while on the job, and
- Demonstrate safe and effective application methods for spraying walls and ceilings in different types of structures, according to WHO principles.

**Step 1:**

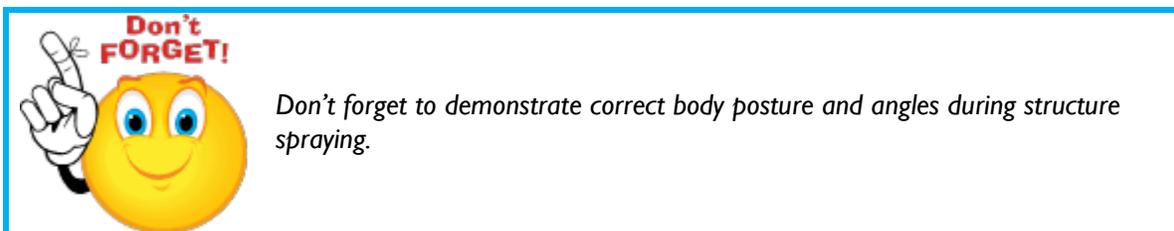
**Discuss** what to check for to ensure that a household is well prepared.

**Provide** instructions and demonstrations on insecticide handling and mixing. Teach participants how to perform pressure checks, nozzle checks, and leak checks.

**Demonstrate** mixing and spray agitation techniques and teach participants when to conduct spray pump agitation—every ninth swath or every two to three minutes.

**Step 2:**

**Conduct** field demonstrations and sequential steps showing the correct technique for spraying a structure. This includes demonstrating where to start and end and how to time spray speeds by using a mental counting procedure (such as “one thousand and one, one thousand and two, one thousand and three...,” which can be adapted to the local language).



**Step 3:**

Upon completion of field demonstrations and individual demonstration by all participants, allow participants to discuss any challenges and issues that they noticed.

**Use** graphic illustrations to discuss, in detail, all procedures for spraying different structures commonly found in the locality.

**Describe** what tasks the team leader should supervise and check during any inspection of spray application. Briefly discuss the supervisor checklist.



**Ask** the participants to practice giving instructions to members of the households. The household should be allowed to recite back the instructions.

**Step 4:**

**Prepare** a practical drill for carrying out and supervising personal hygiene, regular washing of protective clothes, and cleaning of equipment according to the environmental safety compliance and WHO standards (*Best Management Practices* checklist 2).

**Step 5:**

**Prepare** a practical exercise with individual demonstrations showing proper maintenance and handling of spray equipment.



**Warn** the team that pump dysfunctions should be reported for pump technician diagnosis and repairs.

## 7 Module 7: IRS Data Management and Quality Control

The broad objective of this unit is to impart knowledge and skills for IRS data collection, monitoring, and evaluation. These skills serve to strengthen capacity of the teams for accurate and consistent data collection and reporting.

### Course syllabus

Session/Objectives	Contents	Learning Method Activities	Materials/Resources	Time
<p>The learning objectives of this unit are for the participants to:</p> <ul style="list-style-type: none"> <li>Familiarize all IRS personnel with data collection tools for all IRS operational components</li> <li>Understand the IRS monitoring and evaluation framework, including indicators</li> <li>Understand the respective roles and responsibilities of spray personnel, and links to supervision, monitoring, and data management</li> <li>Know the importance of supervision, quality control, and reporting procedures</li> </ul>	<ul style="list-style-type: none"> <li><i>Topic 1:</i> Introduction to IRS data management tools</li> <li>Monitoring and evaluation definitions</li> <li><i>Topic 2:</i> Supportive supervision and different roles of staff</li> <li><i>Topic 3:</i> Data quality</li> </ul>	<ul style="list-style-type: none"> <li>Short notes to provide brief information on monitoring and definitions</li> <li>Practical simulation exercises on data collection scenarios and reporting</li> </ul>	<ul style="list-style-type: none"> <li>Markers</li> <li>Flip chart</li> <li>Short notes</li> <li>Prepared exercises on cards</li> <li>Various data collection tools</li> <li>IRS household cards</li> <li>IRS brochure</li> <li>Mobilizer daily form</li> <li>Mobilizer summary record</li> <li>Supervisor checklist</li> <li>Daily tracking and distribution card</li> <li>Environmental compliance checklists one, two, and three</li> </ul>	Two days

The **Target Group for this training includes** spray operators, IEC mobilizers, team leaders and supervisors, district coordinators, and data clerks.

### 7.1 Topic 7.1: Introduction to IRS data management tools and data collection

#### 7.1.1 What the facilitator should prepare

Short notes with definitions of IRS monitoring and evaluation terms, all data collection tools to be covered in this session, practical exercises

#### Start by reviewing the learning objectives

By the end of this session, the participants will be able to:

- Explain the meaning of data management and list all data management tools in IRS operations;

- Describe the purpose and objectives of IRS data collection, monitoring, and evaluation; and
- Explain the principles of IRS data management and provide examples of the following:
  - IRS data forms/tools
  - Accurate spray operations data (at the structure level)
  - Timely data reports
  - Links between different IRS data tools, from the **store stock control forms** and the **IRS sachet tracking form**, to the **spray operator daily team leader cards** and **supervisor daily summary forms**

**Decide** whether to go through the forms in plenary or divide the participants into small groups and task a team leader to lead the team in reviewing the forms.

