

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 2012 appropriation. If any further changes are made to this plan it will be reflected in a revised posting.



# **Burundi**

## **Malaria Operational Plan FY 2012**

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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 (UK)
DHS	Demographic and Health Survey
DPML	Directorate of Pharmacies, Medicines, and Laboratories
EPI	Expanded Program on Immunization
FBO	Faith-based Organization
FY	Fiscal Year
GHI	Global Health Initiative
Global Fund	Global Fund to Fight AIDS, Tuberculosis, and Malaria
GOB	Government of Burundi
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
IEC	Information, Education, Communication
INSP	<i>Institut National de Santé Publique</i>
IPTp	Intermittent Preventive Treatment of pregnant women
IRS	Indoor Residual Spraying
ITN	Insecticide-Treated bed Net
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MIS	Malaria Indicator Survey
MOP	Malaria Operational Plan
MSPLS	Ministry of Public Health and HIV/AIDS Control
NGO	Non-Governmental Organization
PNILP	<i>Programme National Intégrée de Lutte Contre le Paludisme</i>
PNSR	<i>Programme National de Santé de la Reproduction</i>
PSI	Population Services International
RBM	Roll Back Malaria
RCC	Rolling Continuation Channel (Global Fund grant)
RDT	Rapid Diagnostic Test
SP	Sulfadoxine-pyrimethamine
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USG	United States Government
WHO	World Health Organization

## **EXECUTIVE SUMMARY**

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 2011 population of 8.3 million<sup>1</sup>, and an average life expectancy of just 48 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 (MSPLS) 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 Demographic Health Survey (DHS) was conducted in 2010, the first such survey since 1987. The preliminary results were released in April 2011, which gives the first nationally representative data on malaria in the post-conflict era. This survey showed that only 17% of children under five with a fever in the two weeks preceding the survey received an antimalarial drug, and only 12% received an artemisinin-based combination therapy (ACT). The use of preventive measures, reflecting the results of the 2009 insecticide-treated net (ITN) distribution campaign, is increasing, with reported household ownership of an ITN at 52%, and 45% of children under five and 50% of pregnant women sleeping under an ITN the previous night. Burundi's malaria in pregnancy policy currently does not promote preventive treatment for pregnant women; but the DHS found that 99% of women receive antenatal clinic (ANC) services at least once during their pregnancy.

This Operational Plan was developed during a planning visit carried out in Burundi in April 2012, with the participation of the USAID/Washington, USAID/East Africa, and the USAID/Burundi malaria team. The planning visit included a field visits of current projects and addressed all levels of the public health system (national, provincial, district, and community levels). The activities that USAID is proposing to support in FY 2012 fit within the National Malaria Control Strategy (2011-2015) and are designed to complement activities supported under the country's 2008 Global Fund \$33.7 million Rolling Continuation Channel (RCC) grant and its \$64 million Round 9 grant. This plan was developed in cooperation with the National Malaria Control Program (PNILP). The FY 2012 budget for Burundi is \$8 million.

**Insecticide-treated nets (ITNs):** The scale-up of ITNs is a key component of Burundi's overall malaria prevention strategy. In late 2008, the Government of Burundi revised its prevention approach and called for universal coverage through national-level distribution campaigns. The Government's goal is to achieve and maintain universal ITN coverage through one ITN per two people. The PNILP plan for a nationwide distribution campaign was implemented through a mass campaign that took place in three phases from 2009-2011, covering all 17 provinces, and distributing more than four million ITNs. The next mass distribution campaign is scheduled for

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<sup>1</sup> Burundi's most recent census was conducted in August 2008 with an estimated annual growth rate of 2.9%.

2014. In 2013, to support the continuous distribution of ITNs, an estimated 625,000 nets are needed to sustain routine distribution through antenatal and child health clinics.

With FY 2012 funds, USAID will procure approximately 625,000 long-lasting ITNs for routine distribution to pregnant women and children less than one year of age through antenatal and child health clinics. This contribution will ensure that the ITN ownership achieved through the campaigns will be maintained for the most vulnerable populations. USAID will also support the planning for and implementation of the 2014 mass distribution campaign.

**Intermittent preventive treatment of pregnant women (IPTp):** Burundi's malaria in pregnancy policy focuses on increasing ownership and use of ITNs among pregnant women. Therapeutic efficacy studies carried out in 2000-2001 showed a failure rate of 49% with sulfadoxine-pyrimethamine (SP) among children under five. When Burundi changed its first-line treatment for malaria from SP to an artemisinin-based combination therapy (ACT) in late 2003, the MSPLS also decided to discontinue the use of SP. Despite ongoing technical assistance from USAID and recommendations of WHO to adopt IPTp as part of an inclusive malaria in pregnancy policy, the MSPLS has not yet agreed to do so. With FY 2012 funds, USAID will continue to work with the PNILP to consider the benefits of using IPTp. If an IPTp policy is finalized, USAID will support its implementation.

**Malaria case management:** The national policy on malaria diagnosis has been revised and recommends confirmed diagnosis in 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 the diagnostic quality remains questionable. 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. All ACT needs for the next three years are being met by the Global Fund RCC Grant, but there is no buffer stock. Given procurement and funding delays, the country is currently facing the threat of national-level stock outs. The PNILP is considering community case management (CCM) of malaria and will develop a community case management policy based on the outcomes of a USAID-supported CCM pilot.

With FY 2012 funds, USAID will procure approximately 1.3 million ACT treatments and drugs for the treatment of severe malaria for the public health sector. USAID will also support long-term technical assistance to the MSPLS in pharmaceutical management, case management at the national and district levels, and malaria diagnosis. USAID will also continue to support CCM.

**Monitoring and evaluation (M&E):** USAID supported the 2010 DHS survey which resulted in the first post-conflict comprehensive understanding of the country's overall health status and malaria-specific statistics. USAID will contribute to the 2012 Malaria Indicator Survey, and provide assistance to the PNILP to use these survey results to fine tune the government's malaria sector investments and to identify ways to enhance malaria prevention and treatment strategies. USAID will also support the implementation of the PNILP's M&E national strategy, which with USAID's assistance is being developed into a costed operational plan.

**Health systems strengthening and integration:** 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. With FY 2012 funds, USAID/Burundi will help strengthen the overall health system by improving governance in the pharmaceutical sector, strengthening pharmaceutical management systems, and building the PNILP's capacity to oversee and manage its program. USAID will also improve service delivery by training and supervision of health workers in the health facilities and community health workers in targeted communities.

## **GLOBAL HEALTH INITIATIVE AND THE USAID MALARIA PROGRAM**

Malaria prevention and control is a major foreign assistance objective of the U.S. Government (USG). In May 2009, President Barack Obama announced the Global Health Initiative (GHI), a six-year, comprehensive effort to reduce the burden of disease and promote healthy communities and families around the world. Through the GHI, the United States will invest \$63 billion over six years to help partner countries improve health outcomes, with a particular focus on improving the health of women, newborns and children. The GHI is a global commitment to invest in healthy and productive lives, building upon and expanding the USG's successes in addressing specific diseases and issues.

The GHI aims to maximize the impact the United States achieves for every health dollar it invests, in a sustainable way. The GHI's business model is based on: implementing a woman- and girl-centered approach; increasing impact and efficiency through strategic coordination and programmatic integration; strengthening and leveraging key partnerships, multilateral organizations, and private contributions; encouraging country ownership and investing in country-led plans and health systems; improving metrics, monitoring and evaluation; and promoting research and innovation. The GHI will build on the USG's accomplishments in global health, accelerating progress in health delivery and investing in a more lasting and shared approach through the strengthening of health systems. Framed within the larger context of the GHI and consistent with the GHI's overall principles and planning processes, BEST (Best practices at scale in the home, community and facilities) is a USAID planning and review process that draws on our best experience in Family Planning, Mother and Child Health, and Nutrition to base our programs on the best practices to achieve the best impact.

### **BACKGROUND**

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 of the East Africa Community. The country is divided into 17 provinces, 117 *communes* (five to eleven per province) and 2,638 "*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*.

Burundi is emerging from over a decade of civil war that ended with the Arusha Peace Accord in 2000. The ethnic and political crisis resulted in approximately 300,000 deaths, devastated the health and social welfare systems, and led to decreased donor support. Burundi's second democratic election took place from June-August 2010, which included *commune* councils, parliamentary and presidential elections. Twelve parties participated in the communal elections, while boycotting the national-level presidential election. The opposing party to the incumbent president pulled out of the elections due to alleged government interventions in the electoral process, resulting in a second term for President Pierre Nkurunziza.

