Rational Pharmaceutical Management Plus Program
Final Report

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About RPM Plus

RPM Plus works in more than 20 developing and transitional countries to provide technical assistance to strengthen pharmaceutical and health commodity management systems. The program offers technical guidance and assists in strategy development and program implementation both in improving the availability of health commodities—pharmaceuticals, vaccines, supplies, and basic medical equipment—of assured quality for maternal and child health, HIV/AIDS, infectious diseases, and family planning and in promoting the appropriate use of health commodities in the public and private sectors.

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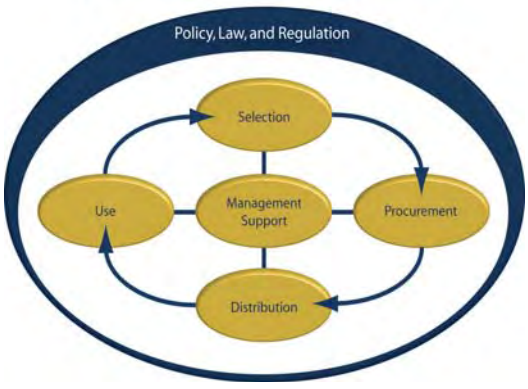
INTRODUCTION

In September 2000, the U.S. Agency for International Development (USAID) awarded Management Sciences for Health (MSH) funding through a five-year cooperative agreement for the Rational Pharmaceutical Management (RPM) Plus Program, the follow-on to the RPM project. A subsequent extension kept RPM Plus operating through March 2009. RPM Plus was USAID's primary Population, Health and Nutrition mechanism for strengthening commodity management systems. Throughout its eight and-a-half year history, RPM Plus worked 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.

The RPM Plus Program goals were to—

- Develop and apply specialized tools that generate needed commodity-related information and improve decision-making processes
- Foster donor coordination and strategic planning, globally and at the country level, to improve product availability
- Monitor and assess the impact of reform initiatives on access to and availability and use of essential health commodities for USAID priority interventions
- Identify lessons learned, formulate guiding principles, and disseminate best practices and approaches in commodity management under health sector reform

RPM Plus grounded its work in the pharmaceutical management framework, developed by MSH in collaboration with the World Health Organization. The pharmaceutical management framework represents the flow of activities that must be coordinated to ensure that appropriate, high-quality medicines are available when patients need them. The framework emphasizes the relationships between selection, procurement, distribution, and use activities, all of which are nurtured by a strong management support system. The entire framework relies on policies, laws, and regulations, which when supported by good governance, sustain the commitment to pharmaceutical supply. Each component of the framework depends on the success of the previous component and contributes to the viability of the next.



Pharmaceutical Management Framework

During the RPM Plus Program, one of the greatest challenges for many countries became introducing and scaling up new treatment programs, such as those for HIV/AIDS and

malaria. To help countries overcome these challenges, RPM Plus worked with both the public and private sectors and with nongovernmental organizations to implement innovative capacity-building and managerial approaches for fostering more appropriate, more cost-effective use of health commodities.

The worldwide shortage of experts able to assist resource-limited programs exacerbates the weak pharmaceutical management capacity within health systems. RPM Plus worked to address this lack of capacity through a multifaceted strategy: developing pharmaceutical management curricula for U.S. graduate-level programs, training U.S. health professionals before they begin their work in developing countries, conducting training-of-trainers courses in various areas of pharmaceutical management, and strengthening knowledge of pharmaceutical management in developing country institutions able to serve as regional sources of expertise.

RPM Plus work focused on the USAID strategic objectives related to maternal health, child survival, HIV/AIDS, antimicrobial resistance, malaria, and tuberculosis. In addition to these global programs, RPM Plus provided technical assistance to the following country programs—

- Albania
- Angola
- Armenia
- Bangladesh
- Brazil
- Cambodia
- China
- Côte d'Ivoire
- Democratic Republic of the Congo
- Dominican Republic
- Ethiopia
- Haiti
- Honduras
- Kazakhstan
- Kenya
- Kyrgyzstan
- Lesotho
- Malawi
- Mali
- Mexico
- Moldova
- Namibia
- Nepal
- Nicaragua
- Peru
- Rwanda
- Senegal
- South Africa
- Sudan [Southern]
- Swaziland
- Tajikistan
- Tanzania
- Turkmenistan
- Uganda
- Uzbekistan
- Vietnam
- Zambia

Additional countries were also affected by involvement with regional programs that included the Malaria Action Coalition, the West Africa Regional Program, USAID/East Africa (previously the Regional Economic Development Services Office for East and Southern Africa), and the Regional Development Mission for Asia, among others.

Collaborating with Global and Regional Partners

Collaboration, which was the hallmark of the RPM Plus approach to rational pharmaceutical management, is key to establishing sustainable improvements in the health care systems of developing countries. RPM Plus's formal program partners included—

- Academy for Educational Development
- Alliance for the Prudent Use of Antibiotics
- Boston University School of Public Health, Center for International Health & Development
- Harvard Medical School Department of Ambulatory Care and Prevention
- Program for Appropriate Technology in Health
- University of Newcastle School of Medicine and Public Health

RPM Plus also worked with international partners, such as the World Health Organization and the World Bank, on a number of global initiatives: the U.S. President's Emergency Plan for AIDS Relief; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Multi-Country HIV/AIDS Program for Africa; and the Global Drug Facility. Coordinating with international partners ensured efficient use of resources, increases knowledge sharing, and prevents duplication of effort.

RPM Plus also worked with collaborating institutions in the regions to foster coordination of donor groups to improve commodity availability, build capacity and country-level improvements in commodity supply systems, and provide rapid responses to specific issues. In addition, once problems were identified, RPM Plus collaborated with these institutions to recommend appropriate interventions or policy options.

Resources and Tools

RPM Plus worked to define and disseminate best practices throughout the developing world. In pursuit of this goal, the program developed publications and electronic tools to provide structured approaches to strengthening existing pharmaceutical systems and to help introduce and scale up specific programs, such as antiretroviral therapy (ART) for people with HIV/AIDS.

Key RPM Plus resources include—

- ART Dispensing Tool
- *Building Local Coalitions for Containing Drug Resistance: A Guide*
- *Changing Malaria Treatment Policy to Artemisinin-Based Combinations: An Implementation Guide*
- *Commodity Management in VCT Programs: A Planning Guide*

- *Community Drug Management Assessment Tool for Malaria and other Childhood Illnesses*
- *Guidelines for Implementing Drug Utilization Review Programs in Hospitals*
- *HIV Test Kits Listed in the USAID Source and Origin Waiver: Procurement Information Document*
- *Managing Pharmaceuticals and Commodities: A Guide for National Tuberculosis Programs*
- *Managing TB Medicines at the Primary Level*
- *Pharmaceutical Management for Malaria Assessment Tools*
- *Pharmaceutical Management for Tuberculosis Assessment Manual*
- Quantimed: Pharmaceutical Quantification and Cost Estimation Tool
- *Requesting USAID Approval to Procure HIV Test Kits and Other HIV/AIDS-Related Pharmaceutical Products: Guidance and Sources of Information*
- Standard Operating Procedures for Laboratory and Pharmaceutical Services for Antiretroviral Therapy Programs

Sharing Results

During the life of the program, RPM Plus staff members and partners presented program results at numerous international forums including—

- American Public Health Association
- International AIDS Society
- International Association of Physicians in AIDS Care
- International Conference on AIDS and STIs in Africa
- International Pharmaceutical Federation
- HIV Implementers

Extensive program information can be accessed from the program website, www.msh.org/rpmplus. In addition, the Strengthening Pharmaceutical Systems (SPS) Program, awarded in 2007, builds on the lessons learned from RPM Plus and uses RPM Plus approaches to formulate guiding principles and disseminate best practices (www.msh.org/sps).

The following report broadly summarizes RPM Plus Program objectives and activities covering the period from October 2000 through March 2009. The reports are organized by the global, regional, and country programs that provided funding.

Cost Sharing

Cost sharing is defined as the activities funded by nonfederal sources that are "necessary and reasonable for the proper and efficient accomplishment of project objectives" (*Handbook 13, USAID Optional Standard Provisions for U.S. Nongovernmental Grantees*). Cost-sharing activities provided an important channel to disseminate RPM Plus products.

RPM Plus's original share requirement on award in September 2000 was $13,186,749. The cost share requirement was raised to $21,000,000 over the life of the program. RPM Plus met this requirement by bringing a number of significant contributions to the RPM Plus Program. A sampling is provided below.

Strategies for Enhancing Access to Medicines (SEAM)

One of RPM Plus's most significant cost-sharing activities came through the Bill & Melinda Gates Foundation-funded SEAM Program. SEAM focused on increasing access through innovative public-private sector partnerships to improve pharmaceutical supply systems, as well as on the quality of the products and pharmaceutical services provided to consumers in developing countries. In particular, SEAM conducted comprehensive (public and private) pharmaceutical sector assessments in six countries to identify gaps in access to quality medicines and determine the potential for creating innovative public-private sector interventions to address those gaps on a sustainable basis. Based on assessment findings, the SEAM Program designed, implemented, and evaluated two African (Ghana and Tanzania) and one Central American (El Salvador) country programs.

In Ghana, SEAM worked with GSMF International to develop a franchise business model for supplying and distributing medicines and other essential health commodities through converted chemical seller shops in underserved areas. SEAM also worked with the Ghanaian Catholic mission sector to establish better and more efficient procurement mechanisms for essential medicines through improved quantification, pooling of requirements, and international tendering and to improve the prescribing and use of medicines. In addition, SEAM provided technical assistance to the Ghanaian Pharmacy Board to help regulate the provision of pharmaceutical services in Ghana.

In Tanzania, SEAM helped the Tanzanian Food and Drugs Authority (TFDA) improve access to medicines in remote regions through the establishment of accredited drug dispensing outlets (ADDOs) called *Duka La Dawa Muhimu* (essential medicines shops) using a model that focused on training, accreditation, and inspection/regulation. SEAM also helped TFDA review and revise regulatory processes relating to monitoring the quality of imported medicines. This work focused on establishing low-cost, low-technology methods (i.e., thin-layer chromatography) to screen imported products at ports of entry and to sample products from the marketplace. A third activity centered on creating a private sector supply alternative for the mission sector in northern Tanzania.

In El Salvador, SEAM worked with the Ministry of Health to improve quantification, pool requirements, and issue international tenders in an effort to make essential medicines available at lower cost.

INRUD and the International Conference on Improved Use of Medicines (ICIUM)

A significant amount of cost share was provided by the Swedish International Development Cooperation Agency (Sida) to support participant attendance at the 2004 ICIUM meeting in Chiang Mai, Thailand.

Regional Pooled Procurement and Drug Product Quality Strategies

The Rockefeller Foundation provided funding to MSH to identify specific opportunities for and barriers to pursuing regional solutions to procuring pharmaceuticals, particularly HIV/AIDS-related commodities. This initiative focused on three major activities: reviewing and analyzing existing and failed regional pooled procurement efforts to develop lessons learned, characterizing and developing regional medicine procurement strategies for sub-Saharan Africa, and developing strategies and policy recommendations relating to product quality assurance. After completing an assessment to obtain critical country-level information to explore the options for a regional approach to health sector goods procurement, the Commonwealth Regional Health Community Secretariat (CRHCS) and the Association Africaine de Centrales d'Achats de Médicaments Essentiels (ACAME) were chosen for further study. The recommendation for the CRHCS was to establish a coordinated informed buying scheme in which countries would exchange information on procurement procedures, prices paid for pharmaceuticals, supplier performance, and quality issues with the aim of achieving improved efficiencies and cost savings within each country's individual procurement program. The strategy developed for ACAME targeted the problem of availability of antiretroviral medicines, with the objective of developing a financial proposal and a detailed activity plan that would allow ACAME to find financing from partners (bilateral or multilateral agencies of cooperation, foundations, etc.) for a permanent regional pooled procurement structure.

Studies and Assessments

During the RPM Plus Program, CPM conducted studies and assessments in a number of different technical areas and with various geographic focus, including analyses of options to strengthen public sector supply chains in Costa Rica, Ecuador, and Suriname.

Training

As one of the world leaders in pharmaceutical management training, CPM undertook a number of important training activities beyond those funded by RPM Plus. Through its partnership with the International Dispensary Association, CPM provided technical presenters to the annual pharmaceutical management course in Amsterdam. CPM also conducted national training courses on rational use of medicines in Turkey and Vietnam.

Funding

The RPM Plus worldwide cooperative agreement had an initial total estimated cost of $37,038,852 through the original agreement end date of September 30, 2005. In September 2003, a three-year extension to September 2008 raised the estimated cost to $98,035,912 as a result of increased interest in the RPM Plus mechanism and buy-in by various countries and regions. USAID approved a second ceiling increase to an estimated $162,035,912 in June 2005 in response to the increased need of RPM Plus's technical expertise to support the U.S. President's Emergency Plan for AIDS Relief. A final extension to March 30, 2009 was approved in September 2008, which allowed the finalization and close-out of specific RPM Plus activities. This extension incurred no additional cost. Of the total agreement ceiling, $155,614,798 was obligated upon conclusion of the agreement term. Total project expenditures were within the amount obligated and activities were completed by the agreement end date.

GLOBAL PROGRAMS

Strategic Objective-5 Antimicrobial Resistance Final Report 2000–2008

Background

Antimicrobial resistance (AMR) is a global public health threat that is rapidly rendering many first-line treatments ineffective. Because the global problem of AMR is complex and cannot be addressed by a single organization, RPM Plus's long-term strategy for Strategic Objective-5/AMR was to work with international health care organizations and national and local health officials to develop policies and strategies to improve the treatment of infectious diseases and slow the emergence of AMR.

In 2001, the World Health Organization published *The Global Strategy for Containment of Antimicrobial Resistance*. This key document provides an operational framework and a comprehensive set of containment-related interventions which reflect AMR's multifactorial nature. However, countries have been slow to operationalize the strategy, particularly in resource-constrained settings. RPM Plus has addressed this gap by helping build capacity to: (1) catalyze country and regional level AMR advocacy and containment, (2) improve hospital infection control practices, (3) improve antimicrobial management and use, (4) generate AMR information and communication, (5) support AMR/antimicrobial use research, and (6) strengthen quality assurance of antimicrobials. These focus areas, which mirror the global strategy recommendations, form a package of containment activities that target the key factors that contribute to AMR.

Technical Objectives

- Support the development of policies and strategies at the national and local levels to improve antimicrobial drug use and subsequently slow the spread of AMR.
- Increase knowledge of effective prevention and management of infectious diseases by health care practitioners.
- Enhance the capacity of researchers in developing countries to research, publish, and implement interventions to improve antimicrobial drug use.
- Improve and rationalize the hospital infection control process to decrease the incidence of nosocomial infections.

Major Accomplishments

- Established country-level AMR working groups in Zambia and Ethiopia and expanded coalitions that carried out local AMR advocacy and containment activities.

- Fostered a subregional alliance in Bolivia, Paraguay, and Peru under the South American Infectious Diseases Initiative in partnership with other international organizations.

- Capacitated health professionals to make evidence-based and cost-effective decisions on selecting and using medicines rationally through Drug and Therapeutics Committee (DTC) training, training-of-trainers, and follow-up programs. In 21 DTC courses, RPM Plus and partners trained 824 participants from 69 countries, who established or restructured over 85 DTCs and implemented hundreds of DTC-related interventions in resource-constrained settings.

- Generated significant awareness and improvement in infection control practices in South Africa, Swaziland, and Guatemala based on a self-assessment and continuous quality improvement approach designed and field-tested under RPM Plus.

- Strengthened local capacity for conducting research on AMR and antimicrobial use in resource-constrained countries—

    - Supporting the Secretariat for the International Network for Rational Use of Drugs.

    - Providing technical assistance to researchers in developing countries under the Joint Research Initiative for Improving Use of Medicine.

    - Co-organizing the 2004 International Conference on Rational Use of Medicines.

    - Conducting promoting rational drug use training courses in collaboration with other partners.

        - Helped the pharmaceutical regulatory authority and a faith-based organization in Zambia integrate standardized processes into their pharmaceutical product quality assurance system through training and follow-up technical assistance.

        - Educated Voice of America reporters on AMR topics to encourage media coverage of AMR stories.

        - Provided technical assistance in the conduct of AMR/drug use intervention research with Joint Research Initiative for Improving Use of Medicines in Thailand, the Philippines, Indonesia, Uganda, Zambia, Nepal, Vietnam, Moldova, Kenya, and Tanzania.

        - Provided technical assistance to the Tanzania Food and Drugs Authority, the Churches Health Association of Zambia, and the Pharmaceutical Regulatory Authority in Zambia to increase their capacity to assure medicine quality assurance through laboratory testing and pharmacovigilance activities.

Key Tools and Publications

Building Local Coalitions for Containing Drug Resistance: A Guide

Containing Antimicrobial Resistance: Guide for USAID Missions to Institution-Based Interventions

Drug and Therapeutics Training Course for participants and trainers

Infection Control Self-assessment Tool

How to Investigate Antimicrobial Use in Hospitals: Selected Indicators

Demographic and Health Survey: AMR Module

Patient Adherence Record tool to measure adherence to antiretroviral therapy

AMR Field Guide for USAID Missions

Conference Presentations

International Pharmaceutical Federation 2007

Taking Action on Antimicrobial Resistance in a Kenyan Hospital: Experience of a Drug and Therapeutics Committee [poster]

Global Health Council 2006

Lessons learned from a country-level approach for advocacy and containment of antimicrobial resistance [poster]

American Public Health Association 2006

Improving adherence to HIV/AIDS treatment in South Africa by using a computerized pharmacy tool to transfer care to local clinics [poster]

Development of a multi-method medication adherence assessment tool suitable for antiretroviral therapy facilities in resource-constrained settings [oral]

Global Health Council 2007

Partnerships to Strengthen Drug and Therapeutics Committees [poster]

Global Health Council 2008

Improving Hospital Infection Control: South Africa and Swaziland [poster]

Collaborating Organizations

Academy for Educational Development

Alliance for Prudent Use of Antibiotics

American International Health Alliance

Applied Research for Child Health (ARCH) Project

Boston University

Harvard University

International Network for Rational Use of Drugs

Joint Research Initiative for Improving Use of Medicines

LinksMedia

ORC Macro

South East African Combination Anti-malarial Therapy

U.S. Pharmacopeia Drug Quality and Information Program

University of Cape Town

University Research Co. /Quality Assurance Project

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various ministries of health, AMR task forces, other government agencies, health care facilities, and pharmacy and therapeutic committees as partners in our AMR activities, in addition to collaborating organizations that may not have been mentioned above.

Strategic Objective-3 Child Survival Final Report 2000–2008

Background

The success of interventions to combat the major conditions contributing to child mortality—malaria, diarrhea, acute respiratory infections, measles, malnutrition, HIV/AIDS—is dependent on the availability, appropriate management, and rational use

of medicines in the community. RPM Plus strived to increase global and national awareness of the crucial role of pharmaceutical management in strategies to reduce child mortality and to strengthen local capacity to improve access to and use of high-quality medicines for children in the public and private sectors and in the community. In addition, the program itself leveraged activities within RPM Plus—especially related to malaria—to strengthen child survival.

RPM Plus child survival activities funded under Strategic Objective 3 complemented USAID/Africa Bureau child survival interventions. There was, therefore, a high degree of collaboration between the two teams, and activities were leveraged through both offices to produce greater impact.

Technical Objectives

- Enable decision makers, managers, and service providers to identify and monitor strengths and weakness in pharmaceutical management for child health through the use of tools targeting public and private providers and caregivers.

- Increase the capacity of decision makers and service providers to design and apply appropriate interventions to improve availability and use of child health pharmaceuticals and commodities.

- Contribute toward shaping global child health strategy to include drug management through collaboration with international bodies and other organizations.

- Increase access to and use of child health drugs through initiatives involving the private sector.

Major Accomplishments

- Worked with the World Health Organization (WHO) to integrate a pharmaceutical management component into WHO's Integrated Management of Childhood Illness (IMCI) Facility Health Survey; applied the survey in several countries including Kenya, Madagascar, Malawi, and Senegal.

- Partnered with important players in child survival including Basic Support for Institutionalizing Child Survival (BASICS), the CORE Group, and other nongovernmental organizations to incorporate pharmaceutical management components into child survival programming, especially in community case management activities.

- Played a major role in drafting international guidelines to implement new global recommendations on the clinical management of diarrhea, including collaborating with partners to develop a diarrhea management assessment tool; applied the tool in Madagascar and Indonesia.

- Contributed to WHO guidelines for child health program managers.

- Collaborated with partners to develop methodologies to track country-level financial commitment to child survival; estimated two countries' expenditures on commodities.

- Developed the community drug management for childhood illnesses (C-DMCI) assessment tool and software to assess household and health provider practices related to managing medicines for sick children.

- Conducted C-DMCI assessments in Guinea, Senegal, Uganda, and Zambia to identify barriers to effective pharmaceutical management and target interventions.

- Used DMCI results to work with the Ministry of Health in Senegal to improve inventory management in public health facilities: trained 323 health providers and 1,060 store keepers in store management.

- Conducted C-DMCI assessments in Cambodia, Democratic Republic of Congo (DRC), Peru, Tanzania, and Senegal, and in Zambia and the Cambodia-Thai border specifically for malaria; worked with local stakeholders to address assessment results.

- Advocated for the Senegalese government to allow private wholesalers to purchase essential generic medicines, including oral rehydration solution, from the central medical stores to increase access in the private sector.

- Partnered with the Senegalese Ministry of Health and the syndicate of private pharmacists to orient 232 pharmacists and train 294 sales assistants in managing childhood illness based on IMCI and to develop a monitoring program for ongoing support.

- Integrated a child health package into the accredited drug dispenser outlet program in Tanzania; trained more than 1,373 dispensers to deliver child health services and conducted 330 supportive supervision visits.

- Set up a pilot project with partners in Senegal to train and supervise community health workers to treat cases of childhood pneumonia with antibiotics; success resulted in the Ministry of Health integrating the practice into policy and scaling up nationwide.

- Integrated a pharmaceutical management component into the standardized community case management program in Senegal and DRC; developed simple tools for community health workers to track inventory and calculate needs.

- Trained community health workers in pharmaceutical management in community case management: 421 in DRC; 1,105 in Senegal.

- Created job aids for private pharmacies regarding the use of zinc in child health; contributed to an assessment of zinc in Madagascar; conducted forecasting and

quantification calculations for Madagascar's zinc needs; contributed to WHO's zinc implementation guidelines, with special attention to supply management and how to put policy into practice.

- Tracked expenditure on national procurements of tracer child survival commodities as part of a global effort to evaluate the progress of reaching the Millennium Development Goals; collected and analyzed data from Cambodia and Kenya; provided input for the procurement recommendations resulting from multiple projects.

Key Tools and Publications

French-language version of the *DMCI Manual, Data Collector's Guide,* and software

Community-Drug Management for Childhood Illness Tool (English, Spanish, French)

District Pharmaceutical Management for Childhood Illness Tool

Senegal Assessment: Drug Management for Childhood Illness [DMCI]

Using Accredited Drug Dispensing Outlets to Improve Management of Childhood Illness in Tanzania

Improving Child Health through the Accredited Drug Dispensing Outlet Program: Baseline Survey from Five Districts in Tanzania, September 2006

Community Drug Management for Childhood Illness: Senegal Assessment, September 2003

Drug Management for Malaria & Childhood Illness

Tracking Expenditures on Public Procurement of Commodities for Child Health: August 2005–January 2006

Training Manual for Private Pharmacy Staff Members in Managing Three Childhood Conditions: Diarrhea, Acute Respiratory Infection, and Malaria

Guinée : Evaluation de la Gestion des Médicaments des Maladies de l'Enfant Avril 2002 [Drug Management for Childhood Illness in Guinea: April 2002]

Managing Medicines and Supplies in Child Survival Programs: Action Guide for Program Managers

Improving child health through informed policy decisions and targeted interventions to strengthen medicine management in the community: the example of Senegal

Managing Drugs and Commodities in Child Survival Programs: Lessons from Senegal, Nigeria, DRC, Guinea and El Salvador.

Assessment for the Introduction of Zinc in the Treatment of Diarrhea in Madagascar

Community Assessment of Availability and Use of Medicines for Childhood Illness: Loreto and La Libertad Regions, Peru, 2003

Chapter on managing medicines for the *Community Case Management Essentials Guide* coordinated by the CORE Group

Improving Community Use of Medicines in the Management of Childhood Illnesses: A Guide to Developing Interventions (in collaboration with partners)

Contributed to *Implementing the new recommendations on the clinical management of diarrhea: guidelines for policy makers and program managers* published by WHO

Conference Presentations

Global Health Council 2007
Pharmaceutical Management of Childhood Illnesses: A Multi-Country Assessment [oral]

American Public Health Association 2007

Improving child health through informed policy decisions and targeted interventions to strengthen medicine management in the community: the example of Senegal [poster]

Global Health Council 2008

Don't Forget Medicines: Community Case Management in DRC [oral]

Collaborating Organizations

Academy for Educational Development

Basic Support for Institutionalizing Child Survival (BASICS)

Centre for Enhancement of Effective Malaria Interventions (Tanzania)

CORE Group

Harvard University

London School of Hygiene and Tropical Medicine

Pan American Health Organization

Partners for Health Reform Plus (PHR*Plus*)

Partnership for Maternal, Newborn and Child Health

Regional Centre for Quality of Health Care

Roll Back Malaria Partnership

Save the Children

United Nations Children's Fund

World Bank

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our child survival activities, in addition to collaborating organizations that may not have been mentioned above.

Common Agenda Final Report 2000–2008

Background

During the first year of the RPM Plus Program, USAID and RPM Plus staff developed a list of topics that were considered vital, but difficult to classify within a particular Strategic Support Objective. The Common Agenda (as the group of topics is now called) was intended to identify and provide funding to RPM Plus to address overarching health commodity issues. These topics have been classified into strategy areas listed below. Not all issues were addressed every year, but were addressed at some point over the lifetime of the RPM Plus Program. The source of funding was allocated within USAID as a proportion of all the separate Strategic Support Objective budget allocations.

Strategy Areas

- Improving availability and use of health commodities.
- Increasing and/or leveraging resources for health commodities with donors, foundations, the World Bank, and selected nongovernmental organizations (NGOs).
- Monitoring the impact of health sector reform on medicine availability and use and developing guiding principles based on lessons learned.

- Developing increased pharmaceutical management capacity to improve health system performance.

- Providing technical leadership and support in pharmaceutical management to global initiatives and Office of Population, Health, and Nutrition program strategies.

- Conducting joint country assessments of commodity management with John Snow Inc./DELIVER and other contractors, as appropriate.

- Promoting the development of a global pharmaceutical management and medicine use practices research agenda.

- Developing RPM Plus distance learning tools.

Major Accomplishments

- Created a pharmaceutical management module to contribute to the Pan American Health Organization/World Bank/International Dispensary Association pharmaceutical clearinghouse Web site.

- Designed and maintained the RPM Plus website, which was launched January 2002 (www.msh.org/rpmplus/). The website includes RPM Plus tools, training materials, methodologies, lessons learned, and information on best practices available for dissemination directly from the website or though links to the MSH Electronic Resource Center (http://www.msh.org/resource-center/index.cfm).

- Developed and disseminated brochures, information sheets, and success stories on RPM Plus activities and tools.

- Contributed to periodic publication and dissemination of the International Network for the Rational Use of Drugs' newsletter, *INRUD News*, including producing a regular insert featuring RPM Plus activities.

- Co-sponsored the International Conference for Improving the Use of Medicine 2004 (ICIUM2) in Chiang Mai, Thailand.

- Assisted the Commonwealth Regional Health Community Secretariat for East, Central and Southern Africa in exploring the feasibility of pooled procurement and establishing a regional pharmaceutical forum. Funding was leveraged by MSH's Center for Pharmaceutical Management using resources from the Rockefeller Foundation for a study to explore the feasibility of regional pooled procurement of pharmaceuticals in Sub-Saharan Africa, focusing on existing regional organizations.

- Helped Makerere University in Uganda conduct assessments of HIV/AIDS pharmaceutical supply management practices in four collaborating countries, Uganda, Kenya, Tanzania, and Rwanda. In addition to learning about HIV/AIDS

pharmaceutical management practices, the exercise provided experience to participants in how to conduct assessments.

- Developed comprehensive training materials for HIV/AIDS pharmaceutical management and supported the adaptation of these materials for use in Kenya, Namibia, Tanzania, and Uganda.

- Conducted a workshop for colleges of pharmacy in East and Southern Africa to incorporate HIV/AIDS pharmaceutical management components into pre-service curricula; Kenya and Uganda have adapted their curricula accordingly.

- Supported a regional training-of-trainers' course on HIV/AIDS pharmaceutical management for 36 representatives from academic institutions, ministries of health, and NGOs from Ethiopia, Kenya, Rwanda, Tanzania, and Uganda.

- Provided technical assistance to Makerere University and Muhimbili University to establish ongoing HIV/AIDS pharmaceutical management training programs. Makerere University worked with the Infectious Diseases Institute, the National AIDS Control Program, Ministry of Health, and the Catholic Relief Services to establish a biannual training program; Muhimbili University worked with the National AIDS Control Program and Ministry of Health to establish an annual training program. More than 100 health care workers managing HIV/AIDS commodities were trained in Uganda, while more than 40 were trained in Tanzania.

- Sponsored Makerere University and Muhimbili University to pilot the monitoring-training-planning (MTP) skills-building approach in 34 facilities in Kenya, Tanzania, and Uganda. From these countries' experience, MTP appears to be a cost-effective and sustainable intervention to build local human resource capacity.

- Provided technical assistance to carry out a survey on adherence to antiretroviral therapy (ART) in Ethiopia, Kenya, Rwanda, Tanzania, and Uganda to leverage the activities of another MSH program funded by the Swedish International Development Cooperation Agency. The survey collected information on current practices in measuring and calculating adherence and defaulting behaviors by patients receiving ART.

- Facilitated a memorandum of understanding to increase the capacity of Muhimbili University junior faculty through training at the University of Iowa College of Pharmacy.

- Worked with John Hopkins University School of Public Health and the University of Iowa College of Pharmacy to develop curricula that addresses pharmaceutical management for underserved populations.

