

PRESIDENT'S MALARIA INITIATIVE
MALARIA OPERATIONAL PLAN (MOP)
ETHIOPIA
FY 2008

TABLE OF CONTENTS

Acronyms and Abbreviations	3
Executive Summary	5
President’s Malaria Initiative.....	8
PMI in Ethiopia, with focus on Oromia Region	9
National Malaria Control Plan and Strategy	16
Current Status of Malaria Indicators.....	16
Goals and Targets of the PMI	17
Expected Results – Year One	17
Interventions	18
Insecticide-treated nets (ITNs).....	18
Indoor residual spraying (IRS).....	23
Malaria in Pregnancy including intermittent preventive treatment (IPTp).....	27
Diagnostics and Case Management	29
Epidemic Preparedness and Response	35
Monitoring and Evaluation	36
HIV/AIDS and Malaria.....	38
Communication and Coordination.....	39
Capacity Building within the National Malaria Control Program	39
Staffing and Administration.....	40
Annexes	42

ACRONYMS AND ABBREVIATIONS

ACT	Artemisinin-based Combination Therapy
AL	Artemether-Lumefantrine
AMREF	African Medical & Research Foundation
ANC	AnteNatal Care
ARV/ART	Anti-Retroviral/Ttherapy
BCC/IEC	Behavior Change Communication/Information Education Communication
CAME	Coalition Against Malaria in Ethiopia
CCM	Country Coordinating Mechanism
CDC	Centers for Disease Control and Prevention
CHW	Community Health Worker
CHP	Community Health Promoter
CRDA	Christian Relief Development Agency
CSHGP	Child Survival and Health Grants Program
DACA	Drug Administration and Control Authority
DALY	Disability Adjusted Life Years
DDT	Dichloro-Diphenyl-Trichloroethane
DFID	UK Department for International Development
DHS	Demographic and Health Survey
EDHS	Ethiopia Demographic and Health Survey
EHNRI	Ethiopian Health and Nutrition Research Institute
EPI	Expanded Program for Immunization
EPHTI	Ethiopia Public Health Training Initiative
ESHE	Essential Services for Health in Ethiopia
ESR	Epidemic Surveillance and Response
FANC	Focused Antenatal Care
FBO	Faith-Based Organization
FMoH	Federal Ministry of Health
FSN	Foreign Service National
FP/MNCH	Family Planning/Maternal, Neonatal and Child Health
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GOE	Government of Ethiopia
HEP	Health Extension Package
HEW	Health Extension Worker
HIPC	Highly-Indebted Poor Countries
HSDP	Health Sector Development Plan
HSEP	Health Service Extension Program
IDA	International Development Association
IM	Intra-Muscular (injections)
IMCI	Integrated Management of Childhood Illnesses
IPTp	Intermittent Preventive Treatment of pregnant women
IRS	Indoor Residual Spraying
ITN	Insecticide-Treated bed Net
IVM	Integrated Vector Management

LLIN	Long-Lasting Insecticide-treated bed net
MACEPA	Malaria Control and Evaluation Partnership in Africa
MCST	Malaria Control Support Team
MCH	Maternal and Child Health
MIP	Malaria in Pregnancy
MSF	Médecins Sans Frontières (Doctors Without Borders)
NGO	Non-Governmental Organization
OFDA	Office of Foreign Disaster Assistance
PBS	Protection of Basics Services program
PEPFAR	President's Emergency Plan For AIDS Relief
PLWHA	People Living With HIV/AIDS
PMI	President's Malaria Initiative
PMTCT	Prevention of Mother-To-Child Transmission
PPE	Personal Protective Equipment (for insecticide spray operators)
PSI	Population Services International
PVO	Private Voluntary Organization
QA	Quality Assurance
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
RHB	Regional Health Bureau
RTI	Research Triangle Institute
SNNPR	Southern Nations, Nationalities and People's Region
SP	Sulfadoxine-pyrimethamine
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USG	United States Government
WHO	World Health Organization

EXECUTIVE SUMMARY

In June 2005, the United States Government (USG) announced a new five-year, \$1.2 billion initiative to rapidly scale up malaria prevention and treatment interventions in high-burden countries in sub-Saharan Africa. The goal of this Initiative is to reduce malaria-related mortality by 50% after three years of full implementation in each country. This 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, incorporating 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).

