

# Country Profile | President's Malaria Initiative (PMI)

## ZAMBIA

April 2011



### At a Glance: Zambia

Population (2011): 13.9 million<sup>1</sup>

Population at risk of malaria (2009): 100%<sup>2</sup>

Estimated annual malaria deaths/100,000 population (2008): 104<sup>3</sup>

Under-five mortality rate (2007): 119/1,000 live births, or approximately 1 in 8 children die before their fifth birthday<sup>4</sup>

<sup>1</sup> US Census Bureau, International Data Base 2011

<sup>2</sup> WHO World Malaria Report 2010

<sup>3</sup> WHO World Health Statistics 2011

<sup>4</sup> Demographic and Health Survey 2007

### Background

Zambia is one of the African countries where great progress in malaria control has been made in the past decade. Very high rates of coverage of insecticide-treated nets and intermittent preventive treatment of pregnant women have been achieved. In spite of these achievements, malaria control remains one of the government's highest priorities. Malaria transmission in Zambia occurs throughout the year, with a peak during the rainy season, which occurs between November and April.

### The President's Malaria Initiative (PMI)

Zambia 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 (fiscal 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 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 Zambia's national malaria control strategy, PMI supports four major interventions to prevent and treat malaria.

- **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 years. With FY 2011 funding, PMI will support the procurement and distribution of ITNs as well as activities to promote their appropriate use. In a unique collaboration with the British Department for International Development, £7 million (approximately \$11 million) was provided to PMI to purchase an additional 1 million ITNs, which have gone to the province with the highest parasite prevalence in the 2010 Malaria Indicator Survey.

- Indoor residual spraying (IRS):** IRS involves spraying of the inside walls of houses with insecticides. Mosquitoes are killed when they land on sprayed walls, thereby reducing malaria transmission. Zambia has a long-standing IRS program that has concentrated on urban areas and, with the support of various mining companies, villages where the companies' workers and their families live. With FY 2011 funding, PMI will support IRS in 35 districts utilizing pyrethroids and carbamates because of increasing evidence of insecticide resistance.
- 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. These risks include maternal anemia and low birth weight babies. IPTp 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 most countries, SP needs for IPTp are being met by national governments and other donors. In FY 2011, PMI will support training in IPTp in hard-to-reach rural areas as well as the distribution of guidelines, job aids, and other tools designed to increase health worker compliance with IPTp guidelines and increase uptake of IPTp among pregnant women. PMI will also engage Peace Corps to promote antenatal clinic attendance and demand for IPTp.
- 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 most malaria-affected regions of Africa. ACTs are extremely effective against malaria parasites and have few or no side effects. With FY 2011 funding, PMI will procure RDTs for distribution at all levels of the health system, including to community health workers. PMI will also purchase and distribute ACT treatments for uncomplicated malaria and provide support to health facilities with training in microscopy and case management.

### Progress to Date

The table below shows key results from the following nationwide household surveys: the Demographic and Health Survey (DHS) and the Malaria Indicator Survey (MIS). The surveys provide nationally representative, household-level data on the health status of the population and on malaria indicators.

Zambia Malaria Indicators	PMI Baseline	DHS 2007	MIS 2008	MIS 2010
All-cause mortality rate in children under five	168/1,000 (DHS 2001–2002)	119/1,000	-	-
Proportion of households with at least one ITN	38% (MIS 2006)	53%	62%	64%
Proportion of children under five years old who slept under an ITN the previous night	24% (MIS 2006)	28%	41%	55%
Proportion of pregnant women who slept under an ITN the previous night	24% (MIS 2006)	33%	43%	53%
Proportion of women who received two or more doses of IPTp during their last pregnancy in the last two years	56% (MIS 2006)	62%	60%	69%

Zambia is in its fifth year as a PMI focus country. With support from PMI and its partners, malaria control interventions are being implemented, and vital commodities are being distributed to vulnerable populations.

<b>PMI Contributions</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>Cumulative</b>
IRS: Houses sprayed <sup>1</sup>	657,695	762,479	1,189,676	1,102,338	
IRS: Residents protected <sup>1</sup>	3,600,000	4,200,000	6,500,000	4,056,930	
ITNs procured	808,332	186,550	433,235	1,800,000	3,228,117
ITNs distributed	550,017	444,865	433,235	400,000	1,828,117
IPTp treatments procured			666,666		666,666
IPTp treatments distributed				666,666	666,666
ACTs procured		495,360		2,390,400	5,771,520
ACTs distributed		80,640	173,160	2,257,920	5,023,440
RDTs procured	979,000	1,639,000	2,070,000	4,804,500	18,985,000
RDTs distributed		979,000	1,250,000	2,550,400	9,558,800
<sup>1</sup> 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.					

### **Impact**

In Zambia, between 2006 and 2010, the prevalence of severe anemia among children six months to five years of age declined from 14 to 9 percent, and malaria parasite prevalence dropped from 22 to 16 percent. These improvements paralleled an unprecedented nationwide scale up of ITN ownership and use. The proportion of households with at least one ITN has increased from 38 percent in 2006 to 64 percent in 2010. More importantly, the use of ITNs by children under five years more than doubled from 24 percent in 2006 to more than 50 percent in 2010. Since 2002, a 30 percent reduction in all-cause under-five mortality has been seen.

During 2010, Zambia reported a slight upswing in malaria cases in two of its 10 provinces. The cause of these increases is being investigated, but reduced ITN availability with a subsequent decline in net coverage may have played a role. In the interim, the National Malaria Control Program, with PMI support, has distributed another 1.7 million ITNs and has begun testing for insecticide resistance in local mosquitoes. In spite of the upswing in cases, malaria control in Zambia is making steady progress.

**PMI Funding**

	<b>FY 2007 Jump start funds</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>
<b>Budget</b> (in millions)	\$9.5	\$14.8	\$14.7	\$25.6	\$23.9

For details on FY 2011 PMI activities in Zambia, please see the **Zambia Malaria Operational Plan**:  
[http://pmi.gov/countries/mops/fy11/zambia\\_mop-fy11.pdf](http://pmi.gov/countries/mops/fy11/zambia_mop-fy11.pdf).



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