- In collaboration with Remed (a French NGO) and International Dispensary Association, adapted the Managing Drug Supply training course materials for Francophone Africa and piloted the course.

Key Tools and Publications

Module on pharmaceuticals and commodities in the Family Health International/IMPACT publication, *Strategies for an Expanded and Comprehensive Response to a National HIV/AIDS Epidemic*

Managing Drug Supply training course (translated to French)

Improving Health Outcomes Through Pharmaceutical Management training course

QUANTIMED software tool

The Manager: Achieving Functional HIV/AIDS Services through Strong Community and Management Support (2002 Volume 11 Number 4)

The Manager: Improving Drug Management to Control Tuberculosis (2001 Volume 10 Number 4)

Collaborating Organizations

Applied Research for Child Health (ARCH)

Basic Support for Institutionalizing Child Survival II (project) (BASICS II)

CHANGE Project

John Snow Inc./DELIVER

Family Health International/IMPACT (Implementing AIDS Prevention and Care) Project

Health and Development Service (HANDS)

Population Council/HORIZONS

International Network for the Rational Use of Drugs

International Dispensary Association

Johns Hopkins University School of Public Health

Joint Research Initiative for Improving the Use of Medicines

Makerere University

Maternal and Neonatal Health Project

Muhimbili University

Newcastle University

Pan American Health Organization

Remed

The Tuberculosis Control Assistance Program

U.S. Pharmacopoeia Drug Quality and Information Program

United Nations Children's Fund

University of Iowa School of Pharmacy

World Health Organization

World Health Organization AIDS Medicines and Diagnostics Services

World Bank

Acknowledgements

We would like to acknowledge the various ministries of health, other government agencies, and health care facilities as partners in our Common Agenda activities, in addition to collaborating organizations that may not be mentioned above.

Global Fund to Fight AIDS, Tuberculosis and Malaria Bottleneck Relief Final Report 2007–2008

Background

RPM Plus received funds to support short-term technical assistance to Country Coordinating Mechanisms and Principal Recipients in selected countries to reduce bottlenecks and improve the function of Global Fund to Fight AIDS, Tuberculosis and Malaria grants. USAID Missions submitted proposals to USAID Washington to receive assistance. RPM Plus developed scopes of work jointly with local recipients, which were reviewed and agreed on by the Mission.

Technical Assistance Areas

- Governance, including aspects of the Country Coordinating Mechanism's function

- Program management
- Financial management systems
- Procurement and logistics management
- Multisectoral implementation
- Performance monitoring and evaluation

Major Accomplishments

- Assessed Global Fund malaria grant implementation in Nigeria, Guinea-Bissau, and Ghana and developed descriptive case studies on the implementation of Global Fund malaria grants in the three countries, with respect to the implementation of artemisinin-based combination therapies (ACTs); developed guidance documents for Principal Recipients on how to overcome grant bottlenecks.
- Helped develop a standard operating procedure manual on pharmaceutical management and a training manual on inventory and stock management in Senegal; helped orient regional and district teams using the manuals.
- Finalized standard operating procedures for warehousing, receiving, and issuing tuberculosis (TB) medicines in Vietnam. This document is used by National TB Program to standardized warehouse and distribution services and to build capacity of warehouse staff.
- Supported the central medical store in the Democratic Republic of Congo to plan for ACT and rapid diagnostic test procurement and distribution, including estimating ACT and rapid test needs for 2008 and 2009 and developing a tendering document.
- Served as a member of the National Committee of Drug Quality Surveillance in Senegal.

Key Tools and Publications

TB Commodity Distribution Planning, Monitoring and Evaluation: National Tuberculosis Program Guide [Vietnam]

Global Fund Grants for Malaria: Lessons Learned in the Implementation of ACT Policies in Ghana

Global Fund Grants for Malaria: Lessons Learned in the Implementation of ACT Policies in Guinea-Bissau

Global Fund Grants for Malaria: Lessons Learned in the Implementation of ACT Policies in Nigeria

Global Fund Grants for Malaria: Summary of Lessons Learned in the Implementation of ACT Policies in Ghana, Nigeria, and Guinea-Bissau

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We would like to acknowledge and thank the various ministries of health, national AIDS coordinating programs, national malaria control programs, national TB programs, other government agencies, and health care facilities as partners in our Global Fund activities.

Strategic Objective-4 HIV/AIDS Final Report 2000–2009

Background

The availability of medicines and other pharmaceutical products, including laboratory supplies, is an essential component of HIV/AIDS health strategies. However, the vast majority of people living with HIV/AIDS in developing countries do not have access to the medicines and other pharmaceutical products that could prolong and improve their lives. Improving access to HIV/AIDS-related pharmaceutical products presents many challenges, including challenges directly related to pharmaceutical management. Initially, RPM Plus concentrated its efforts on providing support for pharmaceutical procurement to USAID and its cooperating agencies and offering technical assistance to understand and address HIV/AIDS-related pharmaceutical management issues. As international support for scaling up access to HIV/AIDS care and treatment services continued to increase, however, RPM Plus turned its efforts to developing activities to support global, regional, and particularly country-level approaches to addressing HIV/AIDS-related pharmaceutical management issues.

Technical Objectives

- Contribute to improved coordination, exchange of information, and transfer of experience among international agencies, donors, countries, and USAID-funded cooperating agencies to maximize efficient and effective use of expertise and resources in addressing health commodity management issues related to developing an expanded response to the HIV/AIDS pandemic.

- Increase the capacity of USAID and USAID-funded cooperating agencies to procure quality drugs and commodities and identify, prioritize, and address pharmaceutical management issues to support the introduction or scaling up of HIV/AIDS programs and services.

- Increase the capacity of USAID, governments, and the private sector to identify, prioritize, and address commodity management issues that improve access to and use of quality medicines and commodities for HIV/AIDS programs.

- Provide technical leadership by identifying key issues, forming strategic partnerships, and developing and supporting approaches and initiatives to address HIV/AIDS-related commodity management issues at global and regional levels.

Major Accomplishments

- Reviewed the regulatory requirements for USAID-funded procurement of pharmaceutical products and presented options on facilitating the process for USAID and cooperating agencies. Several options have since been implemented, including those related to prequalification and source-origin waivers.

- Helped USAID and Family Health International/ Implementing AIDS Prevention and Care Project negotiate prices and procure antiretrovirals (ARVs) for learning sites in Ghana, Kenya, and Rwanda.

- Provided technical assistance to the Commonwealth Regional Health Community Secretariat to establish a regional pharmaceutical forum that address HIV/AIDS-related health commodity management issues and set up a regional pooled procurement system with an initial focus on ARVs among its 14 member states in East, Central, and Southern Africa. The Regional Pharmaceutical Forum was formally launched in August 2003.

- Worked to strengthen pharmaceutical supply systems to support the expansion of antiretroviral therapy (ART), Prevention of Mother-to-Child Transmission, and Voluntary Counseling and Testing (VCT) in Côte d'Ivoire, Ethiopia, Haiti, Kenya, Lesotho, Namibia, Rwanda, South Africa, Swaziland, Tanzania, Vietnam, and Zambia; for example, RPM Plus—

    - Collaborated with the Kenyan Ministry of Health to initiate the first public-sector ART program in the country in three facilities in Mombasa including building capacity to provide pharmacy and laboratory services. The first site began distributing ARV medicines in June 2003—an experience that paved the way for rolling out ART nationwide.

    - Worked with Coast Provincial General Hospital in Mombasa to develop an adverse drug reaction monitoring and reporting system for the ART program.

    - Conducted extensive assessments of the national pharmaceutical management systems in six countries to help design and scale-up HIV/AIDS services.

    - Provided technical assistance to strengthen VCT services in Zambia including development of a management information system.

  - Collaborated with WHO's AIDS Medicines and Diagnostics Service to identify global priorities, develop monitoring indicators, and disseminate tools.

  - Worked with the Global Fund to Fight AIDS, Tuberculosis and Malaria to identify bottlenecks and capacitate country programs to develop and implement critically needed procurement and supply management plans.

  - Developed the HIV/AIDS Pharmaceutical Management Training Course.

  - Adapted the Monitoring-Training-Planning (MTP) approach to build capacity in HIV/AIDS pharmaceutical and laboratory programs in Kenya; worked with Makerere University to implement MTP as part of a regional collaboration.

  - Developed and piloted the Laboratory for HIV/AIDS Services Training Course in Kenya.

- Collaborated with International Network on the Rational Use of Drugs (INRUD) to assess ART adherence in five East African countries and develop standardized adherence indicators and measurement tools.

- Drafted indicators for interagency guidelines, *National Reporting Requirements and Monitoring of Medicine Flows in Antiretroviral Treatment Programmes*, in collaboration with the World Health Organization's (WHO) AIDS Medicines and Diagnostics Service, John Snow Inc./DELIVER, and Booz Allen Hamilton/Supply Chain Management System project.

- In response to a request from the Elizabeth Glaser Pediatric AIDS Foundation, wrote two chapters for a publication promoting the comprehensive approach to HIV/AIDS care in resource-limited settings.

Key Tools and Publications

- *Commodity Management in VCT Programs: A Planning Guide* (2nd edition in 2008)

- *Preliminary Needs Assessment for an HIV/AIDS Health Commodities Planning and Cost Estimation Tool*

- *Prequalification: A Process to Facilitate Procurement of Non-FDA-Approved HIV/AIDS-Related Pharmaceutical Products*

- *Requesting USAID Approval to Procure HIV Test Kits and Other HIV/AIDS-Related Pharmaceutical Products: Guidance and Sources of Information*

- *HIV Test Kits Listed in the USAID Source and Origin Waiver: Procurement Information* (5th edition in 2009)

- Standard Operating Procedures for Pharmaceutical Services and Laboratory Services
- Adherence Promotion Planning Tool (electronic)
- ART Dispensing Tool (electronic)
- Quantimed (electronic)
- HIV/AIDS Commodity Tracking Tool (electronic)
- "Managing the Supply of Drugs and Commodities" in *Strategies for an Expanded and Comprehensive Response (ECR) to a National HIV/AIDS Epidemic*
- Contributed to *Operations Manual for Delivery of HIV Prevention, Care and Treatment at Primary Health Centres in High-Prevalence, Resource-Constrained Settings*, a WHO/Office of the U.S. Global AIDS Coordinator collaborative publication; also contributed to its accompanying country Adaptation Guide and Basic HIV Services document
- Contributed to *Programming Framework to Scale-Up Pediatric Care, Support and Treatment in Resource-constrained Settings* with the World Health Organization/United Nations Children's Fund Interagency Task Team
- Wrote "A strategy to improve skills in pharmaceutical supply management in East Africa; the regional technical resource collaboration for pharmaceutical management," which was published in *Human Resources for Health*, December 2008
- Wrote "Expanding the Role of Pharmacy Staff in Antiretroviral Therapy" and "Managing Medicines and Supplies for HIV/AIDS Program Scale-Up" for *From the Ground Up: Building Comprehensive HIV/AIDS Care Programs in Resource-Limited Settings* published by the Elizabeth Glaser Pediatric AIDS Foundation in 2009

Conference Presentations

International Conference on AIDS and STIs in Africa 2003

Assessment of Health Care Services before Introducing ART in Mombasa, Kenya [poster]

Rapid Assessment Of Access To And Use Of ARVs In Mombasa, Kenya [oral]

Going To Scale: Strengthening Commodity Management Systems [poster]

International AIDS Society 2004

Developing a web-based HIV/AIDS information-sharing network: data collection and dissemination [poster]

HIV/AIDS-related pharmaceutical price comparisons [poster]

Assuring sustained access to PMTCT commodities in Ethiopia through establishment of an integrated distribution system [poster]

Strengthening the VCT information and commodities supply system and integrating VCT and PMTCT activities in Zambia [poster]

Assessing the pharmaceutical supply system in Namibia to support expansion of PMTCT and ART activities [poster]
Increasing access to quality pharmaceuticals and other commodities for the treatment, care, and support of HIV/AIDS patients: a case for regional collaboration for procurement [poster]

Enhancing collaboration for HIV/AIDS-related pharmaceutical management in East, Central, and Southern Africa: establishing a regional pharmaceutical forum [poster]

Review of antiretroviral therapy (ART) guidelines in selected countries of Africa and the Caribbean: A challenge for optimizing treatment and product supply [poster]

The pharmaceutical supply system in Haiti: An assessment to support expansion of VCT/PMTCT activities [poster]

Developing commodity procurement support for the PMTCT program in Ethiopia [poster]

Are pharmaceutical services in the public sector ready for the implementation of antiretroviral treatment on a large scale? [poster]

Scaling up access to ART in resource-limited settings: integrating ART programs into existing pharmaceutical management systems to support sustainable quality care in Mombasa, Kenya [poster]

Access to HIV/AIDS-related essential medicines: a framework for measurement [poster]

Strengthening Good Laboratory Practices in resource-limited settings to support the introduction and scale up of ART: a case from Coast Provincial General Hospital [poster]

Defining an assessment approach to improve medicine and commodity management for PMTCT programs [poster]

International Association of Physicians in AIDS Care 2006

Interventions to Improve Adherence to Antiretroviral Therapy: A Review of the Evidence [poster]

Interventions to Enhance Use of VCT and PMTCT Services and Improve Adherence to ART: Findings from a Survey of Developing Country Experience [poster]

International Association of Physicians in AIDS Care 2007

An analysis of the ART adherence monitoring and promotion practices in five East African countries [oral]

Global Health Council 2005

Pharmaceutical Management Collaboration between Tuberculosis and HIV/AIDS Programs in Ethiopia [oral]

International AIDS Society 2006

Improving the availability of ARVs in Namibia by using policy change to streamline the drug registration process [oral]

Analyzing medication adherence measurement tools in predicting antiretroviral treatment outcomes in resource-limited settings [poster]

Assessment of pharmaceutical management systems in support of the Kenya national antiretroviral program [poster]

Using assessment data to empower a regional pharmaceutical forum in Africa supporting scale-up of antiretroviral therapy [poster]

The analysis of ART regimens used in seven developing countries: impact on forecasting needs and rational drug use [poster]

Challenges and solutions to quantification of antiretrovirals in Sub-Saharan countries [poster]

Establishing a coordinated procurement and distribution system for ARVs in Rwanda [poster]

Keeping track of obligated and incoming HIV/AIDS commodities [poster]

HIV Implementers Meeting 2006

Building local capacities to strengthen the HIV/AIDS pharmaceutical management system in Côte d'Ivoire [poster]

Improving adherence by decentralizing ART to local clinics in South Africa using a computerized pharmacy tool [poster]

Development of a multi-method medication adherence assessment tool suitable for antiretroviral therapy facilities in resource-constrained settings [poster]

Interventions to improve pharmaceutical management in ART programs in Namibia [poster]

Improving the availability of ARVs in Namibia by using policy change to streamline the drug registration process [poster]

Analyzing medication adherence measurement tools in predicting antiretroviral treatment outcomes in resource-limited settings [poster]
Using a simple pharmaceutical management information tool to support ART in Kenya [poster]

Establishing a coordinated procurement and distribution system for ARVs in Rwanda [poster]

Integrating quality pharmaceutical management systems to support ART: Experience in three coastal art sites in Kenya [oral]

Using rapid assessment results to strengthen pharmaceutical management systems to support national ART program scale-up in Kenya [oral]

Tracking ARV drugs for rapidly expanding programs: Use of an electronic inventory tracking tool to support ARV supply chain management [oral]

Strengthening and integrating laboratory services in resource-limited settings to support ART: Coast Provincial General Hospital, Mombasa, Kenya [oral]

American Public Health Association 2006

Improving access to treatment for children living with HIV/AIDS: changing pharmaceutical management policies to support scale up of pediatric ART [poster]

Analyzing HIV/AIDS drug regimens in seven developing countries to monitor and evaluate forecasting needs and rational drug use [poster]

American Public Health Association 2007

Building a regional network of academic experts to increase capacity in pharmaceutical management in East Africa [oral]

HIV/AIDS treatment adherence monitoring and promotion policies and practices in East Africa [poster]

HIV Implementers Meeting 2007

Reasons for Switching Highly Active Antiretroviral Therapy (HAART) Regimens Among HIV/AIDS Patients in Low-Resource Settings: Mbagathi District Hospital, Kenya [oral]

A New Approach to Simplify the Quantification of ARVs at Site Level: Rwanda [oral]

HIV Implementers Meeting 2008

Cross-Fertilization of Global Fund Grant Experiences to Achieve Country-Level Program Success [poster]

Collaborating Organizations

AIDS Medicines and Diagnostics Service

Booz Allen Hamilton/Supply Chain Management System Project

Commonwealth Regional Health Community Secretariat

Elizabeth Glaser Pediatric AIDS Foundation

Family Health International/ Implementing AIDS Prevention and Care Project

Global Fund to Fight AIDS, Tuberculosis and Malaria

International Network for the Rational Use of Drugs

John Snow Inc./DELIVER

Macro International /MEASURE DHS

Makerere University

Population Council/HORIZONS

United Nations Children's Fund

World Health Organization/United Nations Children's Fund Interagency Task Team

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Mainstreaming Initiative Final Report 2005–2008

Background

The purpose of USAID's Health System Strengthening Mainstreaming Initiative was to identify cost-effective ways to put the combined knowledge, expertise, and tools from USAID's many health system strengthening projects at the service of USAID's large bilateral health service delivery projects and to improve the capacity of these projects to achieve health objectives. The Mainstreaming Initiative represents an effort to systematize the lessons from these past experiences, including those in pharmaceutical management, which are applicable at the service delivery level.

Technical Objectives

- Provide technical leadership in pharmaceutical management systems as part of the larger health services delivery system.
- Develop pharmaceutical management capacity to improve health system performance.
- Improve the performance of pharmaceutical management systems.

Major Accomplishments

- Worked with collaborators to design a modular health systems assessment tool that covers stewardship and governance, health financing, human resources and health facilities, pharmaceutical supply systems, private sector engagement, service delivery, and health information systems; field tested the tool in Benin and revised the pharmaceutical management module.
- Participated in a technical seminar held at the National Press Club regarding the assessment tool; contributed to the design and facilitation of a workshop at the Global Health Council conference on how to use the tool.
- Helped draft e-leaning materials based on the health systems assessment tool.

- Assessed Azerbaijan's pharmaceutical quality laboratory procedures and operations, including evaluating pharmaceutical quality laboratory equipment, identifying gaps in skills and procedures, suggesting interventions for strengthening, and recommending standard operating procedures that may be required for the laboratory to perform its functions.

Key Tools and Publications

Health Systems Assessment Approach Manual/Tool

Collaborating Organizations

Partners for Health Reform*plus* (now Health Systems 20/20)

Quality Assurance Project

Policy Project

Council of Independent States Drug Quality Laboratory (Azerbaijan)
U.S. Pharmacopeia Drug Quality and Information Program

Strategic Objective-5 Malaria and Malaria Action Coalition Final Report 2001–2008

Background

In 2001, RPM Plus's malaria activities began with helping countries that were facing malaria drug resistance shift to more effective artemisinin-based combination therapies (ACTs). In addition, RPM Plus has long promoted the importance of pharmaceutical management in global dialogues on access to effective treatments. More recently, efforts shifted toward providing regional and country-level assistance in implementing treatment programs and building capacity through pharmaceutical management training. Now, with the Global Fund encouraging countries to use their grants to procure ACTs and the President's Malaria Initiative emphasizing ACT distribution, RPM Plus partners rely on RPM Plus' expertise to facilitate this transition.

RPM Plus was also one of the four primary technical partners of the Malaria Action Coalition (MAC). MAC supported Roll Back Malaria (RBM) and coordinated with national governments, subregional networks, the private sector, and other RBM partners to provide technical support for RBM goals (60 percent prompt and effective treatment of malaria illness, particularly for children under five; and 60 percent access of pregnant women to intermittent preventive treatment) from 2002–2007.

Technical Objectives

- Support the development of effective antimalarial drug polices at the global, regional, and country level.

- Enhance the understanding of policymakers about household and community antimalarial drug use by effective development of interventions for implementation of drug management.

- Enhance the rational use of antimalarials through interventions at the global, regional, country, provider, and user levels.

- Enhance the capacity of prenatal services to improve the treatment and prevention of malaria in pregnant women.

- Engage the private sector for effective management of malaria and cost-reduction strategies at the global and country level.

Major Accomplishments

- Assessed 20 countries' and one region's capacity to manage pharmaceuticals and supplies for malaria control, including readiness to implement ACTs.

- Helped 15 countries change their first-line treatment policy to ACTs, from the evaluation and planning stage to the rollout of the new policy.

- Evaluated how malaria medicines are managed and used in the community in five countries and worked with governments to increase access to antimalarials through the private sector and improve home-based management.

- Worked to increase capacity within countries to quantify and procure malaria medicines and commodities; for example, quantified needs to treat pregnant women in Ghana and made recommendations to the Ministry of Health on the best procurement process.

- Helped assure the timely distribution of antimalarial medicines; for example, in Uganda, RPM Plus overcame the government's delivery backlog of 3.8 million ACT doses and worked with the Ministry of Health to address long-term distribution issues; in Angola, RPM Plus helped the government integrate ACTs into the existing medicine supply system. In one year the public sector treated 450,000 people with ACTs.

- Provided long-term continuous support to Kenya in malaria control: worked with the National Malaria Control Program and the Kenya Medicine Supply Agency to design and implement an ACT policy, develop implementation committees, quantify ACTs, and train in pharmaceutical management.

- MAC partners assisted countries with malaria treatment policy review/change and set up mechanisms to regularly review existing policies. MAC support resulted in 21 and 11 countries reviewing and updating their case management and malaria in pregnancy policies respectively.

- Designed a qualitative study to identify the barriers and facilitators for the effective introduction of malaria in pregnancy interventions through antenatal care services in Senegal; carried out the research in two districts in Senegal, Dakar and Kaolack.

- MAC partners developed and implemented several tools to help countries identify strengths and weaknesses in existing capacity and helped design appropriate interventions to improve capacity. As a result of this support, 17 countries increased capacity in management and use of antimalarials; 7 countries developed appropriate procurement plans; 5 countries reviewed or developed pharmacovigilance systems for antimalarials; and 13 countries increased capacity in malaria in pregnancy services as part of focused prenatal care.

- MAC partners supported four countries in the development of behavior change and information, education, and communication materials for malaria case management services.

- MAC partners helped 22 countries and regional networks develop their Global Fund grant or subsequent procurement and supply plan (including reprogramming funds for ACT procurement).

Global Technical Leadership

- Member of the Malaria Action Coalition with World Health Organization/Africa Region, U.S. Centers for Disease Control and Prevention, and JHPIEGO/ACCESS to coordinate efforts in Africa among RBM partners to attain goals in case management and malaria during pregnancy.

- Founding member of RBM East Africa Regional Network; West Africa Regional Network; Central Africa Regional Network and Southern Africa Regional Networks.

- Member of the RBM Case Management Working Group; Malaria in Pregnancy Working Group; and Procurement and Supply Management Working Group (co-chair).

- RPM Plus staff member supported the RBM Partnership Secretariat.

- Provided multi-level support to the Global Fund to Fight AIDS, Tuberculosis and Malaria: for example, organized and participated in workshops on procurement and supply management and supported reprogramming for ACTs.

Key Tools and Publications

Drug Management for Malaria Assessment Guide

Saving Lives, Buying Time (contributor)

Road Map for Scaling Up ACTs: 2004 and Beyond

Changing Malaria Treatment Policy to Artemisinin-Based Combinations: An Implementation Guide

The Manager: Addressing the Challenges of Malaria Control, 2003: Volume 12 Number 1

Malaria in Pregnancy Toolkit (contributed a chapter on pharmaceutical management)

Collaborating Organizations

Access to Clinical and Community Maternal, Neonatal and Women's Health Services Program (ACCESS)

Academy for Educational Development

Affordable Medicines Facility for Malaria Taskforce

Applied Research for Child Health (ARCH) Project

Global Fund to Fight AIDS, Tuberculosis and Malaria

Harvard University

Institutes of Medicine (U.S.)

Interdisciplinary Monitoring Program for Antimalarial Combination Therapy in Tanzania

Jhpiego

Malaria Medicines and Supplies Service

Maternal and Neonatal Health/Jhpiego

Roll Back Malaria Partnership

U.S. Centers for Disease Control and Prevention

United Nations Children's Fund Supply Division

U.S. Pharmacopeia Drug Quality and Information Program

Wellcome Trust

World Bank

World Health Organization

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We would like to acknowledge and thank the various ministries of health, national malaria control programs, other government agencies, and health care facilities as partners in our malaria activities, in addition to collaborating organizations that may not have been mentioned above.

Prevention of Mother-to-Child Transmission Final Report 2004–2009

Background

The U.S. President's HIV/AIDS Initiative, which was the precursor to the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), focused on treatment and care for HIV-infected pregnant women to reduce transmission of HIV to infants. In 2003, the RPM Plus Program began working with USAID and other government agencies to identify pharmaceutical management issues that would need to be addressed to support the new HIV/AIDS initiative. The activities were intended to benefit USAID/Washington, the Missions, and other appropriate U.S. agencies and partners to scale-up prevention of mother-to-child transmission (PMTCT) and HIV/AIDS service delivery programs.

Technical Objectives

- Develop and apply new tools and approaches in pharmaceutical management to support HIV/AIDS services.

- Provide technical assistance in pharmaceutical management in support to HIV/AIDS programs.

Major Accomplishments

- Conducted a pharmaceutical sector assessment in Côte d'Ivoire, including an evaluation of the pharmaceutical management software at use in the Public Health Pharmacy; hosted a strategy option workshop to develop consensus on the mix of interventions needed to respond to issues raised in the assessment.

- Developed the Commodity Tracking Tool, which is a web-based information-sharing tool used to track requested, donated, and procured commodities in support of various global HIV/AIDS initiatives.

- Provided technical assistance in procuring pharmaceuticals to several countries, including Haiti, Kenya, Ethiopia, Armenia, Albania, Sudan, and Peru.

- Developed a special component for HIV/AIDS programs for Quantimed, an electronic quantification tool that facilitates order planning and budgeting by determining the quantities of drugs and medical commodities needed.

- Developed a standardized approach/tool to assess the capacity of country-level pharmaceutical sectors and HIV/AIDS and PMTCT service facilities to receive and manage HIV/AIDS-related pharmaceuticals and other health commodities.

- Provided technical support to USAID in thinking through strategies and options to support procurement and pharmaceutical management issues for HIV/AIDS programs; drafted a procurement guidance document that included flow matrix delineating the necessary steps for medicines procurement through to the delivery at the point of service; developed checklists and templates to support pharmaceutical procurement.

- Drafted laboratory training materials to support HIV/AIDS laboratory services.

- Reviewed and updated the *VCT Commodity Planning Guide*.

Key Tools and Publications

Commodity Tracking Tool

Quantimed

Requesting USAID Approval to Procure HIV Test Kits and Other HIV/AIDS-Related Pharmaceutical Products: Guidance and Sources of Information (draft)

VCT Commodity Planning Guide
RxSolution (French translation)

Collaborating Organizations

European Union

Global Fund to Fight AIDS, Tuberculosis and Malaria

Public Health Pharmacy (PSP-CI) [Côte d'Ivoire]

Retro-CI Project [Côte d'Ivoire]

United Nations Children's Fund

U.S. Centers for Disease Control and Prevention

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our HIV/AIDS and PMTCT activities, in addition to collaborating organizations that may not have been mentioned above.

Strategic Objective-2 Maternal Health and Nutrition and Reproductive Health Final Report 2000–2008

Background

In large parts of the developing world, women lack access to basic reproductive health services, including those needed for safe motherhood. Though a limited number of skilled providers and long distances to facilities play a role, the lack of high-quality medicines and supplies also contributes to maternal morbidity and mortality. Of particular importance are uterotonics, which are used in many interventions for safeguarding maternal health. This class of drugs, for the most part, requires careful management and monitoring, as they are susceptible to heat, light, or both. In addition, governments and organizations implementing maternal and reproductive health programs often lack the information necessary for assessing the cost and quantity of drugs and other required commodities.

USAID supports interventions and activities to address maternal health problems through Strategic Objective 2. In 2004, USAID launched an initiative, the Prevention of Post-Partum Hemorrhage Initiative (POPPHI), to support national efforts in priority countries to reduce maternal mortality by preventing post-partum hemorrhage through the promotion and expansion of the practice of active management of the third stage of labor (AMTSL).

Throughout its eight years, RPM Plus developed and improved the tools available to program managers and health planners to quantify and estimate the costs of the health products needed to offer quality maternal health services. In addition, RPM Plus promoted pharmaceutical management principles for maternal health interventions.

Technical Objectives

- Improve the availability and use of commodity and other program cost information to enable effective decision-making and resource allocation by maternal and reproductive health program managers.

- Improve maternal health program planning and service delivery with respect to pharmaceutical and commodity management issues by forming strategic partnerships with and providing technical leadership to USAID and cooperating agencies working in maternal health.

- Enhance the capacity of government and nongovernmental organizations to manage medicines and supplies for key maternal health services.

- Improve the capacity and awareness of global maternal health initiatives and partners in addressing pharmaceutical management issues.

Major Accomplishments

- Developed and applied the Cost-Estimate Strategy, a planning, budgeting, and management tool for estimating the costs of a program's reproductive health commodity requirements and assessing the status of commodity management; used the tool in a number of health care settings in Africa.

- Collaborated on the development of the Strategic Pathway to Reproductive Health Commodity Security methodology, which was designed to help a country develop, implement, and monitor a strategy to improve access to reproductive health commodities. The framework consists of several components: a process guide and six technical areas (service delivery, logistics, demand, finance, policy, and capacity).

- Developed a costing framework tool called Quantimed, which was designed to help identify and estimate the costs of piloting and scaling-up maternal health interventions; field-tested the tool to introduce intermittent preventive treatment of malaria in pregnancy into prenatal care services in Kenya; used Quantimed to estimate and cost the reproductive health medicines and supplies needed in reproductive health services in the developing world from 2003–2015.

- With partners, developed a results framework to implement POPPHI including standardized indicators, assessment instruments, and a baseline measurement tool; prepared instruments to identify and assess pharmaceutical management issues, such as the availability and use of appropriate medicines; helped carry out assessments using the framework in Ethiopia, Zambia, Ethiopia, Mali, and Benin.

