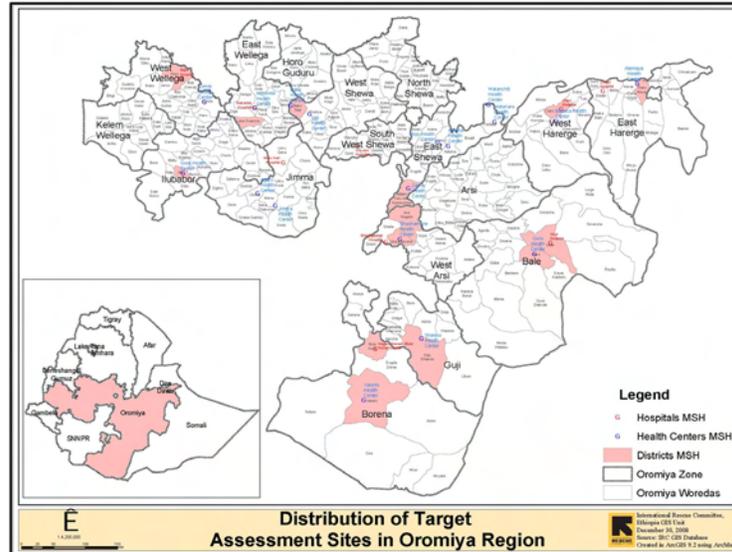




## Anti-Malaria Drugs Management (AMDM)

### Micro-Planning Workshop Report (Preliminary Baseline Assessment Report Included)

SPS/PMI – Ethiopia  
January 2009



**USAID**  
FROM THE AMERICAN PEOPLE



President's Malaria Initiative



**SPS**  
Strengthening  
Pharmaceutical  
Systems

**Anti-Malaria Drugs Management (AMDM)**

**Micro-Planning Workshop Report**  
**(Preliminary Baseline Assessment Report Included)**

**SPS/PMI – Ethiopia**  
**January 2009**



**USAID**  
FROM THE AMERICAN PEOPLE



President's Malaria Initiative



**SPS**   
Strengthening  
Pharmaceutical  
Systems

---

Strengthening Pharmaceutical Systems  
Center for Pharmaceutical Management  
Management Sciences for Health  
4301 N. Fairfax Drive, Suite 400  
Arlington, VA 22203 USA  
Phone: 703.524.6575  
Fax: 703.524.7898

This report is made possible by the generous support of the American people through the U.S. Agency for International Development (USAID), under the terms of cooperative agreement number GHN-A-00-07-00002-00. The contents are the responsibility of Management Sciences for Health and do not necessarily reflect the views of USAID or the United States Government.

### **About SPS**

The Strengthening Pharmaceutical Systems (SPS) Program strives to build capacity within developing countries to effectively manage all aspects of pharmaceutical systems and services. SPS focuses on improving governance in the pharmaceutical sector, strengthening pharmaceutical management systems and financing mechanisms, containing antimicrobial resistance, and enhancing access to and appropriate use of medicines.

### **Recommended Citation**

This report may be reproduced if credit is given to SPS. Please use the following citation.

Daniel, Gabriel & T.Work, Hailu. *AMDM Ethiopia Micro-planning Workshop Report, January 2009*. Submitted to the U.S. Agency for International Development by the Strengthening Pharmaceutical Systems Program. Arlington, VA: Management Sciences for Health.

---

### **Key Words**

Ethiopia AMDM/PMI Micro-planning Workshop Report

Strengthening Pharmaceutical Systems  
Center for Pharmaceutical Management  
Management Sciences for Health  
4301 North Fairfax Drive, Suite 400  
Arlington, VA 22203 USA  
Telephone: 703-524-6575  
Fax: 703-524-7898  
Web: [www.msh.org/sps.org](http://www.msh.org/sps.org)

## Table of Contents

Acronyms.....	4
Background.....	5
Introduction.....	5
Synopsis of the Presentations.....	6
1. Overview and 5-year Strategic Plan for Malaria Prevention and Control in Ethiopia Presenter: Dr. Afework Hailemariam, NMCP.....	6
2. Overview of USAID/PMI Ethiopia Program Presenter: Dr. Richard Reithinger, PMI Team Leader USAID/Ethiopia.....	7
3. RPM Plus/SPS Program Experience and HIV Drugs Management and its Relevance in AMDM in Ethiopia Presenter: Dr. Negussu Mekonnen, COP, SPS/MSH.....	7
4. AMDM Baseline Assessment Presenter: Gabriel Daniel, Country Program Manager, SPS/USA.....	8
5. AMDM Micro-Planning Workshop Presenters: Hailu Tegegnetwork, AMDM/SPS Coordinator & Gabriel Daniel.....	8
6. Comments and Suggestions.....	9
7. List of Participants.....	11
8. Map 1: Distribution of Target Assessment Sites in Oromiya Region.....	13
9. Map 2: Distribution of Target Assessment Sites in All Regions.....	14

### **Annexes (Power Point Presentations)**

- Annex 1: Overview and 5-year Strategic Plan for Malaria Prevention and Control in Ethiopia  
(Dr. Afework Hailemariam)
- Annex 2: Overview of USAID/PMI Ethiopia Program (Dr. Richard Reithinger)
- Annex 3: SPS Program Experience and HIV Drugs Management and its Relevance in  
AMDM in Ethiopia (Dr. Negussu Mekonnen)
- Annex 4: AMDM Baseline Assessment Preliminary Report (Mr. Gabriel Daniel)
- Annex 5: AMDM Micro-Planning Workshop Overview (Mr. Hailu T. Work & Mr. Gabriel Daniel)
- Annex 6: AMDM Baseline Assessment Summary Report (Narrative by Mr. Hailu T. Work &  
Mr. Gabriel Daniel)

### **Acronyms**

ACT	Artemisinin-based Combination Therapies
AED	Academy for Education Development
AIDS	Acquired Immunodeficiency Syndrome
AMDM	Anti-Malaria Drugs Management
ART	Antiretroviral Therapy
ARV	Antiretroviral Drugs
CAME	Coalition Against Malaria In Ethiopia
CDC	Centers for Disease Control
FMOH	Federal Ministry of Health
GPS	Global Positioning System
HCSP	HIV/AIDS Care and Support Program (MSH Bilateral)
HIV	Human Immunodeficiency Virus
IPTp	Intermittent Preventive Treatment of pregnant women
IRS	Indoor Residual Spraying
ITN	Insecticide-Treated Net
JSI	John Snow Inc.
MOH	Ministry Of Health
MOP	Malaria Operational Plan
NMCP	National Malaria Control Program
ORHB	Oromiya Regional Health Bureau
PMI	President's Malaria Initiative
PEPFAR	President's Emergency Plan for AIDS Relief
RDT	Rapid Diagnostic Test
RPM	Rational Pharmaceutical Management
SCMS	Supply Chain Management System
SOP	Standard Operating Procedure
SPS	Strengthening Pharmaceutical Systems
UNICEF	United Nations Children's Fund
USAID	U.S. Agency For International Development
WHO	World Health Organization

## **Background**

Malaria is ranked as the leading communicable disease in Ethiopia. Almost 75% of Ethiopia's landmass is malarious with 68% of the population at risk of contracting malaria. 60% and 40% of malaria cases are caused by *Plasmodium falciparum* and *P. vivax*, respectively. Malaria is unstable in most parts of the country. Over five million clinical cases of malaria are reported annually, representing 16% of all outpatient consultations, 20% of all hospital admissions and 27% of hospital deaths.

In October 2006 Ethiopia was selected as a focus country of the President's Malaria Initiative (PMI), a US\$1.2 billion initiative aiming to reduce malaria-related mortality by 50% in 15 countries in sub-Saharan Africa by 2010. PMI is an interagency initiative led by the United States Agency for International Development (USAID) and the Centers for Disease Control (CDC). This reduction in mortality will be achieved by reaching 85% coverage of the most vulnerable groups, children under five years of age, pregnant women, and people living with HIV/AIDS, with proven preventive and therapeutic interventions, including artemisinin-based combination therapies (ACTs), insecticide-treated bed nets (ITNs), intermittent preventive treatment of pregnant women (IPTp), and indoor residual spraying (IRS). The PMI resources allocated to Ethiopia targets the Oromiya Regional State, the country's largest administrative region and which bears the brunt of the country's malaria burden.

In 2007 the Ethiopia Malaria Operational Plan (MOP) which outlines activities to be supported by the PMI has identified SPS/MSH as the partner for providing technical assistance and support to the President's Malaria Initiative (PMI) in the area of antimalaria products management (AMDM). SPS has participated as a team member in the USAID-CDC PMI Assessment exercise in April 2007. This micro-planning workshop is in line with the workplan in which key partners will be invited to hear about the findings of the baseline assessment, major interventions according the workplan and to also get input and buy-in from them.

## **Introduction**

The anti-malarial drugs and related supplies management micro-planning workshop was conducted on December 23, 2008 following the presentation of the AMDM baseline assessment.

A one-day workshop was organized for major stakeholders for the purpose of presenting the findings of the baseline assessment and to conduct a micro-planning meeting. 38 participants representing PMI/USAID, ORHB, SPS/MSH, HCSP/MSH, SCMS/MSH, TBCAP, IFHP/JSI, ICAP, AED, WHO, UNICEF, CAME and Malaria Consortium attended the workshop. Various presentations were made on PMI, national malaria situation, SPS/MSH role, and work plan. The micro-planning aspect of the meeting focused on the interventions identified as part of AMDM and findings of the assessment.

A 17-page assessment summary findings document was distributed to the participants.

There were five presentations that formed part of the micro-planning workshop.



**Micro-planning Workshop at Yoli Hotel (23rd Dec 2008)**

**Synopsis of the presentations**

**1. Overview and 5 Year Strategic Plan for Malaria Prevention and Control in Ethiopia  
Presenter: Dr. Afework Hailemariam, Malaria Consortium (see Annex 1)**

Dr. Daddi of the National Malaria Control Program (NMCP) was the scheduled presenter of the national overview on malaria. Unfortunately Dr. Daddi was unable to attend the meeting because of unforeseen conflict of schedule. Instead Dr. Afework of Malaria Consortium was requested to give the presentation. Dr. Afework used to be the malaria team leader at the NMCP until recently.

Dr. Afework cited malaria as a major public health problem being the 6<sup>th</sup> cause of out-patient consultation, 2<sup>nd</sup> leading cause of admission and 1<sup>st</sup> leading cause of death. He then went to enumerate the principal strategic approaches to address the problems as: disease management early detection and effective treatment. He stated that there was a significant change in potential health service coverage reaching 92% as at 1998. The coverage of ITNs and IRS was also significant. Coartem procurement and distribution was reported to be 6 million doses per year for the last two years.

He enumerated the following as specific objectives of the national program:

- Achievement of 100% access to effective and affordable treatment for malaria by the end of 2008 as compared to the 5% level in 2005
- Achievement of 100% coverage of all households in ITNs targeted districts with at least two ITNs per household by the end of 2008
- Achievement of 60% coverage of villages targeted for Indoor Residual Spraying (IRS) by the end of 2010 as compared to the 20% coverage in 2005
- Early detection and containment of 80% of the malaria epidemics within two weeks from onset by 2010 as compared to 31% in 2005

- Strengthening malaria surveillance in malaria free areas for timely understanding of the situation and institution of timely preventive measures

Dr. Afework mentioned the following as challenges:

- Sustaining the distribution and coverage of the ITNs
- Low shelf life of Coartem and RDTs & difficulties in stock management
- Unpredictability of malaria epidemic in space and time and lack of adequate preparedness & response,
- High cost of RDTs and Coartem: issue of fund mobilization & sustainability
- High price of Coartem in the Private Sector

## **2. Overview of USAID/PMI Ethiopia Program**

**Presenter: Dr. Richard Reithinger, PMI Team Leader USAID/Ethiopia (see Annex 2)**

Dr. Reithinger started his power point presentation by telling the audience what PMI is and what the goals are. He described the PMI Ethiopia program in general and the PMI Oromiya support in particular. Richard stated the goal of the program to be reduction of malaria mortality by 50% by using proven malaria prevention and control interventions.

Although the program has national implications, he said that the rationale for choosing Oromiya as the target were based on the population size (27 million)  $\approx$  more than 1/3 of the total national population, that it contributes more than 38% of total malaria cases and that many disease indicators are lower than in other Regional States

## **3. RPM Plus/SPS Program Experience in HIV Drugs Management and its Relevance in AMDM in Ethiopia**

**Presenter: Dr. Negussu Mekonnen, COP SPS/MSH (see Annex 3)**

Dr. Negussu gave a background of RPM Plus and the follow-on program SPS by describing the different activities that have been accomplished to date. He mentioned that RPM Plus/SPS has the experience to implement PMI in the same way RPM Plus/SPS helped implement the national ART Program.

Negussu cited several areas of intervention that have the potential to contribute towards the work of AMDM

- Improved medicines policies, regulation, quality assurance, and pharmacovigilance
- Improved decision making and strategic planning capabilities in pharmaceutical management
- Building human resource capacity to perform pharmaceutical management functions and services
- Increased capacity of local institutions and networks to provide TA in pharmaceutical management

#### **4. AMDM Baseline Assessment**

**Presenter: Mr. Gabriel Daniel, Country Program Manager, SPS/MSH (see Annex 4)**

Gabriel presented the findings of the baseline assessment using power point slides. He described the methodology of the assessment and selection of target facilities.

He cited the main objective of the assessment as examining the current supply management system through identification of the strengths and weaknesses. He mentioned that the assessment included checking for availability of anti-malarial drugs, TB drugs, HIV/AIDS drugs, condoms and other related products. The questions and observations also looked at knowledge, storage and handling, record keeping and reporting and security and availability of amenities.

Gabriel stated that the assessment target included 19 hospitals, 31 health centers, 27 health posts, 33 private drug outlets, 18 zonal health offices, 29 district health offices and 44 laboratories representing hospitals and health centers and 71 prescribers from selected hospitals and health centers. More than 50% of the target respondents were from Oromiya Region and the rest from other regions (except Addis Ababa and Harari).

The assessment was conducted by RPMAs, ORHB staff and facility personnel. This was done to make sure that the directly involved staff will get a better grasp of the situation and play an active role in interventions.

Gabriel mentioned the following as major concerns identified by the assessment:

- Inadequate availability of malaria products for children
- Expiry due to lack of proper quantification and distribution
- Weak information system (pharmacy level medication record, inventory control tools and reporting)
- Storage inadequacy and poor organization
- Delay in disposal of expired and unusable products (occupy useful space)

#### **5. Micro-Planning Workshop**

**Presenters: Hailu Tegegnework, AMDM Coordinator, SPS/Ethiopia  
Gabriel Daniel, Country Program Manager, Arlington (see Annex 5)**

The presentation on the micro-planning workshop was made jointly by Hailu and Gabriel. Hailu gave an overview of the AMDM program and presented the interventions as described in the work plan.

Hailu cited the objectives of AMDM as being: establishment of partnerships with the FMOH, RHB and other in-country stakeholders; reviewing available AMDM materials, approaches and systems; reviewing and updating of current national FMOH AMDM policy, modifying and/or developing AMDM training materials, training central, regional and zonal level health professionals in AMDM; implementation of effective activities which will result in the establishment and operationalization of an AMDM system at hospital, health center and health

post level, equipment/infrastructure, tracking stock status, piloting AMDM in 20 health posts, Georeferencing with GPS and leveraging of other USG funds.

The micro-planning workshop presentation also included highlighting of immediate interventions in response to findings of the assessment. This part, presented by Gabriel, used color-coded matrices and was labeled as “Yellowing the Red”. The color-coded checker box method of identifying gaps with focus on each facility was presented as an operational and performance monitoring tool during the micro-planning workshop.

Following the power point presentations, the floor was opened for questions, answers and discussions.

## **6. Comments and Suggestions**

Following the discussion, comments and recommendations were also forwarded. The main issues that were raised included:

- In one of the presentations, it was indicated that there has been a decrease in both the morbidity and mortality from malaria infections in the last few years. Some participants raised the question as to what were the main factors that have contributed for this trend. They pointed that, even though the different intervention approaches such as improved treatment, prevention and control must have helped, other natural factors could have contributed as well. They remarked that we should not be highly satisfied with earlier successes but also strengthen our efforts in all areas of interventions so as not to experience epidemics of the earlier years. On the other hand, in response to the issue, it was explained that in the last few years, the metrological indicators even showed situations which would rather have favored the increase in the prevalence of the disease. Finally it was agreed that more studies be carried out on the epidemiological patterns and possible contributing factors for observed patterns.
- It was noted that in recent years better funding has been obtained for the control of malaria. This has greatly improved the procurement of malaria drugs and other commodities. But still problems in managements such as efficiency in the distribution of the products, proper use and system improvements are observed. It was thus pointed that all program partners should work closely to improve the above deficiencies.
- It was commented that the procurement and distribution of ITNs have progressed well. But still, there are low utilization rate and problems in proper use. Thus it was pointed that strong IEC campaigns be carried out to improve these situations.
- There is a long drug distribution chain in Ethiopia. The anti malarial drugs and diagnostic reagents such as ACTs and RDTs have short shelf life. Because of the long distribution processes, these products are seen to expire with in short period after reaching the health facilities. Therefore, all concerned bodies should discuss and try to minimize the long distribution processes.
- The issue of sustainability of the Malaria control and the different PMI Programs was raised. It was also noted that the NMCP requires about 500 million USD in the coming 5 years to be obtained from different sources. It was asked if this huge amount could be available. In answering this question, it was explained that the amount was ensured to be available from the GOE as well as from donor countries and other international

organizations. But still, the need to ensure the long term sustainability of the programs was stressed.

- In the presentation concerning the first year key activity areas of the PMI/AMDM the introduction of different recording and reporting formats was indicated. Participants indicated that the different partners introduce their own versions of similar formats which ultimately overburden the already overburdened staffs of the health facilities. Apart from these formats, the partners also plan and execute training programs to the health professionals. Concern on unnecessary duplications and waste of resources was raised. Recommendations were made to minimize the duplication of activities by these supporting partners and that frequent meeting of the PMI partners be conducted to synergize their efforts and properly utilize resources.
- It was pointed that in 2004 MSH had carried out a study to assess the situation of the Drug Management and Laboratory Services in Ethiopia. Following the assessment study, MSH/RPM program was started in Ethiopia which has made tremendous efforts in the drug management sector including renovation works to improve the drug storage and dispensing facilities. On the other hand, little has been done in the renovation and other service improvement efforts in the laboratory sector. Request was forwarded to MSH and other PMI partners to give attention to the laboratory service as well. In answer to this, it was explained that MSH/RPM as a program entrusted with improving the pharmaceutical management had carried out different activities including limited renovations of drug storage and dispensing facilities. But the new MSH/SPS is mainly responsible in strengthening the pharmaceutical service and as its program focus; it will put more of its efforts in system improvements in the health facilities rather than in renovation activities. At this point the representative of ICAP, a PMI partner working in the laboratory sector, explained that his organization also mainly focuses in the activities of capacity building of the laboratory sector.
- Based on the findings of the AMDM assessment, different participants expressed their concerns on some of the findings such as the problems of drug availability in the facilities visited, especially shortages or non availability of pediatric preparations, expiry of products, and the presence of Sulfadoxine and Pyremethamine combination preparations in the private sector outlets. They suggested that all partners should bring their efforts to solve these problems.
- In the presentation concerning the PMI/AMDM first year activity plan, it was indicated that apart from the 60 health facilities Technical Support services will also be given to 20 Health Posts. Some participants noted that this number is so small compared to the number of these basic health units currently operating and their importance in bringing the service to the majority of the rural population. The program managers explained that the number indicated is only for the first year operation and that as the problems of the facilities and the gap in their needs are well identified, the number of these facilities will be scaled up in the subsequent operational years.
- The representative from WHO pointed of the interest and activities carried out by his organization in improving the availability of Essential Drugs including Program Drugs and expressed its readiness to closely work with all concerned in the sector. In addition, he also expressed his concern on some unnecessary duplication activities being undertaken and recommended that the different organizations working in the area come together to coordinate their activities.
- Finally the participants requested that the Final Assessment Report and all future activity reports be sent to partner organizations for better coordination of their activities.

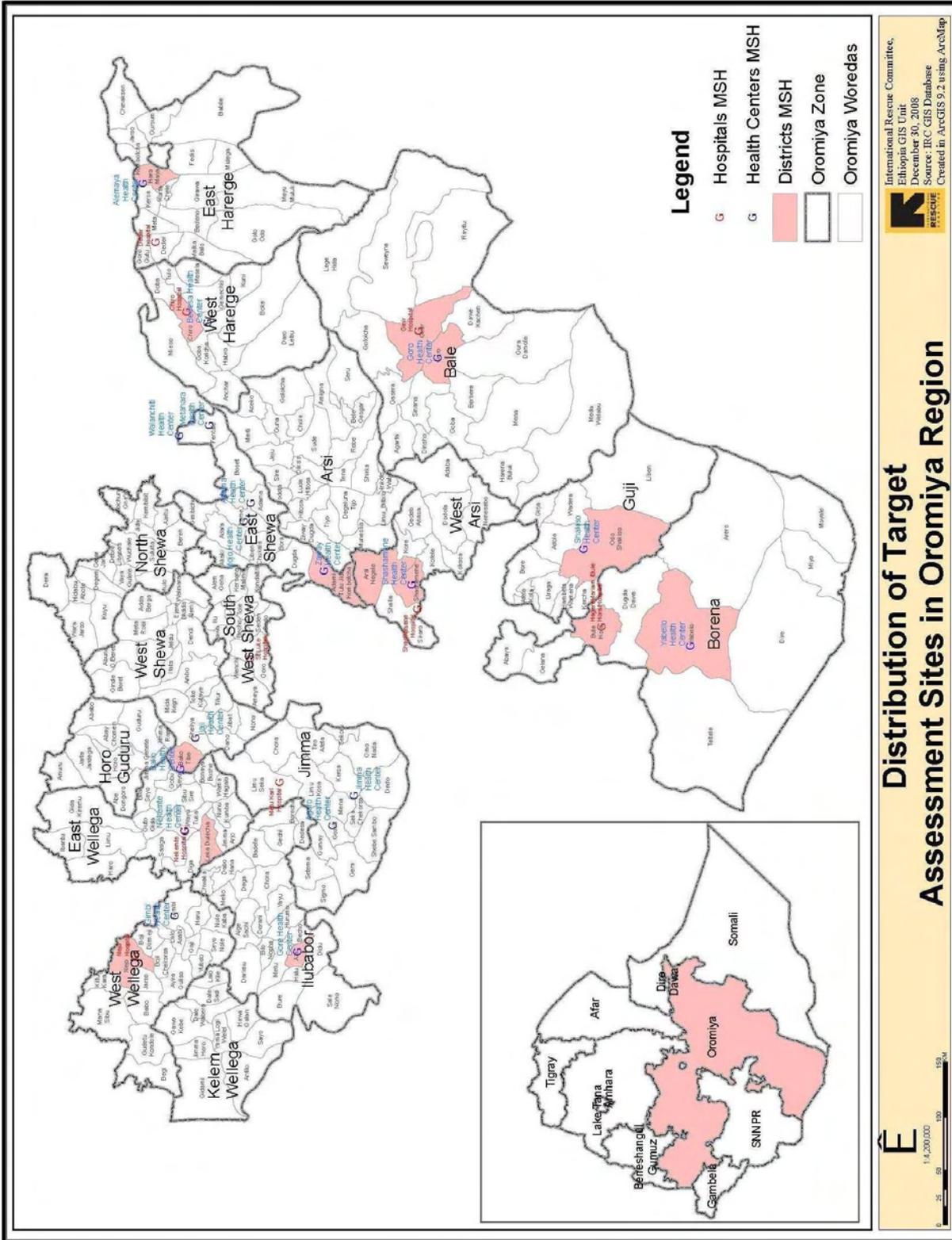
At the end of the discussion, Mr. Gabriel Daniel expressed his thanks to all the participants for their willingness to spare their precious time and attend the workshop. He also appreciated the participants' active participation in the discussions and for their invaluable comments and recommendations which will be seriously considered in the implementation of the program. Finally he thanked USAID for choosing MSH as the PMI/AMDM implementing partner and Dr Richard Reithinger for his continuous support.

