



PRESIDENT'S MALARIA INITIATIVE



## INDOOR RESIDUAL SPRAYING FOR MALARIA CONTROL

# Communication Strategy for Indoor Residual Spraying (IRS) for Malaria Control

February 2010

## **Abbreviations**

<b>CHWs</b>	-	Community Health Workers
<b>COP</b>	-	Chief of Party
<b>DDT</b>	-	Dichlorodiphenyltrichloroethane
<b>IEC</b>	-	Information Education and Communication
<b>IRS</b>	-	Indoor Residual Spraying
<b>MOH</b>	-	Ministry of Health
<b>NMCP</b>	-	National Malaria Control Program
<b>PMI</b>	-	Presidential Malaria Initiative
<b>TV</b>	-	Television
<b>USAID</b>	-	United States Agency for International Development
<b>WHO</b>	-	World Health Organization

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# 1. Introduction and Background

RTI International was awarded a contract by the U.S. Agency for International Development (USAID) to expand indoor residual spraying (IRS) programs in sub-Saharan Africa as part of the US President's Malaria Initiative (PMI) to reduce the impact of Malaria in sub-Saharan African countries. RTI as the key implementing agency and its partners, South African-based Medical Research Council, Crown Agents and Meridian Group International, Inc (Meridian), will provide technical assistance to continue partnerships with African national malaria control programs (NMCPs) to spray safe insecticides to the inside walls of homes in Africa, preventing the spread of malaria by killing mosquitoes that carry the malaria parasite.<sup>1</sup>

RTI will work with the ministries of health and the national malaria control program in each country to establish effective mechanisms to ensure that the household spraying is conducted safely. The IRS intervention aims to significantly reduce rates of malaria transmission in the sprayed areas. At the national level, the National Malaria Control Programs (NMCPs) are the lead partner agencies and the IRS activity is implemented within the existing national policy framework and priorities. RTI will build capacity within the NMCPs and other partners to plan and implement safe and effective IRS operations.

## 1.1 Technical Information on IRS

In-door Residual Spraying (IRS) is a one of the vector control strategies for reducing and interrupting malaria transmission. IRS involves the coordinated and timely spraying of the interior walls of structures/houses with insecticides to kill or repel mosquitoes (especially the *Anopheles mosquitoes*) that land and rest on these surfaces. IRS aims to kill female mosquitoes before the infective stage of the malaria parasite can develop. IRS reduces/interrupts malaria transmission by decreasing the survival of malaria vectors entering houses or sleeping units. Sprayed houses are protected for about 4 to 10 months, depending on the insecticide used and the housing construction. The primary effects of IRS towards curtailing malaria transmission are:

- i) to reduce the life span of vector mosquitoes so that they can no longer transmit malaria parasites from one person to another, and
- ii) to reduce the density of the vector mosquitoes.

Scientific evidence therefore indicates that IRS is effective to control malaria transmission and thus reduces the related burden of morbidity and mortality as long as most structures (houses) within targeted communities are treated. In unstable, epidemic-prone malaria transmission areas, IRS will prevent seasonal increase in transmission, will prevent and control epidemics and can be used for the elimination

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<sup>1</sup> RTI website – RTI Continues Extends Reach of Malaria Reduction Efforts in Africa

of local transmission of malaria. In stable-endemic malaria areas with moderately intense but seasonal transmission, IRS can prevent seasonal increase in transmission and reduce levels of infection prevalence and highly seasonal morbidity and mortality. In stable-hyper endemic areas where very intense seasonal or perennial transmission occurs, IRS, with a higher frequency of application than in the above instances, can reduce the level of transmission and reduce levels of infection prevalence, morbidity and mortality.<sup>2</sup>

While IRS is one of the most effective interventions against malaria, national health providers have not routinely employed it for a variety of reasons, including misconceptions about cost, lack of technical understanding of the intervention, the complex nature of its application, and weak local health systems. RTI is helping to build technical understanding of IRS by training staff at NMCPs and MOHs, and strengthening local capacity for implementation, through “learning by doing.”

