MALARIA IN THE AMERICAS: PROGRESS REPORT

Introduction

1. As countries of the Americas join the world in entering the final quarter of the decade to Roll Back Malaria (2001-2010) and move towards the achievement of the Millennium Development Goals for 2015, the Pan American Health Organization (PAHO) is reviewing the progress of efforts against malaria in the Region. It is considered essential to monitor achievements in combating malaria in the Region and to further intensify efforts to enable PAHO to fulfill its mandate and Member States to attain their national targets and commitments. PAHO is following up on Resolution CD46.R13 (2005) in which Member States requested designation of a malaria day to highlight efforts to attain the objectives of the Roll Back Malaria (RBM) initiative and the UN Millennium Development Goals. National malaria programs should be re-evaluated and efforts aligned accordingly, so that progress is achieved towards realizing both global and nation-specific targets.

Background

2. In September 2005, the 46th Directing Council of the Pan American Health Organization adopted Resolution CD46.R13 which highlighted, among other things, the need to establish policies and operational plans to achieve a reduction of the malaria burden by at least 50% by 2010 and 75% by 2015, and to designate a malaria control day in the Americas on a selected annual date, to recognize past and current efforts to prevent and control malaria, promote awareness, and monitor progress (1). In November of that year, PAHO convened malaria professionals and stakeholders from the Region and commenced development of a plan that outlined the strategic directions to achieve the mandate of Resolution CD46.R13. The result is the consolidation and implementation of the Regional Strategic Plan for Malaria in the Americas, 2006-2010 (2). With regard to a designated Malaria Day, Guyana proposed 6 November, the date when the presence of
malaria parasites in the blood of patients with febrile symptoms was first observed by Charles Louis Alphonse Lavérán in 1880 (3).

3. In January 2007, a proposal to establish a World Malaria Day was introduced in the WHO Executive Board and a draft resolution states: “Malaria Day shall be commemorated annually on 25 April or on such other day or days as individual members may decide …”(4). The resolution was among the topics for discussion and deliberation at the World Health Assembly in May 2007. In Resolution CE140.R11, the 140th Session of the Executive Committee recommended to the Conference that it establish 6 November as the date to annually commemorate Malaria Day in the Americas.

Progress

4. Since the adoption of Resolution CD46.R13 in 2005, efforts have been intensified at all levels – global, regional, national, and community. The Roll Back Malaria (RBM) Department of the World Health Organization in Geneva was redesignated the Global Malaria Program (GMP) (5) in early 2006 and has adopted a reorientation of approaches to facilitate the attainment of the RBM objectives and the malaria-related United Nations Millennium Development Goals (MDGs). The development, consolidation and implementation of the Regional Strategic Plan for Malaria in the Americas 2006-2010, has permitted alignment of efforts among stakeholders and sectors working towards global and national targets against malaria, and synergy of country programs with regional and global counterparts.

5. Based on preliminary country reports for 2006, the number of malaria cases reported in the Americas was 902,373, representing a 22% reduction in malaria-morbidity in the Region in comparison with 2000. Approximately 74% of infections are caused by \textit{Plasmodium vivax}, with \textit{Plasmodium falciparum} accounting for almost 26% of cases. Less than 0.01% of cases are due to \textit{Plasmodium malariae} which is focused in certain areas of Brazil, French Guiana, Guyana, and Suriname. The latest regional data on malaria-associated mortality from the country reports in 2005 reflect a 69% decrease relative to the 2000 baseline figures. It is expected that these mortality figures further decreased in 2006.

