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EXECUTIVE SUMMARY



THE AMAZON MALARIA INITIATIVE:

Goals and Accomplishments

October 2001– May 2009



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Developed under USAID contract
GHS-I-372-03-00037-00 by

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AMI FOCUS COUNTRIES



¹ Venezuela was a participant in AMI from 2001-2008. The initiative is not currently supporting Venezuela.

² French Guiana is not a formal member of AMI, but participates in regular meetings.

EXECUTIVE SUMMARY

The U.S. Agency for International Development (USAID) Latin America and Caribbean Bureau, Office of Regional Sustainable Development launched the Amazon Malaria Initiative (AMI) in 2001 as a collaborative partnership among international technical organizations and Amazon Basin countries to improve the control and treatment of malaria. The initiative's mission is to (i) ensure that national malaria control programs in the Amazon Basin substantially incorporate selected best practices and (ii) promote lasting, evidence-based policy change in the partner countries.

The technical partners provide expertise and collaborate with the nations' ministries of health (MOHs) and national malaria control programs to proactively address malaria prevention and control.

AMI partner countries are Bolivia, Brazil, Columbia, Ecuador, Guyana, Peru, Suriname, and Venezuela (2001–2008). The partner countries collaborate with one another and maintain an ongoing exchange of information and expertise (i.e., South–South collaboration).

AMI TECHNICAL PARTNERS

Pan American Health Organization (PAHO)
USAID/LAC and USAID/Peru
U.S. Centers for Disease Control and Prevention (CDC)
U.S. Pharmacopeia (USP/DQI)
Management Sciences for Health (MSH/SPS)
Links Media
Research Triangle Institute (RTI)

The technical partners are Pan American Health Organization (PAHO), USAID/Latin America and the Caribbean (LAC) and USAID/Peru, U.S. Centers for Disease Control and Prevention (CDC), U.S. Pharmacopeia (USP/DQI), Management Sciences for Health (MSH/SPS), Links Media, and Research Triangle Institute (RTI).

The most important gauge of AMI's impact on malaria control in the Amazon Basin subregion is in terms of lives saved and illness averted. Although malaria remains a significant public health problem in the subregion, malaria morbidity and mortality have declined considerably since AMI's inception in 2001. Some AMI countries have achieved major international goals for malaria control. AMI's subregional approach, which has promoted evidence-based decision-making in the subregion, and fostered South–South collaboration, will help ensure the sustainability of its accomplishments and impacts.

AMI addressed a number of specific problems that have hindered effective malaria control and treatment in the Amazon Basin subregion, including:

- the periodic emergence and spread of malaria-causing parasites that are resistant to antimalarial medications;
- treatment policies that are not based on the best available medicine efficacy information;
- inadequate diagnostic quality assurance/quality control (QA/QC) systems in many Amazon countries and limited access to diagnosis;
- deficiencies in QA/QC systems of antimalarial medicines, preventing the effective and rapid identification of poor-quality medicines and the implementation of appropriate corrective actions;
- insufficient availability and the inappropriate use of antimalarial medicines; and
- the use of nonselective and/or nonintegrated, and sometimes ineffective, vector control approaches.

The accomplishments of AMI are measured by the initiative's progress in achieving the following results:

- Reliable and standardized surveillance information on malaria medicine resistance and vector control are available and used to monitor trends and to more effectively target disease control efforts.
- The laboratory diagnosis of malaria is improved.
- Tools and approaches for malaria control, diagnosis, and prevention are developed, adapted, tested in local settings, and disseminated.
- Sustainable systems for ensuring the availability of high-quality antimalarial medications are adopted.

The initiative's major accomplishments are:

Antimalarial medicine resistance. In collaboration with the Red Amazónica para la Vigilancia de la Resistencia a los Antimaláricos (RAVREDA) (Amazon Network for the Surveillance of Antimalarial Drug Resistance), AMI has established a network of sentinel sites for ongoing surveillance of medicine efficacy in Amazon countries using standardized protocols. This surveillance provides AMI partner countries with reliable information on the distribution and intensity of resistance to antimalarial medicines. As a result, each country has now modified its official malaria treatment regimens to more effective combination therapies and continues ongoing medicine efficacy monitoring through the surveillance network, searching for new forms of resistance. AMI is also supporting the development of new tools, such as molecular markers,¹ to further enhance medicine efficacy surveillance in these countries.