Malaria is ranked as the leading communicable disease in Ethiopia, accounting for approximately 30% of the overall Disability Adjusted Life Years (DALYs) lost. Approximately 75% of the country is malarious with about 68% (50 million) of the total population of 73 million living in areas at risk of malaria (MOH, 2006). An estimated 9.5 million cases of malaria were reported annually between 2001-2005, with an annual average of 487,984 confirmed cases. Malaria causes approximately 70,000 deaths each year. Overall, malaria accounts for approximately 17% of outpatient consultations, 15% of admissions and 29% of in-patient deaths. However, as 36% of the population is out of reach of the health service coverage, these figures may under-represent the true situation. The burden of malaria has been increasing due to a combination of large population movements, increasing large-scale epidemics, mixed infections of *Plasmodium vivax* and *P. falciparum*, increasing parasite resistance to malaria drugs, vector resistance to insecticides, low coverage of malaria prevention services, and general poverty. Outpatient consultations, inpatient admissions and all in-patient deaths have risen by 21-23% over the last five years.

PMI implementation will focus on the Oromia Region of Ethiopia. Malaria is considered to be the most important communicable disease in Oromia. Three quarters of the region, (242 of 261 *woredas* (districts) and 3932 of 6107 *kebeles*, the smallest administrative unit of Ethiopia similar to ward or a neighborhood), are considered malarious, accounting for over 17 million persons at risk of infection. There are 1.5 to 2 million clinical cases per year, with malaria accounting for 20-35% of outpatient consultations, and 16% of hospital admissions. Malaria deaths, at a rate of 18-30%, are the leading cause of all hospital deaths. This one region was selected because it has a high malaria burden and is relatively underserved compared to other regions.

A nationwide Demographic and Health Survey (DHS) carried out in 2005 showed that about 6% of the 15,000 households surveyed owned at least one mosquito net whether treated or untreated, but only 1.5% of children under five and 1.1% of pregnant women had slept under an ITN the previous night. About 6% of children under five with a fever in the previous two weeks had taken an antimalarial drug within 24 hours of the onset of fever. Only 28% of pregnant women attended an antenatal clinic. All of these rates were much lower in rural areas than in urban areas.

Ethiopia has received two grants from the Global Fund to Fight AIDS TB and Malaria (GFATM) in Round 2 (for \$73 million) and Round 5 (for \$140 million). Despite a slow start and procure-

Table 2

President's Malaria Initiative – Ethiopia
Planned Obligations for FY08 (\$20,000,000)

Proposed Activity	Mechanism	Budget	Commodities	Geographic area	Description of Activity	Page Reference
PREVENTIVE ACTIVITIES						
LLIN distribution	UNICEF	4,200,000	4,200,000	Oromia	Provide free LLINs through health facilities, HEWs and other networks	22
LLIN Commercial sector collaboration	NetMark and follow on	325,000	225,000	Oromia	Facilitate commercial sector involvement through communications, distribution, and expansion of retail outlets and targeted vouchers.	22
BCC/IEC for ITNs, ITNs and Case Management; and CBO support	HCP follow on	1,850,000		Oromia	Includes support to RHB IEC Unit; communications development, implementation/evaluation, and support (approximately half) for NGOs and other community-based organizations	22
Procurement of IRS equipment	IRS IQC	2,000,000	2,000,000	Oromia	Procurement of insecticides, spray equipment, and personal protective gear	26
IRS operations	IRS IQC	1,300,000		Oromia	Training, implementation and supervision support for IRS operations including capacity for targeting IRS, with GIS and other information management	26
Entomological Monitoring and capacity-building	IRS IQC	375,000	100,000	Adama	Build capacity for entomological monitoring for Vector Control, including Adama training facilities.	27
Pesticide management and environmental compliance	IRS IQC	100,000		Adami Tulu	Support environmental compliance incl. DDT distribution chain from Adami Tulu plant to final use and disposal	27
Subtotal Prevention		10,150,000	6,525,000			