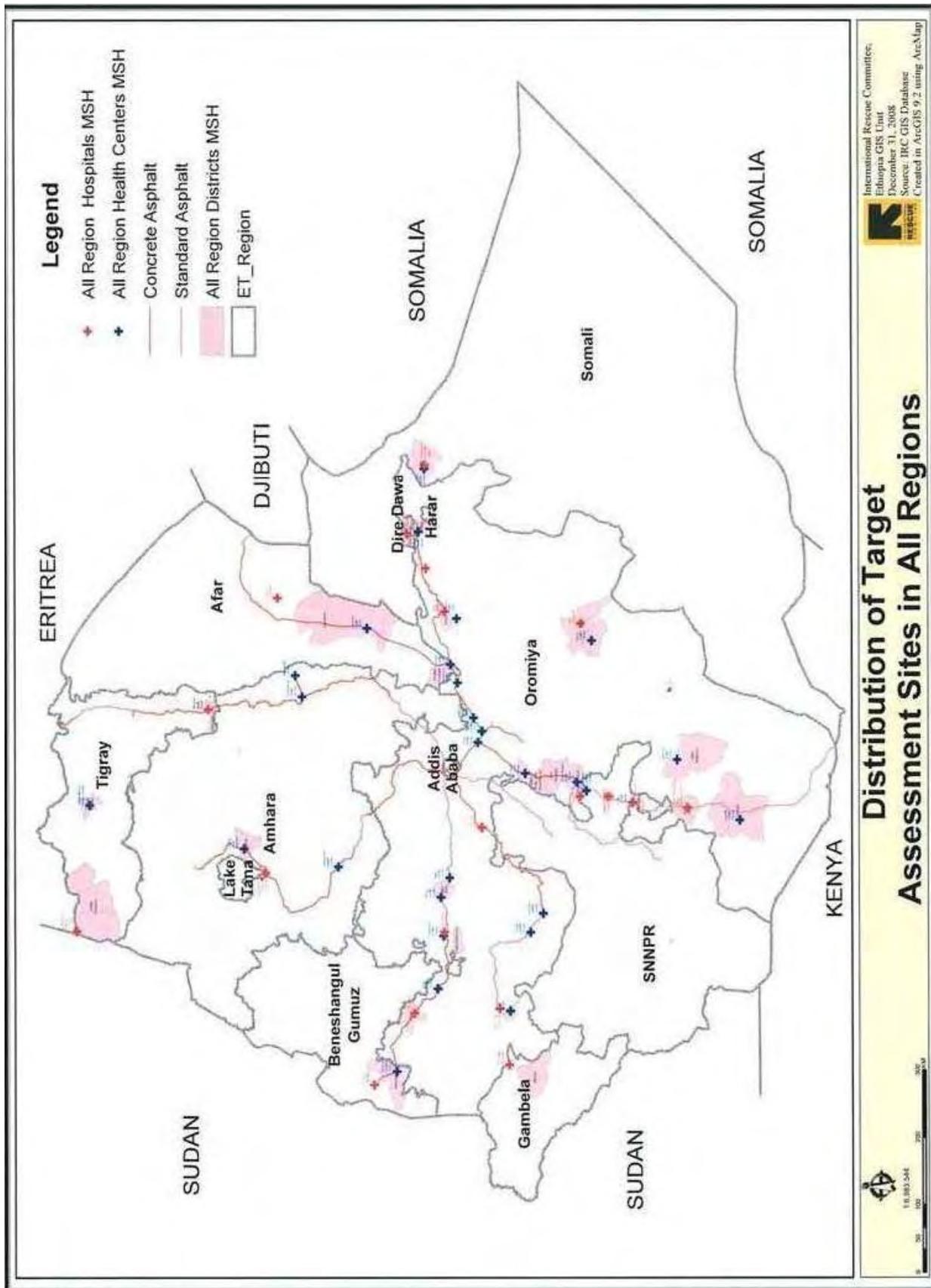
The Workshop came to a close at 4:00 pm local time.

### **7. List of the Workshop Participants**

	<b>Name</b>	<b>Organization</b>	<b>Phone Number</b>
1.	Dr. Richard Reithinger	USAID-Ethiopia	011 5 510088
2.	Ms. Tsion Demissie	USAID-Ethiopia	0911 659491
3.	Mr. Damtew Yadeta	ORHB	0911 976748
4.	Mr. Abdulmalik Ebro	ORHB	0911 446527
5.	Mr. Mohammed Tussi	ORHB	0911 745875
6.	Mr. Melaku Maru	IFHP/JSI/PT	0911 461625
7.	Dr. Gebisa Tolosa	ORHB	0911 751287
8.	Mr Kassa Mohammed	USAID	0911 485690
9.	Dr. Garoma Kena	USAID	0911 408739
10.	Dr. Agonafer Tekalegne	CAME	0911 216102
11.	Mr Abdulselem Jirga	IFHP/JSI	0911 481137
12.	Mr. Zelalem Kebede	AED-C-Change	0911 682759
13.	Dr. Bereket H/Giorgis	ICAP-Ethiopia	0911 405562
14.	Dr. Mengistu Tafesse	ICAP-Ethiopia	0911 21791?
15.	Mr. Fikru Kebebew	AED-C-Change	0911 240915
16.	Dr. Challa Negeri	TBCAP/MSH	0911 379747
17.	Ms Shoa Girma	AED/C-Change	0911 255383
18.	Mr. Dereje Muluneh	UNICEF	0911 239995
19.	Dr. Ezra Shimela	TBCAP	0911 674458
20.	Mr. Dawit Teshome	ORHB	0911 892758
21.	Mr. Bekele Tefera	WHO	0911 169663
22.	Dr. Afework H/Mariam	CAME	0911 486650
23.	Mr. Gabriel Daniel	SPS/MSH	0911 454866
24.	Dr. Negussu Mekonnen	SPS/MSH	0911 226909
25.	Mr. Laike G. Tewoldemedhin	SPS/MSH	0911 206090
26.	Mr. Haile Wubneh	HCSP/MSH	0911 331949
27.	Mr. Tenaw Andualem	SPS/MSH	0911 627059
28.	Mr. Yosef Wakoya	SPS/MSH	0911 040960
29.	Mr. Hailu Tadeg	SPS/MSH	0911 671137
30..	Mr Hailu Tegegnetwork	SPS/MSH	0911 476038
31.	Mr. Daniel Tadesse	SPS/MSH	0911 429089
32.	Mr.Antenane Korra	SPS/MSH	0911 698990
33.	Mr. Amanu Nure	SPS/MSH	0911 814903
34.	Mr. Shemelis Endaylalu	SCMS/MSH	0911 154010
35.	Mr. Gultneh Kebede	SPS/MSH	0911 698044

36.	Mr. Andualem Mohammed	SCMS/MSH	0911 662948
37.	Mr. Gashaw Shiferaw	SCMS/MSH	0911 716812
38.	Mr Alemayehu Nigatu	SCMS/MSH	0911 610218





Annex - 1

# Overview and 5 Year Strategic Plan for Malaria Prevention and Control in Ethiopia

Afewerk Hailemariam (MD, MPh)  
Malaria Consortium, Ethiopia

1

## Outline of Presentation

- Malaria Epidemiology
- Malaria Burden
- Goal, Objectives, Targets
- Country's Priority Strategic Approaches
- Achievements and Coverage of interventions
- Support provided by Partners
- Challenges
- Future directions

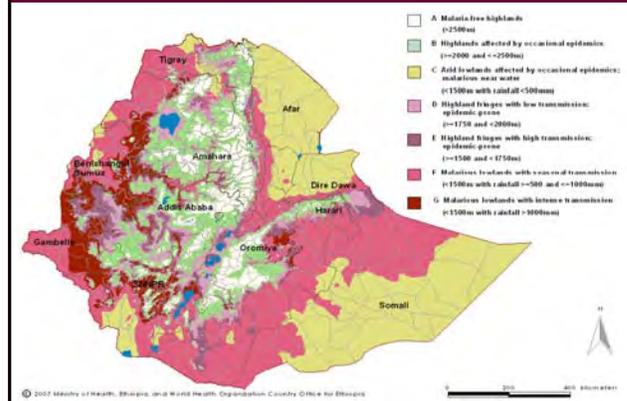
2

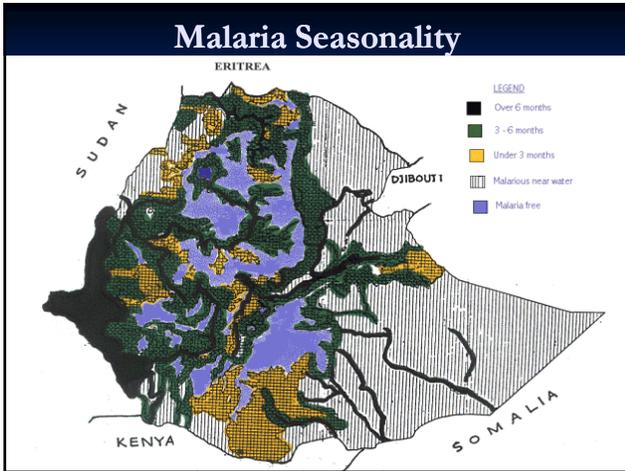
## Malaria Epidemiology

- 75% of the land ( areas below 2000 m above sea level) is malarious
  - Fertile low land areas
  - Suitable for agriculture
- >50 million (68%) of the population live in these areas and at risk of malaria
- Transmission is unstable and seasonal
  - September to December and April to May
  - Coincide with major planting and harvesting season for farmers - aggravate economic loss

3

## Malaria Epidemiology



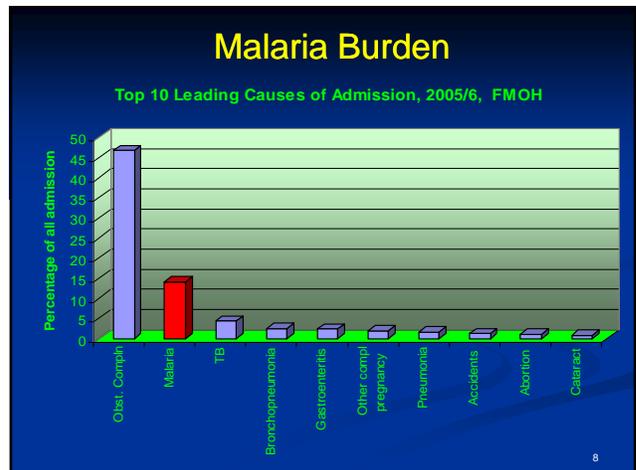


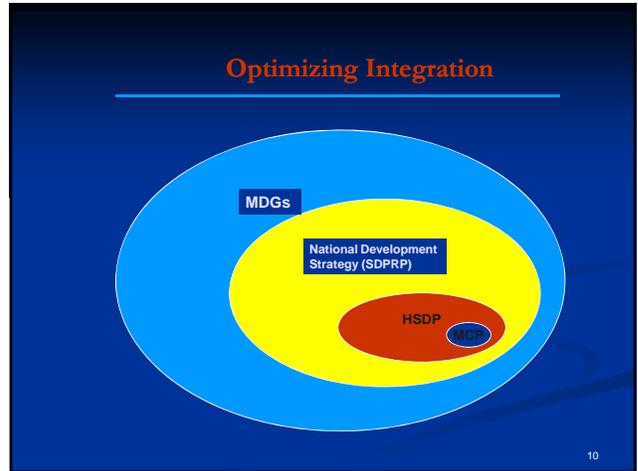
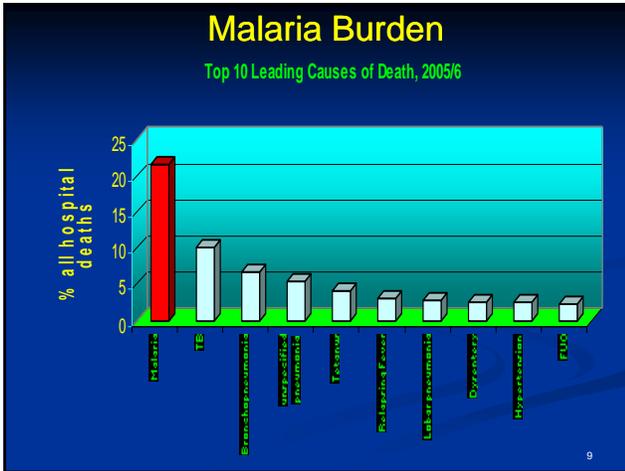
### Malaria Epidemiology

- Major epidemics occur every 5 - 8 years, but focal epidemics are happen every year,
- Two major parasite species
  - Plasmodium falciparum* (60%)
  - P. vivax* (40%)
  - P. ovale* & *P. malaria* (<1%)
- Main malaria vector
  - Anopheles arabiansis*
  - Anopheles pharoensis*

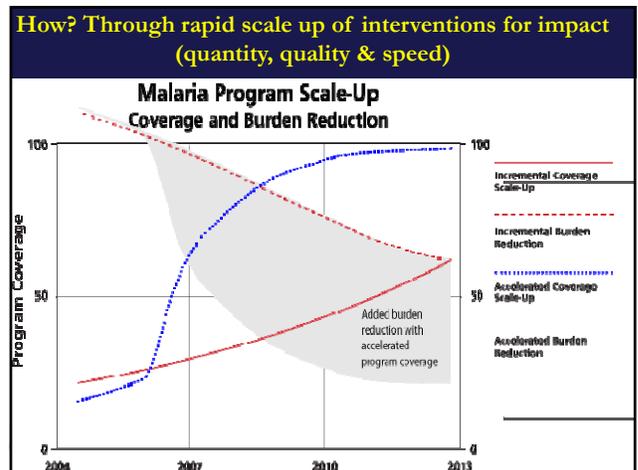
### Malaria Burden

- Malaria is a major public health problem in Ethiopia
  - Every year it is the leading cause of out patient consultations, admissions and death
  - Recently, however, the rapid scale up of interventions has brought about significant decline in malaria burden
    - In 2006/7 it become 6<sup>th</sup> cause of outpatient consultations
    - No malaria epidemic report at all





- ### The Goal & Objective
- Ultimate goal is to reduce the burden of malaria to the level it is no more a public health problem
  - To contribute to MDG 6 target 8 by reducing the overall burden of malaria by 50% by the year 2010  
AND
  - To contribute to the reduction of child mortality (MDG 4) and improvement of maternal health (MDG 5)



### Specific Objectives

- Achieve 100% access to effective and affordable treatment for malaria by the end of 2008 as compared to the 5% level in 2005.
- Achieve 100% coverage of all households in ITNs targeted districts with at least two ITNs per household by the end of 2008,
- Achieve 60% coverage of villages targeted for Indoor Residual Spraying (IRS) the end of 2010 as compared to the 20% coverage in 2005,
- Early detect and contain 80% of the malaria epidemics within two weeks from onset by 2010 as compared to 31% in 2005,
- To strengthen malaria surveillance in malaria free areas for timely understanding of the situation and to institute timely preventive measures.

### HSDP III: Impact Objectives

- By 2010:
- Reduce morbidity attributed to malaria from 22% to 10%
- Reduce malaria case fatality rate in under- children from 5.2% to 2%
- Reduce case fatality rate of malaria in age groups 5 years and above from 4.5% to 2%

### Malaria prevention and control strategies

#### 1) Main strategies:

- Early diagnosis and effective treatment
- Vector control
  - Insecticide treated nets
  - Indoor Residual Spray
  - Environmental Management

#### ■ Epidemic prevention and control

#### 2) Cross cutting Strategies:

- Human resource development
- Operational research
- Information, education and communication
- Program monitoring and evaluation

15

Measure	Core Indicators	Baseline (2005)	Target (2010)	Data Source & Collection Interval	Primary Responsible Unit
Output	Service delivery knowledge skill - ITNs distributed # treated Houses sprayed			HMIS (quarterly)	DHO, RHB, FMOH
	Proportion children US with fever in last 2 weeks who received treatment (per guideline) within 24 hours from onset of fever	5	100	2-3 yrs CS	DHO, RHB, FMOH & Partners
	Proportion of severe malaria cases in US correctly managed	59	100	2-3 yrs - HFS	DHO, RHB, FMOH
Outcome	Proportion children AS& Adults with fever in last 2 weeks who received treatment (per guideline) within 24 hrs from onset of fever	5%	100%	2-3 yrs CS	DHO, RHB, FMOH & Partners
	Proportion of epidemics detected within 2 weeks of onset and properly controlled	5%	80%	2-3 yrs M, IS	DHO, RHB, FMOH & Partners
	Proportion of households with at least one ITN in target districts	24%	100%	2-3 yrs CS	DHO, RHB, FMOH & Partners
	Proportion of pregnant women who slept under an ITN the previous night in target districts	2%	100%	2-3 yrs CS	DHO, RHB, FMOH & Partners
	Proportion of children <5 years old who slept under an ITN the previous night in target districts	2%	100%	2-3 yrs CS	RHB, FMOH
Impact	% epidemic prone localities receiving timely IRS	20	60	IRS Ass. Rpt	RHB, FMOH
	Morbidity attributed to malaria	22%	10%	HFS CS	RHB, FMOH & Partners
	Mortality attributable to malaria: case fatality rate US	5.20%	2%	HFS CS	RHB, FMOH & Partners
	Case fatality rate in age groups 5 years and above	4.50%	2%	HFS CS	RHB, FMOH & Partners

**Indicative Budget Requirement (2006 – 2010)**

- The total budget required for five years is estimated at US\$446,927,770.
- The budget will be utilized for:
  - case management (8.3%),
  - Vector control (20%),
  - Epidemic prevention & control (2.4%),
  - IEC/BCC (0.9%),
  - Training & capacity building (31.7%),
  - Operational research (1.2%),
  - monitoring and evaluation (0.5%) and
  - administrative costs (34.5%)
- Based on this indicative plan, detailed annual plans will be prepared by each region and resource that will be mobilized will be distributed to regions based on the population at risk.

**Indicative Budget Requirement (2006 – 2010)**

Component	2006	2007	2008	2009	2010	Total
Case management	6,078,693	8,777,761	7,774,719	7,606,332	7,005,108	37,242,61
Selective vector control	10,904,487	13,253,444	27,780,368	20,211,919	18,904,385	91,054,60
Epidemic prevention & control	1,494,986	1,785,105	2,312,892	2,409,290	2,671,747	10,674,02
IEC & behavioral impact	906,507	802,120	810,148	817,614	835,159	4,171,54
Capacity building	28,743,367	29,079,357	27,154,355	28,246,136	28,581,593	141,804,80
Operational research	868,285	1,236,776	1,196,476	1,164,928	954,938	5,421,40
M & E and prog. Mx	315,526	579,644	629,107	405,625	277,171	2,207,07
Implementation arrangements & coord.	29,243,390	32,957,792	31,005,951	31,630,583	29,513,987	154,351,70
<b>GRAND TOTAL</b>	<b>78,557,246</b>	<b>88,474,006</b>	<b>98,666,023</b>	<b>92,494,435</b>	<b>88,746,099</b>	<b>446,927,77</b>

**Government policy towards malaria control in Ethiopia:**

- Priority to communicable diseases
- Free diagnosis (especially at lower health facilities level)
- Free anti-malarial drugs
- Free distribution of ITNs to all
- Free indoor residual spraying of houses

**PART I: PRINCIPAL STRATEGIC APPROCHES**

**DISEASE MANAGEMENT (EARLY DIAGNOSIS AND EFFECTIVE TREATMENT)**

### Specific Objective

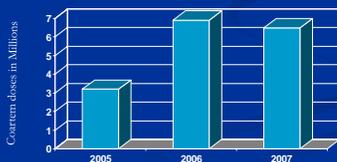
- To achieve & maintain 100 % access to high quality malaria diagnosis and treatment at all levels of the health system by the end of 2008 as compared to the 4% coverage in 2005,

### Implementation Approaches: Dx & Tx

- **Improved quality** of case management in public and private health facilities,
- Strengthening and expansion of community based service through Health Extension Workers and trained community health agents towards home based services,
- **Improved drug management system at public and private health facilities,**
- Expand diagnostic services including the use of Rapid Diagnostic Test (RDTs) in remote areas and for epidemic investigation,
- Update the malaria diagnosis and treatment guideline based on local evidences.

### Major Achievements: Diagnosis and Treatment

- **Target: Universal coverage of fever treatment within 24 hours of onset in 2008**
  - Diagnosis and treatment guideline revised
  - RDT procurement and distribution (>2 million tests)
  - Coartem procured and distributed (> 6 million doses every year for the last 2 years)



23

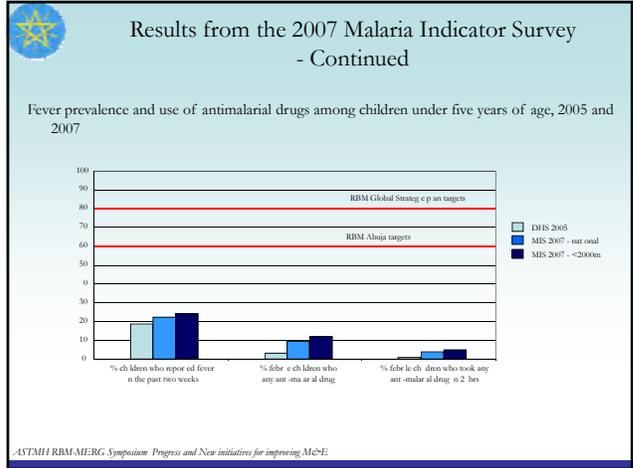
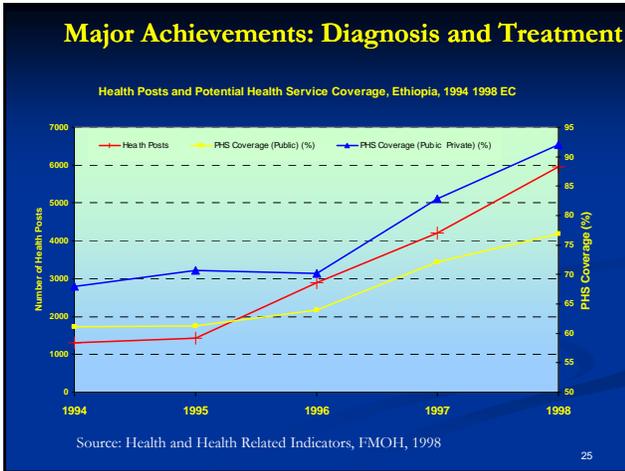
### Major Achievements: Diagnosis and Treatment

- Opportunity
  - Accelerated expansion of primary health service coverage - universal health service coverage by 2008
    - Health extension program
  - Better financial input: GFATM, PMI
  - More than 24,000 health extension workers have been trained and deployed across the country.



