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.

USAID
FROM THE AMERICAN PEOPLE

PRESIDENT'S MALARIA INITIATIVE

PRESIDENT'S MALARIA INITIATIVE

Democratic Republic of Congo

Malaria Operational Plan FY 2013

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

ACT	artemisinin-based combination therapy
AL	artemether-lumefantrine
ANC	antenatal clinic
AS-AQ	Artesunate-amodiaquine
BCC	behavior change communication
CCM	country coordinating mechanism (of the Global Fund)
CDC	Centers for Disease Control and Prevention
CDR	regional distribution centers
CNOS	National Council of Health Non-Governmental Organizations
DfID	Department for International Development (British)
DHS	Demographic and Health Survey
DPM	Department of Pharmacies, Medicines, and Traditional Medicine
DRC	Democratic Republic of Congo
FY	Fiscal Year
GDRC	Government of the Democratic Republic of Congo
GF	Global Fund to Fight AIDS, Tuberculosis, and Malaria
GHI	Global Health Initiative
iCCM	Integrated Community Case Management (of childhood illnesses)
IEC	information, education, communication
INRB	*Institut National de Recherches Biomédicales* (National Institute for Biomedical Research)
IPTp	intermittent preventive treatment for pregnant women
IRS	indoor residual spraying
ITN	insecticide-treated net
LLIN	long-lasting insecticide-treated net
M&E	monitoring and evaluation
MICS	Multiple Indicator Cluster Survey
MIS	Malaria Indicator Survey
MOH	Ministry of Health
MOP	Malaria Operational Plan
MSH/IHP	Management Sciences for Health – Integrated Heath Project
NGO	non-governmental organization
NMCP	National Malaria Control Program
PARSS	*Projet d'Appui à la Réhabilitation du Secteur de la Santé* (World Bank)
PHC	primary health care
PMI	President's Malaria Initiative
PMURR	*Projet Multisectoriel d'Urgence pour la Réhabilitation et la Reconstruction* (World Bank)
PNDS	*Plan National de Développement Sanitaire* (National Health Development Plan)
RBM	Roll Back Malaria
RDT	rapid diagnostic test
RFA	request for application
SANRU	*Santé Rurale* (USAID rural primary healthcare project)

SNAME	*Système d'Approvisionnement en Médicaments Essentiels* (National System for Procurement of Essential Medicines)
SNIS	*Système National d'Information Sanitaire (*National Health Information Management System)
SP	Sulfadoxine-pyrimethamine
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USG	United States Government
WHO	World Health Organization

I. EXECUTIVE SUMMARY

Malaria prevention and control are major foreign assistance objectives of the United States 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. President's Malaria Initiative (PMI) activities are core components of the GHI, along with activities aimed at reducing 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 percent in 15 high-burden countries in sub-Saharan Africa. With passage of the 2008 Lantos-Hyde Act, funding for PMI is now authorized through Fiscal Year (FY) 2014. Programming of PMI activities follows the core principles of GHI*: focus on women, girls, and gender equality; encourage country ownership and invest in country-led plans; build sustainability through health systems strengthening; strengthen and leveraging key partnerships, multilateral organizations, and private contributions; increase impact through strategic coordination and integration; improve metrics, monitoring and evaluation, and promote research and innovation.*

The United States Agency for International Development (USAID) has supported malaria control efforts in the Democratic Republic of Congo (DRC) for more than ten years. During the past five years, USAID malaria funding in DRC rose significantly: from about $7 million annually in FY 2007 and FY 2008, to $15 million in FY 2009 and finally $18 million in FY 2010. DRC became the sixteenth PMI country with a budget of $35 million in FY 2011. Malaria is a major health problem in the country, accounting for an estimated 40 percent of outpatient visits by children under five and 40 percent of the overall mortality in children under five. Implementation of large-scale malaria control activities in DRC faces serious challenges. The country's health infrastructure is very weak and it is estimated that only about 25 percent of the population has access to health facilities. An additional complicating factor is that external donor support of health activities in DRC is fragmented geographically.

The 2007 Demographic and Health Survey (DHS) showed very low coverage rates of major malaria prevention and control measures. Only nine percent of households owned one or more insecticide-treated nets (ITNs), and only six percent of children under-five and seven percent of pregnant women had slept under an insecticide-treated mosquito net the night before the survey. The 2010 Multiple Indicator Cluster Survey (MICS) found that 51 percent of households owned at least one bed net and that 38 percent of children less than five years of age and 43 percent of pregnant women had slept under a bed net the night before the survey. The proportion of children under five with fever treated with artemisinin-based combination therapy (ACT) within 24 hours of the onset of illness and the proportion of pregnant women receiving two doses of intermittent preventive treatment (IPTp) were less than one percent and five percent, respectively, but implementation of those interventions only began in 2006. The next DHS, planned for 2012 (to include anemia and parasitemia), will provide data to appraise progress achieved in controlling malaria in the DRC.

Between 2006 and 2010, USAID focused on assisting the National Malaria Control Program (NMCP) of DRC to scale up a package of malaria prevention and treatment measures in all 1,432 health facilities within 80[1] targeted health zones in four provinces (East and West Kasai, South Kivu, and

[1] Global Fund is supporting 10 of these 80 health zones in round 8 (2009-2014)

Katanga). In February 2010, DRC signed a five-year, $383 million Round 8 malaria grant with the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund/GF). The Global Fund has approved the Round 10 malaria proposal and the DRC will receive additional resources during the next five years (2012-2016) to accelerate malaria prevention and control. However, due to management issues, Global Fund disbursement has been slowed down and under consolidation of the Round 8 and Round 10 grants, DRC will receive approximately $212 million, distributed among the three Principal Recipients ($130 million for *Santé Rurale* (SANRU), $65 million for Population Services International and $17 million for the Ministry of Health Support Management Unit) to accelerate implementation of malaria control activities. The DRC is also a World Bank Malaria Booster Program country and has received approximately $130 million in malaria funding to be used over the next two to three years. The Department for International Development (DfID) is one of the potential investors in malaria control in the DRC, and plans on supporting long-lasting insecticide-treated (LLIN) distribution campaigns and case management of malaria. The United Nations Children's Fund (UNICEF), the World Health Organization (WHO), and others have partnered with the NMCP to scale-up interventions.

This Malaria Operational Plan (MOP) for Year 3 was developed during a planning visit carried out April 30-May 10, 2012 with participation of USAID/Kinshasa, USAID/Washington, the Centers for Disease Control and Prevention (CDC) in Atlanta and CDC/DRC, the NMCP, and other major partners. The activities that PMI proposes to support are aligned with the NMCP's revised, but not yet ratified, National Malaria Control Strategy, (2011-2015) that is aligned with the new five-year National Health Development Plan 2011-2015 (PNDS). The activities are designed to complement activities supported under the Global Fund Round 8 and Round 10 consolidation grant and the World Bank Malaria Booster Program. With FY 2013 funding, PMI will expand malaria control support not only to the 136 health zones in five provinces currently targeted by USAID, but also will include two new health zones in Eastern Kasai and South Kivu, increasing the total supported health zones to 138 in five provinces (West Kasai, East Kasai, South Kivu, Katanga, and Orientale Province). This represents almost 27 percent of all the 515 health zones in the country.

Insecticide-treated nets (ITNs): The NMCP's revised National Malaria Control Strategy (2011-2015) supports a three-pronged strategy for distribution of ITNs: distribution of free nets through mass campaigns, routine distribution of free nets through antenatal care clinics (ANCs) and child health clinics, and commercial sales of full-cost nets. During the past three years, USAID has funded distribution of more than three million (LLINs) in the first group of 80 targeted health zones supported through FY 2011. With the increased malaria funding available in FY 2012, PMI provided two million of the 5.3 million LLINs that were distributed in the second quarter of 2012 in collaboration with the World Bank and the NMCP through a mass campaign to achieve universal coverage in Katanga Province. Another 650,000 LLINs were used in FY2 011 to sustain routine distribution through ANCs and child health clinics in Katanga, South Kivu, East Kasai and West Kasai Provinces. In FY 2013, PMI resources will be used to procure one million LLINs for free distribution, to achieve universal coverage in the Bas Congo Province, while 1.15 million LLINs will be procured to meet the needs for routine distribution in five provinces including Orientale Province.

Prevention of malaria in pregnancy: More than 85 percent of women in DRC attend an antenatal care clinic (ANC) at least once during their pregnancy. Although implementation of intermittent preventive treatment in pregnancy (IPTp) in the DRC began in 2006, scale-up has been slow, and as of

2007, only five percent of pregnant women were receiving two IPTp treatments. With FY 2013 funding from PMI, the USG's support to IPTp scale-up will expand to 138 health zones in the five targeted provinces where PMI has consolidated plans to support procurement and distribution of sulfadoxine-pyrimethamine (SP) for IPTp, providing refresher training of health workers, and information, education, and communication (IEC) to increase demand for and use of the recommended two doses of SP during pregnancy. With FY 2013 PMI funding, 1.7 million doses of SP will be procured and distributed to pregnant women, reinforcing PMI's commitment to prevent malaria in pregnancy.

Malaria case management: With FY 2011 and FY 2012 resources, USAID continued to support the scale up of artesunate-amodiaquine (AS-AQ) treatment in all health facilities in the 136 targeted health zones in five provinces. With FY 2013 PMI resources, this support will expand to 138 health zones in those five provinces, with procurement of five million AS-AQ treatments, and 70,000 kits and supplies for the treatment of severe malaria. PMI will also support refresher training of health workers in case management, IEC/BCC to support the use of AS-AQ, and provide technical assistance to the NMCP and Ministry of Health (MOH) to strengthen the pharmaceutical management system at the national, provincial, and health facility levels in those 138 health zones. To facilitate treatment of severe malaria cases at the health facility level, PMI funds will be used to procure 135,000 doses of rectal artesunate and 200,000 kits of injectable quinine and related supplies for pre-referral. For patients who do not tolerate ACTs, PMI will procure oral quinine. To confirm malaria cases before treatment and in accordance with WHO recommendations, PMI will support progressive scale-up of microscopy, including quality control of microscopy and the use of rapid diagnostic tests (RDTs) where microscopy is not available. A total of six million RDTs will be procured and distributed with FY 2013 funding to improve malaria diagnosis in the five focus provinces covering 138 health zones.

Monitoring and evaluation: Monitoring and evaluation (M&E) received extensive attention during the FY 2013 MOP visit in the DRC. During FY 2012, PMI supported technical assistance, provided by Measure Evaluation, to the NMCP and partners to refine the national monitoring and evaluation (M&E) plan as part of the revised NMCP Strategic Plan to align with the National Health Development Plan 2011-2015 (PNDS). The National Health Information Management System (SNIS) has developed national reporting standards and training guides, defined national quality assurance standards for data collected, and encouraged production of twice-yearly provincial bulletins. Though partners have increased support for the SNIS, the system remains weak and fragmented due to lack of timely and complete data, poor data quality, and limited capacity for analyzing, reporting, and using information to strengthen the program. The 2007 DHS results provide the baseline measurement for PMI-supported activities. A Malaria Indicator Survey (MIS) proposed for 2011 was not conducted as the Global Fund decided that conducting a DHS in 2012 would be more cost-effective In 2012, PMI contributed to the implementation of DHS which will include biomarker data collection on parasitemia and anemia as well as coverage indicators for all key malaria interventions. PMI's FY 2013 support will focus on strengthening the M&E division of the NMCP, including supporting a position exclusively dedicated to coordinating M&E activities, preparing for a MIS in 2013, strengthening of the SNIS - including an assessment of the NMCP's data management system, and technical assistance and training for expanding insecticide resistance monitoring in sentinel sites throughout the country.

Health system strengthening and integration: Consistent with GHI principles, PMI is intensifying its efforts to build in-country capacity and integrate malaria activities with other USG programs. The

health system in the DRC, as in other countries in the region, suffers from lack of qualified health workers and resources to provide quality health care, as well as weak coordination of donor and civil society support. PMI funds will be used with other health funds (HIV, maternal and child health, and family planning) to support the training and supervision of health workers at the health facility as well as the community levels in order to ensure quality of malaria prevention and case management services. Current primary healthcare activities include the prevention and treatment of malaria and HIV/AIDS, maternal and child health, and family planning services offered in the 80 health zones that have been supported with USG funding. In addition, PMI laboratory strengthening activities, including procurement of equipment and training of laboratory technicians, will be well integrated with similar activities supported by the President's Emergency Plan for AIDS Relief (PEPFAR). FY 2013 PMI funding will be used to continue strengthening the supply chain management system more effectively in the long term and more importantly, the monitoring and evaluation system.

PMI's budget for FY 2013 will be US $34,000,000.00, supporting implementation of activities to benefit approximately 20.5 million people in five provinces.

II. STRATEGY

1. Introduction

The President's Malaria Initiative (PMI) is the United States Government's (USG's) response to malaria prevention and control in sub-Saharan Africa. PMI was launched in June 2005 as a five-year program with funding of $1.2 billion and a goal to reduce malaria-related mortality by 50 percent. The strategy for achieving this goal was to reach 85 percent coverage of the most vulnerable groups—children under five and pregnant women—with evidence-based preventive and therapeutic interventions, including artemisinin-based combination therapies (ACTs), insecticide-treated bed nets (ITNs), intermittent preventive treatment of pregnant women (IPTp), and indoor residual spraying (IRS). Owing to PMI's progress, in 2008 the Lantos-Hyde Act extended funding for PMI through fiscal year (FY) 2014 with the revised goal of a 70 percent reduction in malaria-related mortality by 2015. In 2011, the DRC became PMI's sixteenth focus country, although DRC had received USAID support for more than ten years with substantial funding:

- FY 2009, $15 million
- FY 2010, $18 million
- FY 2011, $34.9 million, and
- FY 2012, $38 million.