Proposed Activity	Mechanism	Budget	Commodities	Geographic area	Description of Activity	Page Reference
MALARIA IN PREGNANCY						
Expanding malaria in pregnancy services through safe motherhood and focused antenatal care	New FP/MNCH procurement	300,000		Oromia	Support MIP components in FANC, Safe Motherhood and Adolescent Reproductive Health, including anemia management and LLINs.	28
SUBTOTAL: MIP		300,000				
CASE MANAGEMENT						
Laboratory baseline assessment	Diagnostics agreement	80,000		Oromia	Rapid assessment of lab capacity to determine availability of equipment and trained personnel (regional and district) incl. microscopy quality and effectiveness	30
Policy development for diagnostics, especially RDTs	Diagnostics agreement	80,000		Nation-wide	Support policy and guideline development	30
Support for quality assurance system for microscopy and RDTs	Diagnostics agreement	250,000	50,000	Oromia	Support RHB to improve laboratory services and quality assurance for microscopy and RDTs	30
Procurement of RDTs	Deliver	750,000	750,000	Oromia	Tentative, pending clarification of policy and impact	30
Procurement of lab equipment/supplies	Deliver	400,000	400,000	Oromia	Procurement of lab equipment and supplies including logistics systems support	30

Proposed Activity	Mechanism	Budget	Commodities	Geographic area	Description of Activity	Page Reference
CASE MANAGEMENT (continued)						
Procurement of ACTs, pre-referral treatment and drugs for severe malaria	UNICEF	1,500,000	1,500,000	Oromia	Procurement of ACT; rectal artesunate and severe malaria treatment and supplies, including \$500k for buffer stocks	33
Review/update National Treatment Guidelines	WHO	75,000		National	Work with other partners to review and update	33
Pre-service training clinical officers and HEWs in diagnosis and treatment	Carter Center follow on	500,000		Oromia	Provide pre-service training to facility-based clinical officers and to Health Extension Workers for improved diagnosis and treatment including rational use of drugs	33
In-service training for clinical officers, HEWs	RHB	530,000		Oromia	Support to Integrated Refresher Training for HEW and clinical officer	33
Provide systems support for ongoing supervision and monitoring of malaria treatment	New FP/MNCH procurement	1,075,000		Oromia	Provide support for supervision from Health Center and woreda Health Officer for in-patient, out-patient and community-based management	34
Therapeutic efficacy monitoring	WHO	100,000	50,000	National and Oromia	<i>in vivo</i> monitoring in ten sites nationally - four sties in Oromia (completed in alternate years)	34
Evaluation of adherence	CDC IAA	80,000		Oromia	Operational research	34

Proposed Activity	Mechanism	Budget	Commodities	Geographic area	Description of Activity	Page Reference
CASE MANAGEMENT (continued)						
Strengthening of drug management system capacity	SPS	600,000		Oromia	Strengthening of drug management system- e.g. LMIS, quantification and procurement; distribution management, including national level in the context of the "Pharmaceutical Master Plan"	34
BCC/IEC for case management (note costs covered under ITNs)	HCP follow-on	Covered above in LLIN section		Oromia	In conjunction with other BCC and community-based activities, specifically for early care seeking, compliance etc.	35
Strengthen drug quality monitoring and pharmacovigilance	SPS	250,000		Oromia	Support of Drug Administration and Control Authority for drug quality and pharmacovigilance	36
SUBTOTAL: Case Mgmt.		6,270,000	2,750,000			

