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Health education for malaria control in the context of a

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### Health Education for Malaria Control in the Context of a Primary Health Care Approach

A Training Program Guide

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#### 1. Overview its minor does and the mesonal about the welth pain in the abolised up

### Purpose en filo analacia de la companya de la companya

This manual provides guidelines for short-term training on the health education component of malaria control in the context of primary health care (PHC) for district level health and community development teams. sogs bas lasts bluode alarotam

Two contains six modules that provide information-authentements as a health wholeh

### on health education areas for planning and managing the educational competing and managing the

The training activity is designed primarily for people working with malaria control programs at local or district levels, although the same material could be used with national staff in the form of a training-of-trainers workshop. A team approach for selecting local or district level participants is suggested. The ideal team should consist of district level staff including the local government primary health care coordinator or manager, a health educator, a disease control worker, and a local government health councillor. In addition, a state or regional malaria control staff member should be included. Relevant community leaders who may be involved in providing structural support and continuity for the program may also be included as workshop participants. The maximum number of participants recommended is 30 (i.e., approximately six local or district teams), because of the participatory training approach used.

### model health education planning and management training workshop. In 1987 **strainers**

These guidelines have been developed by and for trainers or facilitators who are experienced in health education planning and management and in using adult education methods. The number of trainers or facilitators will depend on the number of participants and the background of the trainers. At least one facilitator should be an expert in malaria control. The health education trainers should either have experience in health education or facilitating groups and in conducting experiential learning activities. A statistical Algebra and the Length of Statistics algebra bit of boo

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### Organization

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Each of these LGAs then sent teams to the four-week workshop in July and whereas A The training guide is organized into four sections. The first, or introductory section describes each of the four phases of the workshop 1) Needs Assessment, 2) Course Design and Team Building, 3) Training Workshop and 4) Follow-up Evaluation and Consultation. The malaria modules are found in the second section, and the third section is comprised of the health education sessions. A brief case study of posttraining implementation and follow-up in the Ife Central Local Government Area of Osun State, Nigeria, is presented in the fourth section. The guide concludes with

appendices containing relevant needs assessment forms and documents and sample weekly schedules.

### Content

Generally, the content of this manual is given in outline form. Trainers using the materials should adapt and update them for use in their particular settings. Section Two contains six modules that provide information about malaria as a health problem and about malaria control methods. Section Three contains nine modules and focuses on health education areas for planning and managing the educational component of malaria control programs.

The training activity is designed primarily for people working with malaria control

### The 1990 Workshop

The SE guidelines were developed and field tested in Nigeria in 1990 with a workshop in Oyo town, Oyo State, Nigeria. This workshop was the fourth in a series that had been jointly organized by the African Regional Health Education Center (ARHEC), University of Ibadan; the School of Public Health, University of North Carolina at Chapel Hill (UNC), and the International Health Program Office of the Centers for Disease Control and Prevention (CDC).

These partners, operating under the United States Agency for International Development's Combatting Childhood Communicable Diseases Project, developed a model health education planning and management training workshop. In 1987, 1988, and 1989, with participants from various nations, workshops were conducted with a primary focus on the Expanded Program on Immunization.

The 1990 workshop took the lessons learned from the previous workshops, which had focused mainly on national and state level personnel and programs, and applied them to the priority problem of malaria and to local and district level situations. In the early months of 1990, staff from the African Regional Health Education Center conducted needs assessments in four Local Government Areas (LGAs) of Nigeria including Ife-Central in Osun State, Barkin Ladi in Plateau State, Idah in Benue State and Kaura Namoda in Sokoto State.

Each of these LGAs then sent teams to the four-week workshop in July and August and used the needs assessment data and training input to develop health education action plans. Three other African nations, including Swaziland, The Gambia and Kenya, sent small teams to participate in the 1990 workshop.

Workshop staff included faculty of the African Regional Health Education Center, the UNC School of Public Health, the University of Ibadan, the Centers for Disease Control and Prevention (CDC), the Nigeria Federal Ministry of Health, and the Oyo State Ministry of Health. The intention of the trainers was that each team should

2

implement its plan on return to its site. Trainers from three of the collaborating agencies (ARHEC, UNC, and CDC) conducted follow-up visits to provide consultation and encouragement to ensure plan implementation. After the training, specific malaria control activities were carried out in Ife Central and Kaura Namoda LGAs. A brief case study of the Ife Central LGA experience is at the end of this manual.

### 1.1 Needs Assessment Phase easily public mast bis inplace easily 0.1

#### **Objectives and Overview**

The workshop faculty and participants will:

Identify participants' strengths and weaknesses in knowledge, attitudes, and skills related to planning and management of the health education component of a malaria control program.

· Identify priority areas of interest and needs of the participants.

• Collect information abut participants' local area in terms of population, health care services, malaria control activities, availability of anti-malarial drugs, community member and health worker attitudes, and knowledge and practices about malaria and environmental conditions relating to malaria control.

Identify human and organizational factors in participants' work environment that affect on-the-job performance of health education planning and management tasks.

The purpose of this phase is to collect information about the workshop participants, their learning needs, and the environment in which they work. Activities will be carried out up to 2 or 3 months before the workshop as well as during the first week of training. Methods that can be used to accomplish the objectives include questionnaires, observation checklists, small group discussions, and existing records.

Preparation of workshop schedule outline with daily activities and th solitivityA

Pre-Workshop

• Conduct on-site visits to participants at their locales to collect information using interviews, observation checklists, group discussions, and existing records (see Appendix A for sample data collection instruments).

3

Workshop Start-up

Pre-test on level of knowledge about malaria control and health education.

Assess priority areas of interest and need through focus group discussions with participants from the same locale.

### 1.2 Course Design and Team Building Phase and the measure Acabe Mathematic

and shout malarin control methods. Section Three

#### Objectives and Overview

This phase of the workshop is very important, even if the workshop faculty have worked together before. Besides building team spirit among those who will facilitate the workshop, consensus on all aspects of the workshop should be a key outcome of the planning process. At least 5 working days immediately preceding the workshop should be allocated to this phase.

The components of this phase are described below.

Discussion and analysis of current malaria control problems within the country or countries, implications for health education, available data on malaria control, and any existing health education strategies being used to deal with the malaria problem.

• Review and discussion of preworkshop needs assessment (site visits, surveys, etc.) and agreement on method of integrating this information into workshop design and content.

• Preparation of, and agreement on, technical content and training methods for malaria and health education modules.

Allocation of teaching and other responsibilities among facilitators.

**Review and discussion of workshop evaluation plan.** 

• Preparation of workshop schedule outline with daily activities and the trainers responsible for each module.

• Preparation of field sites for practical activities in communities and clinics.

### Sample Weekly Schedules

Sample weekly schedules for a 4-week workshop demonstrate one way of allocating the activities of the training program. A sample of schedules for a 4-week training program is found in Appendix B.

1.3 Training Workshop Phase

### Training Objectives

Village health

The training objectives are set during the planning week of the workshop with technical malaria resource personnel and health education trainers contributing. Below is an example of training objectives.

At the end of the workshop, participants will possess the skills to:

Assess the magnitude of malaria morbidity and mortality in their respective locality and be motivated to take effective action.

Recognize and appreciate the importance of multi-disciplinary teamwork in health education for malaria control.

• Apply appropriate health education methods to identified malaria control technologies that lend themselves to educational interventions.

Communicate appropriate messages and transfer skills that will enable family members to recognize the signs and symptoms of malaria and seek early treatment.

Delineate the health education implications of a national malaria control program and integrate them into primary health care at the local government area (LGA) or district level.

Plan, implement, manage, and sustain at least one health education strategy for one malaria control method in one target group in their respective localities.

members, and traditional healers

Section three focuses on the health editation implications of malaria control. After first selecting a target group and specific cuhavioral problems in their country or locality, each group of pairicipaints works inrough all the modules within the framework of the chosen problem. The problem chosen is used as the focus for each of the subsequent skills and capabilities developed in the various health education modules. After the modules have over presedied, the participants complete the

### Methods

Sample Weekly Schedules

The methods used in this training guide emphasize applicability and relevance to the needs of the participants in their home localities. The different kinds of methods used are:

Plenary sessions, with lecture presentation, followed by open discussion with contributions from both participants and other facilitators.

Slide presentations.

Small group discussions with facilitators usually the participants are divided by Local Government Area or country.

Presentations by participants, usually based on completed group assignments, followed by questions and answers from the floor.

Fieldwork at sites near the workshop premises (i.e., field testing a questionnaire or observation checklist).

In particular, fieldwork for the practical application of specific skills learned in the modules and for demonstrating the nature of the malaria control problems discussed during the technical presentations, has been found by participants to be useful. After each field visit, a presentation on the findings can be made in the plenary session, and the ensuing discussion can prove to be helpful for illustrating concepts presented in the module.

### Training Modules

In section two, the first modules focus on the technical aspects of malaria. The six modules in this section provide information about national malaria policies and protocols, the epidemiology of malaria, malaria parasitology and entomology, clinical features of malaria, the case management of malaria, and various aspects of malaria control. Fieldwork is part of the last two modules and includes visits to village health workers, primary health care centers, patent medicine dispensaries, household members, and traditional healers.

Section three focuses on the health education implications of malaria control. After first selecting a target group and specific behavioral problems in their country or locality, each group of participants works through all the modules within the framework of the chosen problem. The problem chosen is used as the focus for each of the subsequent skills and capabilities developed in the various health education modules. After all the modules have been presented, the participants complete the prototype action plans they will implement in their respective localities and present them in a plenary session during the final week of the workshop.

The standard format for all modules is as follows:

10 million (10 mil

· Materials Required

Objectives

Estimated Time Estimated Time Content

• Training Methods

Handouts used for the modules, including specific materials or instruments needed for fieldwork, follow the module plan for easy reference and use.

### 1.4 Follow-up Evaluation and Consultation Phase

Follow-up visits are one key to measuring the outcomes of the workshop. Visits provide a monitoring and evaluation tool for implementation activities and encourage and continue the momentum of the malaria education program developed at the workshop. They provide support in terms of technical assistance to the participants and can also help solve problems that may arise during implementation of the plans.

Follow-up activities and evaluation of plan implementation activities should be carried out by workshop faculty members. The timing and duration of these activities will vary depending on the site location (i.e., other countries may be difficult to visit more than once) and the needs of the participants at their field sites. Most visits should probably last 7-10 days per site.

For sites within the same country where most of the facilitators are located, two visits are optimal. The first visit, within the first 3 months of the workshop, should focus on:

- Collecting additional baseline data.
- Integrating the action plans with the existing primary health care (PHC) program.
  - Assisting in community mobilization geared towards malaria control.

• Prioritizing and scheduling malaria control activities.

The second visit, approximately 3-6 months after the workshop, should focus on:

inds of the part cipants in the Presence and a matter provided and the part of the part o

Implementing activities.

Monitoring and evaluating those activities.

For other country sites, one follow-up visit, 3-6 months after the workshop, should assess the status of the malaria control plan developed at the workshop and provide any technical assistance requested by the participants or other personnel involved in the malaria control program.

Presentations by participants, usually based on completed group assignments followed by questions and answers from the floor.

Handouts used for the modules, including specific materials or instruments needed for fieldwork in follows the module plane for each and its search is showhist. An other search and the search of the the search of

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Training Modules

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Section three focuses on the health education will applied and the selecting a target group and specific behavioral problems in their country or (CHR) (Magnification applied applied

Maiam Modules

I be component of the training program was designed to ensure that all participants operation a basic and common understanding of the nature and control of melaria. The testion of the guide: are outlined in this section of the guide:

MI National Malaria Policies

M2 Malaria Epidemiology

M3 - Parasitology and Entennedorg

M4 - Clinical Fradults

M5 - Field Cast, Minnermean

Michael Malaria Modules

Prioritizing and scheduling mais na control activities.

The second visit, approximately 3-6 months after the workshop, should focus on:

Implementing activities.

Monitoring and evaluating those accidities

For other country sites, but follow-up visit is 6 (acaust after the workshop, should assess the status of the malacia control pion developed at the workshop and provide any technical assistance requisted by the providents or other personnel involved in the malaria control program.

### Malaria Modules

### Malaria Modules

This component of the training program was designed to ensure that all participants shared a basic and common understanding of the nature and control of malaria. The following modules are outlined in this section of the guide:

M1 - National Malaria Policies

M2 - Malaria Epidemiology

M3 - Parasitology and Entomology

M4 - Clinical Features

M5 - Field Case Management

M6 - Field Malaria Control

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Malaria Modules

Objectives

Upon completion of this module, the participants will be able to:

- 1. State the reasons for a national malaria policy.
- 2. Outline the stages in the preparation of a national malaria policy.
- 3. List the components of the National Malaria Policy in Nigeria.
- 4. Describe the National Malaria Policy in Swaziland.
- 5. Describe the Current Malaria Protocol in The Gambia.
- 6. Outline the National Malaria Policy in Kenya.

### Materials Required

· National Malaria Policy Guidelines

### Estimated Time

1 hour 30 minutes

| M1: National Malaria Policies  |   |  |
|--|---|--|
| ebodteM g Content 2. Malaria Epide   | Training Methods  |  |
| <ul> <li>Importance of malaria.</li> <li>Proper action and followup.</li> <li>Systematic approach.</li> <li>Uniformity of action.</li> <li>Expression of philosophy (on malaria).</li> <li>Record purposes.</li> </ul>   | Currently in <b>Didactic presentation</b> of <b>Didactic presentation</b><br>Since 1985 a protocol <b>noiscussid</b><br>Protocol includes:<br>D All fever cases during rainy sea<br>as mataria.<br>D Chloroquine recommended as N |  |
| <ul> <li>Formation of a committee of experts (technical<br/>and administrative) should be multi-sectoral and<br/>include health leaders who will later implement<br/>policy.</li> <li>Activities of the committee — definition of the<br/>problem, identification of risk factors, situation<br/>analysis, prescription of intervention,<br/>determination of resources, monitoring, and<br/>evaluation.</li> </ul>  | Didactic presentation   |  |
| <ul> <li>Early recognition and adequate treatment of cases of malaria.</li> <li>Prophylactic use of effective anti-malarial drugs during pregnancy.</li> <li>Periodic training of health workers.</li> <li>Provision of adequate quantities of recommended anti-malarial drugs.</li> <li>Community mobilization and health activities.</li> <li>Maintenance of trained malaria control staff at the Federal and State Ministries of Health.</li> <li>Support of operational research leading to the improvement of malaria control.</li> </ul> | <ul> <li>Didactic presentation</li> <li>Slides</li> <li>Discussion</li> </ul>   |  |
| <ul> <li>Historical overview of malaria situation in<br/>Swaziland (geographical and seasonal<br/>variations, unstable malaria).</li> <li>Current strategies include: <ul> <li>Vector control.</li> <li>Restricted chloroquine usage because of<br/>70-80% chloroquine resistance.</li> <li>Active case detection.</li> <li>Health education.</li> <li>Passive case detection.</li> <li>Chemoprophylaxis for all pregnant women.</li> </ul> </li> </ul>  | <ul> <li>Didactic presentation</li> <li>Questions and answers</li> </ul>  |  |

| M1: National Malaria Policies  |   |  |
|--|---|--|
| shorts M g Content National Malar  | Policia Training Methods  |  |
| <ul> <li>Currently no national policy in The Gambia but since 1985 a protocol is in place.</li> <li>Protocol includes:</li> <li>All fever cases during rainy season treated as malaria.</li> <li>Chloroquine recommended as malaria treatment for all.</li> <li>Use of impregnated bednets being currently tested in the country.</li> </ul> | Didactic presentation     Questions and answers     descripts of an of a structure of a str   |  |
| <ul> <li>Historical overview of malaria situation in Kenya (geographical and seasonal variations, ranges from hypo to holoendemicity).</li> <li>Current strategies include:</li> <li>Vector control insecticide, larvicide; and environmental management.</li> </ul>   | Didactic presentation<br>Didactic presentation |  |
|  | 2.119969/athukka.28849/bitiogooa  |  |
| teriologick LonnolDiscoberginut<br>terioles<br>trutices<br>terificat<br>staff at<br>staff at<br>staff<br>at<br>to the<br>teriological Time   | Prophylactic use of effective anti-ritest<br>luring pregnancy.<br>Periodic training of health workers<br>Provision of adequate quantities of<br>ecommended anti-malarial drugs.<br>Community mobilization and health ac<br>Maintenance of trained malana control<br>he Federal and State Ministnes of He<br>Support of operational research leadin<br>mprovement of malaria control.  |  |
| In Didactic presentation<br>Questions and answers<br>ause of<br>t women.   | <ul> <li>Historical overview of malaria situation</li> <li>Swaziland (geographical and seasonal</li> <li>Current strategies include.</li> <li>Dector control</li> <li>Vector control</li> <li>Restricted chloroquine usage bec</li> <li>70-80% chloroquine resistance.</li> <li>Active case detection.</li> <li>Health education.</li> <li>Chemoprophylaxis for all pregnan</li> </ul>  |  |

|                         | M2: Mal  | aria Epidemiology   |      |
|-------------------------|--|---|------|
| bjectives               | Braivadeekiisginoo natoe<br>1. What somataria 2000<br>2. How is it transmitted<br>Lecture and dibbubsion | finition: Mal <b>aria B<sup>r</sup>à''de/miùrficable disease</b><br>used by a parasite d <b>àiléd'Pièsmodi</b> um<br>ciparum and transmitted by a mosquito known<br>Aropheles.  |      |
| Upon com                | pletion of this module, the  | participants will be able to:   |      |
| 1.                      | Describe now mataria is t  | rer and body pains manifest.  |      |
| tions f<br>the of<br>3. | Explain three reasons why<br>importance.<br>List four factors responsib                                  | y malaria is a disease of great public health<br>ole for malaria's occurrence in various communi  | itie |
| 4.                      | Identify four factors that a   | are amenable to simple health education interver  | ntic |
|                         |  |   |      |
| laterials R             | eauired  | RESISTANCE OF VECTORS TO PESTICIDES.  |      |
| · None                  |  | vers of Endermoly: Marana is anderno in it<br>ours at all times in a community<br>nen the malaria parasite rate is:<br>Over 75% in children - INTENSE-ENDEMIC   |      |
| stimated T              | Time   | Between 50% and 75% - HIGH-ENDEMIC<br>Between 10% and 50% - MODERATE-<br>ENDEMIC<br>Less than 10% - LOW-ENDEMIC   |      |
| s <i>timated</i> 7      | Time   | Between 50% and 75% - HIGH-ENDEMIC<br>Between 10% and 50% - MODERATE-<br>ENDEMIC<br>Less than 10% - LOW-ENDEMIC<br>wironmental Factors: Stable and unstable<br>Breeding habitat such as stagnant water<br>Season  |      |
| s <i>timated</i> 7      | Time   | Between 50% and 75% - HIGH-ENDEMIC<br>Between 10% and 50% - MODERATE-<br>ENDEMIC<br>Less than 10% - LOW-ENDEMIC<br>whomental Factors: Stable and unstable<br>staria.<br>Breeding habitat such as stagnant water<br>Season.<br>Ecology.<br>Temperature between 15°C and 32°C.  |      |
| s <i>timated</i> 7      | Time   | Between 50% and 75% - HIGH-ENDEMIC<br>Between 10% and 75% - HIGH-ENDEMIC<br>ENDEMIC<br>Less than 10% - LOW-ENDEMIC<br>Nironmental Factors: Stable and unstable<br>stagnant water<br>Season.<br>Ecology<br>Ecology<br>Temperature between 15°C and 32°C.<br>Environmental sanitation practices.<br>Beliefs.<br>House siting and designing.   |      |
| s <i>timated</i> 7      | Time   | Between 50% and 75% - HIGH-ENDEMIC<br>Between 10% and 50% - MODERATE-<br>ENDEMIC<br>Less than 10% - LOW-ENDEMIC<br>wironmental Factors: Stable and unstable<br>Breeding habitat such as stagnant water<br>Season,<br>Ecology<br>Temperature between 15°C and 32°C<br>man Behavior:<br>House siting and designing,<br>Coupation,<br>Culture such as water storage habits or food<br>processing activities. |      |

| M2: Malaria Epidemiology   |   |  |  |
|--|---|--|--|
| aria Epidemiologinanoo   | Training Methods  |  |  |
| <ul> <li>Definition: Malaria is a communicable disease caused by a parasite called <i>Plasmodium falciparum</i>, and transmitted by a mosquito known as <i>Anopheles</i>.</li> <li>Man-mosquito contact: Man contracts the disease when bitten by infected mosquito. After a latent period of 7 days, symptoms such as fever and body pains manifest.</li> </ul>   | <ul> <li>Brainstorming:</li> <li>1. What is malaria?</li> <li>2. How is it transmitted</li> <li>Lecture and discussion</li> </ul>   |  |  |
| <ul> <li>Malaria affects people of all ages irrespective of sex, color, or race in endemic areas.</li> <li>Malaria is a major cause of death among children and is responsible for absenteeism from school and work.</li> <li>Resurgence of malaria because of: <ul> <li>Changing environmental conditions.</li> <li>Drug-resistance of parasites.</li> <li>Resistance of vectors to pesticides.</li> </ul> </li> </ul>  | <ul> <li>Discussion and presentation of<br/>global data on malaria</li> <li>Participants present status of<br/>malaria in their respective areas</li> <li>Lecture and discussion</li> </ul> |  |  |
| <ul> <li>Levels of Endemicity: Malaria is endemic if it occurs at all times in a community.</li> <li>When the malaria parasite rate is:</li> <li>Over 75% in children - INTENSE-ENDEMIC</li> <li>Between 50% and 75% - HIGH-ENDEMIC</li> <li>Between 10% and 50% - MODERATE-ENDEMIC</li> <li>Between 10% - LOW-ENDEMIC</li> <li>Less than 10% - LOW-ENDEMIC</li> <li>Environmental Factors: Stable and unstable malaria.</li> <li>Breeding habitat such as stagnant water.</li> <li>Season.</li> <li>Ecology.</li> <li>Temperature between 15°C and 32°C.</li> <li>Human Behavior:</li> <li>Environmental sanitation practices.</li> <li>Beliefs.</li> <li>House siting and designing.</li> <li>Occupation.</li> <li>Culture such as water storage habits or food</li> </ul> | <ul> <li>Brainstorming</li> <li>Lecture and discussion</li> </ul>   |  |  |
| processing activities.<br>Insect Behavior: Discussed in the Malaria<br>Parasitology and Entomology module.   |   |  |  |

| M2: Malaria Epidemiology  |   |                      |
|---|---|----------------------|
| Content moth 3 bris ypol  | Training Method                                       | s                    |
| <ul> <li>Human-vector contact behaviors.</li> <li>Vector control behaviors.</li> <li>Treatment behaviors.</li> <li>Prophylaxis behaviors.</li> </ul>  | <ul> <li>Brainstorming</li> <li>Discussion</li> </ul> | lifectives           |
| Mechanical means of transmission<br>of side of flive anugioitrag a  |   |                      |
| The different stages of the mana parasite in  |   | Ι.                   |
| malaria is transfillifectes in princip bas evitade Di   |   |                      |
| f the malaria parasite and this driffs that Sifect if an<br>the hogen numbers stated to special oblicing the second of the second |   |                      |
| Differentiate between chromouine and Fansider.<br>- The material votor (Anopheles species) and identify<br>- Use cycle of the Ancoheles mosquito.<br>- Category description of the states.  |   |                      |
| resortant habits of the Anopheles mestal of the Anopheles   | List three hobits of the                              |                      |
| e amenable to simple health (education intervention.<br>rooblue bos rooblu = 1<br>apos rooble = 0   |   |                      |
|   |   | <b>laterials Red</b> |

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Estimated Time

• .