Prior to the country selection for PMI, large-scale implementation of ACTs and IPTp began in 2010 and is making progress rapidly with support from the US Government (USG) and other partners. This FY 2013 MOP presents a detailed implementation plan for the DRC based on PMI's Multi-Year Strategy and Plan and the NMCP's revised five-year strategy. This MOP was developed in consultation with the NMCP, and with participation of national and international partners involved with malaria prevention and control in the country. The activities that PMI is proposing are aligned with the National Malaria Control Strategy and Plan and will build on investments made by PMI and other partners to improve and expand malaria-related services, including the Global Fund malaria grants. This document briefly describes the country malaria situation, the current status of malaria control strategy in DRC, the coordination mechanisms with other partners and funders, and the progress on coverage and impact indicators. Finally, this document summarizes the challenges, opportunities, and threats for malaria prevention and control in the DRC and provides a description of PMI support strategy for the FY 2013.

In implementing PMI, the USG commits to working closely with host governments and within existing national malaria control plans. Efforts are also coordinated with other national and international partners, including the GF, Roll Back Malaria (RBM), and the World Bank Malaria Booster Program, as well as non-governmental organizations, the private sector and faith-based organizations to ensure that investments are complementary and that RBM and Millennium Development Goals are achieved. PMI aims to ensure that all country assessment, evaluation, and planning sessions are inclusive and collaborative. Over the past three years in the DRC, PMI has strengthened coordination and collaboration among donors, particularly with the GF.

Efforts taken through PMI are a core component of the Global Health Initiative (GHI), along with those aimed at eliminating HIV/AIDS, and tuberculosis, which seek to maximize the impact of the United States support in foreign assistance. 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 USG successes in addressing specific diseases and issues.

2. Malaria situation in the Democratic Republic of Congo

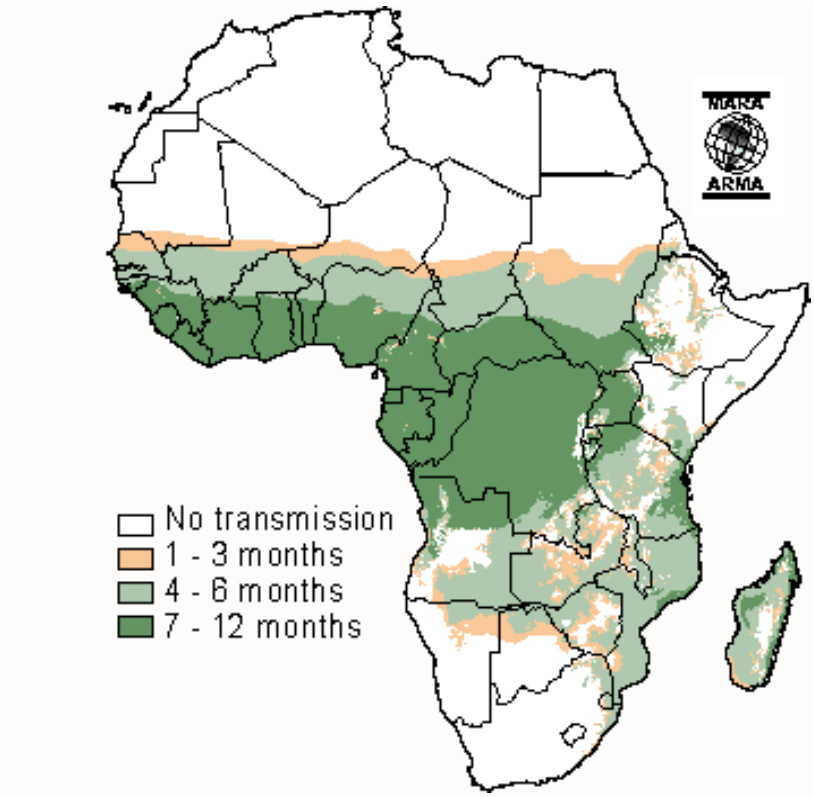
The DRC is the second largest country and the third most populated in Africa. It has a population estimated at 68.3 million people—32 percent of whom live in urban areas. It straddles the equator and shares borders with nine countries – Republic of Congo, Central African Republic, South Sudan, Uganda, Rwanda, Burundi, Tanzania, Zambia, and Angola – five of which are also PMI countries.

Administratively, the country is divided into 11 provinces, 25 districts, 21 cities, 145 territories, 77 municipalities, and 515 health zones. The DRC is the poorest country on the African continent; it ranks 187, the last place out of all ranked countries, according to the 2011 Human Development Index. An estimated 80 percent of the population lives on less that $1 per day. According to the 2007 DHS, the under-five mortality rate is 148/1,000 live births and the maternal mortality rate is 549/100,000 live births. Life expectancy at birth is only 48 years.

According to the Ministry of Health (MOH), malaria is reported to be the principal cause of morbidity and mortality in the DRC. It is estimated that 97 percent of the population lives in zones (between 300 and 1,000 meters of altitude) with stable transmission lasting 8-12 months per year. The highest levels of transmission (hyper- and holo-endemic zones) are in the north and west of the country. The remaining three percent of the population lives in highland or mountainous areas (mostly in North Kivu, South Kivu, and Katanga Provinces), which are prone to malaria epidemics. As is the case throughout tropical Africa, the greatest burden of malaria morbidity and mortality falls on pregnant women and children under five years of age. According to MOH reports, malaria accounts for more than 40 percent of all outpatient visits and for 40 percent of deaths among children under five years of age.

Plasmodium falciparum is the most common species of malaria, accounting for 95 percent of infections. The other five percent of infections are caused by *Plasmodium ovale* and *Plasmodium malarie*. The epidemiology of malaria can be divided into three zones: equatorial, tropical, and highland. The equatorial zone, which is typically found in the forest and post-forest savanna regions of Central Africa, is known for its intense transmission and is capable of reaching an entomological inoculation rate of 1,000 infected bites per person per year; the tropical zone consists of savannas where the rainy season lasts from five to eight months and; the highland zone is located in eastern high altitude regions (1,000 – 1,500 m) where malaria transmission is unstable and greatly dependent on temperature, rain, and topography. The major vector is *Anopheles gambiae s.l. (*92 percent) but An. *funestus* predominates in the highlands of the eastern part of the country. Other vector species include *An. nili, An. moucheti, An. brunnipes, and An. paludis.*

Figure One: Duration of the malaria season transmission.



3. Country health system delivery structure and Ministry of Health organization

In 2003, the DRC emerged from seven years of armed conflict, during which the government was only able to maintain power in the western part of the country. Following the 2003 peace accords, the eastern part of the country has become more accessible, but continuing flare ups between opposing political factions make security problematic and an estimated two million displaced people add to the challenge of providing health services in the region. The country held its second general elections in November 2011.

The country's vast size, its numerous large rivers, and the poorly maintained road system, make travel very difficult and many areas are inaccessible for several months each year. Public telecommunication systems are only beginning to be developed. The capital, Kinshasa, provincial capitals, larger towns, and most secondary cities have cellular telephone networks.

Figure Two: Map of the DRC with neighboring countries

Currently, DRC has 393 general reference hospitals and 8,266 lower-level health facilities. The health system in DRC consists of three levels:

- A central level, which includes the office of the Minister of Health, the General Secretary office, and Directorates and disease-specific programs;

- An intermediate level consisting of the 11 provincial health departments covering 65 health districts with a Minister of Health appointed by each provincial government. Each department has program offices corresponding to the central level and a provincial reference laboratory all under oversight of a provincial medical inspector appointed by the central government. The provincial health departments are expected to provide technical and logistic support to the health zones; and

- A peripheral, operational level, which consists of 515 health zones, each with a population of 100,000-150,000 and about 15-20 health centers. Each health zone is supervised by a Chief Medical Officer.

The National Malaria Control Program (NMCP) was established in 1998 to combat malaria and define the strategy for malaria control. The NMCP's primary directives include: a) to decrease morbidity and mortality due to malaria, with major emphasis on children less than five years of age; b) to decrease morbidity and mortality in pregnant women; and c) to decrease the socio-economic burden due to malaria. The NMCP is composed of a director, a deputy director, and eight divisions at the central level. At the provincial level, a team of four people are responsible for the malaria program: a provincial director, a nurse/supervisor, a data manager, and a driver.

4. Country malaria control strategy

Taking into account its epidemiological profile, DRC is focused on scaling-up proven high-impact malaria interventions. The strategies used in this process were adopted by the DRC in 2002 and updated in 2007 and 2009, to align with the recommendations of the WHO and the Global Malaria Action Plan goal to reduce malaria burden (morbidity and mortality) to 50 percent by 2010 and 75 percent by 2015, with respect to the 2000 baseline. The National Malaria Strategic Plan (2009-2013) was revised for 2011–2015 to align with the PNDS.

The NMCP has not introduced any changes in malaria prevention and control strategy since the last MOP. The focus of the NMCP continues to be a) the strengthening of prevention activities through methods of individual and collective protection, such as: LLINs, IRS, the treatment of larvae sites, and the improvement of housing and environment; b) the prevention and control during pregnancy through IPTp; c) improvement of early case management, with appropriate treatment at all levels of the health system; and d) the reinforcement of management of epidemics due to malaria.

Per WHO guidelines, the NMCP recommends biological confirmation of suspected malaria cases either by RDT or microscopy where available.

5. Integration, collaboration, coordination

Many donors are contributing to malaria control efforts in DRC:

Global Fund: The major donor for malaria control activities in DRC is the Global Fund. In Round 3, DRC received a five-year malaria grant for $53.9 million that ended in June 2009 and supported activities in 119 of 515 health zones of the country. A follow-on Round 8 grant is being implemented in the same geographic areas. More recently, the country secured Round 10 currently under consolidation with the Round 8 grant to cover activities from 2012 to 2016 with approximately $212 million.

The World Bank: The Booster Program Phase I was implemented through two World Bank projects: 1) DRC Health Sector Rehabilitation Project (PARSS), a four-year, $150 million project with a $30 million Malaria Booster Program component providing a package of malaria prevention and treatment services; and 2) a $180 million Emergency Urban and Social Rehabilitation Project (PMURR), an

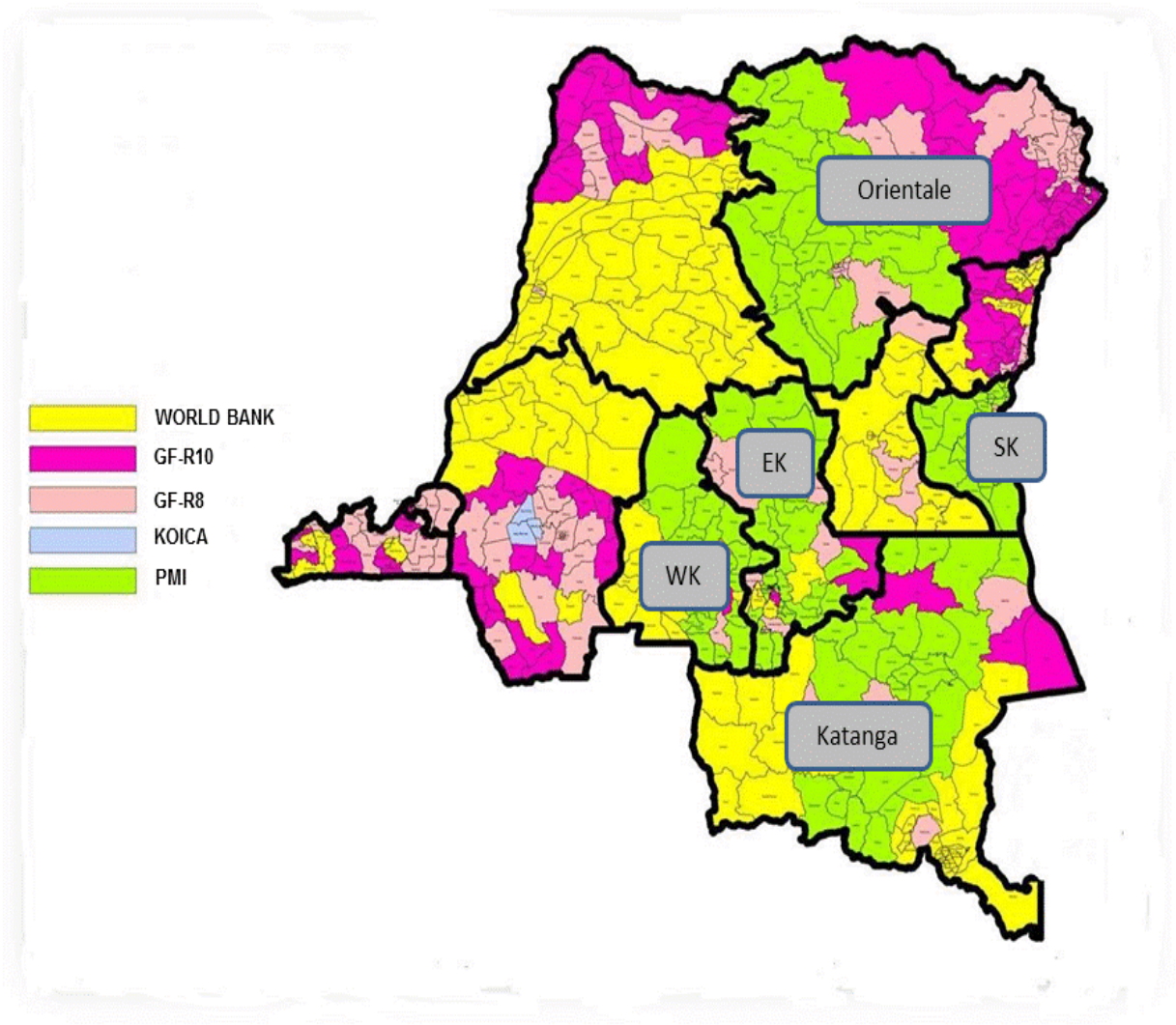
urban development project that included a $13 million, one-time procurement and distribution of two million LLINs in Kinshasa town and province (now completed). Announced in April 2010, the current project will contribute an additional $100 million (Booster Program Phase II) as an extension to the Health Sector Restructuring Support (PARSS) Project as well as fill the gap of LLINs for mass distribution campaigns over the next two years.