Burundi has an estimated population of 8.3 million<sup>2</sup> and an annual population growth rate estimated at 2.4% with a life expectancy of 46 years for men and 52 years for women. According to Government of Burundi (GOB) statistics, 45% of the population is under the age of 15, 50% is under the age of 20, and the median age is 17 years of age.

Burundi remains one of the poorest countries in the world. It is ranked 185 out of 187 countries in the 2011 Human Development Index (UNDP 2011 Human Development Report), with infant and under five mortality rates, 59/1000 live births, and 96/1000 live births respectively (DHS 2010), which are among the highest in Africa. The National Aids Council (NAC) survey in 2007 showed an adult HIV prevalence rate of 2.9% while the 2010 DHS results provide a new HIV prevalence rate of 1.4%, yet malaria still remains the most common reported illness in the country.

Figure 1: Administrative Map of Burundi



<sup>2</sup> WHO <http://www.who.int/countries/bdi/en/>

## **Burundi Public Health System**

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 MDG goals 4, 5, and 6 related to reducing child mortality, improving maternal health, and combating infectious diseases. To improve access to health services for the most vulnerable groups, the 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 (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 on-going, while 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. The GOB's budget for health, as a percentage of its total annual budget, was 7.2%<sup>3</sup> in 2011. This is still below the 10-15% annual budget allocation that WHO recommends that governments should provide; however, real progress being made towards developing an earmarked health budget. Because of the low levels of public sector funding committed to the health sector, essentially all health services in Burundi are provided by government facilities, non-governmental organizations (NGOs) and faith-based organizations with support from external donors. The GOB has formed an international health partnership, envisioning setting up the sector-wide approach (SWAp) to support health

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<sup>3</sup> Loi Budgétaire du Burundi, 2011

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.

### **USAID/Burundi Health Program**

Burundi is a limited presence country for USAID. The Mission’s programs are managed by a Country Representative and a small staff of foreign service nationals and third country nationals. Significant administrative and technical assistance is provided by the USAID/East Africa Regional Mission in Nairobi, Kenya.

USAID support to Burundi’s health sector began in 2003. Initial USAID assistance (2003-2005) focused primarily on humanitarian assistance, including malaria prevention and treatment, therapeutic and supplementary feeding, building the capacity of health center staff, strengthening health center management, and improving water points. As Burundi transitioned from relief to recovery and development (2005-2007), USAID worked with major NGO partners to ensure an essential health interventions package, support health committees, and mobilize the community to use the services in targeted provinces. In addition, small HIV prevention programs were funded by the US Department of Defense, targeting military members, their families and the surrounding communities. With the end of the civil war, USAID began to work directly with the GOB through annual assistance agreements in the areas of maternal and child, nutrition, malaria and HIV/AIDS.

In 2007, USAID began providing MCH services in Kayanza and Muyinga Provinces. In addition to providing an improved primary health care package of interventions, this MCH program currently works with districts and provinces to develop the new district structure, improve analysis of health information data, and strengthen health care provider and community capacity to address maternal and child health problems.

Although chronic and non-communicable diseases, such as malnutrition, high blood pressure, diabetes, and mental illness factor into the overall health morbidity and mortality rates in Burundi, it is infectious and communicable diseases that dominate the disease burden. Respiratory tract infections, malaria, and waterborne diseases, particularly diarrhea, remain the main causes of death in children under five years of age.

The USAID Malaria program began in September 2009 and was officially launched in March 2010. The program is orienting its interventions nationwide in accordance with PNILP strategic plan 2008-2012. The USAID/Burundi malaria team works closely with the PNILP to enhance the strategies and to better define the guidelines for interventions that specifically increase ITN coverage for pregnant women and children under five years and related BCC activities, improve drug management and develop an integrated vector management strategy.

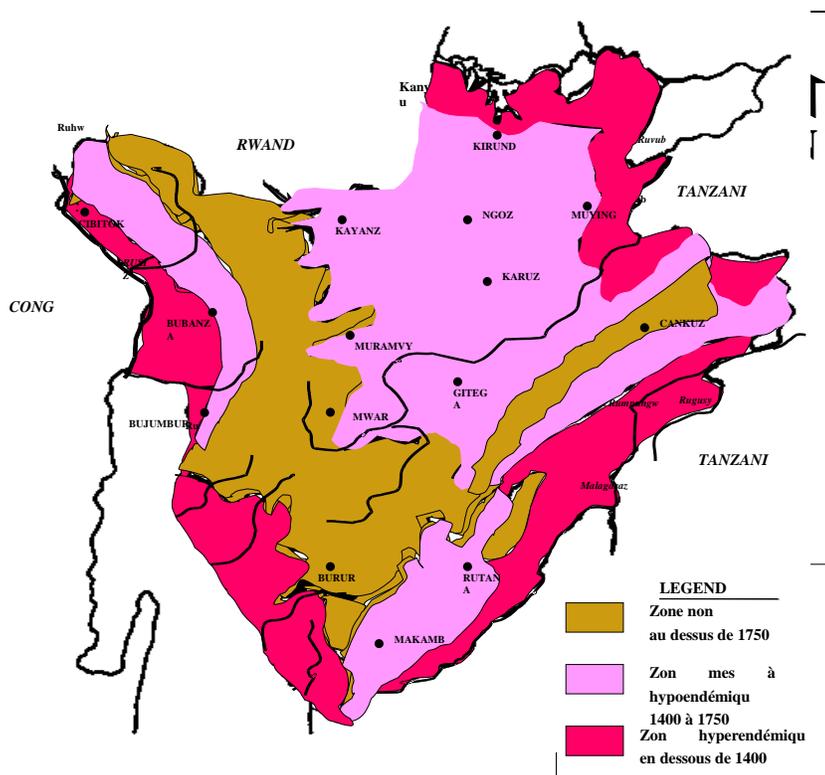
### **MALARIA SITUATION IN BURUNDI**

Malaria is considered a major public health problem in Burundi and places a heavy burden on the health system. According to the MSPLS, 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. The major vectors are *Anopheles gambiae* and *An. funestus*. Epidemiologically, Burundi can be divided into three zones in terms of the levels of malaria transmission:

1. Areas with an altitude below 1,400 meters with high-level transmission (hyperendemic);
2. The central high plains with an altitude between 1,400 and 1,750 meters with low to moderate transmission (meso-to hypoendemic). These are largely rice-growing areas where 56% of the population lives; and
3. Areas with an altitude above 1,750 meters where no malaria transmission occurs.

Figure 2: Burundi Malaria Endemicity Map, by risk category



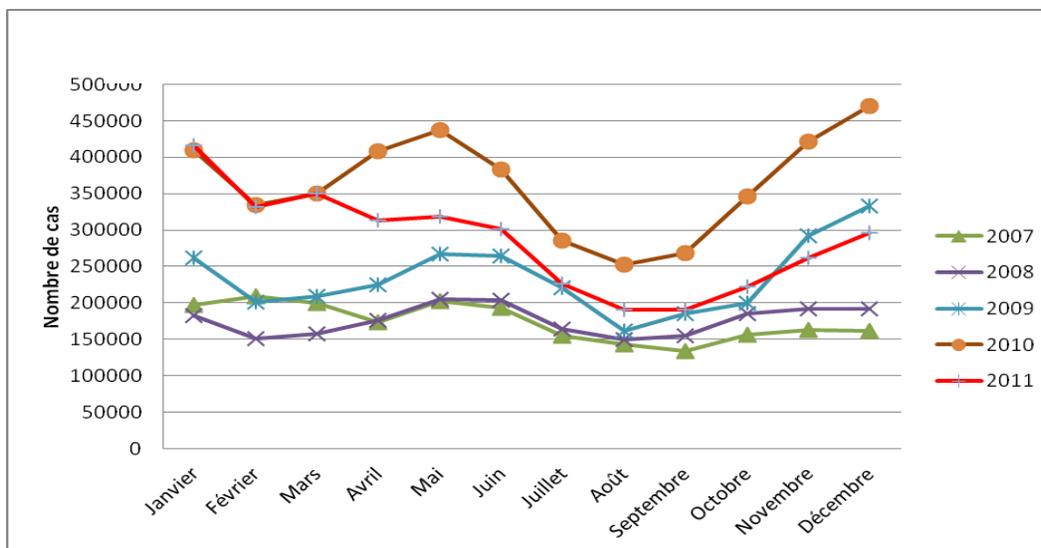
Eight provinces are said to be prone to malaria epidemics: Gitega, Karusi, Kayanza, Muramvya, Muyinga, Mwaro, Ngozi, and Cankuzo. An epidemic was reported in June 2010 in Ngozi. However, with climate changes and many other factors influencing malaria endemicity in Burundi, the endemicity map shown in Figure 2, needs to be revised and updated. The PNILP is planning to reevaluate the mapping of malaria with funds from Global Fund RCC Round 2 grants part of the upcoming Malaria Indicator Survey (MIS).

