

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 2014 appropriation. If any further changes are made to this plan it will be reflected in a revised posting.



# **Burundi**

## **Malaria Operational Plan FY 2014**

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## ABBREVIATIONS

ACT	Artemisinin-based combination therapy
ANC	Antenatal clinic
AS-AQ	Artesunate-amodiaquine
BCC	Behavior Change Communication
CAMEBU	<i>Centrale d'Achat de Médicaments Essentiels du Burundi</i>
CCM	Community Case Management
CHW	Community Health Worker
DfID	Department for International Development
DHS	Demographic and Health Survey
DPML	Directorate of Pharmacies, Medicines, and Laboratories
DSNIS	<i>Direction du système National information Sanitaire</i>
EUV	End-use verification
EPI	Expanded Program on Immunization
FY	Fiscal Year
Global Fund	Global Fund to Fight AIDS, Tuberculosis, and Malaria
GOB	Government of Burundi
HMIS	Health Management Information System
IPTp	Intermittent Preventive Treatment of pregnant women
IRS	Indoor Residual Spraying
ITN	Insecticide-Treated Net
M&E	Monitoring and Evaluation
MIS	Malaria Indicator Survey
MSPLS	Ministry of Public Health and HIV/AIDS Control
PNILP	<i>Programme National Intégré de Lutte Contre le Paludisme</i> (National Malaria Control Program)
RDT	Rapid Diagnostic Test
SOP	Standard Operating Procedure
SP	Sulfadoxine-pyrimethamine
TCN	Third Country National
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

## I. EXECUTIVE SUMMARY

The Republic of Burundi, located in the Great Lakes region of Central Africa, is one of the ten poorest countries in the world. Burundi emerged from over a decade of civil war in 2000, with the signing of the Arusha Peace Accord. Burundi's first democratic election was held in 2005. With an estimated 2014 population of 10.4 million, and an average life expectancy of just 51 years, Burundi continues to recover from the effects of massive population displacement, social disruption, and ethnic and gender-based violence.

Malaria is considered a major public health problem in Burundi and places a heavy burden on the health system. According to Ministry of Public Health statistics, malaria is responsible for up to 60% of all outpatient visits and up to 50% of deaths in health facilities among children under five years of age. Almost the entire population of Burundi lives in areas at risk of malaria.

A Malaria Indicator Survey (MIS) was conducted in 2012, the first nationally representative survey for malaria. The results update the data on malaria that were collected in the 2010 Demographic and Health Survey (DHS). The use of preventive measures is increasing, with reported household ownership of an insecticide-treated net (ITN) at 63%, with 53% of children under five and 56% of pregnant women sleeping under an ITN the previous night. Burundi's malaria in pregnancy policy at the time of the survey did not promote preventive treatment for pregnant women. This policy has now changed and the most recent DHS demonstrates that women do receive some antenatal care through antenatal clinic (ANC) visits, with 99% visiting an ANC at least once during their pregnancy.

This Operational Plan was developed during a planning visit carried out in Burundi in April 2014, with the participation of team members from USAID/Washington and USAID/Burundi. The activities that USAID is proposing to support with FY 2014 funds fit within the National Malaria Control Strategic Plan (2013-2017) and are designed to complement activities supported under the country's consolidated Global Fund transitional funding grant. This plan was developed in cooperation with the national malaria control program, the *Programme National Intégré de Lutte Contre le Paludisme* (PNILP). The FY 2014 budget for Burundi is \$9.5 million.

**ITNs:** The scale-up of ITNs is a key component of Burundi's overall malaria prevention strategy. The Government's goal is to achieve and maintain universal ITN coverage by providing one ITN per two people. This targeted coverage is primarily achieved through periodic mass distribution campaigns and routine distribution to vulnerable populations through antenatal and immunization services at health facilities. The PNILP will conduct another mass distribution in June 2014, where over 5.3 million ITNs will be distributed to replace those from the first round of rolling mass campaigns held from 2009-2011. In 2015, to support the continuous distribution of ITNs, an estimated 1 million nets are needed to sustain the continuous distribution strategy.

With FY 2014 funds, USAID will procure approximately 700,000 long-lasting ITNs to support continuous distribution through antenatal and child health clinics as well as a small amount for the social marketing program to reach residents in targeted urban settings. This contribution will help to ensure that the ITN ownership achieved through the campaigns will be maintained in the year following the distribution.

**Entomology:** Burundi's longer-term vector control management goals include increasing country capacity to collect, analyze, and use entomologic data to inform the country's malaria prevention and control program. National entomology capacity remains limited, but has made some significant progress in the past year. By October 2013, the insectary was maintaining a susceptible colony (*Anopheles gambiae*) while entomological data collection was initiated in four sentinel sites and later expanded to six sites by November 2013. One year's worth of data collection will be completed in 2014, establishing a clear baseline from which to work in the coming years. With FY 2014 funds, USAID will continue to improve national entomology capacity in the six established sentinel sites, including using the collected entomological data to inform the implementation of the national malaria control strategy.

**Intermittent preventive treatment of pregnant women (IPTp):** Following extensive support from USAID and UNICEF over the past several years, in 2014 Burundi adopted a national policy to add IPTp to the package of services available through ANCs. With FY 2014 funds, USAID will support the training and implementation of IPTp within targeted facilities as part of a national roll out of this new program.

**Malaria case management:** The national policy on malaria diagnosis recommends confirmed diagnosis of all cases of suspected malaria, through either microscopy or rapid diagnostic tests, while children under five may be treated presumptively when diagnostic testing is not available. Malaria laboratory diagnosis is available throughout the country, but the quality and adherence to the results can vary significantly. Infrequent in-service trainings and a non-functioning quality assurance system means that microscopic diagnostic quality remains variable. The current treatment guidelines recommend scaling up RDTs to 80% of all diagnostics. Burundi has used artesunate-amodiaquine (AS-AQ), as its first-line treatment for uncomplicated malaria since 2003, and currently uses the AS-AQ fixed-dose combination therapy. Gaps remain in the estimated ACT needs in 2015 and 2016, and are not expected to be fully met through the Global Fund transitional funding and the future concept note. While the threat of national-level stockouts has waned in the past year, facility level stockouts continue as logistical challenges prevent maintenance of adequate stock levels at the facility level. The PNILP is eager to expand community case management (CCM) services beyond malaria to include additional services (pneumonia and diarrhea).

With FY 2014 funds, USAID will procure approximately 2.2 million rapid diagnostic tests and up to 2.4 million ACT treatments and/or drugs for the treatment of severe malaria to fill the gaps estimated for 2015. USAID will also support long-term technical assistance in pharmaceutical management and case management at the national, district and facility levels, and continue to support CCM.

**Behavior change communication (BCC):** Burundi needs significant support to strengthen its malaria BCC program. A National Communication Strategy for malaria has not yet been adopted and implemented. There is only one full-time BCC staff member at the PNILP, and the recommended information, education, and communication technical working group in the PNILP is neither functional nor able to coordinate BCC efforts among donors. With FY 2014 funds, USAID will provide support to promote prevention and treatment uptake of malaria services,

including correct and consistent use of ITNs, prompt care-seeking behavior with fevers, and promoting ANC attendance.

**Capacity building:** USAID is committed to providing the PNILP with critically needed support to sustain and strengthen the government's malaria prevention and control program while emphasizing national and local capacity building and key policy and structural reforms needed for a sustainable national response. Over the past year, USAID support organized quarterly progress meetings with the PNILP and relevant stakeholders, developed an annual work plan, and developed and finalized a handbook with standard operating procedures (SOPs) on financial, human resources and administrative procedures and job descriptions available for PNILP staff. With FY 2014 funding, USAID/Burundi will continue to support building the PNILP's capacity to oversee and manage its program, including: improve the operations and functions of their office, organize quarterly meetings with in-country Roll Back Malaria partners, leadership and management training, regional professional development opportunities, organizational development, financial management assistance.

**Monitoring and evaluation (M&E):** USAID supported the 2012 MIS, which resulted in the first post-conflict baseline of malaria parasitemia levels throughout the country. In the past year, USAID also supported the development and validation of the new national monitoring and evaluation (M&E) plan, 2013-2017. With FY 2014 funds, USAID will contribute to the 2015 DHS, and provide assistance to the PNILP to operationalize and fund the PNILP's M&E national strategy.