Proposed Activity	Mechanism	Budget	Commodities	Geographic area	Description of Activity	Page Reference
IN-COUNTRY MANAGEMENT AND ADMINISTRATION						
TDY for ACT adherence study	CDC	30,000			Two, two week trips to provide technical assistance for the adherence study	
TDY for Treatment guidelines development	CDC	15,000			One two week trip to provide technical assistance for development of treatment policy guidelines, including RDTs	
TDY for Monitoring and Evaluation	CDC	30,000			Two two-week trips, one for sentinel site development and one for strategic guidance to epidemiological work	
TDY for Entomologic Support	CDC	30,000			two-two week trips to support development and implementation of entomological monitoring	
In-country staff; Admin. Expenses	CDC	700,000			Salaries, benefits of in-country PMI staff (1)	
In-country staff; Admin. Expenses	USAID	730,000			Salaries, benefits of in-country PMI staff (1 PSC/1 FSN), support staff (1 FSN), vehicle	
SUBTOTAL: Mgmt. and Admin.		1,535,000				
TOTAL		20,000,000			46% commodities	

Table 3

**Ethiopia (Oromia) – Year 1 Targets
Assumptions and Estimated Year 1 Coverage Levels**

Year 1 PMI Expected Results:

The goal of the PMI is to reduce malaria-associated mortality by 50% compared to pre-Initiative levels in PMI countries. By the end of 2010, the PMI will assist the Oromia region of Ethiopia to achieve the following targets in populations at risk for malaria:

- >90% of households with a pregnant woman and/or children under five will own at least one ITN;
- 85% of children under five will have slept under an ITN the previous night;
- 85% of pregnant women will have slept under an ITN the previous night;
- 85% of houses in geographic areas targeted for IRS will have been sprayed;
- 85% of pregnant women and children under five will have slept under an ITN the previous night or in a house that has been sprayed with IRS in the last 12 months; (Note, because of the highly seasonal transmission, one spray round per year is enough to protect the community)
- 85% of women who have completed a pregnancy in the last two years will have received two or more doses of IPTp during that pregnancy; Note: for reasons described in the text, this target does not apply to Ethiopia.
- 85% of government health facilities have ACTs available for treatment of uncomplicated malaria; and
- 85% of children under five with suspected malaria will have received treatment with an antimalarial drug in accordance with national malaria treatment policies within 24 hours of onset of their symptoms.
-

Assumptions:

Population of region (estimated): 26,553,000 (total population of Ethiopia is approximately 77.4 million)

Pregnant women: 5 % of total population = 1,327,650 pregnant women

Infants (children <1): 4 % of population = 1,062,120 infants (WHO estimate, 2005)

Children <5: 19.5% % of population = 5,177,835 children under five

Average number of malaria-like illnesses per year and cost per treatment (costs given are for Coartem):

(%) Children <5: 19% 2 illnesses/year at \$0.50 each

(%) Older children/Adults: 76% 1 illnesses/year at \$1.50 each

Cost of a LLIN (including distribution) = \$5.00; average of 2.5 nets/household needed to cover all pregnant women and children under five in family

