

MADAGASCAR

April 2011



Background

Malaria is endemic in 90 percent of Madagascar, but the entire population is considered to be at risk for the disease. On the East Coast, transmission is stable and perennial, and the West Coast has one long, rainy transmission season and a brief dry season. Almost one-third of the Central Highlands is above 1,500 meters elevation, where malaria transmission rarely occurs. Malaria cases and deaths reported through the national health management information system have declined over the period of 2003–2009, but malaria remains a leading cause of deaths for children under five. Following the political crisis and *coup d'état* in March 2009, all U.S. Government support to the current government, from the central Ministry of Health to the primary care health facility level, was suspended until a freely and fairly elected government is in place. The fiscal year (FY) 2011 Malaria Operational Plan was developed based on the assumption that normal relations will be established in the next year and current U.S. Government suspensions will end.

The President's Malaria Initiative (PMI)

Madagascar is one of 17 focus countries benefiting from the President's Malaria Initiative (PMI), which is led by the U.S. Agency for International Development and implemented together with the Centers for Disease Control and Prevention. PMI was launched in 2005 as a five-year (FY 2006–2010), \$1.265 billion expansion of U.S. Government resources to reduce the burden of malaria and help relieve poverty on the African continent. The 2008 Lantos-Hyde Act authorized an extension of PMI funding through FY 2013. With congressional authorization and the subsequent launch of the U.S. Government's Global Health Initiative, PMI's goal was expanded to achieve Africa-wide impact by halving the burden of malaria in 70 percent of the at-risk populations on the continent (i.e., approximately 450 million residents), thereby removing malaria as a major public health problem and promoting development throughout the African region.

To reach its goal, PMI works with national malaria control programs (NMCPs) and coordinates its activities with national and international partners, including the Roll Back Malaria Partnership; The Global Fund to Fight AIDS, Tuberculosis and Malaria; the World Health Organization; the World Bank; numerous nongovernmental organizations, including faith-based and community groups; and the private sector.

Key Interventions

In line with Madagascar's national malaria control strategy, PMI supports four major malaria prevention and treatment measures.

- **Insecticide-treated mosquito nets (ITNs):** Sleeping under a long-lasting ITN provides protection from malaria-carrying mosquitoes. The nets are nontoxic to humans but can repel and kill mosquitoes for up to three

At a Glance: Madagascar

Population (2011): 21.9 million¹

Population at risk of malaria (2009): 100%²

Estimated annual malaria deaths/100,000 population (2008): 8³

Under-five mortality rate (2009): 72/1,000 live births, or approximately 1 in 14 children die before their fifth birthday⁴

¹US Census Bureau, International Data Base 2011

²WHO World Malaria Report 2010

³WHO World Health Statistics 2011

⁴Demographic and Health Survey 2009

years. Madagascar’s national malaria control strategy includes free distribution of mosquito nets via campaigns, free routine distribution through antenatal and immunization clinics to pregnant women and children under five, and social marketing of highly-subsidized ITNs at the community level. In 2009–2010, PMI supported Madagascar’s universal coverage campaign to distribute two long-lasting ITNs per household in 91 of the 111 health districts where seasonal or perennial malaria transmission occurs. This included assistance for the distribution of more than 7.2 million nets, of which more than 3.5 million were purchased by PMI. With FY 2011 funding, PMI plans to procure approximately 1.8 million mosquito nets for the 2012 mass campaign.