6. In comparison with the situation in 2000, most recent data indicate a decrease in cases in 15 of the 21 PAHO Member States where the disease is endemic. Eight of these countries achieved the target of at least 50% case reduction and seven registered decreases below 50%. Increases were reported in the other six endemic countries (See following table).
### Percent change in number of cases reported by country (Compared to baseline 2000 data)

<table>
<thead>
<tr>
<th>Country</th>
<th>Latest Annual Report</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>2004</td>
<td>-74%</td>
</tr>
<tr>
<td>Belize</td>
<td>2006*</td>
<td>-43%</td>
</tr>
<tr>
<td>Bolivia</td>
<td>2006</td>
<td>-40%</td>
</tr>
<tr>
<td>Brazil</td>
<td>2006</td>
<td>-11%</td>
</tr>
<tr>
<td>Colombia</td>
<td>2006</td>
<td>-9%</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>2006*</td>
<td>+55%</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>2005</td>
<td>+211%</td>
</tr>
<tr>
<td>Ecuador</td>
<td>2006</td>
<td>-93%</td>
</tr>
<tr>
<td>El Salvador</td>
<td>2006</td>
<td>-93%</td>
</tr>
<tr>
<td>French Guiana</td>
<td>2006</td>
<td>+10%</td>
</tr>
<tr>
<td>Guatemala</td>
<td>2006</td>
<td>-42%</td>
</tr>
<tr>
<td>Guyana</td>
<td>2006</td>
<td>-12%</td>
</tr>
<tr>
<td>Haiti</td>
<td>2005</td>
<td>+29%</td>
</tr>
<tr>
<td>Honduras</td>
<td>2006</td>
<td>-67%</td>
</tr>
<tr>
<td>Mexico</td>
<td>2006*</td>
<td>-67%</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>2006*</td>
<td>-88%</td>
</tr>
<tr>
<td>Panama</td>
<td>2006</td>
<td>+61%</td>
</tr>
<tr>
<td>Paraguay</td>
<td>2005</td>
<td>-95%</td>
</tr>
<tr>
<td>Peru</td>
<td>2006*</td>
<td>-5%</td>
</tr>
<tr>
<td>Suriname</td>
<td>2006*</td>
<td>-70%</td>
</tr>
<tr>
<td>Venezuela</td>
<td>2006*</td>
<td>+25%</td>
</tr>
</tbody>
</table>

* Preliminary Reports

7. Among the 27 Member States declared free of malaria transmission by WHO in previous years, between 900 and 1,300 cases were reported annually from 1999 to 2005. These imported cases occur among travelers from endemic countries in the Americas and from other regions of the world.

8. Outbreaks of malaria were reported in two non-endemic countries in 2006. At least 19 introduced cases of *P. falciparum* were reported in the island of Great Exuma in the Bahamas beginning in June 2006 before the outbreak ended in September (6). Beginning November 2006, Jamaica identified an outbreak of *P. falciparum* cases in the capital, Kingston, with approximately 350 cases being detected up to April 2007 (7).
9. The Region follows a five component strategy to address the malaria challenge in the Americas: Malaria Prevention, Surveillance, and Early Detection and Containment of Epidemics; Integrated Vector Management; Malaria Diagnosis and Treatment; Enabling Environment for Malaria Prevention and Control; and Health Systems Strengthening/Country-Level Capacity-Building. These strategic components align the areas of work advocated by the Global Malaria Program: surveillance, monitoring, and evaluation; case management and research; vector control and prevention; and supply chain management; alongside national malaria program approaches.

10. Supporting the efforts to decrease the burden of malaria in the Region are various partner governments and institutions in the following networks/projects:

- Amazon Network for the Surveillance of Anti-malarial Drug Resistance/Amazon Malaria Initiative (RAVREDA/AMI). PAHO/WHO as lead collaborator, with funds from the United States Agency for International Development (USAID); Health Ministries of Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, Venezuela; Management Sciences for Health (MSH)/Rational Pharmaceutical Management Plus (RPM Plus); United States Centers for Disease Control and Prevention (CDC); United States Pharmacopeia Drug Quality Information Program (USP DQI); and other service delivery, advocacy, research, and academic organizations/institutions. RAVREDA/AMI has expanded its areas of work from antimalarial drug resistance surveillance to include drug policy implementation, access and quality of diagnosis and treatment, evidence-based vector control, and epidemiologic stratification through financing of approximately $8.8 million between 2001 and 2006.