## II. STRATEGY

### INTRODUCTION

Burundi was selected as a USAID Malaria country in FY 2009. Large-scale implementation of malaria control efforts has progressed rapidly with support from USAID. This FY 2014 Malaria Operational Plan presents a detailed implementation plan for Burundi, based on the U.S. Government's malaria strategy and the National Malaria Control Program's (PNILP) strategy. It was developed in consultation with the PNILP and with the participation of national and international partners involved in malaria prevention and control in the country. The activities that USAID is proposing to support fit in well with the PNILP's Strategic Plan (2013-2017) and build on investments made by USAID and other partners to improve and expand malaria-related services, including the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund) malaria grants. This document briefly reviews the current status of malaria control policies and interventions in Burundi, describes progress to-date, identifies challenges and unmet needs to achieving the targets of the PNILP and USAID, and provides a description of activities that are planned with FY 2014 funding.

Burundi is a limited presence country overseen by the USAID East Africa Mission. The USAID Burundi Office's programs are managed by a Country Representative and a small staff of Foreign Service Nationals (FSNs) and Third Country Nationals (TCN). Significant administrative and technical assistance is provided by the USAID/East Africa Regional Mission in Nairobi, Kenya.

The total amount of USAID Malaria FY 2014 funding requested for Burundi is \$9.5 million.

### COUNTRY HEALTH SYSTEM DELIVERY STRUCTURE AND MOH ORGANIZATION

The Republic of Burundi is a small country in the Great Lakes region of Central Africa bordered by Rwanda to the north, Tanzania to the south and east, and the Democratic Republic of the Congo to the west. Although the country is landlocked, it borders Lake Tanganyika to the southwest. Burundi is now a member state of the East Africa Community (EAC) comprised of Burundi, Kenya, Rwanda, Tanzania, and Uganda. The country is divided into 17 provinces, 129 *communes* (five to eleven per province) and 3,061 "*collines*" with an average population of 3,000 per *colline*. Provincial governments are structured upon these boundaries. In 2000, the province encompassing Bujumbura was separated into two provinces, Bujumbura Rural and Bujumbura Mairie consisting of 13 urban *communes*.

The goals outlined in the current national Health Development Plan (*Plan National de Développement Sanitaire II 2011-2015*) are to: reduce maternal and neonatal mortality; reduce infant and child mortality; reduce mortality from communicable diseases; and, strengthen the health system and meet Millennium Development Goals 4, 5, and 6 related to, respectively, reducing child mortality, improving maternal health, and combating infectious diseases. To improve access to health services for the most vulnerable groups, the Government of Burundi (GOB) has implemented policies to support free services to pregnant women for deliveries in

health facilities and for children under five years of age, plus expanding community-based service delivery and national health insurance schemes. The GOB will continue to strengthen the quality of health services through human resource management, capacity building, quality assurance and control, and performance-based financing.

The Ministry of Public Health and HIV/AIDS Control (MSPLS) is organized into three levels with well-defined roles and responsibilities to implement the ambitious *Plan National de Développement Sanitaire II 2011-2015*. The central level has the Health Minister and the Heads of Departments and Services that are tasked with setting policies and guidelines. The intermediate level is composed of the 17 health provinces that are administered by a Provincial Bureau, headed by a Chief Medical Officer. The tertiary level is composed of forty-five health districts that are managed by health district teams. Each district team is normally led by a physician, and composed of three supervisors, a health information system manager, an administrative officer, a drug stocks manager, an accountant, an administrative assistant, a driver, and up to three clerks.

Decentralization is ongoing; strategic planning, implementation, and financial support are now being transferred to the provincial and district levels. Under the new decentralization plans, the provincial health departments will regulate and supervise district-level offices to ensure compliance with the central MSPLS. The district-level offices will oversee the delivery of health care services in the local communities. As a result of these changes, provincial and district health departments are becoming responsible for implementing and coordinating activities within their health zones. Under the decentralization plan, each district will have a district hospital and peripheral health centers, however, the implementation of this plan is not yet complete and five districts still do not have hospitals. The peripheral level is composed of district-based health centers, staffed by nurses who provide preventive and curative interventions for the population.

The MSPLS has adopted performance-based financing countrywide to strengthen the health system by improving quality care and retaining key personnel. Although performance-based financing is national, not all health elements are covered and at the moment the malaria control program is not included in the system. The GOB's budget for health, as a percentage of its total annual budget, has been increasing, peaking at 12%<sup>1</sup> in 2012 before dropping to 10% in 2013.

Despite growth in the Government of Burundi health budget, the portion dedicated to malaria prevention and control is still very low (around 0.4% of the total budget). The vast majority of funding for malaria control continues to come from external donors (primarily from the Global Fund and USAID). However, with the Global Fund now requiring a minimum 5% government contribution to fully access funding under its New Funding Mechanism, it is possible that the government contribution in the coming years will increase. The GOB has formed an international health partnership, envisioning setting up the sector-wide approach to support health interventions. The MSPLS has requested donors to support provinces and to provide a minimum package of health services in health facilities in the areas that they support.

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<sup>1</sup> Burundi Budgetary law 2011 (*Loi Budgétaire du BURUNDI 2011*)

## COUNTRY MALARIA SITUATION

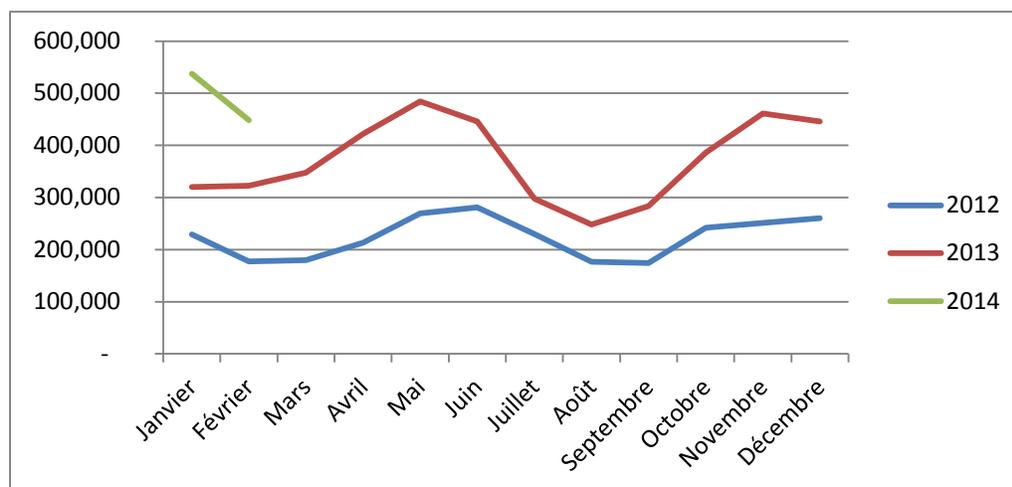
Malaria is considered a major public health problem in Burundi and places a heavy burden on the health system. Burundi's health management information system data indicate that cases of malaria represent approximately 25% of total consultations and account for up to 48% of deaths in health facilities among children under five years of age. The estimated 2012 malaria mortality rate was 2%<sup>2</sup>. The major vectors transmitting malaria in Burundi are *An. gambiae* and *An. funestus*.

Nationally, the 2012 MIS found that 17% of children 6-59 months tested positive for malaria; however, their parasitemia levels ranged from 24% in the North region to 1% in Bujumbura-Mairie region. Rural areas carry higher disease burdens than the urban and semi-urban areas. The malaria transmission season lasts from May through November (and is longer in the south). *Plasmodium falciparum* accounts for 84%, while the remaining 16% are co-infections with *Plasmodium malariae* or *Plasmodium ovale*.

Burundi recorded 4,464,369 reported malaria cases in 2013, an increase over the number of cases recorded in 2012. The data presented in Figure 1, below, show a significant increase of malaria cases in 2013 compared to 2012.

Confirmed diagnosis of malaria, however, is increasing and in 2012 the case management quality survey found that 87% of fevers were tested for malaria.

