

This Malaria Operational Plan has been approved by the U.S. Global Malaria Coordinator and reflects collaborative discussions with the national malaria control programs and partners in country. The final funding available to support the plan outlined here is pending final FY 2013 appropriation. If any further changes are made to this plan it will be reflected in a revised posting.



PRESIDENT'S MALARIA INITIATIVE



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Zimbabwe

Malaria Operational Plan FY 2013

TABLE OF CONTENTS

ACRONYMS	3
EXECUTIVE SUMMARY	5
STRATEGY	8
1. Introduction	8
2. Malaria Situation in Zimbabwe	9
3. National Malaria Control Program: Plan and Strategy	12
4. Goals and Targets of the President's Malaria Initiative.....	14
5. Current Status of Malaria Indicators	14
6. Integration, Collaboration, Coordination.....	15
7. PMI Support Strategy and Expected Results	17
8. Challenges, Opportunities, and Threats	17
OPERATIONAL PLAN	19
1. Insecticide-Treated Nets	19
2. Indoor Residual Spraying.....	22
3. Intermittent Preventive Treatment during Pregnancy	27
4. Case Management: Diagnosis	29
5. Case Management: Pharmaceutical and Commodities Management	30
6. Case Management: Treatment.....	32
7. Monitoring & Evaluation	34
8. Behavior Change Communication	38
9. Capacity Building and Health Systems Strengthening.....	39
10. Staffing and Administration.....	40
11. Tables.....	42

ACRONYMS AND ABBREVIATIONS

ACT	Artemisinin-based combination therapy
AL	Artemether/lumefantrine
ANC	Antenatal care
AS/AQ	Artesunate-amodiaquine
CDC	Centers for Disease Control and Prevention
CHW	Community health worker
DDT	Dichloro-Diphenol-Trichloroethane
DHS	Demographic and Health Survey
DOT	Directly observed therapy
FETP	Field Epidemiology and Training Program
FY	Fiscal Year
GF	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GoZ	Government of Zimbabwe
HBMF	Home-based management of fever
HMIS	Health Management Information System
IDSR	Integrated Disease Surveillance and Response
IEC/BCC	Information, education, communication/behavior change communication
IPTp	Intermittent preventive treatment of pregnant women
IRS	Indoor residual spraying
ITN	Insecticide-treated net
LLIN	Long-lasting insecticide-treated net
MCAZ	Medicine Control Authority of Zimbabwe
MCH	Maternal and Child Health
M&E	Monitoring and Evaluation
MoHCW	Ministry of Health and Child Welfare
NatPharm	National Pharmaceutical Company of Zimbabwe
NGO	Non-governmental organization
NMCP	National Malaria Control Program
NMRL	National Microbiology Reference Laboratory
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
PMI	President's Malaria Initiative
QA/QC	Quality control/quality assurance
RBM	Roll Back Malaria
RDT	Rapid diagnostic test
SP	Sulfadoxine-pyrimethamine
SSF	Single stream of funding (Global Fund Grant)
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USG	United States Government

WHO	World Health Organization
WHT	Ward Health Team
ZINQAP	Zimbabwe National Quality Assurance Programme
ZIPS	Zimbabwe Informed Push System

EXECUTIVE SUMMARY

Malaria prevention and control are major foreign assistance objectives of the U.S. Government (USG). In May 2009, President Barack Obama announced the Global Health Initiative (GHI), a 6-year, comprehensive effort to reduce the burden of disease and promote healthy communities and families around the world. Through the GHI, the United States will help partner countries improve health outcomes, with a particular focus on improving the health of women, newborns, and children.

The President's Malaria Initiative (PMI) is a core component of the GHI, along with HIV/AIDS and tuberculosis programs. PMI was launched in June 2005 as a five year, \$1.2 billion initiative to rapidly scale up malaria prevention and treatment interventions and reduce malaria-related mortality by 50% in 15 high-burden countries in sub-Saharan Africa by 2010. With passage of the 2008 Lantos-Hyde Act, funding for PMI has now been extended through FY 2014 with the goal of reducing malaria-related morbidity and mortality by 70% compared to pre-initiative levels in the original 15 PMI countries. Programming of PMI activities follows the core principles of GHI: encouraging country ownership and investing in country-led plans and health systems; increasing impact and efficiency through strategic coordination and programmatic integration; strengthening and leveraging key partnerships, multilateral organizations, and private contributions; implementing a woman- and girl-centered approach; improving monitoring and evaluation; and promoting research and innovation.

In mid-2011, Zimbabwe's selection as a PMI country was announced. Malaria is a major health problem in Zimbabwe, although its epidemiology varies in the different regions of the country, ranging from year round transmission in the lowland areas to epidemic-prone areas in the highlands. Zimbabwe's National Strategic Plan does not call for the implementation of all interventions in all malarious districts, hence the targeted number of districts varies by intervention, as detailed below.

Zimbabwe's malaria program receives support from the following major donors: Global Fund, UNICEF, the United Kingdom Department for International Development (DfID), and the European Commission. USAID also provided targeted support to Zimbabwe's National Malaria Control Program (NMCP) through an emergency round of indoor residual spraying (IRS) in 2009 and in 2011 with a procurement of malaria commodities. In addition, a new multi-donor fund designed to strengthen health systems in Zimbabwe, The Health Transition Fund, is operating from 2011-2015 and aims to improve access to all types of quality healthcare for Zimbabweans and to harmonize donor support, practices, and requirements.

The FY 2013 Malaria Operational Plan was developed in collaboration with the NMCP and aligns well with the National Malaria Control Strategy. Planning for FY 2013 was carried out in Zimbabwe in April 2012 and included representatives from USAID and CDC staff based in Washington, Atlanta, and Zimbabwe. The FY 2013 PMI proposed budget for Zimbabwe is \$12 million.

The following major activities will be supported with FY 2013 funding:

Insecticide-treated nets (ITNs): PMI is supporting the Ministry of Health and Child Welfare's (MoHCW) goal of universal coverage with long-lasting insecticide-treated nets (LLINs) in the 30 districts with moderate to high transmission of malaria. PMI will support free routine distribution through antenatal care (ANC) and immunization clinics to pregnant women and children under one year of age through a pilot program to be implemented in 2012. With FY 2013 funding, PMI will procure approximately 280,000 LLINs for free routine distribution.

Indoor residual spraying (IRS): Zimbabwe has a history of IRS dating back to the 1950's. The NMCP IRS strategy focuses on 45 high-burden malaria districts throughout the country. With FY 2012 and FY 2013 funding, PMI will support IRS protecting approximately 1.5 million people in 17 districts in the three highly endemic provinces of Manicaland, Mashonaland East and Mashonaland West. Funding will cover the procurement of insecticides and equipment for spray operations, along with training implementation, and environmental compliance for IRS implementation.

Intermittent preventive treatment of pregnant women (IPTp): Zimbabwe's malaria in pregnancy policy focuses on the 33 high-burden malaria districts, and advocates for directly observed administration of three doses of sulfadoxine-pyrimethamine (SP). With FY 2013 funding, PMI will support the NMCP by procuring approximately 95,000 treatments of SP. Funding will also be used to improve quantification of SP in an effort to minimize stock outs.

Case management: Since 2007 the first-line treatment for malaria has been the artemisinin-based combination therapy, artemether-lumefantrine (AL). The NMCP policy requires that, where possible, all cases of malaria be diagnosed by microscopy or a rapid diagnostic test (RDT). At the end of 2010, the pharmacy board and the laboratory regulatory council changed the policy to allow community-based health workers to perform RDTs and dispense ACTs for positive cases. With FY 2012 funds, PMI will procure ACTs and RDTs, and support the training of village health workers (VHW). With FY 2013 funding, PMI will support the supervision and training of health facility workers and VHWs to improve case management of malaria. PMI will procure approximately 1.3 million ACTs and 3 million RDTs, and strengthen the supply chain management system.

IEC/BCC: Zimbabwe's 2008-2013 National Malaria Communication Strategy document utilizes advocacy, social mobilization and behavior change communication (BCC) for malaria prevention and control through traditional and religious leaders and community volunteers organized into ward health teams. The NMCP uses ward health teams and community malaria committees to promote IRS campaigns and raise awareness about LLIN distribution and use.

In FY 2013, PMI will work with the NMCP and partners to strengthen IEC/BCC approaches for malaria prevention and treatment, particularly at the community level. PMI will be a major contributor to IEC/BCC activities supporting universal LLIN coverage, IRS, and IPTp, and will also collaborate in activities to improve malaria treatment-seeking and prevention behaviors.

Monitoring and evaluation (M&E): The NMCP, with the support of Global Fund and other partners, has developed a National Malaria M&E Strategy and Plan. This plan covers 2008-2013, and describes by program area the type of data needed, the indicators, data collection and flow, analysis, reporting, feedback and stakeholders' responsibilities.

With FY 2013 funding, PMI will strengthen M&E nationally by supporting training from the provincial level down to the primary health facility level. Training will be co-funded with Global Fund, and will include malaria stratification, improved reporting quality, epidemic surveillance and epidemic detection/response. PMI will also support quarterly surveys to assess the availability of malaria commodities in health facilities. In addition, PMI funding will support anti-malarial drug efficacy studies in four of the eight sites. PMI will support capacity building by contributing to the Field Epidemiology Training Program (FETP), which is designed to train leaders in applied epidemiology while providing epidemiologic services to national and sub-national health care workers and supervisors.

STRATEGY

1. Introduction

Global Health Initiative

Malaria prevention and control is a major foreign assistance objective of the U.S. Government (USG). In May 2009, President Barack Obama announced the Global Health Initiative (GHI) to reduce the burden of disease and promote healthy communities and families around the world. Through the GHI, the United States will help partner countries improve health outcomes, with a particular focus on improving the health of women, newborns, and children. The GHI is a global commitment to invest in healthy and productive lives, building upon and expanding the USG's successes in addressing specific diseases and issues.

The GHI aims to maximize the impact the United States achieves for every health dollar it invests, in a sustainable way. The GHI's business model is based on: implementing a woman- and girl-centered approach; increasing impact and efficiency through strategic coordination and programmatic integration; strengthening and leveraging key partnerships, multilateral organizations, and private contributions; encouraging country ownership and investing in country-led plans and health systems; improving metrics, monitoring and evaluation; and promoting research and innovation. The GHI will build on the USG's accomplishments in global health, accelerating progress in health delivery and investing in a more lasting and shared approach through the strengthening of health systems.

President's Malaria Initiative

The President's Malaria Initiative (PMI) is a core component of the GHI, along with HIV/AIDS, and tuberculosis. PMI was launched in June 2005 as a five-year, \$1.2 billion initiative to rapidly scale up malaria prevention and treatment interventions and reduce malaria-related mortality by 50% in 15 high-burden countries in sub-Saharan Africa. With passage of the 2008 Lantos-Hyde Act, funding for PMI has now been extended through FY 2014 and, as part of the GHI, the goal of PMI has been adjusted to reduce malaria-related mortality by 70% in the original 15 countries by the end of 2015. This will be achieved by continuing to scale up coverage of the most vulnerable groups — children under five years of age and pregnant women — with proven preventive and therapeutic interventions, including artemisinin-based combination therapies (ACTs), insecticide-treated nets (ITNs), intermittent preventive treatment of pregnant women (IPTp), and indoor residual spraying (IRS).