- Regional Action Program and Demonstration of Sustainable Alternatives for Malaria Vector Control without Using DDT in Mexico and Central America (DDT-GEF). This project is coordinated by PAHO’s Area of Sustainable Development and Environmental Health (SDE), with the United Nations Environmental Program (UNEP), the Cooperación Ambiental de América del Norte (CCA), and national collaborators. In addition to sustainable alternatives to vector control, the network has rich experience in mobilizing community participation for disease surveillance and control with financing of approximately $13 million from 2003-2006.

- Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund). Projects approved in 11 of the 21 endemic countries, individually for Bolivia, Guatemala, Guyana, Haiti, Honduras, Nicaragua, and Suriname, and a joint project in Colombia, Ecuador, Peru, and Venezuela through an approved proposal from the Organismo Andino de Salud (Andean Region Health Agency) (ORAS). Bolivia is contemplating presentation of a revised proposal to the Global Fund by the end of June to continue its current country project. Cumulatively, these
projects are for $65 million, of which approximately $41.7 million has been disbursed.

11. The total expenditure (national and external contributions) for malaria reported by the endemic countries increased from $107,798,405 in 2000 to $166,763,743 in 2006, while the number of reported cases went down from 1,150,103 to 902,373 during the same period. Notably, an increase in cases was observed in 2005 when a decrease in funds and expenditure for malaria were reported. Thus, funding allocations is correlated strongly with the attainment of targets for malaria. It is estimated that the Region needs a similar, if not greater increase in resource allocation to facilitate the achievement of the 2010 and 2015 goals for malaria in the Americas.

### Malaria Cases and Expenditure in the Americas, 2000-2006

![Diagram showing malaria cases and expenditure in the Americas, 2000-2006.](image)

12. Currently, the interprogrammatic, intersectoral, and alignment efforts on malaria prevention and control in the Americas have resulted in significant milestones:
• Strengthening of epidemiologic surveillance and monitoring system for malaria that facilitates evidence-based public health policy decision-making;
• Coordination between the regional malaria program and the regional epidemic and alert response to strengthen capabilities of countries to combat outbreaks;
• Use of vector control interventions: insecticide treated mosquito nets (ITN), Insecticide Residual Spraying (IRS), as determined by national authorities;
• Integrated vector management including monitoring of resistance to insecticides;
• Artemisinin-based Combination Therapy (ACT) for treatment of P. falciparum in eight target countries sharing the Amazon Rainforest; expansion of work to improve access, quality of diagnosis and treatment, and epidemiologic stratification;
• Movement towards conducting efficacy trials to guide treatment policy in Mexico, Central America, and Hispaniola;
• Increased involvement of the community and various sectors through the DDT-GEF project in participating countries;
• Engagement in communications, publications and advocacy efforts; technical cooperation and training to reinforce the importance of commitment and continuity of efforts in combating malaria;
• Consideration of the possibilities of malaria elimination in six of the 21 endemic countries: Argentina, El Salvador, Guyana, Mexico, Paraguay and Suriname.

13. These milestones serve as a basis for PAHO to fulfill its commitment and mandate and for the Region to contribute to the attainment of global and national goals, including the UN Millennium Development Goals set for 2015.

Challenges

14. The Region continues to confront a number of formidable challenges and situations that contribute to current constraints in the progress of work against malaria. These include:

• Increased migration of people within and among countries as a result of both tourism and other socioeconomic and political reasons has made epidemiologic surveillance and monitoring ever more challenging and increased the susceptibility of countries, both endemic and nonendemic, to malaria outbreaks and epidemics.
Dynamic changes in the organization of institutions and health systems of countries create new sets of specific conditions that necessitate inter-programmatic coordination. In particular, the decentralization of vertical programs resulted in the transfer of responsibilities to the local level which, in many instances, lack managerial capacities; and loss of trained personnel as malaria posts are suspended, with many of the local governments resorting to contracting personnel on a temporary basis.

Investments made on establishing the scientific basis for malaria prevention and control do not necessarily translate into implemented interventions in the countries.