Department for International Development: DfID will invest $64 million (£41milion) to support LLIN distributions via campaigns in two major provinces—Equateur and Kinshasa—as well as primary healthcare projects in 20 health zones.

In addition to the donors listed above, support for malaria control has come from UNICEF, the Korean International Cooperation Agency, the African Development Bank, the Canadian International Development Agency, and WHO. Since 2006, the Government of the DRC (GDRC) has provided approximately $2 million annually to the NMCP for staffing costs, infrastructure, and some commodities. More recently, funding for salary support has continued at about the same level but no funding is provided for commodities.

Most of private sector support is provided through faith-based institutions and these are aligned with the public sector in the provision of services. Some of the health zones in PMI expansion areas are almost exclusively covered by faith-based clinics, which will be included in PMI supported-trainings to inform them of the current strategy and harmonize activities. Support from the private sector is provided by the Tenke Fungurume Mining Company, which has conducted yearly rounds of IRS since 2008 as a part of their malaria control program in 10 of 18 health areas in the Fungurume Health Zone, Katanga Province. This program, which included universal coverage with LLINs, achieved a 60 percent reduction in incidence of malaria in the workforce and a 56 percent reduction of malaria prevalence in school age children. This program has offered training activities to help surrounding areas initiate a malaria programming but, to date, IRS activities are limited only to the Fungurume Health Zone.

Figure Three: Proposed Partner Support of Malaria Activities by Health Zone – 2011



6. PMI goals and objectives

In the DRC, PMI aims to expand malaria control efforts through reaching large areas with key interventions, achieving a 50 percent reduction in malaria burden (morbidity and mortality) in at-risk populations when compared with the 2007 baseline established in DRC's last DHS. By the end of 2014, PMI will assist the DRC to achieve the following targets in populations at risk for malaria:

• More than 90 percent of households with a pregnant woman and/or children under five will own at least one ITN;
• 85 percent of children under five will have slept under an ITN the previous night;
• 85 percent of pregnant women will have slept under an ITN the previous night;
• 85 percent of pregnant women and children under five will have slept under an ITN the previous night or in a house that has been sprayed with IRS in the last 6 months when appropriate;

• 85 percent 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 percent of government health facilities will have ACTs available for treatment of uncomplicated malaria; and
• 85 percent of children under five with suspected malaria will have received treatment with an ACT within 24 hours of onset of their symptoms.

7. Progress on indicators to date

The most up-to-date information on the status of malaria prevention and control interventions in DRC comes from the 2007 DHS and the 2010 Multiple Indicator Cluster Survey (MICS). New information will be available to assess progress after the DHS is carried out in country at the end of 2012. NMCP targets for 2015 are also summarized in the table below.

The 2007 DHS reported household ownership of any net in DRC to be 28 percent and ownership of an ITN at nine percent versus 51 percent for the MICS (2010). This may be explained by mass distribution held in four provinces after the DHS and before the 2010 MICS was completed. Only six percent of children under-five surveyed had slept under an ITN the previous night in the 2007 DHS, compared with 38 percent in the MICS. With the DHS, only five percent of pregnant women had taken one to two or more does of SP for IPTp. Pregnant women sleeping under an ITN rose from seven percent in 2007 to 43 percent in the 2010 MICS.

The DHS also showed weak case management of malaria in children under five. Only 17 percent of children with a fever in the last two weeks were treated with an antimalarial drug the same day or the next day after onset of the fever. Of those treated, fewer than one percent had received an ACT, while ten percent received quinine, the second-line treatment. The MICS did not collect data on IPTp and ACT coverage.

2007 DHS and 2010 MICS Results

Indicator	2007 DHS	MICS 2010	NMCP 2015 Targets
Households with ≥ 1 ITN	9%	51%	>80%
Children ≤ 5 years sleeping under an ITN the previous night	6%	38%	>80%
Pregnant women who slept under an ITN the previous night	7%	43%	>80%
Women who received ≥ 2 doses of IPTp during their last pregnancy in the last two years	5%	N/A	>80%
Children ≤ 5 with fever in the last two weeks who received treatment with an ACT within 24 hours of onset of fever	<1%*	N/A	>80%

*Although a total of 17% of children under five received an antimalarial drug the same day or next day after onset of fever, most were treated with quinine; SP and amodiaquine were also prescribed.

8. Other relevant evidence on progress.

Apart from the LLIN distribution started in 2009 to achieve universal coverage, routine distribution during ANC clinics and child immunization (see PMI Year 6 Annual Report) and distribution of other commodities such as ACT for treatment, no data are currently available to report on progress achieved in malaria control in the DRC.

9. Challenges, opportunities, and threats

DRC faces significant challenges in controlling malaria and effectively monitoring all malaria activities in the country. Some of the main challenges include: 1) an inefficient supply chain management system due to poor infrastructure and a lack of adequate and sufficient resources; 2) a deficient Health Management Information System (HMIS), where the quality of the information is still low, and the data are incomplete and inaccurate; 3) lack of sufficient personnel at the central and provincial levels to manage the system and the ever expanding activities necessary to fight malaria; 4) deficient monitoring and evaluation systems due to the lack of human and logistic resources; 5) vast geographical scope of the program where geography plays an important role in access and coverage of interventions; 6) difficult to reach areas due to conflict or civil unrest ; and, 7) lack of adequate communication systems.

The HMIS remains a key challenge. Quality data emanating from health facilities should feed into the provincial and then central levels, but at present the data is far from accurate and reliable. Much still needs to be done to improve the system.

The low number of human as well as logistic resources at the NMCP for managerial and supervisory functions constitutes a significant threat to the long-term efficiency and sustainability of high impact malaria activity. PMI is looking into hiring one additional staff member to support the NMCP at the provincial level and in the central M&E unit to address this concern.

Despite the huge challenges, it is also important to maximize the opportunity in DRC to initiate a strong program with the support of so many donors for malaria activities. Funding has been increasing from other donors such as the GF and DfID, and other international partners planning a minimum package of malaria interventions in each of the 515 health zones of the country. Appropriate collaboration and coordination among donors is required to ensure efficient and sustainable technical assistance and implementation support to the NMCP.

10. PMI support strategy

DRC was selected as a PMI country in FY 2011. Prior to the country selection, large-scale implementation of ACTs and IPTp by USG began in 2010 and is making progress rapidly with support from USG and other partners.

PMI's national level support for FY 2013 includes: a) increased coverage of ITNs and use; b) improvement of malaria diagnostics and case management; c) health system strengthening, with emphasis on improving the monitoring and evaluation subsystem; d) improving pharmaceutical and commodity supply chain management; and e) enhancing IEC/BCC activities. Integrated interventions,

including diagnostics, integrated Community Case Management (iCCM), promoting quality medicines, ITN distribution through ANC, and the provision of antimalarial commodities in health facilities, are among specific interventions that PMI will continue to support under its nationwide investment approach. In many cases, PMI is one partner among many, enabling PMI to expand its activities beyond what would have otherwise been possible.

Support at the provincial level consists of the implementation of the IHP in five provinces at the facility level. At health facilities, the IHP is the principal delivery mechanism for preventive and curative malaria activities. Up to 112 health zones were initially targeted for service delivery in FY 2012, and by 2013, 138 health zones will be covered by the project, with 68 health zones under the soon to be awarded PMI Expansion Project. According to the NMCP, all the 515 health zones in the country will be covered by at least one partner working in malaria by end of 2012.

III. Operational Plan

1. Insecticide-treated nets

NMCP/PMI Objectives

The revised NMCP Strategic Plan maintains the focus on achieving high long-lasting insecticide-treated net (LLIN) availability and use among the general population through reaching universal coverage of all persons. The goal is to ensure that at least 80 percent of persons at risk of malaria sleep under an LLIN. The NMCP follows a three-pronged strategy for distributing LLINs: a) distribution of free LLINs through large-scale integrated or stand-alone campaigns; b) routine distribution of free nets to pregnant women at antenatal care clinics (ANC) and to children less than five years of age at pre-school clinics; and c) private sector sales of full cost nets.

The strategy for achieving universal coverage (one LLIN per 1.8 persons per WHO guidelines) is to distribute via a voucher system, one net to a household (HH) of one to two persons, two nets to a HH of three to five persons, three to a HH of six to eight, and four to a HH of greater than nine, mostly through mass campaigns. Under its revised strategic plan, the NMCP will complete its first cycle of universal coverage in 2012 and begin replacement campaigns in 2013.

PMI/Country Progress FY 2011-2012

In 2011 and early 2012, DRC and international partners (DfID, GF, PMI, PSI, UNICEF, World Bank) distributed over 20 million LLINs in universal campaigns in seven provinces (see LLIN gap analysis table below). To assist DRC in successfully scaling up universal coverage, PMI procured and paid for distribution costs of two million LLINs of the 5.3 million needed to support a mass net distribution in Katanga, the most populated province in DRC. World Bank and UNICEF supported procurement and distribution of the remaining 3.3 million. Although nets were procured in 2011, the LLIN distribution only began in April 2012 and was completed in May 2012 because the general elections held in the country in November 2011 resulted in some turmoil.

Approximately 85,000 nets have been distributed through the routine system but transportation costs and other logistical problems have hindered the success of this activity. The road infrastructure is so poorly developed that the distribution of commodities requires the use of airplanes and boats, and thus, is more expensive. Nets are shipped using boats or airplanes when they are delivered to Matadi port in Kinshasa or in the provinces, and trucks are generally used to transport them from neighboring countries. This explains the high distribution cost of $1.50 per net planned in the DRC

PMI Supported BCC/IEC Activities

The NMCP and partners have developed a national integrated behavior change communication/information, education, communication (BCC/IEC) strategy for malaria control interventions, which includes the promotion of correct ITN use. PMI supported BCC activities during Global Fund Round 8 mass ITN distribution in three of the eleven provinces in 2011.

In April 2012, PMI supported the training of 24 entomologists and technicians, including personnel from the central level and four provinces (Katanga, East Kasai, West Kasai, and South Kivu). The training covered mosquito identification, collection techniques, and insecticide susceptibility testing as well an overview of vector control methods. Entomological monitoring is being carried out by the trained technicians from July through September at sentinel sites in each of the four provinces with supervision from the entomologists from the central level. In DRC, little is known about vector species composition and behavior; therefore, human landing catches as well as pyrethrum spray catches were done to determine which vectors were biting humans and resting in homes. Because insecticides for agriculture have been used in many areas of DRC and because use of insecticide treated materials such as ITNs place selection pressure on malaria vectors, insecticide susceptibility assays were done.

Challenges, Opportunities and Threats

Poor donor coordination is a major obstacle to implementing an effective ITN program. In FY 2010 and FY 2011, USAID provided funding to support the development of a centralized database for LLINs, which should improve the NMCP's ability to track inputs geographically and target its funding requests. PMI Resident Advisors continue working closely with the NMCP to help build its coordination capacity, and help monitor the implementation of this centralized database.

To maintain LLIN coverage post-campaign, the National Strategy includes distribution of LLINs through routine ANC and pre-school clinics[2], but the distribution network and infrastructure are inadequate to ensure sufficient and regular supplies. Monitoring the distribution of routine LLINs is a challenge, as health workers themselves have been known to divert some nets for their own use. In addition, the costs of transporting LLINs from ports to distribution points have been higher than originally anticipated. Nevertheless, the NMCP and partners stress the importance of continuing some level of support for the routine system.

In the absence of information on LLIN durability, the NMCP recommends replacing nets after three years of utilization. However, the NMCP cites anecdotal reports suggesting that nets in some areas last no more than 18 months, contrary to manufacturers' guidelines of three to five years.

In 2009, the *Institut National de Recherches Biomédicales* - National Institute for Biomedical Research (INRB) conducted a study of vector susceptibility to insecticides in one sentinel site in each of four provinces: Bas Congo, Kinshasa, Equateur, and South Kivu. Mosquitoes were found to be resistant to deltamethrin, lambdacyhalothrin, and DDT in all four sites but were susceptible to permethrin in the Kinshasa site. Resistance to malathion was detected only in the South Kivu site. The results confirm the need to continue insecticide resistance testing nationwide to monitor the efficacy of present and future vector control strategies. However, entomological capacity remains insufficient to cover the whole country.

Commodity Gap Analysis

With the assumption of net replacement every three years, the tables below present the LLIN distribution schedule to implement the universal coverage strategy by 2015.

[2] Pre-school clinics are clinics where immunizations and growth monitoring are provided for children under five.