Zimbabwe was selected as a PMI country in FY 2011, but USAID has previously provided limited malaria support, including funding and technical assistance to conduct emergency IRS in 2009, and an emergency procurement of ACTs in early 2011. Funding for Zimbabwe has been:

- FY 2011, \$12 million
- FY 2012, \$14 million
- FY 2013, \$12 million (planning figure).

This FY 2013 Malaria Operational Plan (MOP) presents a detailed implementation plan for Zimbabwe, based on the National Malaria Control Program's (NMCP's) five year National Malaria Control Strategy (2008-2013). It was developed in consultation with the NMCP, with

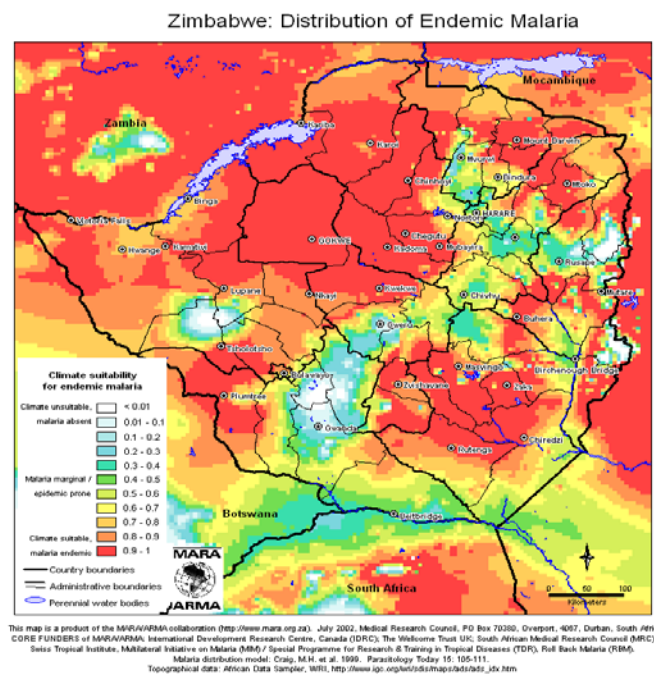
participation of national and international partners involved with malaria prevention and control in the country. The activities PMI is proposing to support align with Zimbabwe's National Malaria Control Strategy, and build upon investments made by other partners to improve and expand malaria-related services.

Zimbabwe's FY 2013 MOP 1) briefly reviews the current status of malaria control policies and interventions; 2) identifies challenges, opportunities and threats that pose barriers to achieving the targets of the NMCP and PMI; and 3) provides a description of planned FY 2013 activities.

2. Malaria Situation in Zimbabwe

Zimbabwe has seasonal and geographic variation in malaria transmission that corresponds closely with the total rainfall pattern.

Figure 1: Distribution of malaria in Zimbabwe

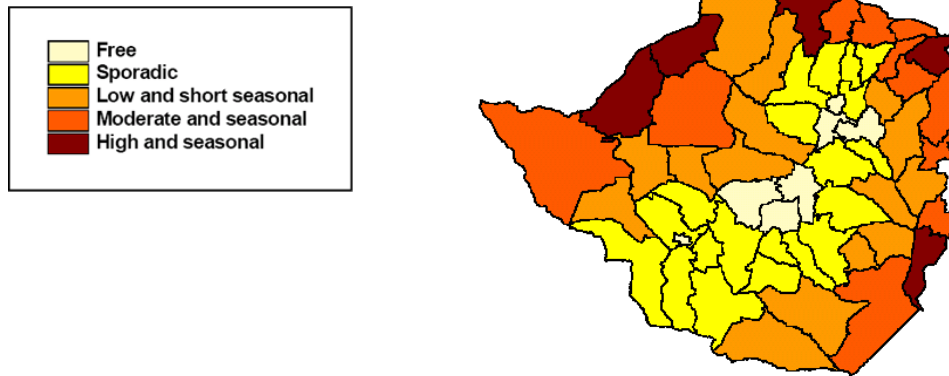


In general, the main malaria transmission season is during the rainy season between November and April, with the average temperature ranging between 18 and 30 degrees Celsius. The annual rainfall varies from less than 700 mm in the Matabeleland to more than 1,500 mm in Manicaland. Malaria transmission is lower in the low rainfall areas and higher in the high rainfall provinces.

Geographically, Zimbabwe is divided by a central watershed lying 1,200 meters above sea level and flanked north and south by low lying areas. In 1986, the country was divided into three malaria epidemiological areas: areas below 900 meters to the north and below 600 meters in the south have perennial transmission; areas between 900-1,200 meters north and 600-900 meters south have seasonal transmission and are prone to epidemics; areas above

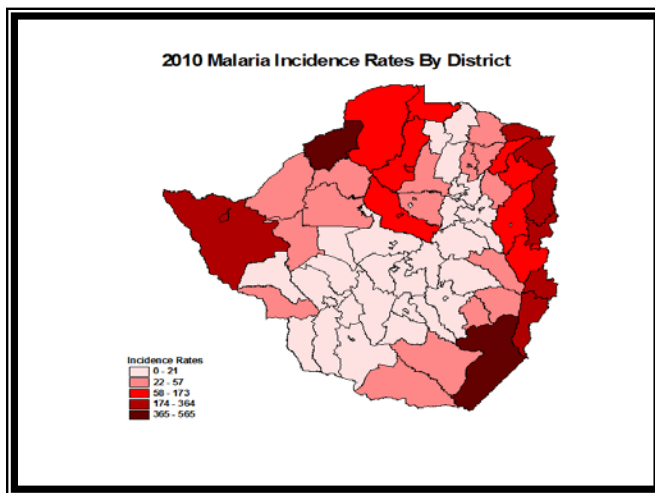
1200 meters north and 900 meters in the south normally do not experience malaria transmission¹.

Figure 2: 2002 Malaria stratification



Zimbabwe is divided into ten provinces (two of which are considered urban), 62 rural districts and 1,200 wards. Forty-five of the rural districts are considered malarious, with 30 considered as high malaria burden districts. Population estimates for Zimbabwe vary due to the recent migration within and outside the country. The present population estimate, an extrapolation from the 2002 census, is 12.5 million. The 2002 malaria stratification estimated that about half of the population lives in malaria risk areas. The map below shows the 2010 malaria incidence rates by district.

Figure 3: Incidence rates by district, 2010



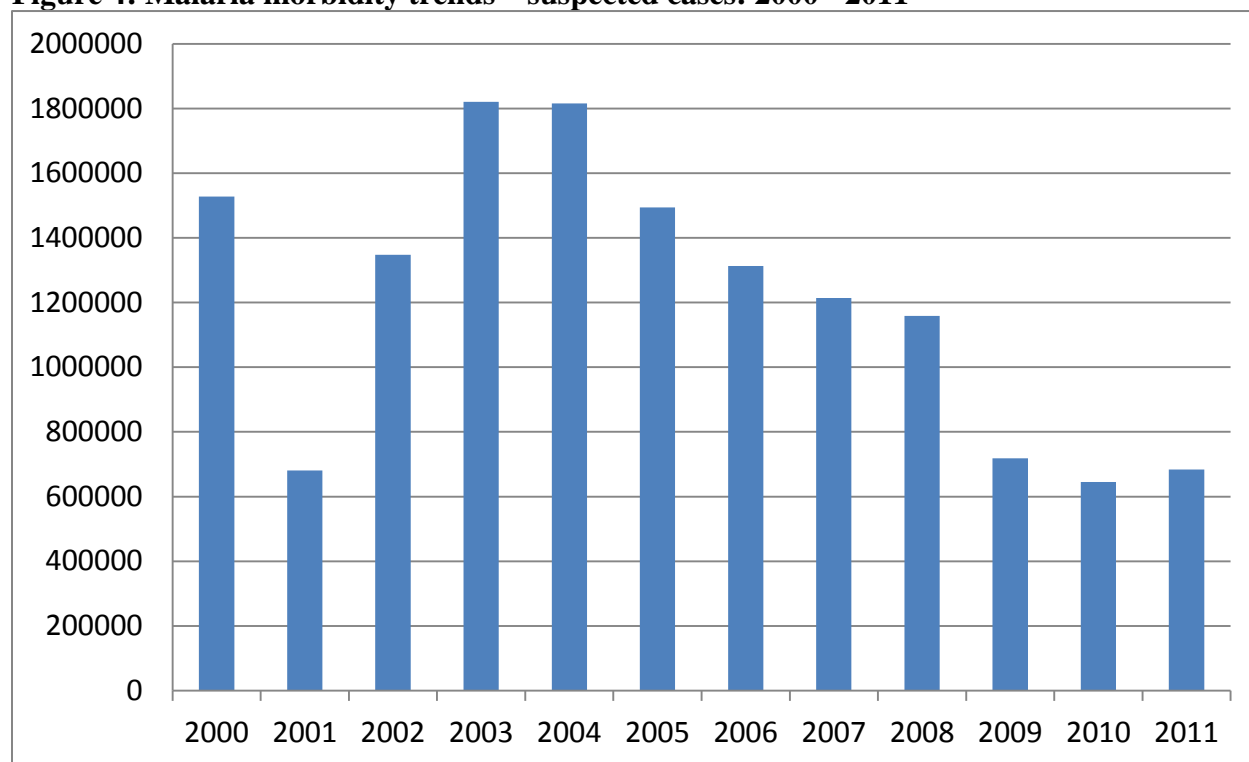
Malaria burden

Overall, malaria incidence in Zimbabwe appears to be decreasing even though it remains a major challenge in certain districts and wards. According to the 2011 RBM/WHO Malaria Program Review, reported malaria incidence decreased from 1.8 million cases in 2006 to about 600,000 in

¹ National Malaria Control Strategy 2008-2013, Ministry of Health and Child Welfare Zimbabwe.

2010². Outpatient department malaria cases have decreased from about 1.53 million in 2005 to approximately 684,000 in 2011 (see Figure 4); inpatient malaria cases declined from 53,000 in 2005 to 10,337 in 2010 with case fatality rate for same period declining from 5.3 to 4.1. By December 2010, Zimbabwe’s reported malaria incidence rate was 49 cases per 1,000, indicating a decline of almost 64% from 2000. It is difficult to know how much of the decrease is due to migration, drought, a weakened surveillance system, or if this represents a true reduction due to effective malaria control interventions.

Figure 4: Malaria morbidity trends – suspected cases: 2000 - 2011³



Note: The 2001 drop in cases was attributed to health workers “industrial action” that paralyzed the health system. Since 2008, there have been no inpatient morbidity and mortality data at national level due to problems with computer software changes. RDTs were introduced in 2010.

Plasmodium falciparum accounts for 98% of all reported malaria cases; *P. ovale* and *P. malariae* account for the remaining 2%. The major malaria vector is *Anopheles arabiensis*, while generally *An. gambiae* is not reported. *An. quadriannulatus*, a member of the *An. gambiae* complex, is commonly found in Zimbabwe, but is zoophilic and therefore not a malaria vector. A fourth member of the complex, *An. merus*, which is a vector in coastal areas of eastern Africa, has also been reported in Zimbabwe; its role in malaria transmission is unclear.

² Zimbabwe Malaria Program Review Report (draft), Ministry of Health and Child Welfare (June 2011).

³ National Health Information System, Ministry of Health and Child Welfare (2012).