24

### Major Achievements: Diagnosis and Treatment



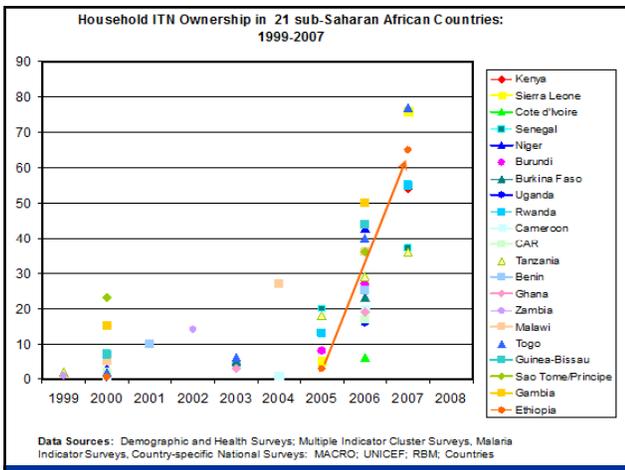
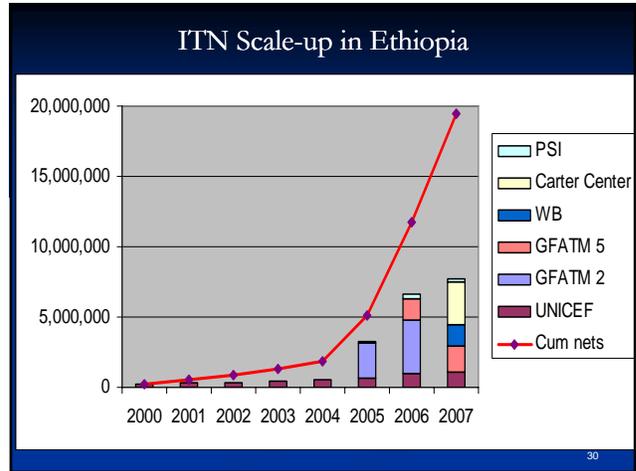
### Use of insecticide treated nets

- Distribution started with ordinary nets since 1998
  - Coverage and re-impregnation rate was low
- LLINs introduced in 2005
  - Rapid scale-up was carried out
    - GFATM and other donors
  - 2 nets per household
  - 20 mln nets needed to cover all

### Major Achievements: LLINs

- Target: to cover all households in malarious areas with at least 2 nets per household (20 million nets) in 2007 and to protect more than 50 million people.
  - 18.2 million LLINs have been distributed to beneficiaries since 2005
  - 90 % coverage at 2 ITNs per household
  - Protected more than 45 million people from malaria

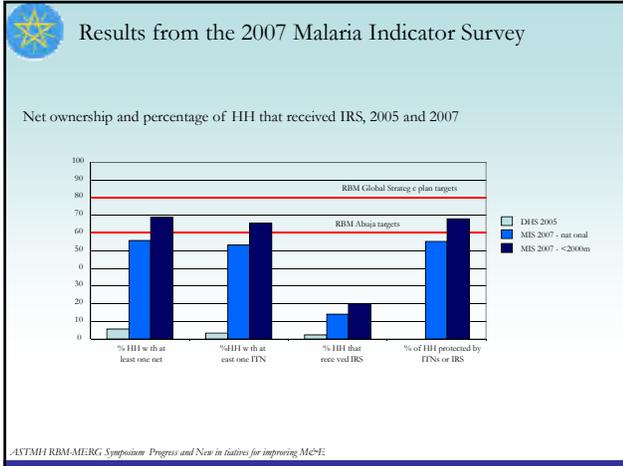
# AMDM Micro-Planning Workshop Report SPS/PMI Ethiopia, January 2009



### Status of ITNs distribution As of January 2008

Region	Total number of HH at risk of malaria	Total Number of ITNs required (2 ITNs/HH)	Total Distributed	coverage (%)
Tigray	608,114	1,216,228	1,216,228	100
Afar	271,744	543,488	543,488	100
Amhara	2,980,168	5,960,335	5,960,335	100
Oromia	3,356,227	6,712,454	6,717,454	100
SNNPR	1,883,662	3,767,323	3,889,237	103
Somali	759,294	1,518,587	1,520,673	100
Gambella	61,750	123,500	197,900	160
B-Gumuz	114,588	229,175	240,600	105
Harari	18,955	37,910	69,089	182
Dire Dawa	35,000	70,000	137,314	196
<b>Total</b>	<b>10,089,502</b>	<b>20,179,000</b>	<b>20,492,318</b>	<b>101.6</b>

Source: Federal Ministry of Health



## ITNs utilization and knowledge issues

- Different studies carried out (mostly patchy) and non representative

- UNICEF:
  - Number of HHs with children < 5 years of age reported used ITNs the previous night:
    - East Hararge: 93.3%
    - Borena: 85.5%
  - ITN cluster survey results (Harari)
    - H/Hs with 1 ITN hanging – 91%
    - Children sleeping under ITNs – 87%
    - Receiving health education – 82%
- Tigray RHB In Humera
  - Children under 5 who use ITNs >70%

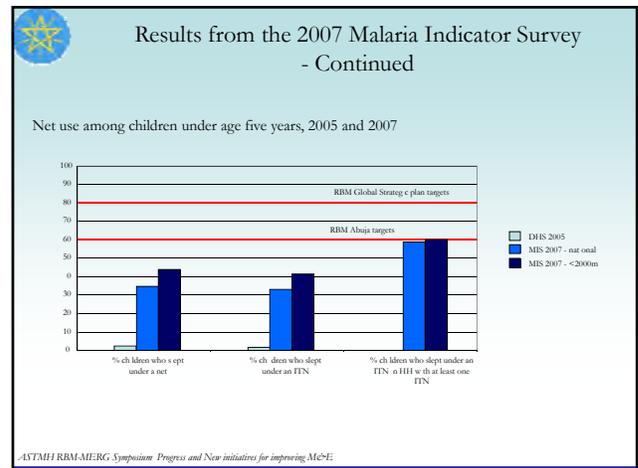
34

## ITNs utilization and knowledge issues

- The Carter Center:
  - Oromia, SNNPR and Amhara
    - 14-36%
- Institute of Pathobiology
  - More than 90%
- Jimma University (personal communication)
  - ~42%

- To have a representative data a nation wide Malaria Indicator Survey is just completed. Result will be available in April 2008

35



### Indoor Residual Spraying

- Indoor residual spraying has been implemented in Ethiopia for more than 4 decades.
- The insecticide used is DDT 75%
- Every year 20% – 30% of sprayable localities covered

37

### Indoor Residual Spraying

- Indoor residual spraying has been implemented in Ethiopia for more than 4 decades.
- The insecticide used is DDT 75%
- Every year 20% – 30% of sprayable localities covered

38

### Achievements: IRS

- On average 800 tones of DDT 75% procured and distributed every year
- Spray about 1 million unit structures in more than 3000 localities
- Protecting 1 million households and 5 million population
- Vector control and IRS Guidelines is updated
- This year we have got budget to procure additional 800 ton to increase the coverage to 60%

39

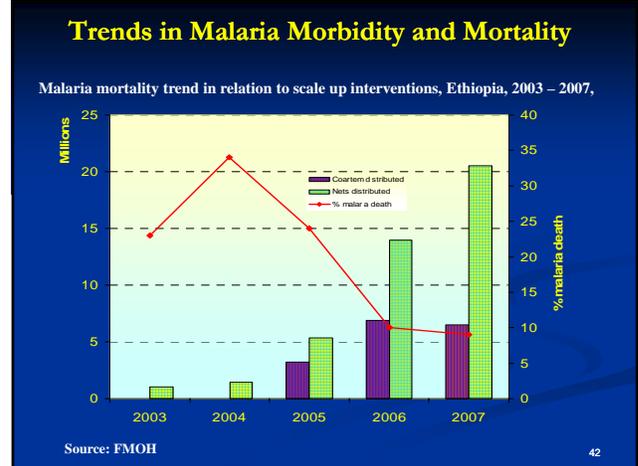
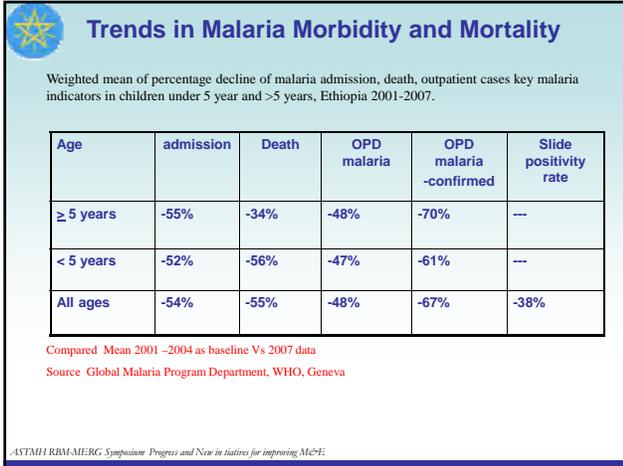


### Results from the 2007 Malaria Indicator Survey - Continued

Parasitemia and anemia

	Parasite prevalence in all age groups (%)			% children under five years of age with severe anemia (Hb < 8g/dl)
	<i>P. falciparum</i>	<i>P. vivax</i>	Total	
Nationwide	0.5	0.2	0.7	5.5
Malarious areas (below 2,000m)	0.7	0.3	0.9	6.6

ASTMH/IRMM/EMERG Symposium Progress and New initiatives for improving M&E



- ### Challenges
- Sustaining the distribution and coverage of the ITNs
  - Low shelf life of Coartem and RDTs & difficulties in stock management
  - Unpredictability of malaria epidemic in space and time and lack of adequate preparedness & response,
  - High Cost of RDTs and Coartem: issue of fund mobilization & sustainability
  - High price of Coartem in the Private Sector
- 43

- ### Future direction
- Health sector development program
  - Five years (2006 – 2010) strategic plan produced
  - Strategic directions:
    - Further scale up the diagnosis and treatment activities
      - Ensure continuous supply of diagnostic materials and antimalarial drugs to the lowest level health facilities
      - Ensure quality of malaria prevention and control activities
- 44

### Future direction

- Ensure 100% coverage of ITNs
- Ensure ITNs replacement
  - From 2008 onwards (to MDG date of 2015) an extra 50 million ITNs are needed to replace old nets to maintain >80% ITN coverage and utilization rates
- Increase and sustain the ITNs utilization rate
- Scale up IRS to 60% and strengthen epidemic prevention and control
- Monitoring and Evaluation of progress and achievement

45

### Major RBM Partnership in Ethiopia

- |  |                                    |
|--|------------------------------------|
| ■ Federal Ministry of Health                                 | ■ CRDA/CORE                        |
| ■ Regional Health Bureaus                                    | ■ MSF Group                        |
| ■ WHO  | ■ Anti-Malaria Association         |
| ■ UNICEF   | ■ PSI                              |
| ■ Development Cooperation of Ireland,                        | ■ AED NetMark                      |
| ■ Italian Development Co-operation                           | ■ AMREF                            |
| ■ The World Bank   | ■ American Red Cross               |
| ■ USAID/PMI  | ■ Angereb PLC                      |
| ■ Malaria Consortium   | ■ Green PLC                        |
| ■ The Carter Center  | ■ Malaria Professional association |
| ■ Center for National Health Development in Ethiopia (CNHDE) | ■ Anti malaria association         |
| ■ Merlin   | ■ ICAP                             |
| ■ RPM Plus   | ■ MSH                              |

46

2008 - ] ]

World Malaria Day 2008: Malaria – a disease without borders.



United to Combat Malaria

Thank you

47

PMI  
Annex - 2

## President's Malaria Initiative

### Overview of USAID/PMI Ethiopia Program

Anti-Malaria Drug Management  
Micro-planning Workshop

Richard Reithinger, PhD

Addis Ababa  
December 23, 2008

PMI

## What is PMI ?

PMI

## What is PMI ?

- President's Malaria Initiative (PMI)
- Goal: Reduce malaria mortality by 50% by using proven malaria prevention and control interventions
- 2006 – 2010: \$1.2 billion in 15 focus countries

PMI

## What is PMI ?

- President's Malaria Initiative (PMI)
- Goal: Reduce malaria mortality by 50% by using proven malaria prevention and control interventions
- 2006 – 2010: \$1.2 billion in 15 focus countries
- 2006: 3 countries
- 2007: + 5 countries
- 2008: + 7 countries, including Ethiopia
- Under PMI, *Malaria Communities Program*, \$30 million initiative to strengthen local organizations in malaria prevention and control

**PMI**

### PMI in Ethiopia

- *September 2006*: Ethiopia declared PMI focus country.
- *March 2007*: needs assessment with participation of USAID, CDC, WHO, UNICEF, FMoH and ORHB.
- *May – September 2007*: development of Year 1 PMI country plan.
- *November 2007*: PMI country plan approved.
- *December 2007*: Official launch of PMI in Ethiopia.
- *January – May 2008*: PMI activity portfolio finalized.
- *May 2008 – present*: selection of implementing partners.
- *June 2008 – present*: implementation of activities.

**PMI**

### PMI in Ethiopia

- Budget: \$19.8 m (2008); \$19.7 m (2009); ??? (2010)
- Focus: Oromia Regional State
- PMI budget was not large enough to cover the whole country
- Rationale for choosing Oromia:
  - largest state in terms of population size (27 million)  $\approx$  more than 1/3 of the total national population
  - contributes more than 38% of total malaria cases
  - many disease indicators are lower than in other Regional States

**PMI**

### Malaria Indicators and Targets

Indicators	Baseline 2005 DHS	
	National	Oromia
Household with at least one ITN	5.70%	2.80%
Children <5 years of age who slept under ITN the previous night	1.50%	0.40%
Pregnant women who slept under ITN the previous night	1.10%	0%
Children <5 years of age who received anti-malarial drug treatment within 24 hours of fever onset	0.70%	0.60%

**PMI**

### PMI in Ethiopia

- Budget: \$19.8 m (2008); \$19.7 m (2009); ??? (2010)
- Focus: Oromia Regional State
- PMI budget was not large enough to cover the whole country
- Rationale for choosing Oromia:
  - largest state in terms of population size (27 million)  $\approx$  more than 1/3 of the total national population
  - contributes more than 38% of total malaria cases
  - many disease indicators are lower than in other Regional States
  - all eco-epidemiological malaria transmission patterns found in Ethiopia are present

PMI



## PMI Interventions

PMI



## General Approach

*National Impact*

- Support for FMoH/ORHB and stakeholders in development of national strategies, policies and implementation guidelines.
- Support for development or modification of tools for program implementation and capacity building.
- Advocacy for malaria prevention and control.

*Regional Impact*

- On the ground implementation of activities; original focus zones of Arsi, East Shoa, Illababor, Jimma, West Arsi

PMI



## Prevention & Control 1

*Indoor Residual Spraying [Research Triangle Institute]*

- Spraying of 316,829 household units to protect an estimated 1,000,526 residents in 22 districts of Oromia.
- Procurement of insecticide pumps, personal protective equipment and other operational equipment.
- Ensuring environmental compliance in areas targeted for IRS (e.g. construction of insecticide evaporation tanks).
- Implementation of entomological surveillance in selected sites (e.g. vector behavior or insecticide resistance).
- Validation and implementation of revised and / or novel approaches for improved targeting of households.

PMI



## Prevention & Control 2

*Insecticide-treated Nets / LLIN [UNICEF]*

- Procurement and distribution of 640,000 LLINs through FMoH health facilities, HEWs and NGOs.
- UNICEF is working with the FMoH/ORHB on a series of micro-planning meetings to estimate the LLIN need/gap for the whole region.

*IEC / BCC [Academy for Educational Development]*

- Macro-planning workshop and creation of IEC/BCC Task Force.
- Support for comprehensive IEC/BCC activities for correct and continuous use of LLINs, access to early diagnosis and prompt treatment.
- Malaria Communities Program [FIDA]

PMI

### Case Management 1

#### *Laboratory Diagnostics Strengthening* [ICAP / IMaD]

- Laboratory baseline assessment to gather information on the true status of laboratories at health facilities providing malaria diagnosis.
- Support diagnostic guideline and policy development.
- Support for strengthening of laboratory diagnostic capacity and quality assurance and control system.

#### *Laboratory Commodities* [John Snow Inc]

- Procurement and distribution of RDTs (750,000), microscopes and other laboratory supplies.

PMI

### Case Management 2

#### *Anti-malarial Drugs* [UNICEF]

- Procurement and distribution of ACTs (500,000) and other anti-malarial drugs (e.g. quinine for severe malaria).

#### *Drug Management Management* Sciences for Health

- Baseline assessment of drug management capacity at health facility level carried out at a range of health facilities in Oromia.
- Support for strengthening drug management at health facilities.

PMI

### Case Management 3

#### *Drug Quality Control* [United States Pharmacopoeia]

- Baseline assessment of anti-malarial drug quality is being carried out in 30 selected sites in Oromia in collaboration with DACA/EHNRI.

#### *Case Management Supervision / Epidemic Detection and Response* [Pathfinder International / John Snow Inc]

- Implementation of comprehensive case management activities at health facility level in selected zones and districts of Oromia.
- Capacity building of districts and zones with regards to epidemic alert system and epidemic preparedness plan.
- Integration of activities in comprehensive family planning, reproductive health and maternal, newborn and child health activities implemented by Pathfinder International / JSI.

PMI

### Monitoring & Evaluation

- Support of Malaria Indicator Survey 2007.
- Establishment and support of malaria sentinel surveillance sites for real-time monitoring of malaria morbidity and mortality.
- Support for national commodity tracking (i.e. LLINs and insecticide).

**PMI**

### Operational Research

- Monitoring of drug efficacy and resistance [ICAP].
- Assessment of anti-malarial drug adherence.
- Evaluation of RDTs for diagnosis of malaria [Malaria Consortium].
- Development of a malaria risk map for Oromia [Malaria Consortium].

**PMI**

### Where Does PMI Fit In or 'What PMI Can and Cannot Do'

**PMI**

### Malaria Control Support

- **FMoH / GFATM:** since 2003 >\$150 million ITNs/LLINs; ACTs, RDTs, IRS, capacity building; system strengthening. Round 8 \$291 million has been approved.
- **World Bank:** procurement and distribution of LLINs and insecticide; capacity building.
- **UNICEF:** procurement and distribution of LLINs; training of HEWs; other technical support.
- **WHO:** technical support.
- **Non-governmental organizations:** procurement and distribution of ITNs/LLINs; capacity building; other technical support (e.g. *Carter Center, Malaria Consortium, PSI, Addis Ababa University*).

**PMI**

### What PMI Can Do

- Advocate for support of scale-up of malaria interventions in Ethiopia.
- Support and complement the FMOH and in-country stakeholders in its efforts to scale-up malaria interventions.
- Support the procurement and distribution of malaria commodities.
- Support the strengthening of systems and processes to manage, implement and monitor and evaluate malaria activities.
- Pilot and establish state-of-the-art malaria prevention and control approaches, ensuring interventions follow international best practices and regulations.

PMI

What PMI Cannot Do

*'\$20 million is a lot, but...'*

- U.S. Government requirement to document measurable results and their impact on disease morbidity and mortality.
- Cannot cover the whole of Oromia Regional State.

Annex - 3

## RPM Plus/SPS Program Experience in HIV Drugs Management and its Relevance in AMDM in Ethiopia

By *Negussu Mekonnen, MPharm, PhD*  
 Chief of Party MSH/RPM Plus & SPS Programs,  
 Country Representative, MSH

23<sup>rd</sup> December, 2008

Yoli Hotel, Addis Ababa




MSH MANAGEMENT SCIENCES for HEALTH

### MSH in Ethiopia

MSH manages three big projects in Ethiopia:

- **Rational Pharmaceutical Management Plus (RPM Plus)** and the follow-on to it – **Strengthening Pharmaceutical Systems (SPS)**
- **Supply Chain Management Systems (SCMS)**
- **HIV/AIDS Care and Support Project (HCSP)**
  - Employees > 500 when recruitment finalized
  - Co-located in two buildings in AA (equivalent to a ground-plus-nine story building)
  - Co-location also in the Regions
  - Implementing the “One MSH” philosophy in Ethiopia

MSH MANAGEMENT SCIENCES for HEALTH

### RPM Plus ... the beginning

**Assessments done during 2003-4**

- PMTCT/ART Pharmaceutical & Lab Management System Assessment
- Pharmaceutical Quality Control System Assessment
- Assessment of Drug Management of Tuberculosis
- Assessment of Hospital Pharmcies to Introduce Antiretroviral Treatment




MSH MANAGEMENT SCIENCES for HEALTH

### Major Problem Areas Identified at Pharmacies

<ul style="list-style-type: none"> <li>▪ <b>Infrastructure</b> <ul style="list-style-type: none"> <li>❖ Poor storage condition</li> <li>❖ Inadequate dispensaries</li> </ul> </li> <li>▪ <b>Equipment</b> <ul style="list-style-type: none"> <li>❖ Refrigerators</li> <li>❖ Thermometers</li> <li>❖ Computers</li> </ul> </li> <li>▪ <b>MIS</b> <ul style="list-style-type: none"> <li>❖ No recording</li> <li>❖ No reporting</li> <li>❖ No feedback</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Stationary/Forms</b> <ul style="list-style-type: none"> <li>❖ Registers</li> <li>❖ Stock and Bin Cards</li> <li>❖ Writing material</li> <li>❖ Reference Material</li> </ul> </li> <li>▪ <b>Manpower</b> <ul style="list-style-type: none"> <li>❖ Shortage</li> <li>❖ High turnover</li> <li>❖ Inadequate training</li> </ul> </li> </ul>
---	--




MSH MANAGEMENT SCIENCES for HEALTH

**Rational Pharmaceutical Management Plus (MSH/RPM Plus) & Strengthening Pharmaceutical Systems (MSH/SPS) presence:**

- In 9 regions and 2 city administrations
- ~ 400 HF's providing ART services
- 116 HF's with computerized ART dispensing system
  - About 82% of ART patients information is being captured by ADT
- 180 pharmacy data clerks in 9 regions
- 6 pharmacy data managers in 5 regions
- 22 pharmacists (14 in the regions)
- No single instance of ARV drugs supply disruption!