Cost of spraying a house with an average of 5 inhabitants = \$15.00

Intervention	Needs for 100% Regional Coverage over 3 Years*	Needs for 85% Regional Coverage over 3 Years*	Annual Needs to Achieve 100% Regional Coverage	Needs to Achieve Year 1 PMI Targets	Year 1 Contributions
IPTp	0 pregnant women x 2 treatments/woman = 1.2 million treatments/year x 5 years = 0 million treatments	0 million SP treatments	0 treatments	Target: 0 % of pregnant women receive 2 doses of IPT =	No SP needed, IPTp has not been adopted as Ethiopian National policy
LLINs	5.53 million households x 2.5 nets/household x 3 years = 41.5 million nets	41.5 x 85% = 35.3 m LLINs	13.8 LLINs	Target: 35% of children under 5 and pregnant women sleep under LLIN	PMI will contribute 500,000 nets to address the need in Oromia By September 2007, contributions among partners and donors will achieve 2 nets per house hold nationwide
ACTs – children < 5	5.1 million children under 5 x 2 episodes/year = 10.2 million treatments/year x 3 years = 30.6 million	30.6 m treatments x .85 = 26 m treatments	10.2 million treatments	Target: 20% of children under 5 receive ACTs = 2.04 m treatments	PMI will procure 500,000 doses of Coartem
ACTs – older children/adults	19.9 m older children/adults x 1 episode/year = 19.9 million treatments/year x 3 years = 59.7 doses	59.7 m treatments x .85 = 50.8 m treatments	19.9 treatments		GFATM and other donors are filling the remaining gap
TOTAL	90.3 treatments	76.8 m treatments	30.1 m treatments		
IRS	5,200,000 structures x \$14 hh x 3 years = 218.4 m	185.6 m	72.8 m	Target: 85% of targeted houses to be sprayed 85,000 households to be sprayed	PMI is contributing \$3,300,000 for the procurement of IRS and Operational costs.

Table 4

**President's Malaria Initiative – Ethiopia
Year 1 (FY08) Budget Breakdown by Intervention (\$20,000,000)**

Area	Commodities \$	(%)	Other \$	(%)	Total \$
Insecticide-treated Nets	\$4,325,000	69%	\$1,950,000	31%	\$6,275,000
Indoor Residual Spraying	\$2,100,000	54%	\$1,775,000	46%	\$3,875,000
Case Management (including diagnostics)	\$2,750,000	44%	\$3,520,000	56%	\$6,270,000
Malaria in Pregnancy	\$0	0%	\$300,000	100%	\$300,000
Epidemic Preparedness & Response	\$0	0%	\$420,000	100%	\$420,000
Monitoring and Evaluation	\$0	0%	\$1,325,000	100%	\$1,325,000
Administration	\$0	0%	\$1,535,000	100%	\$1,535,000
Total	\$9,175,000		\$10,825,000		\$20,000,000

ANNEX 2

Multi-Year Strategy and Plan: Ethiopia

GOAL AND TARGETS OF THE PRESIDENT’S MALARIA INITIATIVE

By the end of the project, reduce malaria-related mortality in Ethiopia by 50% when compared with pre-Initiative levels.

After three years of full implementation, the PMI will have provided resources to assist each country to attain the following targets in populations at risk for malaria:

- >90% of households with a pregnant woman and/or children under five will own at least one ITN;
- 85% of children under five will have slept under an ITN the previous night;
- 85% of pregnant women will have slept under an ITN the previous night;
- 85% of houses in geographic areas targeted for IRS will have been sprayed;
- 85% of pregnant women and children under five will have slept under an ITN the previous night or in a house that has been sprayed with IRS in the last 6 months;
- 85% of government health facilities have ACTs available for treatment of uncomplicated malaria; and
- 85% of children under five with suspected malaria will have received treatment with an antimalarial drug in accordance with national malaria treatment policies within 24 hours of onset of their symptoms.

PREVENTION ACTIVITIES

Control of malaria in pregnant women

While IPTp is not part of the Ethiopia National Malaria Control Program strategy, PMI will support other aspects of the “MIP Package” including improved case management for pregnant women suffering from acute malaria, access to LLINs, improved anemia management and support to the roll-out of Focused Antenatal Care services

PMI will include a focus optimizing the delivery of the full package of ANC services, including PMTCT links. PMI will support quality of services, improved monitoring and evaluation of MIP activities and additional refresher trainings as needed for health workers in MIP as part of comprehensive ANC refresher training. Supporting integrated supervision of ANC services could help build district capacity, motivate staff and improve quality of ANC services.

Continued emphasis on IEC/BCC messages is essential to ensure that women and their families are aware of the risks of malaria during pregnancy, to promote attendance at ANCs, improved nutrition etc.

