Strengthening pharmaceutical management for better health worldwide

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Despite existing means of prevention and treatment, malaria still places an intolerable burden on the health and development of people living in many of the world’s poorer countries. The disease is caused by a parasite that spreads to humans through the bite of infected mosquitoes. Malaria causes an estimated 300 to 500 million cases of acute illness worldwide each year, resulting in more than one million deaths. The impact is greatest in Africa, where more than 80 percent of malaria cases and deaths occur, but malaria is also a significant problem in areas of Asia and Latin America. Those most vulnerable are children under five years of age, pregnant women, and people with little or no malaria immunity. In addition, high rates of malaria and HIV/AIDS co-infection constitute major public health challenges in affected countries. The disease causes serious economic loss, and in some areas, as much as 25 percent of annual household income is spent on malaria-related costs.

RPM Plus strives both to increase global and national awareness of the crucial role of pharmaceutical management and to strengthen local capacity in support of improving access to high-quality antimalarial medicines and commodities. In pursuit of these goals, RPM Plus provides resource tools, training, and technical support to global malaria strategies through our collaboration with both global and country-level partners.
RPM Plus supports the Global Malaria Strategy initiated by the Roll Back Malaria (RBM) Partnership, which includes the United Nations Development Programme, World Health Organization (WHO), United Nations Children’s Fund, and the World Bank. RPM Plus is also contributing to the development of the new President’s Malaria Initiative. Important components of the global strategy are prevention, early diagnosis, and treatment—all of which depend on access to and rational use of a core set of medicines and commodities, the essence of RPM Plus expertise.

A major challenge in malaria control is overcoming drug resistance. *Plasmodium falciparum*, the most deadly malaria parasite, has become resistant to chloroquine, the mainstay of malaria treatment for 60 years. The most common replacement has been sulfadoxine-pyrimethamine (SP), but this drug is also losing effectiveness.

WHO recommends that countries with significant rates of resistance incorporate artemisinin-based combination therapies (ACTs) into their national health policies as first-line treatment. Such ACT policies have been particularly successful in Southeast Asia, where multidrug-resistant organisms are common. Making the transition to ACTs, however, poses formidable challenges—the process of changing treatment policies and rolling out new programs is expensive and complex, requiring the active involvement of many stakeholders from the public and private sectors. In addition, ACTs are significantly more costly than other antimalarials and have less than half of the shelf life.

For these reasons, effective procurement practices are particularly important for successful management of antimalarial medicines and commodities, especially as countries make the change to an ACT-based treatment policy. Globally, RPM Plus works with the RBM Partnership Secretariat and Malaria Medicines and Supplies Service to support the prequalification of ACT products, as well as to forecast and track global needs for antimalarials and related supplies.

**Applying Global Strategies at the Country Level**

RPM Plus contributes to global malaria control strategies by participating in global policy dialogue and helping to strengthen malaria medicines management systems at the country level. RPM Plus works closely with the ministries of health and their national malaria program managers to build local capacity to acquire adequate quantities of the right medicines at reasonable prices and at internationally recognized standards of quality.

RPM Plus channels its technical assistance in endemic countries through three major areas.

**Supporting ACT Policy Design and Implementation**

RPM Plus helps countries that are taking steps to change their first-line treatment to ACT—from the evaluation and planning stage to the rollout of the new policy. The process entails a review of the operational and technical capacities of the public and private sectors, which must be addressed to achieve successful policy change.

**Improving Procurement of Malaria Medicines and Commodities**

RPM Plus has expertise in quantifying medicine and commodity needs which supports procurement and budgeting for malaria programs at all levels of the health system. RPM Plus also provides quantification and procurement expertise to grant applicants and recipients of Global Fund to Fight AIDS, Tuberculosis and Malaria, and will make this expertise available for the President’s Malaria Initiative as needed.

**Developing Local Capacity for Pharmaceutical Management**

RPM Plus helps endemic countries develop local capacity to manage antimalarial medicines and commodities. This assistance is focused on training national malaria program and health system staff in how to assess, manage, and monitor pharmaceutical supply systems in the public and private sectors.
RPM Plus has developed publications and tools to guide countries and programs in managing malaria-related pharmaceutical and commodity needs. These tools and publications can be adapted to address specific country needs and provide structured approaches to strengthen pharmaceutical systems.