**Figure 1: Total Number of Malaria Cases (Confirmed), 2012-2013-2014, by month**



Source: Direction du Système National de l'Information Sanitaire (DSNIS)

<sup>2</sup> Annual report for the national information system (*Rapport annuel de la Direction du système National information Sanitaire (DSNIS)*):

## **BURUNDI'S MALARIA CONTROL STRATEGY**

The Ministry of Public Health and HIV/AIDS finalized Burundi's third national malaria strategy (*Plan Stratégique National de Lutte Contre le Paludisme 2013-2017*) in November of 2013. The national strategy is aligned with the *Plan National de Développement Sanitaire II* and WHO recommendations. With the support of the government and partners the PNILP's strategy subscribes to the key malaria priorities and activities of: universal coverage, improved diagnostics through rapid diagnostic test (RDT) use, increased communication activities, provision of free first-line malaria treatment, and free case management of severe malaria for children under five and pregnant women.

Burundi's stated goal is to reduce malaria morbidity and mortality by 75% from 2013 levels by 2017. The strategy is comprised of seven thematic areas: 1) case management, 2) malaria in pregnancy, 3) integrated vector control management, 4) epidemic surveillance, 5) communication, 6) monitoring and evaluation and operational research, and 7) capacity building of the national program. Each area has its own specific goals and objectives.

### **Case Management**

The principal objectives of malaria case management are to minimize severity and complications from malaria infections and thus reduce morbidity/mortality among vulnerable populations and to ensure that all people with malaria have access to appropriate, timely diagnosis and prompt treatment.

### **Malaria in Pregnancy**

Adopted as a new prevention intervention in Burundi in 2014, under the current national strategy, IPTp will be introduced and scaled up with the target of ensuring that 100% of pregnant women receive 3 doses of sulfadoxine-pyrimethamine (SP) during their pregnancy. This new intervention will complement the distribution of ITNs to pregnant women, providing a more comprehensive package of malaria prevention tools to this vulnerable population.

### **Integrated Malaria Vector Control**

Burundi's objectives for integrated vector control are: 1) ensure universal coverage of ITNs with at least 80% use; 2) maintain 100% coverage of households in targeted epidemic-risk districts receiving indoor residual spraying (IRS); and 3) establish and operationalize an entomological surveillance system.

### **Epidemic Surveillance**

The main objective is for the program to develop a surveillance, detection, and alert system with mapped high risk zones with the goal of detecting 100% of epidemics.

### **Communication**

The primary objective under this theme is to ensure that at least 90% of the population will be aware of the appropriate use of malaria prevention and treatment interventions.

### **Monitoring and Evaluation**

The objective of this theme is to strengthen monitoring and evaluation of malaria control interventions, activities, policies and strategies and ensure that at least 80% of decisions are made using available evidence.

### **Capacity Building**

The principal objective is to strengthen capacity in program management, resource mobilization and coordination at all levels.

## **INTEGRATION COLLABORATION AND COORDINATION**

The Global Fund and the USAID Malaria program provide more than 90% of malaria control funding to Burundi. This does not take into account staff salaries, which are paid by the government. Other donors include WHO, UNICEF, and the Swiss Development Cooperation.

Under the Global Fund New Funding Model, the proposed malaria funding level for Burundi is \$36.3 million for the 2014-2016 allocation period<sup>3</sup>. Approximately half of this amount is part of the consolidated grant (including remaining funds from the rolling continuation channel, Round 9 and the transition funding) which is still pending final approval (expected in mid-2014). The PNILP will develop and submit a concept note for the balance of funds in October 2014.

The USAID Malaria program and the Global Fund provide complementary funding for malaria control efforts in Burundi. The Global Fund Round 9 grant funded the vast majority of the 2014 mass distribution campaign that will distribute 5.2 million nets nationwide in June 2014. The USAID Malaria program targeted its funding to ensure that state of the art technical assistance was available to the PNILP for the planning of the mass distribution campaign.

For case management, the USAID Malaria program and the Global Fund provide all funding for national stocks of ACTs, RDTs and SP (currently). PMI coordinates closely with all partners to ensure that national stockouts are avoided and will place emergency orders in case of delayed release of funds or late delivery of commodities. The USAID Malaria program will also provide technical assistance for quantification, procurement planning, and monitoring of SP, ACTs, and RDTs. The Global Fund's New Funding Model is expanding support for integrated community case management (iCCM) which, if funded in Burundi, would open wider collaboration with UNICEF and other NGOs that are involved in the integrated management of childhood illnesses.

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<sup>3</sup> <http://www.theglobalfund.org/en/fundingmodel/allocationprocess/allocations/>

**Table 1: Major non-USAID Malaria Program External Sources of Funding for Malaria Control in Burundi**

Source	Amount (millions)	Period Covered	What is covered
Global Fund New Funding Model	\$36.3	October 2014-December 2016	TBD, concept note is not yet written. Will likely cover all prevention and treatment areas of the national strategy.
UNICEF		Ongoing	Delivers ITNs (around 10,000/year) for emergency situations like flooding and tornado that create displaced families. Collaborates with USAID and PNILP to expand iCCM to include other interventions (including pneumonia and diarrhea). Provides technical and financial support for IPTp implementation.
World Health Organization		Ongoing	Provides technical and some financial support for the implementation of treatment and prevention policies, planning, M&E, research, surveillance, and management of the PNILP.
<i>Médecins sans Frontières</i> (Belgium)		Project to end by 2015 in Kirundo	Collaborating with the PNILP and partners on severe malaria treatment in Kirundo Province.

## **PROGRESS ON CURRENT MALARIA INDICATORS**

Two nationally representative population-based household surveys provide intervention coverage estimates for key malaria outcome indicators between 2005 and 2012. The table below describes current estimates of intervention coverage and impact indicators for Burundi. The 2010 DHS provides baseline estimates for the main USAID indicators of interest.

The 2012 MIS collected the first nationally representative data on malaria parasitemia among children aged 6-59 months. It also updated estimates of selected demographic and health indicators covered in previous surveys to more accurately measure trends in malaria infection. The next DHS is scheduled to be fielded in 2015.

**Table 2: Summary of Selected Malaria Indicators**

Indicator	2005 MICS	DHS 2010 (USAID baseline)	2012 MIS
Households with at least one ITN	8%	52%*	63%
Children under five years old who slept under an ITN the previous night	8%	46%	53%
Pregnant women who slept under an ITN the previous night	NA	50%	56%
Women who received two or more doses of IPTp during their last pregnancy in the last two years	NA**	NA**	NA**

Children under five years old with fever in the last two weeks who received treatment with an ACT within 24 hours of onset of fever	NA	12%	14%
*The DHS was conducted before the 2011 universal coverage mass campaign was conducted, which distributed ITNs to the remaining provinces (as discussed in the ITN section, below). **IPTp was not policy in Burundi until 2014.			

### III. OPERATIONAL PLAN

#### MALARIA PREVENTION

##### Insecticide-Treated Nets (ITNs)

###### Background

The scale-up and maintenance of ITN coverage is a key component of Burundi's overall malaria control and prevention strategy. The PNILP's current national malaria control strategy calls for universal coverage (defined as one net for every two people) through national-level distribution campaigns and supported in the interim years through continuous distribution channels

Mass Distribution: Mass distribution campaigns are intended to quickly scale up coverage of ITNs throughout the country by providing one ITN for every two people registered for the campaign. The first phase of universal coverage was achieved through three phases of mass distribution campaigns: June 2009, April 2010, and February 2011. Over 4 million ITNs were distributed through this effort. The replacement mass distribution campaign is currently scheduled to take place in June 2014, where over 5.2 million ITNs are scheduled to be distributed throughout the country in one nationwide distribution effort. This campaign is primarily funded through the Global Fund Round 9 grant, with technical assistance for the design and planning of the campaign provided by USAID.

Routine Distribution: Burundi's national malaria strategy supports free distribution of ITNs to pregnant women and young children through ANC and Expanded Program on Immunization (EPI) clinics. In 2009, when USAID launched its malaria program in Burundi, less than 30% of the annual ITN needs for pregnant women and children under one were being met through the routine system. Today, USAID and UNICEF, the only donors supplying ITNs for routine distribution, are able to meet approximately 85% of the annual calculated need. In 2011, in order to establish a better tracking system of routine ITNs, the MSPLS decided that ITNs should be managed as an essential medicine. This was a significant policy change that will ultimately require each district to manage their own stock of ITNs, including: quantifying need based consumption (instead of population estimates), collecting the district stock of ITNs from a central warehouse (instead of the ITNs being delivered to each district), and overseeing actual consumption to better manage stock levels, thereby preventing ITN stockouts.