Active participation of many sectors, particularly civil society and communities, remains lacking in many countries.

In some cases, there is limited coordination between PAHO and the principal recipients of the Global Fund, which undermines the potential for optimizing the investments of the country projects and the realization of their corresponding targets.

Urban infrastructure development is deemed to have a concrete connection to the spread of malaria and other communicable diseases, particularly as a consequence of waste management problems, pollution of water reservoirs, and inadequate housing.

Malaria programs in many countries continue to be primarily vertical in approach and orientation and are minimally articulated/integrated with the primary health care system, thus undermining the potential gains in integrated and holistic health care for the affected populations.

Countries of the Region are in varying degrees of readiness to sustain and build on the current efforts on malaria, which needs to be taken into account for long-term sustainability of programs and achievement of desired outcomes.

Recommendations

15. To address these constraints and challenges, PAHO recommends countries and others stakeholders in malaria in the Region to collaborate towards:

Upgrading the health surveillance, monitoring, and evaluation system to facilitate evidence-based development and implementation of policies and interventions that yield the desired results; likewise, countries are requested to collaborate with
PAHO country office advisors on malaria/communicable diseases in conducting a joint assessment of epidemiologic events such as outbreaks and in accordance with the International Health Regulations (IHR) Annex 2 (Decision Instrument);

- Fostering efficient and close collaboration between programs within institutions (including PAHO) and within the countries to optimize efforts and results;
- Staffing, training, and other human resource management reforms to complement program changes;
- Translating evidence-based recommendations and interventions into implemented policies, as appropriate to country specificities;
- Improving the communication process and extension of advocacy work to all stakeholders and target audiences. This concern highlights the importance of commemorating the World Malaria Day/Malaria Day in the Americas, proposed by Guyana for 6 November;
- Clarifying the mechanisms for and reinforcing PAHO’s participation in the implementation of the Global Fund country projects (as mandated by Resolution CD46.R13);
- Engaging in a multisectoral, multipronged agenda on urban infrastructure development that will address various health consequences (including malaria);
- Strengthening the commitment to primary health care and intensifying efforts towards the integration of malaria work into the primary health care system;
- Institutionalization and sustaining malaria efforts within the health system.

**Action by the Pan American Sanitary Conference**

16. The way forward requires concerted efforts. Changes in the nature and intensity of challenges are expected to occur since the battle against malaria is a dynamic process. However, PAHO Member States have already provided the mandate to address these matters aggressively and appropriately through Resolution CD46.R13. The next step is to proceed with implementation and decision on the date when Malaria Day will be commemorated in the countries of the Region. Institutionalizing a World Malaria Day, a Malaria Day in the Americas, or National Malaria Days among countries annually will facilitate and accelerate the achievement of global and national goals. The Conference is requested to review this document, provide comments to the Secretariat, as appropriate, and consider the recommendations of the Executive Committee at its 140th Session (see Resolution CE140.R11, attached).
Reference Documents


Annexes
RESOLUTION

CE140.R11

MALARIA IN THE AMERICAS

THE 140th SESSION OF THE EXECUTIVE COMMITTEE,

Having considered the progress report submitted by the Director on malaria in the Americas (Document CE140/10),

RESOLVES:

To recommend to the 27th Pan American Sanitary Conference the adoption of a resolution along the following lines:

THE 27th PAN AMERICAN SANITARY CONFERENCE,

Having considered the progress report submitted by the Director on malaria in the Americas (Document CSP27/9), which reviews progress towards attainment of the Roll Back Malaria Initiative (2001-2010) and the achievement of the malaria-related Millennium Development Goals for 2015 that propose that the Member States continue efforts to combat malaria through strengthening national capacity to preserve achievements and further reduce the burden of disease;

