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REVIEW OF USAID'S RATIONAL PHARMACEUTICAL MANAGEMENT PROJECT

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The opinions expressed herein are those of the authors and do not necessarily reflect the views of TvT, Pragma, or USAID.

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Preface

This evaluation is, of course, the work of many whose names do not appear as authors. In this regard, the team appreciates the contributions of those countless individuals whose efforts to facilitate this evaluation were critical to its success. Several persons deserve special mention. Anthony Boni and Linda Sanei were tireless in planning and facilitating the evaluation. Their efforts were paralleled in Russia by Nikita Afanasiev and by Olga Alexinskaya, our extraordinary interpreter. Matthew Friedman and Janardan Lamichhane provided helpful support in Nepal. In Zambia, Mark Anthony White and his staff were invaluable, as was Armand Utshudi-Lumbu in Mozambique. Finally, the team is grateful to Jim Bates, Keith Johnson, Anthony Savelli, and the personnel of Management Sciences for Health (MSH) and United States Pharmacopeial Convention, Inc. (USP) for the quality of their briefing materials, their receptivity to our inquiries, and their openness and patience in response.

A few words are also warranted regarding the report's possible biases and limitations. During this evaluation, a lot of ground, literally and figuratively, was covered in a very short amount of time. Yet, the evaluation team's work, by its terms, remains a snapshot in time of the RPM project and does not fully reflect its geographical scope. The countries for site visits were chosen carefully and, the team believes, appropriately. Nonetheless, the team recognizes that there are lessons to be learned from the other countries in which the RPM project has been working. These other countries, and the lessons to be learned from the work therein, have not, and cannot be, fully represented in this report.

Contents

Acronyms

AED	Academy for Educational Development
AIDS	Acquired Immune Deficiency Syndrome
AIHA	American International Health Alliance (Russia)
ARCH	Applied Research on Child Health (USAID Project)
ARI	Acute Respiratory Infection
ARV	Anti Retroviral
ASD	AIDS and Sexually Transmitted Diseases (WHO)
BASICS	Basic Support for Institutionalizing Child Survival (USAID Project)
CA	Cooperative Agreement, or Cooperating Agency
CAIDP	Central Asia Infectious Diseases Program
CBOH	Central Board of Health (Zambia)
CDC	Centers for Disease Control (Atlanta)
CDD	Control of Diarrheal Disease
CDP	Community Drug Program (Nepal)
CHD	Division of Child Health and Development (WHO)
CMS	Central Medical Store
CTO	Cognizant Technical Officer (USAID)
DAP	Action Programme on Essential Drugs (WHO)
DDA	Department of Drug Administration (Nepal)
DfID	Department for International Development (formerly Overseas Development Agency, U.K.)
DGIS	Dutch Aid Agency
DIC	Drug Information Center
DINoN	Drug Information Network of Nepal
DILSAT	District Level Self Assessment Tool (Zambia)
DUR	Drug Use Review
EDL	Essential Drug List
EDMSS	Essential Drug Medical Supply Store (Zambia)
EPI	Extended Programme on Immunization
EU	European Union
FDA	U.S. Food and Drug Administration

GTZ	Gesellschaft fur Technische Zusammenarbeit (German Aid Agency)
HFS	Health Financing and Sustainability Project (USAID Project)
IMCI	Integrated Management of Childhood Illnesses
INRUD	International Network for Rational Drug Use
JSI	John Snow International, Inc.
KfW	Kreditanstalt fur Wiederaufbau (Germany)
LMD	Logistics Management Division of the Nepal Ministry of Health
LMIS	Logistics Management Information System (Nepal)
LSIP	Logistics System Improvement Plan (Nepal)
MDS 2	MSH Publication, *Managing Drug Supply* (Second Edition)
MOH	Ministry of Health
MSL	Medical Stores Limited (Zambia)
MSH	Management Sciences for Health
NCDA	Nepal Chemists and Druggists Association
NDP	National Drug Policy
NGO	Nongovernmental Organization
NHRC	National Health Resources Council (Nepal)
NIS	Newly Independent States
NORAD	Norwegian Development Agency
OR	Operations Research
PAHO	Pan American Health Organization
PHC	Primary Health Care
QA	Quality Assurance
QC	Quality Control
RECPHEC	Resource Center for Primary Health Care (Nepal)
REDSO/ESA	Regional Economic Development Services Office for Eastern and Southern Africa
RFA	Request for Assistance
RH	Reproductive Health
RP	Results Package (USAID)
RPM	Rational Pharmaceutical Management
SDMD	Strengthening of Drug Management at the District Level (Nepal)
SIDA	Swedish International Development Agency
SO	Strategic Objective (USAID)
STD	Sexually Transmitted Disease
STG	Standard Treatment Guideline
TA	Technical Assistance
UNAIDS	United Nations Programme on AIDS
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development