The malaria transmission season lasts from three to seven months between May and November and is longer in the south. *Plasmodium falciparum* accounts for more than 90% of all infections. As malaria is highly resistant to both chloroquine and sulfadoxine-pyrimethamine (SP) in Burundi, the first-line treatment was changed in 2003 to the artemisinin-based combination therapy artesunate and amodiaquine (AS-AQ). Malaria remains one of the most significant diseases treated in the public health sector. The 2011 WHO World Malaria Report reported that in 2010 there were approximately 2.9 million cases of confirmed malaria out of over 4.2 million suspected cases presented in the public health sector. About 4% of these cases (114,623) were admitted to hospital where 2,677 deaths were recorded, a 2% mortality rate.

### Malaria Incidence

The national health information management system collects data on malaria morbidity (confirmed and suspected cases) from facilities managed by the public sector and faith based organizations. The data presented in Table 1, below, show a significant increase of malaria cases in 2010 compared to 2009, most likely due to increased reporting by health providers and the scaling-up of the performance-based financing system which includes indicators related to malaria activities and results in increased use of health facilities by target populations. Accurate reporting of malaria cases is hindered by the fact that there has not been a standard case definition used throughout the country. A standard definition has now been adopted, and providers are being trained to follow it. It is expected that over the coming years, a more accurate picture of the national malaria burden will emerge.

**Table 1: Total Number of Malaria Cases (Suspected and Confirmed), 2007-2011, by month**



### CURRENT MALARIA INDICATORS

A Demographic Health Survey (DHS) was conducted in 2010, the first such survey since 1987, which provides the first nationally representative data on malaria in the post-conflict era. The survey confirmed that Burundi's health system is still weak, and is not likely to achieve the

MDG targets set for reducing infant mortality, maternal mortality, and HIV incidence by 2015. For malaria, this survey showed that only 17% of children under five with a fever in the two weeks preceding the survey received an antimalarial drug, of which 12% received an artemisinin-based combination therapy (ACT). The use of preventive measures, reflecting the results of the 2009 ITN distribution campaign, is increasing, with households owning an insecticide-treated net (ITN) at 52%. Use of ITNs is also increasing. Forty-five percent of children under five and 50% of pregnant women slept under an ITN the previous night. Burundi's malaria in pregnancy policy currently does not promote preventive treatment for pregnant women; but the DHS found that 99% of women receive ANC services at least once during their pregnancy, and health facility-assisted births has reached 60%.

**Table 1: Summary of Selected Malaria Indicators**

Indicator	2005 MICS	DHS 2010 (USAID baseline)
Households with at least one ITN	8%	52%*
Children under five years old who slept under an ITN the previous night	8%	46%
Pregnant women who slept under an ITN the previous night	NA	50%
Women who received two or more doses of IPTp during their last pregnancy in the last two years	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%
*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 is not policy in Burundi.		

## **EXPECTED RESULTS—YEAR 4**

By the end of Year 4 (approximately September 2013), USAID together with other partners will have achieved the following key results:

### Prevention:

- Approximately 625,000 ITNs will have been procured and distributed through health facilities to children under-five and pregnant women.
- A national strategy for continuous ITN distribution will have been developed and implemented.
- Planning for Universal Coverage Campaign will be underway.

### Treatment:

- Approximately 1.3 million ACTs treatments will have been procured and delivered to facilities.
- Approximately 250,000 RDTs will have been procured to ensure a full national supply.
- Approximately 20 microscopes will have been procured to enable the INSP to become an operational training facility for malaria diagnostics.
- A national community case management policy will have been developed and adopted.

## M&E

- A National Malaria Control Strategic Plan (2013-2018) and National Malaria Monitoring and Evaluation (M&E) Plan will have been developed.

## MALARIA PREVENTION

### Insecticide-Treated Nets (ITNs)

#### Background

**Mass Distribution:** The scale-up of ITNs is a key component of Burundi's overall malaria control and prevention strategy. The PNILP's current ITN guidelines were revised in late 2008 to call for universal coverage (defined as one net for every two people) through national-level distribution campaigns. Because of a shortfall of ITNs, it was necessary for the government to conduct the first mass campaign in three phases. The first phase, reaching a total of seven provinces<sup>4</sup>, was completed in June 2009 as part of a broader child-health campaign (that included measles vaccination, vitamin A supplementation, and deworming activities). During this campaign, households were given three ITNs each. An additional two provinces<sup>5</sup> were covered under a second mass distribution campaign sponsored by the Burundi and Belgian Red Cross in April 2010. During this campaign, ITN distribution was based on one ITN for every two people, with a maximum of four ITNs per household. These first two campaigns distributed a total of 2.1 million ITNs to the nine provinces. The third phase, held in February 2011, distributed a total of 1.9 million nets to the remaining eight provinces.<sup>6</sup> During this phase of the campaign, which was largely funded through Burundi's Global Fund Round 9 grant, ITNs were distributed to households based on the ratio of one ITN for every two people, with no limits on the number of nets given to a household. To date, a total of over 4 million ITNs have been distributed throughout the country through mass campaigns. The next mass distribution replacement campaign, also funded through the Global Fund Round 9 grant, Phase 2 (which was still being negotiated as of this writing), is scheduled for 2014—which will mean almost a full five years has lapsed in between mass distributions for the first seven provinces that were part of the June 2009 campaign.

**Routine Distribution:** In 2009, when USAID launched its malaria program in Burundi, less than 30% of the annual ITN need for pregnant women and children under one was being met through the routine system. Nets were being diverted to the mass distribution campaign, and donors were not focused on sustaining routine distribution through antenatal care (ANCs) and child immunization clinics. Additional donor support to continue the routine system in the aftermath of the mass distribution effort remains limited. The RCC Grant Phase 2 will no longer provide

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<sup>4</sup> The seven Phase 1 provinces were: Cankuzo, Gitega, Kirundo, Makamba, Muyinga, Rutana, and Ruyigi.

<sup>5</sup> The two Phase 2 provinces were: Cibitoke, Bubanza, and two communes in Bujumbura Rural province (Mubimbi and Mutimbuzi).

<sup>6</sup> The eight Phase 3 provinces were: Ngozi, Karuzi, Mwaro, Muramya, Bururi, Rumong, Bujumbura Marie, and the remaining communes in Bujumbura Rural.

ITNs for the routine system (in previous years the grant had provided 150,000 ITNs per year). UNICEF and GAVI are the only other donors identified who will contribute ITNs to the routine system in 2013 (with an estimated contribution each of 150,000 and 30,000 ITNs, respectively). 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. As the decentralization process is still underway, the MSPLS decided to test this approach in ten health districts. This is 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 ensure that ITNs do not stock out.

Tracking the consumption of ITNs at district and health center levels to improve the ITN quantification process as well as to strengthen the health districts' ability to "pull" needed ITNs into their communities remains a challenge. In 2011, a poor allocation of ITNs across the 45 districts resulted in overstocking in some and understocking in others. Some districts have been reporting stockouts since January 2012, requiring a costly internal reallocation of nets amongst districts. The situation is expected to be rectified once the next shipment of USAID ITNs arrives in June 2012.

Social Marketing: With the shift towards free distribution of ITNs to achieve universal coverage, the country moved away from supporting Burundi's fledgling market segmented approach, which included selling socially marketed ITNs in the private sector. Two private sector brands exist, "Supanet®" and "Mama Supanet®". According to the distribution partner, between 2003 and 2007 a total of 209,000 *Supanets* and 114,000 *Mama Supanets* were sold. However, marketing of these nets was suspended in 2008. The brands remain viable and ready to be reintroduced, when needed. The PNILP remains interested in reviving this distribution channel.

ITN Coverage: The 2010 DHS results, which reflect the inputs from the first two phases of the mass distribution campaign covering approximately half of the population, found that household ITN ownership is at 52%, reflecting a dramatic increase from the 8% of households that owned at least one ITN in the 2005 Multiple Indicator Cluster Survey. Net use is also increasing. The preliminary DHS results report that 45% of all children under five slept under an ITN the night before the survey. Further, 75% of children under five living in households that owned at least one ITN slept under an ITN the night before the survey. The DHS recorded similar findings among pregnant women. Given that an additional 1.9 million nets were distributed to the final eight provinces just a month after the DHS data collection was completed, national ITN ownership is probably significantly higher than reported in the DHS. However, with the next mass distribution not scheduled until 2014, Burundi seeks ways to sustain high levels of coverage until then.