**Distribute**/display the actual IRS cards/forms to the participants.

**Explain** the use of each of the cards/forms.

**Explain** that these forms have been approved by USAID/NMCP and that a database has been developed to capture the information that will be collected.

**Define** the indicators measured by the data/information.

**Prepare a question card and read through each question to make sure participants understand:**

- The meaning of each indicator,
- What information the question is asking for, and
- The purpose behind each question.

**Discuss** the data sources to be used to fill out the cards/forms.

**Distribute** the actual IRS data flow chart to the participants. (The facilitators need to have prepared this handout in consultation with the IRS program team.)

**Explain the use of IRS data flow chart**, including the levels of data flow from the first source to last point of data transmission.

## **7.2 Topic 7.2: Supportive supervision and different roles of staff**

This topic is to help supervisors and coordinators to set up a supportive supervision system, plan regular supportive visits, understand how to conduct these visits, and perform follow-up activities linking outcomes into the IRS monitoring system.

By the end of the session, the participants should:

- Understand how to conduct supervisory visits in their areas to help staff in solving problems, and
- Be able to explain supervisory roles and responsibilities.

## Step 1:



Ask participants to discuss how supervision is carried out during IRS operations, what activities are done as part of supervision, and who conducts these supervisions. How does the supervision help solve their problems in the field? What help do supervisors offer?

**Discuss** and summarize findings and then explain the difference between controlling supervision and supportive supervision. *A comparative table should be prepared in the short notes presentation.*

**Explain the** supportive supervision process and how to help staff improve their own work.

**In small groups**, help participants discuss the meaning, purpose, and importance of supportive supervision.

**Step 2: Practical demonstration on setting up a supportive supervision system following the “three Rs” for effective supervision systems:**<sup>6</sup>

1. *The right supervisors*—A core set of supervisors, well trained on supportive supervision techniques and with updated information and skills on IRS operations activities;
2. *The right tools*—Availability of training materials and job aids to update skills of health workers during supervision visits, and checklists and forms for recording recommendations and following up; and
3. *The right resources*—Sufficient vehicles, per diems, time allocated for supervision and follow-up.

Describe and talk the participants through the following activities:

- The daily monitoring role of team leaders and IEC supervisors,
- use of the right tools, and
- Preparation of a weekly timetable on where, when, and what to cover during supervision.

This activity will be adapted to suit roles and responsibility of team leaders, supervisors, coordinators, and any other mid-level management personnel on the IRS team. Use appropriate tools and checklists for each target group and cover the following topics:

- How to collect information, conduct problem solving, and provide feedback to the team;
- Daily on-the-job trainings for different target groups; and

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<sup>6</sup> Excerpted from WHO’s Training for Mid-level Managers: Supportive Supervision. Available at [http://www.who.int/immunization\\_delivery/systems\\_policy/MLM\\_module4.pdf](http://www.who.int/immunization_delivery/systems_policy/MLM_module4.pdf).

- Recording results of supervision visits and use of this information, linkage with follow-up activities, and monitoring reports.

**Explain** the roles of mobilizers, spray operators, team leaders, supervisors, IEC supervisors, district coordinators, data clerks, and IRS central office personnel and make connections to how supportive supervision will be conducted. In small groups, allow participants to discuss what challenges are to be expected in their roles.

**Discuss the importance** of data accuracy, legibility, consistency, and completeness in filling out forms.

**Stress** that staff must hand over the completed forms to the next level on the same day for review/entry.

**Discuss** the various levels of review that the reporting form goes through and explain that delays at any point affect the 24-hour timeline of submission and appropriate actions/decisions.

### **7.3 Topic 7.3: Data quality assurance**

#### **7.3.1 What the facilitator should prepare**

Short notes with definitions of commonly used words and ideas in data quality assurance/audits, and a participant handout

**Explain** that data quality is the reliability and effectiveness of data. Data quality assurance (DQA) is the process of verifying the reliability and effectiveness of data.

**Explain** that maintaining data quality requires reviewing the data periodically, and updating and cleaning the data, as a basis for assessing and monitoring performance against standards and ensuring that the standards are consistently and correctly applied. Results from DQA monitoring help to ensure the continued quality of an activity and generate ideas for quality improvement.

**Provide guidance notes** on how quality control during supervision is conducted. Also, discuss who should conduct the audits checks and how often.

**Explain** that supervisors and coordinators should plan to conduct data auditing. *A schedule for data auditing has to be prepared.*

Ask if there are any questions and discuss with participants.

#### **7.3.2 Cleaning and data processing (for data clerks/managers)**

##### **Learning objectives**

Participants will be able to explain the following:

**Data management, data entry, processing, analysis, and utilization.** All information collected should be recorded, handled, and stored in a way that allows its accurate reporting, interpretation, and verification.

**Define** data entry, validation, and the data cleaning process.

**Explain** the importance of using data entry software that has internal consistency, identification capacity, and data validation.

**Explain** the necessity of data cleaning and how it is done.

Introduce the standardized IRS database for collecting and analyzing program-specific data.

Create a **Practical Exercise**, where participants are able to practice with test data and also use test data with validations (how to start the program, open the data entry screens, enter the data from the paper forms, back up the data, and transmit data).