Social Marketing: Eager to assess other viable continuous distribution strategies to mitigate some of the pressures on the country to maintain complicated and time-consuming mass distributions every three years, the PNILP has supported the revitalization of Burundi's fledgling market segmented approach, which included selling socially marketed ITNs in the private sector.

Sales of socially marketed ITNs began again in 2013 with a promising start and reaching high demand in the marketplace.

ITN Coverage: The 2012 MIS results found that household ownership of at least one ITN was 63%. Net use is also increasing, with 54% of children under five having slept under an ITN the night before the survey, an increase from 45% in the 2010 DHS. Among pregnant women, 56% slept under an ITN the night before the survey, an increase from 50% recorded in the 2010 DHS. Reflecting the efforts of the mass distribution campaign, 46% of household populations had access to an ITN (assuming that each ITN was used by a maximum of two people).

ITN Gap Analysis: The table below describes the total projected ITN gap in Burundi between 2014 and 2016. With the completion of the mass distribution campaign projected for mid-2014, much of the population will have access to an ITN in 2015. The need to provide replacement nets through continuous distribution channels is noted, and the PNILP remains committed to supporting the routine distribution through ANC and EPI as well as to continue to explore additional channels such as social marketing. It is estimated, however, that donor support will be insufficient to fully meet the expected needs for continuous distribution in 2015 and 2016. Additional resources will be needed to ensure that vulnerable populations remain covered in the years following the mass distribution campaign.

<b>Table 3: 2015 ITN Gap Analysis</b>			
<b>Calendar Year</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Total Targeted Population	10,419,717	10,721,888	11,032,822
<b>Continuous Distribution Needs</b>			
Channel #1: ANC	520,985	536,094	551,641
Channel #2: EPI	364,690	375,266	386,148
Channel #3: Social Marketing	100,000	150,000	200,000
<i>Estimated Total Need for Continuous</i>	<b>985,675</b>	<b>1,061,360</b>	<b>1,137,789</b>
<b>Mass Distribution Needs</b>			
2014 Mass Distribution campaign (national)	5,865,902	0	0
<i>Estimated Total Need for Campaign</i>	<b>5,865,902</b>	<b>0</b>	<b>0</b>
<b>Total Calculated Need: Routine and Campaign</b>	<b>6,851,577</b>	<b>1,061,360</b>	<b>1,137,789</b>
<b>Partner Contributions</b>			
PMI (routine only)	850,000	700,000	TBD
Global Fund Round 9 (campaign only)	5,282,212	0	0
UNICEF (routine only)	100,000	100,000	100,000
<i>Estimated Total Partner Contributions</i>	<b>6,232,212</b>	<b>800,000</b>	<b>100,000</b>
Surplus ITNs from previous year	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total ITNs available in calendar year</b>	<b>6,232,212</b>	<b>800,000</b>	<b>100,000</b>

<b>Total ITN Surplus (Gap)</b>	<b>(619,365)</b>	<b>(261,360)</b>	<b>(1,037,789)</b>
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**Progress in the last 12 months:**

USAID supported the planning of the 2014 ITN mass distribution campaign by funding an Alliance for Malaria Prevention consultant to provide technical assistance to the planning committee over the past year. The technical assistance will continue up to the campaign itself in June 2014.

USAID continues to commit a significant proportion of its malaria control program resources towards strengthening the routine distribution of ITNs. In the last year, USAID procured a total of 850,000 ITNs and distributed just under 625,000 through the ANC and EPI clinics nationwide. Among these targeted populations, 87% of pregnant women attending their first prenatal consultation and 93% of vaccinated children under 9 months received ITNs. For the routine distribution system, USAID assisted a total of 20 districts to treat ITNs as an essential medicine. This included support for local management of ITN stocks, where nets are dispatched from the district level to health centers and tracked closely to monitor actual consumption rates. USAID also supported the restarting of the country’s social marketing program with a total of 10,000 ITNs distributed through this new channel by the end of FY 2013. The re-launch of the known social marketing net in Burundi, SUPANET, took place in December. Radio spots and promotional materials were used along with the creation of 138 sales points (30 pharmacies and 108 boutiques) in collaboration with independent promotion agents; there are plans to expand sales points.

**Proposed activities with FY 2014 funding: (\$2,970,000)**

USAID will continue to support increasing the ownership and use of ITNs both through routine and mass campaign distribution methods. Specifically, FY 2014 funding will:

- *Procure and distribute ITNs for routine distribution:* Procure and distribute approximately 600,000 ITNs to pregnant women and children under one free of charge through ANC and immunization clinics in 17 provinces nationwide. In coordination with the PNILP and following the national guidelines, up to an additional 100,000 ITNs may be procured for the social marketing program, for a total procurement of 700,000 ITNs. (\$2,970,000)

**Entomology**

**Background**

The National Malaria Control Strategy calls for the PNILP to establish a sustainable IRS program in all households where it is needed and feasible. In support of this strategy the PNILP has been spraying approximately 50,000 households annually in targeted communities in Ngozi and Kayanza provinces (epidemic-prone zones) to achieve at least 80% coverage among the targeted households. Thus far, the use of IRS has had a relatively minimal impact on malaria control, given the limited application, as demonstrated in the 2012 MIS, which found that less

than 1% of households surveyed were sprayed with insecticide within the 12 months before the survey.

USAID does not support IRS activities in Burundi. To date, all funding for IRS has either come from NGOs or had been provided by a previous Global Fund grant (which has now ended). Despite the national strategy, the PNILP's initiative, and its partners' support to move forward with spraying, critical components for the implementation of a comprehensive vector control program are not yet in place. The PNILP lacks critical resources (e.g., inadequate number of trained entomology personnel especially at the district level) and inadequate data management capacities. Currently, many of the available internal strategic documents are outdated and/or do not reflect the roles and responsibilities traditionally assigned to the PNILP.

One fundamental component of strengthening Burundi's vector control management is to increase its capacity to collect, analyze and use entomology data. National entomology capacity remains quite limited. In the past, the PNILP has conducted some basic entomology and is eager to improve its capacity. Through implementation of an entomology program, Burundi is building a foundation to collect and analyze the necessary data and effectively conduct entomological surveillance and monitoring. With the support of USAID, the NMCP in Burundi has developed a functional insectary with a susceptible *An. gambiae* colony (Kisumu strain) which was received through collaboration with the Rwandan insectary. The development of the insectary and capacity to effectively carry out activities is crucial for strong entomological surveillance, monitoring the effectiveness of insecticide-based interventions such as LLINs and any potential IRS interventions, and provides the necessary data for decision making in the area of malaria vector control.

**Progress in the past 12 months:**

Burundi's entomology capacity has greatly expanded in the past year, and was centered on making the new insectary and entomology laboratory operational with trained staff and appropriate equipment. By November 2013, the insectary was maintaining a susceptible colony (*Anopheles gambiae*) and collecting entomological data from six sentinel sites. USAID is supporting an entomologist to work closely with the Burundi technicians to use light traps, conduct pyrethrum spray catches as well as larval sampling and maintain the insectary. The human landing catches will be launched soon as the national ethics committee approved the protocol. Baseline data for the first year of data collection will soon be completed, providing the first set of entomological data for Burundi in over 25 years. With the newly equipped entomology laboratory, the PNILP conducted its first insecticide resistance study in February of 2014. The study found that the insecticide susceptibility of the populations of *An. gambiae s.l.* in three sites showed good sensitivity to bendiocarb 0.1% and to malathion 5%. The study identified resistance to deltamethrin 0.05% in two sites and potential resistance in a third site. Confirmed resistance to DDT 4% was observed in one site. Further tests to confirm initial results are underway.