Ensuring consistent use of ITNs over time is another operational challenge. Burundians have a growing awareness of personal risk and knowledge of how to use and maintain ITNs. In 2010,

Population Services International conducted a TRaC Survey<sup>7</sup> and found that 51% of both guardians of children under five and of pregnant women were able to spontaneously identify sleeping under an ITN as a primary way to prevent malaria infection.

**ITN Gap Analysis:** The table, below, describes the total projected ITN gap in Burundi in 2013. With the completion of the mass distribution campaigns, much of the population has been covered; however, the ITNs distributed in the 2009 and 2010 are aging quickly; it is expected that fewer than 50% of these nets will remain functional in 2013. Further, the gap analysis shows a shortfall of routine nets for ANC and immunization clinics.

**Table 2. ITN Gap Analysis Table (2013)**

<b>Data Inputs</b>	<b>Country data</b>
<b>At-Risk Population (2010 Estimates)</b>	8,500,000
Expected annual population growth	2.90%
Average number of persons per net	1.8
<b>Distributed ITNs</b>	
Distributed ITNs in 2011 (campaign and routine)	2,163,000
Distributed ITNs in 2012 to date	640,000
ITNs pledged to be distributed in 2012 (USAID, routine)	80,000
<b>Pledged ITNs</b>	
Pledged ITNs in FY 2013 (via routine distribution) (includes pledged ITNs from: USAID: 600,000; UNICEF: 150,000, and GAVI: 30,000)	780,000

**Calculations for ITN Needs in 2013**

Population at risk in 2013	9,261,153
Total number of ITNs needed	5,145,085
Viable Nets from Previous years (3 year durability)	3,823,000
Nets in-country	4,603,000
<b>ITN gap or (surplus)</b>	<b>397,083</b>

**Progress in the last 12 months:**

USAID has committed a significant portion of its malaria control program resources over the past year towards supplying and strengthening the routine ITN distribution system. USAID has procured a total of 1,425,000 ITNs for distribution to ANC and immunization clinics, including 530,000 ITNs with FY 2011 funds. As of March 2012, a total of 895,000 ITNs have been distributed to 543 public health facilities, of which 70% went to pregnant women during ANC visits, and 30% went to children at their measles vaccination. An additional 530,000 ITNs from USAID are expected to be distributed to health districts by December 2012. With the PNILP's

<sup>7</sup> For the full report, please see: *PSI Research Division*, "Evaluation de l'utilisation de la moustiquaire imprégnée par les femmes enceintes et les enfants de moins de cinq ans au niveau national", *PSI Social Marketing Research Series*, (2010) <[http://www.psi.org/research/cat\\_socialresearch\\_smr.asp](http://www.psi.org/research/cat_socialresearch_smr.asp)>.

decision to classify the ITN as an essential medicine, USAID began working with ten districts to integrate the management of ITN stocks into their drug management system. The start of this activity has been hampered by the past year's poor quantification—several of the ten districts selected to begin implementing this new management system did not receive enough ITNs to meet demand. Refining a new distribution and management system is essentially on hold until the districts have sufficient quantities of ITNs to manage. It is expected this problem will be resolved by August 2012.

**Proposed activities with FY 2012 funding: (\$4,010,000)**

USAID will continue to support increasing the ownership and use of ITNs both through routine and mass campaign distribution methods. Specifically, FY 2012 funding will:

- *Procure and distribute ITNs for Routine Distribution:* Procure and distribute approximately 625,000 ITNs to pregnant women and children under one for free through the ANC and immunization clinics in 17 provinces nationwide. If approved as part of the national continuous distribution strategy, up to 50,000 LLINs may be procured for an innovative distribution channel. (\$3,410,000);
- *Develop and implement a Continuous Distribution Strategy:* Support the development of a continuous ITN distribution strategy and its implementation (including, as appropriate, establishing or revitalizing alternative distribution channels) in order to maintain universal coverage achieved through the mass distribution campaign. (\$500,000)
- *Support planning for Universal Campaign:* Support planning for the 2014 national universal coverage mass distribution campaign to ensure that the design of the campaign (scheduled for first quarter 2014) is sound and adheres to the best practices currently promoted by RBM. (\$100,000)

**Entomology**

**Background**

The National Malaria Control Strategy (2011-2015) calls for PNILP to establish a sustainable indoor residual spraying (IRS) program in all households where it is feasible. In support of this strategy the PNILP has been spraying approximately 50,000 households annually in epidemic zones to achieve at least 80% coverage among the targeted households. This effort has minimal impact on malaria prevention in the country; the 2010 DHS found that only 0.3% of households 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 has been provided by the Global Fund RCC grant. The PNILP carried out spray operations in two *communes* in Kayanza Province in 2009 and 2012 using the synthetic pyrethroid insecticide, deltamethrin, in response to a reported malaria outbreak. The Swiss Cooperation also sprayed in Ngozi Province in December 2011. Further, Médecins Sans Frontières sprayed four communes in Kayanza Province during the first quarter of 2012.

Despite the national strategy, the PNILP's initiative and its partner's 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 (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. The PNILP has done some basic entomology and is eager to improve its capacity. The PNILP conducted a small insecticide resistance study in February of 2011 and found that insecticide sensitivity on mosquito vectors were: DDT (58% mortality), permethrin (54% mortality) and deltamethrin (95% mortality).

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

USAID is supporting the PNILP to develop a comprehensive, well-articulated national strategic plan for vector control. In April 2010, USAID funded a vector control needs assessment, the first step in developing a national IVM strategy and work plan. This assessment provided the PNILP with a thorough understanding of the drivers and constraints of the current status of vector control, as well as the implications and needs for anticipated adjustments in the set targets. The needs assessment was completed in December of 2010 and was presented at a validation meeting in July 2011 for formal approval and adoption of the report's findings. The meeting outputs served as a foundation for the second stage of the IVM development process. In 2012, USAID refurbished and equipped a national insectarium and trained PNILP entomologists, which was officially opened by President Nkurunziza on World Malaria Day. It is expected that with additional support the insectary will begin to generate accurate data for vector control interventions in Burundi.

### **Proposed activities with FY 2012 funding: (\$250,000)**

USAID will continue to support the PNILP to build an effective entomological surveillance, monitoring and vector control capacity. Specifically, FY2012 funding will:

- *Provide entomologic technical assistance:* Improve national entomology capacity with continued technical assistance to enable and support entomological surveillance. Support will also contribute to the finalization of a national IVM strategy as an integrated component of the national malaria control strategy. (\$250,000)

## **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. A 2007 national workshop reinforced the policy decision and recommended that health facilities instead provide pregnant women with an integrated antenatal care package which includes an ITN, prevention and treatment of anemia, and deworming

treatment. This package was supported by the maternal health program and outlined in national training modules and materials. The 2010 DHS preliminary results found that 99% of pregnant women attended ANC clinics at least once during their pregnancy, and would therefore have access to this intervention package to reduce the burden of malaria during pregnancy.

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

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). The review concluded that in the absence of suitable alternatives to SP for pregnant women, the use of SP for IPTp in Burundi should be reconsidered while continuing to monitor SP efficacy among pregnant women. Based on these recommendations, USAID sponsored a national workshop, chaired by the MSPLS leadership, to discuss an IPTp policy in Burundi. Consensus was reached at the meeting to introduce SP for pregnant women, but little progress has been made since December 2010.

Despite this recommendation, the PNILP remains hesitant about adopting this policy. As a result, USAID's FY 2011 IPTp funds were reallocated to other activities.

### **Proposed activities with FY 2012 funding: (\$0)**

The USAID malaria program team will continue to advocate for the introduction of IPTp in Burundi.

## **CASE MANAGEMENT**

### **Diagnosis**

#### **Background**

The 2008-2012 National Malaria Control Strategy sets a target of providing parasitological diagnosis of malaria for 90% of persons suspected of malaria by 2012. 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>8</sup> Current national policy calls for using rapid diagnostic tests (RDTs) to confirm malaria cases for children less than five years, in case of epidemic outbreaks, and when microscopy is unavailable. For other cases, microscopy is mandatory and should include both thick and thin smears in order to identify the species of *Plasmodium* and to calculate parasite density.

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. The 2011 Quality of Care study found that 97% of health facilities have microscopes and 55% have access to RDTs, while 63% of malaria cases were confirmed by microscopy or an RDT.

The national health management information system reports that four provinces conduct malaria diagnostics testing on more than 80% of fevers, while six provinces test on less than 50% of

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<sup>8</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)

suspected cases. The remaining seven provinces tested suspected cases for malaria between 50-80% of the time. USAID's non-randomized end-use verification survey of health facilities, conducted in March 2012, found that 88% of patients were tested for malaria before being prescribed an ACT. However, provider adherence to malaria test results needs to be improved as the study also found that 77% of febrile patients with a negative malaria test result (either by microscopy or RDT) were still treated with ACTs.