2 hours 30 minutes

17



| M3: Parasitology and Entomology   |   |  |
|---|---|--|
| Content seatures the  | C AM Training Methods   |  |
| • Names of parasites that cause malaria could en.   | <ul> <li>Brainstorming</li> <li>Didactic presentation</li> </ul>  |  |
| <ul> <li>Life cycle of the parasite in man and<br/>mosquitoes.</li> <li>Mechanical means of transmission.</li> </ul>  | <ul> <li>Lecture</li> <li>Discussion</li> </ul>   |  |
| <ul> <li>The different stages of the malaria parasite in man:</li> <li>Sporozoites.</li> <li>Active and dormant liver stage.</li> <li>Blood schizonts.</li> <li>Gametocytes.</li> <li>Side effects of drugs are an important consideration.</li> <li>Differentiate between chloroquine and Fansidar.</li> </ul> | Guided discussion<br>1. Restutions and pictures<br>2. List four common symplication.<br>3. Carry out clinic and con-<br>recognize the signs and |  |
| <ul> <li>Life cycle of the Anopheles mosquito.</li> <li>Different breeding sites.</li> </ul>  | Guided discussion     Slides and pictures uper 2 statement  |  |
| <ul> <li>Important habits of the Anopheles mosquito include:</li> <li>□ Feeding on blood meal.</li> <li>□ Indoor and outdoor.</li> <li>□ Flight range.</li> </ul>   | Guided discussion   |  |
| <ul> <li>Clearing of breeding sites.</li> <li>Prevention of man and mosquito contact by closing doors, using nets, etc.</li> </ul>  | Brainstorming   |  |

|   |   | AT has vanishered . 214   |
|---|---|---|
| We have some an operation of the second s | aboritati galata 5 M4: C                          | linical Features  |
|   | Brainstorming<br>Didactic presentation            | Names of parasites that cause malaria   |
| Objectives  |   | Lite cycle of the parasite in man and mosquitoes.   |
| Upon co   | mpletion of this module, th                       | e participants will be able to:   |
| 1.  | Recognize the signs and                           | symptoms of malaria.  |
| 2.  | List four common symptimum induced complications. | coms of malaria and recognize at least three malaria-   |
| 3.  | Carry out clinic and con recognize the signs and  | nmunity-based health education to enable mothers to symptoms of malaria in children.  |
| Materials R   | equired   | Life cycle of the Anopheles mosquito.   |
| · None  | Guided disclosure                                 | Important habits of the Anophele's mosquito<br>include:<br>Point Seding OritBlobe Halesh stores or No. 2014<br>Co. Indoor and outdoor.<br>Co. Flight range. |
| Estimated T   | Time  |   |

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Estimated Turk

2 Barry 12 Charles

20

| M4: Clinical Featu   | res   |
|--|---|
| Case Managem Instro  | Training Methods  |
| <ul> <li>Early signs and symptoms of malaria in children:</li> <li>Inability to play.</li> <li>Lack of appetite.</li> <li>Tiredness.</li> <li>Body temperature above 37.5°C.</li> <li>Vomiting.</li> </ul>                   | <ul> <li>Lectures</li> <li>Demonstration</li> <li>Role playing</li> <li>Group discussion</li> </ul> |
| · Complications of malaria:  | O Mothers of children under 5   |
| <ul> <li>□ Convulsion.</li> <li>□ Collapse.</li> <li>□ Coma.</li> </ul>  | nys vinis siff strings587<br>Leal bar of yillog \$1668 sellers                                      |
| □ Anaemia.<br>□ Jaundice.  | 2. Describe the three level   |
| needs assessment on malaria symptoms as  | 3. Accurately describe the  |
| group discussions and interviews.<br>Symptoms such as:   | 4. Describe those things the malaria at home.   |
| <ul> <li>Grivering.</li> <li>High body temperature.</li> <li>Weakness of the body.</li> <li>Loss of appetite.</li> </ul>   | 3. Recognize when to refer  |
| <ul> <li>Headache.</li> <li>Vomiting.</li> <li>For treatment of malaria, use drugs with caution<br/>as they are toxic.</li> </ul>  | aterials Required   |
| Warn mothels about the dangers of over or of the<br>under dosage with chloroquine — eye problems,<br>disease resistance, heart problems, even death.<br>Patent medicine sellers:<br>C — Train them on the correct dosages of | stimated Time   |
| chloroquine for malaria for all age groups,<br>and encourage them to inquire about<br>intended users, so they can self the current<br>dosage to their buyers.  |   |
|  |   |



2 hours

| M5: Field Case Management  |  |  |
|--|--|--|
| abortrading Content  | Training Methods   |  |
| <ul> <li>Early symptoms of malaria:</li> <li>□ For children: inactivity, loss of appetite, and vomiting in older children.</li> <li>□ For adults: fever, lassitude.</li> </ul> | <ul> <li>Lectures</li> <li>Discussion</li> <li>Field visits to:</li> <li>Village health worker.</li> </ul>   |  |
| <ul> <li>Things to do at home:</li> <li>□ For fever, removal of clothing, tepid</li> <li>□ energing famping and giving cold drinks</li> </ul>                                  | <ul> <li>Traditional healers.</li> <li>A local health facility.</li> <li>Mothers of children under 5</li> </ul>  |  |
| sponging, ranning, and giving cold drinks.   | L Mothers of children under 5  |  |
| If a mother says it works, the health workers<br>should be taught to say that some of them   | Patent medicine sellers.   |  |
| are known to suppress the disease and<br>"should be used with caution." Patients<br>should be encouraged to take drugs of  | D Train tremito equitate parents w<br>medicating tolute the correct do<br>chloroquine  |  |
| <ul> <li>proven curative action.</li> <li>Mothers should take children with malaria to the nearest health facility for chemotherapy, but if</li> </ul>                         | Discourage undir use of chlorom<br>injections accept in cases of carts<br>convulsion   |  |
| they have to treat them at home (or before going<br>to the health facility), mothers must know and   | Train them to readgnize when to     patients to the next feyel of care   |  |
| use the right regimen. (See example of<br>illustrated treatment chart at end of module.)   |  |  |
| Things to discourage:  | Comment of the second sec |  |
| <ul> <li>□ Placing the child near fire.</li> <li>□ Using cow's urine.</li> <li>□ Using balms and oil.</li> </ul>   | eld Visit Guidelines   |  |
| <ul> <li>Using additional (warm) clothing.</li> <li>Warn mothers about the dangers of over- or</li> </ul>  | iest one week prior tauhastraining s   |  |
| under-dosage with chloroquine — eye problems,<br>disease resistance, heart problems, even death.   | <ul> <li>i tablet</li> </ul>   |  |
| <ul> <li>Patent medicine sellers:</li> <li>Train them on the correct dosages of</li> </ul>   | <ul> <li>Village Health workstaar 4</li> </ul>   |  |
| and encourage them to inquire about<br>intended users, so they can sell the current  | II Traditional healers, fallas j   |  |
| dosage to their buyers.  | A local health facility. Is : -  |  |
| (This section continued on next page)  | D Mothers of children under 5 years  |  |

This is a sample from Nigeria. Trainers should substitute current contractions in history to countries.

Participants are divided into five small groups, each accompanied by one trainer. after collecting information on the attached interview schedules and checklists, each team will summarize its findings to share with the whole group.

| abontent Content   | Field Case ManageméTraining Methods   |
|--|---|
| Teach about the dangers<br>dosage of chloroguine —   | of over- or under- (Listed on previous page)  |
| disease resistance, heart  | vomiting in older children. even assitude   |
| Teach parents and buyer  | Things to do at home:   |
| the correct dosages, espe<br>evidence that they self-m                                       | ecially if there is a second division of the second s  |
| Health workers within the LGA  | Real Keenesters over herbel, medicides (lauhollaun) weers   |
| Train them on the correct<br>chloroquine for all ages.                                       | If a mother says I works, the health worke to apacob<br>should be laught to say that some of them   |
| Train them to educate pa<br>medicating to use the cor<br>chloroguine.                        | rents who are self-<br>rect dosages of  |
| <ul> <li>Discourage their use of c<br/>injections except in cases<br/>convulsion.</li> </ul> | hloroquine<br>s of coma or to the single of the matter of the single of the |
| Train them to recognize v<br>patients to the next level                                      | when to refer 2 stole (10) entrop is ment taken of every whith taken to the ward taken must be and the stole of care.   |

### Field Visit Guidelines

At least one week prior to the training session, trainers will organize the required field visits to:

- □ Village Health workers.
- .
- $\Box$  Traditional healers.
- $\Box$  A local health facility.
- □ Mothers of children under 5 years of age at home. Devolution of below of the state of the sta
- □ Patent medicine sellers.

Participants are divided into five small groups, each accompanied by one trainer. after collecting information on the attached interview schedules and checklists, each team will summarize its findings to share with the whole group.

| DOSI           | ES FOR         | M/                | ALA    | RI  | AN   | <b>MEI</b>   | DIC  | ATH  | ONS   | 5    |
|----------------|----------------|-------------------|--------|-----|------|--------------|------|------|-------|------|
| Member N       | amee           | D                 | AY ONE |     |      | DAY TW       | 0    | DA   | YTHRE | E    |
|                |                | MOR.              | AFT. E | VE. | MOF  | R. AFT.      | EVE. | MOR. | AFT.  | EVE  |
|                |                | ž <sup>i</sup> te | -OF    | ふど  | 344K | $\mathbf{O}$ | 3.F  | 7"K  | ÷O    | 2    |
| Ø              | NIVAQUINE TAB. | 22                |        | T   | ••   |              |      | ••   | T     |      |
|                | PANADOL TAB.   |                   |        |     |      | • •          |      |      |       | •    |
| ALATA          | MULTIVITE TAB. | •                 | -      |     | •    |              |      | •    |       |      |
| ADULT          | PHENERGAN TAB. | •                 |        |     | •    |              |      | •    |       |      |
| **             | NIVAQUINE TAB. | ••                |        |     | •    |              | •    | •    |       |      |
| SE             | PANADOL TAB.   | •                 | •      | •   | •    | •            | •    | •    | •     | •    |
|                | MULTIVITE TAB. | ٠                 |        |     | •    |              |      | •    |       |      |
| . SCHOOL CHILD | PHENERGAN TAB. |                   |        |     | •    |              |      | •    |       |      |
|                | NIVAQUINE SYR. | -                 |        |     | -    | - * - · ·    | -    | -    |       | 13 a |
| A STA          | PANADOL TAB.   | •                 | •      | 0   | 0    | •            | 0    | •    | 0     | 0    |
| 4-1            | MULTIVITE SYR. | -                 | -      |     | 1    |              |      | -    |       |      |
| CHILD UNDER 5  | PHENERGAN SYR. | 100               |        |     | -    |              |      | -    | -     |      |
|                | NIVAQUINE SYR. | -                 | ·      |     | 0    |              | 0    | 0    |       |      |
|                | PANADOL TAB.   | •                 | •      | •   |      | •            | •    | •    | •     |      |
| 51             | MULTIVITE SYR. | 0                 |        |     | 0    |              |      | 0    |       |      |
| The th         | PHENERGAN SYR. | -                 | 1      | 1   | 10   | 1            |      | 0    |       |      |

# A Pictorial Standing Order for Malaria Treatment\*

Nobody Community Local Government

Other (please specify) DEFINITION OF ABBREVIATIONS AND SYMBOLS

|                   |      |           | DRAWING                                  |   | DEFINITION        |
|-------------------|------|-----------|--|---|-------------------|
| What other occupa | MOR. | Morning   | na an a |   | l tablet          |
| Ċ.                | AFT. | Afternoon |  | = | 2 tablets         |
| 3                 | EVE. | Evening   | ::                                       | - | 4 tablets         |
|                   | TAB. | Tablet(s) | 0  | - | 1 tablet          |
|                   | SYR. | Syrup     | •  |   | tablet            |
|                   |      |           |  | - | 5 ml. teaspoon    |
|                   |      |           | rande                                    | = | teaspoon (2.5 ml) |
| ORT Ach           |      |           |  |   |                   |

\* This is a sample from Nigeria. Trainers should substitute current charts from their own countries.

.7. What symptoms and signs does VHW use to recognize and diagnose midaria?

Source: Training Manual for Voluntary Health Workers in Community-Based Health and Family Planning Programmes. Programme in Reproductive and Family Health, University of Ibadan, Nigeria, 1989.



Field Visit Guidelines

SNORMYS CRA SNOLTANYIREA TO MOTTINITED

At least one week prior to chemicaling versione, trainers will organize the received field visits.

|                          |  | noodisilA | Ċ: |
|--------------------------|--|-----------|----|
|                          |  |           |    |
|                          |  |           |    |
|                          |  |           |    |
| A local health meansy in |  |           |    |
|                          |  |           |    |

\* This is a sample from Nigeria. Trainers should substitute current charts from high registrown countries.

Participants are divided into five small groups, each accompanied by one trainer after collecting information on the attached interview schedules and checklists, each team will summarize its findings to share with the whole group.

| oup 1: Member Names  | Name of I  |  |  |
|--|--|--|--|
| r Village Health Worker Visit  | list) and allequacy  | Infants<br>Other und <b>er 5 yr</b> s.<br>School child   | a.<br>b.   |
| a. Name of VHW   | an <sup>de</sup> mentant and an          | AGURS  | <u>, D</u>   |
| b. Age (if known)Yrs.  |  |  |  |
| [W have or experience in the management and  |  | nat limitations or prol<br>ntrol of malaria? (Pl   |  |
| When did VHW start this PHC work?  | 19   | (years ago)  |  |
| and a second sec |  |  |  |
| Who sponsored the VHW for training?  |  |  |  |
| Who is the VHW responsible to for the pre-   | esent PHC work he  | e/she is doing?  | .0   |
| Who is the VHW responsible to for the pre<br>Nobody Community Loc<br>Other (please specify)  | esent PHC work he<br>al Government   | e/she is doing?  |  |
| Who is the VHW responsible to for the pre<br>Nobody Community Loc<br>Other (please specify)<br>What other occupation does this VHW have  | esent PHC work he<br>al Government<br>e or do ordinarily?                    | e/she is doing?<br>and types of records<br>interbased records<br>if fally-sheets<br>hers (specify) | 0.<br>Sel<br>Sel   |
| Who is the VHW responsible to for the pre<br>Nobody Community Loc<br>Other (please specify)<br>What other occupation does this VHW have  | esent PHC work he<br>al Government<br>e or do ordinarily?                    | e/she is doing?<br>and types of recortos<br>in tally-sheets<br>hers (specify)                      | 01<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 |
| Who is the VHW responsible to for the prevent of t                                | esent PHC work he<br>al Government<br>e or do ordinarily?<br><br>der?<br>Fa  | e/she is doing?  | G. VI<br>Sel<br>Ott                                      |
| Who is the VHW responsible to for the prevent of t                                | esent PHC work he<br>al Government<br>e or do ordinarily?<br><br>ader?<br>Fa | e/she is doing?  |  |

| What drugs does the VHW use to treat malaria? (List names and dosages for each as   |   |   |  |  |  |  |  |
|---|---|---|--|--|--|--|--|
| group.)   |   |   |  |  |  |  |  |
|   | Name of Drug                                      | Dosage  |  |  |  |  |  |
| a. Infants  |   |   |  |  |  |  |  |
| b. Other under 5 yrs.   |   | Village Realth Worker Vist  |  |  |  |  |  |
| c. School child   |   | ·····   |  |  |  |  |  |
| d. Adults   | · · · · · · · · · · · · · · · · · · ·             | UTTVLE CONSTANT S   |  |  |  |  |  |
|   |   |   |  |  |  |  |  |
| What limitations or proble<br>control of malaria? (Pleas  | ems does the VHW have on<br>se list ALL.)         | r experience in the management a  |  |  |  |  |  |
| a   | 21 25100  | Vilor die VIIV san die 1910 v   |  |  |  |  |  |
| h   |   |   |  |  |  |  |  |
| D   |   |   |  |  |  |  |  |
|   |   | Who sponsored the VIIW for the  |  |  |  |  |  |
|   |   |   |  |  |  |  |  |
| 4   |   |   |  |  |  |  |  |
| u   |   |   |  |  |  |  |  |
| ·   |   |   |  |  |  |  |  |
|   |   |   |  |  |  |  |  |
| he/she is doing?  | for the present PHC work                          | Who is the VHW responsible to   |  |  |  |  |  |
| What types of records of t  | patient management does V                         | WHV is the VHW responsible to MW/WHV weep?  |  |  |  |  |  |
| What types of records of p<br>Home based records  | patient management does V                         | Who is the VHW responsible to<br>Nobody Considered<br>Other (please specify)  |  |  |  |  |  |
| What types of records of p<br>Home based records<br>Self tally-sheets   | patient management does V                         | Who is the VHW responsible to<br>NobodyControl of MW/<br>When (please specify)  |  |  |  |  |  |
| What types of records of p<br>Home based records<br>Self tally-sheets<br>Others (specify)   | now OH9 means of not<br>patient management does V | Who is the VHW responsible to<br>MobodyCommunity<br>Other (please specify)  |  |  |  |  |  |
| What types of records of p<br>Home based records<br>Self tally-sheets<br>Others (specify)   | patient management does V                         | Who is the VHW responsible to<br>Nobody Community<br>Other (please specify)   |  |  |  |  |  |
| What types of records of p<br>Home based records<br>Self tally-sheets<br>Others (specify)   | patient management does V                         | Who is the VHW responsible to<br>Nobody Community<br>Other (please specify)   |  |  |  |  |  |
| What types of records of p         Home based records         Self tally-sheets         Others (specify)  | now OH9 means of not<br>patient management does V | Who is the VHW responsible to<br>NobodyCommunity<br>Other (please specify)  |  |  |  |  |  |
| What types of records of p<br>Home based records<br>Self tally-sheets<br>Others (specify)<br>Does VHW make any refe   | patient management does V<br>                     | Who is the VHW responsible to<br>Nobody Community<br>Other (please specify)   |  |  |  |  |  |
| What types of records of p         Home based records         Self tally-sheets         Others (specify)         Does VHW make any refer  | patient management does V<br>                     | Who is the VHW responsible to<br>NobodyCommunity<br>Other (please specify)  |  |  |  |  |  |
| What types of records of p         Home based records         Self tally-sheets         Others (specify)         Does VHW make any refer  | patient management does V                         | Who is the VHW responsible to<br>Nobody Community<br>Other (please specify)   |  |  |  |  |  |
| Self tally-sheets         Others (specify)         Does VHW make any referred         If yes, how and to whom?  | patient management does V                         | Who is the VHW responsible to<br>NobodyCommunity (equal to the community of the communit |  |  |  |  |  |
| What types of records of p<br>Home based records<br>Self tally-sheets<br>Others (specify)<br>Does VHW make any refe<br>If yes, how and to whom?   | patient management does V<br>                     | Who is the VHW responsible to<br>NobodyCommunity<br>Other (please specify)<br>  |  |  |  |  |  |
| What types of records of p         Home based records         Self tally-sheets         Others (specify)         Does VHW make any refer         If yes, how and to whom?                                   | patient management does V                         | Who is the VHW responsible to<br>NobodyCommunity<br>Other (please specify)?qeak WHY<br>700  |  |  |  |  |  |
| What types of records of p         Home based records         Self tally-sheets         Others (specify)         Does VHW make any refe         If yes, how and to whom?                                    | patient management does V                         | Who is the VHW responsible to<br>NobodyCommunity<br>Other (please specify)?qeak WHY<br>What other occupation does this<br>What other occupation does this<br>Cherrs (list)  |  |  |  |  |  |
| What types of records of p         Home based records         Self tally-sheets         Others (specify)         Does VHW make any refe         If yes, how and to whom?         On what illness grounds of | patient management does V<br>                     | /HW keep?   |  |  |  |  |  |

.

14. Does referral system work both ways (forth and back)? Yes \_\_\_\_\_ No\_\_\_\_\_ Comment: \_\_\_\_\_

has preventive measures does she take against malaria for herself and for her

Observations

- roup 2: Member Names
- 1. Drug Kit: For antimalarial drug contents (list) and adequacy.

what drags (if any) doot she down at home for mallelin day any of charge an remound to

- 2. Referral form, if any, and its adequacy (two way?, etc.).
  - nospitals/clinic Patent medicine shops Pharmacy Open Markets
    - . How does she recognize malaria in her child? (List signs and symptoms used.)
- 3. Record forms and their adequacy.

(huers (specify)

 How does she manage malaria in her child? (List, including drugs if any) may but Hazrboy rol circlem isort of and nov agarb to segurab but amon an adiress?
 (C rabot) Mac.

Child

- 5. When (on what condition) does she decide to take her child to a hospital/clinic for malaria treatment?
- 6. a. Has she experienced childhood convulsion in her family (children)?
   6. Yes
   6. How did or would she manage childhood convulsion? (List step by step what she
| What drugs does the VHAV use to treas an brief of 150 names and dosages for each tgo |  |                    |  |  |  |  |
|--|--|--------------------|--|--|--|--|
| ro   | roup 2: Member NamesName of Firing Dosage  | anditarrow         |  |  |  |  |
|  | a. Infants   |                    |  |  |  |  |
| or   | For anninalarial drug contents (list) and adequacy   | Drug Kit           |  |  |  |  |
| or   | or mother of under-5-year-old child  |                    |  |  |  |  |
|  |  |                    |  |  |  |  |
| •  | a. Name  |                    |  |  |  |  |
|  | b. Age (if known)(   |                    |  |  |  |  |
| •  | What is her occupation?  |                    |  |  |  |  |
| •  | How does she recognize malaria in her child? (List signs and symptoms use                      | ed.)               |  |  |  |  |
|  | How does she manage malaria in her child? (List, including drugs if any)                       |                    |  |  |  |  |
|  | When (on what condition) does she decide to take her child to a hospital/climalaria treatment? | nic for            |  |  |  |  |
|  | a. Has she experienced childhood convulsion in her family (children)?                          | C3585 <sup>2</sup> |  |  |  |  |

7. What preventive measures does she take against malaria for herself and for her children? Self

What drugs (if any) does she keep at home for malaria and for other diseases? 8. Malaria

Other diseases\_\_\_\_\_(vne til second add ni man add ao?

- What are her usual sources for these drugs? (Please check.) 9. Hospitals/clinic\_\_\_\_ Patent medicine shops\_\_\_\_ Pharmacy\_\_\_\_ Open Markets\_\_\_\_\_ Others (specify)
- 10. How are the drugs usually paid for? By herself \_\_\_\_\_ By her husband or children's father(s) \_\_\_\_\_ Others (specify)
- 11. Describe the name and dosages of drugs you use to treat malaria for yourself and your child (under 5). a. Self\_\_\_\_\_\_\_

.

b. Child

**Observations** 

Drugs kept at home (request to be shown). 1.

31

2. Drugs kept at home but not presented (native medicines, etc.) if seen.

What preventive measures does she take against malaria for herself and for her

childtenV

3. Window mosquito screening.

.

What drugs (if any) does she keep at Lome for malaria and for other distases? " Malaria Malaria

For the man in the house (if any)

1. What native drugs are used for malaria? For prevention\_\_\_\_\_\_

| For treatment         | Pharmacy            | Patent medicine shops | Hospitals/clinic |
|-----------------------|---------------------|-----------------------|------------------|
|                       |                     |                       | Others (specify) |
| LINE COUSS SHE FORCES | JAZ DIRAKINA DI DEI | CIGRO TELESSENS AND S | ATTACK CARLES    |

2. What are the limitations of western medicine for malaria treatment and control? (Please list)

Describe the number and slosages of daugs you use to treat malaria for yoursolf and your child. (under 5).
 How is malaria fever acquired?