MSH MANAGEMENT SCIENCES for HEALTH

**Capacity building**

- Established 96 DTCs
- Renovated more than 200 HF's
- Public private partnership (PPP)
- ADT nationally implemented
- SOPs developed for national use
  - Training on SOP
- 226 computers, printers, backup drives and accessories provided to HF's\*
- Mentoring and supervision of > 300 ART pharmacies

MSH MANAGEMENT SCIENCES for HEALTH

**Training of Pharmacy Professionals, physicians and Data Clerks**

Cummulative number of professionals trained in one quarter (Jan-Mar, 2008)

Professional Category	Approximate Count
Pharmacist	400
Druggist	200
Pharm Tech	100
Physician	50
Data Clerks	50
Other	50
<b>Total</b>	<b>1000</b>

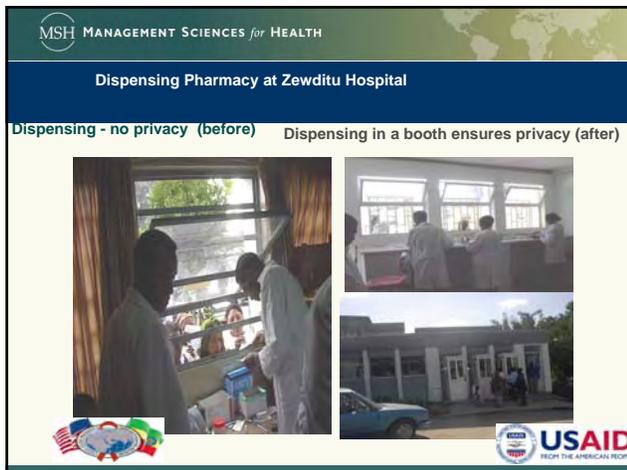
USAID FROM THE AMERICAN PEOPLE

MSH MANAGEMENT SCIENCES for HEALTH

**Infrastructure improvement for pharmacies, laboratories and supplies stores**

- Upgrade facilities to meet minimum requirements in storage, space and security
- Establish/strengthen stock monitoring mechanism
- Develop and implement confidential dispensing booths and counseling rooms at ART facilities
- Establish a functioning DMIS at the dispensing level

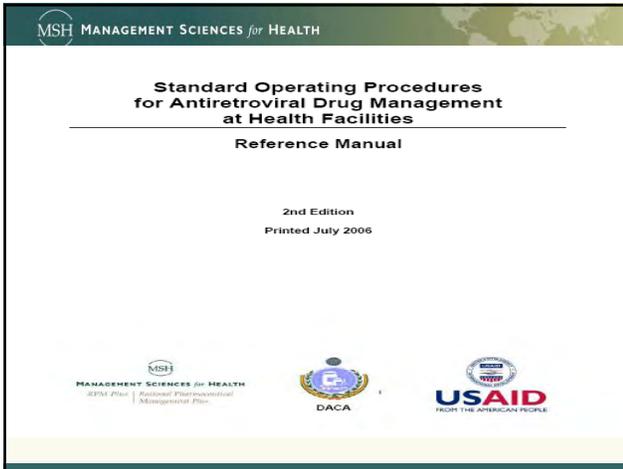
USAID FROM THE AMERICAN PEOPLE







AMDM Micro-Planning Workshop Report  
SPS/PMI Ethiopia, January 2009



MSH MANAGEMENT SCIENCES for HEALTH

Appropriate Tools Developed and Implemented

- Patient profile card
- Daily drug dispensing register
- Monthly activity reports
- Periodic supervisory tools and feedback mechanism
- Exit date tracking chart
- Adherence follow-up chart
- Facility supervisory checklists
- Inventory management stock cards, bin cards, requisition slips, ADR reporting formats etc.
- Simple locally sustainable computer software where applicable

USAID FROM THE AMERICAN PEOPLE

MSH MANAGEMENT SCIENCES for HEALTH

1<sup>st</sup> National Workshop on Optimizing ART, organized by RPM Plus in collaboration with DACA

USAID FROM THE AMERICAN PEOPLE

Year III Pharmacy Students from AA, Jimma, Gondar and Mekele Universities on Training Before Deployment to ART Sites for 2 Months Throughout Ethiopia (250 students with a cost of Birr 1.3 million deployed in 2008). This is the 3<sup>rd</sup> time students are deployed during the summer break

USAID FROM THE AMERICAN PEOPLE

## Transition from RPM Plus to SPS: Strengthening the Pharmaceutical system beyond Logistics



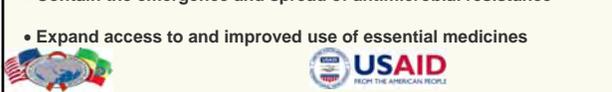
MSH MANAGEMENT SCIENCES *for* HEALTH

### Strengthening Pharmaceutical Systems (SPS) Program

SPS – follow-on to RPM Plus. This is a five-year, \$147.5 million cooperative agreement between MSH/SPS and USAID.

Will focus on four key results —

- Improve governance in the pharmaceutical sector
- Strengthen pharmaceutical management systems to support public health services
- Contain the emergence and spread of antimicrobial resistance
- Expand access to and improved use of essential medicines



MSH MANAGEMENT SCIENCES *for* HEALTH

### SPS contributions in AMDM under PMI

SPS has the experience to implement PMI in the same way RPM Plus/SPS helped implement the national ART Program, and we thank USAID for giving us this opportunity

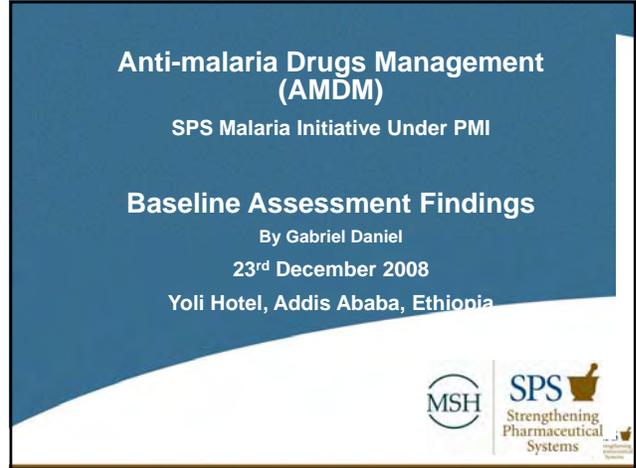


MSH MANAGEMENT SCIENCES *for* HEALTH

### Potential SPS contributions in AMDM

- Improve medicines policies, regulation, quality assurance, and pharmacovigilance
- Improve decision making and strategic planning capabilities in pharmaceutical management
- Build capacity of human resources to perform pharmaceutical management functions and services
- Increase capacity of local institutions and networks to provide TA in pharmaceutical management





**A 5-year, 15-Country, \$1.2 Billion President's Malaria Initiative (PMI) June 2005**

**Goal:**

- Reduce Malaria Mortality by 50% in Selected Countries

**Targets:**

- Achieve 85% Coverage of Vulnerable Groups with:
  - Combination treatment (ACTs)
  - Insecticide-treated Bed Nets (ITNs)
  - Intermittent Preventive Treatment (IPT)
  - Indoor Residual Spraying (IRS)

MSH SPS  
Strengthening Pharmaceutical Systems

**PMI IN Oromia Region**

- PMI is focused on Oromia Region due to its population size of 27 million (of which 68% are at risk for malaria), land mass.
- The overall systems support will benefit the central management and other regions.

MSH SPS  
Strengthening Pharmaceutical Systems

### Strengthening Pharmaceutical Systems (SPS/MSH)

- The U.S. Agency for International Development (USAID) awarded Management Sciences for Health (MSH) a five-year Strengthening Pharmaceutical Systems (SPS) Program in 2007 as a follow-on to its Rational Pharmaceutical Management Plus (RPM Plus) Program .
- SPS / MSH is collaborating with USAID/Ethiopia and MOH/HAPCO in the provision of technical assistance in drug and related products' rational use and management for ART and PMTCT Programs in Ethiopia.
- SPS work in PMI in Ethiopia will build on experiences, best practices and systems developed under RPM Plus in ART/PMTCT drug supply management system at central, regional and health facility levels.



### Primary Objective

The objective of this program is to provide technical, strategic, managerial and operational support to implement and strengthen Anti-malaria Drugs Management (AMDM) activities in Oromia



### Introduction to the Assessment

- One of the key interventions in AMDM is conducting a baseline assessment to find out the status of malaria and related products management and use to inform immediate action
- This assessment is supplementary to the PMI Assessment conducted by USAID/CDC and other partners in early 2007.
- This current assessment is a more focused, rapid, and comprehensive one to gather operational information for the purpose of identifying immediate gaps and intervene appropriately

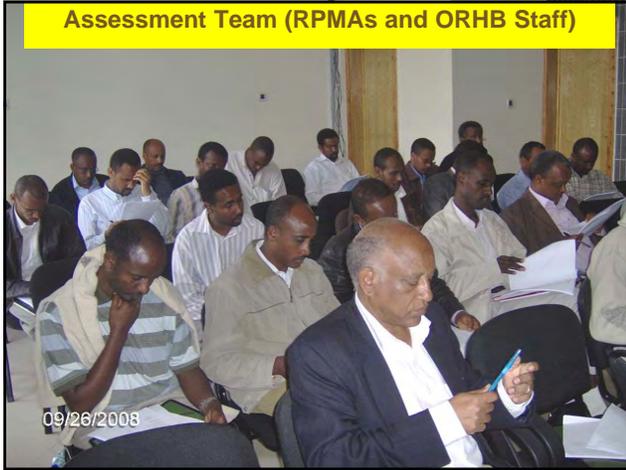


### Assessment Approach

- Both qualitative and quantitative methods, using interviews and observations
- A set of seven structured questionnaires used.
- Training and assessment conducted in a two-week period (01-15 October 2008)
- The findings and observations of the assessment to be presented at a micro-planning workshop with key stakeholders and partners.



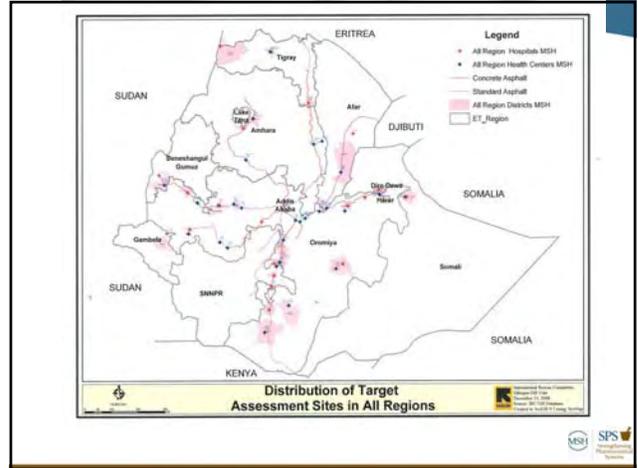
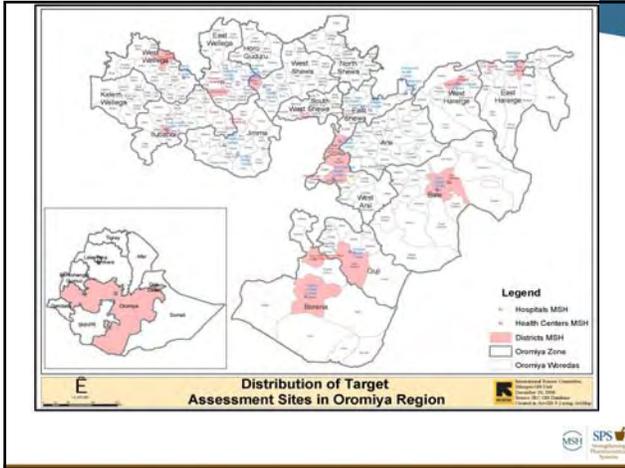
# Annex 4: AMDM Baseline Assessment Findings



Assessment Elements		
(50% representing Oromia Region)	Focus	Detail
Indicators		Product Availability, Staffing, PMIS/LMIS, Expiry, Disposal, Loss/Leakage, Storage Condition/Accessories, Procurement, Utilities, *Testing, *Knowledge (KAP), *Training, *Guideline, *Quality (* = assessed for malaria only)
Facilities	Public	RHBs (4), Zonal health offices (18), District health offices (29), Hospitals (19), Health centers (31), Health posts (27), NMCP, PFSA
	Private	Private drug outlets (33)
Respondents		MDs (19), Health officers (26), Nurses (26), Health extension workers, Laboratory professionals, Pharmacy professionals
Products	Malaria Drugs	Coartem-6, Coartem-12, Coartem-18, Coartem-24, Quinine tab, Quinine Inj, Chloroquine Tab, Chloroquine Syrup
	TB Drugs	RHZE, RH, EH, Ethambutol, INH, Streptomycin
	HIV Drugs	Combivir, Lamivudine, Stavudine, Efavirenz, Nevirapine Syrup
	OI Drugs	Fluconazole, Cotrimoxazole, Ciprofloxacin
	Laboratory	Reagents, equipment and supplies related to malaria
Other	Condom, ITN, RDTs, RTKs, Infection Prevention	
Interviewers		RPMAs, ORHB staff, ZHO/DHO staff, HF staff

Oromia Region Assessment Targets							
Regions	Zones	Districts	Hospitals	Health Centers	Health Posts	Retail Outlets	Prescribers MD/HO/N
Oromia	W Wellega	Bulehora	Shashamen	Shashamen	Modjo	Shashamen	10/15/21
	Boorana	Leka	Metu	Shakiso	Jawis	Gimbi	
	Adama Sp.	Dulacha	Bulehora	Yabelo	Chanchito	Goer	
	West Arsi	Goro Bale	Ginir/Ra	Metahara	Amerti	Metu	
	E. Wellega	Negele	Ginir/Dm	Metahara	Lalisa	Bulehora	
	W. Shewa	Ginir Bale	Deder	Mojo	Goro	Goro	
	E Hararge	Shashamen	Nekemte	Adama	Kovvassa	Ginir 1	
	Bale	Odo Shaki	Chiro	Zway	Adete	Ginir 2	
	SW Shewa	Ale /Ibab	Woliso	Gimbi	gagibeche	Jimma 1	
	Jimmasa	Choa	Szejo	Nekemte	met	Jimmasa 2	
	Metu	Nepj		Bako	Balejem	SW Shewa	
	Goji	Yabelo		Ihaji	Darito	Bako	
		Haromaya		Alecu	Nekemte		
		Adametal		Bedessa	Bira	Chiro	
		Bako Tibe		Gore	Dagahedu	Welenchit	
				Agaro		Merahara	
				Jimma		Modjo	
				Goro Bale		Adama	
				Wolenchit			
	Total	12	14	9	19	14	

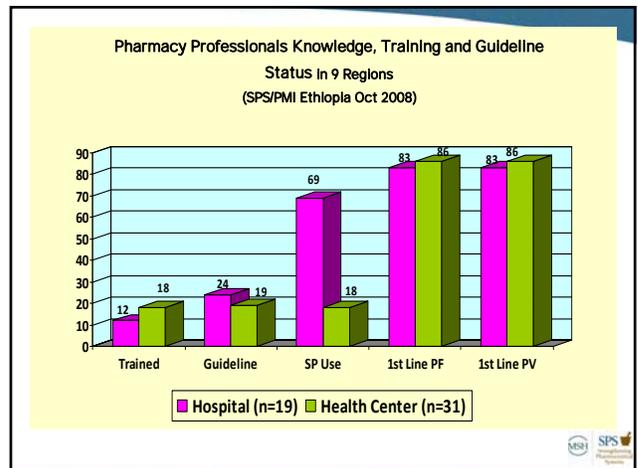
Distribution of Target Assessment Sites							
Regions	Zones	Districts	Hospitals	Health Centers	Health Posts	Retail Outlets	Prescribers MD HO N
Afar		Gerrasa	Dugjo	Awash	Meska	Awash-Taj	1 2 2
		Awash-Fentale		Gerrase	Dudaba	Dugjo	
Amhara	South Gondar	xxxx	Bahadur	Weyta	Yeneta	NA	1 2 1
		Kombolcha		Dambacha	Minakelo	Dudaba	
		West Gondar		Bahadur	Kombolcha	Weyta	
		Oromia		Zaya	Bun	Tata	
		Figaya					
Benishangul	Ansoya	Bamban	Ansoya	Bamban			1
Dandara			Dandara		Asebayra	Dandara 1	
					Hadi	Dandara 2	1
Gambella		Medja Tebelu	Gambella				
		Abaho					
SNNPR	Sidama	Dilla Zaya	Yagalem	Awassa	Dile	Yagalem	2 2
		xxxx	Dilla	Dilla	Dilla 1	Dilla 2	
Somali		Joga	Kusamara	Joga	Hadev	Joga 1	1 2
						Joga 2	
						Gambela	
Tigray		Tata/Konaco	Huassa	Endabesane	Bawvan	Huassa	2 1 2
		Alhamata	Alhamata R2	Alhamata	Lemlem	Alhamata 1	
		Harabesene	Alhamata R2		Ywa Lunat	Alhamata 2	
Total	6	15	10	12	13	15	9 11 3



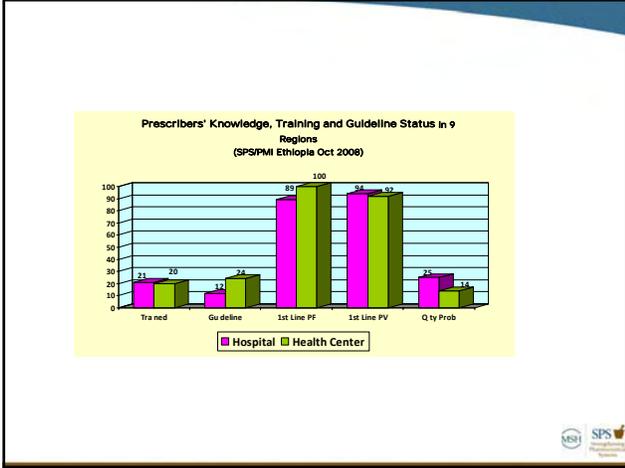
### Staffing & Training

- **Almost adequate staffing at all levels**
- **Inadequate training on malaria products management**
- **Absence of the MOH diagnosis and treatment guideline in most facilities**

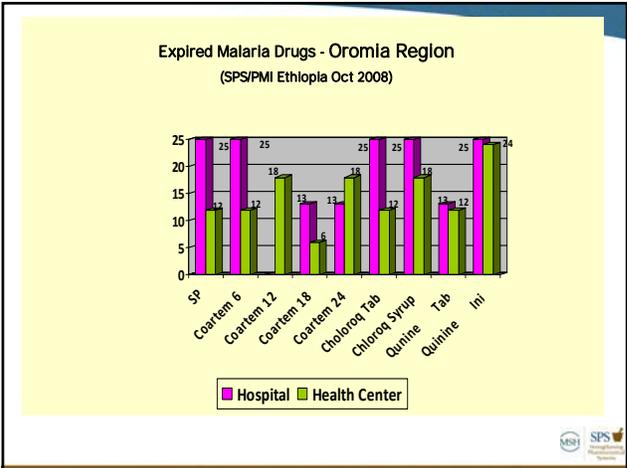
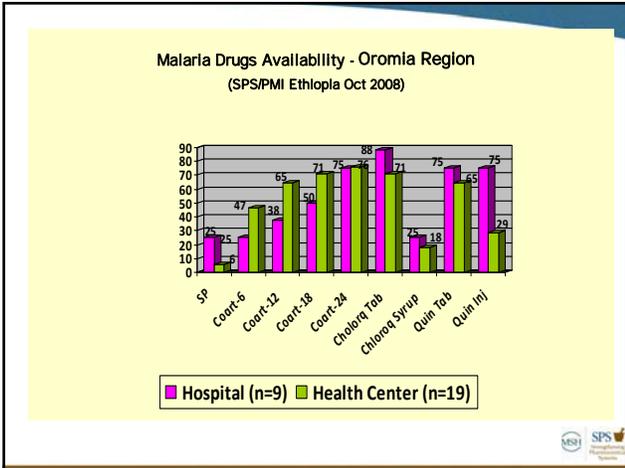
MSI



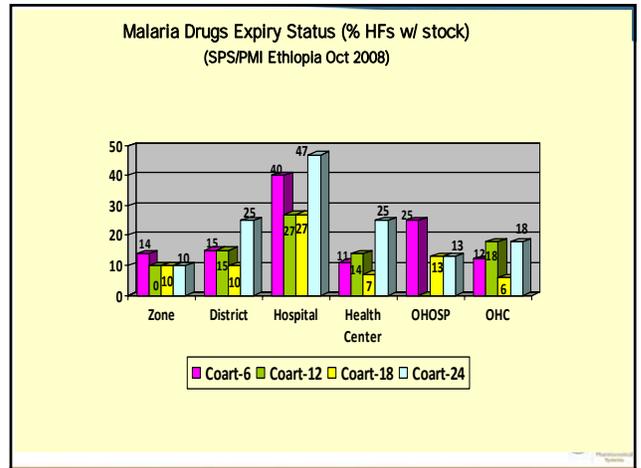
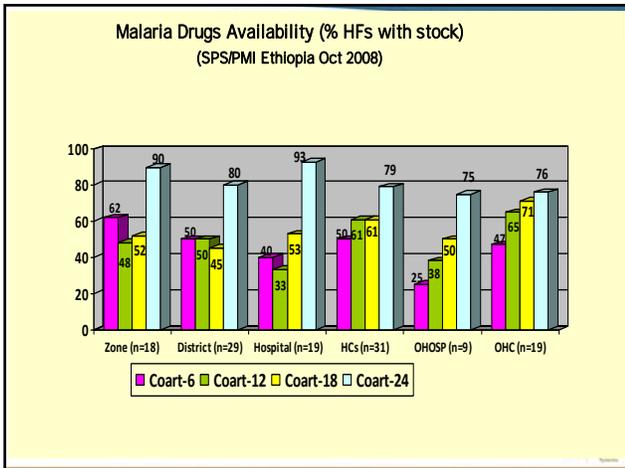
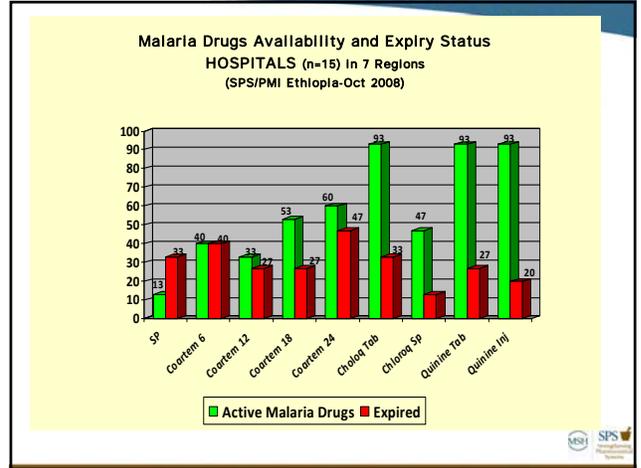
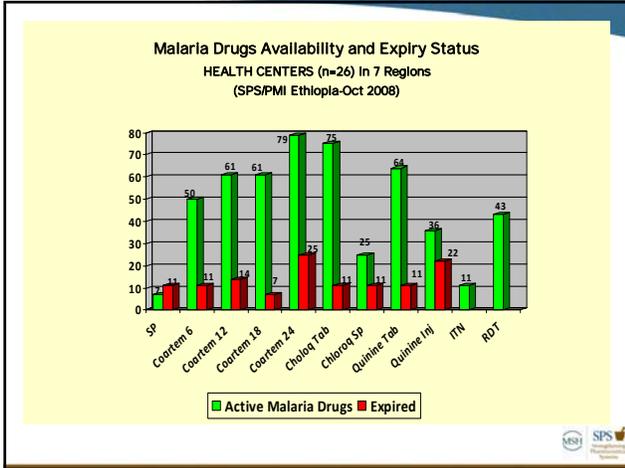
# Annex 4: AMDM Baseline Assessment Findings



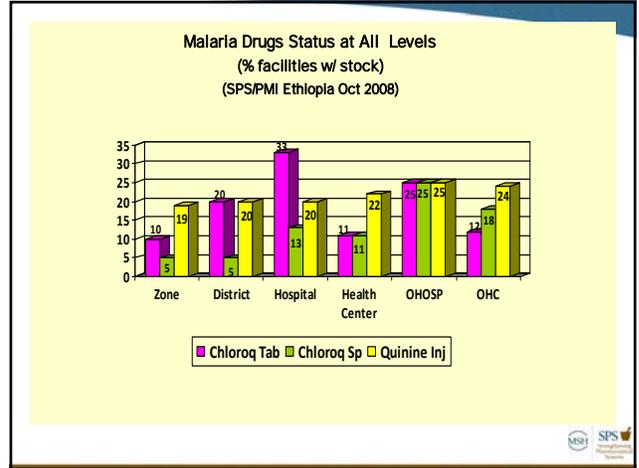
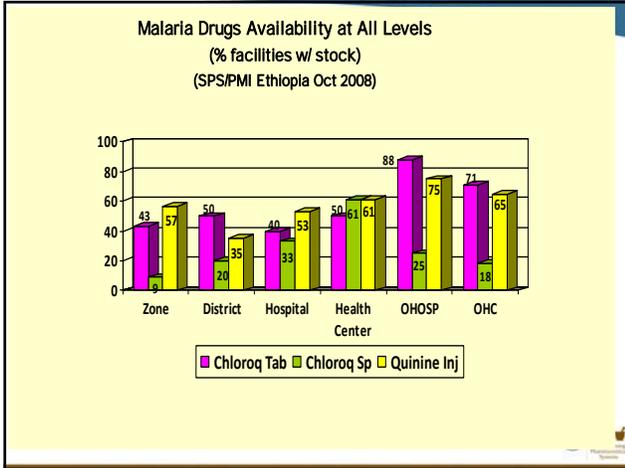
- ### Malaria Products Availability & Expiry Status
- Periodic **shortage** of malaria drugs
  - Pronounced shortage of drugs for children
  - Expired drugs in almost all levels (a quarter of the hospitals reported having expired drugs)
  - Expired drugs not disposed regularly