The emphasis in both the Global Fund Round 2 and RCC Global Fund grants has been on building capacity in malaria microscopy. The Global Fund Round 2 grant procured 120 binocular microscopes and provided initial training or refresher training for laboratory staff. The quality assurance system calls for ten positive and ten negative slides from selected facilities to be sent to PNILP for review each quarter; however, this occurs only once per year, there is no standard protocol, and feedback to the laboratories may not occur on a regular basis. A national reference laboratory, located within the National Institute for Public Health (INSP), is funded only by the government and does not currently have support from donor funding sources. The INSP does not have the necessary equipment to function as a training facility for improving the diagnostic skills of laboratory technicians. A separate laboratory unit is located at the PNILP; the relationship and coordination between these two laboratories needs to be improved.

Implementation of the national diagnostics policies is primarily supported by the Global Fund. The RCC Phase 2 grant has a budget of about \$400,000 annually over three years to support malaria diagnosis. The RCC grant calculated needs related to malaria diagnosis (including microscopy and RDTs) at health facilities based on the updated policy requiring diagnostic confirmation of all cases. The Global Fund Round 9 grant does not budget for any diagnostic needs. The public health facility needs for RDT are mostly covered under the RCC grant, but as community case management efforts are increased, funding gaps are expected to arise as accurate quantification estimates, based on actual consumption, are developed over the coming year. Burundi uses the Paracheck® brand of RDT. INSP activities are not supported by the RCC grant.

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

In 2010, USAID supported an assessment of malaria diagnostic capacity, which provided a snapshot of current diagnostic capacity in MSPLS facilities. Major findings include: a lack of routine and regular refresher training in malaria diagnostic techniques, a lack of a quality assurance/quality of care plan to support malaria microscopy and RDTs, a lack of regular supportive supervision, stockouts of RDTs in all but one facility assessed, and poor prescriber compliance with negative malaria test results.

Based on findings from the assessment, and with support from USAID and WHO, the PNILP has revised its diagnostic guidelines. A workshop to validate the new national protocols for malaria diagnosis and case management was held in March 2012. Trainings of trainers on these new protocols for malaria diagnosis are planned for May/June 2012.

USAID has also launched a community case management (CCM) pilot, which included the introduction and use of RDTs at the community level for diagnosing and treating children under five for malaria. The community health workers (CHWs) in this program are trained to use

ACTs only after a confirmed malaria diagnosis. Outcomes of this pilot are expected to inform the revision of the national diagnostic policy to appropriately address the diagnostic needs of community case management (see the Case Management section below for more details).

**Proposed activities with FY 2012 funding: (\$230,000)**

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 2012 funding will support:

- *Procure RDTs in support of the roll out of the new malaria diagnosis policy:* Procure up to 250,000 RDTs to fill the estimated RDT need to meet the new requirements of revised diagnosis protocols. (\$180,000)
- *Procure microscopes to reinforce INSP's national training capacity:* Procure up to 20 microscopes for use at the National Reference Laboratory (INSP) to enable this institution to function as a national training facility to improve diagnostic capacity of laboratory technicians at the health facility level. (\$50,000)
- *Strengthen the quality of diagnostic training and supervision:* Support the PNILP and INSP to enable high quality malaria diagnosis and case management at the health district level. Activity will include supporting PNILP and INSP to oversee the training and supervision of health facility providers to follow the new diagnostics policy that is funded by the Global Fund RCC grant. (*funding for this activity is included under the Malaria Treatment section, below*)

**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 *Département des Pharmacies, Médicaments et Laboratoires* (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, *Centrale d'Achat de Médicaments Essentiels du Burundi*, or CAMEBU.

CAMEBU's warehouses are ventilated, some rooms are air-conditioned, and there is a refrigerated room for those drugs that need to be stored at cooler temperatures. With UNICEF funds CAMEBU is planning to expand the central warehouse; however, funding is still needed to support capacity building, warehouse equipment, training, and supervision of staff. CAMEBU has an operational LMIS that uses the SAGE computerized management system. Inventory is conducted twice a year at CAMEBU and once a year in each district and hospital warehouse and every month in the health centers. Expired drug stocks are destroyed annually upon review and approval from an oversight committee comprised of government ministries including health, justice and finance. To date, CAMEBU has not had to destroy any expired ACTs.

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, but these drugs are not on the essential medicines list. No provision exists for quality control of drugs purchased through this route. CAMEBU currently sells drugs to hospitals at a 20% mark-up and is willing to offer lines of credit that can be quite extensive. For vertical, public health program drugs and supplies, such as those for malaria, are stored at CAMEBU for distribution to the districts. Vertical programs pay about a 5% management fee to store their drugs and supplies. Vertical disease programs are in control of their commodities and directly manage their orders, disbursements, and procurements, providing direction to CAMEBU. CAMEBU sends a monthly report of stock held to the PNILP. CAMEBU does not manage ITNs.

The MSPLS operates both a push and pull pharmaceutical supply system depending on district needs. CAMEBU owns two trucks to transport drugs to the district-level depots; however distribution to districts occurs intermittently due to cost and there is a need for more distribution vehicles. Quantification of pharmaceutical supplies is mostly 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 submits requests directly to CAMEBU through request forms that are sent or delivered in-person by the district staff. Health center staff collects supplies from the district-level, paying by cash or credit. CAMEBU aims to keep about five to six months of antimalarial stock in the national warehouse; however, due to space constraints the warehouse can only hold about four months of stock.

In response to lengthy procedures that resulted in extended delays before CAMEBU was allowed to fill district resupply requests, the standard operating procedures were revised in 2012. 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.

Burundi currently has no pharmacovigilance system to monitor adverse reactions to drugs. The drug quality assurance system consists of sampling imported pharmaceuticals and sending them for testing to foreign laboratories including: South Africa, France and Niger. CAMEBU has a budget to support this activity under the Global Fund RCC Grant. The MSPLS would like to conduct drug quality testing in-country for health pharmaceuticals, including antimalarials, and is reinforcing the existing national laboratory reference within INSP. The Office of General Inspection collaborates with the DPML to monitor and regulate the private sector pharmaceutical system; however they are constrained by limited resources.

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 an 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. While the ordering process was streamlined this past year, the district-level ACT resupply requests are still not being fully filled by the national program. At the time of writing, new standard operating procedures to address this problem had just been released, which is expected to greatly improve the situation.

### **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 funded an assessment in September 2011 to evaluate the information management systems for antimalarial medicines. The assessment revealed a fragmented information system with poor quality data that is neither timely nor accurate and recommended areas of improvement such as data sharing and improved supervision. USAID supported training on "Channel", a commodity management information system provided for UNFPA to support the reproductive health program. A total of 151 pharmacists and store-keepers from nine districts at the district and facility level were trained on the software management system and in pharmaceutical management in 2011. USAID also supported the formation of a coordination body for the management of medicine stocks to enable regular meetings to be held among CAMEBU, PNILP and the Global Fund. As part of this coordination body, USAID facilitated a revised requisition process for the ordering and approval of ACTs by all partners, which has greatly decreased request and delivery time of orders. New standard operating procedures for pharmaceutical management for districts and facilities were validated and introduced in the first quarter of 2012.

### **Proposed activities with FY 2012 funding (\$350,000)**

USAID will continue to support strengthening of the malaria pharmaceutical management system and build on key findings from the needs assessment. Specifically, FY 2012 funding will support:

- *Strengthen supply chain logistics and pharmaceutical management:* Continue support for supply chain logistics and pharmaceutical management in collaboration with CAMEBU, which will include the operationalization of the new standard operating procedures to strengthen the pull system. This investment will also strengthen CAMEBU's (and the PNILP's) capacity to quantify all malaria commodities, and improve the district-level pharmaceutical management capacity. The semi-annual end-use verification survey will also be funded under this activity. (\$350,000)

## **Treatment**

### **Malaria Treatment Policy**

Introduced in 2003, AS-AQ is the first-line treatment for uncomplicated malaria in Burundi (now dispensed as a co-formulated fixed dose preparation). For patients who fail to respond to AS-AQ, a seven-day course of oral quinine is the recommended second-line treatment. For malaria in pregnant women, quinine is used during the first trimester; while AS-AQ is recommended for the

second and third trimesters. Parenteral quinine is the recommended treatment for severe malaria. In 2009, Burundi made all health services, including malaria treatment, free for children under five and pregnant women; later that year free AS-AQ treatment was extended to all Burundians.