Diagnostic quality assurance and access to diagnosis. AMI led the development of guidelines and recommendations for improving diagnostic QA/QC systems in the Amazon Basin subregion. To facilitate the implementation of these guidelines, AMI engaged in technical collaboration and provided funding for a number of activities in the partner countries, including (i) training to improve competency in laboratory diagnosis, (ii) efforts to introduce proficiency testing as a component of diagnostic QA/

QC systems, and (iii) efforts to improve the efficiency of diagnostic performance monitoring. RAVREDA–AMI has supported training for microscopists in several AMI countries, demonstrating improvements in their competence following training. Further, several AMI partner countries are adopting the proficiency testing and performance monitoring methodologies recommended by RAVREDA–AMI. Improved diagnostic QA/QC systems in Amazon countries will permit public health laboratories to train personnel, provide supervision and monitoring, carry out operations research, contribute to evidence-based decision-making, and participate in the design of interventions to improve malaria treatment.

Antimalarial medicine quality. AMI has promoted increased awareness about antimalarial medicine quality issues among all Amazon countries and has encouraged the strengthening of proper quality assurance and quality control systems for medicines used in national malaria control programs in these countries. Specifically, the initiative has contributed to (i) strengthening the official medicine control laboratory (OMCL) in each AMI partner country by providing guidance on quality management systems and training in pharmacopeial techniques;² (ii) implementing a decentralized methodology in the subregion to monitor and control the quality of medicines under the conditions in which they are stored and distributed in endemic areas³ through the use of portable laboratories; and (iii) increasing awareness about the issue of antimalarial medicine quality among Amazon countries by documenting shortcomings in QA systems. As a result of numerous AMI-supported trainings in analytical techniques and good laboratory practices, other forms of technical assistance, and the supply of analytical instrumentation, the personnel of OMCLs or other laboratories in all AMI countries are now better trained and equipped to ensure the quality of antimalarial medicines. In addition, all AMI partner countries have agreed to implement the use of portable laboratories as an inexpensive, rapid, and efficient approach for continuously assessing antimalarial medicine quality.

¹ A molecular marker within an organism may indicate a particular chemical or physical process or disease state.

² Pharmacopeial techniques are those that follow the procedures described in the monographs (or guidelines) used for the QC analysis of medicines.

³ An endemic area is one in which a disease is maintained without external inputs.

Antimalarial medicine access and use. In collaboration with national malaria control programs, AMI technical partners have systematically intervened in each component of the pharmaceutical management cycle to institutionalize best practices meant to improve the access to and use of antimalarial medicines in the partner countries. First, AMI sought to sensitize partners and stakeholders to the role of good pharmaceutical management in reaching policy goals and thus to sustainably improving the access to and use of good-quality medicines in AMI countries. Second, AMI used assessments to identify the causes of poor availability and use of antimalarials and the resulting problems. AMI technical partners conducted baseline studies, trained personnel from the partner countries' malaria control programs to conduct further studies, and later assessed the state of antimalarial supply management in the partner countries. This has led most countries to implement country-specific interventions to face the most critical problems in pharmaceutical management. Third, to confront problems shared among Amazon countries, AMI has supported regional workshops to (i) improve antimalarial procurement and supply chain management systems and (ii) improve rational use strategies.

Vector control, insecticide resistance, and entomology. AMI has sought to improve the development and implementation of vector control strategies in the Amazon countries by promoting the rational selection of vector control measures and improving insecticide resistance monitoring and evaluation (M&E). In consultation with the partner countries and entomology experts in the subregion, AMI has (i) developed a strategy for selecting and targeting malaria vector control measures and evaluating their effectiveness via integrated vector control and (ii) supported regional and national workshops to design and implement this strategy. In addition, the initiative has developed a strategy to implement an insecticide resistance surveillance system employing field-ready bioassays.⁴ AMI has promoted insecticide resistance M&E through workshops to standardize M&E procedures and guidelines as well as field activities using a bioassay to assess the susceptibility of malaria vector mosquitoes

to several insecticides. By providing training in basic entomology to AMI partner countries and promoting a certification process for vector control workers, AMI has contributed to improving the partner countries' capabilities in entomology and vector control. Additional ongoing efforts are related to the entomological evaluation of insecticide-treated bed nets, insecticide quality monitoring, and support for the increased understanding and implementation of specific vector control interventions.

Communication and information dissemination. Communication and information dissemination are cross-cutting components of AMI and are helping the partners and stakeholders have the knowledge and tools necessary to make the best decisions for improving the outcomes of the initiative. In particular, AMI seeks to share its success stories, best practices, and lessons learned throughout the subregion and with a wider audience. The communication component targets diverse audiences, including the general public, policymakers, healthcare providers, and technical and scientific audiences. For these audiences, AMI has developed comprehensive communication strategy.

The objectives of the dissemination strategy are to:

- Increase information sharing between AMI partners about AMI achievements.
- Publish and promote AMI achievements among the greater international public health community as a means of establishing credibility and bringing attention to the work.
- Ensure a continued and structured flow of information to stakeholders in order to increase and maintain their interest and awareness of AMI.
- Deepen stakeholders understanding of AMI's work in prevention and treatment of malaria in the Amazon region to benefit target users.
- Influence stakeholders to adopt products, materials, or approaches offered by AMI to bring about change, and/or sustain effective policies and practices within their organizations and countries, in the prevention and treatment of malaria in the Amazon region.