Insecticide-treated nets (ITNs)

PMI will have to continue its work with partners to maintain high coverage of nets through various distribution channels and scaling up LLIN activities to achieve the objective of 85% ownership and use. In year 1 PMI will procure over 150,000 nets as replacement nets and provide \$500,000 for the voucher scheme to “keep up” coverage, as well as related BCC/IEC activities. In following years, PMI will continue to support the dual strategy to effectively maintain high coverage in the region. PMI will continue to support BCC/IEC activities to increase and maintain high usage.

Indoor residual spraying (IRS)

Over the next three years, the focus for IRS activities will be on strengthening Federal, Regional, and district-level capacity to effectively target, implement, and monitor spraying operations and to build capacity for the safe and judicious use of pesticides, especially DDT. This will be done in the context of ‘Integrated Vector Management’, that is, the rationalization and optimization of vector control measures, alone or in combination. This will include a concerted effort to build capacity for entomological monitoring that can guide the IRS operations, and also rationalize the historical and very large efforts put into larval control.

CASE MANAGEMENT

The Three Year Strategy and Plan for PMI has been developed to support the Ethiopia malaria control strategy.

In order to support the use of ACTs nationally, PMI will coordinate with other donors (such as GFATM) to purchase and supply ACTs to all health facilities and to Health Extension Workers trained and authorized to provide ACTs.

PMI will continue to support BCC/IEC for early care seeking practices; train private providers and traditional healers (and other service points of delivery) in correct messaging for early referral and treatment; and look at care seeking patterns for other community based illness that have potential to save lives, e.g. pneumonia, and how malaria serves as a platform for overall strengthening of child health services.

PMI will support diagnosis of severe malaria and data collection to ensure accurate forecasting and supply of severe malaria drugs as well as assure proper treatment for malaria among pregnant women.

The three-year plan for reinforcing the laboratory diagnostic capacity for malaria will be to continued support for lab diagnostics refresher training, in-service training as well as the development of a quality assurance plan for the use of RDTs. PMI will review the lab supply status nationwide and analyze needs for procurement/replacement with other donors and the MOH.

EPIDEMIC SURVEILLANCE AND RESPONSE

Epidemic surveillance and response will be a major focus of PMI involvement in Ethiopia. PMI will concentrate on supporting Federal, Regional and district efforts to implement effective ESR and ensure judicious use of commodities for these situations. PMI will assist in monitoring of the situation to ensure that all levels will be able to respond appropriately. Managing and strengthening information and surveillance systems will be an important component to monitoring epidemics and ensuring timely responses. PMI will also consult with other in-country malaria partners, including UNICEF and WHO to ensure implementation of the long-term strategy for epidemic surveillance and response.

MONITORING AND EVALUATION PLAN

PMI will continue to focus on capacity in order to strengthen the quality and timeliness of data collection from the districts, sentinel sites, partners, and other relevant sources. The use of currently collected, routine data from existing systems such as the HMIS and the sentinel surveillance sites will be used for ongoing program monitoring and will continue through the subsequent years of PMI. A population based survey will provide information on impact of PMI will take place mid-term. Finally, discrete surveys or targeted evaluations related to activities in development (such as the use of RDTs, or an assessment of private sector use of ACTs) will be supported as needed. Throughout the Initiative PMI will support quality DSS routine monitoring, semi-annual partner review meeting for progress/process updates and joint planning/work planning among all PMI/FMOH/in-country partners with the RHB in the lead to ensure a unified and solid M&E plan and implementation.

SUSTAINABILITY PLAN

The three-year strategic plan for Ethiopia is designed to begin addressing the complex issues of long-term sustainability and building national capacity over time. The PMI's framework for sustainability addresses several components: technical and management capacity; cost recovery/financial strengthening; and human resources capacity focusing on supportive supervision.

The implementation of the PMI will result in the transfer of technical knowledge and skills to local partners including staff of the RHB, NGOs, community- and faith-based organizations, health workers, and private sector partners. PMI will continue its emphasis on training health workers and developing and strengthening capacity for supportive supervision through refresher training at all levels, as well as support the transition from malaria-specific to integrated supervision. PMI will ensure that other partners are involved such as WHO and UNICEF that assist the Regional Health Bureau.