Table: LLIN mass campaigns 2009-2015: Resources and gaps

S/N	Year	Province	Population to cover	Required LLINs	Gap	Funding/ partners	Status of universal coverage
1	2009/ 2010	Orientale	8,808,609	4,893,672	0	UNITAID-UNICEF-USAID/PMI	Round 1-completed
2	2009/ 2010	Maniema	1,865,490	1,036,383	0	UNITAID-UNICEF-USAID/PMI	Round 1-completed
3	2010	Bandundu (2 districts)	1,703,856	946,587	0	World Bank-UNICEF	Round 1-completed
4	2011	Bas Congo	2,861,561	1,589,756	0	Global Fund-PSI	Round 1-completed
5	2011	West Kasai	6,279,053	3,488,363	0	Global Fund-PSI	Round 1-completed
6	2011	East Kasai	7,864,070	4,368,928	0	Global Fund-PSI	Round 1-completed
7	2011	Equateur (2 districts)	1,668,600	927,000	0	DfID-PSI	Round 1-completed
8	2012	North Kivu	5,742,916	3,190,509	0*	World Bank-UNICEF	Round 1-completed
9	2012	South Kivu	4,339,013	2,410,563	0*	World Bank-UNICEF	Round 1-completed
10	2012	Katanga	9,541,674	5,300,930	0*	World Bank-USAID/PMI-UNICEF	Round 1-partially completed
11	2012	Bandundu (4 districts)	5,040,000	2,800,000	0	World Bank-UNICEF	Round 1-completed
12	2012	Equateur (5 districts)	5,980,874	3,322,708	0	DfID-PSI	Round 1-late 2012
13	2013	Kinshasa	7,411,989	4,117,772	0	DfID-PSI	Round 1-2013
14	2013	Orientale	9,914,215	5,507,897	0	Global Fund-PSI	Round 2
15	2013	Maniema	2,017,616	1,120,898	0	USAID/PMI	Round 2
16	2013	Bandundu (2 districts)	1,724,303	957,947	957,947	TBD	Round 2
17	2014	Bas Congo	3,035,830	1,686,572	1,686,572	TBD	Round 2
18	2014	West Kasai	6,661,447	3,700,804	3,700,804	TBD	Round 2
19	2014	East Kasai	8,342,992	4,634,995	4,634,995	TBD	Round 2
20	2014	Equateur (2 districts)	1,770,218	983,454	983,454	TBD	Round 2
21	2014	North Kivu	6,092,660	3,384,811	3,384,811	TBD	Round 2
22	2014	South Kivu	4,603,259	2,557,366	2,557,366	TBD	Round 2

S/N	Year	Province	Population to cover	Required LLINs	Gap	Funding/ partners	Status of universal coverage
23	2014	Katanga	10,122,762	5,623,757	5,623,757	TBD	Round 2
24	2015	Kinshasa	7,863,379	4,368,544	4,368,544	TBD	Round 2
25	2015	Bandundu (3 districts)	5,346,936	2,970,520	2,970,520	TBD	Round 2
26	2015	Equateur (5 districts)	6,345,109	3,525,061	3,525,061	TBD	Round 2
	Total		142,948,431	79,415,797	34,393,831	TBD	Round 2

Source: NMCP – May 2012

*Gap is likely since campaign was delayed a year and population could have changed.

Although the quantity of nets provided by PMI is insufficient to cover actual needs, the routine system at present does not have the capacity to handle such a high number of LLINs.

GAP analysis for Routine Distribution in ANC and child clinics

	2011	2012	2013	2014	2015
Total Population	66,352,600	68,343,178	70,393,473	72,505,278	74,680,436
Pregnant Women (4% of Population)	2,654,104	2,733,727	2,815,739	2,900,211	2,987,217
Number of children less than one year (3.49%)	2,587,751	2,665,384	2,745,345	2,827,706	2,912,537
Total need for Routine	5,241,855	5,399,111	5,561,084	5,727,917	5,899,754
Total Population in PMI target area	19,677,040	20,857,662	21,483,292	22,127,894	22,791,730
Pregnant Women (4% of Population)	787,082	834,306	859,332	885,116	911,669
Number of children less than one year (3.49%)	767,405	813,449	837,848	862,988	888,877
Total need for Routine	1,554,486	1,647,755	1,697,180	1,748,104	1,800,547
Nets provided by PMI*		700,000	1,000,000	1,150,000	
GAP in PMI supported areas		947,755	697,180	598,103	
Population outside PMI areas	46,675,560	47,485,516	48,910,181	50,377,384	51,888,706
Pregnant Women (4% of Population)	1,867,022	1,899,421	1,956,407	2,015,095	2,075,548
Number of children less than one year (3.49%)	1,820,347	1,851,935	1,907,497	1,964,718	2,023,660
Total need for Routine	3,687,369	3,751,356	3,863,904	3,979,813	4,099,208
Global Fund/SANRU		1,685,900			
World Bank/UNICEF		2,000,000			
KOICA		99,204			
GAP outside PMI area (surplus)		(33,748)			

*PMI LLINs for 2012 procured with FY 2011 funds, for 2013 with FY 2012 funds and for 2014 with FY 2013 funds.

Plans and Justification

PMI, and other international donors including GF, will assist the NMCP to achieve universal coverage of LLINs, to maintain that coverage by replacing the LLINs every three years, and with routine distribution through ANC and Expanded Program on Immunization (EPI) clinics. In FY 2013, PMI will continue supporting implementation of LLIN mass distribution campaigns, providing a portion of the 1,686,572 needed for Round 2 of the mass campaign in the Bas Congo Province in 2014. In the five PMI targeted provinces, PMI will support routine distribution of free nets for ANC and pre-school clinics as well as communication activities to promote ownership in the general population. The

NMCP plans advocacy and resource mobilization with other donors to cover the gaps through 2015. In addition, entomological monitoring and susceptibility assays will be done to detect changes in the vector population and to ensure LLINs are effective against the local mosquito populations.

Proposed FY 2013 Activities ($14,837,500)

- Procure and distribute one million LLINs of the 1,686,572 needed for the LLIN universal coverage replacement campaign in the Bas Congo Province scheduled for 2014. The funding includes the cost of nets along with household registration, delivery from port to distribution site, planning, training and supervision, social mobilization/communications, and net hang-up and promotion. Emphasis will be placed on training and supervising community workers to ensure net use ($6,000,000);

- Procure and deliver to port 1.15 million LLINs for free distribution through routine antenatal and child health clinics in 138 health zones in Katanga, South Kivu, East Kasai, West Kasai, and Orientale Provinces ($5,750,000);

- Support the distribution cost for 1.15 million LLINs for free distribution through routine services in the 138 target health zones. Funds requested include transportation from port to distribution points and reflect the high costs of air shipment in country and is estimated at $1.50 per net. ($1,725,000);

- Support IEC/BCC activities to raise awareness among the population on ownership and use of bed nets, particularly by the most vulnerable groups. Storage of LLINs and supervision are also included in this activity ($1,150,000);

- Continue support for species identification and insecticide resistance monitoring at sentinel sites in FY 2012 supported provinces and add sites in the Orientale Province. ($200,000); and

- Provide CDC technical assistance with insecticide resistance monitoring in sentinel sites. ($12,500).

2. Indoor Residual Spraying

NMCP Objectives

Although IRS is listed in the Strategic Plan as one of the vector control methods, a detailed IRS strategy has not been developed for DRC.

Country Progress
To date, only one mining company, Tenke Fungurume Mining is conducting IRS as a part of their malaria control program targeting approximately 36,000 houses in nine “aires” de santé in the Fungurume Health Zone in the Katanga region.

Challenges, Opportunities, and Threats.

A lack of qualified personnel, infrastructure, and funding will hinder the development of an IRS program. In addition, insecticide resistance has been detected in the areas that have been sprayed. Because IRS is a technically and logistically challenging malaria intervention, PMI will not support IRS activities with FY 2013 funds. When significant progress has been made in the scale up of LLIN coverage and of usage of IPTp and ACTs, this decision will be re-evaluated.

3. Malaria in Pregnancy (MIP)

Background

In 2003, the MOH adopted intermittent preventative treatment (IPTp) with sulfadoxine-pyrimethamine (SP) for prevention of the adverse consequences of malaria in pregnant women and their newborns. However, the national policy has not kept up with current recommendations and is too restrictive regarding timing of SP dosing and total number of doses during a pregnancy. Women attending ANC pay a standard fee for a prenatal card. This fee includes all ANC services, along with the cost of SP and LLIN. Information on the IPTp doses is recorded in clinic registers.

The 2007 DHS survey found that more than 85 percent of pregnant women attend ANC at least once in DRC and 79 percent make two visits. Nevertheless, only five percent of pregnant women received two doses of SP during their last pregnancy, and only seven percent slept under an ITN the night before the survey. According to the NMCP, many factors explain the very low coverage of pregnant women receiving two doses of SP, including frequent stock-outs of SP, late ANC attendance, and the fee charged for the ANC consultation. PMI implementing partners are actively exploring ways to reduce or eliminate the fees. However, because these fees help ensure the functioning of the health facilities and the payment of incentives (primes) for workers, they may be difficult to remove.

The NMCP and the Reproductive Health Program coordinate their activities, and malaria has been integrated into the reproductive health training modules, although some duplication of training between the two programs does occur.

NMCP/PMI Objectives

The NMCP has identified the following objectives, which correspond to the three prongs of the Malaria in Pregnancy (MIP) program.

- Reduce malaria-specific morbidity and mortality by 50 percent by 2015;
- At least 80 percent of people at risk sleeping under an ITN;
- At least 80 percent of pregnant women receive IPTp according to national directives; and
- At least 80 percent of all patients with malaria receive diagnosis and treatment conforming to national standards at all levels of the health system.

Progress During the Last 12 Months

With the launch of a new implementing partner in 2010, PMI has made significant strides in implementing MIP activities in the zones it supports. According to records from the integrated health

project (IHP), a total of 879 health workers have been trained on malaria prevention and treatment, including MIP activities, in the first 18 months of the project (latest date for which data is available). In addition, over 92,000 women have received IPTp during the same period of time. Stock-outs of both LLINs and SP slowed implementation in some zones. In addition, DRC held elections in 2011, which created a number of disruptions in services around the time of voting. Moving into 2012, activities are picking up again and PMI is about to award the new expansion project, which will increase its coverage in the provinces it currently supports and will expand coverage of MIP services to an additional province.

Challenges, Opportunities, and Threats

The DRC national policy is out of date with current WHO recommendations around MIP programming and Focused Antenatal Care (FANC). PMI will provide technical assistance to the NMCP and National Reproductive Health programs to review data and recommendations to update the policy. Subsequently, all the cascade training that is planned under this MOP should emphasize the revised guidelines. The other critical gap is coverage of the new expansion areas for PMI. PMI team will work with the implementing partners, including the new PMI Expansion Project, to ensure that providers are trained in the most recent guidelines and those health facilities have the commodities (LLIN and SP) to provide the necessary services.

Plans and Justification

The MIP component of the FY 2013 MOP places added emphasis on expansion of service provision for two main reasons. Firstly, PMI will expand to 24 health zones in Orientale Province in FY 2012, with much of that new expansion still underway in 2013. There will be an increased need to provide training, supervision, and commodities to the new health zones, while at the same time maintaining strong support for the existing project sites. PMI funding for malaria in pregnancy interventions will support IPTp and provision of LLINs at ANCs in all 138 USAID-supported health zones under the existing and expansion projects through two separate funding mechanisms.

The second reason for emphasizing MIP in this MOP is that, as of this writing, the DRC MIP policy is outdated, and PMI intends to make a concerted effort to bring the national policy up to date in line with current WHO recommendations. Because this will entail changes in training and IEC/BCC materials, the two implementing projects will receive support to make these changes.

To ensure a continued supply of SP for IPTp in all 138 health zones, PMI will procure a total of 1.7 million SP treatments that will be required to provide 100% coverage of pregnant women living in these zones. Issues around supply chain weaknesses are a priority and will be addressed as discussed in the case management section of this document.

Focal activities of the two implementing partners will include initial and/or refresher training to health facility staff and community health workers on MIP interventions, including counseling strategies on use of LLINs during pregnancy and the importance of early attendance at ANC, providing two or more doses of IPTp according to a revised national policy, and proper recording of interventions for program monitoring in 70 health zones through the current IHP and in 68 additional PMI-supported health zones through a new bilateral mechanism (under procurement).

Although a great deal of effort has been invested in improving uptake of SP in the past two years, much needs to be done in terms of making SP available at service delivery points, improving provider

understanding of WHO recommendations for IPTp, and increasing ANC attendance. In FY 2013, resources and increased attention will be paid to supporting the NMCP to achieve its objective on IPTp.

Proposed FY 2013 Activities ($1,035,000)

In FY 2013, PMI intends to support the following activities for MIP programs:

- PMI will undertake the procurement of SP for the five provinces USAID supports in order to provide IPTp for all pregnant women in the 138 health zones (including the new zones covered by the expansion project) ($135,000);

- Through its implementing partners, PMI will support training and supervision of health workers in the health zones it supports to implement all three elements of an MIP program – LLIN, IPTp, and case management for pregnant women. This training will be done through a 'cascade' to extend the reach of the program from the central and provincial levels into the health districts and community health workers ($675,000); and

- Through the implementing partners, PMI will also support IEC/BCC related to MIP programming in the 68 health zones, including the expansion zones, that USAID is supporting ($225,000).

4. Case Management/Pharmaceutical Management

a) Case Management

NMCP/PMI Objectives

The current malaria national strategy in DRC states that, by the end of 2013, 80% of patients with malaria are targeted to have access to proper diagnosis and treatment.

Situational Analysis

According to the national malaria treatment policy in DRC, every febrile patient regardless of age should undergo parasitological testing for malaria by microscopy or using RDTs. However, malaria treatment in most peripheral health facilities in DRC is still based on clinical diagnosis alone. Malaria microscopy is expected to be the testing of choice in hospitals and larger health centers, while RDTs are to be used at other health facilities and at community level. The Kinshasa School of Public Health, with support of Canadian International Development Agency, conducted a study assessing the feasibility of RDT use at the community level in Bas Congo Province and confirmed the good feasibility and acceptance of this approach.