⁴ A bioassay is an experiment or field test to determine the effects of a substance (e.g., insecticide) on a living organism.

Visit the **The Amazon Malaria Initiative** Website and download the full report.

The screenshot shows the Amazon Malaria Initiative website in a browser window. The browser address bar displays <http://www.usaidami.org/>. The website header includes a navigation menu with links for HOME, ABOUT AMI, AMI COUNTRIES, TECHNICAL AREAS, RESOURCES, NEWS, and PARTNERS. Below the menu is a large photo gallery of various scenes from the Amazon region. The USAID logo is prominently displayed on the right side of the header.

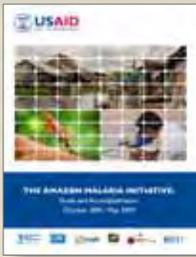
The main content area features a featured article titled "AMI Helps Guarantee Drug Quality in the Amazon Basin". The article text reads: "Peru's successful effort to achieve international accreditation for its drug testing and calibration laboratories was largely the result of a collaboration between the country's National Center for Quality Control and the Amazon Malaria Initiative partners. This important accomplishment for Peru also provides a lasting drug quality resource for the region. [Read More.](#)" To the right of the article is a photograph of a doctor examining blood smears under a microscope, with a caption: "A doctor examines blood smears under the microscope for malaria parasites at a clinic in the Amazon Basin."

Below the featured article are three columns of news and events:

- Malaria News & Events:**
 - World Malaria Day, April 25th - April 7, 2010 [Read More.](#)
 - Global Fund seeks \$20 bln for AIDS, malaria, TB - March 24, 2010 [Read More.](#)
 - United Nations Special Envoy for Malaria Announces the Social Media Envoy Group - March 15, 2010 [Read More.](#)
 - Gates says malaria vaccine may be ready in three years. - January 26, 2010 [Read More.](#)
 - New Drug Targets For Malaria Cure. - January 12, 2010 [Read More.](#)
 - Climate change increasing malaria risk. - December 31, 2009 [Read More.](#)
 - To a mosquito, matchmaking means "singing" in perfect harmony. - December 21, 2009 [Read More.](#)
 - 2009 Malaria Champions of the Americas Awarded Today. - November 6, 2009 [Read More.](#)
 - Malaria Day in the Americas 2009. - November 5, 2009 [Read More.](#)
- AMI News:**
 - Links Media participated in the IX Annual Evaluation Meeting and the XVII Steering Committee Meeting for the Amazon Malaria Initiative/Amazon Network for the Surveillance of Antimalarial Drug Resistance in Santa Cruz, Bolivia, on March 2 to 5, 2010. The purpose of the joint meetings was to allow Amazon Malaria Initiative partners to exchange information about contributions made to malaria control efforts in the Latin American and Caribbean region, as a result of Amazon Malaria Initiative/Amazon Network for the Surveillance of Antimalarial Drug Resistance. [Read More.](#)
- Country Activity:**
 - Bolivia:** Bolivia is currently updating its Standard Treatment Guidelines (STGs) based on studies of currently available antimalarial drugs and their efficacy. [Read More.](#)
 - Brazil:** Brazil is undertaking the task of standardizing practices for prescribing and dispensing antimalarials throughout the country. [Read More.](#)
 - Colombia:** Colombia is encouraging its citizens to seek more immediate treatment for malaria symptoms throughout outreach activities. [Read More.](#)
 - Ecuador:** Ecuador is currently addressing issues with patient adherence to drug protocols, a problem identified by AMI studies conducted by MSH/SPS. [Read More.](#)
 - Guyana:** Guyana has been faced with growing infestations of *P. falciparum*, despite an aggressive program of distributing bed nets. [Read More.](#)
 - Peru:** Peru has been a leader in implementing artemisinin-based combination therapies (ACTs). [Read More.](#)
 - Suriname:** More information is pending from this country. [Read More.](#)

At the bottom of the page, there is a "Photo Gallery" section with a small image and a "Partners Only Login" section with a brief description: "AMI partners can login to the Partners Only section to submit articles or photos we might include on the web site. [Read More.](#)" Logos for USAID, CDC, MSH, IASP, and other partners are displayed at the bottom. A disclaimer at the very bottom states: "DISCLAIMER: The information provided on this Web site is not official U.S. Government information and does not represent the views or positions of the U.S. Agency for International Development or the U.S. Government."

www.usaidami.org



THE AMAZON MALARIA INITIATIVE: Goals and Accomplishments October 2001–May 2009

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Appendix A. External Review Summary

Appendix B. Annotated Bibliography of AMI and Related Products

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