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Moving Mountains: The Evolution of USAID's Malaria Control Program

Roger Bate[α], Richard Tren[β], Philip Coticelli[χ]

Congressional scrutiny of USAID's malaria control funding in 2004 and 2005 led the Agency to reform to its approach to the disease in 2006. USAID is now concentrating more funding in fewer countries, financing more insecticide-treated nets (ITNs), effective drugs, and indoor residual spraying (IRS). Additionally, the President's Malaria Initiative (PMI) is measuring its impact on disease burden, cooperating with partners and publishing detailed reports. USAID's renewed commitment to transparency and accountability should ensure meaningful assessments and enable the Agency to alter country programs based on results. In addition to reducing disease burden, building in-country capacity to control malaria will be the true test of its reforms moving forward.

Introduction

Malaria is a devastating disease caused by the *Plasmodium* parasite and transmitted by the female *Anopheles* mosquito. The World Health Organization (WHO) estimates up to 500 million clinical cases of malaria worldwide each year and over one million resulting deaths[1]. African children under age five and pregnant women bear the highest burden. The combination of deaths, lasting cognitive impairments and recurring absences from work due to malaria cost endemic countries 1.3% of annual productivity; Africa's uniquely high malaria rates cost the continent up to $12 billion a year[2]. Yet the disease is cheaply preventable and treatable.

Congressional investigations into US Government-supported malaria control programs[3-6] prompted a 2005 analysis, "The Blind Hydra: USAID fails to control malaria"[7]. The report found that USAID was spending heavily on advisory programs with limited justification. Approximately 8 percent of USAID's FY2004 malaria control budget financed ITNs, IRS, or effective drugs. Available program reports[8-10] reflected a failure to match interventions with needs and poor coordination with partners. A Senate Subcommittee hearing in May, 2005[11] on the report's findings coupled with unfavorable coverage in the academic and popular press[12-13] put pressure on USAID to reform.

Key Policy Reforms and Measured Progress

On June 30, 2005, President George W. Bush launched the President's Malaria Initiative (PMI), a $1.2 billion effort to bring effective management, best practices, transparency and accountability to the US government's fight against malaria. By achieving 85% coverage with key preventive and therapeutic measures, the PMI expects to halve malaria-associated deaths after three years of full implementation in 15 African countries. In October, 2005, USAID's Global Health Bureau (GHB) instituted a malaria specific data-coding protocol to improve communication on budget and other program information. Finally, in December, 2005, Former USAID Administrator Andrew Natsios announced specific reforms to USAID's non-PMI funding for FY2006[14].

[α] Director, Africa Fighting Malaria & Resident Fellow, American Enterprise Institute, Washington DC
[β] Director, Africa Fighting Malaria, Washington DC
[χ] Researcher, Africa Fighting Malaria, Washington DC

Agency commitments to publishing detailed reports of malaria control spending[15,16] have only materialized for the PMI. Budget breakdowns, needs assessment, action plans, budget breakdowns, obligated funds and eleven contracts[17] are readily available for PMI activities in Angola, Tanzania and Uganda. Non-PMI program reports of malaria control activities are limited to a single-page for each country (15) or region (5), summarizing total budget and commodity purchase figures, key partners and activities. The GHB's efforts should nevertheless be viewed in perspective. USAID has not updated its public index of all Agency contracts since 2001[18]. The PMI is only the second USAID program to systematically post its contracts and grants online; more detailed information across the range of FY2006 malaria control program funding is expected in early 2007[19].

Analysis

Cursory reporting of FY2006 non-PMI activities and scant epidemiological data limits the scope for assessment. This discussion will therefore emphasize the structural evolution of USAID's malaria control program and innovations made by the PMI. (See Table 1) USAID historically relied upon a thin-but-wide disbursement strategy for malaria control, which limited program options within each country and prevented large investments in successful programs. In FY2006, the Agency went from dividing half of its FY2005 budget between 21 African country-level programs and 3 regional offices to spending over two-thirds of its budget in 17 African countries and one regional office. Approximately one-third of its malaria funding, $35 million, was focused in the three FY2006 PMI countries.

With more funding available to individual countries, USAID financed the substantial and direct purchase of Artemisinin-based combinational therapies (ACTs), long-lasting insecticide-treated nets (LLINs), insecticides and other commodities to compliment its expert technical advice. In FY2006, USAID purchased ACTs in Ethiopia and Nigeria; ITNs in Cambodia, Ghana, Madagascar, Mali, Mozambique, Senegal and Zambia (LLINs); both ACTs and LLINs in Angola, Benin, Democratic Republic of the Congo (DRC), Malawi, Sudan, Tanzania and Uganda; rapid diagnostic tests for the detection of malaria in Angola, DRC, Ethiopia, Mozambique, Rwanda and Tanzania; and sulphadoxine-pyrimethamine to prevent mother-to-child transmission of malaria during pregnancy in DRC, Mali, Nigeria, Rwanda, Senegal and the Sudan.