PMI will help carry out the implementation of recommendations from the MOH to regarding the impact of free malaria-related commodity distribution on local funding of health staff. In addition, PMI will continue advocacy for other funding sources to complement a longer-term financial sustainability plan.

STAFFING AND ADMINISTRATION

Two new health professionals will be hired to oversee the PMI in Ethiopia, one representing CDC and one representing USAID. In addition, one or more Foreign Service Nationals FSNs will be hired to support the PMI team. All PMI staff members will be part of a single inter-agency team led by the USAID Mission Director or his/her designee in country. The PMI team will share the responsibility for development and implementation of PMI strategies and work plans, coordination with national authorities, managing collaborating agencies, and supervising day-to-day activities. Candidates for these positions will be evaluated and/or interviewed jointly by USAID and CDC, and both agencies will be involved in hiring decisions, with the final decision made by the individual agency.

It is envisioned that these two PMI professional staff will work together to oversee all technical and administrative aspects of the PMI, including finalizing details of the project design, implementing malaria prevention and treatment activities, monitoring and evaluation of outcomes and impact, and reporting of results. Both staff members will report to the USAID Mission Director or his/her designee. The CDC staff person will be supervised by CDC both technically and administratively. All technical activities will be undertaken in close coordination with the FMOH/RHB and other national and international partners, including the WHO, UNICEF, the GFATM, World Bank, and the private sector.

Locally-hired staff to support PMI activities either in Ministries or in USAID (for example, the contractor position to support sentinel site surveillance) will be approved by the USAID Mission Director. Because of the need to adhere to specific country policies and USAID accounting regulations, any transfer of PMI funds directly to Ministries or host governments will need to be approved by the USAID Mission Director and Controller.

Table 1**Proposed Multi-Year Timeline of Coverage of Interventions***

Coverage Target	2005 DHS	Year 1	Year 2	Year 3 (etc.)	Final Evaluation
Proportion of households with a pregnant woman and/or children under five will own at least 1 ITN		50%	65%	80%	>90%
Proportion of pregnant women sleeping under an ITNs the previous night	0%	35%	50%	70%	85%
Proportion of children under five sleeping under an ITNs the previous night	0.4%	35%	50%	70%	85%
Proportion of children under five with fever in previous 2 weeks treated with ACTs within 24 hours of onset of symptoms	0.6%	20%	40%	65%	85%
Proportion of government health facilities have ACTs available for treatment of uncomplicated malaria	N/A	50%	65%	80%	>90%
Proportion of women who have completed a pregnancy in the last two years will have received two or more doses of IPTp during that pregnancy;	N/A	N/A	N/A	N/A	N/A
Proportion of households in geographical areas targeted for IRS that have been sprayed		85%	85%	85%	85%
Proportion of pregnant women and children under five will have slept under an ITN the previous night or in a house that has been sprayed with IRS in the last 6 months		40%	55%	75%	85%

Note: MIS for baseline will be conducted first quarter FY08

Table 2

Illustrative 3-Year Budget and Expected Coverage Levels

PMI Targets: After three years of full implementation, the PMI will achieve the following targets in populations at risk of malaria in Oromia, Ethiopia:

- i. 85% of children under five will have slept under an ITN the previous night;
- ii. 85% of pregnant women will have slept under an ITN the previous night;
- iii. 85% of pregnant women will have received two or more doses of SP for IPTp during their pregnancy;
- iv. 85% of houses targeted for indoor residual spraying will have been sprayed;
- v. 85% of children under five with suspected malaria will have received treatment with an antimalarial drug in accordance with national malaria treatment policies within 24 hours of the onset of their symptoms.