USP	United States Pharmacopeial Convention, Inc.
USP DI	United States Pharmacopeial Convention Drug Information
WB	World Bank
WHO	World Health Organization

Executive Summary

This report is an evaluation of the Rational Pharmaceutical Management (RPM) components of the Health Financing and Sustainability project of the Center for Population, Health and Nutrition, of the Bureau for Global Programs, Field Support and Research of the United States Agency for International Development (USAID). Briefly stated, the evaluation was designed to achieve two objectives, the first retrospective and the second forward-looking: first, to provide an assessment of the degree to which Management Sciences for Health (MSH)and the United States Pharmacopeial Convention, Inc. (USP)[1] were able to complete the program descriptions contained in their respective cooperating agreements, and second, to provide guidance and recommendations regarding potential modifications to the USAID cooperative agreements that would address USAID's need for pharmaceutical-related expertise and support the Agency's strategic objectives.

USAID's Health Technical Services Project assembled a seven-member evaluation team that convened in Washington, DC, on June 16, 1997, for a series of meetings with personnel from USAID, the cooperating agencies, and collaborating institutions. Following these meetings, the team visited Russia, Nepal, Zambia, and Mozambique, countries where there are RPM activities — of varying maturity and complexity. The team also visited Geneva to discuss technical issues and areas of potential collaboration with the World Health Organization's (WHO's) Action Programme on Essential Drugs and other WHO programs. At the conclusion of the site visits, the team consulted again with

1 MSH is a Massachusetts-based nonprofit corporation founded in 1972. Its primary mission is to provide technical assistance to bridge the gap between what is known and what is done about improving health care for disadvantaged populations. MSH is a recognized leader in providing pharmaceutical management technical assistance.

USP, based in Rockville, Maryland, is an international leader in drug standards and the developer of the leading compendia of drug information in the United States.

project participants and collaborating institutions, and on November 6 and 7, 1997, the team reconvened in Washington to give USAID and the cooperating agencies a preliminary debriefing of its conclusions and recommendations.

A. TECHNICAL BACKGROUND

In most countries, pharmaceuticals account for the largest share of public health expenses other than salaries for personnel. Despite these large expenditures, the pharmaceutical sector in many countries — particularly in developing countries — is plagued by shortages of supply and, in some instances, the presence of drugs of questionable usefulness and/or quality. Also, pharmaceuticals are often prescribed and/or used ineffectively. Such "irrational use" of drugs not only wastes scarce resources, but also can compromise patients' health and present significant health concerns for the population by decreasing the overall effectiveness of drugs such as antimicrobials.

To address these problems, WHO took the seminal step of establishing a Model List of Essential Drugs in 1977. In 1981, WHO established the Action Programme on Essential Drugs to "ensure equity of access to essential drugs, rational use of drugs, and drug quality, within the context of the national health policy."* Other organizations have been active in supporting essential drugs programs and reform of the pharmaceutical sectors in developing countries, including multilateral institutions such as the World Bank and the United Nations Children's Fund (UNICEF) and the bilateral aid agencies of such countries as Denmark, France, Japan, Netherlands, Sweden, and the United Kingdom. Much of this donor support has consisted of actual provision of pharmaceutical supplies rather than technical assistance.

In 1992 USAID supplemented the funding for its Health Financing and Sustainability (HFS) Project to include a component on Rational Pharmaceutical Management (i.e., the RPM Project). Until this time, USAID's activity in the realm of essential drugs and pharmaceutical management had been limited in scope, and implementation of its activities had been ad hoc. Indeed, USAID's

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* WHO Action Programme on Essential Drugs, *WHO Essential Drugs Strategy: Objectives, Priorities for Action, Approaches.* Geneva: World Health Organization, February 1997.

general absence in the essential drugs area was conspicuous given the relative importance of drugs in the health sector. USAID's initial consultations with donors and multilateral institutions during the design of the RPM Project were met with skepticism and distrust.