3. National Malaria Control Program: Plan and Strategy

The MoHCW has three main directorates: Policy Planning, Monitoring, and Evaluation; Curative Services; and Preventive Services, plus the Provincial Medical Directorates. Under the Preventive Services Directorate is the Epidemiology and Disease Control Department and the NMCP is located within this department. The NMCP is led by a program manager, supported by a team of senior officers responsible for: case management, monitoring and evaluation, vector control, information, education and communication/behavioral change communication (IEC/BCC), and finance and administration.

At the provincial level, the Provincial Medical Director (PMD) is responsible for all health activities including malaria control, and has a team of managers responsible for Epidemiology and Disease Control (EDC), nursing services, laboratory services, environmental health, administration, nutrition, health promotion and pharmacy. The EDC manager also serves as provincial focal person for malaria. The structure at the district level mirrors the province with a District Health Executive. The district health team is led by the District Medical Officer (DMO), who is responsible for malaria activities, among others, and works with ward health teams (WHTs) to coordinate and implement health programs. The Environmental Health Officer manages IRS activities; the district nursing officer is responsible for case management training.

The primary health facility level is staffed by two nurses, Environmental Health Technicians (EHTs), and nurse aides. There are approximately 1,400 primary health facilities in Zimbabwe and each primary health facility is linked to a WHT comprised of community members such as community health volunteers, school health teachers, headmen, chiefs, and religious leaders. The health facility staff are responsible for overseeing program implementation in conjunction with the WHT. WHT members are volunteers, although trained community-based health volunteers receive an incentive of \$14/month from the Global Fund Round 8 grant for health system strengthening.

The NMCP collaborates with diverse partners and has formed important linkages with the following parastatal organizations:

- the National Pharmaceutical Company of Zimbabwe (NatPharm), which is responsible for the procurement, storage and distribution of all health commodities, including malaria commodities;
- the Medicine Control Authority of Zimbabwe (MCAZ), which is responsible for registration of all medicines in the country;
- National Microbiology Reference Laboratory (NMRL) which is responsible for internal quality assurance and,
- Zimbabwe National Quality Assurance Programme (ZINQAP), which is responsible for external quality assurance for laboratories.

At the national level, the NMCP develops policy, national guidelines, and training materials. The national level also oversees program implementation, monitoring and evaluation, resource mobilization, and partnership coordination. Due to Zimbabwe's economic collapse in 2008/2009, all of the NMCP positions in Harare are supported by the Global Fund. The position

of the provincial focal person for malaria is also supported by the Global Fund while the other workers receive allowances from the Zimbabwe Health Worker Retention Scheme.

The Government of Zimbabwe (GoZ) funds the malaria program, with partners contributing to the implementation of various activities. The budget is done annually, based upon district annual plans which are consolidated at the provincial and later the national levels.

Table 1: Malaria funding 2008-2014

Partners	2008	2009	2010	2011	2012	2013	2014
GOZ	\$850,000	\$1,400,000	\$1,200,000	\$1,000,000	-	-	-
Global Fund	\$2,100,000	\$11,320,000	\$24,500,000	\$2,600,000	\$19,069,239	\$7,460,006	\$8,348,313
WHO (CERF)	-	\$1,200,000	-	-	-	-	-
UNICEF	\$320,000	\$450,000	\$25,000	-	-	-	-
PMI	-	\$200,000	-	\$12,000,000	\$14,000,000	\$12,000,000	-
DFID	-	\$300,000	-	-	-	-	-
Private Sector	\$47,250	\$60,000	\$20,000	\$12,500	-	-	-
Total	\$3,317,250	\$14,930,000	\$25,745,000	\$15,612,500	\$33,069,239	\$19,460,006	\$8,348,313

Note: The GoZ line items reflect activities funded in foreign currency only. This figure does not include human resource and infrastructure maintenance related costs. Funding amounts listed for 2012, 2013, and 2014 are subject to change.

In addition to the above financial assistance, the European Commission along with other local and international NGOs supported malaria control activities.

The NMCP's 2008-2013 National Strategic Plan was updated in 2010. The vision of the plan is a malaria-free Zimbabwe, and the goal is to "reduce malaria incidence from 95/1,000 in 2007 to 45/1,000 by 2013 and a case fatality rate from 4.5% in 2007 to 2.5% in 2013." The five key approaches to the National Strategy include:

- Universal access to malaria prevention and personal protection with: 90% of the population at risk covered by IRS and ITNs, and 85% coverage of IPTp2 for pregnant women attending antenatal care in medium-high transmission areas
- Improve diagnosis and treatment of both uncomplicated and severe malaria.
- Improve detection and timely control of malaria epidemics, by detecting at least 95% of malaria epidemics within two weeks of onset.
- Strengthen community and other stakeholder participation to maximize achievement of universal access to malaria control interventions.
- Improve partnership coordination, financial and human resources management and malaria surveillance monitoring.

The Zimbabwe NMCP participates in a number of sub-regional and cross-border initiatives. The program is an active partner with the Roll Back Malaria (RBM) Southern Africa Regional

Network (SARN) and with the Southern African Development Community (SADC) malaria network. The program is also a member of the Trans-Zambezi Malaria Initiative with Zimbabwe, Zambia, Namibia and Botswana, and MOZIZA, the cross-border initiative with Mozambique, Zimbabwe and South Africa.

4. Goals and Targets of the President's Malaria Initiative

The goal of PMI is to reduce malaria-associated mortality by 50% compared to pre-initiative levels in the 15 original PMI countries. By the end of 2014, PMI will assist Zimbabwe 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 six months
- 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
- 85% of government health facilities have ACTs available for treatment of uncomplicated malaria
- 85% of children under five with suspected malaria will have received treatment with ACTs within 24 hours of onset of their symptoms.

5. Current Status of Malaria Indicators

The most recent Demographic Health Survey (DHS) was carried out from September 2010 to March 2011. The United Nations Children's Fund (UNICEF) conducted a Multiple Indicator Monitoring Survey (MIMS) from August to October 2009. The NMCP, with support from Global Fund and PMI, conducted a Malaria Indicator Survey (MIS) in February to April of 2012. Data from this survey are not available for this report. UNICEF is planning to implement the next MIMS in 2014 to measure progress towards Millennium Developmental Goals. The next DHS is planned for 2015/16.

Zimbabwe has achieved steady gains in many key malaria indicators. Between the 2005 and 2010 ITN ownership and use increased significantly (see Table 2). However, IPTp2 and the proportion of children under five with fever receiving antimalarial treatment remain low, demonstrating that efforts to scale up interventions must continue for Zimbabwe to achieve the RBM, PMI, and national targets.

The 2010 DHS shows national ITN ownership of one or more ITNs averaged 29% for the country compared to 9% in 2005. ITN ownership in rural areas was 32% compared to 23% in

urban households. Among households owning at least one ITN, 31% of children under five in urban areas and 27% in rural areas reported sleeping under an ITN the previous night. Among pregnant women in households owning at least one ITN, 35% in urban areas and 28% in rural areas slept under an ITN the previous night. At the national level, in 2010, 17% of all households, 24% of rural households, and 4% of urban households had been sprayed with a residual insecticide in the past 12 months. While the DHS is a national survey, the NMCP targets 45 districts for IRS and 30 districts for ITN distribution.

Table 2: Status of Malaria Indicators

Indicator	2005/06 DHS	2009 MIMS	2010/11 DHS
Proportion of households with one or more ITNs	9%	27%	29%
Proportion of children under five years old who slept under an ITN the previous night	4%	17%	10%
Proportion of pregnant women who slept under an ITN the previous night	N/A	N/A	10%
Proportion of women who received two or more doses of IPTp during their last pregnancy in the last two years	N/A	N/A	7%
Proportion of children under five years old with fever in the last two weeks who received treatment with ACTs	5%	14%	2%

6. Integration, Collaboration, Coordination

Both USAID and CDC support programs in three key areas of GHI: HIV/AIDS, tuberculosis (TB) and malaria. With FY 2013 funding, PMI/Zimbabwe will actively seek opportunities to collaborate with USG health programs so as to ensure maximum impact for every health dollar the USG invests in the country. Opportunities include the following:

Maternal and child health services and malaria: Since malaria prevention and control activities have been implemented as part of integrated maternal and child health services, PMI will make a significant contribution to strengthening capacity to deliver these services. PMI/Zimbabwe will work with other USG-funded programs and other partners to support the comprehensive primary health care package, including the training and implementation of community-based diagnosis and treatment of fever, IPTp, and early treatment. PMI will continue to support universal coverage of LLINs via campaigns as well as the integration of LLIN distribution within routine ANC and EPI services. PMI will also support the strengthening of supply chains, including support for the Zimbabwe Informed Push System (ZIPS), which includes tuberculosis commodities, primary health care packages, and malaria commodities, namely RDTs, SP, and ACTs.

HIV/AIDS and malaria: The seroprevalence of HIV infections is high at an estimated 15.2% among individuals aged 15 to 49 years old⁴. HIV infection is higher among women (17.7%) than men (12.3%) and is higher in urban areas (7.0%) than in rural (4.8%) areas.

Areas where integration will be pursued between the HIV/AIDS and NMCP include promoting adherence to universal precautions when taking blood samples, integrating laboratory quality assurance, providing LLINs to people living with HIV/AIDS, and ensuring appropriate malaria prevention services at Prevention of Mother-to-Child Transmission (PMTCT) clinics. At the community level, PMI will support VHWs who provide RDT and ACT services to also communicate important messages regarding HIV prevention and testing.

Tuberculosis and Malaria: The National Tuberculosis Program supports the activities of village health promoters to inform and support tuberculosis diagnosis and follow-up. Where these promoters are the same as the VHW that provide RDT/ACT services, PMI will work to integrate activities across HIV, tuberculosis, and malaria.

Commitment to reducing the malaria burden and continuing on the path of malaria elimination is evident at the highest levels of the MoHCW. NMCP staff meet weekly to review work plans and monitor progress. The NMCP coordinates with partners through five malaria technical subcommittees: vector control, M&E, case management, IEC and procurement and supply management. These sub-committees are chaired by the NMCP staff, include all PMI implementing partners as appropriate, and meet quarterly.

The NMCP participates actively in the “Health Cluster” group meetings, chaired by the WHO. Also, the Health Partners Development Group meets on a quarterly basis to discuss issues of mutual interest. Currently the European Union (EU) chairs these meetings.

PMI, led by the PMI in-country team, will work closely with the NMCP, RBM partners, Global Fund-funded and other health-related programs in Zimbabwe to provide integrated services at the health facility and community level. PMI will work with others in USAID/Zimbabwe to ensure coordination of PMI-supported activities within the broader context of the health strategies. These approaches will ensure the most cost-effective implementation of prevention and treatment measures. PMI has initiated a monthly PMI implementing partners meeting, which includes PMI/Zimbabwe Resident Advisors, partners, and the NMCP.

In addition, PMI staff will provide leadership and technical assistance in other coordinating bodies such as the local RBM (including relevant RBM sub-committees). At the planning and implementation levels, PMI and other partners will work together to effectively fill commodity and human resource gaps.

⁴ Zimbabwe 2010/11 Demographic Health Survey

8. PMI Support Strategy and Expected Results

FY 2013 Expected Results - Prevention:

1. PMI will continue to support universal IRS spraying in three provinces, protecting approximately 1.5 million people.
2. PMI will procure and distribute approximately 280,000 free LLINs in the 30 districts targeted for universal coverage in Zimbabwe. Any surplus of nets from the campaign will be used to establish routine LLIN distribution targeting pregnant women and children through ANC and EPI clinics.