## **1.2 Technical Information on Insecticides**

The World Health Organization has recommended 12 insecticides (belonging to four chemical groups - organochlorine, pyrethroids, organophosphates and carbamates) including DDT that it considers effective and safe for IRS use. The choice of insecticide is informed by the following considerations:

- insecticide susceptibility and vector behaviour;
- safety for humans and the environment;
- efficacy and cost-effectiveness.

Pyrethroids, carbamates and DDT are three types of insecticides used across the IRS countries. The choice of insecticide depends on its registration status in country, the type of housing (e.g., mud, brick, or wood), the duration of the malaria transmission season, and susceptibility of local *Anopheles* mosquitoes to the insecticide.

## **1.3 Overall Programme/Project Objectives**

The overall objectives of IRS are;

- Procure insecticides and equipment necessary for the IRS programs
- Provide operational management support for the programs
- Ensure compliance with environmental regulations in accordance with Title 22 Code of Federal Regulations 216 (22FR216)
- Provide short- and long-term technical assistance for IRS activities.
- Provide training and capacity building for safe and effective spraying in accordance with WHO guidelines.

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<sup>2</sup> Global Malaria Programme - Indoor Residual Spraying – Use of indoor residual spraying for scaling up global malaria control and elimination - WHO

## **2. Rational of the Communication Strategy**

The role of IEC in IRS is that communication is a key component in IRS, It informs the target population of the importance and benefits of IRS as a malaria prevention strategy and the necessary preparations required to assure adequate human and environmental safety for successful spray operations. IEC also increases acceptability of IRS activities among target populations through their participation thus creating sustainable malaria prevention and control interventions.

### **2.1 Communication Goal and objectives**

**Goal:** Raise awareness of malaria prevention and sensitize communities on the benefits and safety of IRS as a malaria prevention strategy and encourage its acceptance.

**Objectives:** The specific objectives of IEC campaign are:

- Involve and engage key stakeholders to create program sustainability
- Provide information on the positive benefits of IRS in controlling and preventing malaria and malaria related deaths
- Inform the beneficiaries about their role before, during and after the spray operations
- Provide accurate information to the key stakeholders and beneficiaries about safety issues related to environmental and health effects of using the selected insecticides.

### **2.2 Key communication issues to be addressed**

IRS is intrusive since the spraying is done in people's houses especially bedrooms or sleeping quarters and living rooms. Due to this, it might not be easily accepted and in some cases there could be prevailing rumours and misinformation on the side effects of the insecticides. The communication strategy will create awareness on the benefits of IRS, address the beneficiaries' concerns on its effect on their health and other stakeholders (environmental groups and opinion leaders), provide accurate information to dispel any rumours and misinformation, and inform the beneficiaries of their role in the spray operation. The messages developed should be simple and targeting low literate audiences. This communication will increase acceptance and participation of the target community in IRS activities.

### **2.3 Target audiences**

- i) Primary audience – all individuals in the selected districts whose structures qualify to be sprayed these includes men, women and children.

- ii) Secondary audience – opinion leaders, government officials from relevant ministries, community health workers and environmentalists.

## **2.4 Media and Communication approach**

The overall communication campaign will be to increase awareness on malaria prevention and increase community participation and acceptance of IRS activities. The communication approach is two pronged; 1) advocacy to government officials, local leaders and other stakeholders for the project and 2) awareness creation/community mobilization is meant for target population for participation and acceptance of IRS activities.

Countries are at different stages of spray operations and IEC activities, for the countries that have already conducted IEC activities, effective approaches will be replicated and used during the next IRS operations or scaling up of activities while ineffective approaches will be reviewed and new ones adopted. The following is the recommended approach to be used while planning for IEC activities.