The RPM initiative was designed to address the increasing difficulties developing countries faced in "funding and maintaining adequate and accessible pharmaceutical supplies," acknowledging that weak pharmaceutical sectors were undercutting the credibility of developing country health systems as a whole.* As such, the new pharmaceutical component was created to address key issues of "efficiency," "equity" and "quality" that were brought out in work conducted under the HFS Project.

The RPM Project has drawn on MSH's more than 20 years of experience in drug management and USP's historical leadership in the development and dissemination of unbiased drug information. As a result, USAID has been able to overcome the prevailing distrust in its commitment to drug management issues and to establish a leadership role. Moreover, USAID has quickly demonstrated a comparative advantage in on-the-ground technical assistance in drug management and procurement, the development and dissemination of drug information, and the promotion of rational drug use.

B. PROJECT DESIGN AND EVOLUTION

1. Range of Activities

In March 1992, USAID defined the goal of the RPM Project as being "[t]o improve the health status of target populations in [least developed countries] through improvements in the allocation and use of financial, human and information resources within the health sector." USAID issued a Request for Assistance (RFA) seeking cooperating agencies' assistance in achieving these purposes.

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* USAID, *Health Financing and Sustainability (936-5974) Project Paper Supplement.* Washington, DC: USAID, March 1992.

The project was designed to use an "assessment-based" approach, under which the cooperating agencies were to work with host governments to assess and specifically tailor interventions to the needs of each individual country. This approach included collecting data in eight technical areas. Seven assessments were undertaken during the RPM Project's country-assessment phase from April 1992 to January 1994. Based on these assessments, a project plan was developed to focus on the priority technical areas described below.

2. Structure and Changes in Program Funding

In September 1992, USAID awarded five-year cooperative agreements (CAs) on a competitive basis to MSH and on a sole-source basis to USP. The CAs were originally designed to carry out core-funded, experimental programs of technical assistance in up to three developing countries. The original developing country portfolio consisted of Ecuador, Nepal, and Mozambique. However, the former Soviet Union dissolved at about the time the original CAs were awarded. To address health care concerns identified by the Newly Independent States' Task Force, an "Add-on" was awarded to the MSH CA in September 1993, and USAID's Bureau for Europe and Newly Independent States later awarded separate CAs to MSH and USP for work to be carried out in the Russian Federation. All four CAs are managed by the Global Bureau under the HFS Project.

In 1995, USAID's funding strategy changed. USAID adopted the field support funding strategy, which caused dramatic cuts in planned core funding for the two Global CAs. Contrary to the earlier direction given to MSH and USP, the project was encouraged to market itself more broadly with field missions. As a result of this process, the RPM Project has added new country programs in Peru, Zambia, and Bangladesh and has joined a regional public health logistics initiative managed by the Regional Economic Development Services Office for Eastern and Southern Africa (REDSO/ESA).

3. Funding Mechanisms Covered by the Evaluation

The RPM Project thus consists of four Cas, two awarded to MSH and to awarded to USP. As discussed above, the separate CAs for each organization distinguish

between work to be carried out worldwide and work to be carried out in the Russian Federation. The separate CAs are summarized in Table 1.

TABLE 1. RPM COOPERATIVE AGREEMENTS

CA	Start/End Dates	CA Number	Total Estimated Project Cost	Estimated USAID Contribution	Obligations to March 1997
MSH Worldwide	9/25/92–9/23/97	HRN 5974-A-00-2059-00	$9,830,000	$8,900,000	$7,937,311
MSH Russia	1/6/95–12/31/97	HRN 0004-A-00-5002-00	$2,374,264	$2,374,264	$2,374,264
USP Worldwide	9/17/92–9/15/97	HRN 5974-A-00-2052-00	$2,078,156	$1,286,076	$1,285,000
USP Russia	12/22/94–12/31/97	HRN 0004-A-00-5001-00	$1,124,000	$1,124,000	$1,124,000

C. TECHNICAL ANALYSIS

1. Country-Level Activities

a. Improving Allocation, Management and Use of Resources

- Drug Selection/Formulary Development: MSH assisted country programs in drug selection and formulary development. This component of the project has been most active in Russia, and, overall, it has been extremely successful. Several successful examples of oblast and hospital formularies have been developed over a relatively short period of time. The challenge for RPM-Russia now is not to make these interventions work, but rather to disseminate more widely the lessons learned at the initial project sites to

all oblasts where the project is working and to other oblasts in Russia. To meet this challenge, the project should build on one of its most notable strengths — its ability to identify and empower counterparts of unquestionable commitment and skill.