Assumptions:

Population of Oromia, Ethiopia (estimated): 26,553,000 million persons

Pregnant women: 5% of total population = 1,327,650 pregnant women

Children <5: 19.5% of population = 5,177,835 children under five

Infants (children <1): 4 % of population = 1,062,120 infants

Average number of persons per household = 5

Assume that 65% of total Oromia population is at risk of malaria = 17.3 m

Average number of malaria-like illnesses per year and cost per treatment with Coartem:

Children <5: 2 febrile episodes/year (\$.050 per treatment)

Older children/adults: 1 malaria illnesses/year at (assume average of \$1.50 per treatment)

Cost of IPTp with SP: \$0. (\$0.08 for each of the two treatments a woman will receive during her pregnancy)

Average household will require 2.5 ITNs to cover all children under five and pregnant women in the family

Cost of a long-lasting ITN = \$5.00

Costs per person for epidemic preparedness, implementation support and USG implementation costs were taken from a detailed cost analysis prepared for previous PMI countries.

Item/Activity	Annual Cost per Person	Annual Cost	3-Year Total	Assumptions/Comments
Prevention – insecticide-treated nets		\$12,250,000	\$36,800,000	17.3 million population at risk of malaria = 3.36 million households x 2.5 nets/household x 85% coverage x \$5.00/net. This assumes LLINs will provide protection for at least 3 years
Prevention – indoor residual spraying		\$3,267,000	\$9,801,000	IRS directly supported by PMI will target a population of 500,000, or 100,000 households in year one at a cost of \$14.00 per household. PMI will also provide supplies, equipment and other support for other, Regional Health Bureau IRS activities
Treatment – malarial illnesses		\$29,700,000	\$88,122,500	Children under 5, 5.1m x 2 episodes/year x 85% = 8.67 m x \$.50 = \$4.34 m; Older children/adults 19.9 x 1 episode/year x 85% x \$1.50 = \$25.4m
Treatment – IPT for pregnant women		\$0	\$0	0 pregnant women x \$0.20 per year x 85% coverage
Epidemic Preparedness	\$.08	\$1,380,000	\$4,152,000	Based on detailed calculations from year 1 MOPs
Implementation Support	\$0.92	\$15,916,000	\$47,748,000	Commodity management, human resources, supervision, training, social mobilization, etc
Monitoring and Evaluation		\$1,325,000	\$3,375,000	Directly from Ethiopia PMI M&E budget, assuming no cost sharing by other donors, one time cost of MIS at 300,000
Cost of Program		\$63,838,000	\$189,998,500	

USG Implementation Support Costs		\$1,470,000	\$4,410,000	Long-term expatriate advisors' salaries, benefits, travel; local staff; office supplies and equipment for PMI in-country office; TDY from CDC and USAID
Total funding needed (including USG program costs)		\$65,308,000	\$194,408,500	
Government of Ethiopia malaria budget		\$0.0	\$0.0	Costs covered in GFATM Rd 2 and Round 6.
GFATM Rd 2 Phase 2 and Rd 6 approved funding		\$		Round two: Phase one \$37,915,011 and Lifetime Budget of \$76,875,212 out of which 9 million (USD) was reprogrammed for ACT procurement Round five: 2-Year Budget of \$ 59,113,829 and a Lifetime Budget of \$ 140,687,413 with \$ 68,488,393 for Commodities and products and \$ 56,929,111 for Drugs Nationwide, not Oromia specific
Available funding from other sources			\$	
PMI funds available (estimated):				Assumes PMI funding is divided between countries based roughly on their populations
Year 1		\$20,000,000		Assumes 15 PMI countries
Year 2		\$20,000,000		Assumes 15 PMI countries
Year 3		\$20,000,000		Assumes 15 PMI countries
Years 1 through 3			\$60,000,000	
Total Available funding			\$60,000,000	
Remaining Gap			\$134,408,500	3-year shortfall to meet total need Note: GFATM funds are not Oromia specific, therefore the breakdown of regional contributions cannot be calculated. However, PMI is working closely with GFATM to ensure that nationwide expenditures take into account regional plans for PMI in Oromia.