# AMDM Micro-Planning Workshop Report SPS/PMI Ethiopia, January 2009

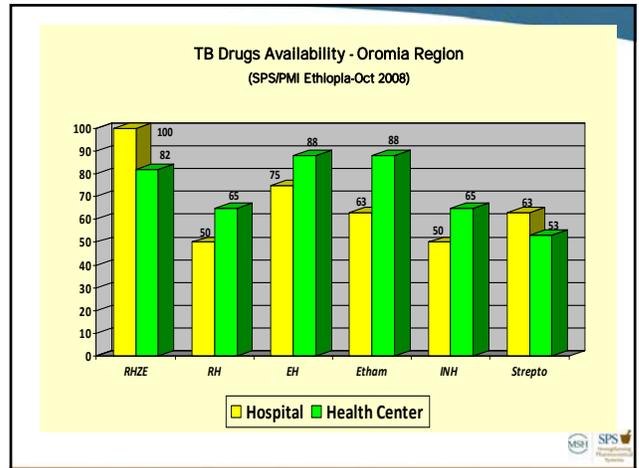


Annex 4: AMDM Baseline Assessment Findings

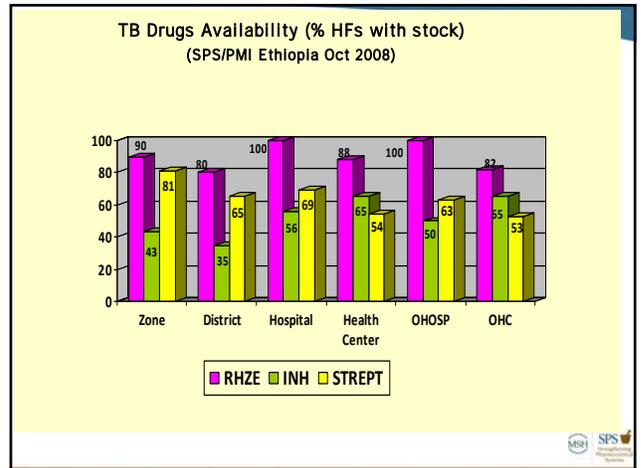
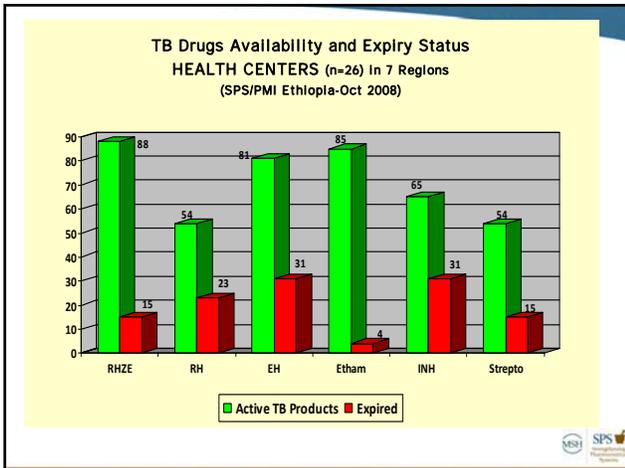
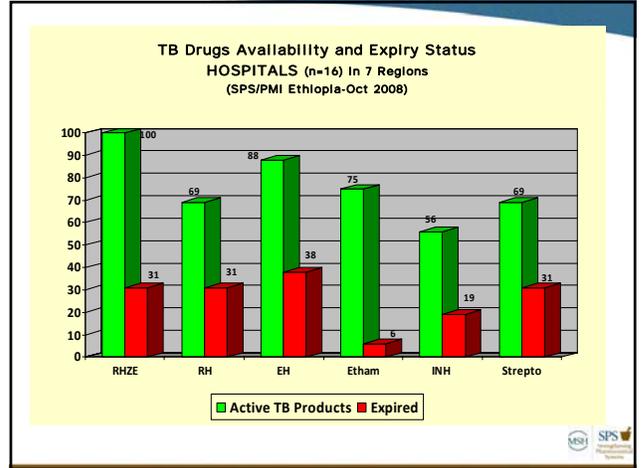
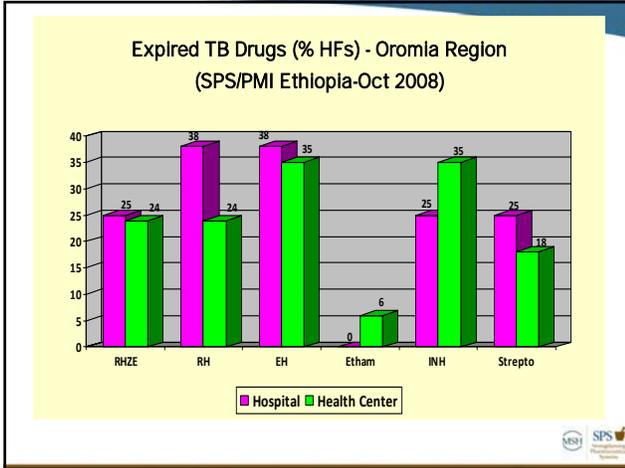


### TB Drugs Availability & Expiry Status

- TB drugs availability looks fine (with HCs better than hospitals) except for INH and streptomycin
- High rate of expiry

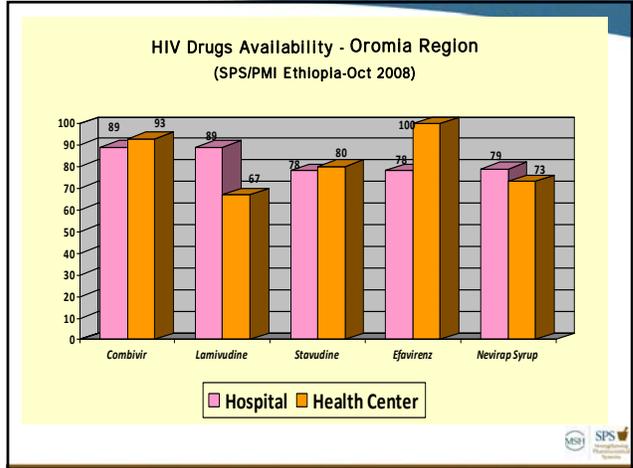


AMDM Micro-Planning Workshop Report  
SPS/PMI Ethiopia, January 2009

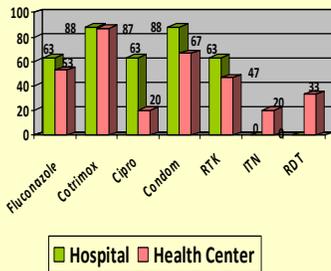


**HIV/AIDS Drugs Availability & Expiry Status**

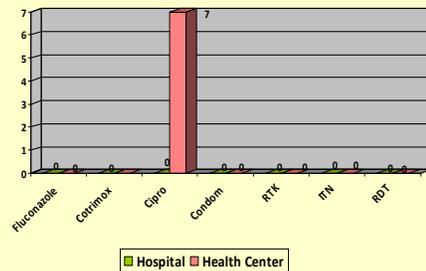
- HIV drugs availability is relatively fine but doesn't meet the 100% mark
- OI Drugs availability is low
- Expired drugs are not much of a problem



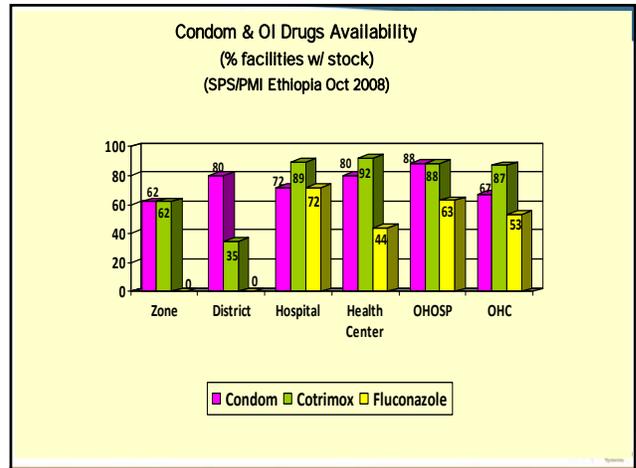
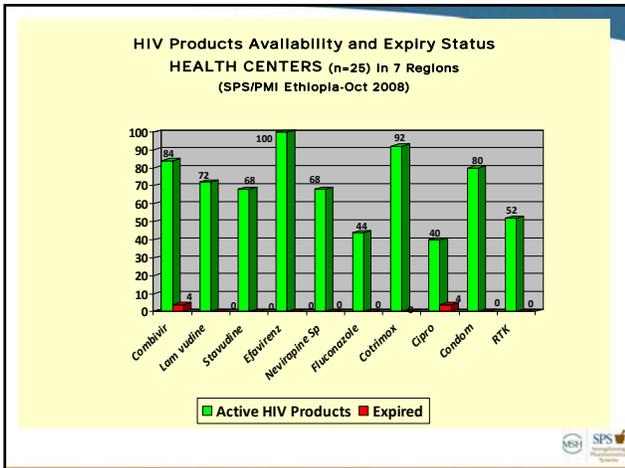
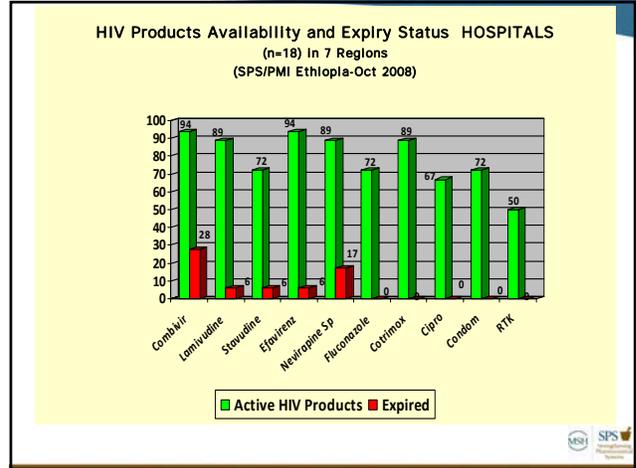
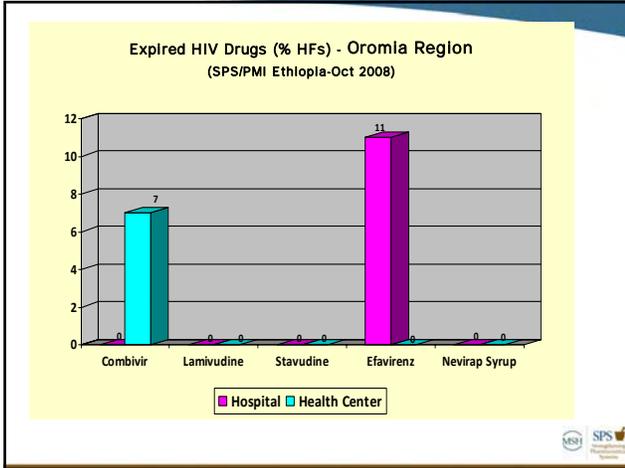
**Condom, OI Drugs, ITN, RTK, RDT Availability Oromia Region (SPS/PMI Ethiopia Oct 2008)**



**Expired OI Drug, Condom, RTK & RDT (% HFs) Oromia Region (SPS/PMI Ethiopia Oct 2008)**



# AMDM Micro-Planning Workshop Report SPS/PMI Ethiopia, January 2009



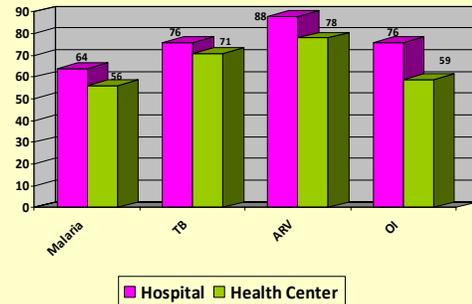
**Malaria, TB and HIV/AIDS Drugs Combined Availability**

▪ **Availability Ranking**

- HIV Drugs (88% Hosp / 78% HC)
- TB Drugs (76% Hosp / 71% HC)
- OI Drugs (76% Hosp / 59% HC)
- Malaria Drugs (64% Hosp / 56% HC)



**Malaria, TB, HIV and OI Drugs Availability (Weighted Average)**  
(SPS/PMI Ethiopia Oct 2008)



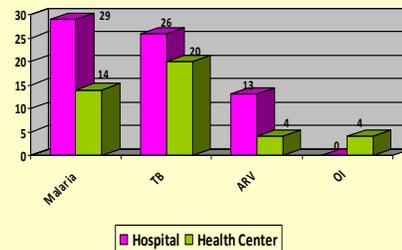
**Malaria, TB and HIV/AIDS Drugs Combined Expiry Status**

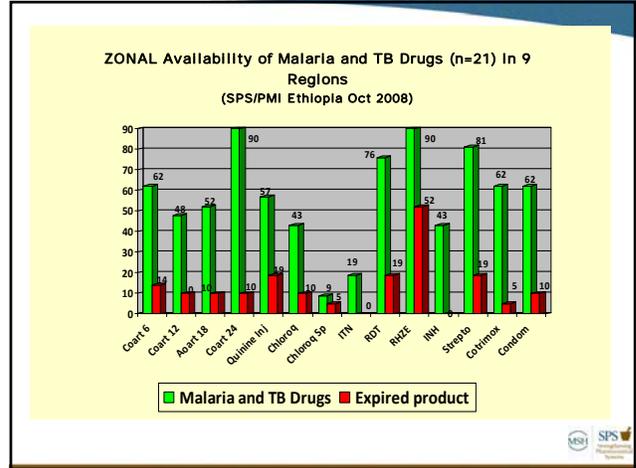
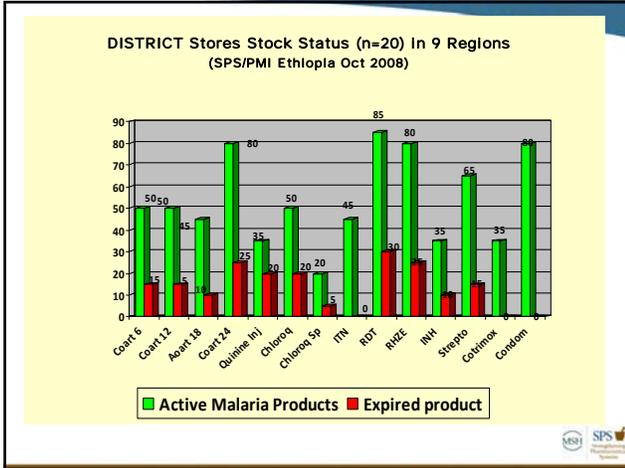
▪ **Expiry Ranking**

- Malaria Drugs (29% Hosp / 14% HC)
- TB Drugs (26% Hosp / 20% HC)
- HIV Drugs (13% Hosp / 4% HC)
- OI Drugs (0% Hosp / 4% HC)



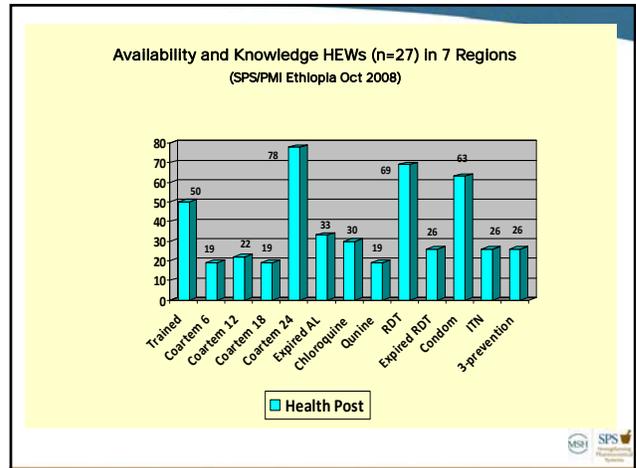
**Expiry of Malaria, TB, HIV and OI Drugs (Weighted Average)**  
(SPS/PMI Ethiopia Oct 2008)





### Health Posts

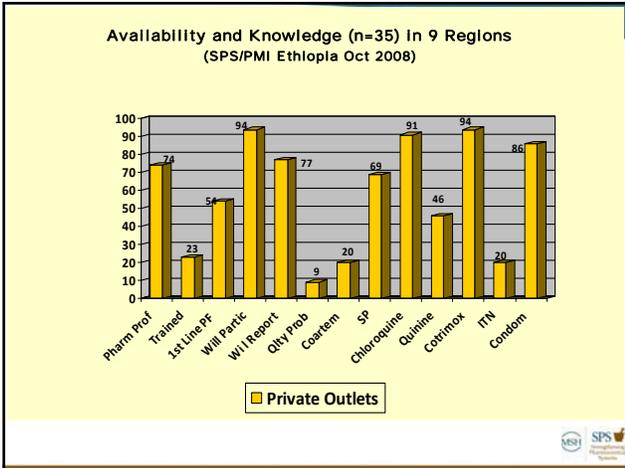
- Stock status of all malaria products is low, with significant shortage of drugs for children
- Staffing is not a problem
- Only 50% of HPs reported being trained in malaria products management
- Knowledge about the three prevention methods is very low





### Private Outlets

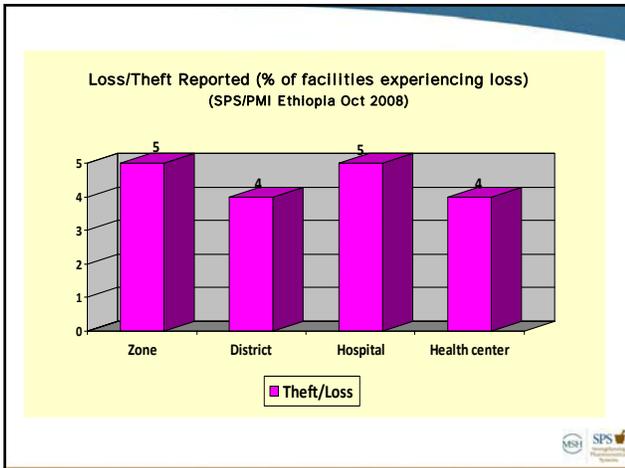
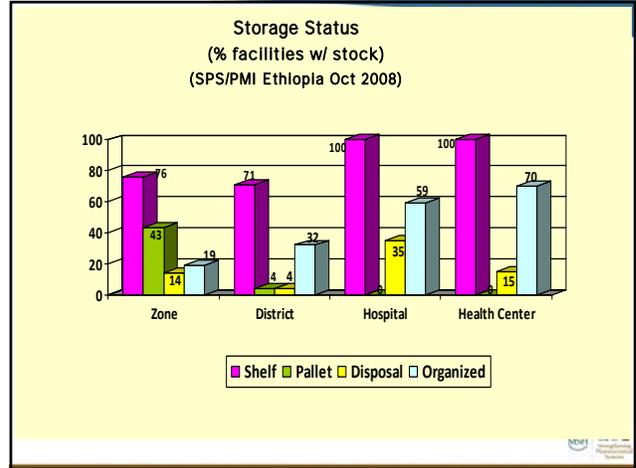
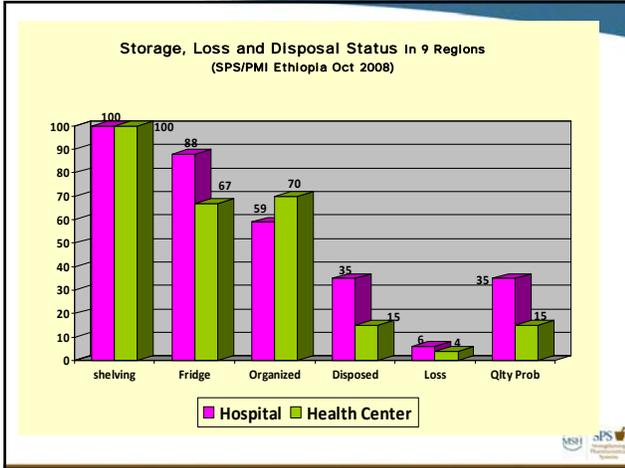
- Are well staffed
- Are willing to participate in a subsidy program
- Malaria drugs availability except chloroquine is low
- Use of SP for malaria may be high since ~70% had stock of SP



### Storage Status

- Availability of shelving looks fine but is reported to be inadequate in almost all facilities
- Pallets are minimally available
- Stores are not well organized
- Expired and unusable products are not regularly disposed and are taking active storage space
- Product loss is not reported as a problem
- There is shortage of refrigerators at HCs

AMDM Micro-Planning Workshop Report  
SPS/PMI Ethiopia, January 2009



Annex 4: AMDM Baseline Assessment Findings

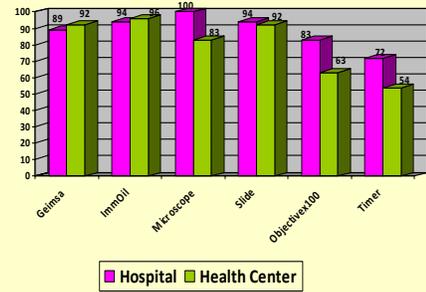


## Laboratory

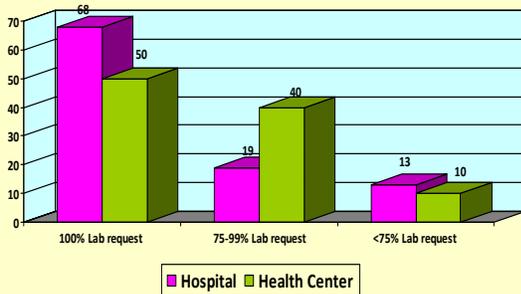
- Availability of key reagents and equipment for malaria diagnosis is fine
- Most practitioners reported to send patients to lab for test before treatment initiation
- There is gross disparity between lab test done and differentiation by species



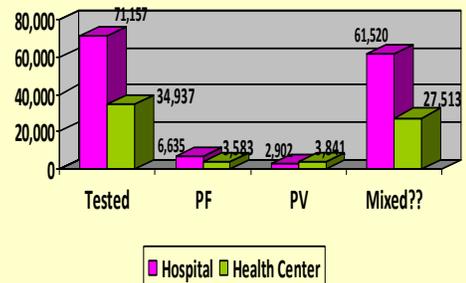
Laboratory Products Availability (% HFs) in 9 Regions (SPS/PMI Ethiopia Oct 2008)



Lab Test Request for Malaria by Prescribers in 9 Regions (SPS/PMI Ethiopia Oct 2008)



Laboratory Testing - OROMIA Region (SPS/PMI Ethiopia Oct 2008)

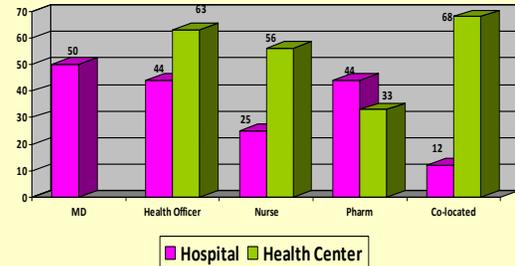


**Procurement at HF Level**

- Procurement of products at health facilities is done more by non-pharmacy professionals
- Co-location of Wereda office/store with pharmacy is witnessed in about 70% of Health Centers