## **2.5 Campaign Overview**

The overall campaign will consist of the following components;

1. Promotion of logo and slogan to promote IRS – all the project print materials should have a logo(s) and a slogan
2. Development of print materials that provide accurate information on IRS.
  - Advocacy brief for opinion leaders and key stakeholders
  - Print Materials for project beneficiaries: these include brochures, leaflets, posters, banners, stickers promotional materials such as t-shirts, bags, caps key holders etc. – the brochures and leaflets should have illustrations or photos demonstrating the key IRS stages to cater for the low literate groups. Please note that brochures will be the main materials distributed to the households the others such as leaflets, bags, caps, t-shirts etc are optional.
3. Mass media and public relations for both stakeholders and project beneficiaries.
  - Use of popular local stations targeting project beneficiaries to run radio spots, call-in radio programs with questions and answers on IRS.
  - Where possible and appropriate especially in urban areas, run TV spots and program with IRS messages targeting project beneficiaries.
  - Media coverage of the launch of spray activities
  - Conduct road shows for project beneficiaries on market days

- Participation in Malaria events and festivals e.g World Malaria Day, inviting musicians and other popular personalities,
- Sensitization of media personnel on IRS project activities through media personnel training to create IRS publicity to both stakeholders and project beneficiaries.

(See sample media Plan in Annex 2)

4. Interpersonal communication targeting project beneficiaries such as;
  - a. Use of community meetings/events to sensitize project beneficiaries with IRS messages
  - b. Door-to-door visits to reach targeted households to accept and participate in IRS activities.
  - c. Use of CHWs and other volunteers to disseminate IRS information to the project beneficiaries.

(See sample mobilization plan in Annex 3)

## **2.6 Advocacy**

**To relevant government officials, local leaders and other stakeholders (See sample advocacy plan in Annex 1.)**

2.6.1 Under this target audience the following activities will be conducted

- List/Identify all the relevant stakeholders;
  - At National level (e.g. they include Minister of Health, Permanent Secretary of Health, Director of Preventive Services, Director National Environment Authority, Country US Ambassador, USAID Mission Director or PMI representatives).
  - At Provincial (e.g Provincial Commissioner, Provincial Medical Officer of Health, Provincial Education Officer, Provincial Social Development Officer, Provincial Health Management Board etc)
  - District level (e.g. District Commissioner, District Education Officer, District Medical Officer, District Social Services Officer, District Environmental Officer,
  - At grassroot level (e.g. public health technicians, head teachers, social development officers, village elders, opinion leaders, religious leaders, traditional leaders, chiefs, assistant/deputy chiefs and women group leaders etc)
- At the national level leaders will be sensitized on the IRS project through a series of briefing meetings using an advocacy brief which contains the project overview, basic information on Malaria and IRS.



- At the other levels, leaders will also be sensitized on the IRS project through a series of briefing meetings using an advocacy brief which contains the project overview, basic information on Malaria and IRS and details of their expected roles and responsibilities in the project.
- Develop/prepare advocacy briefs with country project overview, basic facts and information on malaria, IRS including the benefits of IRS. This package should also have a copy of the brochure or leaflet that will be given to the other community members.
- Project launch – should be presided by a key profile national official e.g. Minister of Health or equivalent accompanied by the NMCP Director, Director National Environment Authority, RTI Regional Director, the COP and other national officials including the US ambassador and the USAID mission director and PMI advisors .
- The country office should identify opportunities at the national level such as influencing policy or reviewing of existing policy e.g. joining all forms of Malaria working groups.
- Participation in National Malaria events and show case IRS e.g. World Malaria Day
- All the events should be covered by the media.
- Deliberate effort should be made to strengthen partnerships e.g. close engagement with the NMCP

## **2.7 Awareness creation for the Target Population**

**This includes community mobilization activities**

The target audience under this category are the project beneficiaries: this includes men, women and children in the selected districts whose structures qualify to be sprayed. The community mobilization process is linked to spray operations. The same messages used in the advertising campaign will be integrated into the communications for community level activities. These activities will include identification, recruitment and training of IEC mobilizers with the assistance of community leaders. The mobilizers will be the key drivers of the community mobilization and communication campaign process. They will be assisted by community leaders and other interested groups.

