



## Malaria

### Background

Half of the world's population is at risk of malaria. In 2006, there were 247 million cases and nearly 881,000 malaria deaths—of which 91% were in Africa, and 85% were of children under five-years of age. Children under age five and pregnant women are the most vulnerable to the disease, especially in areas of high transmission. Each year, approximately 50 million women living in malaria-endemic countries throughout the world become pregnant, over half of whom live in Africa. An estimated 10,000 of these women, and 200,000 of their infants, die as a result of malaria infection during pregnancy.<sup>47</sup>

Over the last five years, the scale-up of malaria prevention and control programs has made great strides in helping to reduce the number of malaria-related deaths. Since 2000, 22 countries outside of Africa have experienced at least a 50% reduction in malaria cases, and seven African countries have experienced at least a 50% reduction in malaria cases and deaths.<sup>48</sup> By 2008, the President's Malaria Initiative (PMI) reached 25 million people with prevention and treatment services, and supported the training of more than 35,000 health workers.<sup>49</sup> The PMI, a \$1.2 billion, five-year effort focusing on 15 target countries, has been associated with a one-third drop in child mortality in Zambia and Rwanda.

Prospects for the future of malaria control are promising. The President's request to Congress for malaria funding in FY2010 included a \$201 million increase over the FY2009 level.<sup>50</sup> In addition, new cost-effective technologies for prevention and treatment present an opportunity to halt and begin to reverse the incidence of malaria by 2015.

However, much remains to be done to reduce the burden of malaria. The WHO World Malaria Report 2008 showed that many countries are far from meeting universal coverage targets, while drug resistance and reemergence threatens current progress and already weak health systems. All of these factors continue to undermine economic development.<sup>51</sup>

The Global Health Initiative provides a unique opening to maximize U.S. impact in malaria programs, by improving the delivery of services and harmonizing with global efforts, such as the Roll Back Malaria (RBM) partnership, its Global Malaria Action Plan (GMAP), and the normative work and guidelines developed by the World Health Organization (WHO). Most importantly, the GHI should also drive all donors worldwide to increase funding for malaria. Increases in malaria funding should also be reinforced by increases in funding for interventions focused on education and behavioral change. It is imperative that we not only provide the needed tools, but also the corresponding education to use these tools effectively.

### Positive Synergies

Country-level capacity building and the strengthening of national health systems are critical to ensuring countries have the ability to deliver needed interventions to vulnerable populations. With sufficient support, national health care systems can support large-scale programs and bring integrated, quality malaria prevention, treatment and care services to the greatest number of people, including those hardest to reach through evidence-based community interventions. Building strong health systems should include not only building and improving health facilities and training medical providers, but also harnessing community-based and private sector delivery models.

Integrated health services will ensure strong health systems that can respond to the mutually reinforcing burdens of malaria, malnutrition, HIV/AIDS, and maternal and child death. Experts at the Copenhagen Consensus ranked control of HIV/AIDS, providing micro-nutrients, and control of malaria as three of the four most cost-effective development interventions.<sup>52</sup> These diseases share determinants of vulnerability and geographic overlap, and their elimination is mutually reinforcing. Co-infection with HIV/AIDS and malaria, often worsened by malnutrition, may complicate treatment, increase the chance of mother-to-child transmission of HIV, and exacerbate symptoms of both diseases. In addition, the integration of maternal and child health services can allow ministries of health to reach a greater number of women and children at a lower cost per intervention by providing a “one-stop shop” for mothers who are seeking care for their children. The U.S., in accordance with the WHO “Making Pregnancy Safer” protocol, should support malaria treatment during antenatal care, not just in PMI countries, but across USAID and its partners’ programs in all countries.

Along with efforts by donor countries, support from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) has been instrumental in the international response to the disease. To date, the Global Fund has approved grants totaling nearly \$2.6 billion to more than 85 countries for malaria-related efforts.<sup>53</sup> To maximize efforts to cut malaria cases and deaths, the Global Fund must be supported financially and the U.S., therefore, must contribute its fair share of funding. For FY 2011, appropriators in Congress should be urged to provide the estimated U.S. fair share of \$2 billion to the Global Fund. Multilateral financing has been a significant part of the U.S. investment in global health, and has ensured a comprehensive and amplified response, through the pooling of resources and creation of partnerships, that exclusive bilateral funding would otherwise be unable to provide. The U.S. should continue to be a leader in donations to the Fund.