3. How is malaria fever acquired? (Please list)

Observations

Would do.)

|            | Case Management Interview Schedule<br>and Observation Checklist<br>for Malaria Control Health Education Field Visit   |         |
|------------|---|---------|
| Gro        | up 3: Member Names  | _       |
| Far        | b. It yes, please indicate what these are   |         |
| FOr        | Local Government Health Facility Visit  |         |
| <b>1</b> . | Name and location (including LGA) of health facility.   | ni      |
| <b>2.</b>  | What range of services is given at this health facility?<br>Out-patient services<br>House visit services<br>In-patient services (No. of beds)<br>Others (please list) |         |
| 3.         | What symptoms and signs do you use in diagnosing malaria in this health facility?<br>a. In children (list)  |         |
|            | b. In adults (list)   | -       |
|            | and by age and mornibility) at this health facting for the pretexting 6 mondus.   | -       |
| 4.<br>chil | What drugs, methods and dosages do you use for treating malaria in this health facilit<br>a. For infants  | y?<br>- |
| UIIII      | c. For school-age children  |         |
| 5.         | <ul> <li>d. For adults</li></ul>  | _       |

| Case Management Interview Schedule  |           |
|---|-----------|
| Drugs kept of means out HSINGSANS HSINGVASARS on bries of see                   |           |
| for Malaria-Control Health Education Field Visit                                |           |
|   |           |
| · Member Names  | Group-3   |
|   |           |
| d Government Health Facility Visit  |           |
| e and location (including LGA) of health facility.                              |           |
| the man in the bouse (if any)   |           |
|   |           |
|   |           |
|   |           |
|   |           |
| What are the funitations of western medicine for malaris (reatment and control? |           |
|   | 5. W ha   |
| In adulis (list)  |           |
|   |           |
| How is malaria fever acquired?  |           |
|   | 4. Wha    |
|   |           |
|   | children_ |
| For schetten<br>For schifts   |           |
|   |           |
| Do you have any referral relationship with other junior or peripheral health    | 5. a.     |
| workers in the treatment of malaria? Yes No                                     |           |
| If yes, please describe.  |           |
|   |           |

|               |  | Total   |
|---------------|--|---|
| a.            | Have you experienced any problems with the treatment facility? Yes No  | of malaria in this healt                          |
| b.            | If yes, please indicate what these are.  |   |
|               |  |   |
|               |  | A MARKA   |
|               |  | the states of                                     |
| WI<br>(Pl     | hat other anti-malaria activities do you carry out apart from lease list)  | 1 clinical case managen                           |
| WI<br>(Pl     | hat other anti-malaria activities do you carry out apart from<br>lease list)   | n clinical case managen                           |
| WI<br>(PI     | hat other anti-malaria activities do you carry out apart from<br>lease list)   | n clinical case managen                           |
| WI<br>(PI     | hat other anti-malaria activities do you carry out apart from<br>lease list)   | n clinical case managen<br>otal<br>bioder 5-years |
| WI<br>(PI<br> | hat other anti-malaria activities do you carry out apart from<br>lease list)<br>vations<br>ealth records of the health facility especially related to mala | n clinical case managen                           |

Under 5-years

2. Extract (if possible) the summary data on the occurrence of the top five diseases (total and by age and mortality) at this health facility for the preceding 6 months.

|  | <br>1 | 1 . r . k .<br>32432321 |
|--|-------|-------------------------|
|  |       |                         |
|  |       | - Dono G                |
|  | 1     | 4                       |
|  | •     |                         |
|  |       |                         |
|  |       |                         |
|  |       |                         |
|  |       | Adult                   |
|  |       |                         |
|  |       | Deaths                  |

| Diseases           | June May                                    | April                           | March   | Feb.   | Jan.  |  |
|--------------------|---|---------------------------------|---|--|---|--|
| 1.<br>Total        |   |                                 |   |  |   |  |
| Under 5-years      | e treatment of main                         | lems with th                    | d any prob<br>No  | experience<br>Yes  | a. Have you facility?   |  |
| Over 5 child       |   | c are.                          | e what they   | ase indicat  | b. If yes, ple  |  |
| Adult              |   |                                 |   |  |   |  |
| Deaths             |   |                                 |   |  | Who in the second se |  |
| 2.<br>Total        | аная пол тыр п                              | you carry ou                    | DD 201141   |  | (Please list)   |  |
| Under 5-years      |   |                                 |   |  |   |  |
| Over 5 child       |   |                                 |   |  | ervations   |  |
| Adult for flucture | ated to malaria (1                          | specially clu<br>equacy.)       | th facility :<br>service ad   | of the beal<br>urveillance   | Health records<br>simplicity and a  |  |
| Deaths             |   |                                 |   |  |   |  |
| 3.<br>Total        |   |                                 |   |  |   |  |
| Under 5-years      |   |                                 |   |  |   |  |
| Over 5 child       | urrence of the top i<br>r the preceding 6 r | a on the occu<br>th facility fo | mmary dat<br>at this heal   | ble) the su<br>mortality)  | Extract (if poss<br>and by age and  |  |
| Adult              |   |                                 | a in a second de la contra a disserva de la contra de la co | La seconda en la seconda de la seconda d | an a  |  |
| Deaths             |   |                                 |   | and an   |   |  |
| 4.<br>Total        |   |                                 |   |  |   |  |
| Under 5-years      |   |                                 | de<br>1   |  |   |  |
| Over 5 child       |   |                                 |   |  |   |  |
| Adult              |   |                                 |   |  |   |  |
| Deaths             |   |                                 | •.  |  |   |  |

.

|  | June   | May  | April  | March   | Feb.   | Jan.  |
|--|--|--|--|---|--|---|
| Total  | k<br>bieliter<br>nom?  | ducatio<br>Missino   |  | onirol.i  | alaria C   | for M   |
| Under 5-years  |  | anders and the state of the sta |  |   | vames  | nadmal/f :  |
| Over 5 child   | er use chios   | nonine or  | an other   | venem dr  | 125 lo trea  |   |
| Adult Islania<br>Other disea<br>Deaths   | es N<br>1637 Yes   | <b>)</b><br>No   | - 1990-<br>  |   | ler Visit  | ditional Hea  |
|  |  |  |  |   |  | Arres of hea  |
|  |  |  |  |   |  |   |
| oN   |  |  |  |   |  |   |
|  |  |  | or malaria   |   |  |   |
|  |  |  |  |   |  |   |
|  |  |  |  |   |  |   |
|  |  |  |  |   |  |   |
|  |  | ni ani squa  |  |   |  |   |
|  |  | u an sdu   |  |   |  |   |
|  |  | ili <mark>an s</mark> que  |  |   |  | Ale Inere an<br>Yes N<br>f yes, please  |
|  |  | n on squ   |  |   |  |   |
|  |  | nips the in<br>no odi odi<br>ease descr  | partent gri<br>h.m. to seu<br>glaria? (Pi                              | no znombri<br>mis?<br>mi??s?zs?   |  |   |
| attempts to trea<br>adi 2005 weH<br>ymptomgrafest<br>sale 200 H d  |  | n on stro<br>on on on<br>case descr  | parlent gri<br>h.m. to seu<br>alaria? (Cl                              | ro znombr<br>aris?<br>II. i 2. iz sz. f   |  |   |
| attempts to trea<br>attempts to trea<br>whytoms kest<br>kateine<br>solg , toy H. d   |  | n orthe the in<br>so ortheodi<br>ease descr  | partent gri<br>h.m. to seu<br>alarja? (Ph                              | ro znombr<br>aris?<br>Bi ???  |  | Are incre an<br>YesN<br>if yes, please<br>(vdrgs, bepler<br>)   |
| attempts to trea<br>attempts to trea<br>with sock wold<br>grapping Atest<br>Fairsian<br>asiq , toy H. d                      |  | n an sque  | parten gri<br>han to seu<br>glaria? (Cl                                | nis?<br>mis?<br>mi <sup>1</sup> 2.32.52 f   |  | Are incre an<br>Yes N<br>if yes, please<br>ydrgs, bealer  |
| attempts to trea<br>attempts to trea<br>with sook well<br>gaugiging Atest<br>Fairsian<br>sole (soy H. d<br>at age groups.)   |  | osages for   | partent gri<br>han to seu<br>glaria?(Ch                                | ndinons or<br>sin<br>Sasasofun<br>salaria? (Di                                      |  | Are increan<br>YesN<br>If yes, please<br>Voggs, pealer<br>voggs, pealer<br>vogs heater  |
| attempts to trea<br>attempts to trea<br>which sob well<br>graptomarkest<br>for the set<br>asiq , to ( 11d<br>nt age groups.) | eater never<br>rockb voiced<br>(SguSterPan<br>Meneo                                    | osages for   | partent gri<br>han to sen<br>glagis?del<br>ugs and d                   | ndinons or<br><sup>2</sup> sin<br>9 53 sfe 9 <sup>(</sup> , p<br>1alaria? (D1       | y neann co<br>bist<br>adjagposg                            | Are incre an<br>YesN<br>if yes, please<br>ydggs, please<br>ydggs, please<br>children  |
| attempts to trea<br>attempts to trea<br>which sold well<br>graptom A.test,<br>sold , to the d<br>nt age groups.)             | eater never<br>rockb voiced<br>(SguSterPan<br>MessierPan<br>the differe                | onps the in<br>so oth oth<br>case descr  | partent gri<br>han to sen<br>glaria? (Ch                               | ndinons or<br><sup>2</sup> sin<br>3 53 sf. 9 <sup>(</sup> , p<br>1alaria? (Di       | y neann co<br>bist<br>hgagposg                             | Ves incre an<br>YesN<br>f yes, please<br>(,dpqs, please<br>(,dpqs, please<br>)<br>does heater<br>Phildren<br>Aduits   |
| attempts to treat<br>set cob well<br>ynggiging Atest<br>ealer, to the<br>nit age groups.)                                    | eater never<br>rockb roinod<br>(SguSie Pauls<br>Menorem<br>nations on<br>the differe   | osages for   | parient gri<br>han to sen<br>glaria? (?)                               | ndinons or<br><sup>2</sup> sin<br>9 53 sf. 9 <sup>(</sup> , p<br>nalaria? (Di       | y nealma co<br>bist<br>djagposgi<br>manage n               | Are incre an<br>Yes N<br>If yes, please<br>y,dpgs, plea |
| attempts to trea<br>attempts to trea<br>wingtom§Atest<br>safe , so( 11 . d<br>nt age groups.)                                | eater never<br>rocab voicod<br>ibgasientad<br>Meneo<br>nialquo on<br>the differe<br>No | oups the in<br>a out out<br>case deser<br>osages for<br>ria? Yes   | parient pro<br>liant to acu<br>glaria? (P)<br>rugs and d<br>es of mala | ndinons or<br>Sine<br>P 52 Sf. 9 <sup>(</sup> , II<br>nalaria? (Di<br>hifficult cas | y neann co<br>bist<br>djagnosgi<br>manage n<br>ever have c | Are incre an<br>YesN<br>If yes, please<br>y,dogs, plea  |

|            | Case Management Interview Schedule<br>and Observation Checklist                                |             |           |
|------------|--|-------------|-----------|
|            | for Malaria Control Health Education Field   | Visit       |           |
| <b>a</b>   |  |             |           |
| Grou       | p 4: Member Names  |             |           |
| 0          | ver 5 child  |             |           |
| For 1      | raditional Healer Visit  |             |           |
| 1. 2       | Name of healer   |             |           |
| t          | . Age (if known)   |             |           |
|            |  |             |           |
| 2. a<br>t  | . Does healer have any other occupation apart from healing? Yes_<br>. If yes, please indicate. | No          |           |
| .0         |  |             |           |
| 3. a       | . What diseases does healer treat? (Please list.)  |             |           |
| t          | Are there any health conditions or patient groups the healer never<br>Yes No                   | r attempts  | to treat? |
| c          | . If yes, please list.   |             | V.        |
|            | Dial   |             |           |
| ย<br>1 1   | nder 5-years<br>Iow does healer diagnose a case of malaria? (Please describe signs             | symptoms    | test      |
| т. I<br>(С | tc.) $\leq$  | symptoms,   |           |
| A          | duit   |             |           |
|            |  |             |           |
| 5. H<br>a  | Iow does healer manage malaria? ( <b>Drugs</b> and <b>dosages</b> for the differ . Children    | ent age gro | oups.)    |
| ŀ          | Adults   |             | 1         |
|            | ader 5-years   |             |           |
|            | ver 5 child  |             |           |
| 5. a<br>ł  | . Does healer ever have difficult cases of malaria? Yes No If yes, please explain.             |             |           |
|            |  |             |           |

a. Does healer ever refer difficult cases of malaria? Yes No 7. b. If yes, to whom? Does healer ever use chloroquine or any other western drugs to treat: 8. For Patent Medicine Vendor Visit a. Malaria? Yes No b. Other diseases? Yes No 9. Would healer like to be trained in the western (orthodox) ways of managing malaria patients? Yes No Design Design 292 10. a. Are there any traditional drugs for malaria prevention as distinct from drugs for treatment? Yes No b. If yes, please indicate those drugs for prevention and how they are used. 11. How does the healer describe the cause of malaria? Are there any limits to the drugs you can sell here? 12. a. Are there other things, apart from drugs, that can be used to control or prevent malaria? Yes No b. If yes, please explain. b. If yes, please let us see it. (Observe and note categories of drugs and adequacy and children). 11. Would the vendor like to receive training on the adequate dosages for anti-realarial

| Grou                                   | up   | 5: Member Names  |
|--|--|--|
|  |  | Does healer ever use chloroquine or any other western drugs to treat   |
| For                                    | Pat  | tent Medicine Vendor Visit   |
| . 1                                    | a.   | Name of vendor   |
|  | b.<br>c.   | Would heater life to he trained in the western (orthodox) ways of the Mana and Amage patients? Yes No xez  |
|  |  |  |
| )                                      | 2  | Name of the proprietor of the shop   |
|  | <b>a.</b> [(                                       | Name of the proprietor of the shop   |
|  | a.<br>b.   | Age  |
| •                                      | a.<br>b.<br>c.<br>d.                               | Age<br>Sex<br>Occupation   |
|  | a.<br>b.<br>c.<br>d.<br>Do                         | Age<br>Sex<br>Occupation<br>bes the owner also sell drugs in the shop? Yes No  |
|  | a.<br>b.<br>c.<br>d.<br>Do<br>a.<br>b.             | Age         Sex         Occupation         bes the owner also sell drugs in the shop? Yes No         Are there any limits to the drugs you can sell here? Yes No         If yes, please indicate   |
| ·<br>· · · ·                           | a.<br>b.<br>c.<br>d.<br>Do<br>a.<br>b.             | Name of the proprietor of the shop         Age         Sex         Occupation         bes the owner also sell drugs in the shop? Yes No         Are there any limits to the drugs you can sell here? Yes No         If yes, please indicate.   |
|  | a.<br>b.<br>d.<br>Do                               | Age         Sex         Occupation         bes the owner also sell drugs in the shop? Yes No         Are there any limits to the drugs you can sell here? Yes No         If yes, please indicate   |
|  | a.<br>b.<br>c.<br>d.<br>Do<br>a.<br>b.             | Age         Sex         Occupation         bes the owner also sell drugs in the shop? Yes No         Are there any limits to the drugs you can sell here? Yes No         If yes, please indicate         Do you keep any record of the drugs that you sell here? Yes No  |
| •                                      | a.<br>b.<br>d.<br>Do<br>a.<br>b.<br>a.<br>b.       | Age         Sex         Occupation         bes the owner also sell drugs in the shop? Yes No         Are there any limits to the drugs you can sell here? Yes No         If yes, please indicate.         Do you keep any record of the drugs that you sell here? Yes No         If yes, please let us see it. (Observe and note categories of drugs and adequacy an characteristics of records kept.) |
| •                                      | a.<br>b.<br>d.<br>Do<br>a.<br>b.<br>d.             | Age         Sex         Occupation         bes the owner also sell drugs in the shop? Yes No         Are there any limits to the drugs you can sell here? Yes No         If yes, please indicate         Do you keep any record of the drugs that you sell here? Yes No         If yes, please let us see it. (Observe and note categories of drugs and adequacy an characteristics of records kept.)  |
|  | a.<br>b.<br>d.<br>Do<br>a.<br>b.<br>d.<br>a.<br>b. | Age         Sex         Occupation         bes the owner also sell drugs in the shop? Yes No         Are there any limits to the drugs you can sell here? Yes No         If yes, please indicate         Do you keep any record of the drugs that you sell here? Yes No         If yes, please let us see it. (Observe and note categories of drugs and adequacy an characteristics of records kept.)  |
| ···<br>···<br>···<br>···<br>···<br>··· | a.<br>b.<br>d.<br>Do<br>a.<br>b.<br>d.<br>a.<br>b. | Age         Sex         Occupation         bes the owner also sell drugs in the shop? Yes No         Are there any limits to the drugs you can sell here? Yes No         If yes, please indicate         Do you keep any record of the drugs that you sell here? Yes No         If yes, please let us see it. (Observe and note categories of drugs and adequacy an characteristics of records kept.)  |

- a. Do people (apart from coming to buy drugs they had decided upon beforehand) sometimes only tell you their symptoms and ask you to treat them?
   Yes No\_\_\_\_\_
  - b. If yes, what are the most common symptoms or diseases?
- a. Can you, and do you, treat people for malaria? Yes No
  b. If not, why not?
  - c. If yes, please describe drugs and dosages for different categories of patients.

8. What brand names of chloroquine does the vendor know? (Please list.)

Materials Required

9. What brand names of chloroquine does the vendor sell or has sold here? (Please list.) Handout M6.1. Vector Control

Handout M6.2 - Malaria Control: Environmental Planning and Management

10. What is the vendor's experience with selling chloroquine tablets?

People may or do buy any number of tablets, including one or two tablets only. People often buy specific numbers of tablets (e.g., 10 for adults, 5 for children).

People always buy specific numbers of tablets (e.g., 10 for adults, 5 for children).

hours 30 minutes

11. Would the vendor like to receive training on the adequate dosages for anti-malarial drugs? Yes <u>No</u>

12. Would the vendor be able to persuade clients who came for inadequate dosages of the drugs to buy and use the correct doses? Yes No

Yes the West of the most common symptoms or diseases?

- 13. Are the vendor's colleagues in this business likely to agree with 11 and 12 above?
- Other under 5 yrs.
   School child
   School child
- a. Do you keep any record of the drugs that you sell bere? Yes No
  - 10. <sup>hw</sup> Mat is the bigs spirit has solve and been solved and solve has been ablets and solved and the bigs has been been been been ablets while selling chloroquine tablets has been been ablets only. <u>People may or do buy any unmber of tablets</u>, ideluding one or two tablets only. <u>People often buy specific numbers of tablets (e.g., 10 for adults, 5 for ehildren)</u>.
    - People always buy specific numbers of tablets (e.g., 10 for adults, 5 for children).
    - Would the vendor like to receive training on the adequate dosages for anti-malarial drugs? Yes No

### M6: Field Malaria Control

### **Objectives**

xamples

Upon completion of this module, the participants will be able to:

Personal Protection: Specify the advantages and disadvantages of using bednets, window screens, mosquito coils, local plants, protective clothing, and horse whisks and brooms to prevent mosquito bites.

- 2. Environmental Management:
  - a. Identify those environmental planning and management elements associated with vector breeding.
  - b. Initiate household, community, and governmental actions required to manipulate environmental planning and management elements for the control of mosquito breeding.
- 3. Chemical Control: Discuss the correct use of kerosene, used engine oil, and "Abate" to control the mosquito breeding sites in drains and ponds.

Materials Required

· Handout M6.1 - Vector Control

- · Handout M6.2 Malaria Control: Environmental Planning and Management
- · Handout M6.3 Malaria Control Observation Checklist and of bus memory of

Estimated Time

6 hours 30 minutes

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|   | M6: Field Malaria Co  | ontrol   |
|---|---|--|
|   | Content   | Training Methods   |
| · O ur Pr<br>· Pr<br>·  | verview of mosquito breeding sites in rural and<br>ban areas.<br>regnant mothers and children under 5 years<br>Using bednets.<br>Screening windows.<br>Using mosquito coils.<br>Wearing long protective clothing.<br>Using horse whisks and brooms.<br>blicy Makers<br>Screen health facilities and institutions.   | <ul> <li>Slides</li> <li>Discussion (Handout M6.1)</li> <li>Exhibition of samples</li> <li>Field observation (Handout M6.3)</li> </ul>   |
| · Pri<br>of<br>of<br>of<br>of<br>of<br>of<br>of<br>of<br>of<br>of<br>of<br>of<br>of | blicy makers<br>Need for the government to maintain public<br>drains to motivate communities to maintain<br>household drains, to supervise construction of<br>drains, and enforce regulations regarding<br>filling of burrows.<br>Sow do human activities contribute to mosquito<br>eeding?<br>Sommunity members<br>Encourage constructing and maintaining<br>household drains and emptying of water<br>containers and covering pots.<br>Communities within a range of 2-5 km should<br>collectively work together in constructing and<br>cleaning drainage, filling of burrow pits and<br>pot holes and clearing of overgrown weeds<br>(Including aquatic weeds).<br>Encourage communities to hold regular | <ul> <li>Lecture</li> <li>Discussion (Handouts M6.1 and M6.2)</li> <li>Field study (Handout M6.3)</li> </ul> |
|   | Encourage communities to hold regular<br>meetings on ways to improve the<br>environment and to participate in planning<br>housing sites with proper drainage, etc.  | <ul> <li>Handout Mó.2 - Malaría Control.</li> <li>Handout Mó.3 - Malaría Control.</li> </ul>   |

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Estimated Time

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6 hours 30 minutes

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| M6: Field Malaria Co  | ontrol  |
|---|---|
| Content   | Training Methods  |
| <ul> <li>Policy makers - Provide funds for health workers to show practical examples of spraying recommended chemicals.</li> <li>Health workers - Encourage the use of chemicals in their surroundings and mobilize community members to perform simple tasks, e.g., applying chemicals, oil, and "Abate", demonstrate practical examples.</li> <li>Community members - Identify water pools in abandoned ponds, wells, rock pools, tree holes, burrow pits, etc.</li> <li>Encourage individual households in applying available and affordable tools (e.g., kerosene, used oil, and a mixture of those [1:2 ratio] to drains and applying "Abate" to ponds.</li> </ul> | <ul> <li>Lecture</li> <li>Discussion</li> <li>Demonstration (Handouts M6.1 and M6.2)</li> <li>Field Study (Handout M6.3)</li> </ul> |

Field Study Field Study

Handout M6.3 is a checklist for observing environmental conditions that influence mosquito breeding and human-mosquito contact. Trainers need to plan in advance a field trip to a nearby village. A sketch map should be prepared as part of the exercises. After the field visit, participants should summarize their findings for presentation and discussion.

Burrow pits harbon water where moscalitors breed. There are some in sales to regulate the furnerships (30 feet x 12 feet x a feet need). The accurationed when the

Handout M6.1

### Vector Control

### 1. Personal Protection

Personal protection to control malaria is an ancient practice. The common practices to avoid or minimize mosquito bites are:

### • Use of bed nets:

They may be made of cotton or synthetic materials. Rectangular nets are better than circular. Openings in the weave should not be more than 0.0475 square inches. There are about 28/29 holes per square inch. Proper care should be taken.

### · Chemical impregnated bed nets:

Current development is to use bed nets impregnated with insecticides such as "Pyrethroid" (permethoin or deltamethion). Nylon or polytene nets are dipped in plastic or aluminum containers holding 15 to 25 liters of insecticide solution. One liter of solution can treat 4 to 5 double-sized nets (11 sq. meters). If properly organized, 300 nets can be dipped in 2 hours. They should be dry before using.

### Long-sleeved dressing:

Culturally acceptable and affordable. May not be feasible under certain situations and occupations.

### Repellents: working the underloods beaus to send T doctoop of approximation of the sender of the sende

Helpful for a short duration in preventing mosquito bites.

### $\square$ Mosquito coils:

The active ingredients include Diethyltoluamcide, and other chemicals that may be active for 18 to 20 hours.

#### □ Body creams:

Indalone, dimethylphthalate, dipmethyl carbete, and althylhexanediol are some of the active chemicals in some of the repellents used in body creams.

A simple cream may be made as follows:

| Oil of citronella          | 1 1/2 parts               |
|----------------------------|---------------------------|
| Liquid paraffin            | 1 part in the left of the |
| Coconut (or any other) oil | 2 parts new moon fired to |
| Carbolic acid              | 1 percent anataw ataaw to |

### Mix ingredients, keep in a bottle, and apply in the night.

### - Herbs: we have been a barren and the second state of the second

Orange peels, lemon grass, and Holy Bagril (Oscimum Sanctum) may also be applied on the skin to repel mosquitoes.

#### Window screens:

Screening buildings with copper or polyester gauze is ideal. Openings in the weave should not be more than 0.0475 square inches. All outside doors, windows, chimneys, and other openings must be closed with the wire mesh.

### • Fans and air conditioners:

They keep away mosquitoes. Some hungry female mosquitoes may, however, succeed in biting you. "Horse whisks" may temporarily be used to keep away mosquitoes.

### Mosquito destruction: persedo ed bloods alles i lienz bos anestalo alle W

- □ Swatting may be carried out with "fly swatters" or by means of a hand covered with soap lather. (In a British army camp there used to be competition to kill mosquitoes; two people recorded killing 400 mosquitoes in a tent one night.) Native brooms may also be helpful.
- □ Spraying with 5% formalin, cresol may be used for clothing, dark corners, cupboards, and other areas where mosquitoes lurk. Cresol (5 ounces per 1000 cubic feet) may be a good fumigant in a room. Not ideal for high roof houses.
  - □ "Cage trays" or "dark boxes" kept in a cool shady place near a corridor attract mosquitoes for resting and may then be destroyed.

### 2. Environmental Management

### Filling burrow pits:

Burrow pits harbor water where mosquitoes breed. There are some bylaws to regulate the dimensions (30 feet x 12 feet x 4 feet deep). The accumulated water can be

treated like any stagnant pool. Alternatively, the pits may be used for sanitary landfill or composting of refuse.

### Drainage and water protection for preventing mosquito breeding:

- □ Sullage of bath room water, storm water, and sewage constitute the three major sources of waste waters that may pose problems. There are no organized drains in most parts of Nigeria. Blocked or silted drains and drains choked with refuse are some of the problems. Householders should take care of the drain from their houses and the LGA should take care of the major drains in the ward. Ideal drains should be 60 cm wide and 70 cm high and should be covered by removable pretested concrete units. The minimum slope should be at least 1 cm/100 feet.
- □ Whenever possible, in small communities, "soakaway" pits filled with stones should be encouraged.

Drainage of marshes may be carried out by contour drains.

- □ Streams should be canalized, weeds removed, and edges kept free from vegetation.
- □ Watering places for animals should be kept under fence and paved to prevent hoof indentations from being left in the mud.

mosquitoes: (wo people recorded killing 400 mosquitoes in a tenf dife

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□ Wells, cisterns, and small tanks should be observed for all openings.

### Larvicides:

#### $\Box$ Mineral oils:

The addition of oil to water or drains is an older control method. Diesel oil, fuel oil, kerosene, or other crude fractions are also very useful. The usual application rate is 40 to 90 liters per hectare. Since the life cycle of a mosquito takes 8 days, weekly application is ideal. A cheap and efficient larvicide is a mixture of 1 part kerosene oil + 2 parts of used engine oil. The mixture can be applied by spraying (by means of drip cans [20 drops per minute], floating cans or plugs of trees), or by using a watering can depending on where you wish to apply the mixture. Liquid paraffin (1 teaspoonful per square yard) or cooking oil (1 oz. per square yard) may also be used on ponds.

 $\square$  Paris green:

A green powder that contains copper arsenite and is insoluble in water. For surfaces, it can be mixed with fine road dust or saw dust and sprinkled on surfaces. It can be mixed with wet sand to sink to the bottom of water.

□ Synthetic insecticides:

Fenthion, chlorpyrifos, and abate are most effective. The dosages (per hectare) are, respectively, 22 - 112g, 11 - 16 g and 56 - 112g. Malathion is also effective at a dose of 224 - 672g/hectare. "Abate" (organophosphorus insecticide) is very useful for drinking water ponds at 1 mg/1 and is the least toxic of the insecticides.

windows are closed for at least 30 minutes. Pyrethnum has no re-

### Biological control

A wide range of fishes (e.g., gambusia affins, tilapia, and carp) can be used in ponds or drains. Bacillus thuringenesis and bacillus aphaesicus are being developed and may prove useful when sprayed into water sources. 100 - 400 g/hectare seems to be ideal. The bacilli infect the gut of mosquito larvae and destroy them. "Elephant mosquitoes" and certain "nematodes" (worms) are also being used.