- Created tools to collect national level data to examine standard treatment guidelines and policies in support of AMTSL; collected data in Côte D'Ivoire, Mali, Benin, Burkina Faso, and Cameroon; used the data to explore the potential for harmonizing guidelines as an initial step in establishing pooled procurement procedures in West Africa.

- Conducted two quantification workshops for procurement personnel from Francophone and Anglophone countries in West Africa.

- With partners, helped develop materials to conduct national surveys to advance understanding of AMTSL policy and practices at the national and facility level and to identify major barriers to its use; contributed to national surveys in Benin, Mali, and Ghana; presented AMTSL study findings in Benin to local, national, and international stakeholders working to promote AMTSL.

- Provided pharmaceutical management support with special focus on the AMTSL scale-up in Mali.

- Developed a pharmaceutical management section that was integrated into the POPPHI training and resource package.

Key Tools and Publications

Cost-Estimate Strategy Tool

Quantimed

Facility-level Assessment Tool: POPPHI AMTSL Global Survey (English and French)

National-level Assessment Tool: POPPHI AMTSL Global Survey (English and French)

Observations Assessment Tool: POPPHI AMTSL Global Survey (English and French)

Prevention of Postpartum Hemorrhage: Drug Management Issues in the Active Management of the Third Stage of Labor

Drug and commodity management in support of the prevention of post-partum hemorrhage (PPH): identifying program priorities.

Revue de la politique et des procédures d'utilisation des ocytociques pour la gestion active de la troisième phase de l'accouchement et la prévention d'hémorragie du post-partum dans quatre pays africains: Bénin, Burkina Faso, Cameroun, et Mali [Review of policies and procedures on use of uterotonics for the active management of the third stage of labor (AMTSL) and the prevention of post partum hemorrhage in four West Africa countries: Benin, Burkina Faso, Cameroon, and Mali]

Preventing postpartum hemorrhage: special initiative baseline assessment report: Benin, Mali, Ethiopia, Zambia

Presentations at Conferences

Preventing Mortality from Postpartum Hemorrhage in Africa: Moving from Research to Practice 2006

International Congress for Prevention of Postpartum Hemorrhage 2006

XVIII FIGO World Congress of Gynecology and Obstetrics 2006

Collaborating Organizations

Abt Associates

CARE

Department for International Development [U.K]

EngenderHealth

Futures Group

Harvard University

HealthTech

International Confederation of Midwives

International Federation of Gynecology and Obstetrics

IntraHealth

IntraHealth/PRIME II

Jhpiego/ Maternal and Neonatal Health (MNH) Project

Jhpiego/Access to Clinical and Community Maternal, Neonatal and Women's Health Services (ACCESS)

John Snow Inc./DELIVER

Making Pregnancy Safer Project

Population Action International

Population Services International

Program for Appropriate Technology in Health

RTI International

U.S. Centers for Disease Control and Prevention

United Nations Children's Fund

United Nations Population Fund

University Research Co./*Projet Intégré de Santé Familiale* (PISAF)

University Research Co./Quality Assurance Project

USAID Health Program/National Technical Assistance project

Wallace Global Fund

World Health Organization

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We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our maternal and reproductive health activities, in addition to collaborating organizations that may not have been mentioned above.

Strategic Objective-5 Tuberculosis Final Report 2000–2008

Background

Countries face many hurdles in reaching their global targets of detecting 70 percent of active tuberculosis (TB) cases and curing 85 percent of those cases. For example, national TB programs face challenges in pharmaceutical management, including stock-outs, poor quality and inappropriate use of medicines, insufficient resources to procure medicines, uncertainty about the second-line medicines required, and insufficient inventory management. RPM Plus has worked to increase both global and national awareness of the crucial role of pharmaceutical management in improving access to high-quality TB medicines and commodities. In pursuit of these goals, RPM Plus has provided technical leadership, capacity building and training, tools, and operations research.

Technical Objectives

- Improve capacity and awareness of TB global initiatives and partners in managing commodities for TB programs.

- Increase the capacity of TB programs to design, apply, and monitor appropriate interventions to ensure uninterrupted supply of quality TB commodities.

- Increase the evidence base for improvements in TB commodity management.

Major Accomplishments

- Collaborated with StopTB global initiatives—

- **Global Drug Facility (GDF)**: provided hands-on technical assistance to the GDF since its 2001 inception by providing on-site procurement specialists; helped develop and promote new GDF products, including patient kits, diagnostic kits, and pediatric products; participated in GDF monitoring missions in over 40 countries to determine if a country is eligible for GDF grants and procurement, to help calculate medicine needs, and to make recommendations to strengthen TB pharmaceutical management; with GDF, held five joint workshops at the annual Union World TB Conferences.

- **Green Light Committee (GLC):** developed a workshop on managing pharmaceuticals for multidrug resistant (MDR)-TB; developed a computerized system for monitoring pharmaceutical supply that links DOTS-Plus recipients of GLC medicines, pharmaceutical suppliers, and the GLC; conducted global market research of second-line TB medicines.

- **Stop TB Retooling Task Force**: developed *New Technologies for TB Control: A Guide for their Adoption, Introduction and Implementation*, which was published by the Stop TB Retooling Task Force; drafted a guide with case studies on how to identify and engage stakeholders in TB control retooling activities.

- Designed and conducted a study in Ethiopia, Kenya, Malawi, Tanzania, and Uganda to characterize how countries are establishing the mechanisms for TB/HIV collaboration and managing pharmaceuticals needed for interventions, such as HIV testing and counseling for TB patients, preventive treatment, and treatment adherence.

- Expanded the evidence base of whether, how, and how much incentives and enablers (I&E) can improve the performance of TB control programs, using a range of performance indicators. Activities included global, regional, and country-level workshops and in-country case studies; designed the *Motivations Mapping Tool* to help DOTS programs identify current performance problems, the underlying motivators to those problems, and potential incentives and enablers that can address motivational challenges. The mapping tool has been used by national TB programs in China, Tanzania, and Uganda; developed the *Operations Research and Evaluation Guide* to measure the effect of I&E activities on TB program performance.

- Evaluated national TB programs in Uzbekistan, Kazakhstan, Russia, Ukraine, Kosovo, and Dominican Republic; conducted pharmaceutical management information system surveys in Romania and Moldova.

- Conducted TB drug quality surveys in two drug quality laboratories in Kazakhstan.

- Developed and field-tested a course on Pharmaceutical Management in Treatment of MDR-TB.

- Helped develop a comprehensive monitoring system of TB patient kit use in Kenya to determine the impact of using patient packs on logistics management, personnel training, rational use of medicines, treatment outcomes, and progress toward program indicator targets; helped develop monitoring checklists and a methodology for data collection, monitored training and system implementation in one region in Kenya and provided technical support for the processing and analysis of the information. Based on initial results, the checklists and methodology were modified and applied throughout other areas in Kenya. Data were collected from a total of 240 randomly-selected study sites in 24 districts.

- Used the RPM Plus-developed indicator-based *Pharmaceutical Management for Tuberculosis Assessment Manual* to assess programs in Armenia, Azerbaijan, Cambodia, China, Congo (Brazzaville), Dominican Republic, Ethiopia, Georgia, Moldova, India (Uttar Pradesh), and Romania.

Key Tools and Publications

Pharmaceutical Management for Tuberculosis: Assessment Manual

Managing Pharmaceuticals and Commodities for Tuberculosis: A Guide for National Tuberculosis Programs (English, French, Spanish)

Managing TB Medicines at the Primary Level

Motivations Mapping Tool

Operations Research and Evaluation (OR&E) Guide

MDR-TB Drug Management Information System Tool

The Manager: Improving Drug Management to Control Tuberculosis, 2001 Volume 10 Number 4

Evaluating Tuberculosis Incentives and Enablers in the Context of Scale-up: Evidence and Experiences

Summary of Current Evidence: Using Incentives and Enablers for Improved DOTS Performance

New Technologies for TB Control: A Guide for their Adoption, Introduction and Implementation

New Technologies for TB Control: A Framework for their Adoption, Introduction and Implementation (contributor)

Design and In-Country Evaluation of TB Diagnostic Laboratory Kits

Managing Pharmaceuticals for TB/HIV Collaboration: Lessons Learned from a Five-Country Study in East Africa

Collaborating Organizations

All-Russia Drug Information Network

Boston University Center for International Health

Global Fund to Fight AIDS, Tuberculosis and Malaria

GTZ

Interagency Coordinating Committee on Tuberculosis

International Union Against Tuberculosis and Lung Disease

Japan International Cooperation Agency

Partners in Health/Harvard University

Project HOPE

Royal Netherlands Tuberculosis Association

Russian Center “Pharmedinfo”

Stop TB

U.S. Pharmacopeia Drug Quality and Information Program

USAID Tuberculosis Coalition for Technical Assistance

USAID/EQUITY Program

USAID/ZdravPlus Project

WHO EMRO

WHO South East Asia Regional Office (SEARO)

WHO Western Pacific Regional Office (WPRO)

WHO/Euro

World Bank

World Health Organization

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We would like to acknowledge and thank the various ministries of health, national TB programs, other government agencies, and health care facilities as partners in our TB activities, in addition to collaborating organizations that may not be mentioned above.

Africa Bureau Final Report 2000–2007

Background

Child Health

In many developing countries, child mortality remains unacceptably high. Childhood diseases such as malaria, diarrheal diseases, acute respiratory infections, measles, and malnutrition, in addition to HIV/AIDS, contribute substantially to infant and child mortality. In response to the high mortality caused by these main childhood illnesses, the Integrated Management of Childhood Illness (IMCI) strategy, developed jointly by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), has been implemented in numerous countries to offer program managers and service providers an integrated approach to effectively manage childhood illness. Notwithstanding considerable efforts to make essential IMCI medicines and other commodities available, significant gaps and management problems persist at various levels of the health system in many developing countries.

RPM Plus child survival activities funded under USAID/Africa Bureau complemented Strategic Objective 3 (SO4) Child Survival interventions, and both sets of activities supported SO3 and corresponding intermediate results. The activities were conducted through synergistic funding to produce greater impact, and the two workplans shared the same technical objectives.

Malaria

RPM Plus established a strong working relationship with groups and organizations to achieve the Roll Back Malaria (RBM) strategic objectives by developing activities aimed at improving pharmaceutical management for malaria at the global, regional, and country levels. In activities begun under the Rational Pharmaceutical Management project, RPM Plus continued to be involved with global malaria partners in pharmaceutical management activities, especially regarding the implementation of artemisinin-based combination therapy.

Activities carried out under RPM Plus Africa Bureau/Malaria complemented the RPM Plus Asia and Near East (ANE) Bureau and RPM Plus SO3-supported activities to promote the overall goal of reducing mortality and morbidity due to malaria by increasing the appropriate use of antimalarials in all populations at risk.

Regional Logistics Initiative

The USAID Bureau for Africa, Office of Sustainable Development supported RPM Plus regional initiatives through the Regional Logistics Initiative (RLI). The main thrust for RPM Plus regional interventions and activities was to improve pharmaceutical and commodity management systems and services for HIV/AIDS, tuberculosis, and malaria, among other diseases that contribute to the highest disease burden in sub-Saharan Africa. RPM Plus responded to regional needs by providing training to providers of pharmaceutical and commodity management services and by developing tools and applying them to improve the supply chain. This work was carried out through documentation and dissemination of pharmaceutical management and logistics better practices; south-to-south collaboration through workshops, meetings, and seminars; and capacity-building in pharmaceutical management and rational medicine use.

USAID/ Regional HIV/AIDS Program for Southern Africa (RHAP) identified the management of sexually transmitted infections (STIs) as a key component of its regional strategy to managing HIV/AIDS in the Southern Africa region. The cross-border initiative, known as the Corridors of Hope, focused on STI management at health facilities located at cross-border sites. A primary goal of the program was to increase access to comprehensive HIV/AIDS and STI services at these high transmission cross-border areas. USAID/RHAP asked the RPM Plus Program to assess pharmaceutical management including medicine availability and rational medicine use as a key component to the overall quality of care with regard to STI services.

Technical Objectives

Child Health

- Enable decision makers, managers, and service providers to identify and monitor strengths and weakness in pharmaceutical management for child health through the use of tools targeting public and private providers and caregivers.

- Increase the capacity of decision makers and service providers to design and apply appropriate interventions to improve availability and use of child health medicines in the public sector.

- Increase access to and rational use of child health medicines through initiatives involving the private sector.

- Contribute to shaping global child health strategy to include pharmaceutical management through collaboration with international bodies and other organizations.

Malaria

- Support the development of effective antimalarial pharmaceutical polices at the global, regional, and country level.

- Enhance the understanding of policy makers about household and community antimalarial medicine use practices to improve effective development of pharmaceutical management interventions.

- Enhance the rational use of antimalarials among providers and users by supporting global, regional, and country initiatives.

- Enhance the capacity of prenatal services to improve the treatment and prevention of malaria in pregnant women.

- Engage the private sector for effective management of malaria and cost-reduction strategies at the global and country level.

Regional Logistics Initiative

- Promote awareness among policymakers and decision-makers in health of key problems affecting commodity management and rational medicine use in the East and Southern Africa region and offer options for improvements.

- Disseminate better practices in medicines and logistics management.

- Support the development of pharmaceutical management capacity to improve health system performance in the region.

- Increase the capacity of USAID and USAID-funded cooperating agencies to procure quality medicines and commodities for HIV/AIDS programs.

- Increase the capacity of USAID and USAID-funded cooperating agencies to identify, prioritize, and address commodity management issues to support the introduction or scale-up of HIV/AIDS programs and services.

- Provide leadership to USAID to identify key issues form strategic partnerships and develop and support approaches and initiatives to address HIV/AIDS-related commodity management issues at global and regional levels.

- Increase the capacity of national governments and the private sector to identify, prioritize, and address commodity management issues to improve access to and use of quality medicines and commodities for HIV/AIDS programs.

Major Accomplishments

- Conducted a subregional Drug Management for Childhood Illness (DMCI) workshop in Senegal to introduce the DMCI tool and methodology, promote discussion of pharmaceutical management issues, identify strategies to improve availability and use of medicines in implementing IMCI, and foster collaboration and networking among IMCI managers and essential medicines managers in each participating country and in the region.

- Applied the DMCI tool in Senegal, in collaboration with Basic Support for Institutionalizing Child Survival (BASICS II) project; presented results to Ministry of Health (MOH) officials and other partners; helped IMCI managers and decision makers identify a set of interventions to address IMCI pharmaceutical management problems identified in the assessment.

- Applied the DMCI tool in Guinea with support from the PRISM project *(Pour Renforcer les Interventions en Santé reproductive et MST/SIDA)* and the collaboration of BASICS II; conducted a strategy option workshop to present the results to the MOH and partners and to develop appropriate strategies to address the results, which will form the basis of the MOH and the IMCI committees' planning.

- Collected data on antimalarial pharmaceutical management, availability, and medicine utilization in a field test of the Drug Management for Malaria tool in the Kwa Zulu Natal and Mpumalanga provinces of South Africa in collaboration with South East Africa Combination Antimalarial Therapy project.

- Conducted a study in collaboration with the WHO/TDR Research and Policy Task Force to evaluate and describe the processes and requirements for introducing new combination therapies in selected countries in Africa; reviewed published and unpublished literature and interviewed key informants to identify the legal and regulatory requirements and procurement procedures for fixed-dose, non–fixed dose, and pre-packaged combinations.

- Developed and administered a comprehensive questionnaire on a pooled procurement system for 11 countries at the East, Central, and Southern Africa region. As a result of the survey findings, health ministers adopted a resolution supporting regional pooled procurement initiatives in a bid to increase availability and access to HIV/AIDS medicines and medical supplies.

- Developed the Community Drug Management for Childhood Illness (C-DMCI) tool and field-tested it in Zambia and Senegal.

- Incorporated a pharmaceutical management component into WHO's IMCI health facility surveys in Kenya, Senegal, Mozambique, and Malawi based on the DMCI tool; planned and adapted data collection instruments, trained data collectors, supervised data collection, analyzed data and disseminating results; developing a

standard data entry and analysis sheet designed for in-country use to facilitate data analysis for the pharmaceutical management component of the IMCI survey. Materials were produced in English, Portuguese, and French.

- Provided technical support in advancing the community case management program in Democratic Republic of Congo; contributed to the final version of the community case management implementation guide; developed a training session on diarrheal disease case management including the treatment of zinc for community health workers.

- Assessed pharmaceutical management, including medicine availability and rational medicine use, in 25 health facilities located at 20 cross-border sites in five RHAP countries: Lesotho, South Africa, Swaziland, Zambia, and Zimbabwe. Research addressed the quality and availability of STI services, the availability of STI medicines and commodities, and how medicines and commodity management practices can be improved to support quality STI services in Corridors of Hope facilities.

Key Tools and Publications

Community Drug Management for Childhood Illness (C-DMCI) Tool

Assessment of Quality of Care and Pharmaceutical Management for Sexually Transmitted Infections at Health Facilities at Corridors of Hope Program Sites in Lesotho, South Africa, Swaziland, Zambia, and Zimbabwe

Community Case Management Essentials Guide (authored chapter on managing medicines)

Collaborating Organizations

Academy for Educational Development

Basic Support for Institutionalizing Child Survival (BASICS) II [project]

Boston University

Commonwealth Regional Health Community Secretariat

CORE Group

Crown Agents

Danish International Development Agency

Delivery of Improved Services for Health II [project]

Harvard University

John Snow Inc./DELIVER

Kenya Medical Association

Mission for Essential Drugs and Supplies

PRISM (*Pour Renforcer les Interventions en Santé Maternelle et MST/SIDA*)

Roll Back Malaria

South East Africa Combination Antimalarial Therapy [project]

U.K. Department for International Development

U.S. Centers for Disease Control and Prevention

United Nations Children's Fund

WHO/Pan American Health Organization

WHO/Regional Office for Africa

WHO/Tropical Disease Research Action and Policy

World Bank

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our child survival, malaria, and regional activities, in addition to collaborating organizations that may not have been mentioned above.

Asia Near East Bureau/Regional Development Mission for Asia Final Report 2000–2009

Background

In 2000, USAID developed a regional program to strengthen efforts to address HIV/AIDS and other infectious diseases in Asia and the Near East. This program has two areas of focus: strengthening surveillance systems and improving the capacity of Asia Near East countries to respond to infectious diseases.

RPM Plus started providing technical assistance in pharmaceutical management of malaria, tuberculosis (TB), HIV/AIDS, and child survival in the Asia Near East region in 2000. In 2003, the Regional Development Mission for Asia in Bangkok, Thailand, took over responsibility for managing USAID programs in the Southeast Asia region. RPM Plus' technical assistance included identifying problematic household and health care provider behaviors in the diagnosis and treatment of malaria, strengthening TB pharmaceutical management in China, and addressing issues in pharmaceutical management of HIV/AIDS.

In years 2002–2005, much of the emphasis was on developing appropriate methodologies to gather information, but then RPM Plus shifted efforts to assisting counterparts to use this information to guide decision-making in pharmaceutical policy and program management in malaria, TB, and HIV/AIDS programs.

Technical Objectives

- Strengthen the capacity of regional, national, country, and local decision makers to systematically identify, prioritize, and monitor pharmaceutical problems that promote the emergence of antimicrobial resistance.

- Enhance the capacity of governmental and nongovernmental organization (NGO) counterparts to utilize indicator-based information to guide the development and implementation of pharmaceutical management systems strengthening strategies.

- Expand the evidence base for developing and implementing effective medicine interventions in commodity management for infectious diseases.

- Increase the capacity of USAID, governmental, or NGO counterparts to maximize the efficient and effective use of resources for HIV/AIDS-related health commodities to support an expanded response to the HIV/AIDS pandemic.

- Increase the evidence base for improving TB commodity management.

- Strengthen the capacity of institutions in the region to provide technical assistance in pharmaceutical management.

- Increase access to and rational use of essential medicines through initiatives involving the private sector.

Major Accomplishments

- Developed the Community Drug Management Assessment Tool; adapted the instruments for use in Cambodia, including translating into Khmer language; conducted the study in nine districts along the Cambodian-Thai border; presented findings at a strategy development workshop of over 140 participants, who identified

problem areas in malaria medicine use practices, provided some potential causes of those problems, and suggested next steps.

- Conducted a case study of the World Food Program's ongoing experience with food incentives in Cambodia to gather knowledge about the effective use of food assistance to improve adherence to TB treatment regimens.

- Developed an operations research and evaluation protocol development guide that addresses questions specific to TB incentives and enablers schemes, provides support for country-level operations research, and evaluates TB incentives and enablers schemes to assess their impact on program performance.

- Provided technical assistance to help counterparts prepare for a malaria medicine use survey on the eastern Thai-Cambodian border and in the Lao People's Democratic Republic, including helping select survey provinces and developing sampling methodology and eligibility criteria.

- Helped adapt the Pharmaceutical Management for TB (PMTB) instruments and methodology for the Chinese context; conducted the adapted PMTB survey in Henan and Shandong provinces.

- Developed standard operating procedures (SOPs) for TB pharmaceutical management at provincial, prefecture, and county levels in China; implemented SOPs in seven pilot facilities, then provided technical assistance to the Chinese National Center for Tuberculosis Control and Prevention in scaling-up use of SOPs; developed 15 training guides and presentations on general pharmaceutical management, receiving medicines, storekeeping, dispensing, and quantification, which will comprise the training program for the use of SOPs; drafted an SOP manual for managing second-line TB medicines.

- Assessed antiretroviral medicines supply operations in Yunnan province; presented key observations and recommendations to stakeholders.

- Collected data for a rapid assessment of inventory management and reporting systems for malaria in Lao PDR focusing on the district and village levels; analyzed the data and prepared a technical report with findings and recommendations; presented the findings to key stakeholders and provided assistance in defining next steps; provided technical assistance to refine the quantification for the annual procurement of antimalarials and rapid diagnostic test kits

- Helped the Lao PDR's Center for HIV/AIDS & Sexually Transmitted Infections (CHAS) shift the responsibility for managing antiretrovirals and other HIV/AIDS commodities from Médecins sans Frontières to MoH/CHAS; worked with local counterparts to evaluate pharmaceutical management systems for five antiretroviral therapy (ART) sites; evaluated the pharmaceutical management systems for ordering and managing HIV test kits at ART sites and voluntary counseling and testing

centers; provided assistance at the site level to develop SOPs for ART pharmaceutical management; conducted a four-day training of trainers course and adapted training materials to the Lao context; assessed current practices of collecting and using data on medicines and commodities for management decisions and quantification.

- Conducted the Regional Training Course on Pharmaceutical Management and Quantification for Malaria for representatives from 13 countries in Southeast Asia and the Pacific; developed a web-based forum to facilitate discussions among course participants on the progress of country improvement plans; moderated five virtual sessions on topics including data collection and reporting/pharmaceutical management information systems, quantification, inventory management/ storekeeping, and budget management; along with ACTMalaria and other partners, developed materials for and conducted training for participants from nine countries in the region on antimalarial pharmaceutical management for the Management for Malaria Field Operations Course and the Malaria Drug Policy Course.

- Provided technical assistance to the Thai Ministry of Health to assess supply systems for malaria and develop recommendations for systems strengthening in light of the integration of malaria clinics into the health care system and implementation of the Global Fund Round 7 activities; developed materials and conducted a training on managing antimalarials and rapid diagnostic test kits.

- Conducted a review of the published and grey literature on effective interventions for engaging the private sector to increase access to essential medicines in Southeast Asia; developed a guide for USAID missions in the region on how to include the private sector in program planning to improve access to and use of essential medicines.

Key Tools and Publications

Community Drug Management Assessment Tool

Community Drug Management for Childhood Illness: Cambodia Assessment

Food Support to Tuberculosis Patients under DOTS: A Case Study of the Collaboration between the World Food Program and the National TB Control Program in Cambodia

Operations Research and Evaluation (OR&E) Protocol Development Guide

Surveying Cambodian Community Drug Management in Malaria: New Methodology and Findings

Engaging the Private Sector to Improve Access to and Use of Essential Medicines: A Guide for USAID Missions in the RDMA Region

Collaborating Organizations

Academy for Educational Development

Asian Collaborative Training Network for Malaria (ACTMalaria)

Bangladesh Rural Advancement Committee

Center for HIV/AIDS & Sexually Transmitted Infections (Laos)

Clinton Foundation

Damien Foundation

Drug Policy Research Group of the Department of Ambulatory Care and

Prevention/Harvard Medical School and Harvard Pilgrim Care

European Union Regional Malaria Programme/Cambodia

Global Drug Facility

Global Fund to Fight AIDS, Tuberculosis and Malaria

Green Light Committee

Kenan Institute Asia/Border Action against Malaria (program)

Kenan Institute Asia/Borderless Action against Microbes (program)

Lao PDR Center for Malariology, Parasitology, and Entomology (CMPE)

Médecins sans Frontières

MOH/Bureau of Vector Borne Diseases (Thailand)

National Center for Parasitology, Entomology, and Malaria Control (also called National

Malaria Center (CNM))

National Center for Tuberculosis Control and Prevention (China)

National Malaria Program (Vietnam)

NGO Service Delivery Program (Bangladesh)

PATH

Pharmacy Association of Cambodia

Population Service International

Roll Back Malaria

Stop TB

U. S. Pharmacopeia Drug Quality and Information Program

U.S. Centers for Disease Control and Prevention

Wellcome Trust

WHO/Regional Office for the Western Pacific

World Bank

World Food Program

World Health Organization

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We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Asia Near East Bureau activities, in addition to collaborating organizations that may not have been mentioned above.

Bureau for Humanitarian Response/Private Voluntary Organizations Final Report 2000–2001

Background

As part of collaborative activities between MSH and the Child Survival Technical Support Group and the Child Survival Collaborations and Resources (CORE) Group, USAID asked RPM Plus to help disseminate pharmaceutical management tools to private voluntary organizations (PVOs) funded by USAID's Office of Private and Voluntary Cooperation's Child Survival Grants Program.

Technical Objectives

- Present RPM Plus tools and capabilities to PVOs at a CORE Group meeting.

- Expand the accessibility of RPM Plus tools on the Internet.

- Review Child Survival Grants Program's PVO proposals with special emphasis on the pharmaceutical management component.

Major Accomplishments

- Participated as a member of the CORE Group's Integrated Management of Childhood Illness, HIV/AIDS, and malaria working groups.

- Presented detailed information on currently available RPM Plus tools at a roundtable meeting for PVOs and provided the information electronically for linking on the CORE Group Internet site.

- Participated in two detailed implementation plan reviews for PVO child health programs in Africa.

Collaborating Organizations

Africare

Child Survival Technical Support Group

Child Survival Collaborations and Resources (CORE) Group

Freedom From Hunger

Health Action International

Central Asian Republics Bureau Final Report 2004–2007

Background

Emergence of new global initiatives in recent years, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, provided the opportunity for additional support for the Central Asian Republics to expand DOTS. The governments of Uzbekistan, Tajikistan, Kyrgyzstan, and Kazakhstan recognized the need for increased pharmaceutical procurement efforts, but their concerns about the quality of tuberculosis (TB) medicines and rising multidrug resistant (MDR)-TB rates led to a major shift in government priorities towards TB medicine quality assurance. In addition, Kazakhstan health officials were concerned about the possible impact that a plan to decentralize pharmaceutical procurement would have on TB medicine. A Tuberculosis Coalition for Technical Assistance survey in Central Asian Republic countries indicated that a lack of quality assurance mechanisms was a challenge to their successful DOTS implementation.

Central Asian Republics Bureau activities were planned and leveraged with funding from individual country Missions.

Technical Objectives

- Increase the capacity of TB programs to design, apply, and monitor appropriate interventions to ensure uninterrupted supply of quality TB commodities.

Major Accomplishments

- Organized a conference on quality assurance related to anti-tuberculosis drugs for senior government officials, policy makers, and senior level decision-makers from the drug regulatory agency in Kazakhstan; introduced the concept of drug quality assurance, presented international approaches and methods, and provided recommendations for adopting best practices/methods of pharmaceutical quality assurance in Kazakhstan.

- Carried out a five-day regional training on pharmaceutical quality assurance methods covering introduction to pharmaceutical quality assurance; principles of Good Laboratory Practice, with a focus on thin layer chromatography-based Minilab® procedures; pharmaceutical sampling procedures and basic tests; data management and reporting; and compliance to standards. RPM Plus carried out the training in collaboration with U.S. Pharmacopeia Drug Quality and Information program and the Academy for Educational Development.

- Provided technical assistance to Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan related to pharmaceutical quality testing using the Minilab. Assistance covered Minilab procedures, an assessment of the implementation of the Minilab technology, discussions on sampling programs, and a review of sample data.

- Hosted a meeting with seven high-level medical professionals and officials responsible for TB control in Kazakhstan; presented sessions and facilitated discussions on pharmaceutical management for MDR-TB, results of Minilab implementation in Kazakhstan, new technologies in TB control, and lessons learned from other health and disease programs. In addition, RPM Plus demonstrated its latest web-based TB Case and Commodity Management tool for MDR-TB.

Collaborating Organizations

Abt Associates

Academy for Educational Development

Central Asian Program on AIDS Control in Vulnerable Populations (CAPACITY) Project

Global Fund to Fight AIDS, Tuberculosis and Malaria

Kazakhstan National Center for Expertise of Drugs, Medical Products and Equipment Ministries of Health in Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan

Project HOPE

U.S. Pharmacopeia Drug Quality and Information program

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Central Asian Republic activities, in addition to collaborating organizations that may not have been mentioned above.

Europe and Eurasia Bureau Final Report 2001–2006

Background

With the rate of tuberculosis (TB) cases continuing to surge in many developing countries, the need for good pharmaceutical management is evident because World Health Organization (WHO) schemes for promoting national TB control, DOTS and DOTS Plus, demand an uninterrupted supply of quality TB medicines and supplies. Developing countries often lack technical resources to put effective pharmaceutical systems in place.

USAID's Bureau for Europe and Eurasia (E&E/EEST/HRHA) provided the RPM Plus Program with funds to carry out activities in TB medicine management, including launching a functional pharmaceutical management information system in Romania and Moldova, and providing assistance in the pharmaceutical management of multidrug resistant (MDR)-TB. In addition, RPM Plus participated in the Tuberculosis Coalition for Technical Assistance TB survey carried out in the countries of Eastern Europe and Central Asia in 2002, and USAID E&E Bureau provided funding for the follow-up technical assistance in TB medicine management for these countries.