- **Indoor residual spraying (IRS):** IRS involves spraying the inside walls of houses with insecticides. Mosquitoes are killed when they land on these sprayed walls, thus reducing malaria transmission. Madagascar’s national strategy aims for IRS coverage of at least 80 percent of targeted structures in 53 health districts (10.25 million inhabitants in the Central Highlands, fringe areas and the South). IRS campaigns in Madagascar are funded by PMI and the Global Fund. With FY 2011 funds, PMI will cover 13 of the country’s 53 targeted districts to reach an estimated population of 2.6 million. PMI will continue its environmental mitigation measures, as well as expand support for entomologic monitoring and evaluation.
- **Intermittent preventive treatment for pregnant women (IPTp):** IPTp is a highly effective means of reducing the serious consequences of malaria in both the pregnant woman and her unborn child, which include maternal anemia and low birth weight babies. It consists of the administration of at least two doses of the antimalarial drug sulfadoxine-pyrimethamine (SP), which is given at least one month apart during the second and third trimesters of pregnancy. In Madagascar, SP for IPTp is procured by the Global Fund. Despite the high antenatal clinic attendance rate (86 percent, Demographic and Health Survey [DHS] 2009) and relatively early attendance, only 6 percent of pregnant women nationwide report receiving two or more doses of IPTp. Because of the political constraints on working with the Government of Madagascar since the coup in March 2009, PMI has focused its malaria in pregnancy efforts on information, education and communication at the community level to promote early and frequent antenatal clinic attendance and an improved understanding among the population of the risks of malaria and benefits of IPTp for pregnant women.
- **Diagnosis and treatment:** Effective case management of malaria depends on early, accurate diagnosis with microscopy or rapid diagnostic tests (RDTs) and prompt treatment with an effective drug. Artemisinin-based combination therapies (ACTs) are the recommended first-line treatment for uncomplicated *Plasmodium falciparum* malaria in Madagascar. They are extremely effective against malaria parasites and have few or no side effects. Madagascar’s national strategy calls for diagnostic testing of all patients with suspected malaria. RDTs were introduced in primary health centers in 2007, and community health workers (CHW) began using them in 2010. PMI has supported the training of more than 4,000 CHWs in community case management using RDTs and ACTs in about 800 of the 1,500 communes in Madagascar. Support from PMI has also included procurement of RDTs, while ACTs for public sector facilities and at the community level are purchased through a Global Fund grant.

Progress to Date

The table below shows key results from a 2009 DHS, which provides nationally representative, household-level data on the health status of the population and on malaria indicators and serves as the PMI baseline. Another nationwide household health survey will be conducted in 2011.

Madagascar Malaria Indicators	PMI Baseline (DHS 2009)
All-cause under-five mortality rate	72/1,000
Proportion of households with at least one ITN	57%
Proportion of children under five years old who slept under an ITN the previous night	46%
Proportion of pregnant women who slept under an ITN the previous night	46%
Proportion of women who received two or more doses of IPTp during their last pregnancy in the last two years	6%

Madagascar is in its fourth year as a PMI focus country. With support from PMI and other partners, malaria control interventions are being scaled up, and critical commodities are being distributed.

PMI Contributions	2008	2009	2010	Cumulative
IRS: Houses sprayed ¹	422,132	216,060	576,320	
IRS: Residents protected ¹	2,561,034	1,274,809	2,895,058	
ITNs procured	351,900	1,875,007	1,715,000	3,941,907
ITNs distributed	351,900	1,005,007	2,579,720	3,936,627
ITNs procured by other donors and distributed with PMI support		290,636	3,204,647	3,495,283
ACTs procured by other donors and distributed with PMI support		519,338	396,470	915,808
RDTs procured			270,000	270,000
RDTs distributed			202,031	202,031
Health workers trained in IPTp ²			1,576	
Health workers trained in ACT use ²		1,696	4,575	
Health workers trained in diagnostics ²		108	2,701	

¹ A cumulative count of the number of houses sprayed and residents protected is not provided since some areas have been sprayed on more than one occasion.
² A cumulative count of individual health workers trained is not provided since some health workers have been trained on more than one occasion.

Impact

According to nationwide household surveys, all-cause mortality among children under five in Madagascar has declined 23 percent, from 94 deaths per 1,000 live births in 2003 (DHS 2003) to 72 deaths per 1,000 live births in 2008 (DHS 2009).

PMI Funding

	FY 2007 Jump start funds	FY 2008	FY 2009	FY 2010	FY 2011
Budget (in millions)	\$5.0	\$16.8	\$16.7	\$33.9	\$28.7

For details on FY 2011 PMI activities in Madagascar, please see the **Madagascar Malaria Operational Plan**: http://www.pmi.gov/countries/mops/fy11/madagascar_mop-fy11.pdf.



PRESIDENT'S MALARIA INITIATIVE