### Cutting weeds, emptying water containers, etc.

Periodic discussions at the community level and actions to pull the unwieldy weeds, fill the potholes, and empty water containers are very helpful in preventing mosquito breeding. Certain aquatic weeds such as water hyacinth and water lettuce that grow in fresh water ponds should be removed constantly. Good community organization will go a long way.

## 3. Chemical Control

Adult mosquitoes are controlled by spraying houses with residual sprays. For environmental health reasons, many countries have discouraged the use of sprays such as DDT. The following insecticides are good against adult mosquitoes:

| Insecticide        | Amount       | <b>Effective For:</b> |
|--------------------|--------------|-----------------------|
| DDT                | $1 - 2g/m^2$ | 6-12 months           |
| Lindane            | 0.5          | 3 months              |
| Malathion          | 2            | 3 months              |
| Propoxion (OMS-33) | 2            | 3 months              |

Resistance of mosquitoes to chemicals is a serious problem. About 51 species have developed resistance. Thirty-four (34) are resistant to DDT, forty-seven (47) to Dieldrin, thirty (30) to both DDT and Dieldrin. Organophosphate and carfamate resistance has been recorded in ten species.

### □ Pyrethrum extract:

The chemical Pyrethrum, a plant extract from pyrethrum flowers, is a nerve poison and kills insects by mere contact. Pyrethrum is sprayed at a dosage of 1 oz. (containing 0.1% active ingredient) per 1000 cubic feet of space. The doors and windows are closed for at least 30 minutes. Pyrethrum has no residual action.

• Quithing reserves remaining wates containers, etc. trend at a cadiator to stand W. C. Peridulo di cussions at the community level and actions to pull the unweldy weeds, fill the pointies, and empty water containers are very helpful in preventing mosquito breeding. Certain aquatic weeds such as water hyacinth and water leftuce that grow in fresh water ponds should be removed constantly. Good community organization will

G Streams should be considered, weeds removed used only a kept low "highler by" water

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Rasistance of a assistance to dismicals is a serious problem. About 218 perces have as an developed newstance of thirdy-four (34), are resistant to DDT, forty-zeven [47] to Dieldrin, thirdy (30) to both DDT and Dialdun, Oregoophosphate and carramate resistance has been recorded in ten species.

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### Handout M6-2

### Malaria Control Environmental Planning and Management

### frontage of the other. As a result, the waste water from one drains noitouborthie .1

The state of the environment in which we live (whether urban or rural) has a lot to do with breeding mosquitoes. The environment, in its natural form and the way it is being altered through human activities, creates favorable conditions for malaria infection and transmission. Therefore, proper planning and management of the environment is a major factor in the control of malaria.

### 2. Objectives

In this discussion, we shall focus attention on the following areas, all of which will aim at effective malaria control through environmental planning and management:

• Identifying and understanding breeding sites of the malaria vector around the housing environment.

Understanding ways and means by which individual households, communities, and local governments can best reduce malaria vector breeding sites.

· Bringing malaria control into the PHC activities.

3. Settlements and Housing Units

We need to understand several things about our villages, neighborhoods, and houses in relation to malaria control. These are:

Location of villages (and neighborhoods):

Some settlements are sited in marshy depressions or very close to rivers or water bodies. Others are located on well drained uplands. Vector breeding and malaria infections will be more problematic in villages that are located in depressions and those close to water bodies. Villages that are located in forest zones:

Such villages will have more malaria control problems to contend with than those located in savannas or near desert vegetation zones.

Orientation of housing units:

Where there is no proper planning, houses are built in such a way that one backs the frontage of the other. As a result, the waste water from one drains directly into the other. The good planning situation is back-to-back.

· Architecture:

The design of some houses encourages transmission of malaria. For example, in The Gambia the gap between the top of the wall and the roof (an open eave) is one architectural feature that enables some species of mosquito to enter a house.

### 4. The Housing Environment

In discussing the housing environment as it affects mosquitoes and malaria, we shall focus attention on environmental infrastructure, vegetation, and human activities around the home, and in water pools.

an co Environmental infrastructure: and to estimate an board an infrastructure and the set

The drains that carry waste water away from the premises are the most important infrastructures. These may be `open,' `covered,' or `semi-covered.' Important considerations regarding drains are whether they are provided or not, their adequacy if provided, and their maintenance. In many settlements in the developing world, drains are not provided, and this encourages formation of water pools that breed mosquitoes. In other cases, where drains are provided, their sizes are not adequate and they are not lined with concrete materials. Another problem is poor maintenance. Drains are usually blocked with sand, refuse, feces, grass, dead animals, etc.

Vegetation:

Uncontrolled vegetation, especially aquatic weeds, around the housing environments encourage mosquito breeding.

Human activities:

In many tropical settlements, daily human activities take place around the home, and quite a number of activities (such as traditional soap-making, pottery, and extraction of palm oil) require water. More often than not, such waste water is not properly disposed of.

Water pools:

The following are conducive for mosquito breeding and are usually found around dwelling units; abandoned ponds, surface pools created after rains, rock pools, tree

holes, abandoned wells, burrow pits, seepage sites near wells, coconut shells, and hoof indentations. An an international of langement of a point of the source of the source

#### 5. **Environmental Planning and Management**

Control actions: Additionation at antipatholic Addition at instant of Our concern is to consider what control activities are required at the household, community, and LGA levels.

### $\square$ Role of the household:

The household has responsibility to properly discharge waste water on the premises. Waste is either directed into a soakaway pit or into a larger street drain. The collection of broken pots, bottles, etc. is also the household responsibility. (The Nigerian monthly environmental campaign law needs to be supported by health education so that the household realizes that environmental sanitation is necessarily a daily affair.)

 $\square$  Role of the community:

Community actions (rural and urban) should be initiated to provide drainage facilities where they are not available, and to maintain the drains on a continuous basis where they are available. As a necessary condition for all community actions, community organizers and their helpers should go around their villages, identifying all potential vector breeding sites and marking them on a sketched map of the village.

 $\square$  Role of the LGA:

The LGA should collaborate with the communities in sharing responsibilities for provision and maintenance of drains. While the household takes care of the drains Door within the premises and the communities look after those drains along neighborhood minor roads, the LGA should plan, design, construct, inspect, No operate, and maintain the larger network of drains.

In addition, LGA should be responsible for the initiation, review, and enforcement of necessary environmental laws.

#### 6. Implications for PHC

The malaria control measures above should be brought within the scope of the PHC program. The measures should not be difficult to achieve as all the activities are in line with the principles of PHC. For example, involvement of the households and the communities conforms with two of the cardinal principles of PHC self-reliance and community involvement. The measures also conform with the principle of intersectoral

collaboration since the efforts of many sectors will be required. The provision and maintenance of community environmental infrastructure requires the collaboration of engineering technologist, town planners, health educators, bricklayers, and laborers.

# Questions where the maganetic bas entires of istnement of a

1. To what extent is your LGA discharging its responsibility in the provision and maintenance of drains?

2. What are the laws in your LGA that deal with housing environmental conditions?

# 3. Who should initiate community action?

facilities where the, are not available, and to maintain the drains on a continuous basis where they are available. As a necessary condition fighth, community a microsoftime science with organize mass including the potential vectors broad the independent of the potential of the potential vectors with the community of the potential of the potential vectors with the community of the potential of the potential vector with the community of the potential of the potential of the potential of the potential with the community of the potential of the potentic of the potential of the potential of

In addition, LGA should be responsible for the initiation or yiewer and an or of occessary environmental laws.

Eluman activites.

The malaria control measures above should be brought within the scope of the PHC program. The measures should not be difficult to achieve as all the activities arguin line

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| E AM Joobbash Handout M6.3  |
|---|
| Malaria Control Observation Checklist                             |
|   |
| Rural or Urban Environment  |
| Village or Town   |
| Housing Conditions:   |
| Roof: Thatched Iron Flat Cement Asbestos                          |
| Number of rooms   |
| Type of eave:   |
| Water source:   |
| Windows: Number Size Size Size Size Size Size Size Size           |
| Screens: 🗆 Yes 🗆 No Type: 🗆 Metal 🗆 PVC                           |
| Curtains:  Present  Absent  |
| Shutters for windows:  Yes  No Material:  Wood  Metal             |
| IF DRAIN: II Open II Concrete cemented II Wide II Narrow :: srood |
| Leads to another large drain: D Yes D No                          |
| Material: Wood Bamboo Metal minute of a sector to some and        |
| Sprays used in the drain: O Yes O Mo Absent D Absent Curtains:    |
| Types of sprays used  |
| □ Mud □ Cement blocks □ Cement over mud bricks □ Wood             |
| Presence of crevices: $\Box$ Yes $\Box$ No                        |
|   |

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| Hand Inside Environment   | landout M6.3 |
|---|--------------|
| Presence of:  |              |
| $\Box$ Water Pots $\Box$ Containers $\Box$ Other pots $\Box$ Buckets $\Box$ Plastic tul   | os           |
| □ Tumblers □ Utensils with little water   |              |
| Calabash: Covered Uncovered   |              |
| □ "AGBO" pots around the state of the state   |              |
| Chemical sprays: $\Box$ Used regularly $\Box$ Occasionally $\Box$ Not at all  |              |
| Outside Environment   |              |
| Water source:   |              |
| □ Well □ Tap □ Pond □ Stream □ Other  | Windows:     |
| IF WELL, presence of:  Cover  Apron  Soakaway   | Sarecus      |
|   |              |
| Bathroom:<br>Listel I book II clanstel of II con II creative of II of the second of II of the second of II of the second of the second of II of the second of |              |
| IF DRAIN:  Open  Concrete cemented  Wide  Narrow  |              |
| Leads to another large drain: $\Box$ Yes $\Box$ No  | isénu.Vi     |
| Presence of refuse in the drain:  Yes No  |              |
| Sprays used in the drain:   |              |
| Types of sprays used  |              |
| Overgrown weeds: 🗆 Yes 🗆 No   |              |
| Presence of mosquito larvae inside or on the premises: $\Box$ Yes $\Box$ N  | No           |
| Places found  |              |

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Handon M6.3

### Handout M6.3

### **Additional Information**

Sketch Map of a VIII

Abandoned Ponds: 
□ Present □ Absent

Surface pools created after rains: 
Present 
Absent

Rock pools: 
Present 
Absent

Tree holes: 
Present 
Absent

Abandoned wells: 
Present 
Absent

Hand dug pits or burrow pits:  $\Box$  Present  $\Box$  Absent

Hoof indentations:  $\Box$  Present  $\Box$  Absent

Handout M6.3 Sketch Map of a Village Trainers should supply a sketch map for the village(s) selected for a field visit. Include roads, landmarks (markets, chief's house, schools, etc.), and water sources. Abandoued wells: D Prison 10 Absent

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Statistics (1.1) - 1.1 (2011) (2.1)

time areas to in this section address the best theory use prostice of health education from out even is a set the invares to advat these concepts to the control of materia

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H4 - Information General Info

### Health Education Modules

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### 3. Health Education Modules

The modules in this section address the basic theory and practice of health education. Practical exercises aid the trainees to adapt these concepts to the control of malaria.

H1 - Health Education Overview

H2 - Synthesis of Behavioral Issues

H3 - Community Involvement and Participation

H4 - Information Gathering

H5 - Formulating Health Education Objectives

H6 - Health Education Strategies

H7 - Plan of Action

H8 - Monitoring and Evaluation

### H9 - Resource Management

Appreciate the importance of an interdisciplinary or team approach to malaria control programs.

Materials Required

Flip clarts and markers

Handout H1.1. When is Repht Education?

Handout H1.2 - Some Principles of Health Education

Estimated Time

2 hours

Health Education Modules

The modules in this section address the basic theory and practice of health education. Practical excepts (id the traineds to adapt these concepts to the control of malaria.

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HI - Health Education Overview

112 - Synthesis of Bohavioral Issues.

K1 - Community Involvement and Participation

H4 - Information Gathering

H5 - Formulating Health Education Objectives

Ho - Health Education Strategies

H7 - Piun of Action

HS - Momintering and Evaluation

119 Resource Management

| n Education Overview  |
|---|
|   |
| Relationship between goal and objectives<br>Goal of health aducation<br>Purpose and objectives of health education in<br>matana control<br>since the education of sole to be heaved of health be heaved |
| and purpose of health education.  |
| explain how it works.   |
| ples of health education.   |
| al and nonbehavioral factors in malaria control<br>1 of these factors for health education.   |
| hip and linkage of the various health education red during the workshop.  |
| by which health education can contribute to the s of malaria control programs.  |
| f an interdisciplinary or team approach to malaria  |
| Presentation of the health education modules<br>Relationship of the modules<br>Implication of the linkages in materia control<br>programs   |
| Review of health education strategies and<br>methods  |
| of Health Education   |
| Interdisciplinary or team approach to malaria<br>control vitnegilletai stouborg (sp   |
|   |

| H1: Health Education Overview  |  |  |
|--|--|--|
| Content  | Training Methods   |  |
| <ul> <li>Relationship between goal and objectives</li> <li>Goal of health education</li> <li>Purpose and objectives of health education in malaria control</li> </ul>  | <ul> <li>Brainstorming</li> <li>Lecture and discussion</li> </ul>  |  |
| <ul> <li>Health education as science of health behavior<br/>Health education characteristics, strategies, and<br/>methods:</li> <li>Community survey and needs assessment -<br/>behavioral research</li> <li>Identification and utilization of local resources in<br/>support of health programs, community<br/>involvement, mobilization and participation</li> <li>Effective IEC</li> <li>Training and human resources development</li> <li>Intersectoral cooperation and collaboration</li> <li>The roles of a health educator</li> </ul> | Brainstorming<br>Handout H1.1  |  |
| <ul> <li>Selected principles of health education</li> <li>Relevance of the principles in selected malaria<br/>control programs</li> </ul>  | <ul> <li>Lecture and discussion</li> <li>Problem-solving</li> <li>Handout H1.2</li> </ul>  |  |
| <ul> <li>Behavioral factors in health education</li> <li>Nonbehavioral factors in a health program</li> <li>Dynamic relationship between behavioral and<br/>nonbehavioral factors</li> <li>Implication for selected malaria control programs</li> </ul>  | <ul> <li>Brainstorming</li> <li>Lecture and discussion</li> <li>Exercise on implications</li> </ul>                                      |  |
| <ul> <li>Presentation of the health education modules</li> <li>Relationship of the modules</li> <li>Implication of the linkages in malaria control programs</li> </ul>   | <ul> <li>Lecture and discussion</li> <li>Application of selected modules<br/>in some aspects of malaria<br/>control programs.</li> </ul> |  |
| <ul> <li>Review of health education strategies and methods</li> <li>Examples of the application of health education strategies and methods in selected malaria control programs and problems</li> </ul>  | Lecture and discussion<br>Problem-solving  |  |
| Interdisciplinary or team approach to malaria<br>control<br>Principal characters and actors in malaria control<br>programs   | Discussion emit loetamized   |  |

nother the standard Handout H1.1

### What is Health Education?

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- 1. Science of health behavior.
- 2. Totality of educational efforts aimed at helping, motivating, and/or encouraging people to:
  - · Want to be healthy
  - · Know how to stay healthy
  - Do what they can to maintain health
  - · Seek help as and when needed
- 3. Educational activities to promote and/or facilitate self-health care through self-efforts, self-help, and self-reliance to:
  - · Prevent ill-health and health hazards (health protection)
  - · Promote and maintain health
- · Use intelligently and maximally available health services

### Goal of Health Education

Voluntary Positive Health Action (Practice):

- Health promotion
- Health protection
- · Use of health services and medical products intelligently
  - Administrators

Significant others
# Processes and Methods of Health Education

- 1. Application of health, socio-behavioral, and education sciences for diagnosis and solution of health behavioral problems.
  - Ecologic approach.
  - Holistic approach.
- 2. Effective information and communication for health.
- 3. Community study man and his environment in relation to health. (Human ecology + Health practice)
- 4. Applied health behavioral and operational research.
- 5. Community involvement, participation, and mobilization.
- 6. Group or team and the change processes:
  - Interdisciplinary approach.
  - · Planned change based on knowledge of what is.

# Targets of Health Education

- · Individuals
- · Families
- · Groups at risk
- · Communities
- · School students and staff
- Health personnel
- Political leaders and policy-makers
- Administrators
- Significant others

# Types of Health Education

- · Individual health education
- · MCH education (family health education)
  - of human behavior is caused: every health condition has a behavioral conclum
- · Community health education
- · Patient health education
- · School health education
- Food and nutrition education
- Environmental health education
- The promotion of health aenon must be in keeping with the services and resources
- · Workplace and occupational health education
- · Accident prevention and safety education
- Enowledge does not necessarily, or always, lead to action, because knowing is one thing
- · AIDS education
- Smoking and drug abuse education
- Effective communication is a sine que non of the practice of health education

# **Barriers to Health Action**

- Personal and situational factors create and offluence the health consumer's already existing behavioral parterns.
- · Behavioral e.g., acceptability problems
- Non-Behavioral e.g., availability and accessibility dominant role in their health
  - · Constraints e.g., affordability, feasibility, and situational and environmental
- To be long lasting, changes in health behavior must be self-imposed not administratively ordered; they must be integrated into the people's life pattern.
- 10. What has intrinsic value for people generates self-motivation; external motivation is of minimal value until it has stimulated the intrinsic self-raofivational forces within the health constitues.

handout N1.2

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| Patient health education dufact von notaconneumer bars notacon she's syntasfill                                      |   |
| Commonly study man and his environment in relation oppingable difficult School S                                     |   |
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|  |   |
| Accident prevention and safety education   | 2 |
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| Smolting and drug abuse education  | - |
|  |   |
| e de la positione de la companya de       |   |
|  |   |
|  |   |
| Constraints e g., affordability, feasibility, and situational and environmental                                      |   |
|  |   |
| Health personnel   |   |
| Political leaders and policy makes.  |   |
| Administrators   |   |
|  |   |
|  |   |

# Some Principles of Health Education

- 1. All human behavior is caused; every health condition has a behavioral correlate.
- 2. The attitude that individuals bring to any health situation determines to a large extent their response or reaction to accept or reject, etc.
- 3. To participate in what affects our destiny is one of our strongest cravings.
- 4. The promotion of health action must be in keeping with the services and resources available so that false expectations and frustrations will not develop.
- 5. Knowledge does not necessarily, or always, lead to action, because knowing is one thing but doing is another.
- 6. Effective communication is a *sine qua non* of the practice of health education.
- 7. Personal and situational factors create and influence the health consumer's already existing behavioral patterns.
- 8. The total environmental setting of individuals plays a dominant role in their health behavior.
- 9. To be long lasting, changes in health behavior must be self-imposed not administratively ordered; they must be integrated into the people's life pattern.
- 10. What has intrinsic value for people generates self-motivation; external motivation is of minimal value until it has stimulated the intrinsic self-motivational forces within the health consumer.

Imperceptible but effects on behavior are perceptible

# Key Issues in Educational Diagnosis

1. Behavioral issues and factors

Same Principles of Health Education

- Knowledge and awareness
   State of a state of the state of the
- Attitudinal factors:
- □ Acceptance and rejection is the dilactive of goind algorithmic and should algorithmic and the set
  - □ Causal variables (beliefs, values, perceptions, felt needs, prejudices, expectations, etc.)
- · Level and quality of involvement

2. Non-behavioral issues and factors

- · Availability factor
- Knowledge does not necessarily, or a ways, lead to action, because knowing is one of the bud state of the second sec
- · Feasibility and workability factor
- · Situational reality and environmental factor

Personal and situational factors create and influence the health consumer's already

- 3. Dynamic interrelationship of behavioral and non-behavioral factors in the context of man and his environment (human ecology and health practice).
  - The total environmental senting of individual plays a dominant role in their health Relevance for malaria control.

. To be long lasting, changes in health behavior must be self-imposed not **sebutittA** administratively ordered; they must be integrated into the people's life pattern.

· Dynamic force

4.

- 10. What has intrinsic value for people generates self-motivation; external motivation is minimal value until it has stimulated the intrinsic self-motivational (soroh gnidsuP)<sup>10</sup>, health consumer.
- · Pulling force
- · Imperceptible but effects on behavior are perceptible

# Undercurrents of Attitudes

| • | Beliefs                                   |     | Needs (felt needs) |
|---|---|-----|--------------------|
| • | Values                                    |     | Problems           |
| • | Known traditional and customary practices | e p | Perceptions, etc.  |
|   | Biases education                          |     |                    |

• Prejudices

Discuss the reasons for the benavioral problems identified at each lossly with speed a arcmion to children under 5 years of age and prognant women.

~

Discuss the importance of this analysis for planning health education activities and thus, for the work to be done during and after the workshop.

Materials Required

Flip charts and markets

Handour H2 1 - Take Home Assignment

Estimated Time

,

2 hours 30 minutes

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Understands of Actuality is an example of Actuality Actuality of Actuality A

- Helis voral issues and fact/alcoa tiet) about
  - Values Problems scenerarys in ogbelwenN
  - Known traditional and customary Perceptions, etc. Antipal Istabuters practices
    - Asseburger and tale year
    - (a) Prejudices (beliefs) and (b) (complete prophets) while a subset of the second complete second complete second completes.
  - Level and quality of involvements
- Non-behavioral visual en marce
  - and the fulles of
  - Autordability factor
  - Feasibility and workability factor
    - Situational reality and environmental factor
- Dynamic intervelation (up or behaviors and non-behaviors) factors in the context of man and its environment (human scotter and health practice).
- Relevance for malarla control.

### Attitudes

- Dynamic force
- Pushing force
- Pulling force
- imperceptible but effects on behavior are perceptible

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# H2: Synthesis of Behavioral Issues

## **Objectives**

Upon completion of this module, the participants will be able to:

1. List four malaria control methods that have important implications for health education.

Meanons for health education:

- 2. Identify key behavioral problems at each of three levels of intervention (individual, community, policy-making) related to the four control methods.
- 3. Discuss the reasons for the behavioral problems identified at each level, with special attention to children under 5 years of age and pregnant women.
- 4. Discuss the importance of this analysis for planning health education activities and thus, for the work to be done during and after the workshop.

### Materials Required

- · Flip charts and markers
  - Handout H2.1 Take-Home Assignment

## Estimated Time

It helps to identify possible solutions that are specific to the reasons for the behavior

D Begin where people already are, i.e., build on

# 2 hours 30 minutes

with particular reference to the logich of the second polarity polarity polarity and specific target groups at the difference based on hifernation in the respective based on

- Select the top priority problem for which action is indicated.
- 4. As a group client one makeria control strategy and one target group that will have an impact on the priority problem that they want to work on back home through health education.

| H2: Synthesis of Behavioral Issues |  |   |  |  |
|------------------------------------|--|---|--|--|
|                                    | Content  | Training Methods  |  |  |
|                                    | Four malaria control methods with major<br>implications for health education:<br>□ Early diagnosis and treatment<br>□ Personal protection<br>□ Mosquito control <sup>□ elde ed</sup> liter atmosphiller education<br>□ Chemoprophylaxis  | Review and discussion in<br>plenary of malaria control<br>technologies studied during<br>Week 1 |  |  |
| ai<br>fin<br>son                   | <ul> <li>Examples of behavioral problems:</li> <li>Individual level:<br/>Mothers do not treat fever in young children<br/>promptly<br/>Young children sleep with no protection from<br/>mosquitoes</li> <li>Community level:<br/>Residents dump refuse in drains<br/>Drains are poorly maintained</li> <li>Policy-maker:<br/>Local authorities do not enforce regulations</li> </ul> | Examples from Week 1 will be<br>discussed in plenary  |  |  |
| •                                  | <ul> <li>3 principal reasons why people behave as they do:</li> <li>Thoughts/feelings related to knowledge,<br/>attitudes, beliefs, values</li> <li>Availability of resources such as time, money,<br/>skills, materials</li> <li>Influence of other people who are important to<br/>them</li> </ul>   | Brainstorming     Guided discussion     Joanuper atementity                                     |  |  |
|                                    | <ul> <li>Importance of the analysis for planning:</li> <li>□ Begin where people already are, i.e., build on existing situation</li> <li>* It helps to identify possible solutions that are specific to the reasons for the behavior</li> <li>* It helps to see how existing malaria control technology fits or does not fit with the target group</li> </ul>                         | Guided discussion   |  |  |

Community involvement and Participation

# **Take-Home Assignment**

## Who

Open completion of this module, the participants will be able to:

Participants will complete this assignment by working in their LGA or country groups.

# By When

To be completed by tomorrow morning.

# Tasks

- 1. Individually review the Needs Assessment reports from their respective localities.
- 2. Working as a group, identify problems of behavior in the context of the four malaria control strategies:

### Estimated Th

- · Early diagnosis and treatment of fever
- · Personal protection
- · Mosquito control
- · Chemoprophylaxis

with particular reference to the levels of intervention, i.e., individual, community, policy-making levels and specific target groups at the different levels. The frequency (if possible) and importance of each problem will be assessed based on information in the reports.