Technical Objectives

- Increase health practitioners' understanding of effective prevention and management of infectious diseases.
- Develop approaches to control nosocomial infections in hospitals.
- Reduce incidence of antimicrobial resistance by decreasing the inappropriate use of antibiotics.

- Support the development of pharmaceutical management capacity of health and pharmaceutical management professionals to improve health system performance.

- Increase the capacity of TB programs to design, apply, and monitor appropriate interventions to ensure an uninterrupted supply of quality TB commodities.

Major Accomplishments

- Conducted assessments of TB pharmaceutical management in Romania and Moldova to identify gaps in TB medicine procurement and supply management systems, assess the countries' training and technical assistance needs, and develop a program of interventions to strengthen pharmaceutical management procedures.

- Developed a TB pharmaceutical management information system (PMIS) survey instrument based on key components of the pharmaceutical management cycle; conducted PMIS surveys in Romania and Moldova; conducted a stakeholder workshop in Moldova to present assessment results and discuss how the TB PMIS could be strengthened; held a roundtable meeting of key stakeholders in Romania to develop a comprehensive strategy and action plan for strengthening its TB program PMIS.

- Supported a series of six regional workshops on pharmaceutical management for TB physicians, pharmacists, and National Health Insurance House representatives in Romania.

- Helped the Moldovan application to the Green Light Committee; collaborated to develop a scheme to manage second-line anti-TB medicines, which was included in the application; developed a list of pharmaceutical management indicators used in the monitoring and evaluation scheme for Moldova's Global Fund to Fight AIDS, Tuberculosis and Malaria grant project.

- Trained personnel to use the *Pharmaceutical Management for Tuberculosis Assessment (PMTB) Manual* in Tbilisi, Georgia. Following the workshop, the three participating countries, Georgia, Armenia, and Azerbaijan, carried out PMTB assessments.

- Implemented a management information system for the TB system in Ukraine to strengthen TB control activities within the country.

Collaborating Organizations

Global Drug Facility

GOPA (German Development Consulting Agency)

Ministry of Health Moldova

Ministry of Health Romania

Ministry of Health/Scientific Practical Centre of Public Health and Sanitary Management [Moldova]

National Institute for Research and Development in Health [Romania]

National TB Program Moldova

National TB Program Romania

National TB Program/Program Implementation Unit [Romania]

Organizational and Methodological Department at the TB Institute [Moldova]

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Europe and Eurasia Bureau activities, in addition to collaborating organizations that may not have been mentioned above.

Latin America and the Caribbean Bureau Final Report 2000–2008

Background

Antimicrobial Resistance Initiative/South American Infectious Disease Initiative (SAIDI)

Infectious diseases continue to present a serious threat in the Latin America and Caribbean (LAC) region where scarcity of resources is complicated by lack of medicine availability and inappropriate use of medicines. The scarce resources and inadequate management practices in many countries contribute to the reduced availability of essential antimicrobials in the public sector and, as a consequence, encourage the use of these medicines within private, unregulated, or unauthorized sources. Inappropriate use is a major contributor to the fast pace of antimicrobial resistance (AMR) in the region. Initial RPM Plus activities in the LAC Region were part of an integrated USAID regional strategy to prevent the emergence and contain the spread of antimicrobial resistance. RPM Plus continued long-term work begun under the RPM project to promote the rational use of antimicrobials.

In response to the growing AMR challenge, the USAID Bureau for the Latin America and Caribbean Region (USAID/LAC/SD) proposed a subregional strategy called the South American Infectious Disease Initiative or SAIDI. Without undermining existing efforts in AMR surveillance and control, SAIDI objective is to create a new set of

activities that focus on the community through a multisectoral, multifaceted, and multilevel approach. Under this approach, the work is expected to be interdisciplinary, holistic, and systems-oriented, and recognize and take advantage of the interaction among stakeholders. SAIDI's target countries are Bolivia, Ecuador, Paraguay, and Peru.

Amazon Malaria Initiative (AMI)

Malaria is a major infectious disease that continues to present a serious threat in the LAC region. In the early 1990s, the Amazon Basin region comprising Bolivia, Brazil, Colombia, Ecuador, Guyana, French Guiana, Peru, Suriname, and Venezuela experienced a re-emergence of malaria, including the appearance of *Plasmodium falciparum,* and resistance to inexpensive, first-line antimalarial drugs. *P. falciparum* resistance to chloroquine is now common, and some areas of the Amazon have reported treatment failure rates of 20 percent. Furthermore, Colombia, Peru, and Venezuela reported resistance to sulfadoxine-pyrimethamine, a second-line antimalarial drug.

In March 2002, USAID launched AMI to support the Pan American Health Organization's Antimalarial Drug Resistance Surveillance Network for the Amazon (RAVREDA by its Spanish acronym), so that together they could address the malaria control and treatment problems in the countries of the Amazon Basin. RPM Plus was invited to participate as a partner in AMI to collaborate with the other partners to develop and strengthen strategies to improve drug management for malaria in the region, particularly related to the design and implementation of new policies.

Health Sector Reform Initiative (HSR Initiative)

The HSR Initiative started in 1997 with support from USAID Regional Bureau for LAC (LAC/RSD). Its original purpose was to provide regional support to national health sector reform processes in Latin America and the Caribbean. As the Initiative evolved, its goal was to improve the capacity in both the public and private sectors in target countries to address and implement health reforms and strengthen health system performance. The RPM Plus Program was invited to participate in the LAC HSR Initiative in October 2002.

RPM Plus proposed to develop a conceptual framework to assess the positive and negative effects of the processes of health sector reform on the pharmaceutical supply system in countries undergoing such reforms. The final objective was to increase the capacity of health sector reform officers and planners to assess these effects.

Tuberculosis

Tuberculosis (TB) continues to be a major global problem due to poor access to effective high quality TB drugs, counterproductive financial priorities practiced by some national health systems, and inappropriate treatment decisions. Poor access to vital TB medicines is often linked to weak pharmaceutical systems with inadequately trained human resources, resulting in ineffective pharmaceutical management practices. RPM Plus technical assistance sought to address the challenge of developing the capacity of TB

programs and of providing tools and information resources to manage TB medicines and funds.

Technical Objectives

- Increase capacity of decision-makers, managers, service providers, and health institutions to effectively develop and implement approaches to address AMR.

- Promote the adoption or adaptation of standard treatment guidelines for drug treatment at the hospital level through the work of drug and therapeutics committees (DTCs) in target countries to address antimicrobial resistance.

- Help countries assess factors contributing to AMR and strengthen their capacity to develop interventions to contain AMR.

- Collaborate with the Pan American Health Organization in current and new strategies for AMR containment, which include the AMI and the HSR Initiative.

- Strengthen health systems in the LAC region to manage malaria medicines appropriately.

- Contribute to the development of a conceptual framework to ensure sustainable pharmaceutical supply in decentralized health care systems.

- Increase the capacity of TB programs to design, apply, and monitor appropriate interventions to promote best practices and ensure uninterrupted supply of quality TB commodities.

- Increase the evidence base for interventions on TB program performance.

Major Accomplishments

- Adapted RPM Plus' Drug and Therapeutics Committee Training Course materials for use in Latin America, including adding examples and activities that emphasize the rational use of antimicrobials in the context of the LAC region; conducted three regional DTC training courses and one regional training of trainers course; followed up with course participants via e-mail, telephone, and visits to monitor their workplan implementation. Examples of participants' DTC interventions included—

    - Studied the use of antimicrobials in surgical prophylaxis for acute appendicitis, colecistitis, laparoscopies, and hernias.

    - Compared costs of the treatment of hospitalized cases of pneumonia with different drug regimens.

    - Established a program of continued medical education.

  - Implemented a pharmacovigilance program.
  - Studied the cost of treatment according to the different practices of practitioners.
  - Designed an intervention to improve obstetric drug treatment according to existing standard treatment guidelines.

- Developed a conceptual framework, *Health Sector Reform and its Effects on Drug Supply Management,* to analyze the effects of health sector reform in pharmaceutical supply systems in Latin America, including a literature review of the different perspectives on health sector reform and a description of the methodology for carrying out rapid country assessments; conducted case studies on the effects of reform on the pharmaceutical supply systems in Ecuador and Guatemala.

- Adapted RPM Plus' training materials on TB pharmaceutical and commodity management and pharmaceutical management of multidrug-resistant TB; conducted workshops in Honduras and Mexico.

- Developed a study protocol with regional experts to assess the impact of the introduction of standard treatment guidelines on antimicrobial use for infectious diseases in hospitals; conducted two workshops on introducing standard treatment guidelines for infectious diseases; provided continuing technical assistance to workshop participants on assessing and addressing issues.

- Assessed the effects of health sector reform on the pharmaceutical supply system in Nicaragua; drafted an illustrative case study based on the findings.

- In conjunction with the Pan American Health Organization, sent an e-mail survey to national TB programs in the region to get information on their use of incentives and enablers in TB treatment; analyzed the findings and disseminated the survey; invited several LAC countries who responded to the survey to participate in a meeting to further share their experiences; drafted a report that comprised the workshop proceedings, presentations, and country profiles.

- Finalized the module presentations and participant guides for the Managing Drug Supply for Malaria course for the Latin American context and translated them into Spanish; held a course on Managing Drug Supply for Malaria, which was attended by 45 participants representing all eight AMI countries; using the materials RPM Plus developed, the participants from Colombia conducted an abridged version of the course in their own country.

- Conducted assessments of the pharmaceutical supply systems for malaria medicines in Bolivia, Colombia, Ecuador, Guyana, Peru, and Suriname; provided country-specific technical assistance in treatment policy implementation, supply chain management, and quantification; developed and tested tools for assessing supply

chain management capacities and monitoring the performance of the pharmaceutical supply system for malaria.

- Conducted a regional meeting on access of indigenous communities to TB pharmaceuticals, where indigenous leaders and TB program representatives analyzed the epidemiology of TB and the cultural, geographical, and financial barriers that limit access to effective diagnosis and treatment, and discussed culturally acceptable strategies to improve DOTS expansion.

- Provided technical assistance to Ecuador's national TB program to help determine local capacity to scale-up DOTS and develop a sound strategy to treat multidrug-resistant (MDR) MDR-TB.

- Adapted, translated, and distributed *Managing Pharmaceutical Supplies and Commodities: A Guide for National TB Programs* to all Spanish speaking countries in Latin America including national TB programs, USAID Missions, and Pan American Health Organization offices.

- Conducted a rapid assessment of the factors contributing to MDR-TB and overall pharmaceutical management of tuberculosis treatment in Paraguay; coordinated pharmaceutical management training for personnel of the national TB program and the managers of regional warehouses.

- Recommended and then helped the national TB program in Paraguay implement the use of individualized patient treatment boxes in 350 facilities throughout the country as a way to better manage TB medicine inventory. A visit to health facilities in two provinces showed that this strategy significantly improved pharmaceutical management. Based on project success, promoted South-South exchange with the Bolivia TB Program on implementing the program in that country.

- Carried out a baseline study and implemented individualized TB treatment kits in Santa Cruz, Bolivia; assessed the pharmaceutical management of first-line TB medicines at the facility level in Santa Cruz; coordinated a training-of-trainers session with regional TB nurses to introduce the individualized TB treatment kits strategy.

- Worked with national partners to assess AMR factors and activities in Callao, Peru; analyzed data and conducted a workshop discuss assessment findings and plan intervention strategies; developed a project to explore the presence of first-line TB drugs in private pharmacies in Callao; collected data from pharmacies on the availability of these medicines, pharmacy staff's knowledge of tuberculosis and its treatment, and the dispensing practices related to these medicines.

- Conducted a study of storage and distribution practices in Callao, Peru; remodeled the regional warehouse in Callao and drafted standard operating procedures for regional and facility level storage facilities; trained pharmacy personnel from the regional

warehouse were trained in good storage practices; helped DISA Callao get the regional drug warehouse certified in good storage practices.

- Strengthened the capacity of drug information centers (DICs) in Peru and Paraguay through training, improving infrastructure, and providing support materials/equipment; in collaboration with the Iberoamerican Cochrane Center, sponsored a course to develop the technical capacity of DIC personnel in Paraguay to critically analyze scientific literature.

- Supported DIC-coordinated trainings in basic pharmaceutical management (with an emphasis on good storage practices) with pharmacists and warehouse managers in five regions in Paraguay; distributed basic supplies (pallets, shelves, thermometers, locks) to training participants.

- Adapted, translated, and validated RPM Plus' Infection Control Assessment Tool (ICAT) and accompanying materials for the Latin American context; worked with Guatemalan Ministry of Public Health and Social Assistance to discuss the activity, select pilot hospitals, and organize site visits; conducted an ICAT training in Guatemala for representatives from four participating hospitals; monitored pilot hospitals' progress on the implementation of infection control improvement plans.

- Helped form national working AMR working groups in Bolivia, Peru, and Paraguay. These groups, in conjunction with SAIDI international partners, conducted various assessment activities which led to a holistic local view of the factors contributing to AMR. Based on the results of these assessments, national partners developed action plans to address the identified problem areas.

- Developed materials and conducted regional workshops on priority areas in pharmaceutical management with participating AMI countries—

    - Managing the Drug Supply for Malaria
    - Conducting Pharmaceutical Management for Malaria Assessments
    - Quantification
    - Supply Chain Management

Key Tools and Publications

Drug and Therapeutics Committee Training Course [Spanish translation and adaptation]

Managing Pharmaceutical Supplies and Commodities: A Guide for National TB Programs

Infection Control Assessment Tool [Spanish translation and adaptation]

Health Sector Reform and its Effects on Drug Supply Management

Managing Pharmaceutical Supplies and Commodities: A Guide for National TB Programs [Spanish translation and adaptation]

Reunión sobre Incentivos en el Control de la Tuberculosis en América Latina y el Caríbe, 6–7 mayo 2004

Collaborating Organizations

Abt Associates/Partners for Health Reform*plus*

Academy for Educational Development

Accion Internacional para la Salud

Alliance for Prudent Use of Antibiotics

Global Drug Facility

Iberoamerican Cochrane Center

LinksMedia

Macro International

MSH/Management & Leadership Program

Pan American Health Organization

ProConDe

Promoción y Mejoramiento de la Salud (PROMESA)

U.S. Centers for Disease Control and Prevention

U.S. Pharmacopeia Drug Quality Information program

Universidad Nacional de Asuncion

University Research Company/Quality Assurance Project

Vigia Project

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Regional and Economic Development Services Office for East, Central and Southern Africa (REDSO/ECSA) Final Report 2000–2006

Background

From 2000–2006, USAID/REDSO (now USAID/East Africa) and the Bureau for Africa, Office of Sustainable Development funded the RPM Plus Program to provide technical assistance to strengthen pharmaceutical management systems in the ECSA region to help increase access to quality pharmaceuticals and health commodities. Specifically, interventions included institutional and human capacity building in pharmaceutical management; direct technical assistance in selection, quantification, and procurement of public health supplies; and provision of strategic information on pharmaceutical management and logistics.

In the latter years, RPM Plus provided technical assistance to regional organizations, disseminated state-of-the-art assessment tools, and shared best practices and information in pharmaceutical management and logistics in the region. The technical assistance and support was channeled through the Regional Logistics Initiative (RLI) based in Nairobi, Kenya. The RLI's mandate was to provide technical resources in various aspects of health commodity management systems including pharmaceutical policy development and systems strengthening.

Technical Objectives

- Advocate for efficient pharmaceutical policies and management, rational medicines use, and logistics development for public health commodities in the ECSA region.

- Increase the capacity for providing effective pharmaceutical management and rational medicine use within health delivery institutions and systems in the region.

- Apply commodity management tools aimed at strengthening pharmaceutical systems in ECSA.

- Document and disseminate strategic pharmaceutical management information and better practices within the ECSA region.

    - Provide technical support to USAID/REDSO regional strategies in HIV/AIDS, tuberculosis, and malaria.

    - Encourage south-to-south collaboration and networking with regional partners and health institutions.

Major Accomplishments

- Collaborated with the ECSA Health Community to launch a 14-country advisory network known as the Regional Pharmaceutical Forum (RPF) in 2003. The RPF provides technical leadership and helps ECSA member countries enable their policy environments and incorporate the best practices needed to maximize access to medicines and commodities. The RPF's activities are implemented through four technical working groups: 1) Policy, Legal Framework, and Management Support; 2) Procurement, Distribution, and Supplies Management; 3) Promoting Rational Drug Use; and 4) Medicines Regulation and Quality Assurance.

- Developed a performance assessment tool to periodically evaluate improvement in pharmaceutical management systems; applied the tool in eight countries; used the results to prioritize RPF interventions.

- Helped develop *Generic Medicines Policy for ECSA Countries* and *Generic Medicines Policy Implementation Plan for ECSA Countries* as models to guide ministries of health and other partners on how to develop or review their national medicines policies; Kenya, and Swaziland have used the generic models as a resource to review or implement their country policies.

- Drafted a Regional Pharmaceutical Strategy for 2004–2007, then revised for 2008–2012, to support new interventions based on performance assessments carried out in select member countries.

- Developed a pre-service curriculum on managing pharmaceuticals to support antiretroviral therapy programs, which has been used to teach 270 graduates in 13 universities in six countries.

- Developed a pharmaceutical management curriculum for district-level health care workers, including 32 health workers from Hanang district in Tanzania.

- Identified regional bulk procurement of essential medicines and supplies as a strategy to obtain competitive pricing for essential medicines for ECSA; created a business plan and a website (www.ecsamedicines.com) to support coordinated informed buying, which is the first step toward pooling procurement. The website provides a database for members to monitor prices and share procurement information.

- Harmonized a set of regional standard treatment guidelines for HIV/AIDS, tuberculosis, and malaria to simplify and standardize treatment in ECSA region and developed a complementary model medicines formulary to promote rational medicines use and to provide a drug information resource for health care providers. The two documents serve as entry points for collaboration in pharmaceutical management activities, such as coordinated informed buying.

- Provided technical assistance and training to two referral hospitals in Kenya to revive their medicines and therapeutics committees; each hospital developed formulary lists and a medicines formulary based on this list.

- Established three sites to serve as regional "Learning Sites" in the introduction and maintenance of ART services in the region. The sites are the Kilimanjaro Christian Medical Center in Tanzania, Ndola Regional Hospital in Zambia, and the Coast Provincial General Hospital in Kenya.

- Conducted preliminary assessments of the functionality of pharmacy and therapeutics committees in Kenya, Zambia, Tanzania, and Ethiopia to help plan activities to strengthen pharmacy and therapeutics committees as a way to combat antimicrobial resistance; helped launch a national pharmacy and therapeutics committee in Kenya

- Conducted research on the quantification of pharmaceuticals and medical supplies for Hanang district, Tanzania and shared the results with the District Health Management Team. The results were used to improve the district's commodity management system.

Key Tools and Publications

Drug Policy & Logistics Management Assessment Tool

Drug Quantification Handbook

Pharmaceutical Management and Logistics Assessment Tool

Guidelines for the Management of HIV and AIDS, Tuberculosis and Malaria in East, Central and Southern Africa

ECSA Model Formulary for HIV and AIDS, TB and Malaria

Generic Medicines Policy for ECSA Countries

Generic Medicines Policy Implementation Plan for ECSA Countries

Collaborating Organizations

Addis Ababa University

African Network for the Care of Children Affected by AIDS

Commonwealth Regional Health Community Secretariat

Community Initiatives Support Services/Ecumenical Pharmaceutical Network Program

Gulu University

Health and Development Service (HANDS) [Japan]

Jimma University

John Snow Inc./DELIVER

Kenya Medical Supplies Agency

Medical Stores Department [Tanzania]

Missions Essential Drugs Store [Kenya]

National Medical Stores [Uganda]

Regional Centre for the Quality of Health Care [Uganda]

Regional Quality of Health Care Center/Makerere University

Swedish International Development Agency

University of Nairobi

University of Zambia, Muhimbili University College of Health Sciences

World Health Organization

World Health Organization/Regional Office for Africa

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West Africa Regional Program Final Report 2004–2007

Background

Countries in the West Africa region share common challenges—poverty, poor health and social services, gender inequality, and civil strife. There is also a high prevalence of serious communicable diseases, such as malaria and tuberculosis. Although HIV/AIDS is not as prevalent as it is in the East and Southern Africa regions, the risk of the epidemic is real. There was a growing understanding that common problems and needs shared across West Africa's porous borders, exacerbated by the scarcity of resources, demanded a regional response.

The USAID West Africa Regional Program (WARP) reflects a broader regional strategy. Action for West Africa Region (AWARE) composed of AWARE-HIV/AIDS and AWARE-Reproductive Health was scheduled to run from 2003 through 2008 in Benin, Burkina Faso, Cameroon, Cape Verde, Chad, Côte D'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sao Tome & Principe, Senegal, Sierra Leone, and Togo. In addition to the broadened geographic reach, AWARE focused on strengthening regional leadership through capacity development, systems strengthening, building partnerships, and leveraging funding from other sources in the region.

Technical Objective

- Increase adoption of sustainable family planning/reproductive health, sexually transmitted infections, HIV/AIDS, and child survival policies and approaches in West Africa.

Major Accomplishments

- Provided technical assistance in pharmaceutical management to countries in the USAID/WARP to help them draft procurement supply management plans that would enable them to access funds from the Global Fund to Fight AIDS, Tuberculosis and Malaria.

- Helped carry out two Global Fund procurement and supply management planning workshops for Francophone West Africa to help countries develop and implement procurement and supply management plans.

- Facilitated a session on forecasting, management, and distribution of HIV/AIDS medicines at a Global Fund regional workshop; facilitated group working sessions on managing medicines and supported Liberia, Sierra Leone, and Gambia as they developed their action plans.

- Organized a regional logistics management training session for Francophone West African countries.

- Carried out two one-week training workshops for Francophone and Anglophone countries to address quantification of medicines for HIV/AIDS, malaria, and reproductive health, including manual quantification methods and RPM Plus' electronic tool, Quantimed.

- Worked with Niger's Global Fund Principal Recipient and the Ministry of Health to strengthen supply management capacity, improve the medicines and commodities management information system, and develop a terms of reference for the quantification committee; conducted two training workshops targeting national and regional-level resource persons in pharmaceutical management for HIV/AIDS, tuberculosis, and malaria programs.

- Organized a training-of-trainers course to strengthen the capacity of lecturers at the Centre Africain d'Études Supérieures en Gestion and Institut Régional de Santé Publique in carrying out a pharmaceutical management training program.

- Assessed the pharmaceutical supply management in Guinea Conakry of the three Global Fund programs in HIV/AIDS, tuberculosis, and malaria; identified gaps and recommended appropriate interventions to close those gaps.

- Conducted an assessment of The Gambia's contraceptive logistics management system; using the results, designed a targeted curriculum and trained mid-level health managers in managing reproductive health commodities; trained storekeepers at central and division levels in reproductive health commodity selection, inventory control, quantification, distribution, and use.

Key Tools and Publications

Review of Pharmaceutical Supply Management for Artemisinin-Based Combination Therapies, Antiretrovirals, and Tuberculosis Products Provided by the Global Fund in Guinea

Collaborating Organizations

Centre Africain d'Études Supérieures en Gestion

Institut Régional de Sante Publique

John Snow Inc./DELIVER

Joint United Nations Programme on HIV/AIDS

MSH/Leadership Management and Sustainability Project

United Nations Development Programme

West African Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our West Africa regional activities, in addition to collaborating organizations that may not have been mentioned above.

Albania Final Report 2001–2008[1]

Background

The RPM Plus technical strategy in Albania was to develop capacity of public and private sector counterparts in rational drug selection and prescribing in order to improve drug use. In 2001, RPM Plus Program made an assessment visit to design a set of activities, which resulted in a decision to concentrate on improving medicine use among general practitioners. An assessment of prescribing practices showed that primary health care providers did not have evidence-based information at hand to guide prescribing for patients attending facilities. USAID asked RPM Plus to prepare a medicine-of-choice list to improve prescribing practices. The list was to complement clinical practice guidelines that were being developed with USAID funding by Abt Associates' Partners for Health Reform (PHR) *Plus* program.

Technical Objectives

- Improve medicine use among general practitioners by preparing evidence-based medicine-of-choice lists to support the development of clinical practice guidelines and provide a resource for the Albania Health Insurance Institute.

- Support the development of training sessions for the continuing medical education of nurses working at the primary health care level in five prefectures supported by the University Research Co. /PRO Shëndetit program.

Major Accomplishments

- Conducted a survey of the Albanian medicine subsidy program and medicine use in primary health care and assessed the need for treatment guidelines for general practitioners; suggested a number of interventions and activities to address identified gaps.

- Assembled a pharmaceutical treatment recommendation working group that developed pharmaceutical treatment recommendations/medicine-of-choice lists for over 100 clinical conditions; arranged for clinical specialists and general practice physicians to review the drafts; incorporated comments into the draft recommendations.

- Developed the following training materials for nursing management and supported training sessions—

[1] Little activity from 2003–2006.

- Nursing management of asthma (classroom session of 3 hours)
- Nursing management of menopause (classroom session of 4 hours)
- Nursing management of diabetes (classroom session of 3 hours)
- Nursing management of hypertension (classroom session of 3 hours)
- Nursing management of chronic heart disease (classroom session of 3 hours)

Key Tools and Publications

Pharmaceutical Management Needs Update Appraisal in Albania

Collaborating Organizations

Abt Associates/PHR*Plus*

Health Insurance Institute

Tirana Medical University Faculty of Nursing

University Research Co. /PRO Shëndetit

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Albania activities, in addition to collaborating organizations that may not have been mentioned above.

Angola Final Report
2006–2008

Background

Malaria is a major cause of morbidity and mortality in Angola. In 2004, 3.2 million cases of malaria were reported with about 38,000 malaria-related deaths. The disease accounts for 35 percent of the overall mortality in children, 25 percent of overall maternal mortality and is the cause of 60 percent of hospital admissions for children under five and 10 percent for pregnant women. For this reason, Angola was among the first selected as a focus country for the President's Malaria Initiative (PMI).

In August 2005, USAID conducted an initial assessment to identify appropriate areas for PMI investment in Angola. An important consideration was that Angola had obtained a Global Fund to Fight AIDS, Tuberculosis and Malaria grant to support the national malaria control program, including procuring artemisinin-based combination therapies (ACTs), training providers, and establishing a viable distribution system, among other activities. The 1.1 million treatments procured under the Global Fund grant arrived in

Luanda; however, preparations to receive, distribute and appropriately manage and use the ACTs had not been finalized, nor did conditions allow effective receipt and distribution of the medicines.

As a result, USAID asked RPM Plus to improve the ACT implementation and by integrating ACT management into the existing essential medicines program system.

Technical Objectives

- Improve the supply and quality of antimalarials and related supplies in Angola.
- Improve the management and use of antimalarials in Angola.

Major Accomplishments

- Drafted an ACT distribution plan.
- Organized two workshops on ACT management, including one specifically to train trainers.
- Reviewed storage capacities and ACT management procedures at Angomedica (national medical store) and recommended practical steps to ensure adequate control of PMI supplies at central level.
- Supported port clearance of PMI-procured ACTs and coordinated with the recommended shipment agency to deliver them to Angomedica.
- Worked with partners to quantify ACT needs for all 18 provinces in the country.
- Helped adapt existing standard operating procedures and corresponding forms in the existing essential drug program system to incorporate ACTs; supported the rollout of the procedures to the provincial level, which improved the information available on the number of patients treated and inventory of ACTs.
- Reviewed ACT management training plans from the Ministry of Health and other partners, and worked with partners to develop a harmonized training plan in line with the ACT scaling-up phases; validated the reviewed the Pharmaceutical Management Training Manual and Supervision Checklist, which will be used to improve pharmaceutical management practices through regional trainings and structured supervision visits.

Collaborating Organizations

Africare

Catholic Relief Services

Chemonics

CONSAUD

European Union

Global Fund to Fight AIDS, Tuberculosis and Malaria

John Snow Inc. /DELIVER

MENTOR Initiative

Ministry of Health

National Essential Medicine Program

National Malaria Control Program

U.S. Center for Disease Control and Prevention

United Nations Development Programme

World Health Organization

World Learning

World Vision

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our malaria activities in Angola, in addition to collaborating organizations that may not have been mentioned above.

Armenia Final Report 2005–2008

Background

When RPM Plus began its activities in Armenia in 2005, the healthcare system had been undergoing dramatic changes. Since 2000, USAID had supported the transition to a new model of health care within the framework of the Armenian Social Transition Program, in line with its strategic objective to increase use of sustainable, high-quality, primary healthcare services in the country. While improvements in access to primary health care services were achieved, access to medicines still remained a major concern, due to variables affecting availability, affordability, geographic accessibility, and acceptability. Insufficient financing of essential medicines for vulnerable populations, interruptions in continuous availability of essential medicines, and inappropriate prescribing practices and

non-adherence to treatment guidelines threatened the effectiveness of healthcare delivery reforms.

Technical Objectives

- Improve prescribing practices for key primary health care and family medicine diagnoses/conditions.

- Analyze the availability of essential medicines for selected standard treatment guidelines and their costs at primary care facilities.

- Explore alternative supply chain strategies for the Basic Benefits Package.

Major Accomplishments

- Carried out a rapid assessment of the Armenian pharmaceutical sector and proposed activities to address challenges in pharmaceutical supply for primary health care facilities.

- Collaborated with the Scientific Center for Drug and Medical Technology Expertise (SCDMTE) to plan and conduct data collection and analysis for a supply chain costing study. Activities included translating the data collection forms into Armenian, training data collectors, and collecting and analyzing data in five *marzes*.

- Worked with the Drug Utilization Research Group–Armenia to plan and carry out a prescribing study, including developing a list of core and supplementary medicines, revising and translating the data collection forms, recruiting and training data collectors, and pretesting the data collection in a number of primary health care facilities and pharmacies of Yerevan. Collaboration on the study activities were then transferred to the Center for Health Services Research & Development of the American University of Armenia.

- Held several stakeholder workshops to share findings of the supply chain costing study and the prescribing study; validated the findings, received feedback from stakeholders, and discussed next steps based on the study results.