**Proposed activities with FY 2014 funding: (\$500,000)**

USAID will continue to support the PNILP to build an effective entomological surveillance, monitoring, and vector control capacity. Specifically, FY 2014 funding will:

- *Support improved vector control capacity:* Continue to improve national entomology capacity, conduct entomological monitoring in six sentinel sites. Support use of the collected entomological data to inform the implementation of the national malaria control strategy. (\$500,000)

## **Intermittent Preventative Treatment for Pregnant Women (IPTp)**

### **Background**

Efficacy studies carried out in 2000-2001 showed a therapeutic failure rate of 49% with SP when used to treat children under the age of five with uncomplicated malaria. As a result, the MSPLS, in consultation with WHO, decided that SP should be discontinued for treatment of malaria and not be used for IPTp. Since 2009, UNICEF, USAID, and WHO have been working with the PNILP and the MSPLS to revisit the possible benefits of IPTp to enhance the package of malaria preventative services available to pregnant women. Given that the 2010 DHS documented that 99% of women attend ANC clinics at least once during pregnancy, integrating malaria preventative services with ANC provides excellent access to this vulnerable population.

In previous years, USAID supported a literature review of SP efficacy for IPTp as well as studies on treatment failures conducted since the review by ter Kuile, van Eijk, and Filler, (which looked at published studies through December 2006)<sup>4</sup>. The review concluded that in the absence of suitable alternatives to SP, its use in Burundi for IPTp should be reconsidered. Workshops and extensive discussions among stakeholders, including UNICEF, WHO, USAID and the GOB, followed over several years to gain support for adopting an IPTp policy within Burundi.

Based on these observations and on support from WHO recommendations to continue to provide IPTp in countries where SP treatment failure exists, in 2014 Burundi adopted a policy of providing SP to pregnant women through ANC clinics.

Like many countries that already have one or more advisory committees providing technical and administrative advice to national control programs against malaria, Burundi established in February 2014 a steering committee for preventive treatment of intermittent malaria in pregnant women whose main role is to oversee the adaptation of international recommendations in the Burundian context and the introduction of the strategy in the country.

### **Progress in the past 12 months:**

In 2014, following extensive advocacy on the part of USAID and UNICEF, the PNILP and the MSPLS officially issued a policy to adopt IPTp (up to three doses during pregnancy) as part of the package of services available through ANC. In preparation for national roll out of the new policy, guidance and training manuals have been developed by partners in close coordination

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4 ter Kuile F. O., A. M. van Eijk, and S. J. Filler, Scott J. 2007. Effect of Sulfadoxine Pyrimethamine Resistance on the Efficacy of Intermittent Preventive Therapy for Malaria Control during Pregnancy: A Systematic Review

with the PNILP and the National Reproductive Health Program. Sulfadoxine-pyrimethamine needs for IPTp were quantified for the first year of implementation. The official launch is expected in late February 2015, once the SP arrives in country. In the interim, in-service training for health workers will be scheduled, so that once the launch occurs it will immediately be implemented. With FY 2013 funding, USAID committed to procure up to 1 million treatments (about 40% of the estimated annual need) to help launch the program. UNICEF plans to assist with the roll out of IPTp through SP provision and support in Gitega.

**Proposed activities with FY 2014 funding: (\$250,000)**

- *Support introduction of IPTp in ANC clinics in targeted health districts:* Support the introduction and roll out of the new IPTp policy in targeted health districts. Support will include in-service training, supportive supervision, and monitoring of SP uptake over the course of the first year of introduction. (\$250,000)

**CASE MANAGEMENT**

**Diagnosis**

**Background**

The 2013-2017 National Malaria Control Strategy sets a target of providing parasitological diagnosis of malaria for 90% of persons suspected of malaria by 2012<sup>5</sup>. In accordance with WHO recommendations, Burundi has revised its treatment policy to require diagnostic confirmation of all fever cases before treatment with an ACT.<sup>6</sup> Current national policy calls for confirmation of every suspected case of malaria either by RDT or microscopy before any ACT treatment is prescribed. The policy also recommends laboratory-conducted thick and thin smears to determine *Plasmodium* species.

Access to malaria diagnostics is fairly widespread in Burundi: microscopy is available in most health centers and hospitals and use of rapid diagnostic tests is expanding. Burundi continues to focus on increasing RDT use in an effort to meet WHO guidelines (also the current national malaria guidelines) by following the recommended proportion of 80% RDTs and 20% microscopy, however recent trends reveal microscopy still dominates. Yet, stockouts in RDTs and microscopy reagents due to increased usage and some poorly planned procurements have hindered consistent malaria confirmation. However, Burundi has made a focused effort to expand access to RDTs and it is becoming the primary method for confirming malaria infections. According to 2013 Health Management Information Systems (HMIS) data, confirmatory testing rates in Burundi are 97%, 40% of which is by RDT, and 60% by microscopy. USAID's non-randomized end-use verification survey (EUV) of health facilities, conducted in Sept. – Oct. 2013, found that 90% of children under five tested for malaria were prescribed an ACT and, while still relatively high, it represents a decrease relative to data collected in the 2012 EUV.

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<sup>5</sup> New guidelines for 2013-2017 were being finalized at the time of writing and will be incorporated into the 2015 MOP.

<sup>6</sup> Guidelines for the treatment of malaria -- 2nd edition. World Health Organization, 2010. [http://whqlibdoc.who.int/publications/2010/9789241547925\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241547925_eng.pdf)

The public health facility needs for RDTs are only partially met through the Global Fund Consolidated Grant. USAID awaits learning how much of the annual need will be met in the future through the New Funding Mechanism. Gaps exist, however, as donor funds have contracted relative to increases in uptake. Maintaining adequate stock in-country to satisfy increased RDT consumption is proving challenging.

The table below describes the current RDT gap analysis. This analysis was created during the joint partner and donor exercise in March 2014 for all malaria commodities for 2014-2016.

<b>Table 4: 2015 RDT Gap Analysis</b>			
<b>Calendar Year</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Estimated population	10,419,717	10,721,888	11,032,822
Suspected malaria cases	6,298,154	5,038,523	4,030,819
Percentage of suspected cases tested by RDT (80%)	5,038,523	4,030,819	3,224,655
Total RDT Needs (30 tests per kit)	5,038,530	4,030,830	3,224,640--
Global Fund	4,600,000	TBD	TBD
PMI	321,210	2,200,000	TBD
<b>Total RDT Surplus* (Gap)</b>	<b>(117,313)</b>	<b>(1,830,819)</b>	<b>(3,224,655)</b>

**Progress in the past 12 months:**

USAID remains committed to supporting confirmed diagnosis of suspected malaria cases, uncomplicated and severe, per national guidelines. In the last year, USAID procured a total of 200,000 RDTs for distribution through the *Centrale d'Achat de Médicaments Essentiels du Burundi* (CAMEBU) for use in health facilities nationwide as well as in the pilot CCM communities. In 2013, USAID supported the PNILP to disseminate 1,200 copies of the new Malaria Treatment Guidelines in a continued effort to strengthen diagnosis and treatment skills. National, provincial, district and health center level trainings were led to increase the understanding of the standard treatment guidelines (STG) and case management. Confirmed diagnosis of malaria, however, is increasing and in 2012 the case management quality survey found that 87% of fevers were tested for malaria. Despite high levels of confirmatory testing noted in the HMIS, supervision visits and the end-use verification survey reveal that there is still a need for refresher training and continued supervision in proper malaria diagnosis.

**Proposed activities with FY 2014 funding: (\$1,353,500)**

Malaria laboratory diagnosis is a key component of high quality case management and USAID will continue to support the strengthening of microscopic and RDT diagnosis of malaria in health facilities and at the community level. Specifically, FY 2014 funding will support:

- *Procure RDTs in support of the roll out of the new malaria diagnosis policy:* Procure up to 2.2 million RDTs to fill the estimated RDT need to meet the new requirements of revised diagnosis protocols. (\$1,353,500)

## **Pharmaceutical Management**

### **Background**

Ensuring an uninterrupted supply of malaria commodities is essential to reducing malaria's morbidity and mortality. A strong pharmaceutical management and supply chain system requires that multiple components such as quantification, distribution, and procurement function well together. The Department of Pharmacies, Medicines, and Laboratories (DPML) is the division of the MSPLS charged with responsibility for providing oversight to the pharmaceutical sector. The DPML oversees the central purchasing and warehousing agency, CAMEBU.