Several approaches will be used to mobilize and get community buy-in. These will include:

- Community education through conducting community awareness sessions using existing social events such as chief's meetings, funerals, religious functions etc. These sessions will be conducted by the sensitized community leaders and other existing social groups such as women group members.
- Door –to-door household visits by IEC mobilizers.
- Reaching out to schools with IRS messages and creating IRS clubs which will disseminate messages to community members.
- Distribution of IEC materials
- Edutainment through song and drama/skits where appropriate
- Use of public address system or announcers to inform communities of the spray operations a day or the morning before the spraying.

## **2.8 Key messages/talking point**

Country specific culturally sensitive messages to the target communities addressing local situations will be developed. The key promise and support statements for the developed messages will be as follows;

- IRS is a safe and long lasting malaria prevention strategy.
- It kills mosquitoes and other insects.
- Prevents malaria
- Promotes Health
- Saves lives

The following section covers key messages and talking points in details. The messages are covered divided into four key areas ; i) Generic malaria and IRS targeting the target communities and the general population, ii) Messages on environmental issues and safety, iii) Messages on the role of beneficiaries in IRS and finally information on the insecticide in use. Messages covering the first three areas are divided into spray operation stages namely; pre-spraying, during spraying and post spraying activities. Each of these stages has different activities with specific messages which address environmental issues, safety, compliance and adherence.

### **2.8.1 General IRS messages to the target community and general population.**

- IRS is part of the government's comprehensive program to fight malaria.
- Indoor spraying kills the mosquitoes that transmit malaria.
- You must continue to use treated nets and other means of preventing malaria even when your house has been sprayed.
- If you or your children have been affected by malaria seek help at the local clinic as soon as you see signs of illness.
- IRS does not cost anything to the family. It is free and voluntary.
- IRS operators will apply a small quantity of insecticide on the walls of your house.

- IRS is safe for you, your family, and domestic animals. It only kills mosquitoes and non targeted insects.

### **2.8.2 Pre-spraying activity messages for household members:**

- All households will be informed of the spraying schedule and the purpose of the spraying to give them adequate time to prepare and take their belongings outside and to vacate the house.
- All food items should be secured, covered and taken outside the house.
- All water should be removed from the house and covered properly.
- All utensils, kitchenware and toys should also be removed from the house.
- Each household should avail at least 10 liters of water to spray operators where possible.
- Remove or cover furniture to allow the spray operator easy access to the walls in each room. Any remaining furniture should be covered.
- Sweep the house clean
- Cage or keep pets and domestic animals away from the house.

### **2.8.3 During spraying messages for household members:**

- Spray operators may not EAT, DRINK or SMOKE while applying the chemical. Community members should discourage ANY spray operator from doing so; it is for the safety of the spray operator. If the spray operator has no alternative but to drink water, s/he should wash his or her hands several times with soap and water, according to training received.
- Occupants must leave the house during spraying.
- Houses that are occupied by sick/old people who cannot be moved may not be sprayed. Rather, these houses are noted and reported to the team leader for mop up operations later on.
- Pregnant women and babies should also remain well away from the house during the spray procedure and two hours after.

### **2.8.4 Post-spraying activity messages household members:**

- Occupants must remain outside the house for at least 2 hours after spraying and the house should be kept shut.
- Sweep floors free of any residual insecticide that may remain from the spraying. Sweep any dead insects found on the floor after spraying and throw them into a pit latrine. If there is no latrine, dig a deep hole and bury them to avoid contaminating domestic animals. The sweeping should be done before children or pets are allowed to enter.
- Following the application of insecticide the walls should not be repainted or cleaned/washed so that the insecticide will remain active to mosquitoes for a longer period.<sup>3</sup>

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<sup>3</sup> IRS Training guide for spray operations – Draft Sept 2009.

### 2.8.5 Type of Insecticide

The type of insecticides used differs from one country to another, it is important to develop messages informing the target community about the effects of the insecticide on the *Anopheles mosquitoes* which are the main target. Additional information that insecticide also kills other insects should be included. This will explain the increased activity of insects in the house including mosquitoes after spraying. The message should say "IRS kills mosquitoes and other insects". This will address the perception among community members that the insecticides attract other insects.