FY 2013 Expected Results - Case management:

1. PMI will procure approximately 1.3 million ACT treatments for uncomplicated malaria and distribute them to primary health facilities and village health workers throughout the country.
2. PMI will procure approximately 3 million RDTs for distribution to primary health facilities and village health workers.

9. Challenges, Opportunities, and Threats

While recent HMIS data and the 2010/2011 DHS survey have shown a reduction in malaria-related morbidity and mortality, current USG restrictions on providing funding directly to the GoZ present a challenge for implementation of PMI activities. PMI is unable to provide direct funding support to the NMCP to support their efforts to carry out important training and supervision activities in the periphery and to provide them direct support to carry out specific activities where they have the demonstrated capacity.

Human resource constraints at the primary health facility level are also a challenge in Zimbabwe. While there is excellent human capacity and technical ability in Zimbabwe, after the economic downturn and instability in 2008/2009, there was a mass exodus of trained workers in both the public and private sectors. In an effort to quickly train staff to fill the critical posts at the primary health facility level, the MoHCW began an abbreviated training program for nurses, focusing on essential tasks, and lasting two years rather than three years. Only now is the MoHCW going back to fully re-train the primary health nurses. The MoHCW relies on the Global Fund to support these trainings.

Another challenge is the Global Fund single stream funding (SSF) grant which consolidates the Round 8 Phase 2 and Round 10 grants for Zimbabwe. Implementation of the grant was supposed to begin April 1, 2012; although the grant was signed at the end of April, Zimbabwe is still waiting for the funds to disburse. In addition, there appears to be a disconnect between the NMCP and Global Fund on procurements and their cumbersome processes, which often hinders malaria implementation activities.

A new multi-donor pooled fund, the Health Transition Fund, is operating in Zimbabwe (2011-2015). It is designed to improve access to quality health care for all Zimbabweans. Initial donors are the governments of Canada, Ireland, Sweden, Norway, and the United Kingdom as well as the European Commission. Although the USG does not contribute financially to the Health Transition Fund, they are an active partner in planning and coordinate USG-supported activities closely with those supported by the fund. The Health Transition Fund is managed by UNICEF and targets women and children (in particular pregnant and lactating women and children under-five). Reducing malaria incidence by 50%, as per Millennium Development Goal 6, is one of the new fund's overall goals. The presence of the Health Transition Fund poses an opportunity for collaboration and coordination for the NMCP and partners for 2013-2014. However, although critically important in the short-term, there are inevitably longer-term challenges to sustainability that will need to be addressed at some point in the future (such as the fund's support for salary top ups for different cadres of healthcare workers).

Table 3: LLINs delivered and pledged by donor

Donor	2012 (procured)	2013 (pledged)
Global Fund	0	1,372,774
PMI	457,000	500,000
Total	457,000	1,872,774

Universal coverage in Zimbabwe is expected to be achieved by 2013. In calculating a net gap for Zimbabwe estimated population growth and number of nets per person were considered (see Table 4, below).

Table 4: LLIN needs/gap based on persons protected

Criteria if using nets per person	Country data
Population at risk in 2012	4,000,000
Expected annual population growth	2.86%
Average number of persons per net	2.0
Distributed LLINs	
Distributed LLINs in 2010	1,219,309
Distributed LLINs as of July 2011	0
Additional pledged for distribution in 2011 & 2012	460,000
Pledged LLINs	
Pledged LLINs for distribution in 2013	1,872,774
Pledged LLINs in 2013	280,000
Pledged LLINs in 2014	0

Calculations for 2013

Population at risk in 2013	4,114,400
Total number of LLINs needed	2,057,200
Nets distributed plus pledged	2,332,774
LLIN gap	275,574 surplus

Progress during the past 12 months

With FY 2011 funds, PMI is procuring 457,000 LLINs. These LLINs will be used to meet the universal coverage targets through campaigns in seven districts in 2012/13 (see Table 5). Logistics planning for the campaign has begun; approximately 208 distribution points are being selected. Door-to-door household audits will be used to create a net roster and LLIN card for each household. A pilot of routine LLIN distribution using antenatal and child health clinics will begin in late 2012.

Plans and justification

The NMCP is planning an additional LLIN campaign in 2013 to target the remaining 23 districts. The Global Fund Single Stream of Funding (SSF) grant, combining Rounds 8 and 10 is supporting the procurement of 1.4 million LLINs. PMI FY 2011 and FY 2012 funding is providing support to procure an additional 957,000 LLINs to support both the 2013 campaign and routine distribution to pregnant women and children under five years of age. The routine system is under development with plans to use antenatal and child welfare clinics to reach new cohorts of pregnant women and infants estimated at 4% of the population in the targeted areas and to begin the process of replacing worn out nets.

Challenges, opportunities, and threats

The current USG restrictions prohibiting funding to the GoZ or any institution affiliated with the GoZ make it challenging to implement NMCP-led ITN activities in Zimbabwe. Fortunately, current partners funded by the Global Fund and PMI have established a successful strategic framework for conducting ITN distribution campaigns.

District health staff, including Environmental Health Technicians and health facility workers, are responsible for ITN implementation in the communities, including the training and supervision of community health workers. Since PMI is unable to support staff per diems or allowances for monitoring visits to the field, ensuring that monitoring visits occur and that staff are compensated is a challenge.

Proposed activities with FY 2013 funding (\$1,850,000)

Following discussions with the NMCP, PMI will continue to fill gaps in ITN procurement not covered by the Global Fund and the GoZ. PMI support for LLIN procurement and distribution in the FY 2013 MOP will cover the new cohort of pregnant women, replace worn out LLINs, and maintain keep-up through routine systems.

Table 5: PMI funded (FY 2011) LLIN distribution

Province	District	LLINs Distributed (MOP FY 2011 Funds)	Est. Target Population (Beneficiaries)
Mashonaland Central	Mt. Darwin	118,050	217,481
	Shamva	48,250	98,450
	Centenary	39,350	78,704
	Guruve	35,750	98,124
	<i>Sub-total:</i>	<i>241,400</i>	<i>492,759</i>
Masvingo	Zaka	79,050	198,931
	Bikita	85,500	207,121
	<i>Sub-total:</i>	<i>164,550</i>	<i>406,052</i>
Matebeleland North	Binga	51,050	124,280
	<i>Sub-total:</i>	<i>51,050</i>	<i>124,280</i>
Grand Total:		457,000	1,023,091

Specific activities to be supported by PMI with FY 2013 funding include:

1. *Procure LLINs for routine replacement and keep-up distribution:* Procure approximately 280,000 LLINs for distribution through routine ante-natal clinic (ANC) and child welfare clinics to maintain coverage of vulnerable populations. Geographic targeting will depend on previous campaign results, the status of improvements to routine distribution systems rollout, and MOH guidance. (*\$1,700,000*)
2. *Planning, distribution, and evaluation of routine ITN distribution systems:* PMI will provide support to the NMCP in logistics and operations to strengthen routine ITN distribution systems and supply chain management to promote continuous availability of ITNs to people who need them and to strengthen the distribution systems capacity for efficient delivery of ITNs to end users. (*\$150,000*)
3. *Technical assistance to implement LLIN activities:* One USAID technical assistance visit to support overall ITN distributions. (*Costs included in core USAID budget*)

2. Indoor Residual Spraying

NMCP/PMI Objectives

Zimbabwe has a long history of implementing IRS, dating back to 1949. Currently, the NMCP IRS strategy targets one round of spraying in the 45 malarious districts. There is not yet an articulated strategy on the combination or balance of IRS and LLINs, and LLINs continue to be distributed in the 30 districts with the highest malaria burden. According to the 2010-2011 DHS, 17% of households received IRS within the past 12 months. This figure ranged from 40% in high-burden malaria provinces (Matabeleland North) to 2% in Harare, where there is little or no malaria transmission.

The program used DDT until 1991, when it was replaced with pyrethroids. However, after the switch, a marked increase in reported malaria cases was observed, prompting the reintroduction of DDT in 2004. The program continues with a mix of DDT and pyrethroids, where DDT is used only in non-commercial agricultural areas that use pyrethroids for agricultural purposes. In 2011, 11 districts were sprayed with DDT, while the remaining 34 were sprayed with pyrethroids; currently there is a very small stock of DDT left in country.

Due to financial constraints, the total number of rooms sprayed and population protected from 2001-2007 were below the targets as shown in the table below. From 2008 to 2010, funding from the Global Fund, the European Commission, DfID and USAID increased and IRS coverage expanded.

Table 6: Rooms sprayed and population covered 2001-2011

Season	Target Rooms	Rooms sprayed	% Coverage	Target Pop	Pop protected	% Pop. Protected
2001	1,191,950	762,848	64	1,602,334	1,229,798	77
2002	2,235,151	680,577	30	4,732,872	1,022,603	44
2003	2,235,151	284,128	28	4,732,872	435,748	20
2004	2,175,026	1,350,403	62	3,373,034	2,031,509	60
2005	1,839,727	1,271,474	69	1,875,472	1,608,848	86
2006	1,764,368	1,212,572	69	2,920,561	1,659,393	57
2007	1,413,074	588,994	42	2,436,172	742,289	30
2008	1,111,663	958,045	85	1,630,915	1,242,346	80
2009	1,992,181	1,638,303	86	3,096,049	2,575,116	86
2010	2,255,318	2,023,159	90	3,478,413	3,090,289	89
2011	2,423,091	2,150,383	93	3,496,756	3,299,058	92

IRS training occurs at three levels: for provincial managers; for IRS district managers; and for spray operators. The Zimbabwe NMCP uses a variety of training materials developed by the program itself, by WHO, and by the major insecticide manufacturers. In addition to hands-on spraying practice, training includes presentations on malaria epidemiology and entomology. Health and safety issues are also included in the IRS training, including the provision and use of personal protective equipment (PPE) and safe handling of pesticides.

Technical support and coordination for entomological monitoring in Zimbabwe is provided by the National Institute of Health Research (NIHR), formerly known as the “Blair Institute”. During the early 1990s, vector mapping and vector bionomics were identified as priority activities along with insecticide susceptibility monitoring and bioassay assessments. A total of sixteen entomological monitoring sites, two sites per province, were established with Global Fund support. While the sentinel sites do have some equipment and some staff have been trained, support is needed for continued entomological surveillance.

Results of susceptibility monitoring using the WHO tube assay are forthcoming. However, there is extensive information available on wall bioassays of sprayed surfaces, using locally collected *An. arabiensis*. This information suggests that resistance is very focal, and differs by districts. Where PMI is supporting IRS, there is some data/confidence that the vectors remain susceptible to the insecticides that are being applied. The table below indicates that all districts supported by PMI are fully susceptible to both pyrethroids and DDT.

