

RPM Plus Support to Case Management Trainings for Referral Hospitals, Private Health Facilities and Non-Governmental Institutions in Kenya, August – October 2006

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Strategic Objective 5

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About RPM Plus

RPM Plus works in more than 20 developing and transitional countries to provide technical assistance to strengthen pharmaceutical and health commodity management systems. The program offers technical guidance and assists in strategy development and program implementation both in improving the availability of health commodities—pharmaceuticals, vaccines, supplies, and basic medical equipment—of assured quality for maternal and child health, HIV/AIDS, infectious diseases, and family planning and in promoting the appropriate use of health commodities in the public and private sectors.

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ACRONYMS

ACT	artemisinin-based combination therapy
AL	artemether-lumefantrine
AMREF	Africa Medical Research Foundation
AQ	amodiaquine
DOMC	Division of Malaria Control
GoK	Government of Kenya
IMCI	Integrated Management of Childhood Illnesses
IPTp	intermittent preventive treatment in pregnancy
KEMRI	Kenya Medical Research Institute
M&E	monitoring and evaluation
MoH	Ministry of Health
MSH	Management Sciences for Health
NGO	nongovernmental organization
PPB	Pharmacy and Poisons Board
QA	quality assurance
QC	quality control
RDTs	rapid diagnostic tests
RPM Plus	Rational Pharmaceutical Management Plus (Program) [MSH]
SP	sulphadoxine-pyrimethamine
ToT	training of trainers
UN	United Nations
USAID	United States Agency for International Development
WHO	World Health Organization

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Partner Institutions

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INTRODUCTION

The Kenya Division of Malaria Control's strategic approach to malaria prevention and control aims to provide prompt and effective treatment for the disease amongst other key interventions. To date, one of the biggest challenges to the implementation of this intervention has been the emergence of parasite resistance to commonly used and relatively cheap antimalarial medicines. The country is currently in early implementation phases of a new malaria treatment policy which recommends artemether-lumefantrine (AL) as first-line therapy for use in the case management of uncomplicated malaria. Until April 2004, sulphadoxine-pyrimethamine (SP) was the nationally recommended first-line therapy whilst amodiaquine (AQ) was reserved for use as second-line¹ therapy for malaria treatment. The documented emergence and spread of *P. falciparum* resistance to SP in the country and the rapid spread of resistance to replacement AQ led to strong consensus in 2003 for making available and affordable an artemisinin-based combination therapy (ACT) for use in the first-line treatment of malaria.

It is well recognized by the Government in Kenya (GoK) that efforts to improve malaria case management will benefit from a focus not only on Ministry of Health facilities, but also the widely used health services provided by the mission and non-governmental organization (NGO) sector, private sector and other government and non-government owned institutions of higher learning. As such, the Division of Malaria Control (DOMC) in collaboration with partners and donor agencies has plans to target all sectors in the new treatment policy roll-out process. To date, roll-out activities achieved include sensitization of key stakeholders; distribution since June 2006 of ACTs to all GoK mission health facilities and selected referral hospitals and parastatals, the development of national guidelines for diagnosis, treatment and prevention of malaria for health workers, and the training of 10,000 public sector health workers on ACT use.

In addition to providing support to the DOMC for all the listed achieved activities, the Rational Pharmaceutical Management Plus (RPM Plus) Program of Management Sciences for Health, through funding from the USAID Kenya mission, provided support to the national training of trainers on the new guidelines for referral hospitals, private health facilities and NGO institutions. A composite set of six 3-day trainings were held in Nairobi, Kenya between August and October 2006.

Objectives of the Training

General Objective

The general objective of the training was to ensure that the new malaria treatment guidelines² are used in private practice and to facilitate the incorporation of the contents of the treatment guidelines in the curriculum of the in-service training in institutions of higher learning.

¹ Second-line treatment is administered for treatment failure and in cases where first-line treatment cannot be administered such as when there is adverse drug reaction or drug interaction or any inherent condition preventing the use of the recommended first-line treatment.

² The treatment guidelines are meant to improve the rational use of antimalarials including ACTs and the outcomes of case management by health workers in their respective organizations. The guidelines provide a harmonized approach to case management.