- Developed a set of training materials for rational medicine use, based on promoting rational drug use and drug and therapeutics committee international training courses. The training materials included presentation materials and session guides that serve as reference materials for the future trainers; carried out a training-of-trainers course on rational use of medicines and similar trainings for primary health care facility managers.

- As a component of health care education reform, worked with the National Institute of Health and Yerevan State Medical University to institutionalize RPM Plus' rational medicines use course into the preservice and continuing education training

programs for family physicians and pharmacists; developed training curricula for three levels: students, residents, and professionals.

Key Tools and Publications

Options for Improving the Supply and Use of Medicines for Primary Health Care in Armenia

Collaborating Organizations

Drug Utilization Research Group-Armenia

Emerging Markets Group/Project NOVA

Ministry of Health

National Institute of Health

Primary Health Care Reform Project

Scientific Center for Drug and Medical Technology Expertise

State Health Agency

World Bank

World Health Organization

Yerevan State Medical University

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Bangladesh Final Report 2001

Background

In 1996, USAID launched the National Integrated Population and Health Program (NIPHP) in Bangladesh, comprised of seven nongovernmental organization (NGO) partners. The 350 NIPHP partnership clinics provided primary health care and family planning services to approximately 20 percent of the population that was not covered by the government public health hospitals and clinics.

Beginning in 1997, the RPM project helped NIPHP implement revolving drug funds and improve rational medicine use in all the NGO clinics. RPM technical assistance included developing an essential drugs list and standard treatment guidelines. Using the monitoring-training-planning methodology, RPM provided technical assistance to clinic personnel in developing revolving drug funds and using the new treatment guidelines and medicine lists.

Although the revolving drug funds were functioning well, in 2001, USAID/Dhaka asked RPM Plus to assess the situation and make recommendations for improvement.

Technical Objectives

- Review the rational medicine use procedures implemented in NGO partner health clinics since RPM technical assistance began in 1997.

- Review the technical assistance being provided in rational medicines use by NIPHP partners (Quality Improvement Partnerships, Urban Family Health Partnership, and Rural Services Delivery Partnership) and make recommendations for improvement.

Major Accomplishments

- Conducted five site assessments—three urban clinics and two rural outposts, including a home volunteer depot—to observe rational medicine use practices and to interview program managers and clinic directors.

- Reviewed the findings and recommendations for updating rational medicine use practices in the clinics based on observations made during clinic visits and a review of documents provided by partners.

- Developed a set of eight rational medicine use indicators for the clinics to use to monitor medicine use practices.

- Presented recommendations and possible interventions to project partners.

Collaborating Organizations

Engender Health/Quality Improvement Partnerships

John Snow Inc./Urban Family Health Partnership

National Integrated Population and Health Program

Pathfinder/Rural Services Delivery Partnership

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our rational medicine use activities in Bangladesh, in addition to collaborating organizations that may not have been mentioned above.

Brazil Final Report
2004–2008

Background

In 1998, Brazil adopted DOTS, the World Health Organization-recommended public health approach to identifying, treating, and preventing tuberculosis (TB). Part of Brazil's commitment to expanding DOTS was to make the Hélio Fraga TB Reference Center responsible for controlling the quality of TB diagnostics and treatment in the national health system. Overall, the Hélio Fraga TB Center develops, analyzes, and transfers technologies to combat TB in the country and monitors the approximately 1,300 cases of multi-drug resistant TB (MDR-TB) in Brazil. USAID has supported the RPM Plus Program's technical assistance to Hélio Fraga since 2004.

Technical Objectives

- Improve the appropriate use of TB drug regimens in Brazil.
- Strengthen the national TB control program.

Major Accomplishments

- Helped organize and coordinate working groups to—
    - Improve the management information system for treating MDR-TB patients and managing second-line medicines.
    - Modify the drug treatment scheme for TB failures to avoid adverse reactions.
    - Develop fixed-dose combination (FDCs) products to promote patient compliance.
    - Investigate the quality of TB drug products and implement a scheme to continually monitor quality.
- Adapted MSH's Management and Organizational Sustainability Tool (MOST) tool as a way to implement quality control systems in laboratories.
- Coordinated the decentralization of the quality control system for TB pharmaceutical management by strengthening the capacity of laboratory managers and technicians in

state laboratories; used the MOST laboratory tool to build capacity on pharmaceutical quality standards in three state laboratories, Amazonas, Goiás, and Ceará.

- Established an ongoing, sustainable quality testing program for first- and second-line TB medicines; oversaw pharmaceutical quality testing of TB drug samples at the National Institute of Quality Control; provided support for the implementation of the capillary electrophoresis methodology at Farmanguinhos and National Institute of Quality Control to expand the testing of drug samples in support of the development of new medicine formulations.

- Provided technical and managerial support to a national study to reformulate first-line TB drugs into FDC products; worked with Farmanguinhos to help develop and produce new FDCs; validated laboratory methods for quality testing FDC products.

- Developed a protocol to study TB treatment failure to determine a suitable regimen replacement, resulting in a revision of the MDR-TB national treatment guidelines.

- Validated and implemented a decentralized model for MDR-TB case surveillance in 27 states including designing and implementing a new pharmaceutical management information system (PMIS) to manage MDR-TB patients; trained staff at all TB reference centers on the PMIS; validated all modules of the MDR-TB case management system; designed the electronic PMIS database to create reports, tables, and graphics to use in training, conferences, and surveillance bulletins; provided technical assistance to review and validate data entered electronically into the PMIS from state reference centers.

- Developed a scope of work to build South-to-South collaboration among Brazil, South Africa, and India in TB pharmaceutical-related issues such as production of FDCs and MDR-TB monitoring.

- Provided technical assistance to the new reference laboratory at Hélio Fraga and National Institute of Quality Control to develop technical standard operating procedures, prepare personnel training in biosafety issues, and help the laboratory through an external audit.

Key Tools and Publications

Guide for Epidemiological Surveillance and Information System for MDR-TB Control

Management and Organizational Sustainability Tool (MOST) for laboratories

Conference Presentations

Global Health Council 2005

Reaching Pharmaceutical Management Targets for TB in Brazil [oral]

Global Health Council 2007

Building a Model for Decentralization of MDRTB Surveillance [oral]

Strategies and Results Improving MDRTB Control in Brazil [oral]

Joining Forces to Improve MDRTB Drugs Management [oral]

Global Health Council 2008

Mobilizing multidisciplinary teams with new tools for MDRTB control [oral]

Collaborating Organizations

ANVISA (National Health Surveillance Agency)

Farmanguinhos

Green Light Committee

Hélio Fraga Tuberculosis Reference Center

Ministry of Health/Pharmacy Department

Ministry of Health/Epidemiological Surveillance Department

Ministry of Science and Technology

National Institute of Quality and Control

Program for the Control of Tuberculosis

TB National Reference Center

Acknowledgements

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Cambodia Final Report
2004–2007

Background

The Cambodian government had expressed concern over poor child health indicators and began addressing them in its Health Sector Strategic Plan 2003–2007. The Global Child Survival Partnership, a group of donors and international organizations, elected to help assess child and neonatal morbidity and mortality in Cambodia. The RPM project and RPM Plus Program developed several tools to conduct focused assessments of pharmaceutical management in the public and private sectors as well as at the household level, including the Community Drug Management for Childhood Illnesses (C-DMCI) survey tool, which was applied in Cambodia.

In an effort to support the government of Cambodia's strategic plan, the USAID Mission asked RPM Plus to coordinate its pharmaceutical management in childhood illnesses assessment with the overall child health assessment so that findings could help guide strategy development and appropriate interventions.

Technical Objectives

- Enhance the capacity of governmental or nongovernmental organization (NGO) counterparts in Cambodia region to systematically identify and monitor community-level drug management for child health using appropriate diagnostic tools.

- Enhance the capacity of decision makers and service providers to design and apply appropriate interventions to improve availability and use of child health medicines in the public and private sectors.

Major Accomplishments

- Developed and applied MSH's Community Drug Management Assessment Tool to identify medicine use practice problems in households and communities in districts on the Cambodian-Thai border.

- Chose a local NGO, the Reproductive and Child Health Alliance (RACHA), to conduct MSH's C-DMCI survey in 10 districts within 5 provinces; worked with RACHA to adapt and field-test the tool for the Cambodian context and provided technical support for the data collection and analysis; presented C-DMCI recommendations through existing government channels and at several national and regional meetings.

- Used MSH's Commodities Tracking Tool to track the quantities and values of child medicines and commodities obtained through national procurements or donations as a proxy indicator of funding for child survival in Cambodia.

- Conducted a qualitative study on anti-malaria drug use in two Cambodian border areas—Sampov Lun District in Battambang Province and Sala Krau/Pailin Districts in Pailin Province—to explore why use of first-line treatment for malaria is sub-optimal and provide data for decision makers to improve malaria medicine use in order to decrease malaria morbidity and mortality in Cambodia.

Key Tools and Publications

Community Drug Use Practices in Malaria in Cambodia: A Cross-sectional Study

Community Drug Management for Childhood Illness: Cambodia Assessment

Mosquitoes, Malaria, and Malarine: A Qualitative Study on Malaria Drug Use in Cambodia.

Training for Private Pharmacy Staff Members in Managing Three Childhood Conditions: Diarrhea, Acute Respiratory Infection, and Malaria [training materials]

Collaborating Organizations

Adventist Development and Relief Agency

Asian Collaborative Training Network for Malaria

Catholic Relief Services

European Union

Global Child Survival Partnership

Helen Keller International

MediCAM

Ministry of Health/International Management of Childhood Illness Unit

National Center for Parasitology, Entomology and Malaria Control

Partners for Development

Population Services International

Program for Appropriate Technology in Health

Reproductive and Child Health Alliance

University Research Company

World Health Organization

World Vision

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Cambodia activities, in addition to collaborating organizations that may not have been mentioned above.

Côte d'Ivoire Final Report 2004–2006

Background

In October 2003, RPM Plus conducted an assessment of the Central Medical Stores of Côte d'Ivoire (PSP-CI) and the pharmacies at public health facilities to investigate PSP-CI's capacity to support the expansion of prevention of mother-to-child transmission (PMTCT) activities. This study revealed numerous gaps in pharmaceutical management at central, district, and facility levels. Following the presentation of the findings, RPM Plus received funds from the U.S. government to address key issues to improve the availability and access to HIV/AIDS commodities needed to deliver PMTCT.

RPM Plus helped PSP-CI identify interventions to address identified gaps in pharmaceutical management and to reinforce the capabilities of drug managers at all levels of the health system. With RPM Plus assistance, PSP-CI drafted a three-year workplan that it disseminated among donors to respond to weaknesses in the different areas of pharmaceutical management. One of the top priorities in the workplan was pharmaceutical management training for health care professionals, which had been very limited in Côte d'Ivoire.

Technical Objective

- Develop human resource capacity in centers that deliver HIV/AIDS services by building a national body of core trainers in pharmaceutical management and develop and implement a training plan for pharmacists and medicines managers at district and facility levels.

Major Accomplishments

- Provided technical assistance to PSP-CI to build a core of 15 trainers in pharmaceutical management; adapted existing training materials and helped trainers prepare a structured pharmaceutical management curriculum to train pharmacists and other pharmacy cadres in facilities.

- Introduced and rolled out the electronic antiretroviral therapy (ART) dispensing tool, known as SIMPLE-1, to 20 ART sites and trained dispensers in its use.

- Used the MSH Inventory Management Tool at the central warehouse to assess the management of antiretroviral (ARV) medicines and non-ARVs. The assessment tool revealed numerous pharmaceutical management issues that required immediate action.

- Applied MSH's Management Organizational Sustainability Tool (MOST) at PSP-CI, which identified several organizational challenges and led to the development of an operational action plan to improve organizational performance in selected areas.

- Provided feedback for a national ARV quantification targeting 27,000 patients.

- Installed the Inventory Tracking Tool (SIMPLE-2) in two districts: San Pedro and Abengourou; trained users in how to use the tool.

Collaborating Organizations

Ministry of Health/Information, Planning, and Evaluation (DIPE) Unit

Ministry of Health/Training Unit (DFR)

PSP-CI (public health pharmacy)

Elizabeth Glaser Pediatric AIDS Foundation

Supply Chain Management System

U.S. Centers for Disease Control and Prevention

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our HIV/AIDS activities in Côte d'Ivoire, in addition to collaborating organizations that may not be mentioned above.

Democratic Republic of Congo Final Report 2004–2007

Background

The Democratic Republic of Congo's (DRC) Ministry of Health (MoH) places malaria among the country's leading endemic diseases and considers malaria to be one of the three major causes of childhood illness. The MoH estimates that in the DRC, 2.87 million

cases of malaria occur annually, resulting in 200,000 deaths, and that each Congolese child suffers 10 malaria episodes annually. Like many other malaria-endemic countries, DRC made the decision to change its malaria treatment policy to incorporate artemisinin-based combination therapy (ACT) as the recommended first-line treatment.

The RPM Plus Program provided technical assistance to the government to help transition to the new ACT treatment policy and increase access to medicines. DRC program activities were leveraged with activities under the Malaria Action Coalition.

Technical Objective

- Assess and improve malaria case management and decrease malaria in pregnancy through effective pharmaceutical management policies and practices.

Major Accomplishments

- Conducted a rapid assessment of the antimalarial drug management system in a selected Santé au Milieu Rural project (SANRU)-supported health zone to identify options for strengthening the pharmaceutical management system to increase access to antimalarials; provided support to SANRU and Catholic Relief Services to improve the pharmaceutical distribution system and supported central and provincial level partners on pharmaceutical management for malaria training.

- Helped the National Malaria Control Program update the national malaria treatment policy and review and update standard treatment guidelines for malaria based on the new policy; helped implement the new policy through a Global Fund for AIDS, Tuberculosis and Malaria Round 3 grant, including providing technical support to the Country Coordinating Mechanism.

- Worked with central-level pharmaceutical management partners to develop harmonized guidelines for pharmaceutical management at all health system levels.

- To help the National Malaria Control Program make decisions regarding malaria treatment, conducted studies to evaluate the effectiveness of antimalarial medicines, including sulfadoxine-pyrimethamine, for case management among pregnant women in areas of high resistance.

- Provided technical assistance to develop the Global Fund Round 7 proposal application for malaria, which was successfully signed-off by the Country Coordinating Mechanism.

- Developed, tested, and applied a checklist for ACT implementation; developed and presented Drug Management Technical Guidelines to DRC stakeholders and distributed 2,450 copies to the national and provincial levels.

Key Tools and Publications

Drug Management Technical Guidelines

Collaborating Organizations

Catholic Relief Services

Global Fund to Fight AIDS, Tuberculosis and Malaria

Maternal and Neonatal Health project

Ministry of Health

National Malaria Control Program

Santé au Milieu Rural III Project

U.S. Centers for Disease Control and Prevention

World Health Organization/Regional Office for Africa

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our malaria activities in DRC, in addition to collaborating organizations that may not be mentioned above.

Ethiopia Final Report
2003–2008

Background

RPM Plus started work in Ethiopia in 2003 to support the pharmaceutical and commodity logistics of prevention of mother-to-child transmission (PMTCT) under the President's Emergency Plan for AIDS Relief. This support revealed Ethiopia's limited experience in procuring and managing HIV/AIDS-related medicines and commodities. RPM Plus has since provided a broad range of technical assistance and resources to the Ethiopian government and U.S. Government partners to ensure an uninterrupted supply of antiretroviral (ARV) drugs and establish a management system to control inventory, track patients, and improve rational medicines use. In addition, since 2005, RPM Plus has helped over 280 public and private health care facilities in all 11 regions build their capacity in human resources, pharmaceutical systems, and infrastructure to provide antiretroviral therapy (ART).

Technical Objectives

- Strengthen the capacity of pharmaceutical and associated professionals to effectively manage PMTCT/ART products.

- Strengthen the overall supplies management system, including procurement, storage, and distribution.

- Improve the physical infrastructure of pharmaceutical and laboratory facilities to ensure security and quality of ARV drugs and related products at target sites.

- Strengthen information management systems, such as monitoring and evaluation and reporting, in order to track stock level, expiry, and use of PMTCT/ART products.

- Promote collaborative links with programs and public, private, and educational entities that will improve access to quality pharmaceutical and laboratory services, promote patient education, improve rational use, and establish drug and therapeutics committees at facilities offering ART and related services.

Major Accomplishments

- Conducted an assessment of the pharmaceutical sector to determine capacity of the pharmaceutical management system to support PMTCT/ART services, including 23 sites targeted to become PMTCT facilities, 14 hospitals targeted for ART services, and national, regional, facility stores, pharmacies, and laboratories; assessed the pharmaceutical quality control system; used results from both assessments to determine scope and direction of interventions.

- Helped develop the national ART guidelines by participating in a technical working group and contributing to the section on pharmaceutical management.

- Made possible the uninterrupted supply of ARVs in even the most remote areas of the country. Of the more than 100,000 people currently receiving free ARV medicines, about 55 percent are women and 5 percent are children.

- Helped create reliable pharmaceutical information systems by developing standard operating procedures and data management forms. Over 400 hospitals and health centers now use standard forms for patient registration, tracking, and inventory control; over 140 hospitals use RPM Plus's electronic ART Dispensing Tool to keep pharmacy dispensing and inventory records.

- Improved infrastructure in health facilities by renovating over 350 dispensing and storage structures, building 100 confidential dispensing booths and over 300 shelving units, and providing more than 100 computers and printers.

- Conducted trainings for 4,735 pharmacists and physicians to strengthen their capacity to provide ART and other health services (some counted for multiple trainings). Training topics included—

  - Pharmaceutical management information systems and tools
  - Using standard operating procedures
  - Pharmaceutical quality assurance/control
  - ART and managing related pharmaceuticals and commodities
  - Drug and Therapeutic Committees and Drug Information Centers
  - Rational medicines use
  - Containing antimicrobial resistance
  - Improving treatment adherence

- Supported about 200 RPM Plus staff members to provide on-site technical support in health facilities and regional and country offices, including 50 pharmacists who provide direct assistance in all facets of pharmaceutical supply management at central and strategic regional locations.

- Helped the Government of Ethiopia access and dispense prophylactic nevirapine to 8,827 mothers and 6,209 infants from the Axios-administered donation program.

- Facilitated the creation of a national antimicrobial resistance (AMR) advisory body and task force to develop Ethiopia's national AMR containment strategy; also, trained pharmacists and physicians about AMR, sensitizing media from television, radio, and print about containing AMR, trained representatives from research, academia, and medical practice to serve as spokespersons for containing AMR, and planned a national baseline assessment.

- Helped build capacity in the private sector to deliver ART, including—

  - Training 25 private hospital pharmacists in ART and ARV management.

  - Providing over 40 private hospital and community pharmacies with standard operating procedures for ARV drugs management, ART dispensing tools, and forms for registration, inventory management, and patient tracking.

  - Training 20 private pharmacy professionals to manage three fixed-dose combination drugs made available to paying patients.

  - Collaborating with the Ethiopian Pharmaceutical Association to train 800 pharmacists in ART and ARV management, good community pharmacy practice, and pharmacy ethics.

Conference Presentations

IAS Conference Bangkok 2004
Assuring sustained access to PMTCT commodities in Ethiopia through establishment of an integrated distribution system [poster]

Collaborating Organizations

Axios

Drug Administration and Control Authority (DACA)

DACA/Drug Quality Control and Toxicology Laboratory

Ethiopian Health and Nutrition Research Institute

Ethiopian Pharmaceutical Association

Family Health International

Federal Ministry of Health

Gondar University
HIV/AIDS Prevention and Control Office

International Dispensary Association

International Training & Education Center on HIV (I-TECH)

IntraHealth International

Jhpiego

Pharmaceutical and Medical Supplies Import and Wholesaler Share Company (PHARMID)

Pharmaceutical Supply and Logistics Provisional Department

Pharmacy Administration and Supply Service

Supply Chain Management System

U.S. Centers for Disease Control and Prevention

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Ethiopia activities, in addition to collaborating organizations that may not have been mentioned above.

Haiti Final Report
2001–2009

Background

USAID/Haiti has supported the Ministry of Health (MoH) and partners' efforts to improve availability and access to essential drugs and supplies, especially through the Haiti Santé 2004 and the John Snow Inc./DELIVER projects. Through the RPM Plus Program, the USAID Mission in Haiti reinforced its assistance and interventions in pharmaceutical management. USAID also provided President's Emergency Plan for AIDS Relief funds for RPM Plus to support Haiti's national HIV/AIDS program, including selecting and procuring medicines and related commodities for HIV/AIDS services; establishing a distribution network for voluntary counseling and testing (VCT), prevention of mother-to-child transmission (PMTCT), and antiretroviral therapy (ART) medicines and commodities; providing technical guidance to support an adequate response to HIV/AIDS-related commodity management issues; and developing a pharmaceutical management information system for ART services at the central and peripheral levels.

In April 2005, in consultation with USAID/Haiti, all in-country technical assistance activities were consolidated within MSH's bilateral program, Health Systems 2007. However, RPM Plus continued carrying out procurement activities of antiretrovirals and medicines for opportunistic infections.

Technical Objectives

- Increase Haiti's capacity in commodity procurement procedures by using state-of-the-art tools, techniques, and methodologies, including hands-on pharmaceutical management training.

- Select and procure drugs and related commodities to support the delivery of HIV/AIDS services.

- Establish a distribution network for the delivery of VCT/PMTCT/ART medicines and commodities as well as basic material and equipment for scaling up HIV/AIDS activities.

- Provide technical guidance to the MoH and other partners to respond to HIV/AIDS-related commodity management issues.

- Develop a pharmaceutical management information system for ART services at the central and peripheral levels.

Major Accomplishments

- Conducted a pharmaceutical needs quantification exercise to provide national estimates of the quantities and costs of essential medicines and supplies needed for three to four years; assessed the capacity of the pharmaceutical system to manage essential medicines and commodities; translated the needs assessment into French and submitted it to the MoH. The findings were instrumental in prompting immediate actions to take at central, departmental, and facility levels, and the report identified a series of priority interventions to strengthen the national essential pharmaceutical supply system.

    - Provided technical assistance to the Central Directorate of Pharmacy, the HIV/AIDS Coordination Unit, donors, and local nongovernmental organizations to streamline the storage and distribution of VCT/PMTCT commodities; introduced the concept of one national pipeline for ARVs and provided input to a "Protocole" that describes this national distribution pipeline and defines the roles and responsibilities of the different partners.

    - Avoided critical stock-outs by procuring and coordinating the distribution of an emergency order of ARVS for the period of May–December 2004, covering an estimated 1,500 HIV/AIDS patients.

    - Identified, quantified, and procured the ARVs and medicines needed to treat opportunistic infections in HIV/AIDS patients for multiple procurement cycles, including developing and submitting appropriate U.S. Government waivers; established contact with the International Dispensary Association to identify availability, manufacturers, and prices; consulted with different partners to determine products to be incorporated into a Life Extending Therapy Kit for home-based care; contracted out the packaging of the kits to a local supplier.

    - Established a storage and transit depot at RPM Plus offices to support distribution efforts of HIV/AIDS-related commodities; received products, including test kits, and inventoried them; monitored storage conditions and inventories for ARVs and supplies at storage points.

    - Customized and translated into French RPM Plus's ART Dispensing Tool and Inventory Tracking Tool for the Haiti context.

    - Collaborated with the Supply Chain Management System (SCMS) project to identify quantities needed for 31 opportunistic infection medicines and coordinated with SCMS to make the purchase; followed up by coordinating a second order of 20 medicines for opportunistic infections.

Key Tools and Publications

Haiti: Report on Drug Management and National Drug Need Estimate, November 2002 Quantifying Essential Drugs and Medical Supply Needs for the United States Agency for International Development/Haiti Mission

ART Dispensing Tool (adaptation and translation into French)

Inventory Tracking Tool (adaptation and translation into French)

Collaborating Organizations

Association of Private Health Programs

Cange (Partners in Health)

Catholic Relief Services/Caribbean

Directorate of Pharmacy and Control of Chemical Substances (DCP/CSC)

Global Fund to Fight AIDS, Tuberculosis and Malaria

Groupe Haitien d'Etude du Darcome de Kaposi et des Infections Opportunistes (GHESKIO)

MSH/Haiti Health Systems 2007

International Dispensary Association

John Snow Inc./DELIVER

Ministry of Health/Unit of Control and Coordination

Programme des Médicaments Essentials (PROMESS)

Supply Chain Management System (project)

U.S. Center for Disease Control and Prevention

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Haiti activities, in addition to collaborating organizations that may not have been mentioned above.

Honduras Final Report 2001–2008[2]

Background

Honduras has one of the highest mortality rates for tuberculosis (TB) in Central America. Data for the year 2001 reported a morbidity rate of 70 per every 100,000 inhabitants with 4,490 cases detected. The Honduran Ministry of Health through its National TB Control Program had been implementing DOTS since 1998, initially in pilot areas. During the year 2000, the government expanded the DOTS strategy to more than 60 percent of the health facilities—reaching all facilities by the end of 2001.

Through its Health Office, USAID/Honduras supported the implementation and funding of Honduras' National TB Control Program and the DOTS strategy. As part of this support, RPM Plus provided technical assistance in pharmaceutical management to the TB program.

Technical Objectives

- Improve the ability of national and regional TB managers to identify TB medicine management problems and implement activities to solve these problems.

- Build capacity in local settings to implement regulatory, managerial, and behavioral interventions to improve medicine use.

Major Accomplishments

- Provided technical assistance to the National TB Program to adopt techniques to improve quantification of needs and to assess the cost of the medicines for procurement; trained regional and national managers on the principles of data collection to monitor TB drug availability and service at the regional warehouses.

- Built capacity in pharmaceutical management at the peripheral health care level by conducting a workshop specifically designed for local managers responsible for warehousing, transportation, and inventory control.

- Conducted a rapid assessment to analyze the country's TB pharmaceutical management, the feasibility of the introduction of fixed-dose combinations, and the implementation of alternative mechanisms to procure TB pharmaceuticals and commodities; presented findings and alternatives to improve programming and information systems.

[2] With a gap from 2003–2006.

Collaborating Organizations

Ministry of Health/National TB Control Program
Global Fund to Fight AIDS, Tuberculosis and Malaria

Acknowledgements

We would like to acknowledge and thank the national and local government agencies and health care facilities that were partners in our TB activities in Honduras, in addition to any collaborating organizations that may not be mentioned above.

Dominican Republic Final Report 2002–2008

Background

The Dominican Republic National Tuberculosis (TB) Program received support from the USAID Mission to expand its implementation of the World Health Organization-supported DOTS strategy. One of the main tenets for the success of DOTS is to ensure the continuous supply of quality medicines and pharmaceutical supplies and to ensure their appropriate use according to standardized treatment regimens. In general, weakness in the pharmaceutical supply system and inadequate management of medicines at different levels of the health system may result in an inefficient use of the scarce resources needed to provide treatment.

With USAID/Dominican Republic funds, the RPM Plus Program provided technical assistance to improve the pharmaceutical management component of DOTS in the areas of pharmaceutical needs estimation, product specification for procurement purposes, inventory management, medicine distribution and storage, and medicine use. These aspects are essential steps in developing a functional TB medicine supply system.

Technical Objectives

- Increase the capacity of the Dominican Republic National TB Program to design, apply, and monitor appropriate interventions to ensure uninterrupted supply of quality TB commodities.

Major Accomplishments

- Conducted an assessment of the TB medicine supply system including the central level of the Ministry of Health, the National TB Program headquarters, the central purchase office at the Ministry of Health, the office of regulation on drugs and supplies, the central warehouse, 20 health facilities, 5 areas of health in the national district and 2 provinces; drafted recommendations and shared them with stakeholders.

- Provided technical assistance to the National TB Program to design a functional managerial structure with standard procedures that ensure a prompt supply of quality, essential pharmaceuticals; drafted a proposal to implement a pharmaceutical management information system (PMIS), including instruments/forms and instructions.

- Designed an implementation plan for piloting the PMIS system in two health areas; carried out the pilot, including collecting baseline data and conducting a mid-term and final evaluation; based on the results, the PMIS was scheduled to be scaled-up in the rest of the provinces.

- Conducted a study that indicated the prices of TB medicines obtained locally were not favorable compared to Global Drug Facility (GDF) prices; provided technical assistance to develop a plan to introduce and then scale-up distribution of fixed-dose combinations (FDCs) nationwide; helped prepare the application to the GDF to procure FDCs. The plan included the criteria for the selection of FDCs, an estimation of needs, the procurement mechanism through GDF, and guidelines for the use of FDCs. The Dominican Republic was the first Latin American country to apply to the GDF and estimated annual savings were about $770,000 U.S. dollars.

- Analyzed information provided by the PMIS and drafted recommendations to deal with identified problems; used the PMIS to estimate the availability of TB medicines at the central and peripheral levels and adjust quantification requirements for procuring FDCs.

Key Tools and Publications

Sistema de Suministro de Medicamentos e Insumos para el Programa Nacional de Control de la Tuberculosis

Sistema de Información Gerencial del Sistema de Suministro de Medicamentos e Insumos para el Programa Nacional de Control de la Tuberculosis

Collaborating Organizations

Dominican Republic Health Secretariat (SESPAS)

Global Drug Facility

National TB Program

Pan American Health Organization

Fondo Mundial/ProFamilia

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our TB activities in the Dominican Republic, in addition to collaborating organizations that may not be mentioned above.

Mexico Final Report
2006–2007

Background

Since 2001, RPM Plus worked to develop methodologies and tools to help national tuberculosis control programs (NTPs) identify opportunities to use incentives and enablers specifically to improve tuberculosis (TB) program performance. These incentives and enablers may target patients, providers (e.g., public or private health workers at all levels, treatment supporters), and/or managers. Work on incentives and enablers represents one component of the larger RPM Plus portfolio that aims to improve access to and use of medicines and diagnostics for TB. In June 2006, the USAID Mission in Mexico requested technical assistance from RPM Plus to help the Mexican NTP develop a comprehensive incentives program for its health personnel.

Technical Objective

- Help Mexico's NTP develop a comprehensive incentives program for its health personnel.

Major Accomplishments

- Met with USAID and NTP representatives in Mexico City to analyze the actual usage of an incentive-based system by NTP health care workers and evaluate the capacity of the NTP to organize and implement this incentives-based system.