Based on calculations done in June 2012 by the NMCP and its partners working in malaria, approximately 57.3 million, 68.8 million, and 54 million RDTs are needed in calendar years 2013, 2014, and 2015, respectively, in DRC to cover countrywide needs and achieve the target coverage. Those calculations took into account public health system coverage, specific age-group estimates of number of febrile episodes per year, and malaria transmission in country (see details on the estimates

in the Case Management section). PMI recognizes the limitations of estimating needs based on expected febrile cases, but that was the choice adopted by malaria control partners in DRC during the gap analysis exercise. As malaria control interventions advance in DRC, PMI will be able to rely on more accurate estimates, such as those based on consumption and intervention coverage data, and be more realistic in planning. The gap analysis in DRC did not stratify needs per health zones, but considering that 57.3 million RDTs are needed in 2013 to cover a population of 70.3 million people and that PMI's health zones (HZs) serve approximately 20.5 million people, 16 million RDTs are needed for PMI-supported HZs.

Procurement of laboratory diagnostic equipment and supplies is done by individual donors according to the needs for the health zones they support. Most microscopes are binocular and use electricity or a mirror for lighting; regular maintenance of the microscopes is usually not provided by donors. At health facilities, the cost for malaria testing is included in the service package fee paid by patients, while at the community level, RDTs are provided free of charge for patients. In PMI-supported health zones, training in RDT use has been integrated with training on malaria in pregnancy and malaria case management.

Both the NMCP and the National Institute for Biological Research (INRB) understand the critical need to perform supervisory visits and activities related to quality control of diagnostic specialty microscopy at the provincial and health facility levels. However, quality control and quality assurance plans are not fully implemented in DRC at this moment.

PMI Progress During the Last 12 Months

In previous years, PMI supported the revision of the training materials for laboratory diagnostics in accordance with WHO 2010 guidelines. Improving Malaria Diagnostics (IMaD), a PMI implementer, completed the first training of trainers in malaria diagnosis for national level and four PMI-supported provinces. A total of 56 representatives of the focus provinces of Katanga, South Kivu, East and West Kasais were trained as part of this initial effort. In the past 12 months, refresher training for representatives of the same provinces was conducted and approximately two persons from each province were trained and two microscopes and two reagent kits for microscopy (enough for 1,000 tests) were sent to each of these provinces.

Provincial laboratory-trained personnel are expected to be trainers at the provincial level. In addition, a first training in supervisory activities was carried out in West Kasai. This effort aims to ensure that supervisory activities become part of regular diagnostic activities. Of note, the provincial officials trained with PMI funds are also supporting activities in non-PMI focus health zones in their respective provinces. This exemplifies the broader range of PMI impact in DRC.

Challenges

In DRC, there are several challenges related to malaria diagnosis. First, there is little information on the actual needs for microscopes and microscopy supplies in the country. It is likely that little functional laboratory infrastructure exists in health facilities across the country. Second, although the national policy calls for laboratory confirmation of all malaria cases, there is a shortage of RDTs to satisfy the demand and, also a shortage of trained health facility and community workers to perform

these tests. In many cases, laboratory tests are not taken into account before deciding on antimalarial treatment. There are anecdotal reports that antimalarial treatment is given to patients with negative results**.**

In terms of quality assurance and control of microscopy, a recently published study showed that only 26 percent of laboratories assessed in four provinces of DRC were able to correctly identify a set of three malaria samples with different parasitemia levels. These findings confirm the need for training and functioning quality assurance programs in DRC. The INRB has been responsible for quality assurance and control in health zones supported by PMI and Global Fund, but some challenges in terms of frequency and quality of supervisory visits have been identified. These include irregular scheduling of visits and lack of sufficient materials and personnel to conduct such visits.

Plans and Justification and Proposed Activities for FY 2013 ($5,100,000)

In FY 2013, PMI will continue to support the strengthening of malaria diagnosis (both microscopy and RDTs) in health facilities in the 138 health zones supported by PMI. The following activities are planned:

- Procure six million RDTs for use in the 138 health zones in five provinces to support malaria diagnosis. These tests will be placed in health facilities where supervision of health workers can be assured. These RDTs are not expected to cover all the RDT needs in these health zones (estimated at 16 million), but we do not expect laboratory-confirmation to be at full force as this policy is still not fully implemented. PMI will monitor and be prepared to adjust needs based on consumption and implementation ($4,200,000);

- Support training for national level diagnosis experts (to server as trainers of trainers) in microscopy and RDT, and improve functioning of reference laboratories at national and provincial levels. This activity will contribute to the DRC efforts in the implementation of laboratory testing at provincial level, institutionalization of quality control strategies, and development of a team of trainers and supervisors for microscopy and RDTs ($300,000);

- Procure microscopes and microscopy kits. PMI will purchase microscopes (at approximately $2,500.00 each) and microscopy kits (enough reagents to run 1,000 tests at $2,500.00 each) to support activities in PMI-supported provinces both at provincial and health facility levels. Exact quantities of these commodities will depend on assessment by PMI implementers ($100,000); and

- Provide training and supervision to laboratory staff and health workers performing malaria RDTs and also cover distribution costs of RDTs from the provincial level warehouses (CDRs) to the 138 PMI-supported health zones ($500,000, includes $250,000 for IHP and $250,000 for PMI–Expansion Project with distinct geographical coverage).

b) Pharmaceutical Management

NMCP/PMI objectives

There is not a specific objective related to antimalarial pharmaceutical management in DRC. However, the expectation is that the pharmaceutical system in DRC will facilitate antimalarial (including those for IPTp) availability at health facilities to support the national target of 80 percent of patients with malaria being treated appropriately.

Situational Analysis

The pharmaceutical sector in DRC is highly fragmented, with inadequate governmental oversight. Multiple parallel pharmaceutical supply systems exist for public sector health facilities and the supply system for any particular health facility depends largely on the donor supporting the health zone where the facility is located. USAID is working with essential drug suppliers and other technical partners in country to improve the performance of the pharmaceutical system in DRC.

In 2002, the MOH established the National System for Procurement of Essential Medicines (SNAME) with the objective of centralizing procurement of essential medicines through a non-profit central purchasing agency, known as FEDECAME, and decentralizing the distribution of medicines in peripheral areas through a network of between 30 and 40 regional distribution depots (*Centrales de Distribution Regionale* - CDR). These CDRs are non-profit private depots that the MOH has contracted to serve as regional warehouses for the public sector pharmaceutical supply system.

Given the fragmented nature of the pharmaceutical system in the country, responsibility for estimating drug requirements depends on whether the partner supporting the health zone or the MOH program is following a 'push' or 'pull' pharmaceutical supply system. Accurate and reliable consumption and/or morbidity data are not available to inform quantification. Methods for quantifying needs vary widely across the country depending on the health zone and donor partner requirements. The NMCP is in the process of moving from a morbidity-based approach to a consumption-based approach for antimalarial quantification. It is not clear if issues, such as needed buffer stocks at each level of the distribution system (national warehouse, CDRs, and health facility), are taken into account in drug estimates.

Most partners in DRC rely on private transportation companies to transport medicines and supplies to the depots (CDRs) in health zones. The primary mode of transportation for pharmaceutical supplies after their arrival at a port of entry is via air. While the CDRs are generally well run and well organized, transport from CDRs to health zones and health facilities vary from province to province. Health zones distant from their respective CDR can have difficulties in paying for transportation to receive and maintain adequate stocks of drugs.

Currently, most of the AS–AQ used in DRC comes from India (Ipca Laboratories and Cipla Pharmaceuticals) and Morocco (SANOFI). The presentation is fixed co-formulated packs for four different age groups, 0–11 months, 1–5 years, 6–13 years and more than 13 years old. Most AS–AQ is procured and distributed by partners directly to CDRs, bypassing the central MOH pharmaceutical management system (FEDECAME), but relying on CDRs for distribution within each province. As

part of the GHI strategy, USAID/DRC will begin working with the FEDECAME for the procurement and distribution of health commodities.

c) Malaria Treatment

NMCP/PMI objectives

The current malaria national strategy in DRC states that, by the end of 2013, 80% of patients with malaria are targeted to have access to proper diagnosis and treatment.

Situational Analysis

In March 2005, the MOH changed its first-line treatment for uncomplicated malaria from SP to artesunate-amodiaquine (AS–AQ), and made oral quinine the recommended treatment for patients who failed to respond to AS–AQ. For pregnant women, quinine is the antimalarial of choice in the first trimester of pregnancy and AS-AQ is recommended for the second and third trimesters. Parenteral quinine is the recommended treatment for severe malaria in all patients. Oral quinine remains the alternative treatment in cases of intolerance to AS–AQ (artemether–lumefantrine may also be used where available). Rectal artesunate is recommended as a pre-referral drug at health facility level. Severe cases are managed at the hospital level with parenteral quinine.

The new treatment policy was implemented in 2006, but scale up has been slow. By the end of 2012, the plan is for ACTs to be in use in all 515 health zones as each will have a donor supporting provision of the ACT. Although training is done by partners, the NMCP requires training to be conducted according to set guidelines. More than 365 institutions train healthcare personnel in DRC yet some do not follow or are not aware of current NMCP guidelines in their training.

In 2012, a forum of experts in antimalarial treatment was convened and it was suggested to include artemether–lumefantrine as an alternative first line for those intolerant to AS–AQ and cases of therapeutic failure. In addition, this forum of experts suggested that parenteral artesunate be used for cases of severe malaria. These recommendations still need to be approved by different levels of the MOH before they are incorporated into the national policy. PMI will monitor this situation closely and is open to change its procurement orders to accommodate possible changes in antimalarial policy.

Global Fund plans to support therapeutic efficacy monitoring of antimalarials under the Round 8 and Round 10 consolidated grant in DRC in five of the country's sentinel sites. Therapeutic efficacy tests will be implemented by Kinshasa School of Public Health Pharmacovigilance Unit with the technical collaboration of the INRB.

Under the leadership of the MOH, DRC has been implementing iCCM since December 2005. As of September 2010, iCCM-trained site "*relais*" were providing services at 716 community sites, covering a population of approximately 1.7 million. The MOH has approved case management with RDTs and ACTs at the community level and the roll out of this policy has already begun in some health zones. In PMI-supported health zones, approximately 45 health zones already count on community health workers to dispense ACTs; 27 of those also regularly use RDTs. PMI plans on supporting pilot

implementation of rectal artesunate by community health workers. As of August 2012, the scope of work for this activity is under discussion among PMI staff and partners.

The use of rectal AS as pre-referral treatment is part of the national policy and training of HCWs and community health workers includes its use. The implementation of this policy will be scaled up progressively as a research activity with funding from FY 2011 and FY 2012. A PMI partner, the same one responsible for case management at the health zone level, will be responsible for this work. The concept paper for this activity was already drafted and is under review by partners in DRC and PMI HQ. Lessons learned from this experience will guide the phase-in of this strategy in DRC.

The NMCP has set an extremely high coverage target for malaria treatment by 2013, indicating 80 percent of patients with a fever will have been diagnosed and treated according to national guidelines at all levels of the health system. According to the 2007 DHS, the country is still far from reaching this target, as only 17 percent of children under-five were treated with any antimalarial drug and less than one percent had received an ACT within 24 hours of the onset of their fever. PMI expects to have updated figures on coverage from the DHS taking place in mid-2012.

The following table shows the national estimated AS–AQ needs for the public sector in DRC. These calculations were presented as part of DRC's strategic plan and were done by the NMCP and its partners. The number of febrile episodes by the different age groups, utilization rates of the public sector, the impact of prevention strategies, and expected positivity rate of malaria tests were all considered in these calculations. It is unclear to what extent these estimates reflect the real needs in the country and also whether they may change during the course of policy implementation. In addition, the estimates do not account for number of ACT treatments needed to 'fill' the drug supply chain and buffer stocks, which are needed at each healthcare system level (see Pharmaceutical Management section).

Estimates used were:

1. Proportion of population by age groups: 0–11 months = 4 %; 1 to 5 years = 16 %; 7–13 years = 25 %; >13 years = 55 %; growth rate from 2011 = 2.9/1,000.
2. Estimated public health facility utilization rate (portion of needs to be covered by PMI) = 50% (2012) to 80 % (2015).
3. Average number of febrile episodes per year for the 0–11 month age group = 0.5 to 1; 1 to 5 year age group = 2 to 4; 6 to 13 year age group = 1 to 2; >13 year age group = 0.5 to 0.75.
4. Laboratory testing positivity rate: 40%.
5. Available pipeline

ACTs national estimated needs for the public sector

Drug/ Formulation	Patient Age group	Year			
		2012	2013	2014	2015
AS+AQ (25/67.5mg) fixed-dose blister	Children 0–11 months	500,887	464,322	557,961	437,866
AS+AQ (50/135mg) fixed-dose blister	Children 1–5 years	8,846,614	8,200,811	9,854,642	7,733,547
AS+AQ (100/270mg) fixed-dose blister	Children 6–13 years	7,491,779	6,944,879	8,345,430	6,549,176
AS+AQ (100/270mg) fixed-dose blister	Children >13 years and adults	7,893,637	7,317,402	8,793,078	6,900,472
TOTAL		24,732,917	22,927,414	27,551,111	21,621,061

The Global Fund–supported health zones are providing RDTs and ACTs free of charge, but the patient has to pay a consultation fee ranging from 250 to 500 Congolese francs (US$0.25 to $0.50). Anecdotal reports from various partners indicate that there have been problems with acceptance of AS–AQ, apparently due to the side effects of AQ. The main Global Fund implementer in case management covers 119 health zones and has worked for many years in this capacity. In their experience, approximately five million ACT treatments are sufficient to cover one year of demand for ACT given the reality of diagnostic testing. Although areas are not the same as those supported by PMI, it does give a general idea of ACT consumption.