**Procurement of Malaria Drugs and Co-location**  
(HFs w/ Districts In 9 Regions)  
(SPS/PMI Ethiopia Oct 2008)

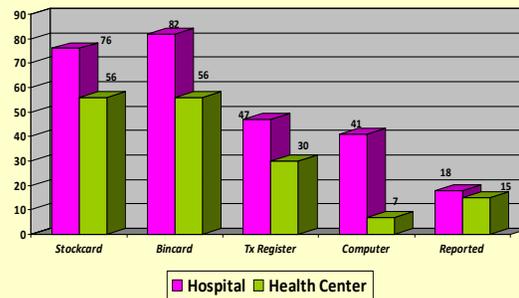


**MIS/LMIS**

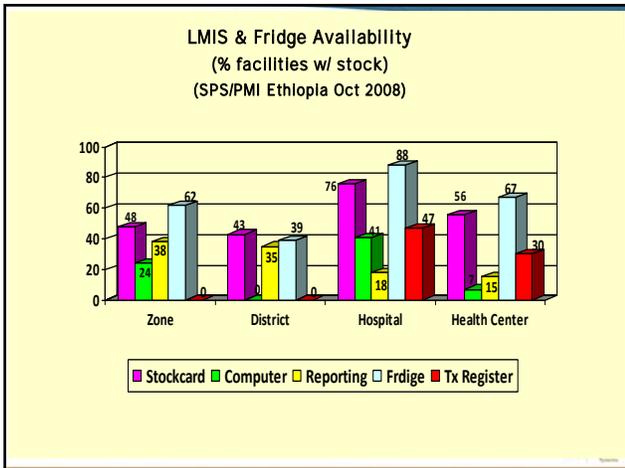
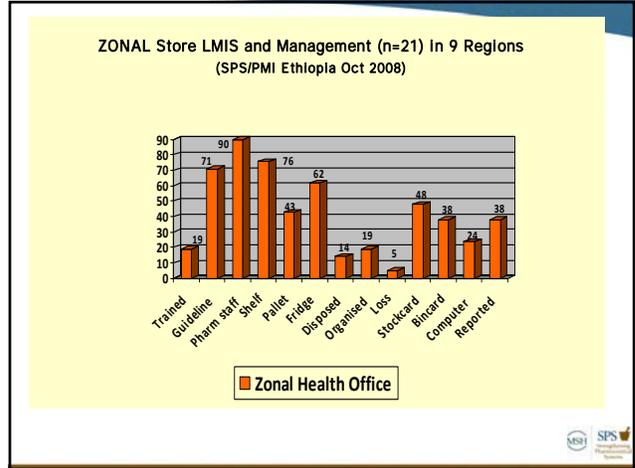
- Lack of reliable consumption and/or morbidity data at all levels
- Most common transaction record is the Model (a non-technical transaction record used by all public sector)
- Stock cards, bin cards and treatment registers are not adequately used
- Stock status and use is rarely reported for malaria products (there is consistent reporting on varies aspects for HIV products)



**LMIS and Reporting Status in 9 Regions**  
(SPS/PMI Ethiopia Oct 2008)



# AMDM Micro-Planning Workshop Report SPS/PMI Ethiopia, January 2009



Health Facility	Malaria Annual Treatment						Lab Testing for Malaria					Staffing			
	Ades T/Ad	Prevalence	HC w/DHO	MD	HQ	N	Tested	P. Falciparum	P. Vivax	Pharmacist	Druggist	Pharm Tech	Diagn. Clerk/Other	Lab Techno	L. B.D. L. C. /L
Hezo th Center		yes	no												
Werreta							9 270	925	261		4				2
Dembecha	474	76					1 000	6	14		2				2
Kombolcha							987	211	155		21				4
Bati							5 575	559	994		2				3
Shashemene							3 576	40	558						3
Shakiso							4 456	1 809	55	1	1				2
Yabelo							1 258								1
Metahara	97	11													1
Mojor															1
Adama	3						687	2	1		3				2
Zwai							6 125	213	1 699	1	1				2
Gimbi							2 082	51			1				1
Nekemte	4784	07					2 474	9	4		1				3
Bako	5 887	67					2 832	86	677		1				2
Jiji	139	7					1 278	500	363		1				1
Haramaya							1 425	61	24	1	1				2
Bedessa							1 002	89							2
Gore	220														2
Agaro							4 297	534	42	1	2				2
Jimma							4 378	180	411		2				2
Goro Bale	22						325	16	11		1				1
Wolenchit	111	17													1
Awash	823	191					7 253	2 797	452		4				3
Gewane	2 011	642					2 995	613	41		2				3
Iligle							410								4
Endeselassie							3 548	253	169		2				2
Alamata	4 675	69					590	45	14		2				3
Awassa	5 190	68					5 190	66	363		2				7

### Annex 4: AMDM Baseline Assessment Findings

Health Facility	Malaria Annual Tx		Co-locate		Order/Quamt fy			HF Lab Testing					HF Staffing			Lab Data Clerk/Asst	
	Adult Tx	Ped <5yrs Tx	yes	no	MD	HO	N	Rx	Tested	P.Falciparum	P. Vivax	Pharmacist	Druggist	Pharm Tech	Date Clerk/Other		Lab Techno
<i>Hospital</i>																	
Bahirdar	1600?		x		hmt	hmt	q	8,337	88	41	1	15		2dc	17	3	
Shashemene	459	37	x		hmtq	hmt	q	5,708			2	5		dc	10	4	
Metu	789	199	x		hmt	m	ht	4,272	11	45	2	5		dc	5	1	
Bulehora								18	3	2	4					4	
Ginir/Rx			x		hmt	hmt		661	563		3	17	3	2	dc	8	1
Ginir/Dru								2									
Deder			x		h	mtq		203			2	3		dc	4		
Nekemte	597	308	x		hmt	mt	h	0,550	1		2	5		dc	10		
Chiro	1,139	116	x				hmtq	NA	168	26	2		7		7		
Wolloso	197	131	x				hmtq	4,342			1	4		dc	7	4	
Nejo			x				hmtq	13,764	429	615	1	3	1	dc	5	dc	
Dapiti			x		h	mt		6,601	3,777	1,637		6		dc	8		
Karamara			x				hmtq	1,094	3							13	
Humera	5,012	902	s	o	hmt	hmt	hm	4,047	215	230	1	1	3	dc	9		
Alamata Rx Main								6,944	213	74	1	3	2	dc	5		
Alamata RxTec																	
Yirgalem					hmt	m		2,221	711	120	3	10	1	3dc	26	2	
Dilla			z		hmt	hmt	h	1,648	617	137	1	6			7		
Dilchora			x				hmtq	2,112	10	3	4	7		dc	14		
Asosa	5,065	849	x				hmtq	9,756			2	6	1	dc	6		

The image shows a handwritten data table with multiple columns. The columns include: 'Date', 'Time', 'Patient No.', 'Age', 'Sex', 'Referral Source', 'Admission Date', 'Discharge Date', 'Diagnosis', 'Treatment', 'Outcome', 'Referral', 'Follow-up', 'Status', 'Remarks', 'Signature', and 'Date'. The table is filled with handwritten entries in blue ink, including patient names, dates, and numerical values. The handwriting is somewhat cursive and difficult to read in some places. The table is printed on a white sheet of paper with a grid background.



**Anti-malaria Drugs Management (AMDM)**

**SPS Malaria Initiative Under PMI**

**Micro-Planning Workshop**

By Hailu Tegegnework & Gabriel Daniel  
23<sup>rd</sup> December 2008  
Yoli Hotel, Addis Ababa, Ethiopia

MSH SPS Strengthening Pharmaceutical Systems

**A 5-year, 15-Country, \$1.2 Billion President's Malaria Initiative (PMI) June 2005**

**Goal:**

- Reduce Malaria Mortality by 50% in Selected Countries

**Targets:**

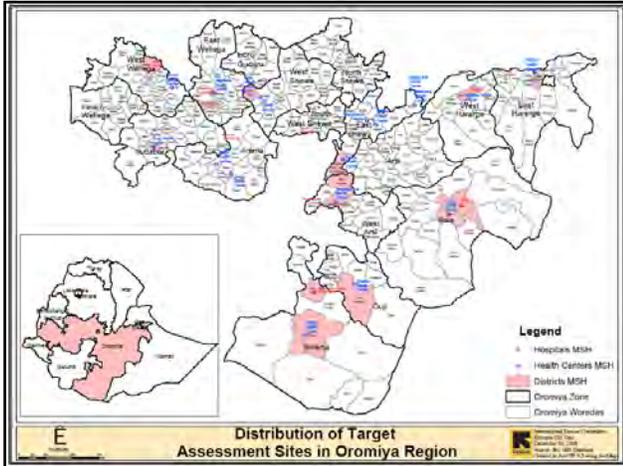
- Achieve 85% Coverage of Vulnerable Groups with:
  - Combination treatment (ACTs)
  - Insecticide-treated Bed Nets (ITNs)
  - Intermittent Preventive Treatment (IPT)
  - Indoor Residual Spraying (IRS)

MSH SPS Strengthening Pharmaceutical Systems

**PMI IN Oromia Region**

- PMI is focused on Oromia Region due to its population size of 27 million (of which 68% are at risk for malaria), land mass.
- The overall systems support will benefit the central management and other regions.

MSH SPS Strengthening Pharmaceutical Systems



### Building Upon RPM Plus/SPS Experiences and Resources

- USAID awarded Management Sciences for Health (MSH) a five-year Strengthening Pharmaceutical Systems (SPS) Program in 2007 as a follow-on to its RPM Plus Program .
- Currently, SPS / MSH is collaborating with USAID/Ethiopia in the provision of technical assistance in drug and related products' management and rational use for . . . . and PMTCT Programs in Ethiopia.
- SPS work in PMI in Ethiopia will build on experiences, best practices and systems developed under RPM Plus in ART/PMTCT drug supply management system at central, regional and health facility levels.



### Primary Objective

The objective of this program is to provide technical, strategic, managerial and operational support to implement and strengthen AMDM activities in Oromia



### Key Intervention 1: Partnership Building

- Establish partnerships with the FMOH, RHB and other in-country stakeholders
  - *Hold quarterly meeting with partners*
  - *Hold a consensus building and micro-planning workshop*
  - *Review available AMDM materials, approaches and systems*



## Key Intervention 2: Capacity Building

- Training central, regional, zonal, district and health facility level health professionals in AMDM using a Monitoring, Training & Planning (MTP) approach
- Secondment of pharmacy personnel to health facilities in Oromia RHB and Zonal Health Offices as appropriate.
- Complement secondment of staff with technical assistance provided by both in-country and US-based SPS/MSH project staff.



## Secondment of Pharmacy personnel

The main task of the pharmacy Personnel will be to

- Serve as the liaison between SPS and ORHB.
- Identify and plan TA needs
- Assist in training
- Ensure that storage meets acceptable standards at all levels
- Ensure uninterrupted supply of malaria products at all levels
- Ensure that malaria information system is functional at all levels (stock status, consumption, patient profile, patient uptake, expiry tracking, tools for inventory control, reporting etc.)
- Coordinate the movement of products from the supply depot to the districts and health facilities



## TA, Training and Resources

- **Hospital and Health Center Level:**
  - Proper storage condition including pallets, shelves, proper lighting and ventilation
  - Proper stock movement/transaction activities using tools such as bin cards, stock cards (with minimum and max stock levels, expiry dates, batch numbers etc.) requisition, issue and receipt forms, summary reporting forms and patient treatment registers
  - Reporting on monthly basis on stock status, consumption, expiry, stock-outs, losses, etc.
  - Counseling of patients on the proper use and handling of malaria drugs
  - Availability of forms and registers at all times



## TA, Training and Resources

- **Health Post Level:**
  - Proper storage condition using storage cabinets or/and shelves/pallets
  - Proper stock movement/transaction activities using tools such as stock cards, requisition, issue and receipt forms, summary reporting forms and patient treatment registers.
  - Reporting on monthly basis on stock status, and consumption,
  - Counseling of patients on the proper use and handling of malaria drugs
  - Availability of forms and registers at all times



### Key Intervention 3: AMDM Framework

- Implement the Drug Supply Management Framework to comprehensively operationalize the AMDM system at all levels
  - Develop simple SOPs and forms that will be used for management of malaria products at all levels (e.g. requisitions, quantification, stock management, coordinating malaria products exchange/transfer, tracking expiry, ensuring data management and reporting.
  - Assist health facilities in timely placement of orders, transfer of surplus, expiry tracking/disposal and stock balance to ensure uninterrupted supply.



### Key Intervention 4: MIS Tools and Reporting

- Design and implement user-friendly medication record that features patient profiles, dispensing and rational use monitoring
  - Computerize data management as appropriate and print/disseminate all standard tools and forms
  - Aggregate data from health facilities and districts for regional and central level reporting on available stock, stock-out, expired items, number of facilities, number of patients broken down by age and sex, etc.





### Consumption by Month

**MSH ARV Dispensing Module**  
ARV Drug Consumption  
Year 2004

Drugname	unit	Jan	Fe	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Program Supported By: GOK/NASCOP</b>													
3TC 150mg	Tablet	0	0	0	0	0	0	0	0	0	0	0	168
d4T 30mg	Capaul	0	0	0	0	0	0	0	0	0	0	0	112
ddi 200mg	Tablet	0	0	0	0	0	0	0	0	0	0	0	56
EFV 600mg	Tablet	0	0	0	0	0	0	0	0	0	0	0	56
Ntd 40mg continue	Pack	0	0	0	0	0	0	0	0	0	0	0	1
NVP 200mg	Tablet	0	0	0	0	0	0	0	0	0	0	0	1
Std 30mg Continue	Pack	0	0	0	0	0	0	0	0	0	0	3	1
Std 30mg start	Pack	0	0	0	0	0	0	0	0	0	2	2	0
<b>Program Supported By: USAID</b>													
3TC 10mg/ml(240ml)	Bottle	0	0	0	0	0	0	0	0	0	0	1	2
3TC 150mg	Tablet	0	0	0	0	0	0	28	84	56	56	280	340
d4T 30mg	Capaul	0	0	0	0	0	0	28	84	56	56	168	168

### Intervention 5: Storage and Organization

- Improve the storage and organization capacity of health facilities and zones/districts that will provide malaria services with focus on the main drug store and dispensing pharmacy areas
- Provide shelfe units, filing and storage cabinets, thermohygrometers for monitoring temperature and humidity and dispensing rooms and basic office furniture.






### Key Intervention 6: Mapping

- Mapping and Georeferencing of supported locations
- Train staff in GIS/GPS
- Procure GPS equipment
- Georeference all locations that are supported under this program description with global positioning systems.
- Forward data to the International Rescue Committee (IRC), to include in the *Geospatial Analysis for Public Health Program*.



### Key Intervention 7: Leverage USG Resources

- *Discuss with USAID/E and Peace Corps* how to collaborate with the twenty volunteers are stationed in Oromia in AMDM activities
- Identify potential Ethiopia MCP recipients, implementing case management activities and hold discussion for collaboration
- Coordinate AMDM activities with PEPFAR implementing partners, inasmuch as possible.





Annex 5: AMDM Micro-Planning Workshop Overview

# CHALLENGE :

“Yellowing the Red “



Health Facility	Stock Availability																											
	SP	Coartem1	Coartem2	Coartem3	Coartem4	Chloroq Tab	CQ Syrup	QuinTab	Quinineinj	ITN	RDT	PIRE	RH	EH	Etham	INH	Steglo	RTX/ARB	Combivir	Lamivudine	Stavudine	Efavirenz	Nevirapine SP	Ficocitab	Coartem	Cipro	Condom	
Hospital																												
Bahrdar	exp	exp	exp	exp	x	x	x	x	x			xx	xx	xx	x	x	xx	x	x	x	x	x	x	x	x	x	x	x
Shashemene	exp	x	x	x	x	x	x	x	x			xx	xx	xx	x	x	xx	x	x	x	x	exp	x	x	x	x	x	x
Metu	xx	xx	x	x	xx	xx	exp	xx	xx			x	xx	xx	x	xx	x	x	x	x	x	x	x	x	x	x	x	x
Bulehora			exp	x	x	x	x	x	x			x	xx	xx	x	xx	x	x	x	x	x	x	x	x	x	x	x	x
Ginir/Dru	exp	exp	exp	exp	xx	exp	x	exp				xx	exp	exp	xx	exp	x	x	x	x	x	x	x	x	x	x	x	x
Deder																												
Nekemte																												
Chiro	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Wo iso																												
Nejo	x				x	x	x	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Karamara																												
Humera	x	x	x	x	x	x	x	xx	x																			
Alamata Rx Main	x	x	x	x	x	x	x	xx	x																			
Yirgalem	xx	exp	x	exp	exp	x	x	x	x			x	xx	x	xx	x	x	x	xx	x	x	x	x	x	x	x	x	x
Dilla	exp	exp	exp	exp	x	x	x	x	x			x	x	x	x	x	x	xx	90d	90d	x	x	x	x	x	x	x	x
D lchora	x	exp	x	exp	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Assosa	exp	exp	exp	exp	xx	x	x	x	x			xx	x	xx	x	exp	exp	x	x	x	x	x	x	x	x	x	x	x
Gambella	exp	exp	exp	xx	xx	x	xx	xx	xx			xx	xx	x	xx	x	x	x	x	x	x	x	x	x	x	x	x	xx



**HOSPITAL: Availability of Malaria Drugs**

Hospital	SP	Coartem1	Coartem2	Coartem3	Coartem4	Chloroq Tab	CQ Syrup	Quin Tab	Quinineinj	ITN	RDT
Amhara	Bahrdar	exp	Exp	exp	exp	x	x	x	x		
	Shashemene		Exp	x	x	x	x	x	x		
	Metu	Xx	Xx	x	x	xx	xx	exp	xx	xx	
	Bulehora			exp	x	x	x	x	x		
Oromia	Ginir/Dru	exp	exp	exp	xx	exp	x	exp			
	Nekemte										
	Chiro	x	x	x	x	x	x	x	x		x
	Woliso										
	Nejo	x									
Tigray	Humera	x	x	x	x	x	x	xx	x		
	Alamata Rx	x	x	x	x	x	x	xx	x		x
	Yirgalem	x	exp	x	exp	exp	x	x	x		
SNNP	Dilla	exp	exp	exp	x	x	x	x	x		
Diredawa	Dilchora	x	Exp	x	exp	x	x	x	x		
Benshangul	Assosa	exp	Exp	exp	exp	xx	x	x	x		
Gambella	Gambella	exp	Exp	Exp	xx	xx	x	xx	xx		xx



**HOSPITAL: Availability of HIV/OI Drugs**

Hospital	RTX/ARB	Combivir	Lamivudine	Stavudine	Efavirenz	Nevirapine SP	Ficocitab	Coartem	Cipro	Condom
Amhara	Bahrdar	x	x	x	x	x	x	x	x	
	Shashemene	x	x	x	x	x	x	x	x	x
	Metu		x		exp	x	x	x	x	
	Bulehora	x	x	x	x	x	x	x	x	x
Oromia	Ginir/Dru	x	x	x	x	x	x	x	x	x
	Deder	x	x	x	x	x	x	x	x	x
	Nekemte	x	x	x	x	x	x	x	x	x
	Chiro	x	x	x	x	x	x	x	x	x
	Woliso	x	x	x	x	x	x	x	x	x
	Nejo	x	x	x	x	x	x	x	x	x
Somali	Karamara	xx	xx	xx	x	xx	x	x	x	x
	Humera	x	x	x	x	x	x	x	x	x
Tigray	Alamata Rx Main	x	x	x	x	x	x	x	x	x
	Yirgalem	x	xx	x	x	x	x	x	x	x
SNNP	Dilla	xx	90d	90d	x	x	x	x	x	x
Diredawa	Dilchora	x	x	x	x	x	x	x	x	x
Benshangul	Assosa	xx	x	x	x	xx	x	x	x	x
Gambella	Gambella	xx	x	x	x	xx	x	x	x	xx



# AMDM Micro-Planning Workshop Report SPS/PMI Ethiopia, January 2009

Laboratory Reagents and Supplies														
Hospital	Product Availability													
	Gelmsa	Imm Oil	Disinf	Glov	RDT	Bi/Micro	Slide	x100 Obj	Timer	Waste bin	Fridge	Water	Power	RegBook
Bahrdar	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Shashemene	x	x	x	x	x	x	x	x	x	x	xx	x	x	x
Metu	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bulehora	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Ginir/Rx	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Deder	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Nekemte	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Chiro	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	x	x	x	x
Woliso	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Nejo	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Duhti	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Karamara	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Humera	x	x	x	x	x	x	x	x	x	x	xx	xx	x	x
Alamata Rx Main	x	x	x	x	x	x	x	x	x	x	xx	xx	x	x
Yirgalem	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Dilla	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Dilchora	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Assosa	x	x	x	x	x	x	x	x	xx	x	x	x	x	x
Gambella	12m	12m	x	x	x	x	x	x	x	x	x	x	x	x

HOSPITAL Pharmacy : LMIS Status													
Region	Hospital	LMIS											
		Stockcard		Bincard		Tx Register		Computer		Reported			
		yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
Amhara	Bahrdar	x	no	x		art	x			art	x		x
	Shashemene	x	no	x		x		x		x		x	x
Oromia	Metu	x		x		x		x		x		x	x
	Bulehora	x	no	x		x		x		x		x	x
	Ginir/Dru	x		x		x		x		x		x	x
	Deder	x		x		x		x		x		x	x
	Nekemte	x		x		x		x		x		art	x
	Chiro	x		x		x		x		x		x	x
	Woliso	x		x		x		x		x		x	x
Afar	Nejo	x		x		x		x		x		x	x
	Duhti	x		x		x		x		art		x	x
Somali	Karamara	x		x		x		x		x		x	x
	Humera	x		x		x		x		x		x	x
Tigray	Alamata Rx Main	x		x		x		x		x		x	x
	Alamata Rx Tec	NA		NA		NA		NA		NA		NA	NA
	Yirgalem	x		x		x		x		x		x	x
SNNP	Dilla	x		x		x		x		x		x	x
Diredawa	Dilchora	x		x		x		x		x		x	x
Benshangul	Assosa	x		x		x		x		x		x	x
Gambella	Gambella	x		x		x		x		x		x	x

HOSPITAL Pharmacy : Storage Condition and Inventory Management													
Hospital	PHARMACY STORE MANAGEMENT												
	Shelving			Fridge		Quality Prob		Disposed		Organize		Theft	
	yes	Inad	no	yes	no	yes	no	yes	no	yes	no	yes	no
Amhara	Bahrdar	x		x		x		x		x		x	
	Metu	x		x		x		x		x		x	
Oromia	Bulehora	x		x		x		x		x		x	
	Ginir/Dru	x	x	x		x		x		x		x	
	Deder	x		x		x		x		x		x	
	Nekemte	x	x	x		x		x		x		x	
	Chiro	x		x		x		x		x		x	
	Woliso	x		x		x		x		x		x	
	Nejo	x		x		x		x		x		x	
Afar	Duhti	x		x		x		x		x		x	
Somali	Karamara	x	x	x		x		x		x		x	
	Humera	x		x		x		x		x		x	
Tigray	Alamata Rx Main	x		x		x		x		x		x	
	Yirgalem	x		x		x		x		x		x	
SNNP	Dilla	x	x	x		x		x		x		x	
Diredawa	Dilchora	x		x		x		x		x		x	
Benshangul	Assosa	x		x		x		x		x		x	