- 3. Select the top priority problem for which action is indicated.
- 4. As a group, select one malaria control strategy and one target group that will have an impact on the priority problem that they want to work on back home through health education.

| Levels of<br>Intervention                            |  | Malaria Control Strategy   |   |   |  |  |  |
|--|--|--|---|---|--|--|--|
| KP JES<br>EL DE V                                    | Early Diagnosis and<br>Treatment   | Personal Protection  | Mosquito Control  | Chemoprophylaxis  |  |  |  |
| Individual Family                                    | Problem:<br>Message (Target<br>Behavior): $\rightarrow \rightarrow \rightarrow$<br>Target Group:<br>$\downarrow$ | ad shire so a succes is<br>ad shire as a succes is<br>a state of shire so as a shire<br>a state of shire so as a shire<br>a state of shire people who are<br>a state of shire people who are | ners do net treat ferer in jo<br>mpter<br>ing children steep with the m<br>iquitoes<br>unify feve<br>idents out to the test of each<br>manent | stuard of which should be a straight to a straight to a straight the straight to a straightt to a straight to |  |  |  |
| Community  | mt Poor Broad-to<br>Mark Markata<br>Bruesana<br>Bruesana<br>Jana Bruesana<br>Ca                                  | n teren<br>6 Euroru<br>Pistož de popis<br>262.4444 ježio<br>262.4444 ježio   | otumă<br>1<br>  | is of the life polynomial   |  |  |  |
| Policy-making  | section shound   | b' (genrif, bl.<br>stirt genrif, bl.<br>stirt genrif, bl.  | Wordomod y  | ti steru - Xa-<br>interiore tipis   |  |  |  |
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# H3: Community Involvement and Participation

Upon completion of this module, the participants will be able to:

- 1. Recognize facilitating and inhibiting factors in community participation.
- 2. Identify appropriate health education strategies that are capable of promoting community involvement and participation at each of the three levels of control (individual, community, policy makers).
- 3. Apply appropriate health education strategies for community involvement and participation in malaria control activities.

Materials Required

**Objectives** 

· Flip charts and markers

Estimated Time

4 hours

Jse of local herbs mmunity education on cause, prevention, and atment of malarie, mmunity mobilization; apedal groups to mobilize Patent medicine salters Patent medicine salters Community organizations, e.g., Bettenbullabile? Tabilitari - 1.1 for Rural Women, Rotary Club, Lions, etc. Traditional rulers Patient makers

12 hours classecone, 6 hours fieldwork, 4 hours analysis and presentation

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| HE3: Community Involvement and Participation   |  |  |  |  |
|--|--|--|--|--|
| Content  | Training Methods   |  |  |  |
| <ul> <li>Purpose of community involvement and participation in malaria control:</li> <li>To improve knowledge of community about the cause, prevention, and treatment of malaria</li> <li>To enlist cooperation and support of community in malaria control activities;</li> <li>To promote local initiatives in malaria control</li> <li>To acquire skills to control malaria in the community, etc.</li> <li>Factors influencing community involvement and participation:</li> <li>Facilitating factors: knowledge of purpose, positive experience of past community action, good community leadership, and simplicity and feasibility of malaria control technologies</li> <li>Inhibiting factors: inadequate knowledge and wrong perception of malaria, negative experience of past community</li> </ul> | Lecture and discussion<br>Upon completion of this and bi-<br>Recognize facilitation<br>Recognize facilitation<br>Recognize facilitation<br>Community involve<br>community involve<br>individual, community<br>articipation in mase<br>Materials Required |  |  |  |
| <ul> <li>leadership or health workers, infighting and complicated and expensive technologies</li> <li>Identification of areas of malaria control which call for community involvement/participation:         <ul> <li>Vector Control</li> <li>Filling of burrow pits</li> <li>Clearing of drainage</li> <li>Cutting and removal of overgrown weeds</li> <li>Covering pots and other containers, etc.</li> <li>Use of chemicals</li> <li>Larviciding</li> <li>Use of local herbs</li> </ul> </li> </ul>   | Directed group discussion<br>Group assignment: Country<br>or LGA teams will identify<br>appropriate community<br>groups to be involved in<br>malaria control activities<br>Group presentations   |  |  |  |
| <ul> <li>Community education on cause, prevention, and treatment of malaria.</li> <li>Community mobilization:</li> <li>Special groups to mobilize         <ul> <li>Patent medicine sellers</li> <li>Traditional healers</li> <li>Community organizations, e.g., Better Life for Rural Women, Rotary Club, Lions, etc.</li> <li>Traditional rulers</li> <li>Policy makers</li> </ul> </li> </ul>  |  |  |  |  |

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Ith Education for Malaria Control

# H4: Information Gathering

### **Objectives**

Upon completion of this module, the participants will be able to:

- 1. Give reasons for gathering information prior to beginning a health education activity.
- 2. Use their own data and experiences to identify five types and sources of information collected related to malaria control.
- 3. Review data from their respective localities to identify the most severe problems related to each of the four malaria control methods.
- 4. Select one target group and one malaria control method for which they will conduct a health education activity; for the selected target group and method, identify additional information to be collected.
- 5. Analyze, present and discuss at least two types of information related to the selected methods, and use two simple methods to present the two selected types of information.
  - Prepare and field test in Oyo draft instruments for collecting information whey they return home.

# Materials Required

6.

- Needs assessment reports
- · Other relevant data
- Flip charts and markers

I be field tested (in addition to use of Tracty Diseases

Handout H4.1 - Facilitator Guidelines

### Estimated Time

End-of-day "Products"

Deminion of behavioral problem(s) selected last known reasons for each behavior.

12 hours classroom, 6 hours fieldwork, 4 hours analysis and presentation

| H4: Information Gathering  |  |  |  |  |
|--|--|--|--|--|
| Content  | Training Methods   |  |  |  |
| <ul> <li>Define importance of problem</li> <li>Learn about resources and constraints</li> <li>Identify who is affected by the problem</li> <li>Learn about people affected and what they are already doing</li> </ul>  | Handout H4.1 - Facilitator<br>Guide<br>Brainstorming<br>Discussion                                 |  |  |  |
| Types of information         Disease occurrence and frequency         Geography         Political organization         Socio-cultural practices         Age and sex distribution of population         Sources or Methods         Household surveys         Record reviews         Interviews with key leaders         Observations         Health worker interviews         Neighborhood meetings         Focus group discussions | Brainstorming<br>Discussion  |  |  |  |
| Analysis of malaria behavioral problems by four methods and three levels of intervention   | Example using Handout H2.1<br>matrix - LGA and country<br>groups with facilitators                 |  |  |  |
| Priority setting based on data about existing situation and feasibility of change (time, resources, etc.)  | <ul> <li>LGA and country-groups with<br/>facilitators</li> <li>Presentations in plenary</li> </ul> |  |  |  |
| Use existing situational data as content   | LGA and country groups with<br>facilitators  |  |  |  |
| Instrument development and field testing procedures  | Guide field practice with facilitators   |  |  |  |
| treatment of malana<br>Community mobilization.   | Other relevant data  |  |  |  |
|  |  |  |  |  |
| for Rural Women, Retary Dub, Llons for.<br>Traditional rulers<br>Policy makers   | Pandon De Facultan o<br>Estimatad Tima   |  |  |  |

12 hours classroom, 6 hours fieldwork, 4 hours analysis and presentation

**1.4H tuobneH** of additional data to be collected about behaviory, reasons for the basavior and target groups and how data will be? **dtiered** 

Facilitator Guidelines

**Information Gathering:** Supervised fiel Dav 1 in surrounding commendation with terrolul developed on previous day. Plenary 9:00 - 10:00 am LGA and country groups with facilitators: 10:00 - 11:00 am 1. Select one malaria control method. 2. Select one target group. 3 Help group to prepare *brief* presentation of their selections giving at least three reasons for their choices. Presentations by each group (5 min. maximum for each group). 11:15 am - 1:00 pm 1:00 - 2:30 pm of failing to a Lunch realised aduno Y broose 2:30 - 4:30 pm LGA and country groups with facilitators: 1. Review needs assessment report in terms of data available on selected behaviors. 2. Determine additional data to be collected on the selected behavior(s). out not contract of the second data will be collected, i.e., by what method. addisational for all discussions of the data that will be field tested (in addition to use of Tracer Diseases form). Have team members practice one interview, using a End-of-day "Products"

1. Definition of behavioral problem(s) selected and known reasons for each behavior.

2. Definition of levels of intervention target groups.

- 3. Description of additional data to be collected about behaviors, reasons for the behavior and target groups and how data will be collected.
- 4. Initial draft of one instrument to be field tested.

Information Gathering: Day 2

8:30 am - 1:00 pm

# LGA and country groups with facilitators

- 1. Complete one questionnaire in English.
- 2. Submit questionnaire for typing.
- 3. Prepare field sites.
- 1:00 2:30 pm benefities Lunch
  - 1. Translate draft English questionnaire into Yoruba.
  - 2. Yoruba translation is to be translated back into English by a second Yoruba speaker or by the original translator, who no longer has a copy of the English version as a reference.

# 2:30 - 3:30 pm

- LGA and country groups with facilitators
- 1. Prepare final Yoruba translation.
- 2. Have Yoruba translation typed.
- 3. Revise English version (if needed, after translation into Yoruba).

4. Continue to develop other draft instruments for information gathering.

5. Have team members practice one interview, using a translator.

End-of-day "Products"

6. Discuss final arrangements for field test.

Definition of behavioral problem(s) selected and known reasons for each behavior.

# 3:30 - 4:30 pm

Role play an interview and discuss, using one of participant's questionnaires.

# Day 3

8:30 am - 1:00 pm

**Information Gathering:** 

# LGA and country groups with facilitators

Supervised field work in surrounding communities with instruments developed on previous day.

2:30 - 4:30 pm

# LGA and country groups with facilitators

Analysis of information gathered and critique of instruments

# **Information Gathering:**

### Day 4

11:00 am - 1:00 pm

# LGA and country group facilitators

Team presentations of results analyzed and critiques

Estimated Time

|              |   | Information Gathering:  |
|--------------|---|-------------------------|
| )0 - 1:30 pm | LGA and country group (actful   | 1. [00 am - 1:00 pm     |
|              |   |                         |
|              | Y roba translation is to be used a<br>solubit Yomba spucker of by the<br>longer has a copy of the English i |                         |
|              | A and country groups with facilit   |                         |
|              |   |                         |
|              |   | t.                      |
|              |   | after translation into  |
|              |   |                         |
|              |   |                         |
|              |   |                         |
|              |   | ng one of participant's |

|                       | H5: Form               | ulating Health E         | ducation Objectives                  |
|-----------------------|------------------------|--------------------------|--------------------------------------|
|                       | eM granistT            |                          | bjective#smoo                        |
| Objectives            |                        |                          |                                      |
| Upon co               | mpletion of this       | module, the participa    | nts will be able to:                 |
| 1.<br>A               | Identify five ch       | naracteristics of a heal | th education objective.              |
| 2.                    | Define a progr         | am objective.            |                                      |
| le objactives         | Define a health        | education objective.     |                                      |
| 4. 4<br>es objectives | Identify three of      | limensions of health e   | ducation objectives.                 |
| ch tuchnish           | Identify two ty        | pes of health educatio   | n objectives.                        |
| 6.                    | Develop three program. | measurable health edu    | acation objectives for their control |

# Materials Required

· Handout H5.1 - Educational Objectives

# Estimated Time

6 hours

| H5: Formulating Health Education Objectives   |  |  |  |  |
|---|--|--|--|--|
| Content   | Training Methods   |  |  |  |
| <ul> <li>What action is to be performed?</li> <li>Who is to perform the action?</li> <li>When is performance to occur?</li> <li>Under what conditions?</li> <li>What is the acceptable level of performance?</li> </ul> | <ul> <li>Lecture</li> <li>Discussion</li> <li>Analysis of sample objectives</li> <li>(Handout H5.1)</li> </ul> |  |  |  |
| <ul> <li>What is a program objective?</li> <li>What is a health education objective?</li> </ul>   |  |  |  |  |
| <ul> <li>Health education objectives:<br/>knowledge, attitude, and behavior</li> </ul>  | <ul> <li>Analysis of sample objectives</li> <li>Group exercise (Handout H5.1)</li> <li>Discussion</li> </ul>   |  |  |  |
| <ul> <li>Outcome objectives</li> <li>Process objectives</li> </ul>  | <ul> <li>Analysis of sample objectives</li> <li>Group exercise (Handout H5.1)</li> <li>Discussion</li> </ul>   |  |  |  |
| How to develop measurable objectives with each of examples  | Facilitators work with LGA and<br>country team to develop<br>objectives  |  |  |  |

Materials Required

Pandout H5.1 - Educational Objective

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Estimated Time

stund d

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# **Educational Objectives**

# I. Formulating Educational Objectives

# **Objective:**

A statement of an organization or unit that specifies expected change or accomplishments as a result of a program or activity.

# Program Objective:

A statement that specifies expected changes a program or activity will have on a *health problem* (malaria).

# Health Education Objective:

A statement that specifies expected changes a health education program or activity will have on a behavior contributing to a health problem.

| Process<br>(Effort of Organi | zation)                            | education                | Outcome<br>(Effect on target) |
|------------------------------|------------------------------------|--------------------------|-------------------------------|
|                              |                                    |                          |                               |
|                              |                                    | n antice                 |                               |
|                              |                                    |                          |                               |
|                              | (Pitablems)<br>re Principlet of He | ldentified)<br>d(t-Educa |                               |
|                              | ives for Health pr                 | ्यादव                    |                               |
|                              | nie                                |                          |                               |

| Examples: Health Education Objectives for Malaria Control   |  |  |  |  |
|---|--|--|--|--|
| Early Diagnosis and<br>TreatmentThe percentage of mothers with children who bring the<br>children to the health clinic within 24 hours of fever ons<br>will increase from 24% to 62% (by July, 1991). |  |  |  |  |
| Personal Protection   | The use of mosquito coils in their bedrooms by pregnant women will increase from 3/100 to 20/100 households in village X by the end of 1991.                       |  |  |  |
| Mosquito Control  | The number of <i>breeding sites</i> for mosquitoes in village X will be reduced from an average of 10 per <i>household</i> to 2 per household by July, 1991.       |  |  |  |
| Chemoprophylaxis  | The percentage of pregnant women in village X who take<br>antimalarial drugs prophylacticly through pregnancy will<br>increase from 15% to 39% by the end of 1991. |  |  |  |

N Statisfient TailStectifies[expected chances a health education program of Scalence with Lave 55 a 16 a contributing to a health problem.

| Two Ferms (Types) of Objectives |                                     |  |  |  |
|---------------------------------|-------------------------------------|--|--|--|
|                                 | Process<br>(Effort of Organization) |  |  |  |
|                                 |                                     |  |  |  |
|                                 |                                     |  |  |  |
| · ·                             |                                     |  |  |  |
|                                 |                                     |  |  |  |
|                                 |                                     |  |  |  |
|                                 |                                     |  |  |  |
| •                               |                                     |  |  |  |
|                                 |                                     |  |  |  |

# II. Types of Educational Objectives

1. There are two types of educational objectives:

Training, process or institutional objectives e.g., training or objectives by the trainer(s) to be accomplished by trainer(s)

- Learning objectives by the learner(s) expectations from learner(s)
- 2. Educational objectives are defined in *measurable*, *observable behavioral terms* or *outcomes*.
- 3. There are three dimensions of *learning* (educational) objectives:
  - Knowledge objectives (cognitive domain);
  - Attitude objectives (affective domain); here and relate the to the same set
  - Practice or action objectives (psychomotor domain)

Examples: Action verbs

- 4. Goal of health education positive health practice and action. Therefore, *knowledge* and *attitude* objectives are the means to an end in health practice and action or health education.
  - No positive health practice, no health education.
- 5. Importance of:

Knowledge objectives for health practice



### (Problems Identified)

Refer to Some Principles of Health Education - Handout H1.2

Attitude objectives for Health practice

|--|

(Problems identified) Refer to Some Principles of Health Education - Handout H1.2

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Aduaide objeen as (affactive domain);

Practice or action objectives (psychomotor domain)

Examples Action verbs

 Gual of health education positive health practice and action. Therefore, knowledge and atritude objectives are the means to an end in health practice and action or health education.

No positive health practice, as health advection.

- 5. Importance of:
- Knowledge objectives for health practice



(Problems identified) Refer to Some Principles of Health Education - Handout H1.2

| Objectives         |                       |   |   |
|--------------------|-----------------------|---|---|
| Upon co            | ompletion             | of this module, the                           | participants will be able to:   |
| 1.<br>of<br>pacole | Explain relate to     | the concept of diffu-<br>the target group and | sion and the need to plan intervention strategies tha d its behavior.   |
| 2.                 | Identify adoption     | the stages of reading<br>of a new behavior.   | ess to accept change and what must occur for  |
| 3.                 | Differer<br>strategie | tiate among communes and identify five e      | nication, training, and community mobilization examples of each type.   |
| 4.                 | List the and its e    | different types of be<br>environment.         | ehavioral factors and relate them to the target group   |
| 5.                 | Select th<br>interven | ne most appropriate tion, and match ther      | behavioral factors to be addressed in the new more strategies.  |
|                    |                       |   |   |
| Materials R        | equired               |   | Intrability is consistent with a net resources impacting on behavior (use endersity invition thermometer, availability and cost of drugs, etc.) |
| · Overl            | nead proje            | ector   | Reinforcing factors suppon a desired<br>behavior (incenuves)  |
| • Flip c           | harts and             | markers                                       |   |

- · Handout H6.2 Guidelines for Developing Strategies
- · Handout H6.3 Health Education Strategy Analysis
- · Handout H6.4 Health Communication Intervention (Media Implications)
- Handout H6.5 Synthesis of a Planning Strategy for a Health Communication Intervention in a Health Program

# **Estimated Time**

4 hours

|        | H6: Health Education Strategies  |  |  |  |
|--------|--|--|--|--|
|        | Content  | Training Methods   |  |  |
| s that | The diffusion process for a health behavior<br>follows a course:<br>early adopters<br>middle majority<br>late adopters<br>Different strategies must be applied with the<br>above groups.   | Lecture<br>Discussion<br>Examples  |  |  |
| •      | Stage of readiness: awareness, interest,<br>trial, decision and adoption<br>At each point, an action must be taken to<br>move someone to the next level until the<br>behavior is adopted.  | <ul> <li>Lecture</li> <li>Discussion</li> <li>Examples</li> </ul>  |  |  |
| daori  | A number of health education strategies will be identified and described.  | <ul> <li>Lecture</li> <li>Discussion</li> <li>Examples</li> </ul>  |  |  |
|        | Predisposing factors relate to motivating<br>persons to act (knowledge, attitudes,<br>perceptions, etc.)<br>Enabling factors are skills and resources<br>impacting on behavior (use of a<br>thermometer, availability and cost of drugs,<br>etc.)<br>Reinforcing factors support a desired<br>behavior (incentives). | Lecture<br>Discussion<br>Examples  |  |  |
| •      | How to assign values in order to prioritize<br>factors<br>How to select strategies for prioritized<br>factors  | <ul> <li>Participants will prioritize factors<br/>by listing them and assigning a<br/>value to their effect on the target<br/>group and its environment.</li> <li>Potential strategies will be<br/>discussed.</li> </ul> |  |  |

Handout H6.3 - Health Education Strategy Analysis

Handout H6 4 - Mealth Communication Intervention (Media Implications)

Handout H6 5 - Synthesis of a Planning Strategy for a Health Communication Intervention in a Health Program

92

4 hours



Mass Media

Radio, Films Newspapers Posters, pictograph Town crier Puppet show Campaign

| Special Media                                |                              |            |
|--|------------------------------|------------|
| Target Advertising<br>Sports events          |                              |            |
| Promotions                                   |                              |            |
| Fiomotions                                   |                              |            |
| The seconse.                                 |                              |            |
| · Iraining                                   |                              | 1.00       |
| Demonstration                                |                              |            |
| Practice                                     |                              |            |
| Workshop                                     |                              |            |
| Seminars                                     |                              |            |
| Conferences                                  |                              |            |
| Symposium                                    |                              |            |
| Group discussion                             |                              | officiants |
| Self-help groups                             |                              |            |
|  |                              |            |
| <ul> <li>Community Mobilization</li> </ul>   |                              |            |
| Coordinate community leadership              |                              |            |
| Community meetings                           |                              |            |
| Social and civic group involvement           |                              |            |
| Volunteers                                   |                              |            |
| Religious groups                             |                              |            |
| Youth clubs                                  |                              |            |
| Enabling factors are shifts and resources    |                              |            |
| impacting on behavior (use mutavosdo , inclu |                              |            |
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|  | , pictograph<br>rier         |            |
|  | , pietograph<br>rier<br>show |            |

# Guidelines for Developing Strategies

- 1. A strategy must take into account the desired health behavior, the target group, and the group's readiness to change. How well has the target group already adopted the desired behavior? Do you want to initiate a new behavior, reinforce one that people already practice, or extend the desired behavior to a part of the community that has not yet accepted it? Are you trying to discourage a behavior that is unhealthy? Are you trying to replace one behavior with another? Your strategy must begin at the place where the desired (or undesired) behavior is currently adopted by the target group.
- 2. The readiness of the target group to adopt a health behavior depends upon the group's awareness of the need to adopt the behavior. The target group must first be made aware of the desired behavioral change, then become interested enough to accept it. Only after creating awareness and interest are you likely to get people to try and to adopt the desired behavior. Is the target group aware of the desired behavior that you expect? Have you created interest in the need for the desired behavior? Have you used rewards, incentives and benefits to assist the target group to try the behavior and to continue it?
- 3. Every target group has barriers and helpers (thoughts, feelings, available resources, skills, influence of others, culture, etc.) that prevent or assist the adoption of a health behavior and that must be considered when developing a strategy. Have you listed the relevant barriers and helpers to action by the target group (see Handout H6.3)? Have you decided which are most important to consider in developing your strategy? Have you considered ways to emphasize the helpers and overcome the barriers?
- 4. The strategies chosen must offer the target group the best opportunity to proceed through the behavioral change process from awareness to action. The choice of the most important helpers and barriers will help you select the strategies that will be most effective in achieving the desired behavior. Have you reviewed a range of methods to reach your target group? Have you decided how you will emphasize helpers and overcome barriers as you take the target group through the behavior change process? Have you decided how you will link different strategies to have the best effect on the target group?
- 5. Always show sensitivity to the target group. Be flexible. If your strategy is not working, review it and don't be afraid to make adjustments based on better information.

Life Weight Handout H8.2

- Tarret Auvenusma Spens evens Promet**acigetant2 prigoteved tot centlebiu**G
- Training .
- A strategy must take into account the desired health behaviorphilo sargetegroup, and the group's readiness to change. How well have the target group already adapted the desired behavior? Do you wan to wid as new behavior, reinforce one; has people already practice, or extend the desired behavior to a part of the communication has not yet accepted if? Are you trying to discourage a behavior that is unhealth already out trying to replace one behavior with another? Your strategy must begin altice the resired (or undesired) behavior is currently udopted by the unstated by the strate the resired (or undesired) behavior is currently udopted by the unit get group of the larget provide the strate of the strate o
- 2. The readiness of the target group to adopt a health behalicatificatification in the group's awareness of the need to adopt the behaviorian interested behaviorian to adopt the behaviorian become interested behavioral change, then become interested behaviorian to adopt the behaviorian become interested behaviorian. Only after creating awareness and interest the provident to grave completion of the desired behaviori interest the provident of the desired behaviori interest the behavior to a state the desired behavior interested behavior to adopt the desired behavior interest and interest the provident to grave completion become the desired behavior to the target group awareness in the desired behavior that you endeen the target for the desired behavioral favor grave to another the target group to the behavioral favor grave and to an and the interest in the acceleration behavioral favor grave to a solution of the target group to the desired behavioral favor grave and to a solution in the target group to the target group to the behavioral favor grave and to a solution in the target group to the target group to the behavioral favor grave and to a solution in the target group to the target group to the behavioral favor grave and to a solution in the target group to the target group to the behavior and to a solution and the target group to the behavior and to a solution and the target group to the behavior and to a solution and the target group to the behavior and the target group to the behavior and to a solution and the target group to the behavior and to a solution and the target group to the behavior behavior and to a solution and the target group to the behavior and the target group to the behavior behavior and the target group to target group to the target group to the tar
- 3. Every target group icts barriers and helpers'(lhoughts, feelings, available resources, skills, influence of others, culture, etc.) that prevent or assist the adoption of a health behavior and that must be considered when developing a surategy. Have you listed the rejuvant barriers and helpers to a close by the target group (see Handout H6.3)? Have you decided which are most important to consider in developing your strategy? Have you strategy? Have you considered the you consider in developing your strategy? Have you consider in developing your strategy?
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- 5. Always show sensitivity to the target group. Be flexible. If your strategy is not working, review it and don't be afraid to make adjustments based on better information.

.

# Helpers Barriers What people know, believe, feel and think Image: Comparison of the second s

H6 - Health Education Strategy Analysis

Slide projector
 Overhead projector

Characteristics of the media listed (advantaget and limitations)

Television

A mass communication availant

- Cast reach a wide area
  - Capable of educating a very large number of people at the same time
  - Containes motion recture, wands and color
  - Expensive and not within the reach of many Nigerians.
- Radio

Has all the potential of television but does not have picture It is relatively cheap and will in the reach of most bilgerians Newly electricity.