Based on the new WHO guidance updates regarding severe malaria treatment the PNILP revised its national guidelines in March 2012, and plans to disseminate and train providers on the new guidelines in June 2012. The new guidelines follow WHO recommendations and call for the use of quinine plus clindamycin as second-line treatment for malaria and the use of injectable artesunate for severe malaria. Training on malaria treatment is needed; an evaluation in April 2010 revealed that only 10% of staff at health centers was trained in how to correctly prescribe an ACT.

The estimated ACT need for public health facilities is over three million treatments each year. The majority of the ACT need for 2012-2014 is budgeted for in the Global Fund RCC Phase 2 grant. Due to improved pharmaceutical management and coordination among donors (discussed in the section above) previous issues with ACT stockouts in 2011 have been largely resolved at this point.

Case management data from recent studies complement the malaria incidence data gathered from the national HMIS system. The 2010 DHS found that 30% of children under age five had a fever during the two weeks preceding the survey. Among those children, only 27% were tested for malaria, and 17% were treated with an antimalarial. Of those treated with an antimalarial, 74% were treated within 24 hours of the onset of symptoms. While the threat of national stockouts has subsided over the past year, adequate stock of ACTs at the facility level remains a challenge. The 2011 Quality of Care study documented that only 35% of private health facilities had ACTs on the day of the survey.

In addition to facility-based case management, the PNILP, with USAID support, is expanding into community-based treatment of malaria, including confirmed diagnosis with RDTs. The CCM pilot is being conducted in two provinces, Kayanza (Gahombo District) and Muyinga (Gashoho District), both provinces where USAID is already supporting networks of CHWs and strengthening health facility services through its bilateral partner project. The pilot design and positive outcomes have generated a lot of interest, which has leveraged financial support from other stakeholders to add two additional sites: Kibuye District in central Gitega Province with support of UNICEF, and Mabayi District in northern Cibitoke Province with support from Concern Worldwide. UNICEF is expanding the malaria focus of CCM to include treatment of diarrhea and acute respiratory infections at the community level.

Antimalarial monotherapies can still be found in the marketplace despite discouragement and policy changes. A joint 2009 proposal to the Global Fund from the PNILP and PSI to introduce AS-AQ in the private sector was not successful. Private sector support is not included in either Global Fund RCC or Round 9 grants.

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

With FY 2011 funding, USAID continued to provide technical assistance to the PNILP in the elaboration and implementation of malaria treatment policies. In 2011, the PNILP finalized its

revision of the Malaria Treatment Guidelines for the health sector which are now in the training and implementation stage. Standard integrated supervision tools for providers at clinical settings and community level are being developed and their validation is scheduled for July 2012.

The implementation of the CCM project emphasized proper diagnosis and treatment of malaria in children under five at the community level. There are now a total of 402 trained CHWs providing CCM services in two districts. During the first quarter of 2012, these CHWs treated 6,500 confirmed malaria cases among children under five, and referred an additional 12,000 sick children to health facilities once they tested negative for malaria.

**Proposed activities with FY 2012 funding: (\$2,150,000)**

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. With poor access to health care services, CCM is an important approach to ensure that children under five years have access to prompt and effective treatment. The complexity of AS-AQ implementation must not be underestimated with the short 18-24 month shelf-life of the artemisinin component, the risk of substandard or counterfeit drugs in the private sector, and the high levels of coverage that need to be attained. With FY 2012 funding, USAID will support the following activities:

- *AS/AQ procurement:* Procure up to 1.3 million AS-AQ treatments, and severe malaria drugs, as needed, to fill supply gaps in the public sector clinics. This will allow USAID to provide security stock to prevent any stockouts in calendar year 2013. (\$1,150,000)
- *Support community case management:* Continue implementation of the community case management of malaria program in the two targeted districts in Muyinga and Kayanza provinces. This assistance includes continued implementation of the activity (including increased supervision and monitoring), increased supervision of CHWs, community mobilization, program evaluation, and developing the national CCM policy with the PNILP. (\$300,000)
- *Improved case management in health facilities:* Strengthen Case Management Capacity at the national level (case management national policy) and district level (case management supervision in selected districts) to operationalize the new malaria treatment policy (adding severe malaria). This activity includes providing technical assistance to the PNILP to enable high quality malaria case management at the health district level, including operationalizing the supervision tools developed in FY 2011 and supporting the PNILP and INSP to oversee the training of health facility providers to follow the new diagnostics policy. (\$450,000)
- *Strengthen national pharmacovigilance capacity:* Strengthen pharmacovigilance capacity at the national level around patient care and safety, clinical responses and adverse reactions to medicines. Develop a Burundi-specific systems improvement plan and guidelines to improve national pharmacovigilance safety and monitoring systems. (\$175,000)

- *Strengthen national drug quality assurance and control (QA/QC) capabilities:* Conduct a situation analysis of the capacity of the national entities to perform basic QA/QC functions. Provide support to the national drug quality control to improve the functioning of this entity. Assess legislation needs, gaps around QA/QC of medicines and the monitoring of counterfeit and substandard medicines. (\$75,000)

## **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 person at the PNILP, and the recommended information, education and communication (IEC) technical working group in the PNILP is not yet functional nor able to coordinate BCC efforts among donors. Only limited community-level BCC activities have been carried out. NGOs report that their staff and volunteers are overstretched, due to limited funding and high demand for malaria information and prevention. Additionally, local BCC programs are faced with high community expectations of service provision such as free net distribution, over which BCC programs have little control.

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

USAID investment in communication activities has been limited to date. To promote correct and consistent use of ITNs, in 2011 USAID funded over 40 outreach sessions which reached over 10,000 pregnant women and mothers of children under five, and trained approximately 650 members of community-based organizations on interpersonal skills to promote ITN use.

### **Proposed activities with FY 2012 funding: (\$100,000)**

USAID will continue to support increasing awareness and uptake of ITN use through integrated behavior change and communication activities. Specifically, FY 2012 funding will support:

- *Targeted community-based BCC efforts:* Conduct community-based BCC efforts to promote the consistent use of distributed ITNs, including instructions on hang up, use, care, and other related activities, especially among pregnant women and children under five years. (\$100,000)

## **EPIDEMIC SURVEILLANCE AND RESPONSE**

### **Background:**

The MSPLS has a national committee to manage malaria epidemics and emergencies. According to the PNILP, eight of the country's 17 provinces (home to 56% of the national population) have areas that are prone to malaria epidemics: Gitega, Karusi, Kayanza, Muramvya, Muyinga, Mwaro, Ngozi, and Cankuzo. Since these same provinces are also categorized as having endemic malaria, it is not clear whether these are truly epidemic-prone areas or simply have marked seasonal swings in the level of malaria transmission. Of the recent

epidemics, 80% were in the marsh areas used for rice cultivation and mixed agriculture. These areas of irrigation systems are also good habitats for larval mosquito growth. The PNILP recognizes that the epidemiology of malaria may be changing in Burundi and that further epidemiologic and entomologic studies are needed to refine malaria control strategies in these epidemic-prone areas.

The National Malaria Control Strategy (2008-2012) has the ambitious goal of detecting and containing outbreaks within two weeks. Over the next five years, the PNILP plans to work with provinces and districts to develop epidemic detection and control plans, establish sentinel surveillance sites, and establish emergency stocks of drugs, insecticides and, other materials to allow a rapid response to upswings in malaria transmission in these areas. Currently, if an epidemic or emergency is declared, there are a few partners on standby to help respond, including WHO and UNICEF, who are prepared to launch a response through IRS, a policy that is contrary to USAID's position on epidemic response and control.

**Proposed activities with FY 2012 funding:**

Given other more immediate malaria control needs in Burundi, no specific activities are planned for epidemic detection or containment with FY 2012 USAID malaria funding; however, complementary work will be conducted through vector control management via the operationalization of a new insectarium and support towards entomological monitoring (discussed earlier in the entomology section).

**INTEGRATION WITH OTHER GLOBAL HEALTH INITIATIVE PROGRAMS**

The USG Burundi GHI strategy was approved in September 2011. Its objective is to reduce neonatal, child and maternal morbidity and mortality and reduce the incidence of major communicable diseases (HIV and malaria). This GHI objective is in line with the GOB's 2011-2015 National Health Development Plan, which states that: "By 2015 all Burundian citizens will have increased access to basic health care through strengthened leadership of the MSPLSA and individual and community participation". The USG intends to achieve its GHI goals through three interrelated results: (1) strengthened health management information systems; (2) improved health-related behavior and demand for health services; and (3) improved quality of health services. These areas were identified based on GOB and USG health priorities, available resources, and key opportunities for USG leveraging and expected impact. The USG in Burundi will make a concentrated effort to leverage its resources and harmonize its efforts to attain greater impact.