Looking to the future, support to district-level facilities in the areas of drug selection and formulary development will become increasingly important. As other countries undergo the type of decentralization that is taking place in Russia, RPM can make a significant contribution to strengthening district-level skills in drug management and formulary development.

- Drug Procurement and Supply Management: MSH has provided technical assistance in drug procurement and supply management to several countries, including Ecuador, Mozambique, Nepal, Russia, and Zambia. Although the nature of this assistance has varied by country, it can be described as providing assistance to countries for managing the purchase, storing, distribution, and control of their drug inventories.

  The project's involvement in procurement has been limited to date, but, along with drug selection and formulary development, procurement is an area where the project can assist central and district-level managers in many countries who face decentralization. Strengthening procurement mechanisms and supply management also can facilitate integration of previously vertical programs. RPM is working directly on these issues in Zambia, Ecuador, and, increasingly, Nepal. This is clearly an important thrust of the project's future work, and by coupling its work in this area with assistance on drug selection/formulary development and rational use, RPM could contribute significantly to a district drug management package, which is in growing demand as more countries take up health reform.

- Community Pharmacy Management: MSH provided assistance to individual pharmacy owners and operators with community pharmacy management in Russia. RPM's involvement has been extremely popular with the pharmacy owners and operators involved, who were instructed how to develop business plans that would allow their pharmacies to survive the enormous stresses they faced under the restructuring of the Russian economy.

This project component, which fell under USAID/Moscow's strategic objective of strengthening democracy, has clearly empowered business owners to succeed in a free market system and improved access to needed drugs. Nonetheless, the project needs to be sensitive to the possibility that its interventions might promote the success of one private sector entity over another, equally deserving competitor.

b. Promoting the Rational Use of Drugs

RPM has worked to promote the rational use of drugs in many project countries, and its efforts have met with varying — but commendable — degrees of success. RPM has taken several approaches to promoting the rational use of drugs, including but not limited to the development of standard treatment guidelines (STGs), reform of curricula for health care providers to incorporate lessons on rational use, direct training of providers, provision of drug information to consumers through drug information centers, and introduction and implementation of hospital-based drug use review programs.

- Standard Treatment Guidelines, Curricula Reform, and Training: RPM's efforts in developing STGs, reforming curricula, and providing training in rational use have been commendable, and the components of the project should continue to be made available to developing countries as part of any USAID project support. Promotion of the rational use of drugs through these mechanisms should be expanded in order to complement improvements in drug availability achieved through strengthened capacity in drug management and logistics. Promotion of rational drug use should be part of the district drug management package and part of different health and disease management programs. As such, promotion of rational drug use can serve as an integrating force between "pharmaceutical management" and "disease management." Training in rational drug use and adoption of STGs — developed with the use of objective clinical and drug information, and with attention to pharmacoeconomic issues — have been, and will continue to be, of vital importance to global health care.

- Drug Use Review: Drug use review (DUR) is critical to improving rational drug use. To date, RPM has been most successful in imparting this notion to local stakeholders in Russia. This is an area with significant potential for the project in Russia and in other NIS countries. This component has

less immediate potential at the hospital-level in countries like Zambia, Nepal, and Mozambique, which do not yet have established hospital therapeutic committees. However, for these countries, a modified DUR, an analysis of prescribing patterns, or a rapid indicator assessment on the use (and expenditure) of drugs in a hospital or primary health care setting may stimulate facilities to create such committees and to undertake more in-depth drug utilization reviews, for example, concerning the use of antibiotics.

c. Improving Level of Drug Information

RPM's efforts to improve the level of drug information have taken two basic forms: first, the development of unbiased drug information for use in developing countries, and second, assistance in disseminating this information through the development of drug information centers.

- Development of Unbiased Drug Information: USP developed monographs for 37 drugs included in the WHO Model List of Essential Drugs that had not previously been included in the USP Drug Information (USP DI). Eight additional monographs are currently under development, and nine more are planned.