- Organized a workshop, "Strategies to implement an incentive based system within the NTP," for NTP program staff; developed a proposal based on the workshop results that described a comprehensive incentive-based system for health service workers.

- Collaborated with the NTP and other Ministry of Health entities to review and finalize the guide; developed a schedule for implementing and monitoring the new incentives program.

Key Tools and Publications

Guía del Sistema de Incentivos del Programa Nacional de Control de la Tuberculosis: Sin-TB [Guide to the National Tuberculosis Control Incentives Program]

Collaborating Organizations

Ministry of Health
National Tuberculosis Program

Acknowledgements

We would like to acknowledge and thank the various local and national government agencies and health care facilities as partners in our Mexico activities, in addition to collaborating organizations not mentioned above.

Rwanda Final Report
2003–2007

Background

Prevention of Mother-to-Child Transmission (PMTCT) and President's Emergency Plan for AIDS Relief (PEPFAR)

In April 2003, the USAID Mission in Rwanda invited RPM Plus to examine the capacity of the pharmaceutical system in support to the new USAID strategic objectives in HIV/AIDS, reproductive health, and malaria. This invitation followed an urgent request from CAMERWA (*Centrale d'Achats de Médicaments Essentiels du Rwanda*) to USAID for technical assistance in quantification of antiretroviral medicines due to the various global HIV/AIDS initiatives. In response, RPM Plus conducted an assessment of the pharmaceutical and laboratory systems. Based on the results, RPM Plus proposed a strategy to strengthen the pharmaceutical and laboratory sectors under PEPFAR.

At the national level, RPM Plus provided technical assistance to the Directorate of Pharmacy, CAMERWA, and to the Treatment and Research AIDS Center (TRAC) on quantification, procurement, distribution, and information systems and to integrate pharmaceutical management into national strategies for improving access to antiretroviral therapy (ART). At the peripheral level, RPM Plus helped develop curricula and conduct training in pharmaceutical management to pharmacy staff at all ART delivery sites. RPM Plus also collaborated with the National Reference Laboratory to develop a national laboratory policy and standard operating procedures (SOPs) for monitoring ART. In addition, RPM Plus helped to develop and implement an initiative to maximize the purchasing power of donor funds and ensure quality products through a centralized supply for antiretrovirals (ARVs) and other medicines and laboratory supplies.

President's Malaria Initiative (PMI)

Rwanda is one of the high-burden malaria countries that the U.S. Government selected to benefit from PMI. In May 2005, the USAID/PMI team conducted an initial assessment to identify appropriate areas for PMI investment in Rwanda. An important

consideration was Rwanda's receipt of Global Fund to Fight AIDS, Tuberculosis and Malaria grants to support the national malaria control program, including procuring artemisinin-based combination therapies (ACTs), training providers, and establishing a viable distribution system. Based on the assessment findings and recommendations formulated during the country visits, RPM Plus developed a strategy to help Rwanda improve case management and pharmaceutical management of ACTs.

Technical Objectives (PMTCT and PEPFAR)

- Improving the laboratory management practices in support of ART delivery programs in Rwanda.

- Strengthen the capacity of CAMERWA to plan, quantify, and implement national procurement of drugs and commodities, including those related to HIV/AIDS treatment and care.

- Strengthen the capacity of the districts and HIV/AIDS service delivery sites to ensure the uninterrupted quality supply of HIV/AIDS pharmaceuticals and laboratory commodities.

- Provide technical support to the U.S. Government and Government of Rwanda to establish a Coordinated Procurement and Distribution System for ARVs and other HIV/AIDS commodities.

Technical Objectives (PMI)

- Improve the case management and use of appropriate antimalarials.

- Improve the supply and quality of antimalarials and related supplies.

Major Accomplishments

- Conducted a stakeholder roundtable meeting, "Strategies for Strengthening Commodity Management for HIV/AIDS Services," to form a consensus on strategic directions for strengthening health commodity management services in Rwanda.

- Conducted a survey to rapidly identify management information systems resources (related to hardware, software, communications systems, and human resources) in the Rwandan Ministry of Health; surveyed 83 facilities at hospital (32), district (39) and provincial (12) levels; helped create a forum where health commodity management information system-related issues are discussed.

- Facilitated the development of a national laboratory policy; conducted a situation analysis of laboratory capacity, and helped draft laboratory standard operating procedures (SOPs) for Rwanda; conducted nationwide training on using the SOPs.

- Helped build capacity to quantify ARVs at national and facility levels including introducing and training on MSH's Quantimed software tool; provided technical assistance for national quantifications of ARVs and other HIV/AIDS-related commodities, including lab reagents and test kits.

- Strengthened pharmaceutical management in ART sites including customizing the ART Tracking Tool and ART Dispensing Tool for Rwandan context, implemented the tools, and trained staff on their use; led the development of pharmacy SOPs for ART and conducted nationwide training sessions on the SOPs for pharmacy staff; organized supportive supervision visits to strengthen data collection, management, and reporting based on a new PMTCT protocol.

- Supported the rehabilitation and equipping of nine district pharmacies and recruited eight district pharmacists that were seconded to the Ministry of Health to help fill human resource gaps.

- In close coordination with USAID and the Ministry of Health, established a Coordinated Procurement and Distribution System for ARVs to maximize the purchasing power of donor funds and to ensure product quality through a centralized supply for ARVs. The system was later expanded to include other HIV/AIDS commodities including reagents and test kits.

- Conducted various pharmaceutical management assessments—

    - Explored options to improve the availability of essential medicines through different distribution strategies

    - Evaluated the human resources capacity at CAMERWA

    - Assessed the readiness of district pharmacies to assume their new mandate under the decentralization policy

- Helped eight hospitals establish drug and therapeutic committees.

- Assisted CAMERWA in developing a draft strategic plan of action to implement active (pull) distribution.

- Developed a reporting system that includes tools and instruction needed to manage information on antimalarials and essential medicines at all levels (central, district, and health center); created plan for cascade training on the system.

Collaborating Organizations

Catholic Relief Services

Centrale d'Achats de Médicaments Essentiels du Rwanda (CAMERWA)

Clinton Foundation

Columbia University

Concern Rwanda

Department of Pharmacy of the University of Rwanda

Direction of Pharmacy/ Pharmacy Task Force

Elizabeth Glaser Pediatric AIDS Foundation

Family Health International

International Center for AIDS Care and Treatment Programs

IntraHealth

John Snow Inc./DELIVER

Lux-Development

Ministry of Health

Ministry of State for HIV/AIDS

National AIDS Control Commission (CNILS)

National Tuberculosis Control Program (PNILT)

National Malaria Control Program (PNILP)

National Reference Laboratories

Supply Chain Management Systems

The Global Fund to Fight AIDS, Tuberculosis and Malaria

Training and Research AIDS Centre (TRAC)

U.S. Centers for Disease Control and Prevention

Voxiva

World Bank

World Health Organization

Key Tools and Publications

Rwanda District Management Information Systems Survey

Using a Systems Diagnosis Approach in Rwanda: Assessing Rwanda's Pharmaceutical System in Support of the U.S. President's Global HIV/AIDS Initiative

Laboratory Standard Operating Procedures for Antiretroviral Treatment Program in Rwanda

Rwanda National Medical Laboratory Policy
Situation Analysis of Rwanda Medical Laboratories

Assessment of the Health Commodity Supply Sector in Rwanda, September 2003

Conference Presentations

International AIDS Society 2006

Establishing a coordinated procurement and distribution system for ARVs in Rwanda [poster]

PEPFAR Implementers Meeting 2006

Establishing a coordinated procurement and distribution system for ARVs in Rwanda [oral]

PEPFAR Implementers Meeting 2007

A new approach to simplify the quantification of ARVs at site level: Rwanda [oral]

Acknowledgements

We would like to acknowledge and thank the various local and national government agencies and health care facilities as partners in our Rwanda activities, in addition to collaborating organizations not mentioned above.

Kazakhstan Final Report
2002–2004

Background

The RPM project started tuberculosis (TB)-related technical assistance in Kazakhstan in 1998, with activities ranging from conducting regional training in TB medicine procurement to helping the government develop standard documents for the national TB tender and providing consulting services during the tender adjudication and award. Through assistance from USAID-funded projects including the RPM project, the country had been developing technical capacity and expertise in procurement of TB medicines via central competitive tendering. While certain improvements were made in pharmaceutical procurement area, the quality of medicines became a concern for both the national institutions and donors. In discussions with USAID and RPM Plus, Kazakh experts shared their concerns about pharmaceutical quality and proposed instituting a laboratory testing program.

Technical Objective

- Increase the capacity of TB programs to design, apply, and monitor appropriate interventions to ensure uninterrupted supply of quality TB commodities.

Major Accomplishments

- Collected TB medicine samples from Kazakhstan oblasts; tested them at two local laboratories and at the U.S. Pharmacopeia laboratory; conducted a workshop to discuss the findings and recommend improvements.

- Planned, organized, and carried out a five-day regional training on drug quality assurance and Minilab® procedures for drug regulatory staff from Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan in collaboration with the U.S. Pharmacopeia Drug Quality and Information Program and Academy for Educational Development.

- Organized a conference for senior government officials and other senior level decision-makers in charge of the quality of pharmaceuticals in the country to introduce and adopt international approaches and methods of TB drug quality assurance and discuss best practices of TB drug procurement. The *Quality Assurance of the Anti-Tuberculosis Drugs* conference was organized in collaboration with the Ministry of Health, U.S. Pharmacopeia Drug Quality and Information Program, and the Academy for Educational Development.

- Provided technical assistance to the government to revise pharmaceutical policy documents with a focus on pharmaceutical procurement.

Collaborating Organizations

Academy for Educational Development
Dori Darmek (national drug supply agency)

Ministry of Health

National Center for Expertise of Drugs, Medical Products and Equipment

U.S. Pharmacopeia Drug Quality and Information Program

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our tuberculosis and drug quality assurance activities, in addition to collaborating organizations that may not have been mentioned above.

Kenya Final Report
2004–2008

Background

President's Emergency Plan for AIDS Relief (PEPFAR)

Kenya introduced antiretroviral therapy (ART) in five public facilities in 2002. RPM Plus worked with partners to conduct assessments that identified constraints to scaling-up HIV/AIDS-related health services and provided information for how best to integrate ART into existing health care services. With funding from USAID through PEPFAR, RPM plus began its expansive support to efforts that strengthened pharmaceutical management systems, including national systems for selecting, quantifying, and procuring antiretroviral (ARV) medicines, while building the human resource capacity within facilities to manage inventory effectively, dispense treatment appropriately, and use medicines rationally.

Kenya Medical Supplies Agency (KEMSA)

KEMSA is a state corporation that procures and distributes drugs and medical supplies to public health facilities. KEMSA has been constrained by lack of funds to develop requisite systems, inadequate physical facilities, and existence of parallel procurement systems because of vertical public health programs. KEMSA has been undertaking several reform initiatives, which provide an opportunity for further improvement. RPM Plus technical assistance helped capitalize on these gains as it collaborated with KEMSA and selected Ministry of Health (MoH) divisions that manage vertical programs to

strengthen commodity management systems and increase the availability of quality medicines.

President's Malaria Initiative (PMI)

Starting in 2006, RPM Plus got support from PMI to help the Division of Malaria Control (DOMC) implement the new antimalarial policy and work with the DOMC to establish robust but practical monitoring and evaluation systems that will ensure that the limited resources it invests in malaria prevention and treatment are used in the most cost-efficient, effective, and equitable way.

Technical Objectives (PEPFAR)

- Provide technical leadership and assistance to the PEPFAR Inter-Agency Team, Mission for Essential Drugs and Supplies (MEDS), and other supply chain organizations to plan, quantify, procure, and provide oversight to the distribution and use of quality pharmaceutical products for HIV/AIDS programs to support the National AIDS and Sexually Transmitted Infection Control Program (NASCOP) and PEPFAR.

- Increase the capacity of the MoH to identify, prioritize, and address pharmaceutical management issues in order to improve access to and use of quality pharmaceutical products for HIV/AIDS programs.

- Increase the capacity of MoH/National Public Health Laboratory Services to identify, prioritize, and address issues to improve access to and provision of quality laboratory services as needed for HIV/AIDS programs.

Technical Objectives (KEMSA)

- Strengthen the capacity of KEMSA and MoH programs to handle commodity consumption data through a robust pharmaceutical and logistics management information system.

- Provide administrative, operational, and technical support for TB activities undertaken by the National Tuberculosis & Leprosy Program.

- Strengthen commodity management institutional and human resource capacity of KEMSA and its MoH clients through needs based and focused short term technical assistance.

- Implement commodity management monitoring and evaluation tools, systems, and activities to support KEMSA and other MoH divisions.

- Update and align KEMSA's strategic plan and business plan with the national health strategic plan in order to reflect existing socioeconomic realities.

- Help KEMSA develop and implement effective distribution planning systems.

Technical Objectives (PMI)

- Provide support to the DOMC in the early diagnosis and prompt treatment of malaria using effective medicines.

- Improve the supply and quality of antimalarials and related supplies and improve the management and use of antimalarials.

Major Accomplishments

- Provided pharmaceutical management leadership and support to national-level ART initiatives

    - Served as a member of NASCOP's ART Task Force that oversees the national implementation of ART and participated on eight technical subcommittees; by participating in these committees, experiences from various stakeholders contributed to overall strategic planning and success of the Kenya ART program. Important accomplishments included rapid scale-up of ART, reaching 94 percent of the treatment target by December 2007, development and review of national treatment guidelines, and streamlining of the national ART supply chain to achieve minimal stock-outs.

    - Participated on the U.S. Government PEPFAR team to support pharmaceutical management activities, including helping build capacity within MEDS, which supplies PEPFAR ARVs.

    - Worked with stakeholders as a member of the National Laboratory Interagency Coordinating Committee; drafted and implemented revised national laboratory policy guidelines and the national strategic plan for medical laboratory services for 2005–2010.

- Strengthened MEDS and KEMSA supply chain for ARVs

    - Worked collaboratively with NASCOP and MEDS to track pharmaceutical and commodity usage at treatment sites; developed and maintained a centralized database and implemented ordering and reporting tools on ARV drug usage.

    - Helped MEDS quantify PEPFAR procurements of ARVs and other HIV/AIDS-related commodities totaling over 60 million U.S. dollars.

  - Provided support that enabled the demand-based PEPFAR supply chain to expand service from fewer than 10,000 ART patients in 2004 to over 90,000 patients at over 300 treatment sites.

- Assessed pharmaceutical management systems
  - Assessed 15 national priority ART sites to identify constraints to scale-up.
  - Conducted 39 site assessments to strengthen pharmaceutical management for ART.
  - Assessed the supply chains at six sites implementing prevention of mother-to-child transmission services.
  - Assessed 37 sites in Nairobi Province to inform strategies for strengthening pharmaceutical systems.
- Developed numerous commodity management tools including ART patient reports and ARV dispensing and consumption reports used by over 200 sites; drafted a set of 11 standard operating procedures for commodity management for nationwide use and a set of 10 job aids that illustrate proper pharmacy practices which are used at over 400 ART sites.
- Supported the monitoring and documentation of artemether-lumefantrine availability in public health facilities in Kenya six months after implementation.
- Helped develop and implement Kenya's Malaria Information Acquisition System for the DOMC.

Collaborating Organizations

Academic Model for Prevention and Treatment of HIV/AIDS Program

African Medical and Research Foundation

Aga Khan Health Services

Association of Kenya Laboratory Medical Scientific Officers

Beckton & Dickson

Children of God Relief Institute

Clinton Foundation

Eastern Deanery AIDS Relief Program

Elizabeth Glaser Pediatric AIDS Foundation

Family Health International

Population Council/Horizons

John Snow Inc./DELIVER

Kenya Medical Laboratory Technicians and Technologists Board

Kenya Medical Research Institute

Kenya Medical Supply Agency

Kenya Medical Training College

Malaria Inter-agency Coordination Committee

MEDS

MoH/ National Leprosy & Tuberculosis Program

MoH/Department of Reproductive Health

MoH/DOMC

MoH/NASCOP

MoH/National Public Health Laboratory Services

National Laboratory Interagency Coordinating Committee

Pharmacy & Poisons Board

U.S. Centers for Disease Control and Prevention

U.S. Department of Defense/Walter Reed Project

University of Nairobi

Key Tools and Publications

Inventory Tracking Tool (Electronic)

Translating ACT Policy Change into Implementation in Kenya

Standard Operating Procedures for Laboratory Services

Standard Operating Procedures for Pharmaceutical Services

Conference Presentations

International AIDS Society 2006

Assessment of pharmaceutical management systems in support of the Kenya national antiretroviral program [poster]

PEPFAR Implementers Meeting 2006

Integrating quality pharmaceutical management systems to support ART: Experience in three coastal art sites in Kenya [oral]

Using rapid assessment results to strengthen pharmaceutical management systems to support national ART program scale-up in Kenya [oral]
Tracking ARV drugs for rapidly expanding programs: Use of an Electronic Inventory Tracking Tool to support ARV supply chain management [oral]

Strengthening and integrating laboratory services in resource-limited settings to support ART: Coast Provincial General Hospital, Mombasa, Kenya [oral]

Human capacity development for quality laboratory services in support of antiretroviral therapy [poster]

PEPFAR Implementers Meeting 2007

Reasons for switching highly active antiretroviral therapy (HAART) regimens among HIV/AIDS patients in low-resource settings: Mbagathi District Hospital, Kenya [oral]

American Public Health Association 2008

Implementing an electronic tool to improve pharmaceutical management information systems in low-resource settings: Experiences from Kenya's ART program [poster]

Improving pharmaceutical care of HIV/AIDS patients in low resource settings: The case of Port Reitz District Hospital in Kenya [oral]

PEPFAR Implementers Meeting 2008

Kenya's experience in using a laboratory interagency coordinating committee to coordinate technical assistance, resources, and program elements [oral]

International AIDS Society 2008

Using the National AIDS and STI Control Programme to effectively coordinate and harmonize technical assistance to support ART scale-up in Kenya [poster]

Decentralization of ART pharmaceutical management in Kenya [poster]

Improving access to antiretroviral therapy for children: the Lea Toto experience in Kenya [abstract]

Acknowledgements

We would like to acknowledge and thank the various local and national government agencies and health care facilities as partners in our Kenya activities, in addition to collaborating organizations not mentioned above.

Kyrgyzstan Final Report 2002–2006

Background

The Kyrgyz Republic was among the first countries in the region to demonstrate political commitment to the DOTS strategy and expand DOTS nationwide. Kyrgyzstan had limited resources and international organizations and donors were supplying most tuberculosis (TB) medicines; however, the national TB program experienced major setbacks in DOTS implementation, including interruptions in treatment, due to shortages of TB drugs. Another concern was the National TB Institute's plan to procure second-line TB drugs, which given the evident lack of capacity to manage first-line medicines, presented a risk to the development of resistance to second-line treatment. The National TB Program needed a solid pharmaceutical management system and sound pharmaceutical policies and regulations to manage the large amounts of donated medicines and to ensure its sustainability.

Technical Objectives

- Increase the capacity of the TB program to design, apply, and monitor appropriate interventions to ensure uninterrupted supply of quality TB commodities.

Major Accomplishments

- Interviewed in-country stakeholders to gain an understanding of the situation and identify critical TB medicine management issues and areas for improvement; used the findings to develop curriculum for a TB medicine management course conducted for central- and *oblast*-level DOTS implementers and TB program managers.

- Provided Ministry of Health experts with specific tools to improve TB medicine management, including strengths, weaknesses, opportunities, and threats (SWOT) analysis; techniques to develop plans at different levels of the TB drug management system; ABC/VEN analysis; and quantification techniques to estimate TB medicine needs.

- Provided technical assistance in conducting pharmaceutical quality assurance tests, including a five-day regional training session covering the principles of Good Laboratory Practice, thin-layer chromatography-based Minilab® procedures, pharmaceutical sampling procedures and basic tests, data management and reporting, and compliance to standards.

Collaborating Organizations

Academy for Educational Development

Ministry of Health

National TB Institute

Project HOPE

U.S. Pharmacopeia Drug Quality and Information Program

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our tuberculosis activities in Kyrgyzstan, in addition to collaborating organizations that may not have been mentioned above.

Lesotho Final Report
2007

Background

The Regional HIV/AIDS Program works in 10 countries in the southern region of Africa, including five President's Emergency Plan for AIDS Relief (PEPFAR) countries and five non-PEPFAR countries. The program focuses particularly on the non-PEPFAR countries of Lesotho and Swaziland, whose HIV prevalence rates are among the highest in the world. In these two countries, the program aims to increase access to the full package of prevention, treatment, care, and support activities necessary to accomplish the goals outlined in the Emergency Plan. In addition to HIV/AIDS, the program aims to address some of Lesotho's immediate health challenges, including tuberculosis, child health, and primary health care services.

RPM Plus worked collaboratively with the Ministry of Health and Social Welfare by offering technical assistance, training, and the development and implementation of pharmaceutical management tools.

Technical Objectives

- Improve and strengthen medicine and commodity supply systems to support the scale-up of HIV/AIDS programs in Lesotho.

Major Accomplishments

- Helped develop a strategic plan and performance management system for the National Drug Services Organization.

- Conducted a pharmaceutical and laboratory commodities assessment; assessment teams including consultants, laboratory, and pharmacy officials who visited 14 antiretroviral therapy (ART) sites in seven districts and conducted stakeholder interviews; presented preliminary findings and recommendations to U.S. government officials and to the Ministry of Health and Social Welfare.

- Implemented RxSolution, a pharmaceutical management software package, in sites delivering ART; trained facility staff in the software.

Collaborating Organizations

Ministry of Health and Social Welfare

National Drug Services Organization

Southern African Human Capacity Development Coalition

Supply Chain Management System

Acknowledgements

We would like to acknowledge and thank the government agencies and health care facilities as partners in our Lesotho activities, in addition to collaborating organizations that may not be mentioned above.

Malawi Final Report 2007

Background

Because Malawi has a high malaria burden, the President's Malaria Initiative (PMI) chose it as one of its beneficiary countries. In preparation for PMI country planning and implementation, the U.S. Government conducted a rapid assessment in 2006 and subsequently asked RPM Plus to provide support to key technical areas of the Malawi PMI Country Operational Plan. RPM Plus activities were to support regulatory and

operational activities needed to implement the national artemisinin-based combination therapy (ACT) policy.

Technical Objectives

- Improve the supply and quality of antimalarials and related supplies in Malawi.
- Improve the case management and use of appropriate antimalarials in Malawi.

Major Accomplishments

- Provided technical support to the Malaria Drug Policy Change Logistics Subcommittee to review assumptions and finalize the quantification exercise for ACTs.
- Reviewed and contributed to the *Participants Training Manual* and *Facilitators Guide* to train health care professionals on implementing the new malaria treatment policy.
- In collaboration with the Central Medical Stores, finalized the *ACT Operational Plan*, which details the distribution plan, including the ACT allocation to facilities, and the responsibilities of the various organizations in implementing the ACT policy change.
- With John Snow Inc./DELIVER, assessed Malawi's readiness to receive its first ACT consignment and made recommendations on improving storage space, technical assistance needs, tools, and training for the short, medium, and long term; identified a warehouse to provide extra storage space.
- Successfully advocated for pharmacy technicians to be included as trainers in the new treatment policy; helped train 108 trainers in pharmaceutical management of the new malaria medicines.
- Drafted an ACT program monitoring and evaluation tool to incorporate into routine district monitoring and supervision.

Collaborating Organizations

Central Medical Stores

Global Fund to Fight AIDS, Tuberculosis and Malaria

John Snow Inc./DELIVER

National Malaria Control Program

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our malaria activities in Malawi, in addition to collaborating organizations that may not have been mentioned above.

Mali Final Report
2006–2008

Background

The RPM Plus Program received funds from USAID to develop strategies to implement malaria policies and to provide technical assistance in pharmaceutical management issues related to malaria in Mali. In 2006, Mali adopted a new malaria treatment policy recommending artesunate-amodiaquine as the first-line treatment for uncomplicated malaria. In collaboration with the Malaria Action Coalition, RPM Plus provided technical assistance to the Mali national malaria control program (NMCP) to implement artemisinin-based combination therapies (ACTs).

Technical Objectives

- Provide technical support to the NMCP to revise the national malaria treatment policy.

- Support the NMCP's implementation of the new malaria treatment policy.

Major Accomplishments

- Assessed antimalarial medicine use and availability in the community and the private sector. The NMCP and other partners used the results to guide and refine ACT implementation.

- Helped the NMCP develop an ACT policy implementation plan, which involved collaborating with other Roll Back Malaria partners to convene a national stakeholders meeting to coordinate strategies, roles, and responsibilities in the implementation process and develop timelines for each step.

- Conducted a workshop with stakeholders to revise the training module for health workers and the community to manage uncomplicated malaria using ACTs. As a result, the new antimalarial medicine policy document was validated and 40 training officers learned how to manage uncomplicated malaria using the new modules for ACTs; participated in developing training modules on the new malaria treatment policy for implementation in the private sector.

- Carried out a national quantification exercise for ACTs for 2006–2010 using estimates of malaria incidence. The estimate was also used to develop the country's Global Fund to Fight AIDS, Tuberculosis and Malaria procurement and supply management plan.

Key Tools and Publications

Évaluation de la Disponibilité et l'Utilisation des Médicaments antipaludiques au Niveau communautaire au Mali [Evaluation of the Availability and Use of Antimalaria Drugs at Community Level in Mali]

Collaborating Organizations

Malaria Action Coalition

National Malaria Control Program

Roll Back Malaria Partnership

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our malaria activities in Mali, in addition to collaborating organizations that may not have been mentioned above.

Moldova Final Report 2004–2006

Background

Moldova has experienced high rates of tuberculosis (TB). Starting in 2001, the country revised its approach to TB treatment and launched a national tuberculosis control program based on the World Health Organization's DOTS strategy. USAID provided funds to RPM Plus to improve the capacity of Moldova's National Tuberculosis Control Program (NTP) to manage anti-TB medicines.

RPM Plus activities included assessing and developing capacity in anti-TB medicine procurement and distribution practices, establishing a TB-related pharmaceutical management information system, and developing the NTP's capacity to manage second-line anti-TB medicines by implementing reliable practices of selection, quantification, distribution, and use.

Technical Objectives

- Increase the capacity of the national TB control program to design, apply, and monitor appropriate interventions to ensure uninterrupted supply of quality first- and second-line pharmaceuticals.

- Strengthen the NTP partners' capacity to manage essential commodities to diagnose and treat TB.

Major Accomplishments

- Organized a course to strengthen the NTP by developing their capacity to work as a team and to understand the role and contribution of each member in improving anti-TB pharmaceuticals management.

- Conducted surveys of anti-TB drug procurement and distribution practices.

- Collaborated with the Program to Strengthen TB Control to develop systems for and expertise in the supply and distribution of laboratory consumables and pharmaceuticals in support of a proposed upgrade of the multidrug-resistant (MDR) reference laboratory and treatment facility.

- Assessed pharmaceutical management information needs for national TB program managers; organized a policy options workshop to establish a set of pharmaceutical management indicators to monitor the supply system.

- Provided technical assistance in managing second-line drugs to support the DOTS Plus program; helped develop a patient package distribution mechanism for MDR-TB cases to ensure effective inventory control and use of second-line anti-TB medicines.

- Helped develop and implement a pharmaceutical management information system for MDR-TB drug management that is integrated into Moldova's existing system for TB surveillance.

Collaborating Organizations

American International Health Association/ Program to Strengthen TB Control

Ministry of Health and Social Protection

National Health Insurance House
Phtisio-Pneumology Institute (*Chiril Draganiuc*)

Scientific Practical Center of Public Health and Sanitary Management

TB/AIDS Project Coordination Unit/Global Fund to Fight AIDS, Tuberculosis and Malaria

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our tuberculosis activities in Moldova, in addition to collaborating organizations that may not have been mentioned above.

Namibia Final Report
2003–2007

Background

The RPM Plus Program received funds from USAID/Namibia under the President's Emergency Plan for AIDS Relief to help the Ministry of Health and Social Services (MoHSS) assess the capacity of the local government to meet health pharmaceutical management needs and to strengthen pharmaceutical management systems to support scale-up of HIV/AIDS activities.

Technical Objectives

- Strengthen relevant policies, legal framework, and management systems that support the implementation of the national medicine policy.

- Strengthen HIV/AIDS commodity management procedures of the Central Medical Stores, regional medical stores, and health facilities.

- Strengthen human resources by filling key public sector pharmacy positions and through training and developing capacity of pharmacy cadres to manage HIV/AIDS-related pharmaceuticals.

- Strengthen the rational use of HIV/AIDS-related pharmaceuticals by implementing proven strategies that promote rational use of medicines.

Major Accomplishments

- Assessed the national capacity for overall pharmaceutical management, including evaluating operations of the Central Medical Stores and two regional medical stores, interviewing key informants in the public and private sectors, and observing pharmaceutical management practices in 12 public and mission facilities. The assessment focused on pharmaceutical care activities, staffing, training, medicine selection, quantification, ordering systems, rational drug use, management support systems, availability and management of pharmaceuticals and commodities needed

for voluntary counseling and testing (VCT), prevention of mother to child transmission (PMTCT), and ART services; developed recommendations for improvements based on assessment findings.

- Assessed the Namibia system for medicines registration and quality assurance and made plans to address major weaknesses; helped develop dossier review guidelines and a drug registration database and advocated for policy change giving priority to antiretrovirals (ARVs) and to create a proxy evaluation process to quickly accept products already registered by trusted countries. Actions resulted in the registration of 74 new ARV products, including pediatric formulations and generics/multi-source products.

- Helped implement new operational changes at the Central Medical Stores, including updating the Syspro™ system and workflow plan, reorganizing space, introducing a perpetual stock count system, drafting a procurement and procedures guidance manual, and establishing a supervision checkpoint system to improve efficiency and accountability; at regional medical stores, rolled out Syspro software system and drafted and implemented standard operating procedures for inventory management, store keeping practices, and distribution systems.

- Addressed the critical lack of human resources in Namibia's pharmaceutical sector by assessing the human capacity development for pharmaceutical services and making recommendations for improvement—

    - In collaboration with National Health Training Center (NHTC) and other stakeholders, developed a strategy to build capacity within NHTC and other institutions to produce more middle-level pharmacy staff to support HIV/AIDS treatment; revised course curriculum to include HIV/AIDS and pharmaceutical management; improved the NHTC infrastructure; developed in-service professional programs; recommended strategies for task-shifting.