In the 138 USAID-supported health zones, training of health workers in malaria case management is to be carried out together with that of prevention of malaria in pregnancy. In these health zones, a seven-day training course is provided to the health zone management team and a three-day course for the chief nurse and deputy in each health facility in the zone. For planning purposes PMI estimated that all cases of uncomplicated malaria would be treated with AS–AQ and approximately three percent of those would need quinine due to intolerance or severe presentation.

With the deterioration of the public health system in DRC, private health facilities offer antimalarial treatment with regimens that are sometimes not part of the national policy. In addition, numerous antimalarial drugs are available for purchase without prescription in shops and pharmacies, including numerous different presentations of SP, quinine, and ACTs, as well as artemisinin monotherapies.

PMI Progress During the Last 12 Months

In 2010, before PMI implementation in DRC, nearly four million AS–AQ treatments were procured by USAID and distributed through USG implementing partners. Additionally, 6.4 million and eight million ACT treatments are in the FY 2011 and FY 2012 plans. Healthcare workers in the 70 health zones covered by USAID IHP project were trained in the management of uncomplicated and severe

malaria, and also in pre-referral treatment Healthcare workers in these zones are supervised once a month by a member of the health zone management team. Refresher training is done as part of these supervisory visits.

In the past 12 months, PMI implementers have worked closely with health authorities to evaluate stocking conditions and assist with drug forecasting at the four PMI-supported provinces. This evaluation showed that most staff at provincial-level CDRs and health facility–level have received training in pharmaceutical management and are familiar with reporting forms. In addition, ACTs are generally available at these levels. At the community level, however, training and availability of ACTs were not as consistent as in the health facility levels. There are deficiencies in forecasting and requesting ACTs by community health workers and the more peripheral health centers. In addition, community health workers showed some deficiencies in malaria case management.

The support to pharmaceutical management is combined with those related to ITNs distributed via the routine system in DRC since both activities are carried out by the same implementing partner. PMI also works at the provincial level to monitor antimalarial usage and support the distribution of drugs from provincial CDRs to health zones and health facilities.

As of August 2012, healthcare worker training in the 68 health facilities added in FY 2012 had not yet commenced due to time required to establish contracting mechanisms. This mechanism should be finalized by late 2012, with direct support in those 68 health zones to start soon after.

Challenges

Providing effective antimalarial treatment in DRC is probably one of the biggest challenges for PMI in DRC. The weak pharmaceutical system in a country as big as DRC poses a challenge that will require great investments and creativity to overcome. Although PMI implementers can be quite effective in delivering antimalarials and diagnostic supplies to CDRs, the distribution to lower levels of the system has been difficult. There are anecdotal reports of drugs close to expiration date at CDRs, while effective antimalarials are not available at more hard-to-reach health facilities. The complexity of AS–AQ implementation must take into account the drug's short shelf-life, the high cost of ACTs in commercial markets ($10–$15 per treatment), the risk of substandard or counterfeit drugs, and the high levels of coverage that need to be attained.

In addition to making drugs available at the point of service, attention needs to be devoted to improving utilization rates of public healthcare system in DRC and making sure healthcare workers and patients adhere to treatment regimens. The low uptake of ACTs in DRC can be attributed to poor utilization of the public healthcare system and poor acceptability of AS–AQ by healthcare workers and patients. As PMI progresses in DRC, it is important to continue to consider these issues and discuss alternatives to overcome possible challenges. One of these will be developing strategies to support malaria treatment in the private sector. Little information currently exists on how to address this, but we have anecdotal information that a considerable portion of malaria case management is offered by private health facilities in urban areas. PMI will consider alternatives to engage with the private sector when more information is available and implementation is more advanced.

Finally, in a country with such a limited network of healthcare facilities, efforts should be made to expand the coverage of community workers. These workers should engage in comprehensive malaria control training encompassing not only malaria case management, including use of RDTs and pre-referral rectal artesunate, but also prevention messages, such as the use of ITNs and recognition of danger signs of malaria. Partners should be encouraged to develop strategies for both community worker training and supervision.

Plans and Justification for FY 2013 activities ($8,512,500)

With FY 2013 funding, PMI will support the following activities in the 138 health zones targeted:

- Procure approximately five million co-formulated AS–AQ treatments for case management of uncomplicated malaria. PMI recognizes this quantity is low considering the needs for the health zones to be supported considering the results of the gap analysis, but this decision was based on the relatively high ACT pipelines in DRC. ACT usage will be closely monitored and special attention will be paid to forecasting drug consumption and triggering of alternate mechanisms in case of unexpected drug needs. PMI will also closely monitor the possible inclusion of artemether–lumefantrine as alternative ACT in DRC and consider adjusting purchase orders depending on needs ($3,250,000);

- Procure 70,000 kits of quinine and related supplies (intravenous fluids, needles, and tubing) for the treatment of severe malaria. PMI will be attentive to possible inclusion of parenteral artesunate as an option for severe malaria and adjust its procurement accordingly ($500,000);

- Procure approximately 135,000 doses of rectal artesunate for pre-referral treatment of malaria. This commodity will be used in accordance with the findings of the on-going pilot implementation of rectal artesunate in DRC both at community and health facility levels ($100,000);

- Procure 200,000 doses of oral quinine for uncomplicated cases of malaria with intolerance to AS–AQ, for follow-up of parenteral quinine, and for cases of treatment failure and intolerance with the first line ($350,000);

- Support in-service training and supervision of facility and community healthcare workers responsible for the management of both severe and uncomplicated malaria and also support the distribution costs of commodities within provinces. Services will be provided through two separate mechanisms, the previous bilateral mechanism covering 70 health zones for $500,000, and PMI–Expansion Project covering 68 health zones for $850,000 ($1,350,000 total);

- Support IEC/BCC efforts related to malaria treatment, including the use of AS–AQ and laboratory testing to improve demand for and appropriate and timely use of ACTs for malaria case management through mass media and interpersonal communication. This activity will be carried out in 70 health zones using the previous bilateral mechanism ($200,000) and in 68 additional health zones using the newly awarded mechanism ($300,000) ($500,000 total);

- Strengthen the supply chain management for malaria drugs and RDTs. This activity will include support to the current SPS activities in forecasting AS–AQ, SP and RDT needs, drug inventory management, availability of warehouses at national levels, targeted technical assistance to FEDECAME, forecasting and management of stock outs, and implementation of End Use Verification (EUV) activity ($1,000,000);

- Support the delivery of malaria commodities (especially ACTs, drugs for severe malaria and alternative treatment, RDTs, and ITNs). This activity aims to support the PMI implementer responsible for commodities procurement and has means to operate in country to manage country shipments, forecasting, obtaining waivers for importation, etc. This activity can cover support for consultants to assist PMI in country or support to in country staff ($500,000);

- Build capacity to provide community case management with ACTs and RDTs. This activity will encompass identifying, training, equipping, and supervising the *relais communautaires* (community health workers) to promote early and appropriate antimalarial treatment. This activity will be carried out in 70 health zones using the previous bilateral mechanism ($400,000) and in 68 additional health zones using the newly awarded mechanism ($400,000) ($800,000 total);

- Support antimalarial in vivo efficacy trial. This activity will support an in vivo efficacy trial in 1 or 2 sentinel sites to evaluate the first-line (AS–AQ) and proposed alternate first-line (artemether–lumefantrine) treatments in DRC ($150,000); and

- Provide technical assistance visit by CDC Atlanta staff to support activities related to case management, in particular, to assist with issues related to training of healthcare workers and community case management of malaria ($12,500).

5. Monitoring and Evaluation/Operational Research

a) Monitoring and Evaluation

Background

In 2011, the NMCP released a new strategic plan based on the global vision expressed in the Roll Back Malaria Global Malaria Action Plan. The plan identifies four basic strategies for malaria control in DRC: a) improving prevention activities to protect individuals and communities (ITN, IRS, larviciding, and environmental improvements); b) IPTp, c) the improvement of case management at all levels of the health system, and d) strengthening the response to control epidemics. In order to implement these strategies in an effective and efficient manner, the plan also outlines a number of support functions for the NMCP and its partners. These functions will be based on a system of integrated and participatory planning and management at all levels of the health system, including inputs from the community level. There is a renewed emphasis on improved resource management and the timely provision of commodities and supplies at all levels. Other functions will include advocacy for malaria control and training of providers at the various levels of the health system. Underlying these strategies and functions will be a strengthened system of surveillance, monitoring and evaluation to measure progress and results.

In previous years, PMI has supported a range of M&E activities including the development of the National Strategic Plan, the accompanying M&E Plan, and a number of assessments and workshops looking at overall M&E capacity and gaps within the program. In FY 2013, PMI aims to consolidate its assistance to support the NMCP in the implementation of its own M&E Plan. This support will focus on both the central level NMCP needs in terms of data aggregation, analysis, and use for program planning, as well as coordination among the many stakeholders in DRC. At the provincial level, PMI will support activities to improve the quality and timeliness of data collection and accurate estimates of coverage across the strategic areas. The details of PMI's planned efforts are outlined below.

NMCP/PMI Objectives

The NMCP has identified clear objectives for itself and its partners in the National Strategic Plan 2011-2015. The principal role for the Monitoring and Evaluation unit at the NMCP is to monitor progress towards these objectives:

Specific Objective

- Reduce malaria-specific morbidity and mortality by 50 percent by 2015.

Expected Results for 2015

- At least 80 percent of people at risk sleeping under an ITN;
- At least 80 percent of households in target zones are covered by IRS;
- At least 80 percent of pregnant women receive IPTp according to national directives;
- At least 80 percent of all patients with malaria receive diagnosis and treatment conforming to national standards at all levels of the health system;
- At least 80 percent of malaria epidemics are controlled according to national standards;
- The strengthening of the national and provincial coordination structures of the NMCP is assured; and
- Data on indicators of importance to the NMCP are routinely available.

Progress During the Last 12 Months

PMI has been supporting M&E activities through the NMCP since DRC became a PMI country in FY 2011. Initially, PMI support (and some funding from other USAID sources) focused on assessing data quality and issues related to routine data collection through the HMIS. More recently, PMI partners have worked with the NMCP and other stakeholders to conduct more targeted assessments of community case management, and national M&E systems (in conjunction with the Global Fund). In addition to the direct M&E assistance provided to the NMCP, all PMI bilateral partners have also developed information systems to track activities and report on timely basis to USAID/Kinshasa. In many of the zones where bilateral partners are working, these information systems are often the only source of accurate data on malaria control activities in the health zone. PMI has also joined with other partners to support the 2012 DHS, which will include biomarker data collection on parasitemia and anemia, as well as coverage indicators for all key malaria interventions. A summary of M&E activities in the past year is provided below.

M&E Support

- M&E Systems Strengthening Tool (MESST) workshop completed with Global Fund in April 2012.
- National M&E Plan for the NMCP Strategic Plan under technical review and due for completion in June 2012. National M&E plan will include mapping of activities and a costing tool.

HMIS Support

- Data quality assessments completed in targeted service delivery sites to examine quality and completeness of routine information across primary healthcare services.
- Preliminary database development started for routine information system data.
- Completed study of supply chain logistics and health worker performance in community settings in Nov 2011. Report under review by PMI senior staff as of October 2011.

Survey Support

- Planning begun for DHS 2012 with field work scheduled for fall 2012. Plans include biomarker data collection for HIV and malaria, as well as geo-coding of clusters. Results anticipated for June 2013.

Challenges, Opportunities, and Threats

The challenges facing the M&E portion of the National Malaria Control Program are myriad and daunting, but at the same time, DRC offers some unique opportunities for creative approaches to collecting and analyzing data. The recent data quality and community case management assessments point to serious problems with routine data collection at the health facility level, including lack of reporting forms, difficulties in transmitting data to the next level, and gaps in healthcare worker training on M&E. At the central level, the NMCP must coordinate a range of reporting and data generation activities managed by multiple different partners and donor organizations. The single biggest 'wish list' item from the NMCP managers was a consolidated database of activities and progress across the country to help them follow the progress of all their partners. The opportunity for PMI is to intervene at both the central and sub-national levels to build an M&E system that is flexible enough to take into account the different activities across the provinces, but allows the NMCP to coordinate and manage on a national level. Although initial steps towards this end have been taken through previous MOP allocations, FY 2013 is the time to bring this collective vision to fruition. The biggest threat to this vision is not moving fast enough to get a plan and M&E system in place early on during scale up. The NMCP and its partners are rapidly scaling up activities and interventions and the M&E system must be able to keep pace with this progress in order to show concrete evidence of impact by 2015, the timeframe set by the NMCP's Strategic Plan.

Plans and Justification

The health sector in DRC is very fragmented with various donors supporting services in different provinces and health zones. The challenge for the NMCP is to monitor the roll out of interventions

across such a diversity of sites, implementers, and funding agencies. PMI envisions a package of support to the NMCP that aims to develop its capacity to monitor and evaluate its programs at a central level through improved data management, analysis, and use for decision making. A key component of this assistance will include recruiting an M&E advisor to sit at the NMCP and play a key role in implementing the activities and coordinating across donors and stakeholders. Recognizing that wholesale improvements in the HMIS within DRC are beyond the technical and financial scope of one donor, PMI intends to support targeted development of HMIS reporting, specifically around malaria data, in selected health zones and provinces. Over time, and with improved coordination with other donors, these HMIS improvements may be scaled up to new regions of the country. At both the national and provincial level, PMI will reinforce its investments in M&E through providing specific training to program managers around the analysis and use of data, including GIS applications. Finally, to track national progress on scale-up of interventions, PMI will support a national-level MIS survey in 2014 with malaria indicators and biomarkers for parasitemia and anemia.