Table 7: Bioassays (mortality rates) conducted on sprayed surfaces (2007 to 2012)

Year	Insecticide	District	Months post spray	Mean mortality (%)	Range (%)
2012	Lambda-cyhalothrin	Hurungue	2	100	100
	Lambda-cyhalothrin	Murehwa	2	100	100
	Lambda-cyhalothrin	Mutare	2	99	88-100
	Deltamethrin	Murehwa	2	100	100
	DDT	UMP	2	100	100
	DDT	Chipinge	2	100	100
2011	DDT	Gokwe South	4	92	77-100
2010	Deltamethrin 5WP	Kwekwe	1	90	80-100
			2	94	80-100
2009	Deltamethrin 5WP	Beit Bridge	1	93	78-100
			2	100	100
			3	95	83-100
			4	97	88-100
			5	93	80-100
			6	97.7	84-100
2008	Lambda-cyhalothrin 10WP	Gokwe North	3	68.9	61.5-100
2007	Lambda-cyhalothrin CS	Gokwe South	2	74.5	51-80
			3	61.4	11.1-100

At the national level, the Vector Control Subcommittee, including partners and vector control experts, meets quarterly, or more frequently during the spray season to provide guidance and technical advice to the NMCP. A monitoring and evaluation framework tracks inputs, outputs and outcomes of the spraying, as well as entomological monitoring. Standard indicators include the proportion of the targeted rooms sprayed, the proportion of the targeted population protected, refusal rates, amounts of insecticide consumed, and average daily spray rates. Although the NCMP monitors IRS by using 'rooms sprayed,' for the purposes of PMI reporting, 'structures sprayed' will be tracked.

Progress during the past 12 months

PMI, via its implementing partners, began support for IRS activities in Zimbabwe by conducting a Supplemental Environmental Assessment to the Programmatic Environmental Assessment, to ensure that activities will not adversely impact the environment, people and bio-diversity in the country.

PMI will support the procurement of pyrethroids, PPE, spray pumps and parts, and other ancillary equipment to fill gaps not covered by Global Fund or the NMCP. PMI will also support quality assurance testing on the pyrethroids procured. PMI will also support some of the trainings for the spray teams, monitoring and supervision during the spray campaign and monitoring of environmental compliance.

Routine entomological monitoring has been conducted with PMI funding. This includes insecticide susceptibility, vector identification, behavior and density, mechanism of resistance, and monthly wall bio-assays to monitor the efficacy and quality of IRS. To date, the quality monitoring of IRS was conducted during the second quarter of FY 2012, and the report showed mortality rates of at least 99% on DDT, deltamethrin, and lambda-cyhalothrin treated walls in the three provinces supported by PMI.

Plans and justification

Due to the NMCP's experience and capabilities to conduct IRS, PMI support will not encompass the entire IRS package, as in other countries. Instead, PMI will work with the NMCP to establish a robust insecticide resistance management system.

PMI support will continue to focus on three high-burden malaria provinces, while also providing technical support to nationwide activities, including IEC messaging for IRS, strengthening of the data collection and M&E system, and entomological surveillance in the 16 established sentinel sites.

Challenges, opportunities, and threats

The Environmental Health Technicians and health facility workers are responsible for IRS implementation in the communities, including the training of trainers, and IRS supervision. Since PMI is unable to support staff per diems or allowances for monitoring visits to the field, ensuring that monitoring visits occur and that staff are compensated is a challenge. The same difficulties are applicable to the research officers under the NIHR, who would normally lead the IRS bio assays and manage the routine entomological surveillance at the 16 sites. The procurement of quality-assured DDT is also another challenge, as there is only one manufacturer available and limited demand for the product, resulting in supply issues.

Proposed activities with FY 2013 funding (\$2,012,000)

PMI will continue to fill gaps in IRS funding not covered by the Global Fund or the NMCP. PMI will continue support of IRS in 17 districts in the three most high-burden provinces: Manicaland, Mashonaland East and Mashonaland West. While the other 28 districts will not receive direct PMI support for operations, they will receive indirect support via inclusion in national-level IRS activities, such as: higher-level training, national review and planning meetings, and technical assistance with environmental practices and M&E.

Table 8: Provinces and districts receiving PMI support for IRS

Province	District	Target Rooms	Target Population
Manicaland	Chipinge	100,639	135,304
	Mutare	94,967	116,687
	Mutasa	82,710	92,800
	Nyanga	71,974	94,972
	Chimanimani	62,192	76,922
	Buhera	39,651	73,841
	Makoni	46,214	56,949
Total		498,347	647,475
Mashonaland East	Mudzi	88,088	138,774
	UMP	86,775	115,236
	Murewa	56,811	85,124
	Mutoko	89,337	131,136
Total		321,011	470,270
Mashonaland West	Kariba	21,314	36,833
	Chegutu	17,228	23,304
	Hurungwe	47,742	137,058
	Kadoma	39,013	54,325
	Zvimba	19,830	25,851
	Makonde	48,442	67,396
Total		193,569	344,767
Total: 17 districts in 3 provinces		1,012,927	1,462,512

Note: The above table lists the NMCP indicator as rooms; for the purposes of PMI reporting structures will be used instead.

Specific activities to be supported by PMI with FY 2013 funding include:

1. *Support spray operations:* Support for IRS in 17 high-burden districts in three provinces, covering a population of approximately 1.5 million. The number of structures to be targeted will depend on a census of the areas. Support will include procurement of pyrethroid insecticide and other IRS equipment, such as PPE, camping gear, spray pumps, and spare parts. Quality assurance testing for the procured pyrethroids will also occur with PMI funding. The remaining funds will support training, meetings and environmental best practices. (\$1,800,000)
2. *Entomological surveillance and monitoring:* Zimbabwe plans to maintain sixteen entomological monitoring sites throughout the country, with the National Institute of Medical Research (NIMR) serving as a reference laboratory for molecular identification and determination of insecticide resistance mechanisms. PMI will continue to support entomological surveillance in some of the existing sites. Entomological surveillance activities will include adult and larval mosquito surveillance to assess the impact of IRS activities in targeted districts, and bioassays to determine IRS longevity on treated surfaces. In addition, PMI will provide insecticide resistance monitoring equipment and

According to the 2010-11 DHS, 90% of pregnant women who gave birth in the five years preceding the survey attended ANC at least once during pregnancy, while 65% made four or more visits with 65.1% delivering at a health facility⁵. A case management audit conducted in 2011 showed that 67% of pregnant women received the first dose of IPTp, with 63% receiving the second dose of IPTp and 54% receiving the third dose of IPTp. The case management audit sampled both private and public facilities in districts that implement the intervention unlike DHS where the denominator includes districts that are not implementing the intervention. In the DHS conducted in 2010-11, the proportion of pregnant women living in households with any type of net, who slept under the net, was 37% for urban and 28% for rural areas. The percentage of women delivering during the two years preceding the survey who received SP during ANC was 13.9%, and 7.8% had received two or more doses⁶.

Progress during the past 12 months

The NMCP has printed MIP training manuals which are currently being used to train health center workers. The training materials will soon be reviewed and updated to reflect the current program's policy and strategy which is in line with WHO recommendation. A new data collection tool from the HMIS is in use and it requires districts and provinces to report on IPTp doses administered.

Plans and justification

The NMCP plans to train more health center workers on control and prevention of malaria in pregnancy. The initial training is focusing on districts where MIP control is recommended. This is a comprehensive training that will improve service delivery for MIP specifically and maternal health in general. The program is also training VHWs on MIP and educates them on referral of pregnant women to health facilities for IPTp and other maternal health services.

Challenges, opportunities, and threats

In 2010, because of the SP stock outs, an emergency procurement of SP was necessary. After training of health center workers and VHWs, there is the need for adequate support supervision and correction when needed. Although there is some funding for monitoring through the Global Fund, the amount is not enough. The current USG restriction on funding to the GoZ and its affiliated institutions, makes it challenging for PMI to support the NMCP and the provincial teams to conduct adequate supervision as needed.

Proposed activities with FY 2013 funding (\$10,000)

1. *Procure SP:* PMI will support the NMCP to conduct a quantification of SP needs, and also procure approximately 95,000 SP treatments. (\$10,000)

⁵ Personal communication with Deputy Director for Reproductive Health, MoHCW, July 2011.

⁶ Zimbabwe Demographic Health Survey, 2011.

2. *Support the training of health workers in MIP:* PMI will assist the NMCP to train health workers on MIP implementation and data collection, as part of the overall training support for malaria case management. All nurses at ANC in district hospitals and nurses at health centers will benefit from the training. (*Costs included in case management training*)

4. Case management: Diagnosis

NMCP/PMI Objectives

Since August 2010, the NMCP policy is to have parasitological confirmation of all suspected malaria cases by microscopy or rapid diagnostic test (RDT) before prescribing treatment. Exceptions to this policy are made in the case of a malaria epidemic or a stock out of diagnostic tests at the health facility. RDTs and/or microscopy are typically used for malaria diagnosis at all health facilities, with the exception of primary health facilities where only RDTs are available.

Zimbabwe has three main cadres of laboratory staff: clinical scientists with a master's or doctorate level degree; general laboratory scientists with a bachelor's degree from the university; and state certified laboratory technicians who receive two years training post-high school at polytechnic level. A professional registry, the Medical Laboratory and Clinical Scientist Council, accredits personnel before they can practice. The microscopists currently employed in the health services are paid through the Global Fund Round 8 so at the end of the grant it will be difficult to retain them as there is hiring freeze in the government sector. Zimbabwe has five central hospitals, eight provincial hospitals and sixty-eight district hospitals, four of which are situated in urban areas; these facilities have laboratories.

The Department for Laboratory Service is located under the Directorate of Curative Services of the MOHCW, and is funded primarily by the GoZ. The department is responsible for policy formulation and organizes refresher training of laboratory personnel. The department's activities are conducted in collaboration with the Tuberculosis Reference Laboratory in Bulawayo, National Virology Laboratory at the medical school, and the National Microbiology Reference Laboratory. Through Global Fund support, about 200 microscopes were purchased under the tuberculosis program. The Ministry supplies laboratory reagents but the quantities are usually not sufficient to meet all needs.

With Global Fund Round 5 support, the Zimbabwe National Quality Assurance Program (ZINQAP) provided external quality assurance and proficiency testing for laboratories on behalf of the NMCP. The ZINQAP is an independent institution with fifteen technical staff based in Harare. The ZINQAP conducts quarterly proficiency testing for laboratories and conducts site visits twice a year to provincial and district laboratories. After each visit, a preliminary report of findings and recommendations is left with the facility: a finalized report follows with copies to the laboratory directorate, the provincial medical director and the facilities visited. Although the Global Fund SSF grant does not include funding for laboratory QA/QC, PEPFAR is funding ZINQAP for laboratory quality assurance. The ZINQAP works in close collaboration with staff

from the National Microbiology Reference Laboratory, the medical schools and the laboratory technician schools. Since October 2011, ZINQAP has established regional quality control offices in some provinces to facilitate more quality assurance visits to health facilities.

Progress during the past 12 months

With PMI support to date 63 health facility staff have been trained on malaria diagnosis and case management, lower-level laboratory staff have been trained on RDT use and slide preparation, and 180 village health workers have been trained on community-based case management.

Challenges, opportunities, and threats

While most clinical and laboratory scientists are quite proficient, laboratory technicians and microscopists would benefit from refresher training on general laboratory procedures, microscopy, and RDT work. Also laboratory supervision is inadequate, but USG restrictions on work with the GoZ make it difficult for PMI to support MOHCW staff to facilitate supervisory visits. The supply chain management of laboratory reagents for malaria slide preparation is inadequate, causing some laboratories to use RDTs even though they have microscopes.