Procurement and management of all public sector pharmaceuticals destined for public health facilities, both government and faith-based, falls under the responsibility of CAMEBU. The DPML updates the essential drugs list about every three years with CAMEBU issuing tenders, procuring and managing the distribution of essential drugs to public sector facilities. With the income from user fees, districts and hospitals may opt to purchase additional supplies and drugs from the private sector. Health element/disease programs are essentially vertical, and are responsible for the management of their commodities, including the management of orders, procurement, distribution, and general oversight to CAMEBU as it relates to their commodities. CAMEBU shares distribution and inventory data on a monthly basis with the PNILP. CAMEBU does not currently manage ITNs.

The MSPLS operates both a push and pull pharmaceutical supply system depending on district needs. Distribution to districts occurs intermittently due to not only associated costs but also a significant lack of functional transportation vehicles for distribution. Quantification of pharmaceutical supplies is primarily based on districts' requests rather than any prior forecasting or planning by the DPML or CAMEBU. With the MSPLS's decentralization of the health system, provincial warehouses no longer exist. Instead, district staff submit requests directly to CAMEBU through request forms that are sent or delivered in-person by the district on a monthly basis. Health center staff collect supplies from the district-level, paying by cash or credit. Stock level parameters are a maximum of 14 months and minimum of 9 nationally, with a desired stock amount of 12 months and a maximum and minimum of 9 and 6 months at CAMEBU.

Revised standard operating procedures have allowed for a more efficient flow of commodities, although there are still stockouts at times at the facility and district levels, and continued efforts are necessary to improve and strengthen supply chain and pharmaceutical management. The national policy for district and hospital stock levels changed from maintaining a three-month to a two-month supply. District health teams are now quantifying their ACT needs by multiplying the monthly consumption by 1.5 and subtracting the current number of in-stock treatments to forecast the two-month supply needs which are then submitted as a commodity request to CAMEBU.

Although CAMEBU functions fairly well there are still many constraints in the pharmaceutical management and supply chain system throughout the country. Some hospitals and districts have computers and a logistics management information systems (LMIS), but the systems are neither linked to each other nor to CAMEBU's system to facilitate quick, automated national quantification and ordering. Currently, hospitals can order directly from CAMEBU and

immediately receive malaria-related medicines, while health districts must go through an indirect process of approvals.

### **Progress during the last 12 months:**

USAID is supporting the strengthening of the malaria pharmaceutical management system, including drug forecasting, procurement, storage, inventory, and transportation. USAID continued to support the coordination body for the management of medicine stocks to enable regular meetings led by the DPML and held among CAMEBU, PNILP, and the Global Fund. The coordinating body developed country quantifications and forecasts and gap analyses in particular to use for advocacy to donors. Eleven central level staff members were trained in quantification methods and tools such as Pipeline and Quantimed. In an effort to improve commodity availability, new stock parameters were developed through a review of the LMIS and SOPs for stock management and reporting. With UNICEF assistance and UK Department for International Development (DFID) funding, CAMEBU expanded its warehouse capacity and infrastructure.

### **Proposed activities with FY 2014 funding: (\$625,000)**

USAID will continue to support strengthening of the malaria pharmaceutical management system at the national, district, and facility level. Specifically, FY 2014 funding will support:

- *Strengthen national supply chain logistics and pharmaceutical management:* Continue support for supply chain logistics and pharmaceutical management at the national level in collaboration with CAMEBU, including refresher trainings, and coordination of the *Groupe Thématique de Médicaments*. This investment will also strengthen the PNILP's capacity to quantify all malaria commodities, and improve the pharmaceutical management capacity in targeted districts. The end-use verification study will also be funded under this activity. (\$375,000)
- *Strengthen district and facility-level supply chain logistics and pharmaceutical management:* In coordination with national guidelines strengthen supply chain and logistics systems within targeted health districts (district pharmacies, *Bureau de District de Santé*, hospitals and health centers) to reduce stockout and waste of essential commodities. Includes support to improve access to essential commodities at the facility level. (\$250,000)

## **Treatment**

### **Background**

Burundi updated its treatment guidelines in 2012 and is striving to implement it. AS-AQ co-formulated fixed dose remains the first-line treatment for uncomplicated malaria in Burundi. For patients who fail to respond to AS-AQ, a seven-day course of oral quinine clindamycin is the recommended second-line treatment. For treating malaria infections during pregnancy, quinine clindamycin is used during the first trimester; while AS-AQ is recommended for the second and third trimesters. Injectable artesunate is the recommended treatment for severe malaria.

The CCM pilot project was evaluated and showed the Community Health Workers (CHWs) were interested in expanding their scope of work. MPLS through the PNILP's Strategic Plan is analyzing possibilities of scaling up the CCM and taking into account the malaria prevalence in health districts. The Global Fund's New Funding Mechanism is an opportunity to integrate diarrhea and acute respiratory infections to the CHWs' package and to expand the strategy geographically. UNICEF and other donors have also pledged their support to this strategy.

The table below describes the current ACT gap analysis. This analysis was created during the joint partner and donor exercise in March 2014 for all malaria commodities for 2014-2016.

<b>Calendar Year</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Estimated population	10,419,717	10,721,888	11,032,822
Total number of confirmed malaria cases	3,951,822	3,161,457	2,529,166
Uncomplicated malaria	3,823,851	3,059,081	2,447,264
Total ACT Needs*	6,542,734	3,059,081	2,447,264
Global Fund Pledged Contribution	3,842,225	TBD	TBD
PMI Pledged Contribution	1,001,400	2,400,000	TBD
<b>Total ACT Surplus* (Gap)</b>	<b>(1,699,109)</b>	<b>(659,081)</b>	<b>(2,447,264)</b>

\*2014 quantification needs include creating a buffer stock of 6 months, to ensure uninterrupted supply of national stock levels during the 2015-2016 transition with Global Fund Support.

#### **Progress during the past 12 months:**

USAID continues to remain committed to supporting access to treatment for confirmed malaria cases throughout the country. In the last year, USAID procured a total of 1,001,400 ACTs for distribution through CAMEBU for use in health facilities nationwide as well as in the pilot CCM communities. USAID also procured 50,140 vials of artesunate injectable for severe malaria cases. With FY 2013 funding, USAID continued to provide technical assistance to the PNILP in the implementation of malaria treatment policies. In 2013, the PNILP finalized trainings for health providers on the malaria treatment guidelines, however accurately following these guidelines is still an area for improvement as revealed in the 2013 end-use verification survey. To continue to improve, malaria diagnosis refresher trainings on microscopy and RDTs are regularly organized. The country is waiting for the clindamycin and artesunate injectable to arrive to fully implement the new treatment guidelines and improve treatment of severe malaria. Standard integrated supervision tools for providers at clinical settings and community level were developed and validated and being used nationwide.

The implementation of the CCM project continued, with emphasis on proper diagnosis and treatment of malaria in children under-five at the community level. A total of 402 CHWs benefited from refresher training and replacement of used and/or missing equipment in their medical kits. During the first quarter of 2014, these CHWs treated 89.5 % of children who tested positive for malaria using RDTs within 24 hours of fever onset. According to the CCM project evaluation, 33.6% of children who tested negative for malaria or had a sign of severe malaria were referred to the nearest health facilities. The MIS showed that 14% of children under five with a fever in the two weeks preceding the survey received an ACT within 24 hours.