  USP has also supported adaptation of the USP DI to incorporate country-specific indications, dosing schedules, and other information into existing drug monographs and to develop separate, country-specific drug monographs. Adaptation of the USP DI is underway in Russia and Nepal and is planned for Mozambique. In Russia and Mozambique, USP has worked (through side agreements not formally part of RPM) on translating the USP DI into Russian and Portuguese. In Nepal, USP's efforts have focused on adapting an English-language USP DI database into a Nepal-specific English-language database that would include, among other things, Nepal-specific brand names for drugs included in the database.

  The success of the project in this area has been mixed. The efforts in Mozambique and Russia have been very fruitful, but the work in Nepal has shown less progress. Much of the success in developing adapted, translated drug information has taken place via private sector contracts between USP and local entities. In those situations where new, adapted

drug information has been produced, local counterparts in the project countries have generally greatly appreciated the information. The existence of this new, adapted material has uniformly pleased local counterparts, though they have not always shown preferences for the USP DI database format, often preferring to use hard copies of the information.

- Establishment of Drug Information Centers: One of the main areas of USP's involvement in the project has been in assisting in establishment of drug information centers (DICs). These DICs have taken two general forms: those established principally to serve target populations in facilities or regions with therapeutic information, or those established principally to "relay" drug information of a more regulatory or normative nature from a central source to regional areas. The project has been reasonably successful with the first type, although the strengths of the various centers in disseminating information vary. The project has been significantly less involved in establishing relay centers that are part of national networks of drug information. In the team's view, the likelihood of establishing effective networks (even at the local level) appears remote, at least in the short or medium term.

  The project has successfully established a significant number of DICs, and many of these are functioning and active in disseminating information. However, collectively, the evaluation team had the most concern over the ability of the DICs to effectively fulfill their potential in disseminating drug information. The team's concerns fall in four general areas. First, the ability of the DICs to effectively disseminate information varies widely in terms of staffing, goals, and location. Second, some of the centers may have been rolled out too quickly, which may prevent them from gathering momentum, which may have come if they were established at more opportune times. Third, where multiple DICs exist in a given geographical area, the delineation of responsibilities and/or goals of the different centers is not clear in some cases. Finally, under current conditions, it appears premature to expect DICs in urban centers to serve rural areas effectively due to problems with communications infrastructures and the technical capacity of rural personnel.

  To improve the effectiveness of some of the less active centers, USAID would need to provide much more intensive technical assistance and

financial resources than provided to date. In this regard, RPM should continue to support the dissemination efforts of the DICs that have been established, with priority given to those centers that share the project's vision for a center that actively promotes itself, disseminates information, and is well integrated into its local environment.

2. Core Activities

In addition to the country-level activities discussed above, the project has engaged in core, or central-level, activities in two areas: Studies and Operations Research, and Tools Development and Information Dissemination.

a. Studies and Operations Research

The project's principal general (as opposed to country-specific) study has involved developing an approach for estimating the drug and expendable supply costs of reproductive health programs. The study, which is not complete, seeks to develop a methodology that would assist donors and decision-makers in estimating the cost of supplying the commodities required to meet the needs of 25 reproductive health problems. The methodology is impressive in its current state, but its potential usefulness will depend on its country specificity — global cost estimates will serve only as a rough guide. It will therefore be important to clearly identify and document the potential uses of the methodology during the country-study phase (to be completed).

USAID has indicated an interest in assistance from the project in future research related to HIV/AIDS, integrated management of childhood illness (IMCI), and antimicrobial resistance. These activities are still in the early stages of development, but RPM can no doubt make a valuable contribution toward the Agency's strategic objectives in these areas. Also, given the recent USAID initiative to address emerging health issues and diseases, including antimicrobial resistance, RPM should give particular attention to research in antimicrobial resistance as related to drug management and rational use.