Proposed activities for FY 2013 ($1,762,500)

- Support better use of data for program management at the central level, through training, supervision, analysis, and coordination among other donors and stakeholders ($250,000);

- Build M&E capacity and improve systems at the provincial level by supporting provincial level training in M&E, piloting of improved data collection and aggregation system in selected sites, and supervision for data collection, analysis, quality control, and use for program decision-making ($400,000);

- Recruit, through an implementing partner, a local-hire M&E technical advisor to sit at NMCP and assist with M&E activities and coordination among donors and across the geographic regions ($100,000);

- Technical assistance for the development of a geographic information system with database to house data from multiple donors across the range of administrative areas in DRC. Activities will include training in database use and maintenance at the central level ($250,000);

- Support an assessment of case management and MIP activities, at the facility and community level in USAID-supported health zones to inform the development of improved approaches to case management and MIP ($250,000);

- Provide financial and technical resources to support the MIS in 2014. The MIS uses standard indicators and methodology approved by the RBM Monitoring and Evaluation Reference Group ($500,000); and

- CDC will conduct one technical assistance visit to support the NMCP on monitoring and evaluation activities. PMI resident advisors, in collaboration with the NMCP, will determine technical priorities in M&E and will request an appropriate headquarters-based technical advisor ($12,500).

b) Epidemic Surveillance and Response

As part of the monitoring component, epidemic surveillance becomes an area of importance for PMI, especially in DRC, where there are regions with high altitudes, and as a consequence lower malaria rates.

NMCP/PMI Objectives

Approximately two million residents, or about three percent of the Congolese population, live in areas at risk of a malaria epidemic in the provinces of Katanga, Orientale, and North and South Kivu in Eastern DRC. The revised National Malaria Control Strategy (2011–2015) has set a target for 2015 of controlling 80 percent of the outbreaks (defined as twice of the number of cases when compared with the two previous years).

Country Progress

Disease surveillance is carried out under the coordination of the *Direction de la Lutte Contre la Maladie – Disease Control Directorate meeting.* This group meets weekly on Wednesdays to review all the data provided by selected health facilities from the 11 provinces. This data covers malaria as well as other epidemic prone disease.

Although very little progress has been made in this area, the NMCP's evaluation of the malaria surveillance (*Evaluation de la Surveillance Epidemiologique & FRP de la Revue du Programme de Malaria en RDC Aout 2011)* recognizes the needs for a better developed system for detection of epidemics.

Challenges, Opportunities, Threats

The surveillance case definition of malaria is still identifying every single case of fever with or without lab test as malaria, and therefore needs revision to be in line with recently released WHO guidelines for surveillance as well as the new 'Test, Track, and Treat' initiative.

In spite of the national directives, nothing has been put in place at the provincial level to ensure early detection and response to epidemics. No emergency stocks of medicines exist and no one has been trained in epidemic detection and response.

These areas that are epidemic prone include 41 health zones and are the same ones where political instability has caused major population displacements, complicating any response to upsurges in malaria incidence. During the epidemic that occurred among refugees in 2007-2008, DRC depended on international partners for assistance in controlling this outbreak.

In 2010, WHO had prepared a proposal to support NMCP efforts to improve epidemic surveillance and response in the first four provinces. The two-year project targeting seven million people would result in a map of the epidemic zones, completed guidelines for control and management of malaria epidemics, and training of personnel. Until the epidemic zones are better defined and the health facilities surveyed, a gap analysis cannot be completed.

Given other priorities, PMI will not fund these activities in FY 2013. However, PMI Resident Advisors will continue providing technical assistance to the improvement of the surveillance system. The option of supporting epidemic surveillance and response planning in each province will be discussed in the future.

6. Behavior Change Communication

NMCP/PMI Objectives

Since FY 2009, USAID has funded support to behavior change communication (BCC) activities related to malaria in DRC. USAID supported the development of a national communication strategy that is being implemented by all partners and coordinated by the NMCP. Starting in FY 2011, when DRC became a PMI country, implementing partners in designated PMI target areas have been delivering prevention and treatment services to the target population. The package of services has been supported with an array of BCC activities that include community sensitization around routine preventive services for MIP and EPI to deliver IPTp and ITNs, as well as community mobilization via the *relais communautaires* to ensure correct and timely use of ITNs as well as to improve care-seeking behavior with regard to treatment of fever in children under the age of five years. Radio messaging is also part of the BCC effort, which is designed to reinforce actions taken at health facilities as well as at the community level.

Progress During the Past 12 Months

During the past twelve months, PMI supported the production of BCC materials and other promotional items such as job aids, message guides, and certificates of accomplishment of BCC activities to health promotion agents, banners and posters. PMI also supported production of radio, TV spots, radio shows and brochures for school students. In order to build the capacity of the NMCP to design and monitor BCC activities at all levels, PMI supported the development of BCC training modules and sponsored the training of 47 MOH staff at the national as well as in two provinces in interpersonal communication. Finally, PMI supported training in social behavior change communication at the national level and in two provinces. Since 2011, a PMI implementing partner has provided strategic direction and support for the development and implementation of national BCC strategies; Despite the fact that this strategy hasn't been administratively approved, a number of operational pilots are under way such as the campaign 3+1 currently implemented with the support of a PMI partner and the IHP whereby households and villages receive certification for mastering three key malaria prevention behaviors (sleeping under LLINs, early care seeking for each case of fever, and completion of the treatment prescribed by the healthcare professional or the community care worker) and certification of health centers on one key behavior (completion of two doses of intermittent treatment for pregnant women attending antenatal care for example). Through these activities, NMCP and partners should have additional evidence to inform program development and implementation.

Also, PMI will ensure that appropriate tools are in place to monitor BCC activities and the impact of messages on population behavior.

Challenges and Opportunities

The major challenges to effectively implement a BCC plan in the DRC are the size of the country and the wide range of local languages spoken by the population, which can be many in a single province, complicating adaptation of messages in local languages. But these challenges are tempered by the existence of a variety of communication channels, including traditional channels, radios and TV that can be used to air messages to target populations.

Plans and Justification

In FY 2013, PMI will continue to support implementation of the national communication strategy, mainly in the five provinces supported by USAID/DRC. Behavior change communication activities will be focused on raising awareness of health workers, religious leaders, community health workers, community groups and other malaria stakeholders on the importance of hanging and sleeping under bed nets and using other malaria commodities for prevention and treatment of malaria. With the award of a new bilateral project, PMI will expand delivery of malaria prevention and treatment services into previously neglected health zones in Orientale Province, similar to those being delivered by current partners in the Kasaïs, Katanga and South Kivu. Of necessity the delivery of these facility and community-based services will include the comprehensive and nationally approved BCC strategy.

Proposed Activities for FY 2013 ($1,685,000):

In compliance with PMI BCC guidance, BCC support will continue to utilize local effective communication channels that are culturally sound and familiar to the communities and target populations. Details and costs of BCC activities are included in the prevention (LLINs, malaria in pregnancy) and case management sections of this plan.

7. Health Systems Strengthening/Capacity Building

NMCP/PMI Objectives

Despite MoH and NMCP commitment to and leadership in malaria control activities in DRC, the capacity of the health system in general and the NMCP needs to be improved for better coordination at national and sub-national levels. The MOH has shown a clear commitment to integrate health services at health facility and community levels to improve access to healthcare services. The NMCP has approximately 52 professional staff members who work at the national and provincial levels. At the provincial level four to five staff members work on malaria: the Provincial Malaria Coordinator, one to two assistant nurse(s) or supervisor(s), a data manager, and a driver. There is a shortage of logisticians and vector control staff to coordinate supply chain management and monitor insecticide resistance, respectively. The NMCP/PMI objective is twofold: 1) strengthen coordination of the program; and 2) increase the competencies of NMCP staff at national and provincial levels for quality programming and monitoring and evaluation.

Progress During the Last 12 Months

The NMCP has demonstrated commendable efforts through its management of the last round of mass distribution of over ten million bed nets in five out of 11 provinces in 2011. The NMCP with the support of its partners also trained health workers for IPTp and case management including use of RDTs and ACTs within the iCCM approach. The first ever national level vector control training was held during the month of April 2012 whereby over 20 entomologist technicians were trained. PMI provided five out of 30 scholarships needed to strengthen NMCP capacity at various levels through a six-week malariology course organized in Kinshasa by WHO AFRO and University of Kinshasa. Key staff in all PMI-supported provinces and central level was prioritized during this activity with balanced gender representation. PMI is continuing its engagement in a variety of evaluation-related activities to help the NMCP plan more effective interventions, including development of a M&E strategy and plan, the development of a database on ITN distribution, post-campaign surveys of ITN ownership and use, and evaluation of the role of the private sector in malaria treatment.

Challenges, Opportunities, and Threats

The challenge of procuring and distributing malaria commodities (LLINs, ACTs, SP, severe malaria kits, RDTs, etc.) in the 515 health zones in the DRC justifies the need to continue strengthening the commodities supply management system. In addition, procuring and distributing malaria commodities (LLINs, ACTs, severe malaria kits, RDTs, etc.) in the over 6,000 health facilities in DRC remains a challenge. The SIAPS project is providing technical assistance to the NMCP for the establishment of an effective and coordinated supply chain network that will ensure timely and adequate forecasting of malaria commodities and laboratory supplies. Quality and reliable data also remain a key focus. The USG has funded a malaria technical advisor through WHO. The malaria technical advisor has been recruited and hosted at the WHO office, pending availability of office space at the NMCP. PMI FY 2012 funding will be used to continue supporting the technical advisor position at the NMCP.

Plans and Justification for FY 2013 activities ($469,000)

PMI recognizes the critical need to have well-trained personnel to ensure the scale-up of malaria activities in DRC. Therefore, PMI, in collaboration with the Global Fund, World Bank, DFID and other partners will support training for the NMCP in M&E, entomology, supply chain, vector control, and logistics management.

PMI will continue its strong focus on building technical and managerial capacity for malaria prevention and control at all levels of the healthcare system. PMI will continue to support the NMCP to improve the quality, completeness and timeliness of malaria-specific data reporting from health facilities and to strengthen staff skills in data analysis, interpretation, and reporting of findings, both from routine supervision and other data sources such as HMIS, DHS, and MIS.

With FY 2013 funding, PMI will support the following capacity building and health systems strengthening efforts:

- Continue support to the Country Coordination Mechanism, as well as national and provincial malaria task force teams, to help address the NMCP's desire to improve coordination of

government, donor and civil society malaria program activities and resources. For the NMCP to fulfill its leadership role in the malaria control effort in DRC, continuing efforts to improve communication and coordination among various stakeholders is very important. The Malaria Technical Working Group provides an ideal forum to share information with all other national and international partners and ensure good coordination of malaria control activities. PMI has been supporting the in country RBM Partnership by providing administrative support to regular meetings of the Technical Working Group, and participating actively in special task forces that are established to deal with specific issues. The planned FY 2012 resources are a continuation of support to National Malaria Technical Working Group at the central level as well as in the four currently PMI-supported provinces. This includes: renting of venue when necessary, collation during meetings and preparation and dissemination of meeting minutes and key documentation, and site visit logistical support. The proposed $100,000 for 2013 is based on historical costs from 2009 to 2011 for the five units, central level and the four provinces. It is important to note that costs are high in DRC, and the country is large, thereby necessitating activities at the provincial level as well as in Kinshasa. It is also important to remember that in 2013, PMI will be supporting one more province, as part of the expansion, adding up a total of six sites: the central level, and five provinces. ($100,000);

- In collaboration with all key malaria donors in DRC, support targeted annual international malariology training course. The course will be held in the DRC in order to enable attendance by a large number of malaria program focal persons from all levels of the health sector. The course will provide training on state of the art malaria program interventions, and update participants on new global and national policies and strategies ($69,500);

- Conduct a national-level training workshop for provincial-level staff on communications. This workshop will focus building technical expertise in areas where the NMCP feels provincial-level staff are especially weak ($200,000); and

- Support Field Epidemiology and Laboratory Training Program (FELTP). Depending on the total level of funding for FELTP, some of the trainees would have an area of concentration in malaria and would work on various malaria-related activities as part of their training. In addition, residents who are specifically enrolled in the malaria concentration would develop a thesis project focusing on malaria, directly working on malaria control priorities for DRC. PMI funds could also support FELTP residents in executing malaria-related field projects and studies such as thesis exploration, surveillance system evaluation, outbreak response activities and other expenses relating to malaria-related field work ($100,000).

8. Staffing and Administration

One resident advisor representing USAID and one representing CDC were hired in February and April 2012, respectively. The USAID PMI Resident Advisor has served since late 2009, and the CDC PMI Resident Advisor has previously served in another PMI focus country in same capacity. In addition, one Foreign Service National that will serve as Malaria Program Specialist is in the final stage of recruitment, and the applications for two shared positions, one Commodities Specialist and one Monitoring & Evaluation Specialist (30% PMI Level of Effort) are under review. 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. All PMI staff members are part of a single inter-agency team led by the USAID Mission Director or his/her designee in country. 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.

Locally hired staff to support PMI activities either in Ministries or in USAID will be approved by the USAID Mission Director and Chief of Mission as appropriate.

Planned Support for FY 2013 ($1,983,000)

- Salaries and support costs of one USAID PSC and two USAID FSNs, including equipment, ICASS, other Mission taxes and fees, and other associated expenses ($1,313,000);

- Salary and support costs of one CDC direct hire, including equipment, ICASS, other Mission taxes and fees, and other associated expenses ($670,000); and

- Salary and support costs for five province-based malaria advisors ($300,000).

