

**Follow-up Visit to Paraguay for SAIDI Assessment
August 8 – 13, 2005: Trip Report**

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The Rational Pharmaceutical Management Plus (RPM Plus) Program, funded by the U.S. Agency for International Development (cooperative agreement HRN-A-00-00-00016-00), works in more than 20 developing countries to provide technical assistance to strengthen drug 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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Acronyms

AMR	Antimicrobial Resistance
CDC	Centers for Disease Control and Prevention
CIRD	<i>Centro de Información y Recursos para el Desarrollo</i> (Center of Information and Resources for Development)
IDB	Inter-American Development Bank
IPS	<i>Instituto de Previsión Social</i> (Social Security)
LAC	Latin America and the Caribbean
MSPBS	<i>Ministerio de Salud Pública y Bienestar Social</i> (Ministry of Health of Paraguay)
MSH	Management Sciences for Health
PAHO	Pan American Health Organization
RPM Plus	Rational Pharmaceutical Management Plus
SAIDI	South American Infectious Disease Initiative
UNA	National University of Asunción (<i>Universidad Nacional de Asunción</i>)
USAID	United States Agency for International Development
USP/DQI	United States Pharmacopeia / Drug Quality and Information Program
WHO	World Health Organization

Background

Infectious diseases continue to present a serious threat in the Latin America and Caribbean (LAC) region. Finding strategies to address this threat is becoming more complicated due to growing resistance to the antimicrobial medicines presently available. Antimicrobial resistance (AMR) develops over time and is exacerbated by an increased exposure of the microorganisms associated with infectious diseases to antimicrobial medicines, and the subsequent development of survival mechanisms within these microorganisms. There are many factors that contribute to the development of AMR, but one of the major contributors from a public health perspective is the unnecessary use of antimicrobials for common conditions and/or, the use of inappropriate doses of the drugs in cases when they are required. Health systems contribute to this situation by lacking the proper legal frameworks, regulations and guidelines for the use of antimicrobials, and by implementing poor managerial mechanisms for proper selection, procurement, distribution and use of these valuable medicines. Physicians, pharmacists and drug vendors contribute to the unnecessary use of these drugs by prescribing and selling inappropriate treatments. Patients experienced with the benefits of antimicrobials tend to self-medicate, even when they may have access to formal health care services. The implication is that new strategies and more resources for second line drugs may be needed in the near future for highly prevalent infectious diseases as conventional treatments fail.

To address AMR, USAID's Regional Bureau for Latin American and the Caribbean has organized an the "South American Infectious Disease Initiative" (SAIDI) which allows organizations working in Cooperative Agreements with USAID, other US Government Departments and the Pan American Health Organization (PAHO) to collaborate in developing sound strategies to contain the advance of AMR in Peru, Bolivia and Paraguay. The SAIDI model enhances the collaboration of these technical organizations with country counterparts and governments and promotes extensive South-to-South information-sharing. Based on the experiences with this initiative, significant economies in terms of training, research, and interventions may be gained for the region. The SAIDI will be jointly managed out of the USAID/Peru Mission and the USAID Washington based Regional Bureau for LAC.

Purpose of Trip

RPM Plus Senior Program Associate, Beth Yeager, traveled to Asunción, Paraguay from August 8 to August 13 to work with national partners on the analyses of a study of antibiotic use in hospitals and a study of antibiotic use in lower-level health facilities that had been undertaken as part of an overall assessment of the factors contributing to AMR in Paraguay.

Scope of Work

- Brief/debrief USAID/Paraguay officials as requested;
- Meet with coordinators of the health facility study of antibiotic use to analyze data collected and prepare the report and presentation of findings to be shared with other SAIDI national and international partners;

- Meet with coordinators of the hospital use study also to analyze data collected and prepare the report and presentation of findings to be shared with other SAIDI national and international partners;
- Conduct further interviews with key informants from organizations and institutions to complement information collected during the previous visit of SAIDI partners in June.

Activities

1. Health Facility Study of Antibiotic Use

Ms. Yeager worked with Dr. Zully Vera and Dr. Juana Ortellado, who had been in charge of coordinating data collection in the health facility study and the preliminary data analysis. Data were collected during July by the ten pharmacy students trained during Ms. Yeager's June visit. In total, 19 facilities were included in the study: 16 Ministry of Health (MSPBS) and 3 Social Security (IPS). The 16 MSPBS facilities included 3 maternal-child health hospitals, 8 centers and 5 posts. The three IPS facilities were peripheral clinics with outpatient and limited inpatient care.

Questionnaires on general information about the facility, including infrastructure, sources of drugs and drug inventory management were completed for each facility. In addition, information on the existences of a 20 tracer antibiotics and tuberculosis drugs was collected. At each facility, 30 medical records of outpatients from the past 12 months were reviewed and information on the medicines prescribed was recorded. Likewise at each facility 10 patients were interviewed to collect information on what drugs they had been prescribed, what information they had been given about them, and where they intended to get them. Finally, 24 local pharmacies were visited using the "mystery shopper" technique to collect information on dispensing practices.