Resources Supporting ACT Policy Design and Implementation

*Road Map for Scaling Up ACTs: 2004 and Beyond.* The Road Map outlines critical steps, bottlenecks, and milestones in the production, prequalification, registration, procurement, and sourcing of ACTs. Its purpose is to facilitate coordination and collaboration within the RBM Partnership to help countries that are adopting ACT treatment.

*Changing Malaria Treatment Policy to Artemisinin-Based Combinations: An Implementation Guide.* This document provides guidance to countries on how to implement national policy changes designating ACT for first-line malaria treatment consistent with WHO’s policy recommendations. It addresses operational and technical considerations and may be used as a planning tool to identify technical assistance and resource needs. It was produced by RPM Plus in collaboration with the RBM Partnership and the Global Fund.

Resources for Strengthening Pharmaceutical Procurement

*Quantimed.* This quantification database tool models a facility’s malaria caseload and allows the input of multiple treatment regimens for individual health conditions. This tool can be applied at a single facility, for a geographic or administrative area, or for a national malaria program, enabling program managers to generate realistic estimates of pharmaceutical requirements and prepare accurate budgets for scaling up ACT.

*Sources and Prices of Selected Products for the Prevention, Diagnosis, and Treatment of Malaria.* The prices paid by end users for antimalarial medicines, insecticide-treated nets, and other supplies vary considerably among different settings—prices may differ in the public sectors of different countries, between public and private sectors, or even within the private sector. This report provides information on suppliers and prices of malaria-related products for use by government and UN agencies in making procurement decisions. The guide was jointly produced by WHO, the RBM Partnership, UNICEF, Population Services International, and RPM Plus.

These tools and publications can be adapted to address specific country needs and provide structured approaches to strengthen pharmaceutical systems.
Global Activities

RPM Plus staff actively participate in malaria policy committees and working groups, including the RBM Case Management Working Group and Communications Working Group and the WHO Task Force on Intervention Research. In addition, RPM Plus helps develop technical and policy documents and other guidance materials, including the recent U.S. Institute of Medicine publication *Saving Lives, Buying Time: Economics of Malaria Drugs in an Age of Resistance*. In direct support to the RBM Secretariat, RPM Plus collaborates with partners to develop key documents providing policy, technical, and operational guidance to help countries create appropriate, effective malaria control and prevention strategies and programs. In addition, RPM Plus is developing a database for the Secretariat to compile market demand figures for ACTs and nets (ITNs and LLITNs) that will enable manufacturers to better plan production of these essential commodities.

Regional Activities

In Africa, RPM Plus provides technical assistance in antimalarial medicines and commodities management by serving as one of four partners in the USAID-funded Malaria Action Coalition (MAC), along with WHO/AFRO, the U.S. Centers for Disease Control and Prevention (CDC), and the Maternal and Neonatal Health Project (now called ACCESS). With these partners, RPM Plus helps to implement regional RBM initiatives in East and West Africa and to ensure that adequate pharmaceutical management is part of malaria prevention and control strategies.

RPM Plus is also active in the Southeast Asian RBM Partnership, developing a three-pronged approach to assessing antimalarial use through monitoring drug resistance, medicines quality, and medicines use practices on the Thai-Cambodian border. In collaboration with the ACT Malaria Foundation, RPM Plus is working with 11 national malaria control programs in this region to develop ACT policies, strengthen pharmaceutical management, and integrate malaria medicines management in the community.

In Latin America and the Caribbean, RPM Plus is involved in the Amazon Malaria Initiative, a regional initiative sponsored by USAID that supports eight malaria-endemic countries in the region. With the CDC and the Pan American Health Organization (PAHO), RPM Plus assists national malaria control programs in assessing their pharmaceutical management policies and programs and implementing appropriate interventions.

RPM Plus Collaborates with Partners at the Global, Regional, & Country Levels to Support Malaria Control

RPM Plus Malaria Program Partners

- Academy for Educational Development
- Amazon Malaria Initiative
- East and West Africa Regional RBM Networks
- Global Fund to Fight AIDS, Tuberculosis and Malaria
- JHPIEGO/ACCESS
- Malaria Action Coalition
- Ministries of health in affected countries
- Roll Back Malaria Partnership
- U.S. Agency for International Development
- U.S. Centers for Disease Control and Prevention
- World Health Organization headquarters and regional offices
Country-Level Activities

RPM Plus works with individual countries to assess and improve their pharmaceutical management capacity related to the prevention and treatment of malaria. Some of the countries with which RPM Plus is collaborating are Ghana, Kenya, Zambia, and Cambodia.