Newspapers' magazines and leaflets
 Benefit only people who can read and write (mostly tables to tables)
 Cheap
 To not used electricity

H6 - Health Education Strategy Analysis

| • |  |
|---|--|

# Health Communication Intervention (Media Implications)

The health education experts have identified the behavioral problem(s) and the target population and have designed the message(s) that are to address the *identified behavioral problem(s) towards positive change*. The next stage is the media strategy. Before this strategy is implemented, one must look into what is known as the media implications of the strategy.

This part of the exercise is a discussion on the media implications of the health communication intervention. In doing this we will look into three areas, namely (1) types of media available, (2) characteristics of the media listed, and (3) media selection.

Expensiverable of bornbacks of such and interview for the

### I. Types of media available

· Broadcast Media

TV Radio

Print Media

Newspapers, magazines, and leaflets Posters and flyers

· Media Equipment

16mm projector Slide projector Overhead projector

II. Characteristics of the media listed (advantages and limitations) 10 pointerial

· Television

A mass communication medium

Can reach a wide area

Capable of educating a very large number of people at the same time Combines motion picture, sounds and color Expensive and not within the reach of many Nigerians

### Radio

Has all the potential of television but does not have picture It is relatively cheap and within the reach of most Nigerians Needs electricity

Newspapers, magazines and leaflets

Benefit only people who can read and write (mostly urban dwellers) Cheap

Do not need electricity

### • Posters and flyers

Benefit literates and illiterates (if visual is simple) Do not need electricity

· 16mm Projector and state and a baltmake and state and state and state and state and state and the Has same potentials as the television Cannot be reproduced locally Expensive above and as record at talk of the set but an instruction as a set of the set Needs electricity

· Slide Projector in another instruction of the activity of the second s Combines sound and picture Its picture is static (i) one is labeled a long of the method (i) and the reber Expensive Needs electricity

Print Medi

### Overhead Projector

Portable chalkboard Outdoor quality Expensive Needs electricity

**III.** Media Selection

Media selection is the process of choosing one media over the other or one media equipment over another for effective media strategy.

- **Target** population . . Rural or urban Literates or illiterates
  - · Message

- Media available Advantages and limitations to reduce again your a goldsout of beidage?
- · Cost effective

- Affordability
- It is relatively cheap and within the reach of most Nigerians

# Synthesis of a Planning Strategy for a Health Communication Intervention in a Health Program

Communication in the context of this workshop should be geared towards behavioral change.

Where do we expect the desired behavioral change to take place? By now we all know the three levels of our LGA.

### 1. The three tiers of the target population.

Individual and family level

Community level

•

Policy makers level.

### 2. Identification of behavioral problems

To design an effective health communication package, we will need to identify the behavioral problem(s) this package is expected to address.

There are four areas of malaria control, namely:

Early diagnosis and treatment

Personal protection to be followed by bucture to be an an and a second s

Mosquito control

Chemoprophylaxis

For the purpose of this discussion, assume that our health communication strategy is geared towards achieving positive behavioral change in the specific area of mosquito control. In the area of mosquito control we have already identified behavioral problems such as:

People not cleaning their surroundings

People littering their surroundings with such items as broken bottles, used tires, and empty tins.

### 3. Target population

Having identified the behavioral problems, we will need to identify the target population with these problems. These can be found at the three levels of our LGA and country.

| Level                 | Location                             |
|-----------------------|--------------------------------------|
| Individual and family | Urban — suburbang sibers of the tec  |
| Community             | Rural — very rural                   |
| Policy makers         | Local government<br>State<br>Federal |

Example: An urban situation
#### 4. Theme/message(s)

Having identified the behavioral problem(s) and the target population, we will need to direct an appropriate message(s), based on a specific theme, at the target population in order to change negative behavior(s) to positive ones. For example, have people

- Bury empty tins, broken bottles, disused tires, etc., in order to prevent breeding of mosquitoes.
- Practice larviciding stagnated pools, thereby killing larvae to prevent mosquito breeding.

Where do we expect the desired behaviors change to size places by now we have a long to be the second s

- 5. Types of media available
  - Broadcast Media

TV Radio

· Print Media

Newspapers, magazines, and leaflets Posters and flyers

Media Equipment
 16mm projector
 Slide projector
 Overhead projector

6. Media selection

Media selection is the process of choosing one medium over another or one piece of media equipment over another for effective strategy. One must consider:

- · Location of target population (urban or rural)
- · Infrastructure

Availability of electricity, etc.

• Percentage of educated people Are most people literate or otherwise?

| • | Advantages and limitations of the available media      |                       |
|---|--|-----------------------|
| • | Cost of the media package                              | Individual and family |
|   | Is the cost within the reach of the LGA?               |                       |
|   | Local government                                       |                       |
| • | Effectiveness of the equipment in relation to the mess | sage                  |

Example: An urban situation

Our media selection process will take the following into consideration:

- Oyo is an urban community.
- · Has a large population of literate adults and students.
- Has necessary infrastructure such as electricity and pipe borne water. Can, therefore, use radio and television transmission.
- · Is the seat of local government.
- · If the choice of media and the equipment chosen are the most effective in relation to other alternatives, the LGA will afford it.

A battery of media approaches will be made to transmit the message through

- Television in English and Yoruba, at specific intervals.
- Radio jingles in English and Yoruba, at specific intervals. About horses of all
- · Posters in English and Yoruba, to be followed by interpersonal contact.
- · Newspapers in English and Yoruba, to be followed by interpersonal contact.

*Example:* A rural situation

Our media selection process will take the following into consideration:

- · Apologun village is very rural
- Lacks the necessary infrastructures such as electricity and pipe borne water
- Even if the LGA is prepared to spend much money, the choice of media or media equipment is limited. Television and newspapers are ruled out.

Our plan will be to transmit the message through:

- Town crier
- · Radio jingles houses, and the print media without participating in packaging these measures
- 16mm projector\*
- these messages are intended to change. The practitioners also \*rotsejorq edil?
- Interpersonal\*

\* Although these will need electricity, an outdoor broadcast van with 5 KVA generator will make this possible. If outdoor broadcast van is not available, the LGA can rent a small a way that they will understand the need for liaison with practi generator.

#### 7. Evaluation of the effectiveness of the media plan

#### · Pretest

Field test the media plan to determine its acceptability within the target population regarding such variables as religious taboos, customs and beliefs. To do this, select persons from the urban and rural areas who are part of the target population and conduct a focus group discussion about the media plan.

After this, modify the media strategy on the basis of the findings from the pretest exercise. Then implement the media plan.

#### • Monitoring and evaluation

Monitoring is a process of checking and keeping track of the media approach.Are the radio jingles aired at the stipulated intervals?

- Is the newspaper coverage in the center spread as agreed?
- · Is the poster ready for distribution?
- When evaluating, follow-up during the campaign to see whether the media plan is going well and to know whether the messages reach the intended audience. Use focus group discussions, selecting people and groups from among the following:

| Illiterate                                   | Rural and urban populace<br>(literates and illiterates)              |
|--|--|
| • Influential<br>members of the<br>community | Religious leaders;<br>Community leaders or Obas, or<br>village heads |
| • Policy makers                              | Chairman of LGA<br>and Councilors                                    |

#### $\cdot$ Training

In the past health educators sent their messages to the media men in radio houses, TV houses, and the print media without participating in packaging these messages. Unfortunately, these media practitioners are not aware of the behavioral problems these messages are intended to change. The practitioners also do not know the socio-cultural habits of the people. Hence, in most cases, the posters they print may not have cultural relevance to the people. The radio messages may be aired when the people are working their farms, etc. Hence, there is a need to train health educators at the LGA level having the Advanced Diploma in Health Education (ADHE) in such a way that they will understand the need for liaison with practitioners in fields such as:

Our plan will be to transmit the message dirough:

- · Graphic artist and photographers
  - Print media

· Broadcast media Radio Television

and understand the principle of media selection.

If health educators are armed with these health communication rules they will be able to supervise the health communication strategy by working with the artists, photographers, and the media personnel to produce appropriate and effective messages for the desired target population.

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Monitoring is a process of checking and keeping track of the treast approach angre Are the radio jungles aired at the stipulated intervals?

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#### Training

In the past headsh educators sent their messages to the media ment in ratio houses, TV houses, and the print modia without participating to packaging these messages. Unfortunately, these messages are intended to change. The practitioners also do not know the socio-cultural habits of the people. Hence, in most cases, the post its dieg print may not have cultural relevance to the people. The radio messages are, when the people is there is a need to train boalen the people are working their family, etc. Hence, there is a need to train boalen educators at the LGA three having the Advanced Diploma in Hende Education (ADHE) in such a way that they will understand the need for flates) with practitioners in fields such as

| Training Methous  |  |
|---|--|
| bjectives   | Components of an Action Plan: noiso 9, 10    |
| · Lecture   |  |
|   |  |
| Upon completion of this module, the p   | articipants will be able to:                 |
|   | Activities                                   |
| 1. Identify the components of an  | action plan.                                 |
| 2 Recognize the benefits of an a  | action plan                                  |
| 2. Recognize the senents of an e  | le cicli piuli.                              |
| 3. Prepare an action plan.  |  |
| (DC M   |  |
| Guided discussion   |  |
| aterials Required   |  |
|   |  |
| • Handout H7.1 - Plan of Action   |  |
|   |  |
| · Handout H7.2 - Plan of Action - Re  | C Reduces the chances of making lucometics   |
|   | decisions due to inadequate or faulty        |
|   |  |
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| timated Time<br>about the solution of the solution<br>S.TH bas 1.Th<br>4 hours<br>Objectives<br>Activities<br>Responsibility roster to be doesn'the   |  |
| <ul> <li>timated Time standingiess quotO<br/>aibeometric quality for a point of the standing o</li></ul>    | information<br>Preparation of an acuion plan |
| timated Time<br>aboomship on subscription<br>S.TH bas 1.TH<br>4 hours<br>Objectives<br>Activities<br>Responsibility roster to be down the<br>Resources  | information<br>Preparation of an advinn plan |
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| <ul> <li>timated Time</li> <li>about the second sec</li></ul>    | information<br>Preparation of an advinn plan |
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| <ul> <li>timated Time<br/>about the second second<br/>S.TH ons 1.Th</li> <li>4 hours</li> <li>Objectives</li> <li>Activities</li> <li>Responsibility roster to be determined</li> <li>Resources:<br/>available<br/>additional</li> <li>That House</li> </ul>  | information<br>Preparation of an advinn plan |
| <ul> <li>timated Time completes quoto above the graduated of the second of the second</li></ul>     | information<br>Preparation of an acuim plan  |
| <ul> <li>timated Time</li> <li>about the managers quoto</li> <li>about the managers quoto</li> <li>S.TH ons 1.Th</li> <li>4 hours</li> <li>Objectives</li> <li>Activities</li> <li>Responsibility roster to be doesn't be</li> <li>Resources:</li> <li>available</li> <li>additional</li> <li>Third trunce</li> <li>Monorma and evaluation</li> </ul>   | information<br>Preparation of an advinn plan |

| H7: Plan of Action   |   |  |  |
|--|---|--|--|
| Content  | Training Methods  |  |  |
| Components of an Action Plan:<br>Definition of the problem<br>Target population<br>Objectives<br>Strategies<br>Activities<br>Posponsibility restor   | <ul> <li>Brainstorming</li> <li>Lecture</li> <li>Guided discussion with Handout</li> <li>H7.1</li> </ul>                |  |  |
| Responsibility roster<br>Resources:<br>available<br>additional<br>Time frame<br>Monitoring and evaluation  | <ol> <li>Recognize the benefits of an</li> <li>Recognize the benefits of an</li> <li>Freques an action plan.</li> </ol> |  |  |
| <ul> <li>Benefits of an Action Plan:</li> <li>Presents a global picture of what is to be done, by whom, and expected outcome</li> <li>Provides indicators for what to monitor and evaluate in order to accomplish tasks as scheduled</li> <li>Reduces the chances of making incorrect decisions due to inadequate or faulty information</li> </ul> | Guided discussion   |  |  |
| Preparation of an action plan  | <ul> <li>Group assignments in LGA or<br/>country groups using Handouts<br/>H7.1 and H7.2</li> </ul>                     |  |  |

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# Handout H7.1

# or response of the provide a Plan of Action and a sub-order most along D

#### What is an Action Plan?

A document describing various activities, resources, outcomes, and strategies for achieving a set of objectives.

#### Purpose

Provides a framework for decision-making about what the individual, groups or organizations want to accomplish, how it is to be accomplished, and what course of action is most appropriate.

#### Components

|   | T          | C   | 1 1   | 1   |
|---|------------|-----|-------|-----|
| • | Definition | of  | prob  | lem |
|   |            | ••• | P-00. |     |

- · Target population
- · Objectives
- Activities
- · Responsibility roster (who does what?)
- Resources: available additional
- Time frame
- · Monitoring and evaluation

# Monitoring

Checks from time to time on the operation of a planned program with regard to:

- · Compliance and deviation from planned objectives
- · Oversights and omissions
- · Logistical problems that may inhibit program success

#### **Evaluation - Purpose**

# Crucial Ingredients

- Provides a framework for decision making about substable individual (**urgaga na**) organizations were to orcover/ish show it unso herecomputyle denaid (**subablears a**/
- · Baseline information
- Measurable objectives
- · Process

Impact

•

Outcomes

Group, essignments in LGA or Sountry **geldsty Ja**ngritterAsC s 47, 1 and 47-2

Target population

Asvinasid0

Activites

- Responsibility roster (who does what())

- Resources: available additienal
- unant ond
- Monitoring and evaluation

# Planning Worksheet

.

Title of Programme:\_

| Behavioral<br>Problems                       | Target                                     | Objectives   | Strategies          | Activities                                      | Resources*  | Time Table<br>J F M A M                          |
|--|--|--|---------------------|---|---|--|
| Delayed seeking<br>of treatment for<br>fever | Women of child<br>bearing age              | % of child<br>bearing age<br>women who<br>bring their<br>children with<br>malaria fever to<br>health clinic<br>within 24 hours<br>of onset of<br>fever will<br>increase X%-<br>Y% by Dec.,<br>1991 | Mobilize women      | Holding<br>meeting with<br>community<br>leaders | Posters<br>Village health<br>workers<br>Community<br>Leaders<br>Health Education<br>Staff | and Evaluation Skills in Malan<br>noitoA to nai9 |
| Available resou<br>Additional need           | rces: projector, po<br>ed: films, posters. | sters, VHWs, TBAs  | s, health education | and other staff.                                | LEF Platente (  |  |

Handout H7.2

Monitorin

# Plan of Action

# Recap

#### TITLE Mosquito Control: Behavioral Problems at Yekemi Village

STEP 1: State problem in behavioral terms (Based on needs assessment and behavioral research)

STEP 2: Define target population

Crucial logretients

**STEP 3:** Set educational objectives

Behavioral outcomes

Process objectives

### **STEP 4:** Outline strategies

(Process objectives)

Effective communication mass and interpersonal

Training and human resource development

**Community mobilization and organization** for effective community involvement and participation identification and use of local resources

Resource linking through inter-sectoral cooperation and collaboration

Social support through community leaders and groups

| STEP 5: | List activities                 |           |  |
|---------|---------------------------------|-----------|--|
| STEP 6: | Determine responsibilities      | าง กลุกเป |  |
| STEP 7: | Identify and mobilize resources |           |  |
| STEP 8: | Organize time table             |           |  |
| STEP 9: | Plan monitoring and evaluation  |           |  |

| H8:                                   | Monitoring and Evalua   | ation Skills in Malaria Control   |
|---------------------------------------|---|---|
| <i>Objectives</i><br>Upon co          | mpletion of this module, the pa   | rticipants will be able to:   |
| 1.                                    | Identify four questions that eva  | luation usually addresses.  |
| 2.                                    | Identify three types of evaluati<br>evaluation should address.  | on and three dimensions which health education  |
| 3.                                    | List the steps for conducting e   | Attudes   |
| 4.<br>5.<br>6.<br><i>Materials Re</i> | Develop the indicators for the<br>LGA and country group.<br>Develop instruments for evalua<br>by each LGA and country grou<br>Use evaluation data to determine<br>ducation program. | health education objectives selected by each<br>ating the health education intervention developed<br>up.<br>ne the degree of success or failure of a health   |
|                                       |   |   |
| Estimated 7                           | Team work: Facilitators work<br>or country teams to develop<br>instruments for at least one<br>indicator discussed above.   | Reviewing questions to be answered<br>Constructing questions<br>Sequence of questions<br>Translation and back translation of<br>instruments<br>Prelesting instrument<br>Fusikzing instrument<br>Administering instrument<br>Methods |

|                            | H8: Monitoring and Evaluation Skills in Malaria Control   |   |  |  |
|----------------------------|---|---|--|--|
|                            | Content   | Training Methods  |  |  |
| 1900.                      | Questions to ask         □ Before:       What are you doing before?         Is what you intend doing         related to your objectives?         □ During:       Are you doing what you         planned to do?         □ After:       Does it have an effect?   | <ul> <li>Brainstorming</li> <li>Guided lecture</li> <li>Participants develop evaluation<br/>questions related to their<br/>(program) intervention</li> </ul>  |  |  |
| MAR<br>I TI FIP            | Three levels of change that health<br>education should address:<br>Knowledge<br>Attitude<br>Practices - what people do or don't do.   | <ul> <li>Brainstorming</li> <li>Questions and answers</li> </ul>  |  |  |
| TETT<br>oped<br>th<br>TATT | The problem definition<br>Types of data to be collected for the<br>problem<br>Setting health education objectives<br>Generating evaluation questions<br>Identifying indicators that will help answer<br>the questions generated above<br>Data collection plan<br>Analyze and interpret action of data | <ul> <li>Participants use information from previous modules for first 3 steps</li> <li>Participants develop three questions about their program which measure the three levels of change</li> <li>Guided discussion</li> <li>Refer to methods of data collection already discussed in Module H4, Information Gathering</li> <li>Refer participants to three levels of change to be measured in health education evaluation</li> </ul> |  |  |
|                            | Indicators:<br>Knowledge<br>Attitudes<br>Behaviors  | Group discussion  |  |  |
| TEP<br>TEP                 | Reviewing questions to be answered<br>Constructing questions<br>Sequence of questions<br>Translation and back translation of<br>instruments<br>Pretesting instrument<br>Revising instrument<br>Finalizing instrument<br>Administering instrument<br>Methods   | <i>Team work:</i> Facilitators work with LGA<br>or country teams to develop evaluation<br>instruments for at least one behavioral<br>indicator discussed above.   |  |  |

| H8: Monitoring and Evaluation Skills in Malaria Control |  |  |  |
|---|--|--|--|
|   | Content  | Training Methods   |  |
| Sur<br>Inte<br>Attr<br>Ma<br>of a                       | mmarizing data<br>erpreting data in relation to objectives<br>ribution<br>king judgments about success or failure<br>a health education program of the participa | Practice: Data are provided to each team for analysis and interpretation to determine effect of intervention |  |

Describe the management process

 List the three and contract of a contract of the bracked in a health education of the contract of the contract of the second seco

Describe by a second manage cach category of resonances.

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4. Introduce a sale safe response management and some methods of overcoming

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| The problem definition<br>Types of data to be collected for the<br>problem<br>Softfing health an usail work social<br>Consisting evelophen assisting<br>Identifying indicators that workelp showed<br>the guintons generated above<br>Data collection play<br>Adatyze and interpret action of data | Participants use information nom<br>previous modules for first 3 stops<br>Participants develop threa<br>(1997) 1999 - Participants develop threa<br>(1997) 1999 - Participants develop the<br>charge<br>Guarrep in actus som<br>Participants of data contectron<br>already discussed in Modula, H4,<br>Information Galhering<br>Referipanticipants to threa levels of<br>clearly to be interstined in threats |
|  | Gerauprin HSLOD SISHOR  |
|  | Team work of adiitators work with LGA<br>of country thams to develop evaluation<br>instruments for at least one bahavioral<br>indicator discussed above.  |

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# H9: Resource Management **Objectives** Upon completion of this module, the participants will be able to: 1. Describe the management process. 2. List the three major categories of resources that will be needed in a health education component of the malaria control program. 3. Describe two ways to manage each category of resources. 4. Identify constraints to resource management and some methods of overcoming them. Materials Required · None Estimated Time 4 hours Inventory.

| H8: Monitoring and Evaluation  | Skills in Malaria Control  |
|--|--|
| Content  | Training Methods   |
| Components of the management process <ul> <li>Planning</li> <li>Organizing</li> <li>Staffing and supervision</li> <li>Training</li> <li>Controlling</li> <li>Reporting</li> <li>Directing</li> </ul> | Lecture<br>Discussion<br>or student and the notsigned and U<br>Don completion of this module and U |
| <ul> <li>Personnel</li> <li>Equipment</li> <li>Finance</li> </ul>  | <ul> <li>Lecture</li> <li>Discussion</li> </ul>  |
| Personnel<br>Selection<br>Salary<br>Job description<br>Supervision<br>Reporting and feedback<br>Training   | Lecture<br>Discussion<br>Group exercise  |
| Equipment and supplies <ul> <li>Ordering</li> <li>Maintenance</li> <li>Storage</li> <li>Stock taking</li> <li>Issuing</li> <li>Security</li> <li>Controlling</li> <li>Inventory</li> </ul>           | None<br>Estimated Time   |
| Finance  Estimating  Budgeting  Accounting  Auditing  Imprest  |  |

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| H8: Monitoring and Evaluation Skills in Malaria Control  |                         |  |
|--|-------------------------|--|
| Content  | Training Methods        |  |
| Constraints  | · Lecture               |  |
| Faulty planning<br>Lack of job description<br>Undetailed budget<br>Lack of continuity of human resources<br>Shortage of relevant staff and/or<br>uncontrolled staff movement | Discussion              |  |
| Political  | on in the Contral Local |  |

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| Training-Methods |                                  |
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The African Ergional Health Education Canter (ARHEC), in collaboration with CCCC-Nigerialproignities infottedware cashing workshop interneed by primiting health can add to the total from four local Government Areas (LGAs) in Nigeria Wallywang shut 9901 Author to a workshop, the team from Ife Central LGA drew up a mosquito control education plan based on a pre-workshop needs assessment in Yekemi district, one of five the white the alter to Al

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# Mosquito Control Education in Ife Central Local Government Area of Osun State, Nigeria

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Lawrence Ijiyera Joshua Adeniyi Fred O. Oshiname

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 struct and rebbles for bathroom waste water. Five bits in different locations in the

The objectives of the educational interventibits in Mellenik welfwithtakdous one of alth control strategies recommended in Nigeria's national policy guidelines, that is, environmental hygiens

and vector control. The objectives when the set of a numerous function of the set of the

o reduce poor environmental conditions contributing to mosquito preeding.

Consultants from ARHEC and CLC beload to keep the programma on course. Easic skills and simple techniques for evaluating health education impact refrequent transferred to the LGA team, the health committee and frontline workers.

In order to evaluate the educational intervention, Yelemi village became the experimental community, and Abata-Egba, 10 kms away, the control.

Prior to programme implementation, data were collected by the LGA team and Yekemi clinic staff using two pre-tested instruments developed at the training workshop. One-third of the households in each village were surveyed. A questionnaire was used to probe the knowledge and practices of the beads of households concerning mosquitoer and malaria. An observation check-list was used to assess environmental conditions which could favor mosquito breeding in and around their houses.

# **Background Information**

The African Regional Health Education Center (ARHEC), in collaboration with CCCD-Nigeria, organized a four-week training workshop attended by primary health care teams from four local Government Areas (LGAs) in Nigeria in July-August, 1990. At the workshop, the team from Ife Central LGA drew up a mosquito control education plan based on a pre-workshop needs assessment in Yekemi district, one of five districts in the LGA.

Following the workshop, the LGA team contacted the opinion leaders in Yekemi and Abata-Egba villages about undertaking malaria control activities. Abata-Egba is located in a different district but belongs to the same geographic zone and shares the same demographic, social and health characteristics as Yekemi. Although the two communities expressed their interest in the project, leaders in Yekemi had three felt needs which they wanted addressed in addition to mosquito control. These were:

- i) the rehabilitation of the access road linking the community with the neighboring Ife urban community;
- ii) the provision of a deep well in the village; and
- iii) the upgrading of the dispensary in the community to the status of a health center.

# Objectives

The objectives of the educational intervention in Yekemi were based on one of the control strategies recommended in Nigeria's national policy guidelines, that is, environmental hygiene and vector control. The objectives were:

- to increase the knowledge of the population abut the role of mosquitoes in the spread of malaria, and
- · to reduce poor environmental conditions contributing to mosquito breeding.

# Methods

In order to evaluate the educational intervention, Yekemi village became the experimental community, and Abata-Egba, 10 kms away, the control.

Prior to programme implementation, data were collected by the LGA team and Yekemi clinic staff using two pre-tested instruments developed at the training workshop. One-third of the households in each village were surveyed. A questionnaire was used to probe the knowledge and practices of the heads of households concerning mosquitoes and malaria. An observation check-list was used to assess environmental conditions which could favor mosquito breeding in and around their houses.