The project also has been engaged in several operations research projects that are part of the country programs. For example, RPM conducted important studies regarding the need and potential for restructuring supply systems in Ecuador and

Zambia. The project also conducted a major feasibility study in Nepal, entitled *Nepal Drug Cost-Sharing in Pharmaceutical Distribution,* which was hailed by many people, including WHO experts in this area, as the best analysis to date in the area of drug cost-sharing schemes. Regretably, the Ministry of Health failed to act on some of the study's key recommendations. RPM also conducted major indicator-based assessments of the pharmaceutical sector in six countries (Ghana, Mozambique, Ecuador, El Salvador, the Eastern Caribbean, and Russia), which were, by and large, excellent and comprehensive.

b. Tools Development and Information Dissemination

MSH and USP have engaged in a number of activities designed to disseminate information and develop tools and documents that are general applicable. These have included presentations at various conferences and workshops and preparation of manuals, documents, and computer software.

- Manuals and Documents: The manuals produced by MSH directly under the auspices of the RPM Project include *Rapid Pharmaceutical Management Assessment: An Indicator-Based Approach* and *The International Drug Price Indicator Guide.* In addition, in 1997, MSH produced the second edition of *Managing Drug Supply* (MDS 2), in collaboration with the WHO Action Programme on Essential Drugs. Although MSH produced this widely sought second edition with support from outside RPM, MSH applied the experiences of RPM to shape its content. Training materials based on MDS 2 are currently under development. The value of these publications was widely acknowledged.

- Software: In addition to the written manuals described above, MSH developed several following software products: INVEC-2 (inventory control and management software); PASS (prescription analysis software system); ESTIMED (drug needs quantification software); and ECPRO-2 (tendering and procurement software). Although the value of these programs, in the abstract, is undeniable, the use of these programs at the country level does not always reflect their value. It is important to note that the area of computer software development — and implementation at country level — is rife with donor politics. Local counterparts repeatedly cited pressure to satisfy other donors' interests by using software packages developed by these other donors.

3. Organizational Impacts

a. Linkage with USAID Strategic Objectives and Programs

RPM has contributed significantly to the achievement of the Center for Population, Health and Nutrition strategic objectives (SOs) and to the SOs of USAID missions in the countries where the project operates. At the central level, RPM has contributed most directly to SO2 ("increased use of safe pregnancy, women's nutrition, family planning and other key reproductive health interventions") and SO3 ("increased use of key child health and nutrition interventions"). To these ends, RPM has improved access to reproductive and child health services through strengthening drug management systems and has enhanced the quality of these same services through increased access to drug information and promotion of rational drug use by prescribers. RPM has also contributed to SO1 ("increased use by women and men of voluntary practices that contribute to reduced fertility") through the development of an integrated family planning and drug logistics management systems in Nepal and an integrated assessment tool for Zambia. While RPM's contribution to SO4 ("increased use of proven interventions to reduce HIV/STD transmission") has been indirect, it is anticipated that RPM will contribute more directly to SO4 in the future as developing countries seek guidance related to the rational use of antiretrovirals and medications to treat opportunistic infections.

USAID has not yet clearly reflected the relationship of RPM — and other cross-cutting projects — to the program outcomes in the context of the strategic framework. Unless a specific indicator is identified for the relevant SOs (particularly SO2 and SO3), the specific contributions of RPM may be neither reflected through the existing framework nor tracked by monitoring plans.

b. Impact on Cooperating Agencies

The project has demonstrably strengthened the institutional capacities of both MSH and USP. MSH has accumulated significant additional expertise and staff in pharmaceutical management, particularly in direct support of country programs. USP has strengthened its institutional capacity to provide technical assistance in developing country settings, and, in areas where its prior experience was

unsubstantial, USP now has an increased international presence as a drug information authority.

c. Collaboration with Other Organizations

To date, RPM has been a strong and effective collaborator. RPM's comparative advantage in technical assistance, tools development, and operations research related to drug management and rational use have informed decision-making and improved the effectiveness of child survival and reproductive health projects.

At the country level, RPM has been responsive to the needs of USAID and host countries by communicating closely with donors, nonogovernmental organizations (NGOs), and bilateral programs and by jointly financing and sponsoring a variety of activities. RPM should continue to focus on collaborating with other projects, organizations, and donors in order to coordinate activities, broaden the stakeholders in country projects, and leverage scarce resources. To these ends, RPM should disseminate information regarding technical services it has provided and the contributions of its activities to child survival and reproductive health interventions, USAID missions, NGOs, USAID global programs, and bilateral and multilateral donors.