After years of focusing prevention campaigns primarily on ITN distribution, USAID financed IRS rounds in all FY2006 PMI countries, and purchased equipment or insecticides for IRS in Ethiopia, Kenya, Madagascar, Malawi, Mozambique and Zambia. USAID also committed to buying highly effective DDT for recipient countries wishing to use it and where environmental assessments have been conducted and approved[20]. The first USAID-financed shipment of DDT for IRS in over a decade arrived in Zambia on September 11, 2006[21]. USAID also committed to investing in evaluative research to study the cost-effectiveness of IRS in various epidemiological settings (~$150,000), and separately the excito-repellency effects of DDT in Tanzania (~$100,000).

Past program measurement emphasized inputs, such as the number of ITNs distributed or health workers trained, and not changes in malaria incidence. Evolving from this approach, USAID has planned for or conducted 2005-2006 baseline morbidity and mortality rates due to malaria, as well as coverage with interventions for FY2006 PMI countries[22]. When the Angolan Ministry of Health decided to postpone a demographic health survey, the PMI made plans to finance a country-wide malaria indicator survey. In Tanzania and Uganda, both of which recently undertook health indicator surveys, the Centers for Disease Control and Prevention (CDC) is using PMI funding to provide technical support for ongoing post-intervention monitoring through existing demographic surveillance sites and health management systems. In Uganda, USAID brought together the CDC, the University of California-San Francisco, Makerere

University and the Ministry of Health to train doctors to confirm malaria as the cause of death using verbal autopsies. The Agency has financed environmental surveillance before and after IRS rounds in Angola, Uganda and Zanzibar, and is also conducting entomological surveillance.

Preliminary FY2006 feedback, for example from Angola, suggests that USAID has demonstrated flexibility and cooperation with other development agencies on the ground. The Global Fund for AIDS, TB and Malaria procured 1.1 million treatments of Coartem through the WHO for a phased roll-out in Angola. Facing a temporary localized delay, the Angolan National Malaria Control Program (NMCP) worked with GFATM and PMI to pool Coartem resources to ensure constant supply to covered provinces[23]. USAID lent both spray pumps and insecticide to the NMCP/Global Fund/WHO IRS campaign in Namibe Province to allow them to begin training and early implementation before their commodities arrived in country. The PMI also provided the IEC materials used by the NMCP/Global Fund/WHO spraying campaign[24].

While the only American-made commodity USAID purchased in FY2006 was Hudson spray pumps for IRS, the PMI has followed USAID's pattern from previous years in its nearly exclusive funding of large American NGOs, such as the Academy for Educational Development/Netmark for social marketing of ITNs, Management Sciences for Health for drug supply chain management, and the Research Triangle Institute (RTI) for IRS. While it may be necessary to employ partners with proven capabilities to absorb the PMI's substantial new funding, this practice seems to contradict USAID's stated commitment to building country capacity to control malaria. The persistence of USAID's underlying funding structure, whereby organizations with past USAID experience and sufficient size to dedicate substantial resources to the application process have an advantage[25], together with increasing annual budgets and 12 new PMI countries through FY2008 ensures these contractors a prominent role in USAID-financed malaria control for the foreseeable future. Transparency will be crucial to preventing constraints in the contracting process from jeopardizing the long run sustainability of USAID's reformed malaria program.

Fortunately, there is evidence from the PMI countries that contractors are working in line with USAID's capacity building rhetoric. Staff numbers in-country put project ownership into perspective. (See Table 2) RTI trains district and sometimes national health officials to manage implementation and make decisions about budget, wages and spraying locations. This includes hiring spray teams and their supervisors, and physically handing pay envelopes provided by RTI via the PMI to spray operators. An even better indication of intended national project ownership is the Ugandan Ministry of Health's recent decision not to raise spray operators' daily wages for fear of inflating expectations beyond what it can deliver post-PMI[26]. However, to further bolster capacity building efforts, funding agreements with American NGOs could offer financial inducements for the contractor to foster independent and sustainable country programs. These might include bonuses for contractors whose area of responsibility continues to function well after the end of direct assistance or supervision.

Conclusion

USAID should be commended for aligning its FY2006 malaria control financing with best practices and principles of good management, as should President Bush for reestablishing the US as a global leader on this crucial issue. Malawi, Mozambique, Rwanda and Senegal will be incorporated into the PMI in FY2007, and eight more countries in FY2008. Though this makes any real distinction between PMI and non-PMI programs "temporary" in the words of one USAID official[27], malaria sufferers cannot afford a moment's idle. Non-PMI countries must keep pace with the PMI on measurement, evaluation and transparency efforts. Without contracts and budget reports to analyze, it is impossible to uncover poor program decisions – like contracting UNICEF to supply Angola with ITNs for a massive 26% fee[28] – and

advocate for change. To the extent that resources are a constraint, additional funding from the private sector would aid this process. Finally, irrespective of policy reforms, US contractors will be no more interested now than in 2005 to work themselves out of a job. USAID must find a way to turn its contractor model for development into flexible, responsive and country-driven malaria control programs.