Specific Objectives

To enable participants become trainers who are able to:

- Understand the basic epidemiology of malaria in Kenya, specifically transmission areas, risk groups, clinical features, and malaria classification (uncomplicated versus severe)
- Know what topics Kenya's national malaria guidelines cover and what antimalarial medicines are now recommended for uncomplicated malaria, severe malaria, treatment of malaria in pregnancy, intermittent presumptive treatment and chemoprophylaxis
- Describe why the recommended antimalarials medicine for uncomplicated malaria has been changed
- Assess a patient with fever for severe malaria and other causes of fever and select appropriate treatment for malaria or other infections. The assessment will include the ability to take a complete history and perform a thorough clinical assessment
- Appropriately order or perform diagnostic tests, where available, to determine whether the patient has malaria
- Determine the correct dosages of antimalarial medicines and successfully describe to a patient/caregiver how to take the medicine
- Understand the reasons for parasitological test results before giving an antimalarial medicine
- Perform microscopy (for laboratory workers) and rapid diagnostic tests (RDTs) to diagnose malaria
- Know what antimalarial medicines should be used if a pregnant woman becomes ill with malaria during pregnancy and know how and when to give intermittent preventive treatment in pregnancy (IPTp)

Participants and Trainers

After RPM Plus had agreed with the Division of Malaria Control and the involved institutions on the dates for the training, MOH invitation letters were sent out.

A total of 236 participants attended the training. Participants were drawn from—

1. Aga Khan University Hospital
2. Division of Malaria Control
3. Equator Hospital
4. Gertrude's Children Hospital
5. Kenya Forestry Research Institute

6. Kenyatta National Hospital
7. Lumumba Health Center
8. Mater Hospital
9. Ministry of Defence
10. Ministry of Health
11. Moi Hospital, Voi
12. Moi Teaching and Referral Hospital
13. MP Shah Hospital
14. Nairobi Hospital
15. Nairobi Women's Hospital
16. Nazareth Hospital
17. The Kenya Medical Research Institute (KEMRI)
18. The KEMRI – Walter Reed Project
19. United Nations (UN)
20. University of Nairobi
21. WHO

Cadres of staff targeted were medical officers, clinical officers, lecturers, nursing officers, public health officers, pharmacists/pharmaceutical technologists, lab technologists/technicians and parasitologists.

The trainers of the course were all members of the DOMC's Drug Policy Technical Working Group with broad technical experience in training and malaria case management. The thirteen selected trainers were drawn from (1) the Division of Malaria Control, (2) the World Health Organization Kenya Country Office, (3) the Kenya Medical Research Institute Walter Reed Project and Wellcome Trust and (4) the University of Nairobi. RPM Plus Program Associate, Elizabeth Njoroge, attended all the trainings and acted as overall co-facilitator with the DOMC.

The dates and venues for the training were:

Date of Training

August 8 – 10, 2006

September 12- 14, 2006

September 19 – 21, 2006

October 3 – 5, 2006

October 10 – 12, 2006

October 17 – 19, 2006

Venue

Utalii Hotel

Nairobi Safari Club

Lenana Mount Hotel

Silver Springs Hotel

Nairobi Safari Club

Silver Springs

Methodology and Session Content

Because most of the participants were trained health workers with some background in malaria case management, the training was highly interactive and benefited from real experiences. However, in order to bring all the different cadres present to the same level and to avoid basic inaccuracies, theoretical sessions and group work for opening discussions were also used. The course was divided into thirteen sessions, most of which included a PowerPoint presentation, a discussion segment and/or group work (*See Annex 2 for Agenda*).

- ***Session 1 and 2: Opening, Objectives of the Policy 2006 and Guidelines for Case Management***

Each 3 day-training was opened by the Division of Malaria Control, Ministry of Health. As part of this session, the objectives of the current national malaria treatment policy were presented. The rationale for the decision to change treatment policy was discussed and data presented on treatment failure with SP and amodiaquine. The content of the national guidelines for prevention, diagnosis and treatment of malaria by health workers was highlighted. Also highlighted was the MOH concern regarding the sustainability of the new ACT policy given the high cost of artemether-lumefantrine, the selected first-line ACT. Participants were provided information on the key activities that had been accomplished within the process of changing the policy as well as the challenges faced, particularly those specific to the choice of artemether-lumefantrine (AL). A list of activities planned to enable monitoring and evaluation (M&E) of the process of policy implementation was shared with participants.

- ***Pre-testing and Participant Expectations***

A pre-test (*shown in Annex 3*) was administered to participants at the training to evaluate their knowledge prior to the training. Participants were also asked to list their expectations from the training. Expectations are discussed later in this report.