    - Identified priority vacant positions in the public sector—ranging from national pharmaceutical quantification and logistic specialists to regional and hospital pharmacists; worked with a local Namibian human resource firm to recruit and hire new staff to fill vacancies, while USAID funded the positions. New staff members work within the government structure and under the supervision of the MoHSS. In two years, new recruits doubled the number of government pharmaceutical staff. To assure sustainability, the MoHSS agreed to eventually absorb the positions into the government system.

- Developed and implemented a facility-based pharmaceutical management information system to support ART services—

    - Mapped data requirements, including those related to pharmaceutical availability and inventory management, rational use of medicines and pharmaceutical care, human resource/workload, and medicine financing.

  - Developed 22 indicators to monitor and evaluate ART pharmaceutical services.
  - Developed standard operation procedures and tools for data collection.
  - Involved facilities' therapeutics committees as stakeholders in developing the pharmaceutical information system.
  - Developed a reporting system for upward data collection from facility to central level with a downward feedback loop.

- Developed a set of standard operating procedures for pharmaceutical management for facilities delivering ART, PMTCT, and VCT services; provided associated training. The comprehensive procedures standardized service provision across all facilities.

- Reviewed and proposed revisions to the National Drug Policy, related laws and regulations, and an implementation plan.

- Provided technical assistance at the national and facility levels on quantification of ARVs, including developing projections for national ART growth trends for forecasting; implemented RPM Plus' quantification tool, *Quantimed*, at the Central Medical Stores and trained staff in its use.

- Customized and implemented RPM Plus' electronic ART Dispensing Tool in 24 facilities delivering ART, resulting in 70 percent of all ART patients being tracked with the tool. Treatment facilities report improved inventory management of ARVs and reduced dispensing time and dispensing errors.

- Helped establish the country's first Therapeutics Information and Pharmacovigilance Center (TIPC), which provides unbiased information to health care workers and the public on ARVs and other medicines, and collects data to monitor adverse drug reactions to medicines used in Namibia; established a TIPC implementation working group, recruited a center coordinator, and purchased 3 electronic databases, 30 medical and pharmacy texts, and 20 key journals; developed and field-tested the data collection and reporting tools, including the adverse drug reaction forms and the therapeutic information request forms; developed training materials and conducted pharmacovigilance training.

- Supported the decentralization of ART services to health centers and clinics by providing training in rational medicine use in the community to home-based care and community-based organizations in Ohangwena region; trained health care workers in treatment adherence.

- Worked with five therapeutic committees to improve rational use of medicines, including training staff and helping them carry out interventions, such as improving inventory management practices and developing regional formularies.

Key Tools and Publications

Assessment of the Public Sector Pharmaceutical Supply System of Namibia

Proposals for Strengthening the Central and Regional Medical Stores of Namibia in Support of the Scale-Up and Expansion of HIV/AIDS Programs

Human Capacity Development Assessment for Public Sector Pharmaceutical Services in Namibia: Strategies to Scale up HIV/AIDS Programs and ART Therapy

Review of National Medicines Policy, Review of the Namibia National Pocket Manual for Health Workers, and Determination of Desirability for National Standard Treatment Guidelines for Namibia

Conference Presentations

International AIDS Society, 2004

Assessing the pharmaceutical supply system in Namibia to support expansion of PMTCT and ART activities [poster]

International AIDS Society, 2006

Improving the availability of ARVs in Namibia by using policy change to streamline the drug registration process [oral]

Analyzing medication adherence measurement tools in predicting antiretroviral treatment outcomes in resource-limited settings [poster]

HIV Implementers Meeting, 2006

Interventions to improve pharmaceutical management in ART programs in Namibia [poster]

Improving the availability of ARVs in Namibia by using policy change to streamline the drug registration process [poster]

Analyzing medication adherence measurement tools in predicting antiretroviral treatment outcomes in resource-limited settings [poster]

American Public Health Association 2007

Building pharmaceutical sector capacity in Namibia: an innovative initiative to recruit and retain pharmacy staff for public service [oral]

HIV Implementers Meeting, 2007

A partnership model to improve human resource capacity to deliver pharmaceutical services in Namibia [poster]

Collaborating Organizations

Catholic Health Services

Central Medical Stores

Directorate of Special Programmes

I-TECH

Johns Hopkins University

Medicines Control Council

Medicos Del Mundo

Ministry of Health and Social Services

MOHSS/ Pharmaceutical Services Division

MOHSS/ Policy Planning and Human Resources Directorate

Namibia Institute of Pathology

National AIDS Coordination Programme

National Health Training Center

Oshakati Regional Medical Stores

Pharmaceutical Control & Inspection

Pharmaceutical Society of Namibia

Rundu Regional Medical Stores

U.S. Centers for Disease Control and Prevention

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our activities in Namibia, in addition to collaborating organizations that may not have been mentioned above.

Nepal Final Report
2000–2004

Background

An important finding of the Strengthening District Management at District Level Program, which the Rational Pharmaceutical Management project developed and implemented in two Nepali districts, was that although training programs and other interventions may improve short-term behavior change in pharmaceutical management and use, alone they were not sufficient to create sustained change. Therefore, an initial focus of RPM Plus Program in Nepal was to develop and implement a pharmaceutical management monitoring and supervision program.

In addition, the Ministry of Health's Community Drug Program asked RPM Plus to help identify ways to encourage rational medicine use in Community Drug Program implementation districts.

Another RPM Plus activity in Nepal was to develop a framework for using antimicrobial (AMR) sentinel surveillance system data to guide the revision of standard treatment guidelines.

Technical Objectives

- Establish a structure and process to formulate antimicrobial prescribing policies, guided by clinical and antimicrobial resistance surveillance data.

- Strengthen public sector pharmaceutical management to improve availability of appropriate antimicrobial and antiparasitic drugs for priority infectious diseases in selected areas.

- Strengthen public and private sector medicine provision practices to enhance the rational use of appropriate antimicrobial and antiparasitic drugs for treatment of priority infectious diseases in selected areas.

Major Accomplishments

- Provided technical assistance to help develop a national level advisory committee to address AMR issues.

- Conducted the national training course on drug and therapeutics committees (DTCs); established an electronic system to track the progress of DTC course participants in implementing their DTC action plans.

- Worked with Valley Research Group to evaluate changes that may have resulted from introducing the Strengthening Drug Management at District Level program in

Dhading and Siraha districts (carried out under RPM), evaluate the effectiveness of the training process, and provide a report to guide revisions to the training program.

- Developed technical guidelines for using AMR surveillance and other data to revise standard treatment guidelines and guide policy and clinical decision-making

- Strengthened district-level drug management by developing and implementing a pharmaceutical management monitoring and supervision program; developed training materials for district, health post, and sub-health post workers and trained health care workers and local government representatives on the program. Training also included a community orientation component on the purpose of the monitoring and supervision activity.

- Helped improve training materials on rational medicine use at the district level.

- Worked with the International Network for the Rational Use of Drugs/Nepal to design and conduct a baseline survey of district-level prescribing practices.

Key Tools and Publications

Using Antibiotic Resistance Surveillance Information to Develop Standard Treatment Guidelines for Acute Bacterial Infections in Developing Countries

Using AMR Surveillance Data to Select Antimicrobial Agents for the Treatment of the Most Prevalent Bacterial Infectious Diseases in Nepal

Pilot Implementation of Monitoring and Supervision for Drug Management and Use in Chitwan District

Training Manual for District level Health Workers on Monitoring & Supervision for Drug Use and Management

Training Manual for Health Post Level Health Workers on Monitoring & Supervision for Drug Use and Management

Training Manual for Sub-Health Post Level Health Workers on Monitoring & Supervision for Drug Use and Management

Operation Manual for Peer-Group Discussion and Supervision/Monitoring for District Level & Health Post Level

Collaborating Organizations

Alliance for the Prudent Use of Antibiotics

British Nepal Medical Trust

Center for Technical Education and Vocational Training

Community Drug Program

Drug Information Network of Nepal

GTZ (German Technical Cooperation Agency)

Health Secretary

His Majesty's Government of Nepal Infectious Disease Program

International Network for the Rational Use of Drugs/Nepal

International Centre for Diarrheal Disease Research, Bangladesh

Ministry of Health

Ministry of Health/Department of Drug Administration

Ministry of Health /Department of Health Services

Ministry of Health /Logistics Management Division

Nepal Family Health Program

U.S. Pharmacopeia Drug Quality and Information Program

United Nations Children's Fund

Valley Research Group

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Nepal activities, in addition to collaborating organizations that may not have been mentioned above.

Nicaragua Final Report 2002–2008

Background

The Ministry of Health of Nicaragua (MINSA) faced a crisis in the supply of essential medicines to its network of health facilities. Major hospitals reportedly faced 70–80 percent shortages of medicines, and health centers had 60 percent shortage levels. The

determinants of the crisis may have been related to inadequate or inappropriate procurement practices, deficiencies in logistics management, inadequate needs estimation, insufficient financial resources, and uneconomic prescribing practices. The policy, legal, and regulatory framework may have also been contributing factors.

The RPM Plus Program, with funds from the USAID Mission in Nicaragua, collaborated with MINSA to assess their pharmaceutical supply system and explore potential alternatives to improve the efficiency of their procurement and distribution system. Another area of collaboration was to expand and improve an existing nonprofit drug outlet network run by several nongovernmental organizations in rural Nicaragua as a strategy for increasing access to essential, quality medicines in underserved areas.

Technical Objectives

- Strengthen national level capacity to improve access to and use of health commodities.

- Provide technical assistance to implement the *Ventas Sociales de Medicamentos* (VSM) program.

Major Accomplishments

- Conducted a pharmaceutical sector assessment looking at pharmaceutical policy, legislation, and regulations and their impact on pharmaceutical supply management, procurement policies and procedures, logistics management, and product quality assurance; based on the assessment results, facilitated a policy-option workshop with senior MINSA representatives.

- Provided technical assistance to help define regulations and guidelines and drafted a legal amendment for the VSM program; strengthened the VSM supply management and financial administration; standardized procedures used by the VSM quality assurance program; standardized materials and methods for dispenser training. At the end of the program, stakeholders agreed that the standardized manuals may be adapted and implemented in the public and private sectors.

  Specific activities included—

  - Developing standardized materials and trained 64 dispensers from 3 VSM nongovernmental organizations on primary-level dispensing and pharmaceutical management.

  - Helping to strengthen the VSM quality assurance system, including developing a quality assurance standard procedures manual and procuring a Minilab® testing kit.

  - Training nine pharmacists from three nongovernmental organizations and two from government reference laboratories on product quality testing using the Minilab® kit and the standard procedures.

  - Conducting a study of the VSMs' financial sustainability; providing recommendations on how to improve cost-efficiency in the existing pooled procurement system.

- Analyzed the costs and benefits of the two public distribution systems: the traditional central medical store (CIPS) and the direct delivery system (SAAS). The data collection process included interviewing public sector authorities and technicians, gathering information for a variable cost analysis, and surveying central and provincial stores. As a result of the analysis, MINSA decided to reorganize the main warehouse and delivery system.

Key Tools and Publications

Análisis del Sistema de Suministro de Medicamentos en el Ministerio de Salud de Nicaragua [Analysis of the Drug Management System in the Nicaragua Ministry of Health]

Standardized Manual for VSM Pharmaceutical Quality Assurance

Standardized Manual for the Training of VSM Dispensers

Collaborating Organizations

Acción Médica Cristiana

Comision Poltica Nacional de Medicamentos

Health Action International

Juan XXIII

Pro Salud Dario

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Nicaragua activities, in addition to collaborating organizations that may not have been mentioned above.

Peru Final Report
2002

Background

Pharmaceutical supply systems in many developing countries often have serious problems, including ineffective procedures in medicine selection, poor quality control, and economically inefficient procurement. A major focus in the work of USAID/Peru in previous years had been to strengthen health facilities through staff training; upgrade management systems; enhance surveillance systems for infectious diseases, biomedical, and operation research; and improve health care financing.

However, at the time RPM Plus started activities in Peru, the Mission decided to concentrate their efforts in five central *departamentos*: San Martin, Ucayali, Huánuco, Junín, and Pasco. USAID/Peru selected these departments because of their high concentration of low-income population and lack of accessibility to health care and medicines due to challenging geographic characteristics.

Technical Objectives

- Conduct a pharmaceutical assessment in three *departamentos* to inform the development and implementation of interventions to improve the effectiveness of health services and policy interventions and to improve the health of high-risk populations.

Major Accomplishments

- Conducted an assessment of the pharmaceutical situation in Ministry of Health hospitals in three regions of central Peru; held interviews with central-level health officers and visited the Drug Administration Office. The assessment found that decentralized pharmaceutical purchasing practices in hospitals had increased drug purchase prices compared to prices obtained by regional offices of health, and that existing insurance schemes had not been fully integrated into hospital budget systems. RPM Plus provided USAID and the Ministry of Health a list of potential interventions to address findings.

- Conducted a course for a course for members of Comités Farmacológicos (drug and therapeutics committees) at 20 Peruvian hospitals.

Key Tools and Publications

Situación de los Medicamentos en Tres Departamentos del Perú [Drug assessment for three Peruvian departments]

Collaborating Organizations

Ministry of Health

Pan American Health Organization

MoH/Drug Regulatory Authority of the Peruvian Ministry of Health [DIGEMID]

Ministry of Health/Drug Administration Office

World Health Organization

VIGIA Project

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities as partners in our Peru activities, in addition to collaborating organizations that may not be mentioned above.

Senegal Final Report 2004–2007

Background

RPM Plus worked with the Ministry of Health (MoH) and other partners in Senegal to determine the strengths and weakness of the pharmaceutical system to support child health and malaria services, in particular, integrated management of childhood illness (IMCI) and the prevention of malaria during pregnancy.

MoH, RPM Plus, and Basic Support for Institutionalizing Child Survival (BASICS II) conducted surveys of pharmaceutical management for childhood illness in the public sector and in the community, which revealed weaknesses in medicine availability and use that RPM Plus and other partners targeted for improvement.

Also during the RPM Plus Program, Senegal changed its first-line policy for malaria treatment from chloroquine to amodiaquine and sulfadoxine-pyrimethamine and then to artesunate-amodiaquine and introduced intermittent preventive therapy using sulfadoxine-pyrimethamine to prevent malaria during pregnancy. These new policies presented challenges in assuring the availability and rational use of medicines, especially in light of the findings of an RPM Plus study on intermittent preventive therapy that showed that women did not receive antimalarials at prenatal clinics, but instead bought them from the private sector.

Technical Objectives

- Provide technical assistance to the Senegal USAID Mission and MoH in pharmaceutical management for malaria and child survival activities.

- Strengthen national capacity for pharmaceutical management to improve availability and use of medicines in the public and private sectors.

- Strengthen national capacity for pharmaceutical management to implement malaria treatment and malaria in pregnancy.

Major Accomplishments

- Evaluated the early implementation of artemisinin-based combination therapy (ACT) for malaria. This evaluation was conducted in two districts: Richard Toll and Touba, where combination therapy was initiated before the national malaria treatment policy was changed; conducted a workshop to disseminate the assessment results. The report is available in English and French and was used by the national malaria committee to guide the transition to ACTs.

- Conducted a survey of commodity management for HIV/AIDS, tuberculosis, and malaria, focusing particularly on the logistics system; developed instruments and indicators for the survey; supported the survey preparation by local partners; facilitated the validation of the indicators and instruments, trained data collectors, and conducted data collection in four districts and nine regional antiretroviral therapy sites, as well as in Dakar at the national level.

- Provided technical assistance in the rollout of community case management (CCM) of acute respiratory infection; drafted the guide for CCM for acute respiratory infection and circulated it among partners for suggestions and comment; produced a draft plan and procedures document to be used in the CCM of acute respiratory infection based on pharmacovigilance research, but also to provide the basis on which to build a general national pharmacovigilance system.

- Trained 685 (95 percent) of private sales assistants in all USAID districts on basic IMCI guidelines, rational medicine use, and national treatment protocols, including the use of the newly introduced national policy of artesunate-amodiaquine for malaria treatment; developed a draft report for each of the 10 workshops that included pre-test/post-test scores for participants to evaluate the workshop effectiveness; drafted and disseminated a final report summarizing results from all of the workshops; worked with the Direction des Pharmacies et des Laboratoires and the syndicate of private pharmacists to develop a supervision mechanism based on questionnaires and simulated client scenarios to continually evaluate knowledge and practices of private sales assistants.

- Provided technical assistance to the national malaria control program in conducting formative supervision visits in the Thies region; evaluated pharmaceutical management practices in district depots and health centers.

Key Tools and Publications

Assessment Report, May 2004: Use of Sulfadoxine-Pyrimethamine and Amodiaquine Combination in Richard Toll and Touba Districts in Senegal

Formation en Gestion de Stock de Médicaments des Prestataires de Soins et Responsables de Structures Sanitaires dans le Cadre de la PCIME: Guide de Stagiaire Sénégal [Store Management Trainer's Guide, July 2007 Senegal]

Training in Inventory and Store Management for Health Care Providers and Health Facility Managers Participant's Guide Senegal

Formation en Gestion de Stock de Medicaments des Prestataires de Soins et Responsables de Structures Sanitaires Guide de Stagiaire Sénégal [Training in Inventory and Store Management for Health Care Providers and Health Facility Managers Participant's Guide Senegal]

Training in Inventory and Store Management for Health Care Providers and Health Facility Managers Trainer's Guide Senegal

Formation en Gestion de Stock de Medicaments des Prestataires de Soins et Responsables de Structures Sanitaires Guide de Formateur Sénégal [Training in Inventory and Store Management for Health Care Providers and Health Facility Managers: Facilitator's Guide Senegal]

Collaborating Organizations

Basic Support for Institutionalizing Child Survival (BASICS)

DANSE

Direction des Pharmacies et des Laboratoires

Family Health International

Ministry of Health

National Malaria Control Program (PNLP)

National Management Information System

Pharmacie Nationale D'approvisionnement (national medical stores)

Syndicate of private pharmacists

United Nations Children's Fund

Université Cheikh Anta Diop

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Senegal activities, in addition to collaborating organizations that may have not been mentioned above.

South Africa Final Report 2003–2008

Background

In 1997, MSH was awarded the management of the EQUITY Project, a bilateral project funded under the USAID Child Survival Program. The project's main objective was to promote an integrated approach to strengthen the delivery of primary health care services. Improvement in the supply of medicines had been a major area of success of the EQUITY Project's assistance to the national Department of Health (DoH), particularly in Eastern Cape Province. To maintain the momentum of South Africa's progress in the critical area of pharmaceutical supply management, the USAID/South Africa Mission committed field support funds to continue assistance through the RPM Plus Program.

RPM Plus' goal in South Africa was to strengthen the pharmaceutical management system, including areas of selection, procurement, distribution, and use to address some of South Africa's immediate health challenges, including HIV/AIDS, tuberculosis (TB), child health, and primary health care services. RPM Plus worked collaboratively with the DoH and the Mission by offering technical assistance, training, and tools development and implementation.

In addition, with support from the President's Emergency Plan for AIDS Relief (PEPFAR), RPM Plus activities included assessing facilities' ability to manage pharmaceuticals, developing and implementing an integrated computerized information system, building the capacity of personnel to manage HIV/AIDS programs, improving patient counseling and adherence to treatment, developing models for quantifying medicines and commodities, and improving infection control practices.

Technical Objectives

- Establish and promote best practices for procurement, inventory management, distribution, and dispensing of antiretrovirals (ARVs) and other essential commodities at all levels.

- Identify gaps and develop strategies to ensure compliance with national standards required to provide antiretroviral therapy (ART) through assessments of provincial pharmaceutical management system infrastructures.

- Develop the skills of pharmacists, nurses, and pharmacist assistants to expand their role in patient counseling, treatment adherence monitoring, and education.

- Strengthen provincial and institutional drug and therapeutic committees to promote reporting and monitoring systems for adverse drug events.

- Provide technical assistance and support to the DoH in its *Comprehensive HIV and AIDS Care, Management and Treatment Plan* to develop strategies for treatment adherence monitoring and measurement.

- Increase the capacity of health facilities (hospitals, community health centers, and primary health care clinics) located in the provinces and in metropolitan areas to deliver quality pharmaceutical services.

- Improve the availability and the appropriate use of ARVs and other HIV/AIDS-related commodities at facilities providing services to HIV/AIDS patients.

- Improve the availability and accessibility of information on medicines used for HIV/AIDS treatment and prevention.

Major Accomplishments

- Assessed over 1,100 public pharmaceutical facilities in nine provinces in South Africa to define strengths and weaknesses and provide strategies for meeting new legislative requirements related to pharmaceutical services.

    - Trained more than 300 staff members in the audit data collection tools.

    - Provided ongoing support to provinces to improve infrastructure, human resources, systems, and processes.

    - Organized a national forum to evaluate progress made towards reaching compliance with new legislation.

    - Produced a national report on the current status which showed considerable improvements in pharmaceutical services following the audit.

- Provided support to South Africa's National Essential Drugs List Committee to revise the list for primary health care and hospital levels; introduced principles of evidence-based medicine in selection and systems for managing conflict of interest.

- Built capacity of provincial and institutional drug and therapeutics committees in ABC analysis, selection, drug utilization reviews, pharmacoeconomic analysis, and formulary development.

- Provide support to the DoH in implementing a new drug supply management system.

- Helped the South African Pharmacy Council and the eight pharmacy schools in South Africa to determine activity times for pharmaceutical services, the cost of providing a pharmaceutical service, and staffing needs; provided support to the National Human Resources Task Team in developing new cadres of pharmacy personnel.

- Adapted the RPM Plus HIV/AIDS Pharmaceutical Management course for the South African environment; conducted 21 training courses for 510 pharmaceutical personnel in South Africa, which included skills building using the monitoring-training-planning (MTP) approach; held 16 MTP follow-up workshops for 255 people.

- Adapted MSH's Drug and Therapeutic Committee and HIV/AIDS Pharmaceutical Management courses for South Africa, resulting in their accreditation by the South African Pharmacy Council—the body responsible for pharmacy education standards.

- Collaborated with the DoH and selected hospitals to train infection control teams on implementing improvement initiatives. Hospital teams conducted baseline assessments and used the results to develop and carry out improvement plans. Pilot hospitals experienced measurable improvements; for example 51 percent increase in the number of staff following hand hygiene policies; compliance with contaminated waste policies increased from 38 to 73 percent; an assessment score for waste management increased from 12 to 82 percent. The government of South Africa is now rolling out this assessment tool nationwide; RPM Plus has trained 175 people and is conducting training of trainer workshops in all provinces.

- Helped establish Regional Training Centers whose purpose is to build the capacity of health care staff to address the HIV/AIDS epidemic; provided technical assistance and training in pharmaceutical management issues and tools.

- Developed an integrated computerized drug supply management system, RxSolution, which manages orders, receipts, issues, stocks, and dispensing at hospital and district levels: used at 91 sites in South Africa with 200 people trained.

- Developed a multimethod tool to assess treatment adherence to ART and trained 384 people in four provinces in using the tool. The Department of Health adopted the tool for nationwide implementation and included it in the new ART standard treatment guidelines.

- Created quantification models to estimate ARV requirements; helped the DoH hold quarterly national-level quantification workshops and developed national tender estimates based on ARV regimens in South Africa.

Key Tools and Publications

Adherence Measurement Tool

RxSolution tool

Conference Presentations

Global Health Council 2005

Dynamic quantification of antiretroviral drug needs: implementation of treatment in the Western Cape, South Africa [oral]

South African Association of Hospital & Institutional Pharmacists 2007

Securing Global Fund allocation by strengthening medicines supply management systems: The Swaziland experience [poster]

International AIDS Society 2004

Are pharmaceutical services in the public sector ready for the implementation of antiretroviral treatment on a large scale? [poster]

International AIDS Society 2006

Improving adherence by decentralizing ART to local clinics in South Africa using a computerized pharmacy tool [poster]

PEPFAR Implementers Meeting 2006

Improving adherence by decentralizing ART to local clinics in South Africa using a computerized pharmacy tool [poster]

Development of a multi-method medication adherence assessment tool suitable for antiretroviral therapy facilities in resource-constrained settings [poster]

American Public Health Association 2006

Improving adherence to HIV/AIDS treatment in South Africa by using a computerized pharmacy tool to transfer care to local clinics [poster]
Development of a multi-method medication adherence assessment tool suitable for antiretroviral therapy facilities in resource-constrained settings [oral]

Collaborating Organizations

Department of Correctional Services

Médecins Sans Frontières

Department of Health

DoH/ Pharmaceutical Policy and Planning Cluster

DoH/HIV/AIDS Directorate

Rhodes University

Save the Children

South African Pharmacy Council

University of Fort Hare

University of Kwazulu-Natal

University of the Free State

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We would like to acknowledge and thank the various national, provincial, and municipal government agencies and public and private health care facilities that were partners in our South African activities, in addition to collaborating organizations that may not be mentioned above.

Southern Sudan Final Report 2006–2007

Background

The Southern Sudan Interim Health Policy (December 2005 draft) mentions malaria as a particular challenge and gives priority to maternal and child health interventions. As a key step, the Government of South Sudan, with inputs from key partners, drafted the first national Roll Back Malaria (RBM) strategic plan for 2006–2011. Most national public

health programs had been disrupted by several years of conflict; such programs therefore required comprehensive support to achieve the expected health results while developing the technical, organizational, and institutional capacities of their staff. In this context, USAID Sudan Field Office (SFO) mandated RPM Plus to provide support to the Ministry of Health to establish a functional National Malaria Control Program (NMCP). The support was part of the USAID SFO multisectoral strategy for infectious diseases.

The RPM Plus strategy was composed of a two-pronged approach that built NMCP capacities while supporting its coordination within the government and among the different actors involved in malaria activities.

Technical Objectives

- Support the development of effective antimalarial medicine policies.
- Enhance policy makers' understanding of household and community antimalarial medicine use.
- Enhance the rational use of antimalarials through interventions among health care providers and consumers.
- Enhance the capacity to provide treatment and prevention of malaria in pregnant women through prenatal services.

Major Accomplishments

- Provided support to the Ministry of Health (MoH) to build an office for the NMCP; outfitted it with information technology equipment and furniture.
- Drafted a concept paper on the long-term structure and functioning of NMCP; helped design the organogram and job descriptions for the program.
- Helped the NMCP finalize its national RBM strategic plan for 2006–2011; revised malaria management guidelines to include new concepts such as pharmacovigilance and management of uncomplicated and severe malaria; developed a rollout plan for the new malaria treatment policy; developed supportive supervision checklists for state, county, and health facility levels in support of the rollout plan.
- Collaborated with the World Health Organization to undertake a vector control needs assessment and develop an integrated vector management strategy.
- Helped develop an indicator matrix—indicator, operational definition, source of data, method and frequency of data collection, and level of data aggregation—which feeds into the overall development of the national monitoring and evaluation framework for the health sector; compiled data from 2003–2005 on the burden of malaria at four health facilities.

- Participated in assessing the pharmaceutical management systems at the Central Medical Stores and State Medical Stores for Central Equatoria, Eastern Equatoria, and Jonglei states.
- Assessed the availability of insecticide-treated nets as part of the Global Fund to Fight AIDS, Tuberculosis and Malaria proposal development process; helped develop a national net distribution plan.

- Developed a training plan and trained health workers in the new malaria treatment policy in Eastern Equatoria State and Central Equatoria State; trained 20 senior health workers to train other health workers in the management of both uncomplicated and severe malaria.

- Supported a full-time technical advisor position in the MoH to mentor the NMCP manager and support setting up policies, strategies, and coordinated implementation and monitoring.

- Helped the MoH/Directorate of Pharmaceutical Services draft a three-year Pharmaceutical Master Plan (2007–2010).

- Collaborated with Howard University Continuing Education and the ROADS Project to organize and conduct a capacity-building workshop on HIV/AIDS care, prevention, and treatment for 40 participants (mainly pharmacists) from all 10 states.

Collaborating Organizations

Family Health International/ROADS Project

Howard University Continuing Education

MoH/Directorate of Pharmaceutical Services

National Malaria Control Program

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Southern Sudan activities, in addition to collaborating organizations that may not have been mentioned above.

Swaziland Final Report
2007–2008

Background

USAID's regional HIV/AIDS program works in 10 countries in Southern Africa, including five President's Emergency Plan for AIDS Relief (PEPFAR) focus countries and five non-focus countries. The regional program especially emphasizes countries such as Lesotho and Swaziland, which have some of the world's highest HIV prevalence rates. In these two countries, the program aims to increase access to the full package of prevention, treatment, care, and support activities necessary to accomplish PEPFAR goals.

In Swaziland, RPM Plus worked to help improve and strengthen the medicine and commodity supply systems in support of the country's scale-up of HIV/AIDS programs. Strengthening the pharmaceutical supply system addressed some of Swaziland's immediate health challenges, including HIV/AIDS, tuberculosis, child health, and primary health care services. RPM Plus worked collaboratively with the Ministry of Health and Social Welfare by offering technical assistance, training, and the development and implementation of pharmaceutical management tools.

Technical Objective

- Strengthen the medicine and commodity supply system in Swaziland to support the scale-up of HIV/AIDS services and other essential medicine programs.

Major Accomplishments

- Implemented RPM Plus's RxSolution electronic tool with the ART Patient Monitoring and Reporting System module in 12 sites delivering antiretroviral therapy (ART); provided training and technical assistance in the use of the tool; made revisions to the tool to accommodate Swaziland's needs. Implementation of the tool resulted in the Global Fund to Fight AIDS, Tuberculosis and Malaria's release of previously withheld grant funds to the country.

- Collaborated with other stakeholders to review and revise the national pharmaceutical policy and new legislation related to the pharmacy profession and the control of medicine; ensured that the new bills were aligned with the national policy.

- Provided technical assistance in multiple pharmaceutical tenders, including product quantification, preparation of product specifications, prequalification of suppliers, and ranking and adjudication of products.

- Supported a national hospital infection control initiative, including promoting the strengthening or implementation of pharmaceutical and therapeutics committees and providing technical assistance to hospital infection control interventions, such as dealing with waste management, improving hand hygiene, and developing infection control policies.