HEALTH CENTER : Availability of Malaria Products													
Region	Health Center	SP	Coartem				Chloro/Tab	CCLSyrup	Quin/Tab	Quinine/Tab	ITN	RDT	
			Coartem	Coartem2	Coartem3	Coartem4							
Amhara	Wereta		x	x	x	x	x	x	x	x	x		
	Dembecha		x	x	x	x	x	x	x	x	x		
	Kombolcha	12m	12m	12m	12m	xx	exp	12m	12m	12m	x		
Oromia	Bati		2m	2m	x	x	2m	12m	x	x	x		
	Shashemene		x	x	x	x	x	x	x	x	x		
	Shakiso		x	x	x	x	x	x	x	x	x		
	Yabelo		x	x	x	x	x	x	x	x	x		
	Metahara		xx	xx	xx	x	exp	xx	exp	x	x		
	Metahara Nm		x	xx	x	x	x	x	xx	x	x		
	Mojo		x	x	x	x	x	x	x	x	x		
	Adama		x	x	x	x	x	x	x	x	x		
	Zway	exp	x	x	x	x	x	x	exp	x	x		
	Gimbi		x	x	x	x	x	x	x	x	x		
	Nekemte		x	x	x	x	x	x	x	x	x		
	Itso		x	x	x	x	x	x	x	x	x		
	Jaji		2m	2m	2m	2m	x	exp	xx	x	x		
	Haromaya		x	x	x	x	x	x	x	x	x		
Gore		x	x	x	x	x	x	x	x	x			
Agaro		x	x	x	x	x	exp	exp	x	x			
Jimma		x	x	x	x	x	x	x	x	x			
Goro Ba e	exp	exp	xx	x	xx	x	xx	x	x	x			
Wolenchit	Itso		x	x	x	x	x	x	x	x	x		
	Jaji		x	x	x	x	x	x	x	x	x		
Afar	Awash		2m	x	12m	x	x	x	x	x	x		
	Gewane		x	x	x	x	x	x	x	x	x		
Somali	Jiji ga		x	x	x	xx	x	x	xx	x	x		
	Endawassie		x	x	x	x	x	x	xx	x	x		
Tigray	Alamata		xx	xx	x	exp	x	x	exp	x	x		
	Awassa		x	x	x	x	x	x	x	x	x		
SNNP	Awassa		x	x	x	x	x	x	x	x			
Benshangul	Bambasi	exp	x	x	exp	exp	x	x	xx	x	x		

# Annex 5: AMDM Micro-Planning Workshop Overview

HEALTH CENTER : Availability of TB Drugs		RHZE	RH	EH	ENem	INH	Strepto
Health Center							
Amhara	Wereta	x	x	x	x	x	x
	Dembecha	x	x	x	x	x	x
	Kombolcha	x	xx	x	x	x	xx
	Bati	x	x	x	x	x	x
Oromia	Shashemene	x	x	x	x	x	x
	Shakiso	x	x	x	x	x	x
	Yabelo	x	xx	x	x	x	x
	Metahara	x	x	xx	x	xx	xx
	Metahara N	x	x	x	x	xx	exp
	Mojo	x	x	xx	x	x	x
	Adama	x	x	x	x	x	x
	Zwai	x	x	x	x	x	x
	Gimbi	x	x	x	x	x	x
	Nekemte	xx	xx	xx	xx	xx	xx
	Bako	x	x	x	x	x	x
	Ijaji	x	exp	xx	x	x	x
	Haromaya	x	x	x	x	x	x
	Gore	xx	exp	x	x	xx	x
	Jimma	xx	x	x	x	x	x
	Goro Bale	exp	exp	exp	exp	exp	exp
Afar	Awash	x	x	exp	x	x	x
	Gewane	x	x	x	x	x	x
Tigray	Endasselassie	x	x	x	x	x	x
	Alamata	x	30d	30d	x	exp	x
SNNP	Awassa	x	x	x	x	x	x
Benshangul	Bambasi	x	x	exp	x	exp	x

HEALTH CENTER : Availability of HIV/OI Drugs		RTV/MSB	Combivir	Lamivudine	Stevadine	Efavirenz	Nevirapine	SP	Fluconazole	Co-trimox	Cipro	Condom
Health Center												
Amhara	Wereta	x	x	x	x	x	x	x	x	x	x	x
	Dembecha	x	x	x	x	x	x	x	x	x	x	x
	Kombolcha	x	x	x	x	x	x	12m	x	x	x	x
	Bati	x	x	x	x	x	x	x	x	x	x	x
	Shakiso	x	x	x	x	x	x	x	x	x	x	x
	Yabelo	x	x	x	x	x	x	x	x	x	x	x
	Metahara	x	x	x	x	x	x	x	x	x	x	x
	Metahara N	x	x	x	x	x	x	x	x	x	x	x
	Mojo	x	xx	x	x	x	x	x	x	xx	x	x
	Adama	x	x	x	x	x	x	x	x	x	x	x
	Zwai	x	x	x	x	x	x	x	x	x	x	x
	Gimbi	x	x	x	x	x	x	x	x	x	x	x
	Nekemte	x	x	x	x	x	x	x	x	x	x	x
	Bako	x	x	x	x	x	x	x	x	x	x	x
	Ijaji	x	x	x	x	x	x	x	x	x	x	x
	Haromaya	x	x	x	x	x	x	x	x	x	x	x
	Gore	x	x	x	x	x	x	x	x	x	x	x
	Agaro	x	x	x	x	x	x	x	x	x	x	x
	Jimma	x	x	x	x	x	x	x	x	x	x	x
Afar	Awash	x	x	x	x	x	x	x	x	x	x	x
	Gewane	x	x	x	x	x	x	x	x	x	x	x
Somali	Jijiga	x	x	x	x	x	x	x	x	x	x	x
Tigray	Endasselassie	x	x	x	x	x	x	x	x	x	x	x
	Alamata	x	x	x	x	x	x	x	x	x	x	x
SNNP	Awassa	x	x	x	x	x	x	x	x	x	x	x
Benshangul	Bambasi	x	x	x	x	x	x	x	x	x	x	x

HEALTH CENTER : Availability of Laboratory Reagents and Supplies		Availability													
Health Center	Germ o	Imm Oil	Disinf	Glov	RDT	BIN/IC o	Slide	ALDO/OL	Timer	Waste bin	Fridge	Water	Power	Refr. B	Cock
Wereta	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Dembecha	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Kombolcha	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bati	x	x	3m	x	x	x	x	x	xx	x	x	x	x	x	x
Shashemene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Shakiso	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Yabelo	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Adama	x	x	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zwai	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Gimbi	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Nekemte	x	xx	x	x	x	x	x	x	x	x	x	x	x	x	x
Bako	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Ijaji	x	x	x	x	xx	x	x	x	x	x	x	x	x	x	x
Haromaya	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bedessa	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Agaro	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jimma	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Goro Bale	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Awash	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Gewane	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jijiga	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Endasselassie	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Alamata	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Awassa	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bambasi	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

HEALTH CENTER : LMIS Status		LMIS									
Health Center		Stockcard		Bin card		Tx Register		Computer		Reported	
		yes	no	yes	no	yes	no	yes	no	yes	no
Amhara	Wereta	x	x	x	x	x	x	x	x	x	x
	Dembecha	x	x	x	x	x	x	x	x	x	x
	Kombolcha	x	x	x	x	x	x	x	x	x	x
	Shashemene	x	x	x	x	x	x	x	x	x	x
	Shakiso	x	x	x	x	x	x	x	x	x	x
	Yabelo	x	x	x	x	x	x	x	x	x	x
	Metahara	x	x	x	x	x	x	x	x	x	x
	Metahara N	x	x	x	x	x	x	x	x	x	x
	Mojo	x	no	x	x	x	x	x	x	x	x
	Adama	x	no	x	x	x	x	x	x	x	x
	Zwai	x	x	x	x	x	x	x	x	x	x
	Gimbi	x	x	x	x	x	x	x	x	x	x
	Nekemte	x	x	x	x	x	x	x	x	x	x
	Bako	x	x	x	x	x	x	x	x	x	x
	Ijaji	x	x	x	x	x	x	x	x	x	x
	Haromaya	x	x	x	x	x	x	x	x	x	x
	Bedessa	x	x	x	x	x	x	x	x	x	x
	Gore	x	no	x	x	x	x	x	x	x	x
	Agaro	x	x	x	x	x	x	x	x	x	x
	Jimma	x	x	x	x	x	x	x	x	x	x
	Goro Bale	x	x	x	x	x	x	x	x	x	x
	Awash	x	x	x	x	x	x	x	x	x	x
	Gewane	x	x	x	x	x	x	x	x	x	x
Afar	Jijiga	x	x	x	x	x	x	x	x	x	x
Somali	Jijiga	x	x	x	x	x	x	x	x	x	x
Tigray	Endasselassie	x	x	x	x	x	x	x	x	x	x
	Alamata	x	x	x	x	x	x	x	x	x	x
SNNP	Awassa	x	x	x	x	x	x	x	x	x	x
Benshangul	Bambasi	x	x	x	x	x	x	x	x	x	x

# AMDM Micro-Planning Workshop Report SPS/PMI Ethiopia, January 2009

HEALTH CENTER: Storage Accessories and Management												
Region	Health Center	Storage										
		Shelving			Fridge			Quality Prob		Disposed		Organized
		yes	Inadq	no	yes	no	yes	no	yes	no	yes	no
Amhara	Wereta	X										
	Dembecha	X	X									
	Kombolcha	X										
Oromia	Shashemene	X	X									
	Shakiso	X	X									
	Yabelo	X	X									
	Metahara	X	X									
	Metahara N	X	X									
	Mojo	X	X									
	Zwai	X	X									
	Gimbi	X	X									
	Nekemte	X	X									
	Bako	X	X									
	Ijaji	X	X									
	Haromaya	X	X									
	Bedessa	X	X									
	Gore	X	X									
	Agaro	X	X									
	Jimma	X	X									
	Goro Bale	X	X									
Afar	Awash	X	X									
	Gewane	X	X									
Soma I	Jijiga	X	X									
	Endasselassie	X	X									
	Alamata	X	X									
SNNP	Awassa	X	X									
Benshangul	Bambasi	X	X									

HEALTH POST: Treatment level, Capacity and Availability of Malaria Products														
Region	Health Post	Trained		ANNUAL TREATMENT		AVAILABILITY								
		yes	no	Number	Treated	Coart 1	Coart 2	Coart 3	Coart 4	O	CC	ITN	Other	
Amhara	Yenesa	X		102										
	Mitikolo	X												
	Tima	X												
Oromia	Mojo	X		239	124	X	X	X	X	X	X	X	X	X
	Jawis	X		136	49	X	X	X	X	X	X	X	X	X
	Chancho	X		9										
	Amerti	X		1780	261									
	Lalisa	X		126	19									
	Goro	X		1621	271									
	Kewussa	X		45										
	Adele	X		15										
	gagbechano	X		1										
	Balealem	X												
	Darito	X		38	1									
	Alecu	X		149	61									
	Bira	X		249	15									
	Dagahedu	X		236	98	X	X	X	X	X	X	X	X	X
Afar	Netela	X		180	18									
	Dudube	X		12	11	X	X	X	X	X	X	X	X	X
Somali	Hadew	X												
Tigray	Rawyan	X				X	X	X	X	X	X	X	X	X
	Lemlem	X		1137	117									
	Waja	X		420	281	X	X	X	X	X	X	X	X	X
	Limat	X		345	137	X	X	X	X	X	X	X	X	X
SNNP	Dale	X		396	56									
	Areberaya	X		199	25									
Diredawa	Haria	X												

PRIVATE Pharmacies/Outlets: Stock Status									
Region	Private Outlets	STOCK STATUS							
		Ma ar a Drugs				Others			
		Coart	SP	Chloro	Quine	TB	Condom	ITN	
Amhara	Bahrdar	X	X	X	X	X	X	X	X
	Wereta	X	X	X	X	X	X	X	X
	Shash	X	X	X	X	X	X	X	X
	Gimbi	X	X	X	X	X	X	X	X
	Gore	X	X	X	X	X	X	X	X
	Metu	X	X	X	X	X	X	X	X
	Bulehora	X	X	X	X	X	X	X	X
Oromia	Goro	X	X	X	X	X	X	X	X
	Ginir	X	X	X	X	X	X	X	X
	Jimma	X	X	X	X	X	X	X	X
	SW Shewa	X	X	X	X	X	X	X	X
	Bako	X	X	X	X	X	X	X	X
	Nekemte	X	X	X	X	X	X	X	X
	Chiro	X	X	X	X	X	X	X	X
	Wetenchiti	X	X	X	X	X	X	X	X
	Metahara	X	X	X	X	X	X	X	X
	Mojo	X	X	X	X	X	X	X	X
	Adama	X	X	X	X	X	X	X	X
Afar	Awash7kg	X	X	X	X	X	X	X	X
	Dugtti	X	X	X	X	X	X	X	X
Soma I	Jijiga	X	X	X	X	X	X	X	X
	Jijiga	X	X	X	X	X	X	X	X
Gambela	Gambela	X	X	X	X	X	X	X	X
	Humera	X	X	X	X	X	X	X	X
Tigray	Alamata	X	X	X	X	X	X	X	X
	Alamata	X	X	X	X	X	X	X	X
	Xxx	X	X	X	X	X	X	X	X
SNNP	Yirgalem	X	X	X	X	X	X	X	X
	Dilla	X	X	X	X	X	X	X	X
	Dilla	X	X	X	X	X	X	X	X
Diredawa	Diredawa	X	X	X	X	X	X	X	X

DISTRICT: Availability of Malaria/TB/OI Drugs and Other Related Products																
District	Malaria Drugs						TB Drugs			Ois/Other						
	Coartn1	Coartn2	Coartn3	Chloroq	CQ Syr up	QuinTab	QuinineInj	RHZE	RH	EH	INH	Strepto	Condom	ITN	RDT	RTK/KHB
xxxx																
Kombolcha	xx	xx	xx	X	X	X	X	X	xx	xx	X	X	X	X	X	X
Bahrdar Zuria				X	X	X	X	X	xx	xx	X	X	X	X	X	X
Fogera	X	X	X	X	X	X	X	X	xx	xx	X	X	X	X	X	X
Bulehora	X	X	X	X	X	X	X	X	xx	xx	X	X	X	X	X	X
Leka Dulecha				X	X	X	X	X	xx	xx	X	X	X	X	X	X
Goro Bale				xx	Xx	Ex	X	Ex	ex	ex	X	Ex	X	X	Ex	X
Arsi negele				X	X	X	X	X	xx	xx	X	X	X	X	X	X
Ginir Bale	ex	ex	xx	Ex	xx	ex	xx	xx	xx	xx	Ex	X	X	X	X	X
Shashemene				X	X	X	X	X	xx	xx	X	X	X	X	X	X
Guji/Odo Shak				X	X	X	X	X	X	X	X	X	X	X	X	X
Ale/Ilubabor	X	X	X	X	X	X	X	xx	Ex	X	X	xx	X	X	X	2
Chro	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Haromaya	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Adametulu	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bako Tibe	ex	ex	ex	xx	xx	X	ex	ex	xx	xx	Ex	xx	xx	X	X	xx
TataiKoraro	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Alfamata				X	X	X	X	X	X	X	X	X	X	X	X	X
Kaftahumera	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dilla Zuria	X	X	X	X	X	X	X	xx	ex	xx	X	X	X	X	X	xx
Dalle	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Melka Tebdu	X	X	X	X	Ex	X	ex	X	X	X	X	X	X	X	X	X
Jijiga	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

# Annex 5: AMDM Micro-Planning Workshop Overview

DISTRICT: Storage Condition													
District	STORAGE SYSTEM												
	Shelving			pallets		Fridge		Disposed		Organized		Theft	
	yes	Inadq	no	yes	no	yes	no	yes	no	yes	no	yes	no
Xxxx	x	X											
Kombolcha	x	X		x									
Bahrdar Zuria	x	X			x								
Fogera	x												
Bulehara	x	X											
Leka Dulecha	x	X											
Goro Bale	x	X											
Arsi negele	x	X											
Ginir Bale	x	X											
Shashemene			x										
Gulji/Odo Shak	x	X											
Mie /Illubabor	x	X											
Chro	x	X											
Yabelo	x	X											
Haromaya	x	X											
Adametulu	x	X											
Bako Tibe	x	X											
Gewane			x										
Ababo													
Tatakoraro	x	X											
Alamata	x	X											
Kafahumera			x										
Dilla Zuria	xx												
Dalle			x										
Melka Tebdu	xx												
Jijiga			x										

ZONE	Availability of Malaria/TB/OI Drugs (Plus Condoms)																			
	Malaria Drugs										TB Drugs				OI Drugs/Other					
	Coartem1	Coartem2	Coartem3	Coartem4	Chloro/Tab	CD Syrup	Quin Tab	Quinine	BRZE	RH	EF	Etham	INH	Strepto	Cotrimox	Cipro	ITN/ITN	Condom	ITN	RDT
South Gonder	x																			
West Gojam																				
Oromia	xx		xx	xx	x		x	exp	xx	x	exp	x	x	x	5m	12m	x	4m	6m	1m
West Welega																				
Borena	x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x	x	x	x	x
Adama Sp	x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x	x	x	x	x
West Arsi	x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x	x	x	x	x
East Welega																				
West Shewa																				
East Hararge	x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x	x	x	x	x
Bale	xx	exp	x	x	x	x	xx	exp	x	x	xx	x	xx	x	x	x	x	exp	exp	exp
SW Shewa																				
Jimma																				
Metu	x	x	x	x	x	x	x	xx	xx	xx	xx	x	x	x	x	x	x	x	x	x
Guji	x	x	x	x	x	x	x	xx	xx	xx	xx	x	x	x	x	x	x	x	x	x
RHB	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	x	xx	x	3m	3m	x	3m	x	x
Sidama	x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x	x	x	x	x
Xxxx	x	x	x	x	x	x	x	xx	x	x	x	x	x	x	x	x	x	x	x	x
RHB	x	x	x	x	x	x	x	xx	xx	xx	xx	x	x	xx	exp	exp	xx	x	x	x
Asossa	x	x	x	x	x	x	x	xx	x	x	x	x	x	exp	exp	x	x	x	x	x
RHB	x	x	x	x	x	x	x	xx	x	x	x	x	x	exp	exp	x	x	x	x	x

ZONE: LMIS Status																					
Region	Zone	INFORMATION SYSTEM																			
		Stockcard		Bincard		Computer		Reported													
		yes	Curr	no	yes	no	yes	no	yes	no	yes	no									
AMHARA	South Gonder																				
	West Gojam		x	no		x															
	Oromia		x	no		x															
	West Welega		x	no		x															
	Borena		x	no		x															
OROMIA	Adama Sp		x	no		x															
	West Arsi		x	no		x															
	East Welega		x	no		x															
	West Shewa		x	no		x															
	East Hararge		x	no		x															
GAMBELA	Bale		x	no		x															
	SW Shewa		x	no		x															
	Jimma		x	yes		x															
	Metu		x	yes		x															
	Guji		x	yes		x															
SOMALI	RHB		x	no		x															
	SNNP		x	no		x															
	Diredawa		x	no		x															
	Benshangul		x	no		x															
	RHB		x	no		x															

ZONE: Storage Condition																					
Zone	STORAGE SYSTEM																				
	Shelving			Pallets		Fridge		Disposed		Organized		Theft									
	yes	Inadq	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
South Gonder	x																				
West Gojam	x																				
Oromia	x																				
West Welega	x																				
Borena	x																				
Adama Sp																					
West Arsi																					
East Welega																					
West Shewa	x																				
East Hararge	x																				
Bale	x																				
SW Shewa																					
Jimma	x																				
Metu	x																				
Guji	x																				
RHB	x																				
Sidama	x																				
Xxxx	x																				
RHB	x																				
Asossa	x																				
RHB	x																				

AMDM Micro-Planning Workshop Report  
SPS/PMI Ethiopia, January 2009

ZONE: Treatment level and HR Capacity										
Region	Zone	Annual Treatment		Qualification			CAPACITY			
		Adult Tx	Ref-S Tx	Ph	Dru	Tech	Training		Guidelin	
							yes	no	yes	no
	South Gondar	76172	21106			1		x		x
	West Gojam	89607	25715	1			x		x	
AMHARA	Oromia	35,601				ha	x		x	
OROMIA	West Welega	33,702	4502	1	1		x		x	
	Borena			1	1		x		x	
	Adama Sp	9				1	x		x	
	West Arsi	44,274	561	1	1		x		x	
	East Welega	42,292	10382	1	1		x		x	
	West Shewa	19,744	3783	1	1		x		x	
	East Hararge	19,500	4000	1	1		x		x	
	Bale	8,187		1	1		x		x	
	SW Shewa	4,205	1007			SK	x		x	
	Jimma					2	x		x	
	Metu	12,741		1	1		x		x	
	Guji			1	1		x		x	
	RHB	7062	2805			2	x		x	
GAMBELA	Sidama	164,255	6,746			2	x		x	
SNPN	Xxxx	1712	657			1	x		x	
	RHB	29	6	1	1		x		x	
Diredawa	Asossa	11219	4203			1	x		x	
Benshangul	RHB	37386	17296	2	3		x		x	
SOMALI							x		x	

Accomplishments To-Date

- Baseline Assessment Completed
- Micro-Planning Workshop Conducted
- Assignment of SPS/PMI Coordinator at MSH office Completed
- Secondment of Pharmacist at ORHB in Progress
- Briefing all SPS RPMAs on role in AMDM in their respective areas made
- GIS/GPS training of six SPS staff by IRC Completed

Artemether – Lumefantrine...

Course-of-therapy blister packs with simplified instructions for illiterate patients

- 4 different packs:
- 10-14 kg (1-2 yrs)
  - 15-24 kg (3-7 yrs)
  - 25-34 kg (8-10 ys)
  - 35+ kg (11+ ys)



ANNEX - 6

# Anti-Malaria Drugs Management (AMDM) Baseline Assessment Summary Report

**SPS/PMI – Ethiopia  
December 23, 2008**

---

*Gabriel Daniel & Hailu T. Work*

*January 2009*



President's Malaria Initiative



---

Strengthening Pharmaceutical Systems  
Center for Pharmaceutical Management  
Management Sciences for Health  
4301 N. Fairfax Drive, Suite 400  
Arlington, VA 22203 USA  
Phone: 703.524.6575  
Fax: 703.524.7898

This report is made possible by the generous support of the American people through the U.S. Agency for International Development (USAID), under the terms of cooperative agreement number GHN-A-00-07-00002-00. The contents are the responsibility of Management Sciences for Health and do not necessarily reflect the views of USAID or the United States Government.

## **About SPS**

The Strengthening Pharmaceutical Systems (SPS) Program strives to build capacity within developing countries to effectively manage all aspects of pharmaceutical systems and services. SPS focuses on improving governance in the pharmaceutical sector, strengthening pharmaceutical management systems and financing mechanisms, containing antimicrobial resistance, and enhancing access to and appropriate use of medicines.

## **Recommended Citation**

This report may be reproduced if credit is given to SPS. Please use the following citation.

Daniel, Gabriel & T.Work, Hailu. *AMDM Ethiopia Baseline Assessment Summary Findings, January 2009*. Submitted to the U.S. Agency for International Development by the Strengthening Pharmaceutical Systems Program. Arlington, VA: Management Sciences for Health.

---

## **Key Words**

Ethiopia AMDM/PMI Baseline Assessment Summary Findings

Strengthening Pharmaceutical Systems  
Center for Pharmaceutical Management  
Management Sciences for Health  
4301 North Fairfax Drive, Suite 400  
Arlington, VA 22203 USA  
Telephone: 703-524-6575  
Fax: 703-524-7898  
Web: [www.msh.org/sps.org](http://www.msh.org/sps.org)

## **Executive Summary**

### **Background**

Malaria is ranked as the leading communicable disease in Ethiopia. Almost 75% of Ethiopia's landmass is malarious with 68% of the population at risk of contracting malaria. 60% and 40% of malaria cases are caused by *Plasmodium falciparum* and *P. vivax*, respectively. Malaria is unstable in most parts of the country. Over five million clinical cases of malaria are reported annually, representing 16% of all outpatient consultations, 20% of all hospital admissions and 27% of hospital deaths.