- ***Session 3: Epidemiology of Malaria***

The objective of this session was to give participants a basic understanding of the epidemiology of malaria and malaria endemicity in Kenya. The session was presented by Dr. Augustine Ngindu, National Professional Officer for Malaria, World Health Organization Kenya Office. A description was provided of the various malaria parasite types that infect humans and their multiplication cycles, malaria vectors and the disease itself. An overview of the effects of malaria including socio-economic was given. Malaria endemicity in Kenya was discussed in detail.

- ***Session 4: Principles of Learning and Effective Adult Learning***

In order to prepare participants to cascade the case management trainings down to other health workers in their various institutions, they were taught the principles of learning and effective adult learning. Specific objectives of this session were to:

1. Describe the features of an effective learning environment

2. Appreciate effective training skills and the role of a trainer.
3. Describe the qualities of a good trainer.

- ***Session 5 and 6: Parasitological Diagnosis of Malaria/Microscopy & RDTs***

In this session, participants were taught to (1) appreciate the role of microscopy in malaria diagnosis and treatment, (2) to understand the process of microscopy and (3) to improve the reporting and interpretation of microscopy results. The available techniques for diagnosis of malaria, namely microscopy and rapid diagnosis using rapid diagnostic tests (RDTs) were discussed. The advantages and disadvantages of each technique were enumerated. The session incorporated a practical component during which participants got a chance to see microscopy and RDT use firsthand.

- ***Session 7: Treatment of Uncomplicated Malaria***

The clinical features and classification of uncomplicated and severe malaria as well as their management were presented. Emphasis was placed on the management of uncomplicated malaria, first-line treatment using artemether-lumefantrine, supportive treatment and what to do in case of treatment failure.

- ***Session 8: Algorithms for Assessing and Treating Patients with Fever***

The function and use of the algorithms developed under the Integrated Management of Childhood Illnesses (IMCI) were discussed in this session. The new policy for the treatment of malaria has adopted the IMCI algorithm for the diagnosis and management of malaria in children between 2 months and 5 years. The guideline for the diagnosis of children above five was presented. Practical group work sessions on the use of algorithms were achieved using case studies. The case studies ranged from simple to more complex problems faced with in the management of malaria. Group presentations were made at the end of this session.

- ***Session 9: Diagnosis and Treatment of Severe Malaria***

In this session, participants looked at the diagnosis of severe malaria and principles of its management. Symptoms of severe malaria including respiratory distress, acidosis, severe anaemia, bacterial infections, meningitis, hypoglycaemia, acute seizures, status epilepticus and their management were discussed. Treatment regimens using artesunate and quinine were detailed as well as potential future control strategies using vaccines, intermittent preventive treatment (IPT) prophylaxis and the reduction of vectors. The need for a strong health system in the management of severe malaria was emphasized.

- ***Session 10: Treatment and Prevention of Malaria in Pregnancy***

The important serious consequences of malaria were highlighted for both a mother and her unborn child. This session went through the importance of preventing malaria in pregnancy, the prevention and management of both uncomplicated and severe malaria in pregnancy, and key behavior change communication messages developed. Guidelines for IPT use in pregnancy were discussed.

- ***Session 11: Pharmacology, Dosing Antimalarials***

This session explained the concepts of combination therapy and ACTs. A presentation was made which featured the pharmacology of artemether-lumefantrine (AL), its strengths and weaknesses, and the process and costs required for product development. The development of drug resistance and mechanisms for averting the rapid emergence of drug resistance to the new treatment were outlined.

- ***Session 12: Pharmacovigilance and Post-market Surveillance***

These concepts and their importance in ensuring the safety of Kenyans and in preventing resistance to AL were discussed in this session. The session shared the key objectives of both systems being implemented by the Pharmacy and Poisons Board (PPB) in Kenya.

- ***Post-test***

As done in the beginning of the training, participants were administered a post-test (*see Annex 3*). Results of the pre- and post-test were presented and discussed.

- ***Session 13: Job Aids, Translating Learning into Practice***

A presentation was made on the job aids developed for implementation of the new treatment guidelines. Input was sought from participants on their experience with the use of job aids in malaria case management.

- ***Post-course Evaluation***

A post-course evaluation of the training was completed and is discussed on pages 14 and 15 of this report.

ISSUES RAISED AND RECOMMENDATIONS

Challenges Identified by Participants to Successful Policy Implementation

The training presented an opportunity for participants to identify issues that they felt needed clarification and/or would challenge the efficiency of ACT policy implementation by the MOH.