Proposed activities with FY 2013 funding (\$2,422,000)

1. *Procure RDTs for malaria diagnosis:* PMI will procure approximately 3 million RDTs to complement those procured through the Global Fund. The RDTs will be used at both health facilities and the community level. (\$2,250,000)
2. *Support quality assurance for diagnostics:* PMI will support quality assurance of malaria diagnostics to improve malaria case detection, via a local implementing partner. This activity will build upon existing QA systems and help to build capacity. (\$160,000)
3. *Technical assistance visit:* by a CDC laboratory expert to provide technical support to the NMCP on malaria diagnostics, including RDT implementation. (\$12,000)
4. *Support the training of staff at health facilities:* on microscopy slide preparation and RDTs, as appropriate. This activity is co-funded with Global Fund and is part of malaria case management training. (Costs included in case management training)
5. *Support the scale up of the training and supervision of village health workers:* on malaria case management and diagnosis using RDTs. This activity will be co-funded with Global Fund. (Costs included in case management training)

5. Case management: Pharmaceutical and Commodities Management

NMCP/PMI Objectives

Historically, essential medicines and medical supplies, including malaria commodities, were managed by the Zimbabwe Essential Drugs Action Program (ZEDAP), with NatPharm

responsible for the procurement, storage and distribution. This system was a traditional pull system, where primary health facilities would send their orders to the district, which would then consolidate orders and place them with the regional NatPharm branch. The economic crisis further undermined the underfunded system which along with low product availability, an inconsistent transportation/delivery system, weak reporting, poor communication, low staff morale due to low salaries and brain drain, contributed to the inefficiency of the system and frequent stock outs.

In September 2009, the MOHCW with partners support began a pilot delivery system to improve tuberculosis and malaria drug distribution to primary health facilities and gather logistics data. The Zimbabwe Informed Push System (ZIPS) is essentially a mobile warehouse, which stops quarterly at each primary health facility to assess the stock status, and then based on consumption data, stock on hand and losses/adjustments, tops the facility up to the maximum stock (six months) for all commodities. The ZIPS team will also re-distribute stocks within the system if a facility has a shortage or soon-to-expire stocks. After a six month pilot, the MOHCW decided to roll out ZIPS nationwide. The ZIP system now reaches 1,534 primary health care facilities on a quarterly basis, and has achieved over 95% distribution coverage and reduced the frequency of stock outs from greater than 30% to less than 5%⁷. In September 2010, the essential medicines and medical supplies were included in the Primary Health Care Package, bringing the total to approximately 20 items managed by ZIPS. The main partners currently supporting implementation of the ZIPS/PHCP system are NatPharm, UNICEF, the USAID|DELIVER PROJECT and Crown Agents Zimbabwe. Donor funding comes from PMI and Dfid.

The current plan of the MOHCW is to continue with the ZIPS delivery system and as the economic situation improves, shift back to a traditional NatPharm supported pull system. The MOHCW hopes to pilot a redesigned pull system in 2013 or 2014. One proposal is to have a hybrid or an assisted pull system, where each facility is still visited quarterly to get the stock counts for all commodities. Once the data are collected, consumption and stock status reports would be turned over to NatPharm, who would then organize and pack the necessary commodities and deliver them to the health facilities.

Progress during the past 12 months

PMI has supported the ZIPS operations, ensuring that malaria commodities are delivered on a quarterly basis to the approximately 1,500 primary health facilities in Zimbabwe. Although not all health facilities receive malaria commodities, ZIPS also delivers tuberculosis and primary health care packages, hence quarterly visits to all facilities. The funding supports the fuel and maintenance of the 18 delivery trucks, per diem for the drivers, the automated software as well as the technical assistance and supervision for entire system. The quantification process, including updates every trimester, is led by the Directorate of Pharmacy Services in consultation with the NMCP.

⁷ Overview of malaria commodities supply chain in Zimbabwe, USAID|DELIVER PROJECT, July 2011.

Plans and justification

PMI will continue to support the implementation of ZIPS in order to ensure that malaria commodities, such as ACTs, RDTs, severe malaria medicines and SP, are available in health facilities. PMI also plans to support a system redesign once a plan is agreed upon by the MOHCW and stakeholders.

Challenges, opportunities, and threats

One challenge with ZIPS is the new cadre of VHWs who are currently being trained in RDT use and dispensing ACTs at the community level. VHWs are given an initial supply of 25 RDTs and 12 ACT treatments, once they complete their training. VHWs are supposed to come to their designated health facility monthly to report their consumption and for resupply. However, since RDTs have never been in full supply in Zimbabwe, and the actual consumption of RDTs at the health facility level, and projected consumption of ACTs and RDTs by VHWs is unknown, there could be supply and delivery challenges for ZIPS.

Another challenge to ZIPS is tied with the USG restrictions in Zimbabwe, and PMI's partnership with Global Fund, and DfID, via Crown Agents Zimbabwe. With each ZIPS trip, the district pharmacy technician joins the delivery team and visits the health facilities. Since USG funds cannot support any MOHCW staff, PMI partners, Global Fund and DfID, have been contributing to the per diems of the district staff. If other partners encounter funding issues, it would be difficult to continue ZIPS operations.

Proposed activities with FY 2013 funding (\$480,000)

1. *Support ZIPS distribution system:* Support ZIPS operations to provide ACTs and RDTs to approximately 1,400 health facilities nationwide. Funds will complement other ZIPS funding towards LMIS forms, reproduction, ZIPS trainings, and delivery team support. (\$480,000)

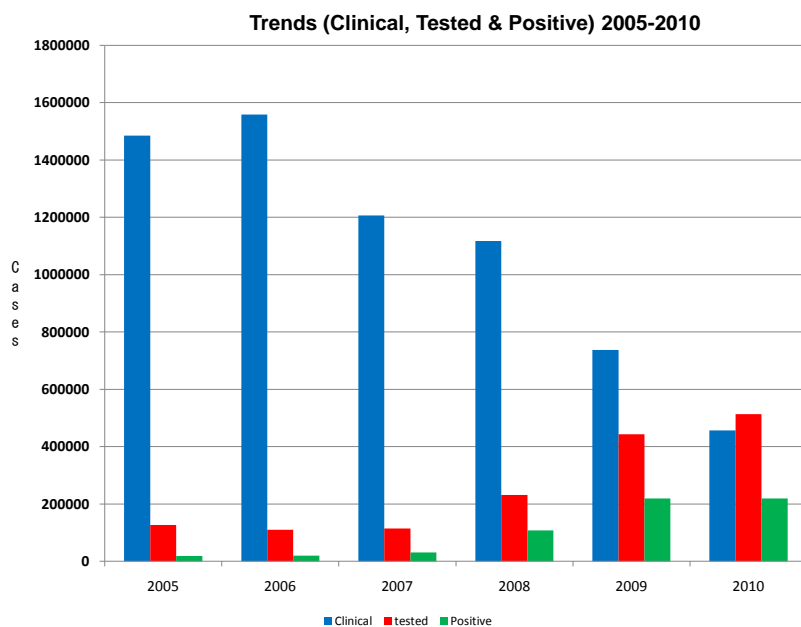
6. Case management: Treatment

NMCP/PMI Objectives

In 2004 Zimbabwe adopted artemether/lumefantrine as its first-line treatment for uncomplicated malaria. When Zimbabwe was awarded the Global Fund Round 5 grant in 2007, they procured Coartem® and trained health workers on the new policy. The first line treatment is Coartem® and quinine plus doxycycline or clindamycin for severe malaria treatment, with quinine plus clindamycin being used for children below eight years and pregnant women. Currently, the national policy for treatment of severe malaria is parenteral quinine. However, the case management advisory committee has just recommended the use of parenteral artemisinin derivatives for the treatment of severe malaria and the use of artesunate suppositories for pre-referral treatment of severe malaria especially in children. This new policy will be incorporated into training manuals and treatment guidelines by the 2nd and 3rd quarters of this year.

Malaria case reporting data includes both laboratory-confirmed and unconfirmed cases. Since 2005, the number of cases diagnosed clinically is falling whereas parasitological diagnosis is increasing (see Figure 6). As of 2010, the NMCP policy recommends parasitological confirmation of all malaria cases. Malaria case management is free in public health facilities; but at council and church health facilities, user fees are charged, although RDTs and ACTs are free.

Figure 6: Trends in malaria case detection



The NMCP, in collaboration with the National Institute of Health Research (NIHR), maintains eight sites, one in each of the rural provinces, where they monitor the efficacy of the first-line malaria treatment. These sites are being supported by the Global Fund; the NMCP will acquire a PCR machine from its Global Fund Round 10 grant to support the NIHR conduct molecular analyses and differentiate re-infection from recrudescence.

Community case management

In 2010, the NMCP adopted a policy of community case management for malaria and conducted pilot study on this. Trained VHWs test all suspected cases with a RDT and treat those with positive results with an ACT. The NMCP is scaling up the training of community VHWs to implement community-based treatment on national scale in malaria endemic districts. The community-based health workers are selected from the ward. After training they are given 25 RDTs, 10 ACT treatments, and a register by the primary health facility serving their area. The primary health facility staff is responsible for supervision of the VHWs and data collection. The EHT will be trained to support VHW supervision. The NMCP plans to train 6,600 VHWs in malaria case management by 2013, according to the new policy of parasitological confirmation of case.

Progress during the past 12 months

Training of VHWs started late due to the late release of funds from donors but the training is ongoing. In 2010, 90 VHWs were trained, in 2011, 2,382 were trained and so far in 2012, 1,400 volunteers have been trained.

Plans and justification

The NMCP is planning to accelerate the training of the VHWs as funds become available so that community case management of malaria will be scaled up in the malaria endemic districts and this will improve access to malaria care.

Challenges, opportunities, and threats

The immediate challenge to the CHWs is to have adequate supply of especially RDTs so that they do not treat cases clinically. The very low rate of attrition of the trained CHWs needs to be monitored closely especially when there are no more incentives from the Global Fund.

Proposed activities with FY 2013 funding (\$2,450,000)

1. *Procure ACTs:* PMI will procure approximately 1.3 million ACT treatments for use in health facilities and by VHWs. (\$1,600,000)
2. *Training and supervision for health facility workers:* PMI will work with the NMCP to improve malaria case management by supporting the training and supervision of health facility workers. Training will include both ACTs, RDTs and IPTp, and will be co-funded by Global Fund. (\$300,000)
3. *Scale up training and supervision of VHWs in community case management:* PMI will support the training of VHW to improve access to the population and the quality of malaria case management at the community level by funding the training and supervision of community health workers on ACTs and RDTs. This activity will be co-funded by Global Fund. (\$550,000)
4. *Technical assistance:* to support the NMCP with malaria case management implementation. (Costs included in diagnostics section)

7. Monitoring and Evaluation

NMCP/PMI Objectives

The NMCP's Monitoring and Evaluation (M&E) Plan was released in 2009. The M&E plan is based on the Global Fund M&E Toolkit, WHO recommended indicators, and internationally accepted tools and practices related to M&E. The M&E plan defines national malaria indicators, sources and frequency of data collection, measurement procedures, as well as mechanisms to

track progress towards targets. Surveillance, M&E and research in malaria have evolved over time with the National Health Information System processing morbidity and mortality data through the recently launched District Health Information System (DHIS). Major M&E activities include nationwide surveys (2012 MIS, 2010/11 DHS), audits, Planning and Review Meetings, rapid assessments, support and supervisory visits to institutions and routine data collection. Information obtained is used for evidence based decision making, program management and accountability.