Taking into account that the 46th Directing Council (2005) urged Member States, inter alia, to reaffirm their commitment to establish national policies and operational plans to ensure accessibility to prevention and control interventions for those at risk or affected by malaria in order to achieve a reduction of the malaria burden by at least 50% by 2010 and 75% by 2015; to allocate domestic resources, mobilize additional resources
and effectively utilize them in the implementation of appropriate malaria prevention and control interventions; and to designate a malaria control day in the Americas to annually recognize past and current efforts to prevent and control malaria, promote awareness and monitor progress;

Concerned that the disease continues to be a public health problem in a number of territories and that increased migration within and among countries increases susceptibility of both endemic and non-endemic countries to malaria outbreaks;

Recognizing the potential for mobilizing additional financial support from the Global Fund to Fight AIDS, Tuberculosis and Malaria, among other sources; and

Cognizant of the malaria report presented by the WHO Secretariat to the Sixtieth World Health Assembly, and Resolution WHA60.18 on malaria, which includes a proposal for the establishment of “…Malaria Day on 25 April or on such day or days as individual members may decide…,”

RESOLVES:

1. To urge Member States to:

   (a) Reaffirm their commitment to establish and implement national policies and operational plans to ensure accessibility to prevention and control interventions for those at risk or affected by malaria in order to achieve a reduction of the malaria burden by at least 50% by 2010 and 75% by 2015;

   (b) Upgrade health surveillance, monitoring and evaluation systems to assess progress in reducing the malaria burden and to prevent re-establishment of transmission where interruption has been achieved, in cognizance of the International Health Regulations (IHR) requirements;

   (c) Allocate domestic resources, mobilize additional resources, and effectively utilize them in the implementation of appropriate malaria prevention and control interventions;

   (d) Foster and translate evidence-based recommendations and interventions into implemented policies, as appropriate to individual specificities;

   (e) Assess the need for staff, training and other human resource management reforms to complement changes and to integrate, institutionalize, and sustain malaria prevention and control efforts within the health system;
(f) Engage in a multisectoral, multipronged agenda on urban infrastructure development to address various health consequences of vector-borne diseases, including malaria;

(g) Encourage communication, coordination and collaboration between malaria control activities and other public health areas and institutions and advocacy among all stakeholders and target audiences;

(h) Establish 6 November as the date to annually commemorate Malaria Day in the Americas.

2. To request the Director to:

(a) Continue to provide technical cooperation and coordinate efforts to reduce malaria in endemic countries and to prevent the reintroduction of transmission where this has been achieved;

(b) Develop and support mechanisms for monitoring the progress of prevention and control programs on an annual basis and promote information sharing and exchange of technical capacity among countries;

(c) Assist Member States, as appropriate, to develop and implement effective and efficient mechanisms for resource mobilization and utilization, including efforts to access resources and successfully implement Global Fund projects;

(d) Promote and assist Member States in commemorating Malaria Day in the Americas.

(Seventh meeting, 28 June 2007)
Report on the Financial and Administrative Implications for the Secretariat of the Resolutions Proposed for Adoption by the Pan American Sanitary Conference

1. Resolution: MALARIA IN THE AMERICAS

2. Linkage to program budget

<table>
<thead>
<tr>
<th>Area or work</th>
<th>Expected result</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDM/CD/MAL</td>
<td>SO 2; RER 2.1</td>
</tr>
</tbody>
</table>

Commemoration of Malaria Day in the Americas.

3. Financial implications

(a) Estimated total cost for implementation over the “life-cycle” of the resolution (estimated to the nearest US$ 10,000; including staff and activities): $60,000 annually.

(b) Estimated cost for the biennium 2006-2007 (estimated to the nearest US$ 10,000; including staff and activities): $25,000.

(c) Of the estimated cost noted in (b), what can be subsumed under existing programmed activities? 30%.
4. Administrative implications

(a) Implementation locales (indicate the levels of the Organization at which the work will be undertaken and identify the specific regions, where relevant): At Regional level and in the Member States of PAHO.

(b) Additional staffing requirements (indicate additional required staff full-time equivalents, noting necessary skills profile): Technical assistance in communication; Development of informational materials

(c) Timeframes (indicate broad timeframes for the implementation and evaluation).