Overall challenges and recommendations considered to be noteworthy by most of the participants were related to—

1. Over-dependency of the government on Global Fund financing for AL

Given the high cost of AL in comparison to previously used monotherapies, participants were interested in learning from the Government of Kenya how it expects to sustain the provision of AL to public health facilities. The government needs to start to move away from donor dependence where the health of Kenyans is concerned.

2. Promotion by the government of artemether-lumefantrine instead of ACTs

Although the new malaria treatment policy recommends the use of ACTs, all communication material developed by the MOH has been promoting the use of AL. Participants encouraged the DOMC to promote ACTs as first-line treatment such that it is possible for referral hospitals, private health facilities and NGOs to promote and use other ACTs as they become available on the Kenyan market.

3. Lack of inter-sectoral involvement

It was the view of the participants that, to date, the implementation of the new ACT policy is solely in the hands of the MOH and that the chances of success will be heightened by involvement and participation of all stakeholders and sectors of the government.

4. Prescription-only status of AL

The first-line treatment AL is still registered as a prescription-only-medicine (POM) in Kenya and as such there is no access to this treatment by the majority of Kenyans who seek treatment in the private sector. The DOMC was encouraged to continue to work with the Pharmacy and Poisons Board towards de-registration of AL.

5. Continued use of failing antimalarial (SP) for IPTp

The continued use of SP for intermittent preventive treatment in pregnancy is somewhat confusing because the DOMC has stated publicly that malaria parasites are resistant to SP. The DOMC should make every effort to review the use of SP in Kenya's policy.

DOMC needs to provide a policy statement on its position regarding the use of DDT for indoor residual spraying in Kenya.

6. Insufficient availability of AL supply to health facilities

Some facilities at the training, although identified to receive public sector supply of AL, had not yet received any supplies. The DOMC was advised to work closely with agencies responsible for distributing donor-funded AL to health facilities, namely the Kenya Medical Supplies Agency (KEMSA) and the Mission for Essential Drugs and Supplies (MEDS), to address all bottlenecks affecting AL distribution.

7. Unclear MOH messages on the role and recommended use of RDTs for malaria diagnosis

There is a poor understanding by health workers of the role and use of RDTs in the diagnosis of malaria. This, it is believed, has arisen from failure of the DOMC to give clear direction on the use of RDTs at the different levels of health care provision. The DOMC was reminded of the need to develop a diagnostic policy to guide health workers. Given that the cost-effectiveness of the use of RDTs is still under investigation by the DOMC, clear guidelines on the role of clinical and laboratory diagnosis of malaria need to be disseminated.

8. Inadequate laboratory capacity at health facilities

Facilities, especially rural health facilities, are inadequately equipped and laboratory staff are poorly trained. Participants recommended that the MOH continue to build the capacity of health facilities to support the new treatment policy.

9. Existent poor quality control and quality assurance services within MOH

There currently exists poor quality control (QC) and quality assurance (QA) services within the MOH. Neither the quality of services nor the quality of chemicals and reagents is guaranteed. Quality assurance frameworks will need to be strengthened if the new treatment policy is to succeed.

10. Unclear capacity of the Drug Regulatory Agency, Pharmacy & Poisons Board

Participants felt that there is inadequate capacity at PPB to deal with the registration of antimalarials, drug inspections and flushing out counterfeits. The PPB needs to continue working towards increasing its capacity to adequately perform its role in ensuring the availability of safe and quality antimalarials.

11. Uncertain compliance of patients to new malaria treatment

Participants shared concern regarding patient compliance to AL. Concern was also raised that patients might not be happy with the increased waiting time for laboratory confirmation of illness. The DOMC was advised to emphasize the need for proper counseling of patients on adherence.

TRAINING OUTCOMES AND EVALUATION RESULTS

Objectives and Expectations of the Participants

During the first day of each of the trainings, participants were invited to share their expectations for the training. Summarized responses include —

- Understanding the new policy roll-out process
- Learning about the impact of drug resistance on case management of malaria
- Learning about malaria prevention
- Learning the Ministry of Health recommendation for diagnosis of malaria
- Learning how to access AL for treatment of malaria
- Getting practical experience in malaria diagnostics (exercises)
- Learning about methodologies for training

Participants and trainers noted that expectations listed corresponded with the objectives for the training, although the wording differed slightly.

On the last day, the participants were invited to review the objectives fixed on the first day and to evaluate whether or not those objectives had been achieved. Each of the objectives was analyzed and the participants concluded that the training had succeeded in all specified objective areas. In addition, the participants mentioned that a major benefit of the training was the opportunity to benefit from the sharing of facility-level case management experiences and lessons learned.