Surveillance, M&E and Operational Research data are collected, reported and recorded from many channels including routine data systems, programmatic monitoring, and national surveys.

Routine Data Systems

The main sources of routine malaria data are the National Health Information System (NHIS) and the Weekly Disease Surveillance System (WDSS), a subset of Integrated Disease Surveillance and Reporting (IDSR). The NHIS has recently implemented a District Health Information System (DHIS) which will form the foundation for the country's Health Management Information System. Monthly reports on malaria cases and deaths from all public health facilities and NGO clinics are reported through the DHIS. With regard to malaria these data include the number of suspected cases, number of suspected cases with parasitologic testing, number of parasitological-confirmed cases, ACT consumption, and IPTp uptake. DHIS information is reported from health facilities to district health information officers who enter these data into a DHIS electronic database. Consolidated electronic data are then reported to the 10 provincial offices where data are consolidated from the districts and then reported to the national level. The DHIS was implemented nationally in 2011; training of district and health facility staff is ongoing but has experienced delays due to funding constraints. Other implementation barriers include lack of resources for on-site validation checks, supervisory visits, and staff vacancies at the district and provincial levels. As a result, the system is currently under-performing, with problems related to both the timeliness and completeness of data. Other problems include limited training, supervision, hardware, and difficulty with connectivity in some settings.

The Weekly Disease Surveillance System (WDSS) provides weekly data on 12 epidemic-prone diseases, including clinically diagnosed and laboratory-confirmed malaria cases and deaths, from 700 health facilities nationwide. The epidemic threshold is reached when the number of weekly cases exceeds 30% of the five-year weekly average of cases. The program uses a 30 percent factor to account for systematic over-diagnoses that occurred prior to RDT scale-up which began in 2009. Participating sites submit data to the districts which then transmit to provincial and central levels. Weekly meetings are held at the national level to review and discuss data quality, potential outbreaks, and action steps. A weekly report is also produced and distributed to the national program areas. In 2006 the WDSS was recognized by WHO as the best IDSR system in the Southern Africa Region, but the system has been in decline from 2007 to 2009 during the economic downturn. The WDSS system is currently being revitalized; during the most recent reporting period completeness of data ranged from 58-66% and timeliness from 51-57%.

Programmatic monitoring

Programmatic data on IRS, LLIN distribution, and larviciding are managed using the WHO Global Malaria Database by the NMCP, who is also responsible for maintenance of the database at no cost to PMI. These data are used to monitor and report on the implementation of all malaria control activities. Data are collected from the sub-district level and passed through district and provincial levels to the national level on a weekly, monthly, or quarterly basis, depending on the data being reported. The system was initiated in 2010; full implementation began in late 2011.

National surveys

The most recent DHS was conducted in 2010 and incorporated a standard malaria module. UNICEF supported a Multiple Indicator Monitoring Survey (MIMS), similar to the MICS in terms of the malaria module, in April of 2009 that also included a malaria module. Data from the DHS and MIMS provide pre-PMI baseline estimates (see Table 1) for most all coverage indicators used by PMI. PMI supported a MIS in 2012 with anemia and parasitemia biomarkers. UNICEF is considering sponsoring another MIMS in 2014 to measure progress towards the Millennium Development Goals. The next DHS will likely take place in 2015 and this may affect UNICEF's plans for the MIMS in 2014.

Progress during the past 12 months

The total number of reported confirmed malaria cases has decreased dramatically in Zimbabwe during the past two years. In 2011, a total of 231 deaths were recorded, of which 56 (24%) were children under five years of age. Though this has not been assessed recently, the NMCP is confident in the reporting completeness of the provincial and district health facilities.

During 2012, the NMCP, in collaboration with Global Fund and PMI, completed a nationwide Malaria Indicator Survey (MIS). Results from the 2012 MIS will be used to guide future M&E strategies and activities, and should be available in fall-2012. Since PMI began support for malaria training activities in Zimbabwe the trainings in malaria case management have continued on course and will continue during FY 2013. To date, 63 of the 285 targeted trainings in case management for health facility staff have been completed; 36 of the 167 targeted M&E trainings have been completed; and 180 of 1,965 community health workers have been trained.

A scope of work has been drafted by the implementing partner for the end-use verification survey (a survey to verify availability of malaria drugs and RDTs in health facilities and warehouses), which was conducted in June 2012. Additional follow-up surveys are planned to be conducted in FY 2013.

Plans and justification

PMI support will continue for M&E trainings on all levels including village and community health workers as well as supervisory and district health facility trainings. In addition, PMI support will be used to facilitate quarterly meetings for district, provincial and national level representatives to meet and discuss surveillance and M&E related issues.

Previously, the therapeutic efficacy studies (TES) have been conducted by the National Institute of Health Research (NIHR) at eight established study sites; however, due to funding shortages the last testing was conducted in 2010. Therefore, PMI identified this as a priority M&E activity and funding of four of the eight study sites will be implemented in the FY 2012 budget with the remaining four sites funded in the FY 2013 budget.

Challenges, opportunities, and threats

The current USG restrictions prohibit giving any funding to the GoZ or any institution affiliated with the GoZ, make it challenging to implement NIHR related TES activities in Zimbabwe. The trained nurses and staff of NIHR are responsible for conducting the TES activities, since we are unable to support staff we will therefore fund the purchasing of laboratory and other equipment items needed to conduct the therapeutic efficacy studies.

Proposed activities with FY 2013 funding (\$712,000)

1. *End-use verification survey:* Conduct quarterly surveys to verify availability of malaria drugs and RDTs in health facilities and warehouses. (\$100,000)
2. *Therapeutic efficacy Studies:* Support ACT therapeutic efficacy studies in four of the eight designated sentinel sites, in conjunction with NIHR. The other four sites will be supported with FY 2012 funds. (\$200,000)
3. *Monitoring and evaluation training:* Support the NMCP to train staff at the regional, district, and health facility levels in routine data collection systems (DHIS, WWDS, and Global Malaria Database). The training will include use of new data collection formats; revision of data collection forms where appropriate; analysis and reporting; and limited computer hardware and software. Trainings will support strengthening the quality of malaria data (completeness, accuracy, timeliness, and consistency) at the health facility, district, and regional levels. PMI will provide assistance to ensure that the malaria component of the DHIS is implemented consistently across all provinces. Support the NMCP to analyze and monitor the malaria trends, and improve preparedness for epidemic response. In addition, technical assistance will be provided to strengthen malaria M&E data collection and analysis at the national level. (\$400,000)
4. *Technical assistance:* Support for technical assistance from the CDC PMI M&E team, including working with the NMCP to implement their harmonized malaria M&E plan, support for the implementation and evaluation of the DHIS at all levels of the system, and support for the Weekly Disease Surveillance System (WDSS). (\$12,000)

8. Behavior Change Communication

NMCP/PMI Objectives

The purpose of Zimbabwe's 2008-2013 National Malaria Communication Strategy is to guide implementing partners and service providers. Zimbabwe uses a three-pronged approach consisting of advocacy, social mobilization and behavior change communication (BCC) across the four main malaria interventions: vector control (IRS, LLINs and larviciding), case management, IPTp, and epidemic preparedness and response.

Mobilizing traditional and religious community leaders and civic organizations to support and promote malaria prevention and control is critical for achievement of the NMCP strategy and PMI objectives. Attached to each primary health facility is one or more ward health team (WHT), who are composed of volunteers from the community. WHTs often include community health workers, school masters, and community leaders, who assist with malaria communication for IRS and LLIN distribution campaigns. Community malaria committees are made up of volunteers selected by their communities and trained by the primary health facility staff on key malaria messaging at an interpersonal communication level. With the implementation of community case management of malaria using VHWs, the NMCP is planning to put more emphasis on VHW activities. This includes strengthening the WHTs and community malaria committees, which often coordinate malaria prevention activities with the VHWs.

Progress during the past 12 months

PMI funding for BCC has been used to improve malaria prevention activities, including the utilization of LLINs, the acceptance of IRS, and national stakeholder sensitization meeting for the MIS. According to the 2011 Tracking Results Continuously (TRaC) survey, LLIN usage increased from 9% in 2008 to 50% in 2011⁸. The funds have also been used to emphasize LLIN uptake and utilization; promoting early treatment seeking behavior to improve malaria case management, and increasing awareness for IPTp. PMI support contributed to the development of the communications strategic plan, and PMI's implementing partner acts as the chair for the malaria specific IEC/BCC sub-committee.

Plans and justification

The Global Fund Round single stream of funding (SSF) grant has support for the development and implementation of malaria control communications, via mass-media and community-based activities. PMI support will complement Global Fund activities and, under NMCP guidance focus on inter-personal communication, pre-season transmission malaria prevention activities and case management of malaria. Evidence-based messages, focusing on a target audience, are used, and the delivery methods include mass media, interpersonal communication, and print media. While the NMCP's National Communication Strategy does include a monitoring and evaluation component for BCC, support is needed to evaluate specific interventions and actual

⁸ Note that the variation between the 2011 DHS and 2011 TRaC results are probably due to sampling, timing of the surveys, and additional interventions in TRaC survey areas.

behavior change. PMI also plans to support the future development of a new National Malaria Communications Strategy in 2013.

Challenges, opportunities, and threats

The NMCP coordinates and oversees all malaria-related BCC messaging for all areas of intervention. USG restrictions prevent PMI from directly supporting NMCP staff, which can make BCC rollout and implementation challenging.

Proposed activities with FY 2013 funding (\$400,000)

1. *Support malaria IEC/BCC:* Support for the development/revision of existing materials, reproduction, dissemination to target audiences, and evaluation of BCC materials for malaria communications. Funds will also support technical assistance for the development of the National Malaria Communications Strategy. The funds will include support for LLIN distribution (both campaign and routine via ANC and EPI services) and additional materials to support the VHW program, such as the VHW toolkit. PMI supported BCC activities will promote increasing knowledge and enabling behaviors related to malaria prevention and treatment. PMI-funded BCC activities will be closely coordinated with Global Fund BCC activities to maximize resources. (*\$400,000*)
2. *Technical assistance:* One USAID technical assistance trip to support harmonization of IEC/BCC implementation with PMI partners and the NMCP. (*Costs included in core USAID budget*)

9. Capacity Building and Health Systems Strengthening

NMCP/PMI Objectives

PMI supports activities that build capacity within a country and include the support and integration of the Field Epidemiology Training Programs (FETP). The University of Zimbabwe trains health personnel in field epidemiology, data analysis, epidemiologic methods, and use of strategic information to make appropriate health decisions. This is a two-year course, which typically benefits central- and provincial-level MoH personnel. PMI will help strengthen the malaria module of the FETP course curriculum and increase opportunities for malaria-focused program and research activities. The university also organizes a short course on leadership and health management for middle-level cadres who work at the district level. PMI is intensifying its efforts to build in-country capacity and integrate malaria activities with other USG programs. In response to the NMCP's various human resource challenges, PMI is invested in training programs at various levels including health facility and village and community health workers. PMI helps fund the supervision of health workers in health facilities involved in the implementation of malaria activities at the health district level. PMI also supports national and provincial meetings, which provides a platform to exchange information and increase communication within the country. Also, PMI will continue to support strengthening reinforcing the capacity of the logistics management system and overall supply chain management.