The analyzed baseline data showed comparable low standards of environmental sanitation in A both Yekemi and Abata-Egba.

Based on the findings the following intervention strategies were implemented in Yekemi between January 1991 and January 1992:

# 1. Resource Linkage

Meeting the felt needs of the community was recognized as a critical step in establishing a working partnership. The LGA health educator invited the LGA Chairman to address the community and pledge the Local Government's support for meeting those needs. Responsible officers of the LGA present at the meeting were directed by the Chairman to give priority to these requests.

#### 2. Community Mobilization

A health committee was formed and met regularly. The committee decided to embark on four activities (1) construction of one soakaway pit for draining waste water by each household through self-help; (2) clearing of weeds around the houses; (3) collection and disposal of receptacles; and (4) spraying of insecticides in major mosquito breeding sites around the village.

#### 3. Technical Assistance and Training

Five frontline health workers were trained to provide technical assistance for implementing the planned activities. Heads of households, men and women, were given a four-day training on how to construct simple soakaway pits filled with stones and pebbles for bathroom waste water. Five pits in different locations in the village were constructed to serve as models.

#### 4. Health Information (Community and Schools)

Volunteers, including teachers, were trained to give health talks and carry out "oneto-one" health education in neighborhoods and schools on the cause of malaria, recognition of symptoms, and early treatment.

#### 5. Consultation

Consultants from ARHEC and CDC helped to keep the programme on course. Basic skills and simple techniques for evaluating health education impact were transferred to the LGA team, the health committee and frontline workers. Achievements/Results

At the end of the health education intervention, the same instruments were administered in Yekemi and Abata Egba.

The results reflect more positive outcomes in Yekemi, the experimental community, in terms of the following:

Knowledge of the cause of malaria and preventive practices:

There was a marked increase in the percentage of heads of households who knew that mosquitoes spread malaria from 43% to 76% as shown in Figure 1. In the control village there appeared to be no change.



Also the percentage of respondents who mentioned that mosquito breeding can be controlled through elimination of water stagnation increased from 8% to 40%. Again, in the control village, there appeared to be no change.

Prior to programme implementation, data were collected by the LGA team and Yekemi clinic staff using two pre-tested instruments developed at the training workshop. One-third of the bouscholds in each village were curveyed. A questionnance was used to probe the knowledge and practices of the heads of households concerning mosquitoes and malaria. An observation check-list was used to assess environmental conditions which could favor mosquito breeding in and around their houses.

#### Environmental Sanitation Conditions

Figure 2 shows that there were more changes in Yekemi than in Abata Egba related to the presence of sanitary facilities. In Yekemi, only 5% of households had soakaway pits before the intervention while 40% had pits after. In the control village, no pits were observed at all both during the pre and post surveys. Also in Yekemi, drains around the house and bathrooms increased from 20% and 16% to 48% and 68% respectively. In Abata Egba, a reduction was observed from 71 to 38% for drains and from 76 to 51% for bathrooms.



As to sanitary conditions, the percentage of households with blocked drains was reduced from 18% to 7% (Figure 3) while in the control village there appeared to be a slight increase.

while the people of Yekemi provided labor and other alfordable legal resources used durin the unplumentation process, the ffe Central Local Government provided minimal financial ad

associants control may be, at best, only a partial solution to the malaria problem. He wever, the sense of new ophshment felt by the community appears to have encouraged to there a community solute for development. For example, the people of Yekemi are community establishing a road to just the village with the national high tension electric here that passes by



In Yekemi, the percentage of houses having weeds around them decreased from 29% to 15% while in Abata-Egba, there was no difference observed. Yekemi bathrooms were cleaner than those of Abata-Egba. The presence of stagnated water in Yekemi bathrooms decreased from 13% to 3% but increased in Abata-Egba from 11% to 25%.

#### Malaria Morbidity

There was an observed decline in reported cases of malaria at Yekemi Primary Health Centre from 1990 to 1992 (Figure 4). The intervention programme may have contributed to this decline.

Also the percentage of respondents who mentioned that mosquite breaking can be convolled through elimination of water stagnation increased from 8% to 40%. Again, in the control village, there appeared to be no change.



#### Felt Needs

In addition to these results, the three felt needs of the Yekemi community were also successfully addressed - that is, the access road was graded, a deep well was dug, and the dispensary was upgraded.

Form E. Forus Group D'aussian Guide

#### Conclusions

Results of the experience in Yekemi indicate how community health education can be effective not only in changing knowledge and practices but also in building partnerships between the community and other agencies such as the local government and a training institution. Such partnership encourages community action requiring minimum external investments.

While the people of Yekemi provided labor and other affordable local resources used during the implementation process, the Ife Central Local Government provided minimal financial aid.

Mosquito control may be, at best, only a partial solution to the malaria problem. However, the sense of accomplishment felt by the community appears to have encouraged further community action for development. For example, the people of Yekemi are currently establishing a fund to link the village with the national high tension electric line that passes by it.

#### Future Challenges

Future challenges posed by the Yekemi Community Health Education experiment include:

- (a) the need to address community felt needs that may not be directly related to predetermined health priorities;
- (b) the need to sustain the motivation and participation of the people of Yekemi in continuing the malaria control programme;
- (c) the ability of health workers to continue partnership relationships with the community in order to address other community felt needs; and
- (d) the replication of similar health education programmes in other rural communities in Nigeria.

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#### Conclusions

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# Appendix A

# Sample Needs Assessment Instruments and Baseline Data Protocol

Form A: General Community Information

Form B: Participant Profile

Form C: Primary Health Care (PHC) Profile

Form D: Specific Community Data: Epidemiology and Health Services

Form E: Environmental Health Assessment

Form F: Focus Group Discussion Guide

Form G: In-depth Interview of Traditional Healers

General description of major ethnic groups

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#### A ppendix A

parries there is received in the last of charge they work from the particular sub-order of the

- Sample Needs Assessment Instruments and approximited to the object of the value of the statements and Baseline Data Protocol white optications at the bonuments
- (b) the need to a retain the meta-attiva and participation of the people of Yelessa an containing the meta-attiva control programme.
- (c) the ability of boolds workers to continue partnership relationships with the community or order to andress other community fait needs; and
- - A Population of the submitted interest of the submitted o
  - Form C: Primary Health Care (PHC) Profile

Form D: Specific Community Data: Epidemiology and Health Services

Form Er Environmental Herlich Association

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Farm F: Fecus Group Discussion Guide

Form G: 46 the depth Instruction of Candidonal Realars

# Form A: General Community Information

1. Map: On the map provided, plot

### · Towns and villages

- · Health facilities
- · Major ethnic groups
- · Schools

# 2. Population

| Names of Towns<br>Above 10,000 | Population of<br>Towns | Village Names<br>1,000 - 9,999 | Population of<br>Villages |
|--------------------------------|------------------------|--------------------------------|---------------------------|
| 1.                             |                        | 1.                             |                           |
| 2.                             | A. I. DI. 1900002      | 2.                             | iypes of Sc               |
| 3.                             |                        | 3.                             | Universitics              |
| 4.                             |                        | 4. zapalica ani                | Teachart co               |
| 5.                             |                        | 5.                             | Secondary                 |
| 6.                             |                        | 6.                             | Primary<br>Ninesery       |
| 7.                             |                        | <b>7</b> . , (vî               | Others (spec              |
| 8. Pupils:                     | i and                  | 8.                             |                           |
| 9.                             | i schools as seen by:  | important <b>probleme</b> b    | Three most                |
| 10.                            |                        | 10.                            |                           |

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Health workers:

# 3. General description of major ethnic groups:

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|-----------------|---------------------------------------|---|------------------------------------|
|                 |                                       | 2.51  | Towns and villa                    |
| General descri  | ption of major occu                   | pations:  |                                    |
|                 | · · · · · · · · · · · · · · · · · · · |   | Schools                            |
|                 |                                       |   | Population                         |
| Population c    | Village Nomes                         | E opulation of  | ames of Towns                      |
| Schools         |                                       |   |                                    |
| Types of Scho   | ols                                   | Number in LGA   |                                    |
| Universities    |                                       |   |                                    |
| Technical colle | ges                                   | na antara ang kanang kanang<br>Mang bandar pang kanang kana |                                    |
| Teacher trainin | g colleges                            |   |                                    |
| Secondary       |                                       |   |                                    |
| Primary         |                                       |   |                                    |
| Nursery         |                                       |   |                                    |
| Others (specify | )                                     |   |                                    |
|                 |                                       |   |                                    |
| · Three most in | portant problems in                   | schools as seen by:   |                                    |
|                 |                                       |   |                                    |
| TT - 141        |                                       |   |                                    |
| Health workers  | S: 1                                  |   |                                    |
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| Farmers:        | 1.                                    |   | ter metri hattiral assedite cercer |
|                 | 2.                                    |   |                                    |
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| Traders:           | 1   | (T  |
|--------------------|---|---|
|                    | 2.  |   |
|                    | 3   | Health Centers  |
|                    |   | General clinics   |
| Youth:             | first)<br>1.  | PHG-Glinics   |
| b. Present positio |   | Watemities  |
|                    | Z   | Dispensaries  |
|                    | 3   | Traditional health ration   |
| Women of Chi       | ld-   |   |
| bearing Age:       | 1   | Patopt predicine stores   |
|                    | 2   | Others (specify)  |
|                    | 10. <b>3</b> 166  | nonesib sgro  |
| Teachers:          | asing probabilities of the second second in present LGA | Draw a general organizati<br>m charge.  |
|                    | 2<br>3  | Driw a debited of the state   |
| Pupils:            | ies performed   | Other duffes  |
|                    | 2   | na na serie de la decembre esta como en como en como en esta como esta esta destra popularia dos mentem en como |
|                    | 3   |   |
| Parents:           | 1   |   |
| List the number    | r of workshops attended in the                          | lest 5 years and state from (e.g.   |
|                    | 3.  |   |
|                    | na na sa            |   |

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icin, M. Participana Profile antiber alasta ,

| Type of facility           | Number in LGA                              | Estimated population being served   |  |
|----------------------------|--|---|--|
| Hospitals                  |  | that $h_{i}$ and $h_{i}$ and $h_{i}$ , $h_{i}$ , $h_{i}$ , the left $h$ is the constant of the transformation |  |
| Health Centers             |  |   |  |
| General clinics            |  |   |  |
| PHC Clinics                |  | l dius V  |  |
| Maternities                | or aralos, eccebaciene                     |   |  |
| Dispensaries               |  | L .   |  |
| Traditional health centers |  | a fa a balan a sa an  |  |
| Pharmacies                 | (a) (b) (b) (b) (b) (b) (b) (b) (b) (b) (b |   |  |
| Patent medicine stores     |  | bearing Aye.  |  |
| Others (specify)           |  |   |  |

# 5. Health Facilities

# 6. Organization

- Draw a general organization chart with major departments, services, and officers in charge.
- Draw a detailed organizational chart for health and environmental groups that includes a pharmacy and maternal and child health care.

|   |       | ems in rchools a |           |
|---|-------|------------------|-----------|
|   |       |                  |           |
|   |       |                  | Prireats: |
|   |       |                  |           |
|   |       |                  |           |
| · | • 2 - | • .              |           |
|   | 3.    |                  |           |

# Form B: Participant Profile

n Childrary Heath Care Profile

### Name of LGA/Country\_\_\_\_

- g. Number of years served in present LGA\_\_\_\_\_
- h. Other duties commonly performed in addition to your regular duties:

| Current duties perfor | med         | Other duties  |
|-----------------------|-------------|---------------|
| vane of staff member  | Rank Status | Guzifications |
| 4                     |             |               |
|                       |             |               |

• List the number of workshops attended in the last 5 years and state focus (e.g., EPI, diarrhea, malaria).

### Form B: Participant Profile addition divide

| Phill Clinics   |  |
|---|--|
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| Tradicinal Insulfit centers   |  |
|   |  |
|   |  |
| Others (specify)  |  |
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| in charge<br>Drifteliuße Itsluteet ey<br>includes a phaemacy  |  |
|   |  |
|   | <ul> <li>A provide a second second<br/>second second sec</li></ul> |
|   |  |
|   |  |
|   |  |
| years and state focus (e.g.,  | List the mmber of workshops atte<br>EPI, diarrhea, malaria).   |
|   |  |

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8.

| Form C                       | : Primary Health         | Care Profile   |  |
|------------------------------|--------------------------|--|--|
| nstruction: This information | on is to be collected    | from the PHC Co                                      | ordinator.   |
| Name of PHC                  | Coordinator              | o conducto de la | t by traineer of t<br>in test 2 years<br>            |
| . What year did the PHC      | program start?           |  | 144.<br>144.<br>                                     |
| . What are the major acco    | omplishments? (Check     | all that apply)                                      |  |
| Situation report             | Yes D No D               |  |  |
| Community survey             | s the malaria courted un | estica (4) above, doe                                |  |
| Plan development             |                          |  | 0 25Y  |
| House numbering              | lems encountered by the  |  | · If yes to (5)                                      |
| Zonal committee              |                          |  |  |
| Staff training               |                          |  |  |
| CHW/TBA training             |                          |  |  |
| Revolving drug fund          | d 🗆                      |  |  |
| B. List PHC staff and qual   | lifications              | 2<br>salth_eflucation unit?                          |  |
| Name of staff member         | ad bob Rank/Status       | w ,() bus (4) Qualifi                                | cations  |
| 855878918<br><b>1.</b>       | inn ion                  | s of the malariz contra<br>2                         | the activitie  |
| 2.                           |                          |  | n ganada gen den son en son son son gen a spinkagen. |
| 7 <u>3.</u>                  |                          | 4  |  |
|                              | ANSERTS CONTOL PORT / YS | steer (4), is there a c                              | MP OF OF H   |
| 5.                           |                          |  |  |
|     | Name of staff member  | Rank/Status  | Qualifications  |
|-----|---|--|---|
| ę   | Э.  | and a service of a service of  |   |
| 1   | 0.  | to An in a light star for  | ana like was with the set of the |
| 1   | 1.  | a na a a sur sa anna anna anna anna anna   | TOTOTICOTO ONTE TREBOR BOL  |
| 1   | 2.  |  | D ALIA LA ANDI  |
| 1   | 3.  | a paramentaria di Materia de Santa de Canada de Can<br>No  | en metre ren artisti  |
| 1   | 4.  | Concession of the second   |   |
| 1   | 5.  | Construction of the second sec | and make a second constrained and and   |
| 1   | t apply) .6   | dishments? (Check all the  | What are the m <b>ajor</b> accomp   |
| 4.  | Is there a malaria control                                    | unit? Yes 🗆 No 🗆 🗌   | Situation report  |
| 5.  | If yes to question (4) abov                                   | e, does the malaria contro   | l unit have any problems?   |
|     | Yes 🗆 No 🗆  |  | Plan development  |
| 6.  | If yes to (5) above, list the                                 | e problems encountered by  | the unit.   |
|     | 1   |  | Zonal committee   |
|     | 2   |  | Staff training  |
|     | 3   |  | CHW/TBA training  |
|     | 4   |  | <ul> <li>Revolving drug fund</li> </ul>   |
| 7.  | Is there a health education                                   | unit? Yes 🗆 No 🗆   | . List PHC staff and qualific   |
| 8.  | If yes to question (4) and (<br>the activities of the malaria | (7), what contribution does<br>a control unit?   | s the health education unit make t  |
|     |   |  |   |
|     |   |  |   |
| 0   | Tf and to an addition (A) is the                              | 1  | Ver D. N. D.  |
| 9.  | If no to question (4), is the                                 | ere a disease control unit?  |   |
| 10. | If yes to (9), list the activi                                | ties carried out by the dise   | ease control unit.  |
|     |   |  | in a second s   |
|     | •   |  |   |

11. How many of the following personnel have been trained since PHC started and what activities do they perform?

| Type of PHC health personnel trained | No. of<br>training<br>programs                       | Total no.<br>trained       | Who conducted<br>training program        | Activities carried<br>out by trainees in<br>the last 2 years |
|--------------------------------------|--|----------------------------|--|--|
| 1. Village health                    |  | 2,22                       |  | S <u>ista</u> 1  |
| workers                              | enderstanden 1990-blande met seine som som som inner |                            |  | 2. vinummoD  |
| 9<br>1                               |  |                            |  | NGOs (specify  |
| 2. Traditional birth attendant       |  |                            |  | Others (specify)   |
|                                      | a<br>an a community of these second                  |                            |  | 2  |
| 3. Assistant                         | Internet of S  | art). 2 2 .()<br>art). 2 2 | nd the unit (attach cl                   | zonal committee u  |
| Supervisors                          |  | ior Na<br>New J            |  | 2  |
|                                      | 1  |                            |  | 3,   |
| 4. Community health extension        |  |                            |  | 1  |
| workers                              |  | 290                        |  | 2  |
|                                      | -i (Sea  |                            |  | 3  |
| 5. Community<br>health officers      |  | 11. 20 11                  |  | 1  |
| in con                               |  | d) 1.4                     |  | 2  |
| COL.                                 | 酒  | ĕ                          |  | 3  |
| 6. Pharmacy<br>assistants            |  | 18                         |  | 1  |
| ton v                                | (45) (2<br>1996)<br>                                 |                            |  | 2  |
|                                      | 69   |                            |  | 3  |
| 7. Others<br>(specify)               |  |                            |  | 1  |
| This<br>Use<br>Thur                  | viology.   |                            | LET Cent                                 | 2  |
|                                      |  | 0 4                        | 11 14 14 14 14 14 14 14 14 14 14 14 14 1 |  |
|                                      |  |                            |  |  |
|                                      |  |                            |  | Phan   |

12. Annual budget for Health Department.

| Sources of<br>Funding | Total<br>\$ Amount  | Amount<br>budgeted for PHC  | Amount<br>budgeted for<br>malaria control | Amount<br>collected  |
|-----------------------|---|---|---|--|
| Federal               |   | minist benist   | - sweed - p                               | parsonnal train  |
| State                 |   | and the second  |   | Allage health  |
| Community             | n - 1996 martin and a state | na an a  |   | WORK21S  |
| NGOs (specify         | an a  | and a statement of the |   | a the state of the |
| Others (specify)      |   |   |   | nid IsnobibmiT   |

13. Draw the PHC organizational structure showing lines of communication between the zonal committees and the unit (attach chart).

|   | has the production exponence of the area   |
|---|--|
|   |  |
| 2 | 4 -Community<br>health extension<br>workers  |
| : |  |
|   | 5. Community<br>bealth officers  |
|   | flucation unit? Yes II No II   |
|   | (4) and (7), what contribution does the health elineation white are at<br>a maintin control unit?                                    |
|   |  |
|   |  |
|   | (), is there a disease control unit? Yas CI No CI  |
|   | If yes to question<br>If yes to question<br>the activities of the<br>S<br>E<br>If yes to question<br>The activities of the<br>S<br>E |

## Form D: Specific Community Data — Epidemiology and Health Services

Instruction: This information wil be collected on health facilities in two selected communities of about 5,000 inhabitants.

Use a separate form for each community.

Name of Community

4. Govt. hospitals | childroghine -

6. Private

Population

#### **Epidemoiology and Health Services** A.

| Туре                            | Type of health   |   | umber Govt./Private |                      |                               | Under 5 | Annual Atter<br>for Malaria | ndance    | Ante                      | enatal Clinic<br>endance for l | Annual<br>Malaria |     |
|---------------------------------|--|---|---------------------|----------------------|-------------------------------|---------|-----------------------------|-----------|---------------------------|--------------------------------|-------------------|-----|
| Private clinifa                 | cility and a second  |   |                     |                      | Old                           | cases   | New cases                   | All cases | Old cases                 | New cases                      | Old cas           | ies |
| Hospital                        | Contraction and the second sec |   |                     |                      | rid, ministelling             |         |                             |           |                           |                                | olar ditta        |     |
| Health Cente                    | ers chicródaine  |   | o nescoloso t       |                      | ayo kulonini da               |         |                             |           |                           |                                |                   |     |
| Clinics                         | ORNERS (shee   | 63                                      | a generation and    | fanti ginne - i fein |                               |         |                             |           | and Touche Strugger Artis |                                |                   |     |
| Dispensaries                    | L tallelatione   |   | i den anti-         |                      | al gazi ette altinu ürheli ur |         |                             |           |                           |                                |                   |     |
| Traditional H<br>(Traditional h | ealth Centers<br>nealers)  | ine contra to possible a statement of a |                     |                      | and the state of the second   |         |                             |           |                           |                                |                   |     |
| Pharmacies                      | Print Tailant  | essaarageaanaadar<br>LX                 |                     |                      | per many dag                  |         |                             |           |                           |                                |                   |     |
| Patent Medic                    | cine Stores  | xy)                                     | 1 10000179100       |                      |                               |         |                             |           |                           |                                |                   |     |
|                                 |  |   |                     |                      |                               |         |                             |           |                           |                                |                   |     |
|                                 |  |   |                     |                      |                               |         |                             |           |                           |                                |                   |     |
|                                 |  |   |                     |                      |                               |         |                             |           | Sometimes                 |                                | CIMIN .           |     |
|                                 |  |   |                     |                      |                               |         | ullable                     |           |                           |                                |                   |     |

### **B.** Availability of Antimalarial Drugs

۰.

| Source                          | Type of Antimalarial<br>Drug | Ava<br>No                           | ilable<br>ow?  | F      | Form Availa      | ble  | U in   | When Available   | Te l                     | Avera<br>to         | ge Cost<br>Test   |
|---------------------------------|------------------------------|-------------------------------------|--|--------|------------------|--|--|------------------|--------------------------|---------------------|---|
|                                 |                              | Yes                                 | No   | Liquid | Tablet           | Injection  | Always   | Sometimes        | Rarely                   | Child               | Adult   |
| 1. LGA                          | Chloroquine                  |                                     |  |        |                  |  | 1  | peo.             | Budi<br>Park             |                     |   |
| lispensary                      | Fansider                     |                                     |  |        |                  | 011.   |  | Υ <sup>4</sup>   | -5 <sub>52</sub>         | ġ                   | -   |
|                                 | Daraprim                     | 4                                   |  |        |                  |  |  |                  |                          | 90                  |   |
|                                 | Others (specify              |                                     | an anns a chuigeacht na  |        |                  |  |  |                  | <u></u>                  |                     |   |
| 2. Health centers               | Chloroquine                  |                                     | 1 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (                        |        |                  |  |  |                  | 1997                     | 日<br>日<br>行         |   |
|                                 | Daraprim                     |                                     |  |        |                  | ti u   |  |                  |                          |                     |   |
| Dispensaries                    | Fansider                     |                                     |  |        |                  |  |  |                  |                          |                     |   |
| Clinics                         | Others (specify)             |                                     |  |        |                  | 1  |  |                  | 18                       | H.                  |   |
| 3. Health Center                | Chloroquine                  |                                     | <ol> <li>State and conservation and conservation of</li> </ol> |        | •                | and a second s | an a' the constraint of the second distance of a state state |                  |                          |                     |   |
| PHW/community<br>revolving fund | Daraprim                     |                                     |  |        | 19               |  |  |                  |                          |                     | a program (n. 1999) en esta de la companya de la co |
| fa ci                           | Fansider                     |                                     | na polositegor pologian en a                                   | P10    | (1865 (/         | 6 M 19868  | All cases  | Old cases i      | 16 M 40 26 2             | 010 03              | 62  |
| Type of                         | Others (specify)             | Go                                  | <i>чт.</i> Р.Ну:   | 316    | under bliv<br>fa | nnuai Aitan<br>r Malant B  | DITUCE   | - Miler<br>Miler | NUSECOS LOL<br>NUSECCION | . Annuat<br>Malaria |   |
| 4. Govt. hospitals              | Chloroquine                  | (                                   |  | i.     |                  | 2  |  |                  |                          |                     |   |
| A. Epident                      | Daraprim                     | 4058                                |  |        |                  | R10.   |  |                  | 11- 1<br>2 5 0           | 2                   |   |
|                                 | Fansider                     |                                     |  |        |                  | ·Nut   |  |                  | 007                      |                     | 3   |
|                                 | Others (specify)             | 1 Tall of Artist consists (Berlin C |  |        | Papalutic        | E 24 100   |  |                  |                          |                     |   |

Use a separate form for each community.