The health management information system is identified as a weak area and will need more attention in the coming years. The need to have reliable data for decision making is regularly cited as a key challenge among health stakeholders. By coordinating resources among USG actors, as well as other donors and partners, this area is likely to achieve rapid improvements with limited resources.

To increase the uptake of available health services, joint efforts will aim at improving health-related behaviors and increasing demand for services among the general population. For

example, behavior change and demand creation activities are needed to increase-household awareness of and engagement in prevention of mother-to-child transmission of HIV/AIDS and voluntary family planning services. These objectives will be achieved through strong IEC and BCC messaging through various media. Communication materials and approaches for BCC will be harmonized and more attention to and support of community-level input and participation work will be provided. The collection and analysis of data at the community level for decision making will also be enhanced.

Improving the quality of health services includes a wide range of activities from capacity building of health service providers to commodity procurement and the provision of quality services. The MCH, FFP, FP, malaria, and HIV/AIDS programs – in collaboration with other donors – will work in synergy to address issues related to quality of health services. These include, for example: poor quality of services in general; frequent stockouts of essential drugs; poor referral systems; weak supervision; poor capacity of health care providers, limited community-based health services; and a non-systematic approach to integrated service provision delivery.

#### **Proposed FY 2012 collaboration:**

The USAID malaria team has identified several areas of potential collaboration:

- **HIV/AIDS:** Burundi became a PEPFAR country in FY 2011, and with the significant increase in resources that accompany this change, there is a major opportunity to partner with the HIV/AIDS program. The HIV/AIDS, nutrition and malaria teams are actively seeking to synergize target populations at the provincial level to integrate ITNs and nutritional support as components of the expanding PEPFAR-supported home-based care program. Additionally, the HIV/AIDS and malaria programs plan to invest in pharmaceutical management technical assistance at the central pharmacy, CAMEBU, to strengthen the supply-chain system.
- **Maternal and Child Health Services/Reproductive Health:** Burundi lacks a robust policy on malaria in pregnancy; the current official policy addresses only provision of free ITNs to pregnant women through ANC clinics. The malaria and MCH/RH teams are actively coordinating their resources to help the GOB develop a more comprehensive policy with both the PNILP and the National Program of Reproductive Health (PNSR).
- **Department of Defense:** The DOD is currently supporting USAID HIV/AIDS activities by supporting voluntary counseling and testing and BCC activities within Burundian armed forces. As one of GHI goals is to harmonize integrated BCC messages through all health sectors, the USAID Malaria and DOD teams will actively work together to build on this HIV/AIDS example.

### **CAPACITY BUILDING AND HEALTH SYSTEM STRENGTHENING**

#### **Background**

In January 2009, the Department of Infectious Disease and Nutrition within the MSPLS was reorganized to establish a new national malaria control program, the PNILP, which currently consists of 19 staff members organized into four key program areas: case management, vector control, monitoring and evaluation, and human resources. The program director and her deputy

are both physicians and 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 three PNILP leads; the current director and her deputy were appointed in March 2011.

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 MCH programs are supporting districts in many different ways, including: health information system, drug management, supply chain, and human capacity development. Cross-cutting areas for these three programs will be coordinated with complementary DOD efforts, in the spirit of GHI. 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, during this past year, through a well-known organizational development tool which addresses 18 areas such as a review of the PNILP vision and mission, analysis of current staff job descriptions, assessment of the decision making process and methods of communication (MOST: Management Organizational Sustainability Tool). The tool was applied during a self-assessment exercise carried out by PNILP staff and facilitated by international experts, which led to the development of a detailed action plan for improvement. The findings of this assessment were already presented at an internal workshop, and will be used by USAID, PNILP and other donors to prioritize areas of support. As a follow up to the assessment results, needed computer equipment was purchased and job descriptions were drafted for the PNILP, which are currently waiting to be reviewed and adopted.

**Proposed activities with FY 2012 funding: (\$100,000)**

With FY 2012 funds, USAID will continue to support the PNILP and its organizational development with the following activities:

- Provide PNILP with support for organization of their office including follow up on the MOST results,
- Organize trainings on leadership and management; this course will be locally organized so that all members of the PNILP can benefit from it.
- Support for regional professional development opportunities and organizational development.
- Support for National and World Malaria Day celebrations.
- Explore creating a PNILP Society at national level, so that they can receive money directly from donor (GF, bilateral or other donors).
- Rehabilitate PNILP office space by exploring a possible Public Private Partnership

## **COMMUNICATION/COORDINATION**

The MSPLS works in collaboration with many multilateral and bilateral partners. The frequent changes in the leadership of the PNILP have made coordination and continuity of the malaria program more challenging. In addition to the Global Fund and USAID, several other partners work on malaria prevention and control in Burundi:

- The Swiss Agency for Development and Cooperation supports IRS, in partnership with *Médecins sans Frontières*
- UNICEF supports provision and delivery of ITNs for pregnant women and children under one.
- A local NGO, ALUMA (Action for Fighting against Malaria), a named sub-recipient on the RCC Grant, specializes in providing technical training to health care workers, as well as IEC/BCC activities.
- CED CARITAS is the civil society prime recipient for the Global Fund Round 9 grant and is supporting and coordinating community based organizations in ITN-related prevention and BCC activities.
- GAVI is providing around 30,000 ITNs for children during measles immunization in selected health districts.

## **PUBLIC PRIVATE SECTOR PARTNERSHIPS**

USAID was appointed as lead donor for coordination of all private-sector investments in 2007. The agency works with the Ministry of Commerce and the Chamber of Commerce to champion policy and program efforts to reestablish private-sector activities following the crisis years, which had a negative impact on infrastructure, capital formation, and private domestic and foreign investment. The GOB has initiated a variety of legislative and policy reforms to stimulate private-sector development, which will be critical to Burundi's success in integrating into the East African Community. These actions have resulted in considerable growth in investments in the communications, banking, and agriculture sectors.

The USG believes there are many opportunities for private sector partnerships with information technology companies, U.S. companies involved in the coffee sector, and suppliers of petroleum products. The USAID East Africa Global Development Alliance Advisor agrees with the USG assessment that Burundi is "open for business" and recommends that the USG actively pursue opportunities to leverage private funding to support its development programs.

At the present time, the USG has a public-private partnership with Coca-Cola for the water/sanitation sector, with an insurance company to support HIV/AIDS programs, and a Development Credit Authority agreement with a private bank to promote lending in the agriculture sector. In addition, the USAID malaria team is starting discussions with Sanofi Pharmaceutical Company to support community-case management of malaria.

## **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 2010 DHS provide the first update on the national health status since 1987. Primarily funded through both Global Fund grants, the PNILP is planning to conduct an MIS in the fourth quarter of 2012. There remains a budget gap for this activity that the PNILP is currently seeking to fill. Following completion of the MIS, Burundi plans to review the malaria stratification map, using funding from the Global Fund RCC grant. Malaria sentinel surveillance sites have been identified, but are not yet functional and must be strengthened to provide reliable data on trends in malaria morbidity and mortality that can be used for advocacy and program decision making. Only two of the six sites have funding support from the GF RCC grant, the remaining four still require funding.

In 2010, the NMCP had issued a monitoring and evaluation document named "*Plan National de Suivi Evaluation 2008-2012 du Programme de Lutte Contre le Paludisme au Burundi*", which outlined the indicators and benchmarks to be monitored in order to reach the 2008-2012 National Malaria Strategic Plan goals. However, the cost for each activity in this document is focused only on the available funds from the Global Fund RCC grant and does not include financial and technical assistance from other donors, making it essentially an RCC Grant M&E workplan rather than a national M&E plan.

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

USAID joined multiple donors to support the 2010 DHS. In 2011, USAID participated in the WHO Malaria Program Review activity, which provided specific recommendations across all sectors of Burundi's malaria control program. At the request of the PNILP, USAID postponed its plans to develop an integrated, costed M&E national strategy to help direct and guide future resources toward key M&E priorities in Burundi's malaria control efforts in 2011. The PNILP wants to conduct this activity after the development of the new national malaria control strategy to incorporate the recommendations of the review into the official M&E plan.

### **Proposed activities with FY 2012 funding: (\$200,000)**

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 2012 funds will:

- *Support National M&E Capacity:* Support the PNILP to develop its next National Malaria Control Strategic Plan, the related national malaria control monitoring and evaluation plan, and its implementation (\$100,000).

- *Conduct the 2012 MIS:* Support the PNILP to conduct the Malaria Indicator Survey (\$100,000)

## **STAFFING AND ADMINISTRATION**

Burundi is a USAID Limited Presence Country and has one USG staff member, the Country Representative. An additional USG direct hire, a foreign service Program Officer joined the in-country Mission team in 2011. USAID hired two malaria staff to oversee the malaria control program and have been functioning together as a team for almost two years. The USAID/Burundi malaria team will 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 will work 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 will report to the USAID/Burundi Country Representative and will split their time between the PNILP and the USAID offices, as appropriate. All technical activities will be 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 Office.