Progress during the past 12 months

The FY 2011 and FY 2012 funds (\$70,000 from each) for the FETP will be combined and obligated through AFENET. These funds will be available by November 2012 and will be applied towards the new cohort of FETP students that begin coursework and training January 1, 2013.

PMI support of additional training programs (e.g. village and community health worker monitoring and evaluation, and health facility workers) was discussed in the Monitoring and Evaluation section.

Plans and justification

Every year, FETP supports students to work on malaria related research and programmatic projects. PMI and the NMCP will continue to work with the FETP to identify areas to strengthen the malaria portion of the curriculum and provide increased malaria-specific training opportunities and projects for the students.

Challenges, opportunities, and threats

The Zimbabwe NMCP has a staff of 12 all of whom are funded through Global Fund grants. At the provincial level, the Provincial Disease Control Officer is responsible for malaria program implementation and monitoring, while at the district level all disease control activities fall on the District Health Director. Due to the economic situation, the staffing and performance at health facilities has been irregular. To fill some of the gaps, the MoHCW has developed an abbreviated training curriculum that is only one year (instead of three years) to train staff to fill vacant technician and nursing positions. Funding constraints have limited the activities available to the public, and some posts were completely abandoned.

The current USG restrictions prohibit giving any funding to the GoZ or any institution affiliated with the GoZ, including the University of Zimbabwe where the FETP students receive their training.

Proposed activities with FY 2013 funding (\$100,000)

1. *Support Field Epidemiology Training Program*: Promote malaria-specific field studies and support at least two trainees to enhance field epidemiology skills. This activity will strengthen mid- to high-level capacity, and develop skilled field supervisors in the malaria field. (\$100,000)

10. Staffing and Administration

Two health professionals currently serve as Resident Advisors to oversee PMI in Zimbabwe, one representing CDC and one representing USAID. In addition, one FSN will be hired to support the PMI team. All PMI staff members are part of a single inter-agency team led by the USAID Mission Director in country. The PMI team shares responsibility for development and

implementation of PMI strategies and work plans, coordination with national authorities, managing collaborating agencies and supervising day-to-day activities.

These two PMI professional staff will work together to oversee all technical and administrative aspects of 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 report to the USAID Mission Director. The CDC staff person is supervised by CDC both technically and administratively. All technical activities are undertaken in close coordination with the MOH/NMCP and other national and international partners, including the WHO, UNICEF, the Global Fund, World Bank, and the private sector.

Proposed activities with FY 2013 funding (\$1,564,000)

- 1. In-country PMI staff salaries, benefits, travel and other PMI administrative costs:*
Support for two PMI (CDC and USAID) Resident Advisors and FSN staff members to oversee activities supported by PMI in Zimbabwe. Additionally, these funds will support pooled USAID Zimbabwe Mission staff and mission-wide assistance from which PMI benefits. The breakdown of funding is as follows: \$900,000 will support USAID staffing and administration costs, while \$664,000 will support CDC staffing and administration costs. (*\$1,564,000*)

TABLE 1: FY 2013 Budget Breakdown by Partner – Zimbabwe

Partner Organization	Geographic Area	Activity	Activity Budget	Total Budget, by Partner
DELIVER	Nationwide	Procure and deliver approximately 280,000 LLINs	<i>\$1,700,000</i>	\$6,140,000
	Nationwide	Procure approximately 95,000 treatments of SP	<i>\$10,000</i>	
	Nationwide	Procure approximately 3 million RDTs	<i>\$2,250,000</i>	
	Nationwide	Procure approximately 1.3 million ACT treatments	<i>\$1,600,000</i>	
	Nationwide	Support ZIPs operations	<i>\$480,000</i>	
	Nationwide	End-use verification survey	<i>\$100,000</i>	
Population Services International	Nationwide	Support LLIN distribution	<i>\$150,000</i>	\$2,000,000
	Nationwide	Support training on malaria case management for health facility workers	<i>\$300,000</i>	
	Nationwide	Support training and supervision of village health workers	<i>\$550,000</i>	
	Nationwide	Support IEC and BCC activities	<i>\$400,000</i>	
	Nationwide	Support therapeutic efficacy studies	<i>\$200,000</i>	
	Nationwide	Support M&E activities	<i>\$400,000</i>	
IRS IQC 2 Task Order 4	17 of 45 targeted districts	Support IRS implementation	<i>\$1,800,000</i>	\$2,000,000

	16 sites	Conduct entomological surveillance	<i>\$200,000</i>	
CDC/IAA/ZINQ AP	Nationwide	Support quality control for diagnostics	<i>\$160,000</i>	\$296,000
CDC/IAA/AFE NET	Nationwide	Field Epidemiology Training Program	<i>\$100,000</i>	
CDC/IAA	Nationwide	Technical assistance trip to support IRS activities	<i>\$12,000</i>	
CDC/IAA	Nationwide	Technical assistance trip to support diagnostics	<i>\$12,000</i>	
CDC/IAA	Nationwide	Technical assistance trip to support M&E	<i>\$12,000</i>	
TOTAL				\$10,436,000

TABLE 2: FY 2013 Planned Obligations - Zimbabwe

Proposed Activity	Mechanism	Total Budget	Commodities	Geographic Area	Description of Activity
ITNs					
Procure and distribute LLINs	DELIVER	\$1,700,000	\$1,700,000	Nationwide	To purchase LLINs for distribution in 30 high burden malaria districts. Approximately 280,000 conical nets at \$6 per net.
Support LLIN distribution	PSI	\$150,000	\$0	Nationwide	To support LLIN distribution, including revitalization of a routine distribution system.
Provide technical assistance to LLIN activities	USAID	\$0	\$0	Nationwide	One USAID TDY to provide support for LLIN distribution (costs covered in core USAID budget).
Subtotal: ITNs		\$1,850,000	\$1,700,000		
IRS					
Support spray operators training and other IRS implementation activities	IRS IQC 2 Task Order 4	\$1,800,000	\$1,000,000	17 of 45 targeted districts	To support IRS implementation in 17 of 45 target districts, including the procurement of equipment & insecticides, training support, and other logistics required for spray operations. Funding will complement GF and NMCP funding.

Conduct entomological surveillance and monitoring	IRS IQC2 Task Order 4	\$200,000	\$0	a portion of the 16 surveillance sites plus Harare	To provide support to the NIHR and the NMCP for comprehensive entomological surveillance, including procurement of equipment and supplies for the existing sentinel sites. Monitoring will include vector identification, distribution, insecticide susceptibility, mechanism of resistance and QA for IRS programs.
Technical assistance to IRS activities	CDC/IAA	\$12,000	\$0	Nationwide	One technical assistance trip to provide support for IRS and entomological activities.
Subtotal: IRS		\$2,012,000	\$1,000,000		
IPTp					
Procure SP	DELIVER	\$10,000	\$10,000	Nationwide	To procure approximately 95,000 treatments of SP for IPTp (includes distribution costs to health facility).
Subtotal: IPTp		\$10,000	\$10,000		
Case Management					
Diagnostics					
Procure RDTs for case management of malaria	DELIVER	\$2,250,000	\$2,250,000	Nationwide	To procure approximately 3 million RDTs for use at primary health facility and by village health workers. A small portion of the funds will also be used for the procurement of reagents for

					microscopy.
Support quality control for diagnostics	CDC/IAA (ZINQAP)	\$160,000	\$0	Nationwide	To provide quality control for diagnostics, including RDTs, at the district and primary health care facility level.
Technical assistance for diagnostics	CDC/IAA	\$12,000	\$0	Nationwide	One technical assistance trip to support diagnostics implementation.
<i>Subtotal</i>		<i>\$2,422,000</i>	<i>\$2,250,000</i>		
Pharmaceutical and Commodity Management					
Support for ZIPS distribution system for ACTs and RDTs	DELIVER	\$480,000	\$0	Nationwide	To support ZIPS operations, including quantification, ZIPS trainings, fuel and drivers for the trucks.
<i>Subtotal</i>		<i>\$480,000</i>	<i>\$0</i>		
Treatment					
Procure ACTs and severe malaria drugs	DELIVER	\$1,600,000	\$1,600,000	Nationwide	To procure ACTs for use at health facilities and with village health workers. Severe malaria drugs will also be procured for use at the health facility level. Assumes \$1.25 per treatment, resulting in 1.3 million ACT treatments.
Training on malaria case management for health facility workers	PSI	\$300,000	\$0	Nationwide	To support training (including refresher training) of primary health facility staff on malaria case management (RDTs,

					ACTs) and MIP (SP). To be co-funded with GF support.
Training and supervision of VHWs by health facility workers and EHTs	PSI	\$550,000	\$0	Nationwide	To support the training and supervision of village health workers on malaria case management (including RDTs, ACTs) at the community level. VHW supervisors are health facility workers and EHTs. To be co-funded with GF.
<i>Subtotal</i>		<i>\$2,450,000</i>	<i>\$1,600,000</i>		
<i>Subtotal: Case Management</i>		<i>\$5,352,000</i>	<i>\$3,850,000</i>		
<i>IEC/BCC</i>					
Support malaria IEC/BCC	PSI	\$400,000	\$0	Nationwide	Support malaria IEC/BCC for IRS, LLINs, MIP and case management, particularly for the VHW. Includes the development/revision of existing materials (i.e VHW toolkit), reproduction, dissemination and evaluation.
Technical assistance for IEC/BCC	USAID	\$0	\$0	Nationwide	One technical assistance trip to support PMI IEC/BCC harmonization and implementation (costs covered in core USAID budget).
<i>Subtotal: IEC/BCC</i>		<i>\$400,000</i>	<i>\$0</i>		
Capacity Building					

FETP	CDC/IAA (AFINET)	\$100,000	\$0	Nationwide	Support malaria-specific field studies and at least two student trainees to enhance field epidemiology skills.
<i>Subtotal: Capacity Building</i>		<i>\$100,000</i>	<i>\$0</i>		
M&E					
End use verification	DELIVER	\$100,000	\$0	Nationwide	To implement quarterly surveys to assess the availability of malaria commodities in health facilities and warehouses.
Therapeutic efficacy studies	PSI	\$200,000	\$0	4 sites	To support therapeutic efficacy studies in 4 of the 8 sites, in conjunction with the NIHR. The other 4 TES sites will be supported with FY 2012 funds.
Support M&E activities at provincial, district and primary health facility levels	PSI	\$400,000	\$0	Nationwide	To support M&E activities, including quarterly district health team meetings and provincial M&E review meetings. Also includes training support and supervision from the provincial level down to the primary health facility level. Training will include malaria stratification, epidemic detection and response and IDSR (integrated disease surveillance and response).

					To be co-funded with GF.
Technical assistance trip to support M&E	CDC/IAA	\$12,000	\$0	Nationwide	One technical assistance trip to support M&E strengthening activities.
Subtotal: M&E		\$712,000	\$0		
Staffing and Administration					
In country staffing and administration costs	USAID	\$900,000	\$0	Nationwide	Support for USAID staffing and administration costs.
In country staffing and administration costs	CDC	\$664,000	\$0	Nationwide	Support for CDC staffing and administration costs.
Subtotal: Staffing and Administration		\$1,564,000	\$0		
GRAND TOTAL		\$12,000,000	\$6,560,000		