Participant Knowledge Skills and Readiness for Conducting Cascade Trainings

The results from the pre- and post-test showed a qualitative improvement in the knowledge on all aspects of malaria management – malaria epidemiology, prevention of malaria, the new treatment policy, diagnosis, case management, malaria in pregnancy, and advocacy. The post-tests indicated participant high knowledge skills and depicted the readiness of participants for conducting cascade trainings.

Participants were given training material for use when conducting cascade trainings. Job aids were requested and are being made available by the DOMC through KEMSA's drug distribution channel.

Course Evaluation Summary

At the end of the training, a course evaluation was administered to participants. Participants were able to provide in depth feedback on the conduct, content and an overall assessment of the training program. This feedback to course organizers was aimed at:

1. Assisting in improving the overall training experience of the participants.
2. Meeting the expectations of participants without losing the core objectives of the course.
3. Enhancing the delivery of training.

This section summarizes the course evaluation for all six sessions.

Training Component	Range and average rating by participants	Comments
Overall assessment of training activity	Range 1 – 5 Average 4.4	Good rating though time management needs addressing
Relevance and usefulness of the different teaching methods	Range 1 – 5 Average 4.5	Role plays were not undertaken
Assessment of training materials	Range 3 – 5 Average 4.7	Very Good rating
Implementation of course: attitude of trainers	Range 2 – 5 Average 4.6	Very Good rating
Overall rating for Programme		4.5

The participants also commended certain components of the training and identified areas which need improvement.

Positive comments

Broad categories	Summary of comments
Venue	Good venue and meals; good service by facility; good atmosphere
Organization of training	Good rapport between trainers and participants; well organized meeting
Time Keeping and punctuality	Punctual organizers and participants
Training Methodology	Very interactive approach; the use of practicals and visual aids made it possible for trainers to pass on information in a short time
Materials	Good learning materials; effective teaching aids including audio-visuals; guidelines; good equipment (microscopes)
Facilitators	Trainers were very good; knowledgeable facilitators

Areas that need improvement/addressing

Broad categories	Summary of comments
Methodology/facilitators	Provide materials before course starts; algorithms were confusing
Time	Provide more time for course; more time should be used in practicals
Venue	Construction activities at the Silver Spring Hotels venue were disruptive
Organization	Afternoon sessions too long, twice a day registration required

NEXT STEPS

Although, the Division of Malaria Control would like to ensure that every health worker in Kenya possesses the knowledge necessary for improvement of malaria case management, it has neither the capacity nor the funds to train every health worker. As such, the DOMC is encouraging all referral hospitals, private facilities and non-governmental institutions trained to carry out cascade trainings as a way of building capacity amongst the health workers in their respective facilities.

The big question at this time is the willingness and readiness of the institutions trained to put into action the cascade trainings as pledged.

On the DOMC's part, it plans to continue coordinating its malaria control efforts by representing all referral hospitals, private health facilities and NGOs and including representatives where appropriate in activities such as:

- Consensus building and planning
- Resource Mobilization
- Quantification and Forecasting of Antimalarials
- Drug Regulation
- Quality Assurance and Control
- Drug Supply & Management
- Guideline Development
- Communication
- Rational Use of Antimalarials
- Monitoring and Evaluation

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ANNEX 1. PARTICIPANT FACILITIES AND NUMBER TRAINED

Institution	No of Participants
Kenyatta National Hospital	96
Moi Teaching and Referral Hospital	62
Mater Hospital	13
DOMC	13
Nairobi Hospital	9
Gertrude's Children Hospital	6
Nairobi Women's Hospital	6
Ministry of Health	6
University of Nairobi	4
Ministry of Defence	3
Equator Hospital	3
Aga Khan University Hospital	2
MP Shah Hospital	2
Nazareth Hospital	2
UN	1
KEMRI – Walter Reed Project	1
Lumumba Health Center	1
Moi Hospital Voi	1
WHO	1
Kenya Forestry Research Institute (KEFRI)	2
Other	2

Summary of Cadres Trained

Designation	No of Participants
Lab Technologists/Technician	23
Lecturer	2
Nursing Officers	89
Medical officers	24
Clinical officers	38
Pharmacists/Pharmaceutical Technologist	44
Others (Public Health Officers, Entomologists, Parasitologists, Health Records Information Officers, Paediatricians, Tutorial Fellows)	16