### **Proposed activities with FY 2012 funding: (\$610,000)**

- *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. (\$610,000)

**Table 1: FY 2012 (Year 4) 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	\$3,010,000	<b>\$5,240,000</b>
		Procure RDTs	\$180,000	
		Procure microscopes to reinforce INSP's national training capacity	\$50,000	
		Procure AS/AQ and/or severe malaria medication	\$1,150,000	
DELIVER TO7 (PSI)	Nationwide	Distribute ITNs through routine systems	\$400,000	
		Implement the continuous distribution of ITNs	\$350,000	
		Support targeted community based ITN promotion efforts	\$100,000	
SIAPS	Nationwide	Strengthen supply chain management capacity	\$350,000	<b>\$1,475,000</b>
		Strengthen case management	\$450,000	
		Strengthen national pharmacovigilance capacity	\$175,000	
		Support to PNILP	\$100,000	
	Support National M&E Capacity	\$100,000		
	Targeted Districts	Support community case management	\$300,000	
NetWorks	Nationwide	Support development and promotion of a continuous ITN distribution strategy	\$150,000	<b>\$250,000</b>
		Support planning for the 2014 universal coverage national campaign	\$100,000	
IRS TO 4	Nationwide	Support improved vector control capacity	\$250,000	<b>\$250,000</b>
USP PQM	Nationwide	Support the national drug quality control efforts	\$75,000	<b>\$75,000</b>
Measure DHS	Nationwide	Conduct the 2012 MIS	\$100,000	<b>\$100,000</b>
USAID	Nationwide	USAID Staffing and Administration	\$610,000	<b>\$610,000</b>

**Total FY 2012 Budget \$8,000,000**

**Table 2: FY 2012 (Year 4) Budget Breakdown by Activity**

<b>Proposed Activity</b>	<b>Mechanism</b>	<b>Budget</b>	<b>Com-modities</b>	<b>Geographic area</b>	<b>Description of Activity</b>
<b>ITNs</b>					
Procure ITNs for distribution through routine systems	DELIVER TO7	\$3,010,000	\$3,010,000	Nationwide	Procure approximately 625,000 ITNs for routine distribution through the ANC and EPI programs, which will fill the entire gap of nets. This funding includes procuring approximately 50,000 ITNs for distribution through innovative continuous distribution channels, as developed in partnership with the PNILP.
Distribute ITNs through routine systems	DELIVER TO7 (PSI)	\$400,000	\$0	Nationwide	Distribute approximately 625,000 ITNs, including support to districts receiving distribution support
Support development and promotion of a continuous ITN distribution strategy	Networks	\$150,000	\$0	Nationwide	Provide specialized technical assistance to help the PNILP develop and promote the adoption and acceptance of a continuous ITN distribution strategy
Implement the continuous distribution of ITNs	DELIVER TO7 (PSI)	\$350,000	\$0	Selected areas	Implement the national strategy for supplying ITNs through the new continuous distribution strategy (including, as appropriate, establishing or revitalizing alternative distribution channels) with the objective of maintaining high ITN coverage once the 2014 universal coverage campaign is completed.
Support planning for the 2014 universal coverage national	Networks	\$100,000	\$0	Nationwide	Support for the 2014 universal coverage campaign planning, and census

campaign					
	<b>Subtotal</b>	<b>\$4,010,000</b>	<b>\$3,010,000</b>		

<b>Integrated Vector Management</b>					
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Support improved vector control capacity	IRS TO4	\$250,000	\$0	Nationwide	Improve national entomology capacity with continued technical assistance to enable and support entomological surveillance. Support will also contribute to the finalization of a national IVM strategy as an integrated component of the national malaria control strategy.
	<b>Subtotal</b>	<b>\$250,000</b>	<b>\$0</b>		

<b>IPTp</b>					
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Support PNILP to adopt a malaria in pregnancy policy	USAID	\$0	\$0	Nationwide	USAID malaria program team will continue to advocate for the introduction of IPTp in Burundi.
	<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>		

<b>Case Management</b>					
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<i>Diagnostics</i>					
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Procure RDTs	DELIVER TO7	\$180,000	\$180,000	Nationwide	Purchase up to 250,000 RDTs to fill the anticipated gap in the national supply.
Procure microscopes to reinforce INSP's training capacity	DELIVER TO7	\$50,000	\$0	Nationwide	Procure up to 20 microscopes for use at the National Reference Laboratory (INSP) to enable this institution to function as a national training facility to improve diagnostic capacity of laboratory technicians at the health facility level.

<i>Pharmaceutical Management</i>					
Strengthen supply chain management capacity	SIAPS	\$350,000	\$0	Nationwide	Continue support for supply chain logistics and pharmaceutical management in collaboration with CAMEBU, which will include the operationalization of the new standard operating procedures to strengthen the pull system. This investment will also strengthen CAMEBU's (and the PNILP's) capacity to quantify all malaria commodities, and improve the district-level pharmaceutical management capacity. The annual end use verification survey will also be funded under this activity.
<i>Treatment</i>					
Procure AS/AQ and/or severe malaria medication	DELIVER TO7	\$1,150,000	\$1,150,000	Nationwide	Procure and distribute up to 1.3 million treatments of ACTs and/or severe malaria drugs for public health clinics, to fill estimated gap and provide buffer stock to avert stockouts in 2013.
Support community case management	SIAPS	\$300,000	\$0	2 districts in 2 provinces (Kayanza and Muyinga)	Continue implementation of community case management activity, including 402 CHWs in 402 sous-collines. Includes: increased supervision of CHWs, community mobilization, program evaluation, and developing the national CCM policy with the PNILP.
Strengthen case management	SIAPS	\$450,000	\$0	Nationwide	Strengthen case management capacity at the national level and district level (case management supervision in selected districts) to operationalize the new malaria treatment policy (adding severe malaria). This activity includes providing technical assistance to the PNILP to enable high quality malaria case management at the health district level, including operationalizing the supervision tools developed in FY 2011, and supporting the

					PNILP and INSP to oversee the training of health facility providers to follow the new diagnostics policy
Strengthen national pharmacovigilance capacity	SIAPS	\$175,000	\$0	Nationwide	Strengthen pharmacovigilance capacity at the national level around patient care and safety, clinical responses and adverse reactions to medicines. Develop a Burundi-specific systems improvement plan and guidelines to improve national pharmacovigilance safety and monitoring systems.
Support the national drug quality control efforts	USP PQM	\$75,000	\$0	Nationwide	Conduct a situation analysis of the capacity of the national entities to perform basic QA/QC functions. Develop recommendations towards a Burundi-specific system improvement plan to develop a functional and sustainable regulatory and organizational structure, operational plan, and guidelines for a strong QA/QC system.
<b>Subtotal</b>		<b>\$2,730,000</b>	<b>\$1,330,000</b>		
<b>Communication</b>					
Support targeted community based ITN promotion efforts	DELIVER TO7 (PSI)	\$100,000	\$0	Nationwide	Provide communication support to promote the consistent use of distributed ITNs, including instructions on hang up, use, care, and other related activities.
<b>Subtotal</b>		<b>\$100,000</b>	<b>\$0</b>		
<b>Capacity Building</b>					
Support to PNILP	SIAPS	\$100,000	\$0	Nationwide	Provide PNILP with support to improve the operations and functions of their office including: follow up on the MOST results, leadership and management training, regional professional development opportunities, organizational development, World Malaria Day support, etc.
<b>Subtotal</b>		<b>\$100,000</b>	<b>\$0</b>		

<b>M&amp;E</b>					
Support National M&E Capacity	SIAPS	\$100,000	\$0	Nationwide	Support the PNILP to develop its next National Malaria Control Strategic Plan, the related national malaria control monitoring and evaluation plan, and its implementation.
Conduct the 2012 MIS	Measure DHS	\$100,000	\$0	Nationwide	Support the 2012 Malaria Indicator Survey to gather critical data on malaria specific indicators. This survey will document progress made in the two years since the DHS was conducted.
<b>Subtotal</b>		<b>\$200,000</b>	<b>\$0</b>		
<b>Staffing and Administration</b>					
USAID Staffing and Administration	USAID	\$610,000	\$0	Nationwide	Support for USAID/Burundi malaria staff and program implementation
<b>Subtotal</b>		<b>\$610,000</b>	<b>\$0</b>		
<b>GRAND TOAL</b>		<b>\$8,000,000</b>	<b>\$4,340,000</b>		