- Helped draft national pharmaceutical and medical device donation guidelines.

- Oriented the newly appointed National Medicine Advisory Committee to the principles of medicine supply management, rational medicine use, pharmaceutical governance, and medicines selection as they apply to policy development and professional leadership. This national committee is responsible for implementing the National Pharmaceutical Policy.

- Undertook supervisory visits to 31 of 65 target facilities to support medicine supply inventory management practices at the clinic level.

Key Tools and Publications

ART Patient Monitoring and Reporting System User's Manual

Collaborating Organizations

Central Medical Stores

Council for Health Service Accreditation of Southern Africa

International Center for AIDS Care and Treatment Programs

World Health Organization

Ministry of Health and Social Welfare

National Medicine Advisory Committee

National Tuberculosis Program

National Emergency Response Council on HIV/AIDS

Swaziland Nurses Association

Swaziland National AIDS Program

Acknowledgements

We would like to acknowledge and thank the various government agencies and health care facilities that were partners in our Swaziland activities, in addition to collaborating organizations that may not have been mentioned above.

Tajikistan Final Report 2004–2006

Background

The government of Tajikistan is committed to implementing DOTS, the World Health Organization-recommended strategy to combat tuberculosis (TB). In 2002, the government finalized a five-year national TB program plan supporting DOTS; however, Tajikistan needed to address a number of issues associated with the quality of TB drugs in anticipation of upcoming procurements funded by the Global Fund to Fight AIDS, Tuberculosis and Malaria. The country also faced a number of problems associated with non-registered medicines of unknown quality that were circulating in the retail sector, where TB patients from the areas not covered by DOTS needed to buy their medicines. TB medicines of substandard quality can affect the outcome of treatment and lead to drug resistance. To address Tajikistan's needs in pharmaceutical quality assurance, and based on the requests from other Central Asian Republics, RPM Plus carried out a regional training in TB Drug Quality Assurance.

Technical Objective

- Increase the capacity of Tajikistan's TB program to design, apply, and monitor appropriate interventions to ensure an uninterrupted supply of quality TB commodities.

Major Accomplishments

- Facilitated two training sessions in rational medicine use and formulary development for the Special American Business Internship Training Program (SABIT) in hospital administration. Participants of the training included senior health care leaders from Central Asia Republics, including Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan.

- Planned, organized, and carried out a five-day regional training on pharmaceutical quality assurance and Minilab® procedures for pharmaceutical regulatory staff from Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan in collaboration with the U.S. Pharmacopeia Drug Quality and Information Program and Academy for Educational Development.

- Provided follow-up technical assistance to pharmaceutical quality assurance training participants: assessed the implementation of the Minilab technology, discussed medicine sampling programs, reviewed data on samples tested, and addressed implementation problems.

Collaborating Organizations

Academy for Educational Development
Ministry of Health

National Tuberculosis Program

Pharmacists without Borders

Project HOPE

State Center for Drug Expertise

U.S. Pharmacopeia Drug Quality and Information Program

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Tajikistan activities, in addition to collaborating organizations that may not have been mentioned above.

Tanzania Final Report
2005–2008

Background

Under MSH's Strategies for Enhancing Access to Medicines (SEAM) Program, the Tanzania Food and Drugs Authority (TFDA) and the Ministry of Health and Social Welfare (MoHSW) developed a new approach to improve access to quality-assured medicines from government-accredited drug outlets in rural and peri-urban areas staffed by trained dispensers. The success of the TFDA/SEAM collaborative pilot program in establishing a network of accredited drug dispensing outlets (ADDOs) in the Ruvuma region led to the government's decision to roll out the program nationwide. With the end of the SEAM Program, RPM Plus continued to support the ADDO rollout and to focus on incorporating components related to child survival, HIV/AIDS care, and artemisinin-based combination therapy (ACT) for malaria.

In another project started under the SEAM Program, an alternative, private sector supply system was developed to complement and augment Tanzania' public supply system. To continue this strategy, RPM Plus provided technical support to hospitals affiliated with

the Christian Social Services Commission and Mission for Essential Medical Supplies to strengthen pharmaceutical management (quantification, forecasting, rational medicine use, information management) in support of HIV/AIDS services. The Christian Social Services Commission represents a group of 81 Lutheran, Catholic, and Anglican hospitals in Tanzania.

In 2005, the U.S. government asked RPM Plus to provide technical support to implement the President's Malaria Initiative (PMI) in Tanzania. The RPM Plus Program's PMI activities included support for Tanzania's National Malaria Control Program's (NMCP) policy to distribute subsidized ACTs through the ADDO program, provide technical assistance to the Medical Stores Department, and help to the TFDA strengthen pharmacovigilance systems, specifically monitoring possible adverse drug reactions (ADRs) to ACTs.

Technical Objectives

- Increase the capacity of USAID, local government, and the private sector to maximize the efficient and effective use of resources for HIV/AIDS-related health commodities in support of an expanded response to the HIV/AIDS pandemic.

- Improve the capacity of the local government and Mission hospital sector to meet health commodity needs of programs and services in support of an expanded response to the HIV/AIDS pandemic.

- Improve the supply, quality, management, and use of antimalarials and related supplies.

Major Accomplishments

- Conducted ADDO advocacy and sensitization seminars in all districts in Morogoro region; mapped existing *duka la dawa baridi* and assessed them for conversion to ADDOs.

- Worked with MoHSW and TFDA to expand ADDOs' role in community-based public health interventions, such as malaria, child health, and HIV/AIDS care and prevention—

    - Trained dispensers in Ruvuma region to distribute ACTs.

    - Incorporated Integrated Management of Childhood Illness (IMCI) into ADDO dispenser training curriculum and into the supervisory checklists; developed and distributed educational materials on child health (posters and flyers).

    - Drafted a concept paper for the ADDO HIV/AIDS-related services; held a seminar with ADDO owners to discuss their role in controlling the spread of HIV; trained 288 dispensers in HIV/AIDS services, sexually transmitted infections

management, HIV prevention, and providing youth-friendly counseling and information; developed and distributed educational materials to all new ADDOs to distribute to their communities.

- Supported the government's accreditation of 553 additional ADDOs to provide essential medicines and other services after the SEAM Program ended in 2005.

- Trained 723 ADDO dispensers, 718 ADDO owners, and 200 local-level ADDO inspectors.

- Delivered 60,000 treatment doses of subsidized ACTs through 763 ADDOs.

- Linked 102 ADDO owners with the National Microfinancing Bank to access microloans worth 62,000 U.S. dollars (USD).
- Provided technical support to TFDA to develop an ADDO implementation guide that any implementing agency can use to standardize the implementation activities in different districts.

- Helped Tanzania craft a successful Round 7 Global Fund proposal for malaria that secured USD 27 million for ADDO scale-up and distribution of ACTs.

- Conducted a rapid antiretroviral treatment (ART) pharmaceutical management assessment in five mission hospitals.

- Installed and trained users on the RPM Plus ART Dispensing Tool to strengthen HIV/AIDS treatment data reporting.

- Adapted generic standard operating procedures for ART pharmaceutical management.

- Conducted a quantification assessment to determine ACT needs for approximately 400 ADDOs in Ruvuma and Morogoro regions; developed ACT distribution plan for ADDOs, including identification of sub-distributors in Ruvuma and Morogoro regions.

- Developed a pricing mechanism and determined the price of ACTs in ADDOs based on operation costs, port clearance, storage and distribution, incentives for regional distributors and ADDOs, and recovery percentage recovery of procured ACT value.

- Developed sensitization materials for regional and district officials and ADDO owners on ADR monitoring in pilot districts of Ruvuma and Morogoro regions; drafted guidelines and standard operating procedures for distributing and collecting ADR reporting forms; sensitized regional and district officials and ADDO owners and dispensers on ADR monitoring; trained public and private sector health workers and ADDO dispensers on ADR monitoring.

- Provided technical assistance to the TFDA to develop a thin-layer chromatography/densitometry analytical method for seven drugs. The method was transferred to the TFDA quality control laboratory for inter-laboratory confirmation of precision, accuracy, and linearity.

Key Tools and Publications

Improving child health through the accredited drug dispensing outlet program: February 2008

Improving child health through the accredited drug dispensing outlet program: Baseline survey from five districts in Tanzania, September 2006

Rapid ART pharmaceutical management assessment in five mission hospitals in Tanzania, March 2006

Collaborating Organizations

AIDS Relief

Centre for the Evaluation of Effective Malaria Interventions

Christian Social Services Commission

Danish International Development Agency (DANIDA)

Elizabeth Glaser Pediatric AIDS Foundation

Family Health International

John Snow Inc./DELIVER

Medical Stores Department

Mennonite Economic Development Associates

Mission for Essential Medical Supplies

Muhimbili University College of Health Sciences

National AIDS Control Program

National Malaria Control Program

Population Services International

Pyramid Pharma Ltd.

U.S. Centers for Disease Control and Prevention/Ifakara Health Research and Development Center (now Ifakara Health Institute)

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Tanzania activities, in addition to collaborating organizations that may not have been mentioned above.

Turkmenistan Final Report 2001–2002

Background

The government of Turkmenistan committed to the implementation of DOTS, which is the World Health Organization's strategy of tuberculosis (TB) control. One of the prerequisites for successfully implementing DOTS is the uninterrupted supply of high-quality, first-line anti-TB drugs for treatment courses lasting up to nine months. Turkmenistan carried out centralized procurement of anti-TB drugs for their national TB programs; however, the country experienced frequent shortages of TB medicines and had concerns about the quality of locally procured drugs. The Ministry of Health attributed TB medicine shortages to both scarce funding for the TB program and lack of capacity to procure, distribute, and track TB medicines. In an agreement with the Ministry of Health, RPM Plus provided training and technical assistance to the Ministry of Health in general aspects of TB medicines management, with a specific focus on TB medicine procurement, as well as developing a system for monitoring and evaluating the TB pharmaceutical supply system.

Technical Objective

- Increase the capacity of the TB program to design, apply, and monitor appropriate interventions to ensure uninterrupted supply of quality TB commodities.

Major Accomplishments

- Conducted a reconnaissance and planning trip to Turkmenistan, which found that the country had serious gaps in its TB pharmaceutical supply system, such as lack of standard documents and procurement procedures, few trained staff, and weak pharmaceutical quality-assurance mechanisms.

- Conducted a five-day training on TB medicines management for the managers of national TB programs and decision makers from the Ministry of Health and procurement and distribution agencies in Turkmenistan. The course focused on developing a TB pharmaceutical procurement policy; the Good Procurement Practice concept; quantifying pharmaceutical needs; identifying, evaluating, choosing, and monitoring supplies; mechanisms for obtaining good prices for drugs, including tendering; the role of laboratory testing; contracting; and general aspects of drug management.

Collaborating Organizations

Ministry of Health

National TB Program

Project HOPE

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Turkmen activities, in addition to collaborating organizations that may not have been mentioned above.

Uganda Final Report
2006–2007

Background

Through the President's Malaria Initiative (PMI), RPM Plus provided technical assistance to Uganda to strengthen its pharmaceutical management system and support the rollout of artemisinin-based combination therapy (ACT) for malaria. RPM Plus helped the National Medical Stores streamline its ACT distribution and supported the National Drug Authority's efforts to phase out antimalaria monotherapies, which contribute to antimicrobial resistance. In addition, RPM Plus collaborated with the National Malaria Control Program to improve the country's capacity to correctly quantify how many antimalarials they need at each level of the health care system and establish an information system to track antimalarial stock and consumption to assure that facilities always have the medicines on hand.

The RPM Plus Program also helped the Ministry of Health and local partners to implement Uganda's Home Based Management of Fever strategy, where community medicine dispensers provide prepackaged malaria treatment. To further increase access to ACTs in the community, RPM Plus and stakeholders formulated a strategy to improve

ACT availability in private sector facilities, where most Ugandans seek treatment for malaria.

Technical Objectives

- Strengthen the existing pharmaceutical management system to ensure the availability of malaria medicines at health facilities and support the National Medical Stores' handling and distribution of PMI-procured ACTs.

- Provide technical support to Uganda's National Malaria Control Program to scale- up its malaria control activities, with an emphasis on treatment, particularly the rollout and rational use of ACTs.

Major Accomplishments

- Established a committee for supply chain management to improve the availability and use of antimalarial medicines in Uganda.

- Helped overcome an eight-week backlog in ACT deliveries due to shortages in labor and transportation resources at the national medical stores by developing and implementing a plan to help the National Medical Stores process, package, and distribute emergency supplies of ACTs through the following activities—

    - Developed an emergency distribution plan covering all health sub-districts.

    - Contracted with a private transportation company.

    - Hired extra labor to prepare and pack orders for the country-wide ACT distribution.

    - Hired 13 eight-ton trucks to distribute Coartem to all sub-districts.

    - The emergency distribution of the 3.8 million doses was completed in three weeks.

- Helped develop plans to distribute ACTs, while phasing out Homapak (chloroquine/sulfadoxine-pyrimethamine); quantified the phase-out and phase-in quantities for Homapak and ACTs respectively for community use; quantified national ACT needs for 2007.

- Helped build capacity within the National Medical Stores including—

    - Updating standard operating procedures for picking and packing medicines, processing sales orders, receiving medicines, and dispatching and delivering medicines; as a result, Global Fund-procured ACT shipments were received, cleared, and distributed without delays.

  - Developing a tool for routine collection of ACT consumption by age group to incorporate into the national health management information system.

  - Providing financial and technical support to distribute almost two million doses of ACTs including into conflict districts and for the Home-Based Management of Fever initiative.

  - Improving communication with health facilities to increase the timeliness and quality of ordering.

  - Improving National Medical Stores' ability to assess orders from health facilities and distribute orders correctly by developing and operationalizing a job aid and providing technical assistance to staff in coordinating orders with districts.

- Helped build capacity within the NMCP including—

  - Carrying out a rapid survey to determine malaria attendances by collecting data from 20 representative districts. The data help the NMCP evaluate the adequacy of ACT orders by health facilities and procurement quantities.

  - Developing a two-year operational plan for antimalarial medicines procurement, storage, and distribution.

  - Helping plan the redistribution of ACTs at risk of expiry.

  - Developing a concept paper for improving access to ACTs through the private sector.

- Identified trainees, adapted materials, and conducted a five-day training-of- trainers workshop on medicines management for the district staff; organized and conducted a training workshop (using the monitoring-training-planning approach) on malaria medicines management for almost 200 health workers.

- Provided support to a national survey to establish availability of anti-malaria medicines in Uganda by assisting the planning process, training data collectors, and writing the survey report.

- Worked with partners to develop a policy guideline on restricting the use of sulfadoxine-pyrimethamine for intermittent preventive treatment in pregnancy.

Key Tools and Publications

Two-Year Operational Plan for Procurement, Storage and Distribution of Antimalarial Medicines (January 2007 – December 2008)

Uganda National Malaria Control Program: Analysis of Malaria Attendances According to Coartem Dosage Age Groups, March 2007

Collaborating Organizations

John Snow Inc./Northern Uganda Malaria AIDS & Tuberculosis (NUMAT) Program

Joint Medical Stores

National Drug Authority

National Medical Stores

National Malaria Control Program

Makerere University

Medicines for Malaria Venture
Ministry of Health

Supply Chain Management System

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We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Uganda activities, in addition to collaborating organizations that may not have been mentioned above.

Uzbekistan Final Report
2001–2006

Background

The government of Uzbekistan committed to implementing DOTS, which is the World Health Organization's strategy of tuberculosis (TB) control. Uzbekistan faced serious challenges in carrying out the pharmaceutical management component of its TB program due the large donations of TB medicines received from multiple sources, problems with irrational medicine use, lack of a sound distribution plan for delivering TB medicines to health facilities, and serious shortages of trained professionals to manage those medicines. These gaps needed to be addressed to ensure an uninterrupted supply of TB medicines and accountability for donated medicines. To tackle many of these challenges, particularly the need for effective coordination, the government established the Center for Drug Policy that reports directly to the Ministry of Health. The Center's functions include overseeing selected structures in pharmaceutical sector and coordinating pharmaceutical management functions, including specific TB medicine management, at the national and

oblast level. RPM Plus helped the Center for Drug Policy build capacity to carry out its planning and oversight functions.

Technical Objective

- Increase the capacity of the TB program to design, apply, and monitor appropriate interventions to ensure uninterrupted supply of quality TB commodities.

Major Accomplishments

- Conducted a reconnaissance and planning trip to Uzbekistan, which found that the country had serious gaps in its TB pharmaceutical supply system, such as a lack of standard documents and procurements, few trained staff, and weak pharmaceutical quality-assurance mechanisms.

- Conducted a regional training course, Drug Procurement for Tuberculosis, in collaboration with Project HOPE, Academy for Educational Development, and the national TB program to train experts from Uzbekistan in TB medicine selection and quantification methods, competitive procurement techniques, and TB pharmaceutical quality assurance mechanisms.

- Held a TB drug management workshop for senior experts and key decision makers in TB medicine management; provided participants with technical tools for developing sound pharmaceutical management practices, including planning, monitoring and evaluation, and quantification techniques; helped develop a TB medicines management component for the national TB program, specifically related to quality assurance.

- Facilitated two training sessions in rational medicine use and drug formulary development for the Special American Business Internship Training Program (SABIT) in hospital administration. Participants of the training included senior health care leaders from Central Asia Republics, including Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan.

- Planned, organized, and carried out a five-day regional training on pharmaceutical quality assurance and Minilab® procedures for drug regulatory staff from Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan in collaboration with U.S. Pharmacopeia Drug Quality and Information Program and Academy for Educational Development.

- Helped the Center for Drug Policy develop a vision and strategic approaches to improve its organizational capacity, such as its positioning in the *oblast* health care system, reporting, and collaborating with other major players in TB and pharmaceutical management field; provided technical assistance in drafting the Center's scope of work and the roles and responsibilities of the branches, which were to be established in each *oblast*.

- Helped establish an effective system of reporting adverse reactions as part of a TB pharmaceutical quality assurance system.

- Provided follow-up technical assistance to pharmaceutical quality assurance training participants: assessed the implementation of the Minilab technology, discussed medicine sampling programs, reviewed data on samples tested, and addressed implementation problems.

Collaborating Organizations

Academy for Educational Development

Boston University Center for International Health

Drug Policy Center

Ministry of Health

National DOTS Center

National TB Program

National TB Training Center

Pharmacological Committee

Project HOPE

Russian Federation Institute of Public Procurement

U.S. Pharmacopeia Drug Quality and Information Program

World Health Organization

ZdravPlus Program

Acknowledgements

We would like to acknowledge and thank the various national and local government agencies and health care facilities that were partners in our Uzbekistan activities, in addition to collaborating organizations that may not have been mentioned above.

Vietnam Final Report
2004–2009

Background

In June 2004, Vietnam was selected as the 15th country to receive assistance under the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) program. Estimates of HIV prevalence in Vietnam are based primarily on HIV/AIDS case reporting and on the HIV sentinel surveillance conducted annually in 40 of Vietnam's 64 provinces. Despite relatively low prevalence, data from 1996 through 2002 indicated a rapidly increasing HIV epidemic among injecting drug users and commercial sex workers. The Vietnamese government adopted a national government strategic plan for HIV/AIDS prevention and control, and as part of the overall prevention and control strategy, the government prioritized the elements of harm reduction and access to antiretroviral therapy (ART).

USAID and the U.S. Centers for Disease Control and Prevention/Vietnam requested technical assistance from RPM Plus to manage pharmaceuticals for Vietnam's implementation of its HIV/AIDS care and treatment strategy under PEPFAR. RPM Plus worked with key stakeholders and health care staff to enhance their capacity to plan for and manage treatment of patients with HIV/AIDS. Additionally, RPM Plus worked with counterparts to identify strategies and interventions to ensure a consistent supply of antiretroviral (ARV) medicines, medicines for opportunistic infections, and other related commodities.

Technical Objectives

- Enhance the capacity of governmental, international, or local partners in Vietnam to systematically identify, prioritize, and address pharmaceutical management issues to improve access to and use of quality pharmaceutical products and other commodities for care, prevention, and treatment of HIV/AIDS.

- Strengthen the pharmaceutical management capacity of referral, provincial, district, and other facilities to ensure an uninterrupted supply of quality HIV/AIDS pharmaceutical and other commodities at ART service delivery sites.

- Procure ARVs on behalf of selected ART implementation sites in accordance with Vietnamese national standard treatment guidelines.

- Work with the Ministry of Health and the University of Hanoi to establish a national pharmacovigilance system.

Major Accomplishments

- Provided technical support to the Vietnam Administration for HIV/AIDS Control in quantification, procurement, and distribution of ARVs, including those procured by

different donors; helped redistribute 80,000 doses of Global Fund ARVs before they expired.

- Developed a fully interlinked and interactive computerized model incorporating all treatment sites, a detailed distribution schedule, forecasting of patient numbers, drug quantities, and costs for ARVs and opportunistic infection medicines, including multiple treatment regimens.

- Adapted, translated, field-tested, and implemented the electronic ART Dispensing Tool in Vietnam.

- Facilitated collaboration among various stakeholders on issues regarding the management of ARVs and other commodities.

- Helped assure quality of ARVs and other commodities by assessing the cold chain procedures of Central Pharmacy Company #1 and making recommendations to improve their procedures; developed standard operating procedures for obtaining samples of procured ARVs for quality testing.

- Conducted regular monthly visits to 40 ART sites supported by the U.S. Government; provided initial ART assessments, implemented programs to improve pharmaceutical management, and reviewed ARV management. Stock reports showed that expired ARVs comprised less than 1 percent of the total pharmaceutical stock.

- Adapted the supervisory checklist used in other RPM Plus country programs to the Vietnamese context to (1) evaluate site readiness; (2) provide consistency in observations and reporting among existing staff and to facilitate follow-up; (3) provide a training tool for new field pharmacists; and (4) identify common pharmaceutical management issues that could be addressed through training site staff or other means.

- Worked with key informants to identify strengths to build on, understand gaps, and identify potential strategies to build capacity of and linkages between existing and potentially new institutions to establish a national pharmacovigilance system/drug information center; drafted a framework for pharmacovigilance that incorporates active surveillance of adverse events and product quality problem reporting; presented the framework at a stakeholder meeting; adapted the HIV/AIDS pharmacovigilance course materials for the Vietnamese context; conducted a training-of-trainers course for representatives of Vietnamese institutions.

Key Tools and Publications

ART Dispensing Tool, adapted and translated for Vietnamese context

HIV/AIDS pharmacovigilance course materials, adapted and translated for Vietnamese context

Collaborating Organizations

Clinton Foundation

Family Health International

Global Fund to Fight AIDS, Tuberculosis and Malaria

Hanoi University of Pharmacy

Harvard Medical School AIDS Initiative

Médecins du Monde

Ministry of Health

Ministry of Health/Drug Administration Department

Ministry of Health/Medical Services Administration

Provincial AIDS Committee

U.S. Centers for Disease Control and Prevention (CDC)

United Nations Development Programme

Vietnam Administration for HIV/AIDS Control

Vietnam-CDC-Harvard Medical School-AIDS Partnership (VCHAP)

Voluntary Service Organization

World Health Organization

Acknowledgements

We would like to acknowledge and thank the various government agencies and health care facilities as partners in our Vietnam activities, in addition to collaborating organizations not mentioned above.

Zambia Final Report
2000–2005

Background

From 2000 to 2005, the RPM Plus Program, with support from USAID/Zambia, worked with the Zambia Ministry of Health (MoH) to strengthen the country's pharmaceutical management in the areas of malaria, child health, reproductive health, and voluntary counseling and testing (VCT) for HIV. This initiative built upon the work started by RPM in 1996. In 2004–2005, RPM Plus received additional funding from the U.S. President's Emergency Plan for AIDS Relief to extend our work to pharmaceutical and laboratory management in HIV/AIDS and antiretroviral therapy (ART).

RPM Plus contributed significantly to Zambia's pharmaceutical sector by supporting the development of a national essential medicines list and standard treatment guidelines, helping establish a national formulary committee, and developing a nationalized management information system for VCT and prevention of mother-to-child transmission (PMTCT) programs. In addition, RPM Plus helped improve and strengthen pharmaceutical management through other activities, including trainings in procurement, quantification, and rational use.

Technical Objectives

- Develop an information technology and health commodities supply management system for Zambia’s VCT program.
- Provide technical assistance for malaria drug policy implementation.
- Increase capacity on pharmaceutical supply management and development of interventions at district and health facility levels.
- Improve rational medicines use at national and district levels.
- Improve management of commodities in support of integrated management of childhood illness (IMCI) strategy in selected districts.

Major Accomplishments

- Developed, printed, and distributed the Zambia *National Formulary* to provide a source of unbiased information for prescribing and using efficacious, safe, high-quality, and cost-effective essential medicines.
- Developed, printed, and distributed the Zambia *Essential Medicines List* and *Standard Treatment Guidelines* for health workers.

- Participated as a member of a national procurement technical working group, which helped review the overall performance of procurement activities, particularly before floating tenders.

- Provided peer review and technical assistance in quantification of essential medicines; procured a two-year mainstream pool of medicines for Zambia.

- Conducted an alternative supply system assessment to advise the Government of Zambia on how best to manage the Medical Stores Limited (MSL), which resulted in a much-needed procurement that avoided stock-outs and a decision to contract out MSL management.

- Helped develop the District Integrated Logistics Self-Assessment Tool (DILSAT), a performance improvement strategy targeting health workers at facility levels.

- Developed and integrated a VCT/PMTCT information and commodity management system in the national health management information system, which—

    - Provides critical data for program management and policy development, including both quantitative and qualitative information about client profiles and use of services, commodity management, and laboratory services.

    - Includes indicators, standards, easy-to-use tools, user's guide, and procedures manual.

    - The system is used in more than 265 VCT sites across the country.

- Developed and distributed standard operating procedures for ART in pharmacies and laboratories in Zambia, providing quality standards for ART services.

- Developed and integrated an electronic ART Dispensing Tool in all facilities that provide ART services.

- Conducted a study on acceptability and prescribing practices of health workers and the community on sulfadoxine-pyrimethamine in Lusaka and Chipata districts that provided information to the MoH. This information led to recommendations for more education campaigns and correcting common misperceptions about the use and side effects of sulfadoxine-pyrimethamine to ensure an effective policy change in the treatment of malaria.

- Provided technical assistance to the MoH in selecting and quantifying medicines for sexually transmitted infections using MSH's cost-estimate strategy—the *Assessment of Commodity Needs for Integrated Reproductive Health Report* became a reference document in costing the reproductive health program in Zambia.

- Conducted a baseline assessment of district-level hospitals and surrounding clinics to determine pharmaceutical management issues affecting active management of the third stage of labor for the prevention of postpartum hemorrhage in Zambia.

- Conducted an assessment of service quality and pharmaceutical management for sexually transmitted infections at health facilities at Corridors of Hope program sites in Zambia and Zimbabwe.

- Conducted a community drug management for childhood illness (C-DMCI) assessment of malaria to identify the strengths and weaknesses of community drug management for childhood malaria; used results to guide the development of interventions, plan activities for community medicine management for malaria, and address national drug policies targeting childhood illnesses.

- Supported a country-level strategy for advocacy and containment of antimicrobial resistance (AMR), which catalyzed a response by local stakeholders to build and coordinate realistic strategies to contain AMR. Achievements under this strategy included—

    - Establishing a 10-member AMR advocacy working group.

    - Holding the first national AMR stakeholders' "Call for Action" meeting in November 2004.

    - Developing print and radio campaigns that promoted appropriate antibiotic use.

    - Conducting in-service training for health professionals on AMR topics.

    - Working with physicians to review standard treatment guidelines and promote adherence.

    - Drafted workbook for building local support for containing local drug resistance.

- Conducted a pharmaceutical supply and use review survey to evaluate systems supporting drug availability and utilization. Two years after interventions were initiated, a follow-up survey was conducted to assess their impact in the district.

Key Tools and Publications

Alternative Supply System for Health Commodities: Zambia Assessment Mission Report

District Integrated Logistics Self-Assessment Tool

ART Dispensing Tool

Promoting Rational Use of Drugs, Lusaka Urban District Health Management Team Drug and Therapeutics Committee

Assessment of Commodity Needs for Integrated Reproductive Health in Zambia

Community Medicine Management for Childhood Malaria in Zambia, June 2003: Assessment Report.

Drug Supply and Use Review in Lusaka Urban District

Lessons from a Country-Level Approach for Advocacy and Containment of Antimicrobial Resistance

Zambia National Biomedical Laboratory Safety Manual

Assessment of Quality of Care and Pharmaceutical Management for Sexually Transmitted Infections at Health Facilities at Corridors of Hope Program Sites in Lesotho, South Africa, Swaziland, Zambia, and Zimbabwe

Preventing Postpartum Hemorrhage: Special Initiative Baseline Assessment Country Report: Zambia

Collaborating Organizations

Academy for Educational Development

Alliance for the Prudent Use of Antibiotics

American College of Nurse-Midwives

Applied Research on Child Health Project

Center for Infectious Disease Research in Zambia

Central Board of Health

Churches Health Association of Zambia

Commonwealth Regional Health Community

Corridors of Hope (program)

Department for International Development

Development Cooperation Ireland

Family Health International

John Snow Inc./Family Planning Logistics Management (project)

Global Drug Facility

Harvard Drug Policy Group

International Network for Rational Use of Drugs

Intra Health PRIME II project

Japan International Cooperating Agency

Jhpiego (Johns Hopkins Program for International Education in Gynecology and Obstetrics)

Jhpiego Maternal and Neonatal Health (project)

John Snow Inc.

Lusaka Urban District Health Management Team

Medical Stores Limited

Ministry of Health

National Malaria Control Centre

Norwegian Agency for Development Cooperation

Roll Back Malaria

John Snow Inc./Society for Family Health

Swedish International Development Cooperation Agency

U.S. Centers for Disease Control and Prevention

United Nations Children's Fund

World Health Organization

World Health Organization Regional Office for Africa

Zambia Integrated Health Program

Zambia Prevention, Care, and Treatment Partnership

Zambia Voluntary Counseling and Testing Service

Acknowledgements

We would like to acknowledge and thank government agencies and health care facilities as partners in our activities in Zambia, in addition to collaborating organizations that may not be mentioned above.