In October 2006 Ethiopia was selected as a focus country of the President's Malaria Initiative (PMI), a US\$1.2 billion initiative aiming to reduce malaria-related mortality by 50% in 15 countries in sub-Saharan Africa by 2010. PMI is an interagency initiative led by the United States Agency for International Development (USAID) and including the Centers for Disease Control (CDC). This reduction in mortality will be achieved by reaching 85% coverage of the most vulnerable groups, children under five years of age, pregnant women, and people living with HIV/AIDS, with proven preventive and therapeutic interventions, including artemisinin-based combination therapies (ACTs), insecticide-treated bed nets (ITNs), intermittent preventive treatment of pregnant women (IPTp), and indoor residual spraying (IRS). The PMI resources allocated to Ethiopia will target the Oromia Regional State, the country's largest administrative region and which bears the brunt of the country's malaria burden.

In 2007 the Ethiopia Malaria Operational Plan (MOP) which outlines activities to be supported by the PMI has identified SPS/MSH as the partner for providing technical assistance and support to the President's Malaria Initiative (PMI) in the area of antimalaria products management (AMDM). SPS has participated as a team member in the USAID-CDC PMI Assessment exercise in April 2007. This assessment is operational in nature, with the purpose of identifying immediate concerns in malaria products management and address the needs. This is a preliminary report for presentation at the micro-planning workshop of December 2008. A detailed final report will be produced in the future.

### **Introduction**

The anti-malarial drugs and related supplies management assessment was conducted in October 2008 by SPS/MSH in all the regions of the country with focus on Oromia Region which is the PMI target region.

The main objective of the assessment was to assess the current supply management system through identification of the strengths and weaknesses. The specific objectives include checking for availability of anti-malarial drugs, Tb drugs, HIV/AIDS drugs, condoms and other related products. Determining baseline logistics data for future monitoring purposes was also one of the objectives of the study. The questions and observations were based on availability, knowledge, storage and handling, record keeping and reporting and security and availability of utilities.

The assessment target included 19 hospitals, 31 health centers, 27 health posts, 33 private drug outlets, 18 zonal health offices, 29 district health offices and 44 laboratories representing hospitals and health centers and 71 prescribers from selected hospitals and health centers. More than 50% of the target respondents were from Oromia Region and the rest from other regions (except Addis Ababa and Harari) so that we get the overall national picture.

The assessment was conducted by RPMA, ORHB staff and facility personnel. This was done to make sure that the directly involved staff will get a better grasp of the situation and play an active role in interventions.

The assessment identified both strengths and weaknesses in the different aspects of anti-malarial drugs and related supplies management.

<b>Assessment Targets</b>	<b>Focus</b>	<b>Detail</b>
<b>Facilities</b>	<b>Public</b>	RHBs (4), Zonal health offices (18), District health offices (29), Hospitals (19), Health centers (31), Health posts (27)
	<b>Private</b>	Private drug outlets (33)
<b>Respondents</b>		MDs (19), Health officers (26), Nurses (26), Health extension workers, Laboratory professionals, Pharmacy professionals
<b>Products</b>	<b>Malaria</b>	Coartem 6, Coartem 12, Coartem 18, Coartem 24, Quinine tab, Quinine Inj, Chloroquine Tab, Chloroquine Syrup, ITNs, RDTs
	<b>TB</b>	RHZE, RH, EH, Ethambutol, INH, Streptomycin
	<b>HIV/AIDS</b>	Combivir, Lamivudine, Stavudine, Efavirenz, Nevirapine Syrup
	<b>OI Drugs</b>	Fluconazole, Cotrimoxazole, Ciprofloxacin
	<b>Laboratory</b>	Reagents, equipment and supplies related to malaria
	<b>Other</b>	Condom
<b>Variables</b>		Availability, staffing, LMIS, loss/theft, expiry, storage, procurement, amenities, training/guideline (mal)
<b>Interviewers</b>		RPMA, ORHB staff, ZHO/DHO staff, HF staff

## Summary Conclusion and Recommendation

### Major Concerns:

- **Availability of malaria products with focus on drugs for children**
- **Expiry due to lack of proper quantification and distribution**
- **Information system (pharmacy level medication record, inventory control tools and reporting)**
- **Storage inadequacy and poor organization**
- **Delay in disposal of expired and unusable products (occupy useful space)**

Gaps	Pluses	Action Ideas
<p><b>Staffing/Training</b></p> <p>Training is not widely given in the new malaria drug treatment and product handling. The MOH malaria guideline for diagnosis and treatment is not readily available at the health facilities.</p>	<p>With average availability for pharmacy of 7/hosp and 2/HC and for laboratory of 10/hosp and 2/HC, Staffing is optimal.</p> <p>Training in malaria drugs management has been conducted for selected group of pharmacists by EPA and DACA. Training materials are available from other related programs that can be adopted for malaria.</p>	<p>Use existing HIV/AIDS training materials with appropriate modification</p> <p>Adopt Monitoring/Training/Planning (MTP) approach to make it result oriented</p> <p>Train on identified gaps and on-site.</p> <p>Create job-aids for specific interventions.</p>
<p><b>Product Availability/Expiry</b></p> <p>Pediatric malaria products are found to be short.</p> <p>INH is not uniformly available.</p> <p>As much as availability was there, there was also significant expiry problem Expiry is observed in malaria and TB products.</p> <p>Where applicable, stock-out dates ranged from 1 month to 12 months.</p>	<p>The picture in ARVs is different in that availability and expiry are not major issues.</p>	<p>The difference in the three products management is due to the bulk availability and hence risk of expiry of malaria and TB products while there is better forecasting and inventory management of HIV products.</p> <p>Adopt the system of proper quantification using reliable consumption data from health facilities. Use direct delivery of supplies to health facilities as is done for ARVs (using PFSA as the delivery mechanism).</p> <p>Use a campaign mode of disposal of obsolete and expired drugs to create room for store reorganization.</p>
<p><b>Infrastructure/Store Management</b></p> <p>Although shelving is said to be available at health centers and hospitals, most reported that they were inadequate.</p>	<p>Shelving is available in many facilities but is inadequate</p>	<p>Reorganize stores by removing expired drugs.</p> <p>Follow a clean-up campaign for clearing and reorganizing the stores.</p>
<p><b>LMIS/Reporting</b></p>	<p>Laboratory register is available in most facilities</p>	<p>Provide stock cards and bin cards and update inventory.</p>

<p>Stock cards and bin cards not in use in all facilities Where available, most are not current Treatment registers are available but in less than half of the facilities assessed Reporting is very poor The availability of stock at the target sites varied much. The problem of testing in malaria showed that a high number are tested at health centers and hospitals but the reported cases broken down by species is extremely low. This could be a recording problem or that the time consuming differentiation of species is not done regularly. The figures obtained from the health facilities and higher levels don't match also. Poor inventory control system</p>	<p>ART recording and reporting is in track.</p>	<p>Use medication record (treatment register) at hospital, health center and health post level. Adopt treatment registers in use for ARVs and TB. Follow campaign mode for reinstating proper record keeping system.  Adopt the SOP developed for ARV drugs management.  Institutionalize record keeping and reporting system.  Develop monthly audit sheet/check list for monitoring key intervention areas.</p>
<p><b>Knowledge</b>  Knowledge about the shelf life of LLINs was not encouraging. There is general lack of knowledge on treatment during pregnancy and prevention of malaria in pregnancy.</p>	<p>The use of SP for OIs is widely known in the public sector but not in the private, where different antimalarials including Coartem are cited as the drugs of choice for PF. Knowledge about duration of treatment with Coartem is nearly 100% across the board. The knowledge about preventive measures was also 100% for at least knowing two ways of prevention (spraying, ITN, education and environmental). Knowledge on treatment of severe malaria with injectable quinine is very good.</p>	<p>Provide job-aids and other technical resources for prescribers and dispensers to update their knowledge regularly.</p>
<p><b>Other</b> Laboratories lack objectives to make species differentiation at health centers. The absence of waste bin without lids and disinfectant is a health hazard for the staff and patients served.</p>	<p>Loss or theft was extremely low in all the target facilities assessed. Quality problem was also not a big problem and the ones cited include poor treatment response and delivery of near-expiry products from higher levels.</p>	<p>Improve on laboratory recording and reporting system</p>

## Distribution of Target Assessment Sites

Regions	Zones	Districts	Hospitals	Health Centers	Health Posts	Retail Outlets	Prescribers		
							MD	HO	N
Oromia	West Welega	Bulehora	Shashemene	Shashemene	Modjo	Shashemene	10	15	21
	Borena	Leka Dulecha	Metu	Shakiso	Jawis	Gimbi			
	Adama Sp	Goro Bale	Bulehora	Yabelo	Chancho	Gore			
	West Arsi	Arsi negele	Ginir/Rx	Metahara	Amerti	Metu			
	East Welega	Ginir Bale	Ginir/Dru	Metahara N	Lalisa	Bulehora			
	West Shewa	Shashemene	Deder	Mojo	Goro	Goro			
	East Hararge	Guji/Odo Shak	Nekemte	Adama	Kewussa	Ginir 1			
	Bale	Ale /Illubabor	Chiro	Zwai	Adele	Ginir 2			
	SW Shewa	Chro	Woliso	Gimbi	gagibechano	Jimma 1			
	Jimma	Nejo	Nejo	Nekemte	Balealem	Jimma 2			
	Metu	Yabelo		Bako	Darito	SW Shewa			
	Guji	Haromaya		Ijaji	Alecue	Bako			
		Adametulu		Haromaya	Bira	Nekemte			
		Bako Tibe		Bedessa	Dagahedu	Chiro			
Oromia Total	12	14	9	19	14	18	10	15	21
Afar		Gewane	Dupti	Awash	Meteka	Awash7kg	1	2	2
		AwashFentale		Gewane	Dudube	Dupti			
Amhara	South Gonder	xxxx	Bahrddar	Wereta	Yenesa	NA			

## Distribution of Target Assessment Sites

Regions	Zones	Districts	Hospitals	Health Centers	Health Posts	Retail Outlets	Prescribers		
	West Gojam	Kombolcha		Dembelcha	Mitikolo	Bahrdar	1	2	1
	Oromia	Bahrdar Zuria		Kombolcha	Tima	Wereta			
		Fogera		Bati					
Benshangul	Assosa	Bambasi	Assosa	Bambasi				1	
Diredawa		Melka Tebdu	Dilchora		Areberaya Harla	Diredawa 1	2		
						Diredawa 2			
Gambella		Ababo	Gambella					1	
SNNPR	Sidama	Dilla Zuria	Yirgalem	Awassa	Dale	Yirgalem	2	2	
	xxxxx	Dalle	Dilla	Dilla		Dilla 1			
						Dilla 2			
Somali		Jijiga	Karamara	Jijiga	Hadew	Jijiga 1	1	2	
						Jijiga 2			
						Gambela			
Tigrai		TataiKoraro	Humera	Endaselassie	Rawyan	Humera	2	1	2
		Alamata	Alamata Rx 1	Alamata	Lemlem	Alamata 1			
		Kaftahumera	Alamata Rx2		Waja	Alamata 2			
					Limat				
Other Total	6	15	10	12	13	15	9	11	5
<b>Grand Total</b>	<b>18</b>	<b>29</b>	<b>19</b>	<b>31</b>	<b>27</b>	<b>33</b>	<b>19</b>	<b>26</b>	<b>26</b>
	<b>18</b>	<b>29</b>	<b>19</b>	<b>31</b>	<b>27</b>	<b>33</b>	<b>71</b>		

### General Findings and Observations

Level	Staffing/Training	Product Availability/Expiry	Infrastructure	LMIS/Reporting	Knowledge	Other
ORHB	ORHB has only 3 pharmacists. One druggist is responsible for the Dukem main regional store and he commutes from the Addis office to receive consignment or fill requests.	Since the pharmacy office is being restructured it was not possible to look into this aspect.	The store in Addis is grossly inadequate and poorly organized. A lot of expired stuff is congesting space. The Dukem store is a modular warehouse built for reproductive health supplies with USAID support. It stores all supplies except equipment. The store is congested and expired drugs are also occupying useful space. The pharmacy is awaiting management decision to officially dispose off the expired stuff.	The record keeping system is manual and is not current except the ones at Dukem, about 20km outside Addis.	NA	
Zonal Health Office	<ul style="list-style-type: none"> <li>• About 60% of the zones have a pharmacist, 82% have druggist/pharm tech and two had store keeper and health assistant manning the zonal stores.</li> <li>• Only 19%</li> </ul>	Malaria products availability ranges from a high of 90% for Coartem-24 to a low 9% for Chloroquine Syrup. TB Products with 95% high for RHZE and 43% low for INH is in better stock level shape. ARVs are not stocked at this level. OI drugs except Cotrimoxazole are barely present. Condom was found	76% of the zones have shelving and 43% pallets. The shelving in most instances is reported as inadequate. Only 62% had refrigerators.	Inventory management tools are inadequate as shown with the low number of zones that have stock cards, bin cards and computers. Less than 40% of zones do report on stock	NA	14% of the zones reported not to have disposed expired/unusable products. Nearly 80% of zones have stores that are not well kept and organized. Only 5% of zones reported theft/Loss.

### General Findings and Observations

Level	Staffing/Training	Product Availability/Expiry	Infrastructure	LMIS/Reporting	Knowledge	Other
	reported to have been trained in malaria; 71% have the MOH guideline.	in 62% of the zones. The malaria expired drugs picture shows that all zones have expired malaria drugs in stock. 19% of zones have quinine injection and 14% have Coartem-6 in stock. TB drugs expiry is more frequent with a high of 52% zones with expired RHZE.		status.		
District Health Office	<ul style="list-style-type: none"> <li>65% of the districts assessed have a druggist/pharm tech while 35% have nurses heading the district store.</li> <li>Only 21% reported to have been trained in malaria; 70% have the MOH guideline.</li> </ul>	<p>Malaria products availability ranges from a high of 74% for RDT and 70% for Coartem-24 to a low 22% for Chloroquine Syrup. TB Products with 86% high for EH and 73% for RHZE to 32% low for INH is in better stock level shape. ARVs are not stocked at this level. OI drugs are stocked by less than 32% of districts. Condom was found in 73% of the districts. The malaria expired drugs picture shows that all districts have expired malaria drugs in stock. Highest is 26% for RDT and 22% for Coartem-24. TB drugs expiry is more</p>	70% of the districts have shelving and only 3% have pallets. The shelving in most instances is reported as inadequate. Only 38% had refrigerators.	Inventory management tools are inadequate as shown with only 41% for stock cards and 21 for bin cards. There are no computers in any of the assessed districts. Reporting on stock status is also very low at 34% of districts reporting.	NA	Only 3% of the districts reported disposal of expired/unusable products. Nearly 70% of districts have organized stores. 14% of district reported theft/Loss.

### General Findings and Observations

Level	Staffing/Training	Product Availability/Expiry	Infrastructure	LMIS/Reporting	Knowledge	Other
		significant with a high of 50% districts carrying EH followed by 36% for RH and 23% for RHZE.				
Hospital	<ul style="list-style-type: none"> <li>All the assessed hospitals have 1-4 pharmacists ( total of 30) , 1-15 druggists / pharm techs (total 78) and 81% have pharmacy data clerks.</li> <li>Only 12% reported to have been trained in malaria; 24% have the MOH malaria guideline.</li> </ul>	<p>Malaria products availability ranges from a high of 93% for chloroquine tab and quinine to an average low of 50% for the Coartems. TB Products show 100% high for RHZE to 56% low for INH. ARVs show a high of 94% for Combivir and Efavirenz and 72% for Stavudine. OI drugs average 75%. Condom was found in 72% of the hospitals. The overall weighted average of availability is 64% for malaria, 76% for TB, 88% for ARVs and 76% for OIs.</p> <p>Expiry picture shows a high 47% for Coartem-24 followed by 40% for Coartem-6. TB expiry picture is similar with a third of the hospitals having expired FDCs. The expiry of ARVs looks</p>	100% of the hospitals have shelving. The shelving in some reporting inadequacy. 88% have refrigerators.	76% of hospitals have stock cards and 82% bin cards. 41% have computers used in ARV drugs management. Treatment registers are used in 41% of the hospitals. Except for ARVs, only 18% of hospitals report stock status.	Although training was not provided to all, about 70% of dispensers cited use of SP for OIs. 83% of the dispensers knew Coartem is first line treatment for PF and Chloroquine for PV.	Only 35% of the hospitals reported disposal of expired/unusable products. Nearly 60% of hospitals have organized stores. Only 6% of zones reported theft/Loss. 18% interviewed said they have come across quality problems with some products. Ordering of malaria products at the hospital showed that MDs ordering 50% of the time, health officers 44% of the time, nurses 25% of the time and pharmacy professionals 44% of the time.

### General Findings and Observations

Level	Staffing/Training	Product Availability/Expiry	Infrastructure	LMIS/Reporting	Knowledge	Other
		<p>better with 28% for Combivir and 17% for Nevirapine syrup.</p> <p>The weighted average for expiry is 29% for malaria, 26% for TB, 13% for ARVs and 0% for OIs.</p>				
Health Center	<ul style="list-style-type: none"> <li>All the assessed health centers have 1-4 druggists/tech (total of 55) , there are 5 pharmacists and 54% have pharmacy data clerks.</li> <li>Only 18% reported to have been trained in malaria; 19% have the MOH malaria guideline.</li> </ul>	<p>Malaria products availability ranges from a high of 79% for Coartem-24 to a low of 11% for INH.</p> <p>TB Products show 88% for RHZE and 54% each for RH and Streptomycin.</p> <p>ARVs show a high of 100% for Efavirenz and 84% for Combivir.</p> <p>OI drugs average show 92% for Cotrimoxazole and about 40% each for Fluconazole and Cipro. .</p> <p>Condom was found in 80% of the health centers.</p> <p>The overall weighted average for availability is 56% for malaria, 71% for TB, 78% for ARVs and 59% for OIs.</p> <p>Expiry picture shows a high 25% for Coartem-24.</p> <p>TB shows a high of 31 for INH.</p>	<p>100% of the health centers have shelving with 65% citing inadequacy.</p> <p>Only 67% have refrigerators.</p>	<p>56% of health centers have stock cards and bin cards each. 7% have computers used in ARV drugs management.</p> <p>Treatment registers are used in 30% of the health centers. Except for ARVs, only 15% of health centers report stock status.</p>	<p>18% of dispensers cited use of SP for OIs.</p> <p>86% of the dispensers knew Coartem is first line treatment for PF and Chloroquine for PV.</p>	<p>Only 15% of the health centers reported disposal of expired / unusable products.</p> <p>30% of health centers have organized stores.</p> <p>Only 4% of health centers reported theft/Loss. 15% interviewed said they have come across quality problems with some products.</p> <p>Ordering of malaria products at the health centers showed that health officers ordering 63% of the time, nurses 56% of the time and pharmacy</p>

### General Findings and Observations

Level	Staffing/Training	Product Availability/Expiry	Infrastructure	LMIS/Reporting	Knowledge	Other
		<p>The ARVs are faring very well with expiry control except one health center that has a stock of expired Combivir.</p> <p>The weighted average for expiry is 14% for malaria, 20% for TB, 4% for ARVs and for OIs.</p>				<p>professionals 33% of the time.</p> <p>68% the health centers have the district stores co-located with them.</p>
Health Post	<p>Each of the assessed health posts have HEWs. 74% have 2 each, 19% have one each and two health posts have three each.</p> <p>50% are trained in the new malaria protocol.</p>	<p>78% of the HPs have Coartem-24. The other three dosage forms of Coartem are available in about 20% of the health posts only. Quinine is available in 19% and Chloroquine in 30% of the HPs.</p> <p>ITN is available in 26%, and RDT in 69%, Condom is available in 63% of the HPs.</p>	NA	NA	<p>The knowledge about useful life of ITN varied grossly from 2 years to indefinite. 96% new that Coartem is the first line drug for PF. 92% knew at least two ways to prevent malaria. 96% knew the three days duration of Coartem treatment.</p>	<p>About 7,330 adults and 1,540 children were treated in 20 health posts (on the average 350 adults and 77 kids per health post) during the year.</p>
Private Out let	<p>Thirty five private outlets were assessed of which</p>	<p>The availability of malaria drugs was as follows: 20% of the outlets have Coartem,</p>	NA	NA	<p>54% of the outlets cited Coartem as first line treatment for PF,</p>	<p>9% of the outlets said they are involved in ITN</p>

### General Findings and Observations

Level	Staffing/Training	Product Availability/Expiry	Infrastructure	LMIS/Reporting	Knowledge	Other
	74% of the interviewed were pharmacy professionals (14% pharmacists and 86% druggists). 26% were nurses and health assistants. 23% were trained in malaria treatment.	69% SP, 91% Chloroquine and 46% Quinine. The presence/use of SP is very likely for malaria. 33% have Cotrimoxazole, 86% condom and 20% ITNs. ARVs and TB drugs are not handled by the outlets assessed.			while 26% mentioned SP and 8% Chloroquine. 60% cited Quinine for severe malaria. 74% knew the duration of treatment with Coartem. 94% knew at least two ways to prevent malaria.	subsidy program. 94% expressed interest in being part of such a program. 77% agree to report on their activities. 9% said they have encountered quality problems with some malaria drugs.
Laboratory	Hospital : Of the assessed hospital laboratories there are 4-26 laboratory professionals (186 lab technologists and lab technicians in 19 hospitals).	All the hospitals have binocular microscopes. 83% of them have objective suitable for differentiating species (100xObj). 94% have immersion oil and slides. 72% have timers. 89% have Geimsa stain. 61% have disinfectant and 89% have gloves.	Refrigerators, water and power supply is available in 100% of the hospitals. 83% have waste bin, most with lid.	89% of the hospitals have register books for different tests conducted.	NA	About 104,700 persons are reported to be tested in 17 of the hospitals during the year. Nearly 10% are reported to be PF and only 3% reported as PV. RDTs are not used at hospital level. 68% of prescribers reported to having sent patients for laboratory test for malaria 100% of the time., while 19% sent 75-99%

### General Findings and Observations

Level	Staffing/Training	Product Availability/Expiry	Infrastructure	LMIS/Reporting	Knowledge	Other
						of the time and 13% less than 75% of the time.
	Health Center: 25 assessed health centers have 1-6 laboratory professional (with a total of 61).	83% have binocular microscopes. 63% have 100x objectives. 96% have immersion oil and 92% slides. 54% have timers. 92% have Geimsa stain. 75% have disinfectants and 88% have gloves.	96% have refrigerators, 92% have power supply and 75% have uninterrupted supply of water. 79% have waste bin.	92% of the health centers have register books in place.		About 73,000 persons are tested in 20 assessed health centers during the year. About 12% are recorded as PF and about 7% as PV. RDTs are not used by policy at health center level. 50% of prescribers reported to having sent patients for laboratory test for malaria 100% of the time., while 40% sent 75-99% of the time and 10% less than 75% of the time.

### General Findings and Observations

Level	Staffing/Training	Product Availability/Expiry	Infrastructure	LMIS/Reporting	Knowledge	Other
Prescribers	Hospital : Of the interviewed, 55% are MDs, 15% HOs and 30% are nurses. 21% reported to be trained in malaria treatment and 12% have the MOH malaria guideline.	NA	NA	NA	89% know that Coartem is a first line drug for PF and 94% know Chloroquine as first line drug for PV. Almost all know the duration of treatment with Coartem, that Quinine is the drug of choice for severe malaria and mention at least two ways to prevent malaria.	25% said they have encountered quality problems with some malaria drugs, mainly poor response to treatment with Coartem.
	Health Center: Of the interviewed, 2% are MDs, 50% HOs and 48% are nurses. 20% reported to be trained in malaria treatment and 24% have the MOH malaria guideline	NA	NA	NA	100% know that Coartem is a first line drug for PF and 89% know Chloroquine is first line drug for PV. 100% know the duration of treatment with Coartem, 84% know Quinine is the drug of choice for severe malaria. 56% mentioned at least two ways to prevent malaria.	24% said they have encountered quality problem with some malaria drugs.