Table 1: USAID's Malaria Control Funding[a]

	FY2004	FY2005	FY2006	
Total Malaria Funding	$79.9m	$89.3m	$99m	
Minimum Country-Level Budget	Tajikistan lowest funded at $45,000	Guinea and Peru lowest funded at $300,000	Cambodia, Ghana, and Rwanda lowest funded at $1.5m[b]	
Proportion of budget for commodity purchase	8% ($6m)	10% ($8.6m)	PMI	53% ($13.8m)
			Non-PMI, non-research	50%[c] ($15.2m)
			Total	40% ($30.7m)
Proportion of budget for ACTs purchase	0.5% ($0.4m)	1% ($0.8m)	PMI	6% ($1.9m)
			Non-PMI, non-research	NA
			Total	NA
Proportion of budget for ITNs and related materials purchase	3% ($4.8m)	5% ($4.6m)	PMI	35% ($10.4m)
			Non-PMI, non-research	NA
			Total	NA
Proportion of budget for any IRS activities	1% ($0.8-0.9m)	3% ($2-2.5m)	PMI	19% ($5.6m)
			Non-PMI, non-research	33%[d] ($14.6m)
			Total	21% ($20.5m)
Publishing budgets, contracts, reports	No	No	Yes	

a. All figures are approximate. Any discrepancies or incorrect sums are the result of combining budgetary information available at http://fightingmalaria.gov/funding/ with updates provided to the authors by USAID Global Health Bureau prior to submission. b. USAID promised a minimum FY2006 country-level budget of $1.5m, increasing to $2.5m in FY2007. c. USAID promised a minimum of 40% of non-PMI, non-research FY2006 funding for commodity purchase, increasing to 50% in FY2007. d. USAID promised a minimum of 25% of non-PMI, non-research FY2006 funding for IRS activities. NA – Not Available

Table 2: Distribution of RTI operations staff for IRS[29]

Category	Angola	Uganda	Zanzibar
Government staff with substantive operational roles (team leaders and supervisors)	41	50	106
Local citizens hired (spray operators, educators, drivers, equipment managers and technicians)	620	317	487
RTI in-country employees and consultants	4	12	3

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Who We Are

Africa Fighting Malaria (AFM) is a non-profit health advocacy group founded in 2000 and based in South Africa and the United States. AFM conducts research and writes commentary on the political economy of diseases and disease control in developing countries, demanding better anti-malaria policies, donor and UN agency transparency in spending taxpayers' money on malaria control, scientific measurement of and reporting on the effect that spending has on malaria rates, and accountability for results. We monitor and report on the aid programs of groups, including the World Bank, World Health Organization (WHO), USAID and UNICEF in journals and the wider media.

AFM Networks

AFM works with malaria scientists from different countries, some of whom sit on its advisory board. These scientists include Dr Brian Sharp, Medical Research Council in South Africa, Professor Amir Attaran, University of Ottawa and Professor Don Roberts, Uniformed Services University of the Health Sciences in Maryland. In addition, we consult widely with experts, for example, from the London School of Tropical Medicine and Hygiene and the National Institute of Communicable Diseases in Johannesburg. AFM works closely with US Congressional staff, and AFM staff members have testified before several different committees and subcommittees in both the US Senate and House of Representatives. AFM also works with British MPs and has given testimony in the UK House of Commons. For many years, AFM has worked closely with government officials and Ministers of Health in African countries, such as South Africa, Zambia and Uganda. AFM also works with the WHO as well as advocacy groups in the US and elsewhere in order to improve malaria control policies and increase accountability and transparency.

Successes and Ongoing Challenges

AFM has contributed to some significant changes and improvements in malaria control policies. AFM long advocated for the various changes USAID has made to its malaria control program in FY2006, including the President's Malaria Initiative. The WHO has issued new treatment and prevention guidelines that closely reflect the agenda that AFM has promoted for over 5 years. After AFM-promoted Congressional pressure, the European Commission retracted its threats that countries using DDT for malaria control would risk losing their agricultural export markets in the EU.

There is much to be done however, as resistance to reform persists within other organizations, such as the World Bank and UNICEF. In addition, even when institutions reform policy, field operatives of western agencies in Africa and elsewhere often resist change. AFM will work to change the malaria policy of the World Bank, of the remaining major anti-DDT donors, and of organizations like UNICEF whose contract overheads and "programme recovery" run up to 26% of the cost for procurement and distribution of bed nets. AFM will continuously hold public officials and UN organizations to account for the policies they now promote, acting as a watchdog for the malaria community. Finally, AFM will work with advocates and policymakers worldwide to ensure malaria program priorities are based on rigorous evaluation and sound science.

You can read more of AFM's published critiques of institutional malaria control on its website, www.fightingmalaria.org. The authors can be reached at the addresses below.

Roger Bate, Africa Fighting Malaria & American Enterprise Institute, (202) 828 6029. rbate@aei.org
Richard Tren, Africa Fighting Malaria, (202) 223 3298 rtren@fightingmalaria.org
Philip Coticelli, Africa Fighting Malaria, (202) 223 3519 pcoticelli@fightingmalaria.org