U.S. agencies should also harmonize their policies for malaria diagnosis and use of long lasting insecticide-treated nets (LLINs), indoor residual spraying (IRS), and Artemisinin-based combination therapy (ACT), consistent with the World Health Organization recommendations.<sup>54</sup> Large-scale, integrated net distribution, combined with timely diagnosis and treatment, indoor residual spraying of homes and interventions focused on malaria social mobilization and education to ensure the correct and sustained use of these tools, will increase the likelihood of achieving the RBM goal of 80 percent coverage of all populations at risk of malaria. In addition, the U.S. should strengthen its efforts to prevent the spread of drug-resistant malaria as antimalarial drug resistance poses a growing threat to global malaria control. Such efforts should include scaling up resources for improving capacity in drug quality control and antimalarial drug resistance surveillance, as well as working to reduce the transmission of malaria from drug resistant hotspots in Southeast Asia and the Amazon Basin.

## Targets

The United States should be a strong leader in the fulfillment of global targets and live up to its pledges to support, by 2015:

- Purchasing and distributing 730 million LLINs;
- Achieving a mortality rate near zero for all preventable deaths and a 75% reduction in malaria burden in the original 15 PMI countries;
- Expanding PMI malaria support to at least 10 more countries and malaria control program strengthening to the Democratic Republic of the Congo and Nigeria;

- Continuing universal coverage with effective interventions: ITNs, IRS, diagnosis, and provision of ACTs and IPTs;
- Ensuring global and national mortality is near zero for all preventable deaths and global incidence level is reduced by 75% from 2000 levels;
- Achieving the malaria related Millennium Development Goal of halting and beginning to reverse the incidence of malaria with a focus on all PMI focus countries and regions where USAID and PMI are supporting national and regional malaria control programs; and
- Eliminating malaria in eight to ten countries by 2015, continuing with all countries in the pre-elimination phase today and working with countries to receive certification of malaria elimination by the World Health Organization.

## Costs

Although there have already been significant increases in malaria funding, with disbursements from international donors increasing from US\$250 million in 2004 to \$700 million in 2007, more funding is needed and outlined below in Table 4. In 2008, national spending in endemic countries made up 34% of funding for malaria, international donors made up 47%, and private household spending made up 19% of a total of about \$1.5 billion. The Roll Back Malaria's *Global Malaria Action Plan* estimates a four-fold increase in funding is necessary in order to reach sustained control and eventual elimination.<sup>55</sup>

<b>Table 4: Annual Global Resource Needs for Key Malaria Control Activities (US\$ Millions)</b>							
	2009	2010	2011	2012	2013	2014	6-Year Total
Bilateral Funding for Malaria Programs*	385	585	924	1275.12	1759.66	1759.66	<b>6688.44</b>
Percentage Increase Over Previous Year		52%	58%	38%	38%		
* FY2011 estimated based on U.S. fair share of GMAP need from donor countries. FY2012 and FY2013 based on Hyde-Lantos commitment of \$5 billion total spending by 2013. FY2014 is flat-funded, consistent with a front-loading strategy for malaria control.							

The U.S. commitment to malaria programs in the past should be commended, but contributions must continue to increase to fulfill its fair share of the global need. Consistent with the GMAP strategy and the scale necessary to meet the commitment made in the Hyde-Lantos U.S. Global Leadership for HIV, TB and Malaria Act, ambitious funding would meet the current and future needs for malaria control. Such leadership among the donor community is pivotal, as the U.S. could lead the way to bridge the present and future funding gaps for malaria programs.

## Needed Policy Changes: Malaria

A key set of policy changes are needed to ensure that U.S. global malaria programs and the Global Health Initiative can be most effective:

### Strengthen Health Systems

- Continue to focus on strengthening health systems to deliver integrated services, particularly maternal and child health programs.

### **Comprehensive Evaluation**

- Encourage the Global Malaria Coordinator and the Interagency Coordinating Task Force to comprehensively evaluate all programs to determine effective and ineffective programs and policies; use these findings to promote best practices with all malaria funding recipients.

### **Support the Global Fund**

- Increase support to the Global Fund and encourage other nations to fulfill their funding commitments.

### **Resource Support**

- Increase resources to support normative work and technical assistance provided by the World Health Organization and Roll Back Malaria Partnership, supporting countries in regional strategy development and achieving universal coverage targets through PMI, USAID, and CDC, as consistent with the Hyde-Lantos U.S. Global Leadership for HIV, TB and Malaria, P.L. 110-293.

### **Re-Emphasize Monitoring and Research**

- Expand emphasis on drug and insecticide resistance monitoring and research.

### **Improve Country Coordination**

- Enhance the sustainability of interventions by continuing to improve alignment with in-country national priorities and existing implementation strategies.

### **Continued Commitment to Research and Development**

- Continue leadership in research – vaccine development, drug resistance research, new drug development.