All the above messages will be developed in several formats, some will be radio spots, pictorials (such as posters, brochures and leaflets) for the low literate group and others with pictorials and text only for the literate consumers where appropriate.

## 2.9 Creative considerations

- All print materials must include the country's ministry of health logo and the PMI/USAID logo as per the USAID Marking Plan which all COPs have. All broadcast materials should include the phrase...**"this message has been brought to you by "Click here to insert the Country Ministry of Health" and sponsored by Presidential Malaria Initiative (PMI) and United States Agency for International Development (USAID): from the American people."**
- In areas where literacy levels are low, use of more pictures/illustrations on the brochures or leaflets is recommended.
- The common local language should be used and materials translated into English.

## Annexes

### 1. Sample Advocacy Plan

<b>Objective</b>			
Mobilize leaders from all levels to support IRS			
<b>Activity</b>	<b>Timeline</b>	<b>Status</b>	<b>Output</b>
Identification of national stakeholders			List of national stakeholders
Identification of provincial stakeholders			List of provincial stakeholders
Identification of district leaders			List of district stakeholders
Identification of local leaders			List of local stakeholders
Preparation of advocacy presentations and briefs			Advocacy presentations Advocacy briefs
Conduct briefing meetings with the different stakeholders			

## 2. Sample Media Plan

Target audience description		
Media Channel	Details	Cost
Radio	Use of local radio stations to disseminate IRS information through; <ul style="list-style-type: none"> <li>• Radio spots</li> <li>• Call-in radio programs</li> </ul>	
TV	Use of TV to disseminate IRS messages through; <ul style="list-style-type: none"> <li>• TV spots</li> <li>• TV programs</li> </ul>	
Out-door advertising	Design and development of print materials such as; <ul style="list-style-type: none"> <li>• Posters</li> <li>• Banners</li> <li>• Signs</li> </ul>	
Events	Organization of events to promote IRS such as; <ul style="list-style-type: none"> <li>• Road shows</li> </ul>	

### 3. Sample Community Mobilization Plan

Activity	Timeline	Status	Output.
<b>IEC Activities</b>			
Identification of existing IEC resources in the country			
Development of IEC materials if required			
Pretesting of developed IEC materials			
Production of IEC materials			
Development of IEC distribution plan			
Dissemination of IEC distribution plan			
Detailed District IEC materials distribution report			
Initiate IEC radio campaign			
Preparation of WMD Activities			
<b>Mobilization Activities</b>			
TOT National for the managers steering spray operations at the national and district level.			
TOT training of District level MOH staff			
District IEC supervisor and mobiliser training			
Mobiliser training			
Health providers training			

Operational plan for all divisions finalized & in place			
Coordinated IEC operations with IRS operations			
Mobilisation commences throughout districts			
Conduct Sensitization talks on IRS with opinion, community, village and religious leaders			
Sensitization talks on IRS with specific community groups - chiefs meetings, women's groups, clubs, schools etc.			
Initiate door to door IEC campaigns-organised and targeted mobilisation			
Development of Mobiliser certificates			



#### 4. IEC activities and Indicators

	Activities	Indicators
1	Advocacy at government level - Government stakeholder meeting – National, district levels – these are different from courtesy calls – there are tasks and commitments on how to engage in IRS	# of IRS advocacy meetings held
2	Community level stakeholder meetings – local leaders (village leaders, chiefs, women group leaders, religious leaders) local authority, local administration, opinion leaders etc.	# of Stakeholder sensitization meetings held
3	Identification of IEC mobilizer supervisors	# of Supervisors identified and trained
4	Identification and recruitment of IEC mobilizers	# of IEC mobilizers recruited and trained
5	IEC material development (use of exiting materials/develop new materials)	# of IRS IEC materials developed
6	Media – Radio program, radio spots, *** journalist sensitization***, bulletin/newsletter	# Media personnel/journalists trained # of radio programs aired # of radio spots aired
7	Community mobilization – community events (door-to-door, use of existing forums to reach community members) drama, skits and road shows	# of drama sessions held # of road shows held # of community events held # of households reached with IRS information
8	IRS launch	# of materials distributed
9	Post spray survey	