9. Table 1: Year Three (FY 2013) Budget Breakdown by Partner ($000)

S/N	Partner Organization	Geographic Area	Activity	Budget
1	IHP	70 health zones in four provinces (West Kasai, East Kasai, Katanga, South Kivu)	- Training of facility- and community-based health workers and lab technicians - Supervision of health workers - Capacity building for CCM - Training of laboratory technicians in use of RDTs with a focus at the health zone level - Transportation costs of commodities and IEC/BCC	2,990
2	PMI-Expansion	68 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	- Training of facility- and community-based health workers and lab technicians - Supervision of health workers - Capacity building for CCM - Training of laboratory technicians in use of RDTs with a focus at the health zone level - Transportation costs of commodities and IEC/BCC	4,285
3	Measure Evaluation	NMCP, West Kasai and East Kasai and Orientale	- Training for central and provincial-level NMCP staff on data collection, analysis quality control and use for program decision making. -Support M&E Advisor position within the NMCP	500
4	TBD	Nationwide	- Technical assistance to NMCP for MIS 2013	500
5	SIAPS	National and five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	- Strengthening of supply chain management including end use verification	1,000
6	DELIVER	West Kasai, East Kasai, Katanga, South Kivu and Orientale	- Procurement of LLINs, ACTs, RDTs, severe malaria drugs and laboratory supplies	14,885
7	IMaD-Follow-on with INRB	National and five provinces (West Kasai, East Kasai,	-Supervise and support system for quality control in reference. Assist with preparation for accreditation.	300

	sub-grant	Katanga, South Kivu and Orientale)		
8	IRS 2 IQC TO #4	West Kasai, East Kasai, Katanga, South Kivu and Orientale	- Entomological monitoring	200
9	USAID	Nationwide	- Staff, administrative and management costs for USAID Resident advisors and FSNs	1,313
10	CDC/ IAA	Nationwide	- Technical support - Staff, administrative and management costs for CDC resident Advisor	807.5
11	TBD	National and Provincial	Three target assessments including efficacy study, continue support to country coordination mechanism at the national and provincial levels (malaria task force committees) - Support targeted malariology training course -Support for Malaria Advisors positions within Provincial Malaria Teams	1,219.5
12	UNICEF Malaria	Bas Congo	- Mass campaign	6,000
	TOTAL			34,000

Table 2

Democratic Republic of Congo
Planned Malaria Obligations for FY 2013 (USD $34,000,000)

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
PREVENTION ACTIVITIES				
ITNs				
Procure long-lasting insecticide treated bed nets (LLINs) for mass campaign	UNICEF	6,000,000 *(6,000,000)*	Bas Congo	Contribute 1.0 million nets for LLINs campaign in Bas Congo. This includes the cost of net, delivery, supervision, social mobilization, IEC/BCC ,and pre-post campaign evaluation One million LLINs at $6/net all costs included.
Procure LLINs for routine distribution through ANC and EPI clinics	DELIVER	5,750,000 *(5,750,000)*	138 health zones in five (5) provinces (West Kasai, East Kasai, South Kivu, Katanga and Orientale)	Provide LLINs to support routine services. 1.15 million LLINs at $5/net all costs included.
Distribution costs for routine LLINs from port to distribution points	IHP	740,000	70 Health Zones in four (4) provinces (West Kasai, East Kasai, South Kivu, and Katanga)	Support the distribution cost for 1.15 million LLINs for routine services in target health zones (local distribution costs previously not covered ; high

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
Distribution costs for routine LLINs from port to distribution points	PMI-Expansion	985,000	68 Health Zones in five (5) provinces (West Kasai, East Kasai, South Kivu, Katanga and Orientale)	costs due to air shipment in country)
IEC/BCC for routine distribution, storage and supervision	IHP	400,000	70 Health Zones in four (4) provinces (West Kasai, East Kasai, South Kivu, and Katanga)	Support IEC/BCC activities to raise awareness among the population on ownership and use of bed nets, mainly by the vulnerable groups. Also storage of LLINs and supervision are included in this activity.
IEC/BCC for routine distribution, storage and supervision	PMI-Expansion	750,000	68 Health Zones in five (5) provinces (West Kasai, East Kasai, South Kivu, Katanga and Orientale)	
Entomological monitoring	IRS 2 IQC TO #4	200,000	Kinshasa, South Kivu, West Kasai, East Kasai, Katanga and Orientale	Continue support to species identification , insecticide resistance monitoring and other entomological work at sentinel sites in FY 2012 –supported provinces
CDC technical assistance for insecticide resistance monitoring	CDC/IAA	12,500		Work with the NMCP, IVM and the PMI country Team on insecticide resistance monitoring.
SUBTOTAL: Insecticide-treated bed nets		**$14, 837,500** ***($11,750,000)***		
Malaria in Pregnancy				

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
Procurement of SP	DELIVER	135,000 (135,*000*)	138 health zones in West Kasai, East Kasai, Katanga, South Kivu and Orientale	Procure 1.7 million SP treatments for 850,000 expected pregnant women in the 138 health zones, including ANC registers, cups, water, etc. to all pregnant women.
Training and supervision of facility-based health workers in malaria in pregnancy, cascading elements from provincial to health zones and health facilities	IHP	262,500	70 health zones in four provinces (West Kasai, East Kasai, Katanga and South Kivu)	Train health workers with initial or refresher courses on MIP topics in 138 health zones in five provinces, including the Orientale Province. This includes health workers from both public and private sectors. Conduct supervision
	PMI-Expansion	412,500	68 health zones in five provinces (West Kasai, East Kasai, Katanga and South Kivu and Orientale)	
IEC-BCC-related to malaria in pregnancy, cascading elements for community health workers and communities.	IHP	87,500	70 health zones in four provinces (West Kasai, East Kasai, Katanga and South Kivu)	IEC-BCC training for community health workers on MIP interventions, including bednet use, IPTp, and treatment-seeking behavior for suspected malaria along with general messages on the importance of antenatal care 138 health zones in five provinces, including the Orientale Province in IEC/BCC. This includes health workers from both public and private sectors.
IEC-BCC-related to malaria in pregnancy, cascading elements for community health workers and communities.	PMI-Expansion	137,500	68 Health Zones in five Provinces (West Kasai, East Kasai, South Kivu, Katanga and Orientale)	
SUBTOTAL: Malaria in Pregnancy		**$1,035,000** ***($135,000)***		

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
TOTAL: Prevention		**$15,872,500** ***($11,885,000)***		
CASE MANAGEMENT ACTIVITIES				
Diagnosis				
Procurement of RDTs	DELIVER	4,200,000 *(4,200,000)*	138 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	Procure and distribute about six million RDTs to support malaria diagnosis in 138 health zones in five provinces, in compliance with NMCP case management guidelines.
Support to reference laboratories at national and provincial levels for microscopy and RDTs training of trainers.	IMaD-follow-on with INRB sub grant	300,000	National and five provinces	Supervise and implement system of quality control in reference laboratories, assist in preparation for accreditation and provide equipment
Support to provincial laboratories at provincial and health facility levels with microscopy commodities	DELIVER	100,000 *(100,000)*	National and five provinces	Purchase of microscopes and kits
Train and supervise laboratory technicians and other health workers to perform RDTs at the health zone level, and distribute RDTs from health zones to	IHP	250,000	70 health zones in four Provinces	Support training and supervision of health facility and community health workers in using RDTs. Distribution costs from CDRs will also be covered under this activity.

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
health facility level	PMI-Expansion	250,000	68 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	Support training and supervision of health facility and community health workers in using RDTs. Distribution costs from CDRs will also be covered under this activity.
SUBTOTAL: Diagnostics		**$5,100,000** ***($4,300,000)***		
PHARMACEUTICAL MANAGEMENT AND TREATMENT				
Procurement of AS-AQ	DELIVER	3,250,000 *(3,250,000)*	138 health zones in five targeted provinces	Procure five million AS-AQ treatments for uncomplicated malaria, both for health facilities and community case management
Procurement of drugs and supplies for treatment of severe malaria	DELIVER	500,000 *(500,000)*	138 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	Procure approximately 70,000 kits of parenteral quinine with supplies for severe malaria treatment
Procurement of drugs for pre-referral treatment of malaria	DELIVER	100,000 *(100,000)*	138 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	Procure 135,000 doses of rectal artesunate for management of referral
Procurement of oral quinine for intolerance and treatment failure	DELIVER	350,000 *(350,000)*	138 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	Support the procurement of 200,000 doses of oral quinine for cases of ACT intolerance and therapeutic failure

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
Training and supervision of facility and community-based health workers trained in case management, and support drug distribution costs to health facility level	MSH/IHP	500,000	70 health zones in four provinces (West Kasai, East Kasai, Katanga and South Kivu)	Train and supervise health workers in 138 health zones covered under FY 2013. This includes health facility–based and community health workers. Ensure supervision conducted in an integrated fashion per NMCP guidelines. Cover distribution of drugs from CDRs to health zones and from health zones to health facilities.
	PMI-Expansion	850,000	68 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	
IEC/BCC related to case management	IHP	200,000	70 health zones in four provinces (West Kasai, East Kasai, Katanga and South Kivu)	Support provision of IEC/BCC based out of health facilities
	PMI-Expansion	300,000	68 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	
Strengthening of the supply chain management for drugs and RDTs including end use verification	SIAPS	1,000,000	National and five provinces	Contribute to on-going SPS support activities for supply chain management (renovation of warehouses). Targeted technical assistance to FEDECAME and addressing stock-outs, testing storage conditions (temperature, humidity) for drugs and RDTs.

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
Support for operational cost related to commodities in country	DELIVER	500,000	National+5 Provinces	Support proper delivery of malaria commodities in DRC
Build capacity to provide community case management services	IHP	400,000	70 health zones in four provinces(West Kasai, East Kasai, Katanga and South Kivu)	Identify, train, equip and supervise community relais to provide community case management services.
	PMI-Expansion	400,000	68 health zones in five provinces (West Kasai, East Kasai, Katanga, South Kivu and Orientale)	
Support to anti-malarial in vivo efficacy trial	TBD	150,000	Provincial level	Support in vivo efficacy trials in 1 or 2 sentinel sites to evaluate antimalarial first line and proposed alternate ACT.
CDC Technical Assistance for case management	CDC/IAA	12,500		Support capacity building for case management data management
SUBTOTAL: Pharmaceutical Management and Treatment		**8,512,500 (4,200,000*)***		
TOTAL: Case Management		**$13,612,500 *($8,500,000)***		

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
CAPACITY BUILDING				
Continue support country coordination mechanism at the national and provincial levels (malaria task force committees)	TBD	100,000	Nationwide and provincial	Support multi-partner National Malaria Task Force at the central and provincial levels, including meetings, report dissemination, support to technical assistance for coordination, annual review
Support targeted malariology training course	TBD	69,500	National and Provincial	Support the training of ten medical doctors of health experts at the national and the provincial levels to attend the international malariology training courses organized by WHO in the DRC.
Support the conduct of a national-level training workshop for provincial-level staff on communication and malaria control	PMI-Expansion	200,000	National + five Provinces	Support in-country training sessions for national and provincial levels staff in communication (IEC/BCC) and in monitoring and evaluation. The two trainings which are also organized at the international level will enable an increased number of participants in the DRC.
Support Field Epidemiology and Laboratory training Program	CDC-IAA	100,000	National	

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
TOTAL: Capacity Building		**$469,500** ***($0)***		
MONITORING AND EVALUATION				
Support better use of data for program management at the central level,	TBD	250,000	National	Support: training on data analysis and use for program management, supervision, coordination
Build M&E capacity at provincial level through training, data analysis, and use	Measure Evaluation TBD	400,000	National (NMCP) West Kasai and East Kasai	Build M&E capacity and improve systems at the provincial level by supporting provincial level training in M&E, piloting of improved data collection and aggregation system in selected sites, and supervision for data collection, analysis, quality control, and use for program decision-making This also includes printing standardized reporting forms.
Development of a spatially oriented database training for database use and maintenance	TBD	250,000	National	Support the development of a spatially-oriented database and training for database use and maintenance at the central level
Hiring M&E technical staff	Measure Evaluation	100,000	National	Support the recruitment of a M&E professional to work at the

Proposed Activity	Mechanism	Budget (*commodities)*	Geographic area	Description of activity
to the National Malaria Control Program.				National Malaria Control Program Division to coordinate and conduct M&E activities.
Planning and implementation of 2014 MIS	TBD	500,000	National	Provide technical assistance to the NMCP and partners in planning, developing questionnaires, implementing and conducting data analysis for the 2014 MIS.
Assessment of case management and MIP at facility and community levels	TBD	250,000	Target areas	Support an assessment of case management and MIP activities, at the facility and community level in USAID-supported health zones to determine to inform the development of improved approaches to case management and MIP.
Monitoring and evaluation technical assistance	CDC IAA	12,500	TBD	Assist national M&E planning, support capacity building for M&E
TOTAL: Monitoring and Evaluation		**$1,762,500**		
IN-COUNTRY MANAGEMENT AND ADMINISTRATION				
In-country staff and administrative expenses	USAID	1,313,000	NA	One Resident Advisor, one Malaria Program Specialist, one

Proposed Activity	Mechanism	**Budget (*commodities)***	**Geographic area**	**Description of activity**
				(30%) Malaria Commodities and Logistics Specialist, one (30%) Monitoring and Evaluation, one Administrative Assistant.
CDC in-country staff administrative expenses	CDC-IAA	670,000	NA	One Resident Advisor
Five Province-based Malaria Advisors	TBD	300,000		Support the recruitment of five Malaria Advisors to Assist the Provincial Malaria Teams in the five Provinces
TOTAL: Management and Administration		**$2, 283,000**		
GRAND TOTAL		**$34,000,000** ***($20,385,000***		

* Global Fund supports 10 out of 80 USAID/IHP supported health zones