Ghana
Malaria during pregnancy is a major public health problem in Ghana. The government’s goal is to provide intermittent prevention therapy to 60 percent of pregnant women in 20 districts by 2007. The government asked RPM Plus to help quantify how much SP must be procured immediately, and to assist in developing models to quantify future SP needs. RPM Plus collected data from prenatal clinics on their use of SP compared with that of other malaria drugs, and estimated how many visits pregnant women make to the clinics. Based on these data, RPM Plus developed recommendations for the Ministry of Health on SP procurement timing and quantity; the suggested procurement procedure, including pricing information; and a methodology for monitoring data needed for future needs estimates.

Kenya
To support Kenya’s transition to artemether-lumefantrine as the first-line treatment for malaria, RPM Plus assessed antimalarials management within the government and mission pharmaceutical distribution systems. The assessment identified bottlenecks in distribution, determined the frequency and extent of medicine stock-outs, and proposed interventions to help implement the new ACT policy. RPM Plus continues to provide assistance and training to enable central and regional facilities to respond more effectively to the policy changes.

Zambia
The Government of Zambia has also adopted artemether-lumefantrine as its first-line treatment for uncomplicated malaria. The government procures this ACT through WHO for its public-sector clinics; however, many Zambians traditionally seek treatment through the private sector, where artemether-lumefantrine is either unavailable or priced beyond reach. In response to this problem, RPM Plus is working with the government and other organizations to increase access to quality antimalarials in private-sector outlets. For example, RPM Plus is training pharmacists to evaluate and train other private-sector providers.

Bolivia
The existence of different species that require distinct malaria treatment regimens, the emphasis on biological diagnosis, and the adoption of ACT in 2002 pose numerous challenges for Bolivia’s pharmaceutical supply system. Following RPM Plus’s regional training workshop on the Pharmaceutical Management for Malaria assessment methodology, the Amazon Malaria Initiative partners—including the USAID country mission and the national program for control of vector-born diseases—assessed the availability and use of malarial medicines and supplies in high transmission areas. The results, gathered with technical assistance from RPM Plus, will help in designing appropriate interventions to strengthen the system, particularly the availability of first-line treatments in primary care level facilities.

Cambodia
In collaboration with other organizations, RPM Plus helped evaluate community antimalarial medicines management in Cambodia using the Community Pharmaceutical Management for Malaria Assessment Tool. Local workers conducted interviews with community members and providers of medicine to collect data on the availability and use of modern treatments, malaria prevention, and sources of medicines. The research showed that not only do most malaria patients seek treatment first from private providers with little formal training, but the availability of recommended medications is unreliable, especially in private outlets. The survey results helped program managers assess the strengths and weaknesses of pharmaceutical management practices in their communities, develop strategies for improvement, and create a system to monitor program progress in combating malaria.
Management Sciences for Health’s (MSH) Rational Pharmaceutical Management (RPM) Plus Program, funded by the U.S. Agency for International Development, works to improve the lives of people around the world by closing the gap between the need for essential medicines and their availability and rational use. In malaria treatment programs, rational use means that patients are prescribed and dispensed the full amount of the appropriate, high-quality medicine at the lowest cost to them and their communities, and that patients take the medicines correctly, without interruption. RPM Plus provides developing countries with the technical assistance, training, and tools to successfully manage pharmaceuticals.

The Pharmaceutical Management Cycle Framework, developed by MSH in collaboration with the World Health Organization, consists of four integrated activities—medicines selection, procurement, distribution, and use—supported by a policy and legal framework and management functions. Effective pharmaceutical management relies on strong leadership. Adherence to sound management within each Cycle activity ensures consistent supply and use of essential high-quality medicines and commodities.

To learn more about how RPM Plus helps build capacity to manage and use malaria-related commodities and pharmaceuticals, please visit our Web site at www.msh.org/rpmplus or contact us at rpmplus@msh.org.

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This brochure was made possible through support provided by the U.S. Agency for International Development, under the terms of Cooperative Agreement Number HRN-A-00-00-00016-00. The opinions expressed herein are those of the author(s) and do not necessarily reflect the views of the U.S. Agency for International Development.