Instruction: This information will be collected du health facilities in two selected communities of about 5,000 missionts

Form D: Specific Community Data - Epidemiology and Health Services

| Source  | Type of Antimalarial<br>Drug | Ava<br>No   | ilable<br>ow?   | F  | orm Avai   | able      |                             | When Available   | e                                      | Avera<br>to  | ige Cost<br>Test                                      |
|---|------------------------------|---|---|--|------------|-----------|-----------------------------|--|--|--|---|
|   |                              | Yes   | No  | Liquid   | Tablet     | Injection | Always                      | Sometimes  | Rarely                                 | Child  | Adult   |
| 5. Govt. clinics  | Chloroquine                  |   |   |  | 1          |           |                             |  | -                                      |  |   |
|   | Daraprim                     | W. Fr   | 3 Te  | Types  |            |           |                             |  | Uns                                    | end in th  |   |
|   | Fansider                     | , Avali   | able  | Avenab   |            | Quar      | ty Availab                  |  | P. 10.6                                | st mont  | n   |
|   | Others (specify)             |   |   |  | Lang       | ely Ma    | oberately<br>table          | Fairty   |  |  |   |
| 6. Private  | Chloroquine                  | ter in the teach  | a an  | 1  | 1          |           | 1 • ] [                     | 1977 - ser i santatorio antoi e presidente della substanti della s | · ·                                    |  |   |
| hospitals (mosquit  | Daraprim                     |   |   |  |            |           |                             |  |  |  |   |
|   | Fansider                     | $\left\{ (1, \dots, (n, 0), n) \mid (1, \dots, (n, 0), (n, 0)) \right\} = \left\{ (1, \dots, (n, 0), (n, 0), (1, \dots, (n, 0), (n, 0)) \right\}$ | an a  |  |            |           | n mar alar 1 an - 1         |  |  | · · · · · ·  |   |
|   | Others (specify)             |   |   |  |            |           |                             |  |  |  |   |
| 7. Private clinics  | Chloroquine                  |   |   |  |            |           |                             |  |  |  |   |
|   | Daraprim                     |   |   |  |            |           |                             |  |  | (1992) (1 |   |
|   | Fansider                     |   |   |  |            |           |                             |  |  |  |   |
|   | Others (specify)             | hanna an ta na starbhail  | a pinnin ini kara sara s  |  |            |           |                             |  |  | k - menintanak ara d   | a sea ann an an ann an Ann                            |
| 8. Patient  | Chloroquine                  |   | a an  |  |            |           |                             | la lantes de la construit de montecher del statement   |  |  |   |
| medicine sellers  | Daraprim                     |   |   |  |            |           | Marcon and the solar data ( | n en   | ************************************** |  |   |
|   | Fansider                     |   |   |  |            |           |                             |  |  |  | a<br>Managana ang sa katalagan katalagan katalagan sa |
| 10. Homes   | Others (specify)             |   | a anna an taon an tao an ta |  |            |           |                             |  |  |  | 1 = 0   |
|   | Others (specify)             |   |   | $\label{eq:states} \  \  = \  \  \  \  \  \  \  \  \  \  \  \  \  \  \  \  $ |            |           |                             | n 11 minuter) en proposant i esterament (Sterio) (Suit-Ali an-matikatione)   |  |  | ana ang ang ang ang ang ang ang ang ang               |
|   |                              |   |   |  |            |           |                             |  |  |  |   |
|   |                              |   |   |  |            |           |                             |  |  |  |   |
|   | Chloroquine                  |   |   |  |            |           |                             |  |  |  |   |
| an de la cale anti-de la cale de la cale de<br>La cale de la |                              |   |   |  |            | Injection |                             |  |  |  |   |
|   | Type of Antimatarial<br>Drug | Aval<br>No  |   | L  | orm Availe |           |                             | Vhen Available   |  |  |   |

| B. Availability<br>Source             | Type of Antimalarial<br>Drug | Ava<br>No  | ilable<br>ow?                  | F   | orm Avail   | able   |  | When Available  | 1  | Avera<br>to   | ge Cost<br>Test                       |
|---------------------------------------|------------------------------|--|--------------------------------|---|---|--|--|---|--|---|---------------------------------------|
| Source                                | Type of Antimatariai         | Yes  | No                             | Liquid  | Tablet  | Injection  | Always                                   | Sometimes   | Rarely   | Child   | Adult                                 |
| 9. Pharmacies                         | Chloroquine                  | Vag  | Ma                             | 1 heresidert  | Talaina   | energia estrator   | Adven ve                                 | Sumethings  | Ramh   | Child   | ñ el alt                              |
|                                       | Daraprim                     | Constant of Michigan Applications of Appl<br>1   | Photosoften (Childrenia)<br>I. |   |   | e Brites - Arbeit Arlintslopfic  |  | an Sound (e. 1997) and the set of the second                  | ar<br>Selandara iki ser timalara<br>L  | and the state of the second   | production and a second second        |
|                                       | Fansider                     |  |                                | 5 Sey   |   | a daga kalan sa ta sa sa saya (da sak)   | an a | در الوسرائيل مواد ترياس ماند معاليو ماند العراقي المان<br>الم |  | na denera por p   | · · · · · · · · · · · · · · · · · · · |
|                                       | Others (specify)             | $D_{ij}(d,d) = d\left( (2in_{ij})_{ij}^{2} \cdots \cdots \otimes (2in_{ij})_{ij}^{k} \right)$  |                                |   | y (M <sup>2</sup> ) possible constraint (M) (M) (M) (M) (M) |  | an a | n a Channe - Mar a Children and an anna an an an<br>I         | and a second   |   | in Marian I and H downlin             |
| 10. Homes                             | Chloroquine                  |  |                                |   | <ul> <li>Male Action Provident (p. 1) - non-</li> </ul>     |  |  |   |  |   |                                       |
|                                       | Daraprim                     |  |                                |   |   |  |  |   | terne and part of the figure of the second s | and a second sec      |                                       |
|                                       | Fansider                     |  |                                |   |   |  |  |   |  |   |                                       |
| 8. Patient<br>medicine sellers        | Others (specify)             |  |                                |   |   |  |  |   |  | [1] S. Santa and S. Santa an         |                                       |
| 11. Maternities                       | Chloroquine                  | and the second s |                                |   |   |  |  |   |  | <ul> <li>Source primage and straining to be a set of a set of</li></ul> |                                       |
|                                       | Daraprim                     | har territori de la C  |                                |   |   |  |  |   |  | la conference de conserva-<br>la conserva de conserva-  |                                       |
|                                       | Fansider                     |  | -<br>Calendar - Scill Sciences |   |   |  |  |   |  |   |                                       |
| 7. Private clinics<br>Lexonauti irrun | Others (specify)             |  |                                | er (* 1997) gebourne of start (* 1997)<br>19 - Alexandro Barthard, al ar Donard |   | and a second |  |   | Statistical Control of Control (1990) Statistical Control (1990) Statist    | an a  |                                       |
|                                       |                              |  |                                |   |   |  |  |   |  |   |                                       |
|                                       |                              |  |                                | •   |   |  |  |   |  |   |                                       |
|                                       |                              |  |                                |   |   |  |  |   |  |   |                                       |
|                                       |                              |  |                                |   |   |  |  |   |  |   |                                       |
|                                       |                              |  |                                |   |   | e la chieranne constation  |  |   |  |   |                                       |
|                                       |                              |  |                                |   |   |  |  |   |  |   |                                       |
|                                       | Daraprim                     |  |                                |   |   |  |  |   |  |   |                                       |
|                                       |                              |  |                                |   |   | •  |  |   |  |   |                                       |
|                                       |                              |  |                                |   | Tablet  |  |  |   |  |   |                                       |
|                                       |                              |  |                                |   | onn Avail   | able   |  |   |  |   |                                       |

## C. Other Malaria Control Technologies

| Sources                           | Avail  | able?       | Where<br>Available | Types<br>Available  | ion B: Ei                        | Quantity Availal                  | ble                        | Unit<br>Price                    | Quantity<br>sold in the<br>last month |
|-----------------------------------|--|-------------|--------------------|---|----------------------------------|-----------------------------------|----------------------------|----------------------------------|---------------------------------------|
| 3<br>1<br>1<br>1<br>1             | Yes  | No          | nity:              | <sup>r</sup> orn I<br>rom t<br>hown<br>Maxin  | Largely<br>available             | Moderately<br>available           | Fairly<br>available        |                                  | 10 T                                  |
| 1. Bed nets<br>(mosquito<br>nets) | AFA MA ALEMA<br>Materials  | . M         | usehold;           | n Ranác<br>e middle<br>Obzáli i<br>ore occuj<br>ore)  | d Obsec                          |                                   | al mande<br>a couldr       |                                  |                                       |
| 2. Mosquito coils                 | and a state of the | ddie 5      |                    | la partici<br>barrici<br>selistica<br>se An   | 2. 00. 51<br>BEER   \$15         |                                   | r of de<br>G Heile         | vill 5                           |                                       |
| 3. Insecti-<br>cides              | and demonstration  | rction      |                    | oct fiv<br>, and<br>, fron<br>a fanti   |                                  | a, Ĝiarsio<br>Politiko<br>Alitono |                            | colley                           |                                       |
| 4. Window screens                 |  |             |                    | - bours<br>Ive fin<br>9 metalie<br>9 unit   | 100                              |                                   |                            | ted us                           |                                       |
| 5. Fans                           | a de la compañía de la   |             |                    | thouts<br>on the<br>two the<br>two the  |                                  |                                   |                            | each o                           |                                       |
|                                   |  | ariphery [] | -                  | wass the inner part of hown, five<br>weightry — Observe and record as<br>ors (a household is a bruse of part<br>ad/wife/children/other- | The two communities subscred for | No of shight                      | naamiiiyi<br>30 wa belga ? | the two continuities selected in |                                       |

TRANSFERRENT CONTRACT PRESS

|          |                 |     |  |               |   |        |   | Barely |   |  |
|----------|-----------------|-----|--|---------------|---|--------|---|--------|---|--|
|          | Childroquine    |     |  |               |   |        |   |        |   |  |
|          |                 |     |  |               | · |        |   |        |   |  |
|          |                 |     |  |               |   |        |   |        |   |  |
|          |                 |     |  |               |   |        |   |        |   |  |
|          |                 |     |  |               |   |        |   |        |   |  |
|          |                 |     |  |               |   |        |   |        |   |  |
|          |                 |     |  |               |   |        |   |        | • |  |
|          |                 | din |  |               |   |        |   |        |   |  |
|          | Oh or occurruly | •   |  |               |   |        |   |        |   |  |
|          |                 |     |  |               |   |        |   |        |   |  |
| wobriw . | Sanahor .       |     |  |               |   |        |   |        |   |  |
|          | Others (spec    |     |  |               |   |        |   | -      |   |  |
|          |                 |     |  |               |   |        | •   |        |   |  |
|          |                 |     |  |               |   |        | (a) Solution (Section (Sect |        |   |  |
|          | 20Y             |     |  |               |   | 110 SI |   |        |   |  |
|          |                 |     |  | A As Repaired |   |        |   |        |   |  |

## Form E: Environmental Health Assessment

#### Section A: General Observation

Instruction: This information will be collected in each of the two communities selected in Form D.

1. What is the total number of dwelling units in the community?

2. How many total dwelling units are located in the areas shown below?

| Traditional area of town | Periphery of town        | Reserved areas if any    |
|--------------------------|--------------------------|--------------------------|
| No. of compounds:        | No. of compounds:        | No. of compounds:        |
| No. of single<br>houses: | No. of single<br>houses: | No. of single<br>houses: |

#### Section B: Household Observation

**Instruction:** This information is to be collected in each of the two communities selected for Form D. Randomly select five households from the inner part of town, five from the middle portion, and five from the periphery. Observe and record as shown. Obtain assistance from health workers (a household is a house or part of a house occupied by a family unit - husband/wife/children/other-departments).

| 1. | Name of community:          | er affect people methis com | munify?                | immediate<br>surroundings<br>of the     |
|----|-----------------------------|-----------------------------|------------------------|---|
| 2. | Location of house           | hold:                       |                        |   |
|    | Inner area 🛛                | Middle section              | Periphery 🗆            |   |
| 3. | Total number of l household | iving rooms in the          | obtain treatment for e | ach type of fever?<br>12. — Give r gaug |
| 4. | Number of rooms<br>windows  | with                        |                        |   |
| 5. | Number of windo<br>screens  | ws with mosquito            |                        |   |

- 6. Number of window screens damaged or with holes
- 7. Number of rooms with ceilings
  - Section A: General Observation
- 8. a b Number of rooms with and to does a betaalian addition of the noise number of a miture term bednets
- 9. Number of bednets for babies (small and graffer to reduce have bednets)
- 10. Number of baby bednets with holes
- 11. Number of mosquito breeding sites

| Place  | Breeding sites  |  |   |  |                               |  |
|--|---|--|---|--|-------------------------------|--|
|  | Empty receptacles<br>(e.g., calabashes,<br>pots and bottles                               | Overgrown<br>weeds and<br>vegetation   | Open drains   | edO blanfastra<br>Pot holes                                    | Others                        |  |
| In the<br>compound or<br>house                               | from the inner part<br>periphery. Observe<br>ters (a household is<br>and/wife/children/ot | steer in each<br>ve households<br>five from the<br>malets wor<br>tily unit - has | ou is to be con<br>domly select (<br>le portion, and<br>assistance fr<br>upied by a fra | Form D. Kar<br>From D. Kar<br>shown the mide<br>of a house oct | 31011312577                   |  |
| In the<br>immediate<br>surroundings<br>of the<br>compound or |   |  | - 14  | of<br>nity:<br>m of househol                                   | 1. Mame<br>commi<br>2. Locati |  |
| nouse  | Periphery . D   |  | Middle section  | теа 🛛  | i nani                        |  |

Total number of living rooms in the

12. Give a general description of mosquito breeding sites.

Number of rooms with

Number of windows with mosquite

148

## Form F: Focus Group Discussion Guide (Discussion with Households and Women of Child-bearing Age)

#### Introduction:

Good evening and welcome to this group discussion session. Thank you for taking the time to join our discussion, which will center on fever and malaria. My name is \_\_\_\_\_\_ and my colleague's name is \_\_\_\_\_\_. We are from the College of Medicine, University of Ibadan. We want to know your opinion on various aspects of fever and malaria in this community.

We are not interested in what is right or what is wrong. All we want is your opinion on the issues to be discussed. So please feel free to share your point of view even if it differs from that of others.

Because we do not want to forget anything you have discussed, we are going to record the discussion. The results of the discussion will be kept confidential and will be used to develop strategies for solving malaria problems in our communities.

We would like to know your names and since I want to remember your names while we are talking, I am going to write them down as you tell me. Thanks for your cooperation.

(If discussants say mosquite bitss are harmful, then ask: What harm can be done to these groups of people?) (G-22) missional quota quota start groups of people?)

Now let us start with the types of fever in this community:

- 1. What types of fever affect people in this community?
- 2. What groups are mostly affected by each type of fever?
- 3. What do you think cause(s) each of the fevers?
- 4. How can one know that a person is suffering from each of the fevers mentioned?
- 5. Where do these groups of people most often obtain treatment for each type of fever?

(If discussants say yes, then ask: In what ways can they be prevenenthand breeding?)

Pregnant women and a substant start and a substant start and a substant start women and a substant start women

ap questions on important leads that may emerge from

- 6. How do you treat each of the mentioned fevers in children, pregnant women, and other adults?
- 7. What is the cost of treating each fever for children, pregnant women, and other adults?
- 8. How effective is the treatment for each fever?
- 9. What are the consequences that may arise when there is a delay in treating each fever in children, pregnant women, and other adults?
- 10. When is fever most common in this community?
- 11. We have discussed the various types of fever people get in this community. Now let us talk about ways of preventing them. How can each fever be prevented?

#### Section B

- 12. Thank you for your contribution to the discussions so far. Let us now talk about mosquitoes. When are mosquitoes most common in this community?
- 13. Are mosquito bites harmful to human beings?

(If discussants say mosquito bites are harmful, then ask: What harm can be done to these groups of people?)

Children

Pregnant women

Adults

sund or

14. Be How do mosquitoes breed in this community? Hose (a) setup black of ball w

- 15. What types of behaviors facilitate the breeding of mosquitoes in this community?
- 16. Do you think it is possible to prevent mosquitoes from breeding?

(If discussants say yes, then ask: In what ways can they be prevented from breeding?)

17. What measures do you take to prevent the breeding of mosquitoes?

## Form G: In-depth Interview of Traditional Healers

- 1. What are the different types of fevers in this community?
- 2. What do you think causes each type of fever mentioned?
- 3. For each type of fever mentioned, how do you know that a person is suffering?
- 4. Which is the commonest type of fever you treat?
- 5. Which groups of people do you frequently treat for fever?
- 6. How do you treat each of the mentioned fevers in children, pregnant women, and other adults?
- 7. What is the cost of treating each fever for children, pregnant women, and other adults?
- 8. What are the likely consequences that may arise when there is a delay in the treatment of fever for children, pregnant women, and other adults?
- 9. How can each kind of fever be prevented in children, pregnant women, and other adults?

#### Methods for Conducting Focus Group Discussion (FGD)

Training of FGD Assistants: This will be necessary if interviews are to be conducted in the local language.

- 1. Recruitment of moderators and assistants and their training: Training will be focused on acquiring the following skills:
  - How to ensure full participation from participants; how to deal with dominant and taciturn participants.

  - How to ask follow-up questions on important leads that may emerge from discussions.
  - How to keep discussions focused and ensure that all questions are discussed within the stipulated time.

Recruitment of discussants: 2. Characteristics of groups: Male groups made up of heads of household who are homogeneous in terms of sex, marital status, and leadership of households. Female groups made up of women of child-bearing age (15-45 years) who are homogeneous in terms of sex, marital status, and parity. Sample size: Six to eight persons will take part in discussions. 3. Number of sessions to be conducted: Yet to be determined. • Duration of each session: Should not exceed 2 hours. Logistics: 4. 109(B)5:01 Tape recorder Blank cassette Refreshments Venue of discussion: 5. Should be a place with few distractions or disturbances. Sitting arrangement should afford opportunity for face-to-face interaction. The labor Functions of assistant moderator: 6. • Record nonverbal communication Operate tape recorder Note unanimity and dissension of opinion ing notecorrely set are of woll Do you think it is cossible to prevent mesquitoes from breaches

## Appendix B

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|--|----------------------------------|-----------------------------|------------|
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## Sample Weekly Training Schedules

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  - Salaphi size. Sin to eight partous who and the discribions,
- Number of solucies to be conducted: Net to be determined.
- Duration of each session: Should not exceed 2 hours,
- Loganici.
  - Talls stored by
  - The second second
    - Referentiations

Venue of discussion:

should be a place with few distructions or approbables

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Functions of assistant moderneyr,

Record nonverbal communication

Operate take recorder

Note interimity and dissension of opinion

# WEEK 1

| MON. 23/7   | TUE. 24/7   | WED. 25/7   | THUR. 26/7  | FRI. 27/7   |
|---|---|---|---|---|
| AM/   |   |   |   |   |
| <b>Registration</b><br>(8:30-11:30)   | Official Opening<br>(8:30-1:00)   | Malaria<br>Epidemiology<br>(M2)                           | Field Case<br>Management<br>(M5)                          | Field Malaria<br>Control<br>(M6)  |
| Welcome<br>(11:30-1:00)   |   | (8:30-9:30)   | (8:30-1:00)   | (8:30-1:00)   |
| HeathCommo<br>Presentation <sup>a H</sup><br>(2:00-11:00 <sup>11:3</sup><br>(2:00-11:00 <sup>11:3</sup><br>(2:00-11:00-61 | PfeldWind <sup>®</sup><br>Information<br>Gathering 1 <sup>14</sup> 4)<br>(9:00-11:00) | Parasitology<br>and Entomology<br>(M3)<br>(9:30-12:00)    | абилётнона<br>G s morna g<br>(9 - 00 - 1 - 00)<br>        | Synthesis<br>BettaVioral of<br>safles (H2)<br>9:00-11.00)<br>and safe   |
| Coffeellea<br>11:00-11 15   | Coffeettee<br>11.00-11.15   | Clinical Features<br>(M4)<br>(12:00-1:00)                 | Coffee/tea<br>11:00-11:15                                 | Coffee/tee/teo  |
| Lunch<br>1:00-2:30  | Lunch<br>1:00-2:30  | Lunch<br>1:00-2:30  | Lunch<br>1:00-2:30  | Lunch<br>1:00-2:30  |
| PM/   |   | MOOHTER MAA<br>Evaluation<br>(H8)                         | ise <b>legeng</b> atifit)<br>Erzebenen<br>Kal             | Proteining Romann (Rom<br>Proteining Romann (Rom<br>115-100   |
| Pretest<br>(2:30-3:30)  | Health Education<br>Overview<br>(2:30-3:30)   | Field Case<br>Management<br>(M5)                          | Field Malaria<br>Control (M6)<br>(2:30-4:30)              | Summary<br>(2:30-4:30)  |
| Small Group<br>Discussion   | (3:30-3:45)   | (2:30-4:30)   | Lunch.  | Lunion<br>1.00-2130 MM4   |
| (3:30-5:00)   | Break   | Information   | Information   | Community   |
|   | National Malaria<br>Policies<br>(M1)<br>(3:45-5:00)                                   | G athoring<br>(H4)<br>bits 3000000M<br>noticulave<br>(8H) | Gathering<br>(H4)<br>(236, gaiggine M<br>(236, gaiggine M | Protestion and<br>Particination<br>(H3) Informetion<br>2,30 - 2,000 and<br>2,30 - 2,000 and<br>2,30 - 2,000 and<br>2,30 - 2,000 and<br>2,30 - 2,000 and<br>2,000 - 2,000 - 2,000 and<br>2,000 - 2,000 - 2,000 and<br>2,000 - 2,000 - 2,000 - 2,000 - 2,000 - 2,000<br>- 2,000 - 2,0 |

| MON. 30/7   | 0/7 TUE. 31/7 WED. 1/8                           |  | THUR. 2/8  | FRI. 3/8  |
|---|--|--|--|---|
| AM/<br>Review and<br>Overview<br>(8:30-9:00)                                | Review and<br>Overview<br>(8:30-9:00)            | Review and<br>Overview<br>(8:30-9:00)                          | Review and<br>Overview<br>(8:30-9:00)                          | Review and<br>Overview<br>(8:30-9:00)                                   |
| Synthesis<br>Behavioral of<br>Issues (H2)<br>(9:00-11:00)                   | Information<br>Gathering (H4)<br>(9:00-11:00)    | Information<br>Gathering (H4)<br>(9:00-11:00)                  | Fieldwork-<br>Information<br>Gathering (H4)<br>(9:00-11:00)    | HealthCom<br>Presentation<br>(9:00-11:00)                               |
| Coffee/tea<br>11:00-11:15   | Coffee/tea<br>11:00-11:15                        | Coffee/tea<br>11:00-11:15                                      | Coffee/tea<br>11:00-11:15                                      | Coffee/tea<br>11:00-11:15   |
| Community<br>Involvement &<br>Participation<br>(H3)<br>(11:15-1:00)         | Information<br>Gathering<br>(H4)<br>(11:15-1:00) | Information<br>Gathering<br>(H4)<br>(11:15-1:00)               | Fieldwork-<br>Information<br>Gathering<br>(H4)<br>(11:15-1:00) | Information<br>Gathering<br>(H4)<br>(11:15-1:00)                        |
| Lunch<br>1:00-2:30  | Lunch<br>1:00-2:30                               | Lunch<br>1:00-2:30   | Lunch<br>1:00-2:30   | Lunch<br>1:00-2:30  |
| PM/<br>Community<br>Involvement and<br>Participation<br>(H3)<br>(2:30-4:30) | Information<br>Gathering<br>(H4)<br>(2:30-4:30)  | (02:3-02:3)<br>Information<br>Gathering<br>(H4)<br>(2:30-4:30) | Information<br>Gathering (H4)<br>(2:30-4:30)                   | Formulating<br>Health<br>Education<br>Objectives<br>(H5)<br>(2:30-4:30) |

# WEEK 2

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## WEEK 3

| MON. 6/8  | TUE. 7/8  | WED. 8/8   | THUR. 9/8  | FRI. 10/8  |
|---|---|--|--|--|
| AM/<br>Review and<br>Overview<br>(8:30-9:00)                          | Review and<br>Overview<br>(8:30-9:00)               | Review and<br>Overview<br>(8:30-9:00)                | Review and<br>Overview<br>(8:30-9:00)                | Review and<br>Overview<br>(8:30-9:00)  |
| Formulating<br>Health<br>Education<br>Objectives (H5)<br>(9:00-11:00) | <b>Plan of Action</b><br>(H7)<br>(9:00-11:00)       | Monitoring and<br>Evaluation<br>(H8)<br>(9:00-11:00) | Monitoring<br>and Evaluation<br>(H8)<br>(9:00-11:00) | Development of<br>Prototype Plan<br>(including some<br>expected<br>modifications to<br>be made back<br>home)<br>(9:00-11:00) |
| Coffee/tea<br>11:00-11:15   | Coffee/tea<br>11:00-11:15                           | Coffee/tea<br>11:00-11:15                            | Coffee/tea<br>11:00-11:15                            | Coffee/tea<br>11:00-11:15  |
| Formulating<br>Health<br>Education<br>Objectives (H5)<br>(11:15-1:00) | Plan of Action<br>(H7)<br>(11:15-1:00)              | Monitoring and<br>Evaluation<br>(H8)<br>(11:15-1:00) | Monitoring and<br>Evaluation<br>(H8)<br>(11:15-1:00) | Development of<br>Prototype Plan<br>(11:15-1:00)   |
| Lunch<br>1:00-2:30  | Lunch<br>1:00-2:30                                  | Lunch<br>1:00-2:30                                   | Lunch<br>1:00-2:30                                   | Lunch<br>1:00-2:30   |
| PM/<br>Health<br>Education<br>Strategies<br>(H5)<br>(2:30-4:30)       | Monitoring and<br>Evaluation<br>(H8)<br>(2:30-4:30) | Monitoring and<br>Evaluation<br>(H8)<br>(2:30-4:30)  | Monitoring and<br>Evaluation<br>(H8)<br>(2:30-4:30)  | Development of<br>Prototype Plan<br>(2:30-4:30)  |

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