ANNEX 2. TRAINING AGENDA

Time	
<u>DAY 1</u>	
8.30 – 9.00 am	Registration and welcome
9 –10.30 am	<p>Introduction, group norms</p> <p>Session 1. Opening; Objectives of the training policy 2006</p> <p>Pre – test</p> <p>Session 2: Guidelines for case management; what's new change</p>
10.30 – 11.00 am	Break
11.00 –1.00 pm	<p>Session 3. Epidemiology of malaria;</p> <p>Session 4: Principles of learning and effective adult learning.</p>
1.00-2.00 pm	Break
2.00-4.30 pm	<p>Session 5. Parasitological diagnosis of malaria</p> <p>Session 6: Microscopy and RDTs</p>
<u>DAY 2</u>	
8.00am-10.30 am	<p>Session 7. Treatment of uncomplicated malaria;</p> <p>Session 8: Algorithms for assessing and treating patients with fever.</p>
10.30-11.00 am	Break
11.00-1.00pm	Session 9. Diagnosis and treatment of severe malaria.
1.00-2.00 pm	Break
2.00-4.30pm	Session 10. Treatment and prevention of malaria in pregnancy

<u>DAY 3</u>	
8.00am-9.30am	Session 11. Pharmacology, dosing of antimalarials.
9.30 – 11.00	Session 12. Pharmacovigilance
10.30-11.00 am	Break
11.00-1.00pm	Post test Session 13. Job Aids , translating learning into practice post course assessment and course evaluation Way forward
1.00-2.00	Break and departure

ANNEX 3. PRE- AND POST-TEST

PRE-TEST

Exercise: Assessment of Knowledge and Quality of Practice

Please answer the questions below as well as you can. The questions are to remind you of the significance of malaria in your daily clinical practice and help you think about the management of uncomplicated and severe malaria in your place of work. You should therefore answer them as clearly as possible according to your current practice.

1. What is malaria? _____
2. What causes malaria? _____
3. How do people get malaria? _____
4. Do people in your area have malaria all year round or does malaria occur during certain seasons or periods of the year? (Specify the seasons or period)

5. List three important symptoms of uncomplicated malaria _____
6. What do you use for treating uncomplicated malaria in your area?

7. What are the doses and length of treatment for adults and children?

8. Do you think this treatment is effective? _____
9. Approximately what percentage of children from 5-14 who receive malaria actually has malaria? _____
10. What drugs do you use as second line treatment for uncomplicated malaria?

11. What is severe malaria? _____
12. What complications do you see commonly associated with severe malaria in your area?

13. Which groups of people in the population are most likely to develop severe malaria?

14. Which disease kills the largest number of children < 5 years in Kenya? _____
15. List 3 factors that you consider responsible for deaths associated with malaria. _____
16. What antimalarial drug do you use for managing severe malaria?

17. List three conditions in children that may be confused with malaria.

18. List 3 effects of malaria on pregnancy _____

19. What do you do to reduce the effect of malaria in pregnancy? _____
20. What do you understand by the term IMCI? Have you received training on IMCI?

21. What would you like to learn in this course? _____

POST- TEST

Write “T” for true of “F” for false.

- _____ 1. Assess all sick children for general danger signs and signs of severe malaria.
- _____ 2. Malaria diagnostics are required in febrile children (<5 yrs) in high malaria endemic areas during initial visit.
- _____ 3. Treat all febrile children less than 5 years in high risk areas for malaria regardless of the presence of other signs and symptoms.
- _____ 4. Do not treat all febrile older children (5 – 14 yrs) and adults for malaria if diagnostics are not available – Do exclude other obvious causes of fever before treating for malaria.
- _____ 5. Even if fever or history of fever is NOT present, test older children and adults if diagnostics are available.
- _____ 6. Do not treat febrile older children and adults for malaria if malaria slide or RDT is negative.
- _____ 7. It is preferable to calculate antimalarial dosage by age rather than by weight.
- _____ 8. Give first dose of Coartem under supervision at health facility.
- _____ 9. Provide information to all patients how to take drugs, what to do in case of vomiting, when to return immediately, and when to come back for follow up.
- _____ 10. A blood transfusion in a child with severe anaemia and respiratory distress can safely be delayed for 12 hours.
- _____ 11. Do not transfuse blood if Hb is not less than 4g/dl or between 4 and 5 g/dl with signs of respiratory distress or cardiac failure.
- _____ 12. Give IV quinine drip while a child with severe anemia is being transfused.