**Proposed activities with FY 2014 funding: (\$2,318,500)**

Ensuring prompt, effective, and safe ACT treatment to a high proportion of patients with confirmed malaria in Burundi represents a key challenge for the PNILP and its partners. Furthermore, to avoid complications or deaths resulting from delayed care-seeking or some other cultural barriers, CCM is an effective approach to ensure that children under five years have access to prompt and effective treatment. With FY 2014 funding, USAID will support the following activities:

- *AS/AQ procurement*: Procure up to 2.4 million AS-AQ treatments and/or severe malaria drugs, as needed to fill supply gaps in the public sector clinics. This will meet approximately 80% of the anticipated need for calendar year 2015. (\$1,518,500)
- *CCM*: Continue CCM of malaria with the current CHWs in 402 sous-collines, and support expansion into other communities as part of a comprehensive iCCM package of services (e.g., ARI, pneumonia, and diarrhea). (\$250,000)
- *Improved case management in health facilities*: Strengthen case management capacity at the national level and in targeted health districts to continue support for the current malaria treatment policy. This activity includes providing technical assistance to the PNILP to supervise and enable high quality malaria case management including parasitological diagnosis at the health district level, including reinforcing the PNILP's supervision of district health teams. This support also includes support to oversee and supervise the continued uptake and adherence to diagnostic results in targeted districts. (\$650,000)

**BEHAVIOR CHANGE COMMUNICATION**

**Background:**

It is widely accepted that BCC is important in ensuring that prevention and treatment interventions are maximized by communities. However, a National Communication Strategy for malaria has not yet been adopted and put into action. There is only one full-time BCC staff personnel at the PNILP, and the recommended information, education, and communication technical working group in the PNILP is not yet functional nor able to coordinate BCC efforts among donors. However, the work that donors have done in the area of BCC is starting to make an impact. The 2012 MIS indicates that there was significant progress of key behavior indicators over the baseline 2010 DHS. The use of ITNs among pregnant women the night before the survey increased from 50% in 2010 to 63% in 2012. Among children under five, ITN use the night before the survey also increased from 50% in 2010 to 56% in 2012. Despite these gains, the results are still below the national objective of 80% of net utilization amongst these two vulnerable groups. The 2012 MIS results do indicate that prompt care-seeking behavior also needs to be improved.

**Progress during the past 12 months:**

USAID investment in communication activities has been limited to-date and focuses on promoting ITN ownership and use. To promote correct and consistent use of ITNs, in 2013

USAID funded over 20 outreach sessions which reached over 21,488 pregnant women and mothers of children under five using interpersonal communication, mobile cinema, and community drama.

**Proposed activities with FY 2014 funding: (\$200,000)**

USAID will expand its support in this area to include increasing awareness and uptake of critical malaria prevention and treatment tools through integrated behavior change and communication activities closely involving community, elders, and religious leaders. Specifically, FY 2014 funding will support:

- *Behavior change communication efforts on malaria prevention and treatment:* Provide communication support to promote prevention and treatment uptake of malaria services, including correct and consistent use of ITNs, prompt care-seeking behavior with fevers, and promoting ANC attendance. (\$200,000)

**CAPACITY BUILDING**

**Background**

In January 2009, the MSPLS established a new national malaria control program, the PNILP, which currently consists of 21 staff members organized into four key program areas: case management, vector control, monitoring and evaluation, and human resources. The program is comprised of a director and deputy director (both physicians) while the technical staff includes one medical doctor, four biologists who have received entomology training, laboratory technicians, and an economist. Since the creation of the PNILP in 2009, there have been four PNILP leads; the current director was appointed in January 2014.

One of the four goals of the Burundi Health Development Plan is to enhance the performance of the national health system. USAID fully supports this goal, since strengthening the system will improve the quality of all health services, including clinical and community malaria prevention and treatment services. Devolving critical health system functions to the health districts is part of the GOB strategy for providing quality decentralized health services, and the formation of health district teams is now underway. USAID/Burundi's malaria, PEPFAR, and maternal and child health programs are supporting districts in many different ways, including: health information system, drug management, supply chain, and human capacity development. There are no malaria focal persons at the district or health facility levels; rather health staff are trained to provide and manage integrated health services, including malaria prevention and control.

**Progress in the last 12 months:**

USAID provided the PNILP with organizational and professional development support allowing the PNILP to serve as a coordinating body for malaria stakeholders in-country. USAID supported the organization of quarterly progress meetings, developed an annual work plan, and finalized a handbook with SOPs on financial, HR and administrative procedures and job descriptions available for PNILP staff.

**Proposed activities with FY 2014 funding: (\$75,000)**

With FY 2014 funds, USAID will continue to support the PNILP and its organizational development with the following activities:

- Provide PNILP with support to improve the operations and functions of their office including: quarterly meetings with in-country Roll Back Malaria partners; continued leadership and management training, regional professional development opportunities, organizational development, financial management assistance, etc.

## **MONITORING AND EVALUATION**

### **Background:**

Malaria, a reportable disease, is included in the statistics generated by Burundi's Department of Statistics system (EPISTAT). Each month, public health facilities are expected to report on the number of malaria cases, deaths and case-facility rates. Facilities that can perform microscopy are expected to test suspected malaria cases and report slide-positive rates. Although data are stratified by age and facility type (inpatient vs. outpatient), more effort needs to be made to distinguish clinically diagnosed cases from those that are confirmed by laboratory testing.

The results from the 2012 MIS provided critical baseline information for parasitemia rates throughout the country. Planning for the 2015 DHS is now underway. The PNILP is considering whether or not to add biomarkers to the malaria module in the DHS instead of conducting a separate MIS study in late 2015 or early 2016. A budget gap for the DHS study exists.

In January 2014, the PNILP validated a new National M&E Plan 2013-2017 where the indicators and benchmarks are set for monitoring Burundi's malaria control program through 2017. The new M&E plan intends to verify if planned activities have been implemented according to the annual work plans, identify gridlocks that emerged during the implementation and propose solutions. The M&E plan will also identify key indicators to be collected to supply the malaria control database. It describes the mechanisms to provide feedback to peripheral level, to policy makers and partners to improve future planning and decision making and will document periodically if planned strategies have achieved intended and unintended results / (outputs/outcomes and impacts). The main aim is to build districts' capacity to collect, analyze, and use their health data for local decisions.

### **Progress in the past 12 months:**

USAID supported the development and validation of the new National M&E Plan, 2013-2017. Four candidates from PNILP were supported to do regional trainings on malaria-related M&E.

### **Proposed activities with FY 2012 funding: (\$300,000)**

USAID intends to build on the M&E support it has previously funded in order to continue to develop and strengthen the PNILP's M&E capacity. Specifically, FY 2014 funds will:

- *Support national M&E capacity:* Support the PNILP to implement the new national malaria control monitoring and evaluation plan. (\$100,000)

- *Conduct the 2015 DHS:* Support the implementation of the 2015 Demographic Health Survey. (\$200,000)

## **STAFFING AND ADMINISTRATION**

Burundi is a USAID Field Office that is part of the USAID/East Africa Mission. USAID supports two malaria staff members in Burundi to oversee the malaria control program. The USAID/Burundi malaria team share responsibility for development and implementation of program strategies and work plans, coordination with national authorities, management of collaborating agencies, and supervision of day-to-day activities.

The malaria team works to oversee all technical and administrative aspects of the effort in Burundi, including finalizing details of the project design, overseeing implementation of malaria prevention and treatment activities, monitoring and evaluation of outcomes and impact, and reporting of results. They report to the USAID/Burundi Country Representative and split their time between the PNILP and the USAID offices, as appropriate. All technical activities are undertaken in close coordination with the MSPLS, the PNILP and other national and international partners, including the WHO, UNICEF, the Global Fund, World Bank, and the private sector.

Locally hired staff to support USAID/Burundi's malaria control program, either in Ministries or in USAID, will be approved by the USAID/Burundi Country Representative. Because of the need to adhere to specific country policies and USAID accounting regulations, any transfer of USAID/Burundi malaria funds directly to Ministries or host governments will need to be approved by the USAID/East Africa Regional Mission.