D. ORGANIZATION AND MANAGEMENT

Overall, the expectations for the project were too ambitious, particularly regarding the drug information component, given the organizational and management constraints and the fact that funding was never provided at the levels envisaged in the original cooperative agreement program description. Short-term technical visits on the part of RPM staff have generally been effective, particularly in situations where strong host country nationals were in place and where there was strong collaboration between RPM and other local collaborating entities. However, in some settings, the mode of short-term visits has reached the limit of its effectiveness. In Nepal, Mozambique, and Zambia, the evolving situations all urge a long-term presence. The evaluation team is aware that in the past RPM has requested funding for resident advisors in selected cases, which has not been forthcoming. RPM should continue its dialogue with these missions and attempt to secure the required resources.

The expanding portfolio of RPM country programs and the leveraged resources of other donors and programs are evidence of increasing demand for RPM's services. The team expects that this demand should accelerate as missions recognize the critical role of drug management in supporting their health interventions.

1. Cooperating Agencies

a. Organizational Structure

Within MSH, the personnel dedicated to the RPM Project are located in MSH's Drug Management Program (DMP). Although MSH is based in Boston, the DMP elected to move its operations to Rosslyn, Virginia, in December 1992, in order to facilitate collaboration with USAID in implementing the RPM Project and to allow greater proximity to other clients such as the World Bank. Currently, the DMP is comprised of about 24 staff members (including 19 professionals), of which 13 full-time equivalent staff members administer the RPM Project. This current staffing level represents a significant increase over the level at the start of the project, although like USP (discussed below), the MSH staff is still stretched to capacity.

At USP, the personnel dedicated to the RPM Project currently comprise two full-time professionals, a part-time computer programmer, and additional drug and medical information specialists as needed for development of drug monographs. All are based at USP's headquarters in Rockville, Maryland. Given the scope of project activities, the USP staff remain stretched beyond its capacities. USP needs either to increase its in-house staff or to use consultants more often to fill gaps in areas such as monitoring and evaluation, field-testing, and institution-building.

b. Financial Management

Although the team did not conduct a comprehensive analysis of the project's expenditures and accounting, the team did evaluate the cooperating agencies' budgeting and strategic planning of USAID's overall allocation of resources and their ability to mobilize additional resources to achieve project objectives. These subjects are discussed below.

USAID allocated approximately (US)$11 million to the Worldwide project and approximately $3.5 million to the Russia project. For the Worldwide project, $8.9 million was allocated to MSH, and about $1.3 million was allocated to USP. For Russia, about $2.4 million was allocated to MSH, and about $1.1 million was allocated to USP. As of March 1997, both CAs had obligated nearly all of their allocated amounts. Importantly, the CAs also have been successful in mobilizing other USAID resources and leveraging funds of other donors. Generally speaking, given the ambitious work plans of the country programs, the team found that these levels of expenditure were appropriate and were matched at the country level, at least through the team's qualitative analysis. The fact that the project has expended nearly all of its funds on worthwhile activities and that it has a few months left with more to do indicate to the team that the project has been under-funded.

c. Cooperation and Collaboration

Cooperation and collaboration between and among USAID personnel and the cooperating agencies appears to have been strong, at both the central and the country level. Similarly, cooperation and collaboration between MSH and USP appears strong. At the field level, cooperation and collaboration is occasionally so strong that local counterparts show confusion as to whether RPM Project personnel are MSH or USP employees. This confusion reflects a real strength in the cooperating agencies' collaboration.

2. USAID

Both cooperating agencies were highly complementary of USAID management, though personnel within the CAs did cite isolated instances of differences of opinion regarding administrative priorities and management processes. By all accounts, these differences were successfully managed. In light of the overall success and rapid expansion of the project, the team believes that USAID management and the cooperative agreement structure have served the project well. Indeed, it appears that the USAID Cognizant Technical Officer (CTO) has been a very effective advocate for drug management issues at the global level and has been effective in providing project support.

E. FUTURE DIRECTIONS

Selected recommendations are set forth below. Additional recommendations are included in the main body of the report.

1. Country Programs

- For the foreseeable future, the project should continue to focus on the current technical areas (i.e., improving drug management, promoting rational use, and increasing access to unbiased drug information). RPM should prioritize activities to develop strategies that bridge the gap between improved drug management systems and improved health outcomes.