### **Proposed activities with FY 2012 funding: (\$1,008,000)**

USAID will continue to support malaria program related staffing and administrative costs. Specifically, FY 2013 funding will be used to support:

- *In-country USAID staff salaries, benefits, travel and other malaria program administrative costs:* Continued support for two USAID staff personnel to oversee activities supported by USAID in Burundi. Additionally, these funds will support pooled USAID Burundi staff and Mission-wide assistance from which the malaria program benefits. (\$907,500)
- *Long-term TDY coverage:* The TCN malaria technical advisor departed the Mission in July 2013. The recruitment process has taken longer than expected and it is anticipated that a new candidate will not be recruited until mid-2014. To help relieve the staffing shortage, these funds will be used to fund a long-term consultant contract to work with the USAID/Burundi office to support management of the malaria program. (\$100,500)

**Table 1: FY 2014 (Year 6) Budget Breakdown by Mechanism**

<b>Partner Organization</b>	<b>Geographic Area</b>	<b>Activity</b>	<b>Activity Budget</b>	<b>Project Budget</b>
DELIVER TO7	Nationwide	Procure ITNs for distribution through routine systems	\$2,400,000	<b>\$5,842,000</b>
		Distribute ITNs to existing ANC and EPI channels	\$420,000	
		Procure AS/AQ and/or severe malaria medication	\$1,518,500	
		Procure RDTs	\$1,353,500	
	Selected Areas	Implement the continuous distribution of ITNs	\$150,000	
SIAPS	Nationwide	Strengthen national supply chain management capacity	\$375,000	<b>\$800,000</b>
		Support implementation of the National Malaria M&E Plan	\$100,000	
		Support to PNILP	\$75,000	
	Targeted Districts	Strengthen case management at the national level	\$250,000	
AIRS	Nationwide	Support improved vector control capacity	\$500,000	<b>\$500,000</b>
IHPB	Kirundo, Muyinga, Karuzi, Kayanza	Roll out of IPTp at facility level	\$250,000	<b>\$1,150,000</b>
		Strengthen district and facility level supply chain management capacity	\$250,000	
		Strengthen case management at the community level	\$250,000	
		Strengthen case management at district and facility level	\$200,000	
		Support behavior change communication efforts for malaria prevention and treatment	\$200,000	
Measure DHS	Nationwide	Support 2015 DHS	\$200,000	<b>\$200,000</b>
USAID	Nationwide	USAID Staffing and Administration	\$907,500	<b>\$907,500</b>
Crisis Surge Support Staff (CS3)	Nationwide	Temporary contract for staff coverage	\$100,500	<b>\$100,500</b>
<b>Total FY 2014 Budget</b>				<b>\$9,500,000</b>

**Table 2: FY 2014 (Year 6) Budget Breakdown by Activity**

<b>Proposed Activity</b>	<b>Mechanism</b>	<b>Budget</b>	<b>Commodities</b>	<b>Geographic area</b>	<b>Description of Activity</b>
<b>PREVENTION ACTIVITIES</b>					
<b>ITNs</b>					
Procure ITNs for distribution through routine systems	DELIVER TO7	\$2,400,000	\$2,400,000	Nationwide	Procure approximately 600,000 ITNs for routine distribution through the ANC and EPI programs, and up to 100,000 ITNs for distribution through innovative continuous distribution channels, as developed in partnership with the PNILP.
Distribute ITNs to existing ANC and EPI channels	DELIVER TO7 (PSI)	\$420,000	\$0	Nationwide	Distribute approximately 600,000 ITNs, including support to districts receiving distribution support
Implement the continuous distribution of ITNs	DELIVER TO7 (PSI)	\$150,000	\$0	Selected areas	Supply ITNs through the new continuous distribution channels with the objective of maintaining high ITN coverage once the 2014 universal coverage campaign is completed. Up to 100,000 ITNs will be provided for this activity.
<i>Subtotal</i>		<b>\$2,970,000</b>	<b>\$2,400,000</b>		
<b>Entomology</b>					
Support improved vector control capacity	AIRS	\$500,000	\$0	Nationwide	Continue to improve national entomology capacity with technical assistance, refresher training and expansion from 4 to 6 sentinel sites to continue entomological monitoring.
<i>Subtotal</i>		<b>\$500,000</b>	<b>\$0</b>		
<b>Malaria in Pregnancy</b>					
Roll out of IPTp at facility level	IHPB	\$250,000	\$0	Kirundo, Muyinga, Karuzi, Kayanza	In partnership with the PNILP, coordinate the roll out and implementation of the new IPTp policy in targeted facilities, ensuring SP administration with close supervision and support.
<i>Subtotal</i>		<b>\$250,000</b>	<b>\$0</b>		
<b>PREVENTION SUBTOTAL</b>		<b>\$3,720,000</b>	<b>\$0</b>		
<b>CASE MANAGEMENT</b>					

Diagnostics					
Procure RDTs	DELIVER TO7	\$1,353,500	\$1,353,500	Nationwide	Purchase up to 2,200,000 RDTs to fill about 80 percent of the anticipated 2015 gap in the national supply.
Treatment and Pharmaceutical Management					
Strengthen national supply chain management capacity	SIAPS	\$375,000	\$0	Nationwide	Continue support for supply chain logistics and pharmaceutical management at the national level in collaboration with CAMEBU, including refresher trainings, and coordination of the <i>Groupe Thématique de Médicaments</i> . This investment will also strengthen the PNILP's capacity to quantify all malaria commodities, and improve the pharmaceutical management capacity in targeted districts. The end-use verification study will also be funded under this activity.
Strengthen district and facility level supply chain management capacity	IHPB	\$250,000	\$0	Kirundo, Muyinga, Karuzi, Kayanza	In coordination with national guidelines strengthen supply chain and logistics systems within targeted health districts (district pharmacies, <i>Bureau de District de Santé</i> , hospitals and health centers) to reduce stockouts and waste of essential commodities. Includes support to improve access to essential commodities at the facility level.
Procure AS/AQ and/or severe malaria medication	DELIVER TO7	\$1,518,500	\$1,518,500	Nationwide	Procure and distribute up to 2,400,000 treatments of ACTs and/or severe malaria drugs for public health clinics, to fill the estimated 2015 gap.
Strengthen case management at the community level	IHPB	\$250,000	\$0	Select communities in Kirundo, Muyinga, Karuzi, Kayanza	Continue community case management of malaria with the CHWs in 402 sous-collines, expand into other communities as part of a comprehensive iCCM package of services (e.g. ARI, pneumonia, diarrhea).
Strengthen case management at district and facility level	IHPB	\$200,000	\$0	Kirundo, Muyinga, Karuzi, Kayanza	Improve quality of malaria case management (diagnosis, treatment and adherence) in targeted districts this includes training, supportive supervision and implementation of national best practices.

Strengthen case management at the national level	SIAPS	\$250,000	\$0	Nationwide	Strengthen case management capacity at the national level and select districts to continue support for the current malaria treatment policy. This activity includes providing technical assistance to the PNILP to supervise and enable high quality malaria case management at the health district level, including reinforcing the PNILP's supervision of district health teams. This support also includes support to oversee and supervise the continued uptake and adherence to diagnostic results in targeted districts.
<b><i>Subtotal Case Management</i></b>		<b><i>\$4,197,000</i></b>	<b><i>\$2,872,000</i></b>		
<b>M&amp;E</b>					
Support implementation of the National Malaria M&E Plan	SIAPS	\$100,000	\$0	Nationwide	Support the PNILP to implement the new national malaria control monitoring and evaluation plan.
Support 2015 DHS	Measure DHS	\$200,000		Nationwide	Support implementation of 2015 DHS.
<b><i>Subtotal</i></b>		<b><i>\$300,000</i></b>	<b><i>\$0</i></b>		
<b>Communication</b>					
Support behavior change communication efforts for malaria prevention and treatment	IHPB	\$200,000	\$0	Kirundo, Muyinga, Karuzi, Kayanza	Provide support for communication activities to promote prevention and treatment uptake of malaria services, including correct and consistent use of ITNs, prompt care seeking behavior with fevers, and promoting ANC attendance.
<b><i>Subtotal Communication</i></b>		<b><i>\$200,000</i></b>	<b><i>\$0</i></b>		
<b>Capacity Building</b>					
Support to PNILP	SIAPS	\$75,000	\$0	Nationwide	Provide PNILP with support to improve the operations and functions of their office including: quarterly meetings with in-country RBM partners; continued leadership and management training, regional professional development opportunities, organizational development, etc.
<b><i>Subtotal Capacity Building</i></b>		<b><i>\$75,000</i></b>	<b><i>\$0</i></b>		

<b>Staffing and Administration</b>					
USAID Staffing and Administration	USAID	\$907,500	\$0	Nationwide	Support for USAID/Burundi Field Office in-country malaria staff, USAID/Burundi Field Office management costs, and USAID/East Africa LPC management costs.
Temporary contract for staff coverage	Crisis Surge Support Staff (CS3)	\$100,500	\$0	Nationwide	Temporary TDY/consultant (up to 6 months) to the malaria team during period of staffing gap.
<b><i>Subtotal</i></b>		<b><i>\$1,008,000</i></b>	<b><i>\$0</i></b>		
<b>GRAND TOAL</b>		<b><i>\$9,500,000</i></b>	<b><i>\$5,272,000</i></b>		