- Indicator-based assessments should continue to be key in the design of country programs. RPM should complement the information gathered through these assessments with political mapping and stakeholder analysis. These additional assessment methodologies will allow RPM to more comprehensively analyze the pharmaceutical situation within the macro and micro political environment, design appropriate strategies, and identify viable counterparts. Priority areas to keep in mind in these assessments:

    - Health reform and the decentralization process: This would include integrating public health logistics, drug management, and supplies; training; and research in cost-effective purchasing, storage, delivery, and use of drugs for "vertical" disease-specific health care initiatives.
    - Private sector collaboration: This would include exploring, researching, and establishing mechanisms to work with the private sector in satisfying public health goals in the procurement and distribution of drugs and in promoting the rational use of drugs. In this regard, noting the potential for insurance systems to rival the influence of government regulatory authorities regarding to drug availability, pricing, and access, RPM should explore potential opportunities to improve drug use and reduce financial waste through systems of insurance.

- RPM should identify potential country programs for drug use review and strengthen project activities in support of these activities. RPM also should undertake pilot activities in patient information. In doing so, the drug information component will be positioned to more directly contribute to improved health outcomes, particularly to improve compliance and address key issues related to antimicrobial resistance. Also, RPM should identify and/or leverage resources to assist countries in strengthening local expertise in clinical pharmacology. Experts in this area can become influential advocates for improved clinical practice and curriculum and pharmaceutical system reform.

- The organizational capacity of existing drug information centers and drug information networks should be assessed. Based on the findings of this assessment, training should be provided in organizational development including the development of DIC standard procedures, work plans, marketing plans, and financial sustainability.

- During an extension period, the project should limit its involvement in countries (and regions in countries) outside those where the project currently works. Much work remains to be done in the countries (and regions) where the project currently operates. Absent increased resources and staffing, rapid expansion could compromise the effectiveness of current interventions.

- Focused, short-term technical assistance provided by RPM is valued by USAID missions, other cooperating agencies, and host-country counterparts. This assistance should continue. However, it should be recognized that drug management involves complex and interrelated issues and a need for close collaboration at the country level. Accordingly, RPM, MSH, and the CTO should continue and intensify efforts, on a country-by-country basis, to persuade USAID missions to fund the presence of resident advisors.

2. Core Activities

- In the short-term, RPM should continue its ongoing core activities in the areas of tools development and should finish the pending operational research regarding drug supply costs of reproductive health programs. Major new research, publications, or software development should be undertaken cautiously and only after close coordination with and endorsement by USAID.

- In the long-term, RPM should continue to engage and collaborate in operations research, focusing project resources on country-specific studies that would directly benefit country programs. RPM should also continue to develop documents and manuals, both for specific countries and for general applicability. Studies and projects to develop materials of general applicability should be chosen carefully and undertaken in close coordination with other international entities, such as WHO, that may be engaged or interested in similar studies or materials.

3. Project Management

- Assuming that RPM is extended and that increased funding is provided, both cooperating agencies should increase staffing, expand the use of existing consultants, and identify new consultants in order to provide services to existing and new programs. Additional human resources appear necessary to satisfy current demands on the project and would certainly be necessary in times of project expansion.

- The global center should develop an intermediate result (IR) for "Improved availability and rational use of necessary (STI drugs, ARI drugs, RH drugs, etc)," as well as the related performance indicator, to be incorporated into the strategic plan under relevant SOs. RPM should provide guidance to USAID missions in identifying and including performance indicator(s) in missions' strategic plans that will serve to monitor RPM contributions related to program outcomes.

- In future RPM projects, USAID should follow an approach similar to the one used to manage the current RPM project (i.e., use of cooperative agreements with a "substantial involvement" clause).

- RPM should design and carry out a study to document outcomes and, to the extent possible, the impact of program interventions. This might include outcomes such as:

  - money saved through tender procurement
  - money saved from curtailing antimicrobial resistance through the use of first line antibiotics (e.g., sulfas, tetracyclines, penicillins) versus newer, more expensive and unnecessarily broad spectrum antibiotics
  - decreased occurrence of drug stock-outs
  - improved patient care due to improved drug selection.

- USAID should allocate project resources and shape project priorities to focus on longer-term technical assistance, particularly through in-country advisers.

- RPM should continue to explore partnerships with the U.S. Food and Drug Administration (FDA) in order to strengthen host-country regulatory authorities.