Ms. Yeager and Drs. Vera and Ortellado reviewed the preliminary analysis that had been prepared in anticipation of the visit. Then a final meeting with the pharmacy students who collected the data was held to gain additional insight from their comments on the experience and on the preliminary results. The presentation with the preliminary results prepared for this meeting is attached in Annex 1. In general, the MSPBS facilities manage very small stocks of very few antibiotics. As such patients have to purchase prescribed medicines from private pharmacies. In contrast, in the IPS facilities there was greater variety and quantity of antibiotics available and a more structured inventory management system.

During this meeting, the pharmacy students provided valuable feedback on the results. They also expressed their gratitude for having considered pharmacy students in this type of study. They felt they had learned a lot about their country's health system and about their role as future pharmacists.

The final results will be presented in a report written by Drs. Vera and Ortellado by mid-September, to be shared with all SAIDI partners. In addition, the Pharmacy Department of the Universidad Nacional de Asuncion will hold an international conference on appropriate use of antibiotics in late October. Groups working on appropriate use of antibiotics and rational drug use in South America and Spain have been invited. The SAIDI will be presented and Dr. Vera will present the results of the facility study. The feasibility of Ms. Yeager's participation was also discussed.

2. Hospital Study of Antibiotic Use

Ms. Yeager worked with the study coordinators from the 5 participating hospitals. The hospitals included two MSPBS hospitals (Hospital Nacional and Hospital Niño de Acosta Ñu), two

University hospitals (Clinicas and Materno-Infantil) and the central IPS hospital. The results from each of the 5 hospitals were thoroughly different. The two MSPBS hospitals manage a small, sporadic supply of antibiotics, but mostly depend on outside sources for drugs. The IPS hospital manages the entire drug supply for IPS facilities in Paraguay and has a computerized system in place for tracking their flow through the system. The university hospitals do not manage antibiotics, or any other drugs, at all. The hospital purchases some medical supplies (syringes and gloves, for example) but no antibiotics. Patients must buy their own or ask private foundations for donations.

The final results will be drafted by Dr. Cynthia Diaz and B. Yeager, and then shared with the study coordinators for their input. The study coordinators will then present the report to the hospital directors. Also, the SAIDI and these results will be presented in November at a national infectious disease conference. Dr. Wilma Basualdo of the MSPBS also suggested publishing them in a bulletin distributed by the MSPBS or a local scientific journal. Dr. Cynthia Diaz will follow up on this point.

3. Meeting with representatives of Center of Information and Resources for Development (CIRD)

Ms. Yeager met with the coordinator of the Economy and Health Unit of the USAID supported Decentralization of Health Project, Mr. Ruben Gaete to discuss the Social Pharmacy strategy included in the project. Mr. Gaete explained that the social pharmacies began in 1996 in the department of Itapua and have since expanded within the department and to a second department, Misiones. Three levels participate in the creation of the social pharmacies. At the political level the Regional Government participates. Civil society is represented by the Regional Health Councils and up to now by CIRD. Finally the regional MSPBS authorities (*Dirección de Vigilancia Sanitaria Regional*) participate in a technical role.

The social pharmacies are based on a revolving fund system. All three levels participate in forming an initial fund from multiple sources for the purchase of the initial stock of drugs. The local health council must approve this purchase. Prior to the purchase, the three levels must have also agreed on an essential drug list, quite similar to the list used in MSPBS health facilities. A regional drug warehouse is also established. Once the initial stock of drugs is purchased, individual social pharmacies purchase drugs from the regional warehouse and sell them to the public at a price that is about 60% of the cost in a private drugstore.

In order to purchase drugs at a social pharmacy, clients must have a prescription from a public health service. Clients may not purchase drugs without a prescription or with a prescription from a private physician or facility. Also, no credit is extended in social pharmacies. Someone must pay for the medicines. If the client is unable to do so, the local health council attempts to raise funds to pay.

When the social pharmacy is running low on a certain medicine, it can purchase more from the regional warehouse. Likewise, when the regional warehouse is running low, it can purchase more as long as the regional health council approves. Mr. Gaete emphasized that the idea is not to buy

large quantities of drugs because the funds will be caught up in commodities. Rather, procurement is done regionally and in small quantities to keep the funds moving.

Mr. Gaete commented that initially, private pharmacies were worried about the competition but have since learned to appreciate the social pharmacies. Prior to the existence of social pharmacies, most private pharmacies had extended credit to clients who could not pay for their medicines and in many cases were never re-paid. With social pharmacies, the number of clients requiring credit had decreased.

Most social pharmacies do not require the presence of a pharmacist as Paraguayan law dictates, because legally they are classified as “dispensaries” since they manage less than 5,000,000 Guaranis (under \$1000) in sales per month. The Regional Health Council also monitors the level of business that the social pharmacies manage to make sure pharmacies that require the presence of a pharmacist are complying with the law.

Mr. Gaete explained that the role of CIRDA has been to train the groups involved in social pharmacies in the legal, administrative and financial aspects of their management. They have developed training packets and materials for this purpose. Although USAID funding for the decentralization project will end in 2006, it is hoped that the social pharmacy strategy will continue to spread to other departments. An evaluation is planned for 2007.

5. Debriefing USAID/Paraguay officials

Beth Yeager and Cynthia Diaz met with Graciela Avila to give an update on SAIDI activities since June. Dr. Avila mentioned some other activities relevant to SAIDI, especially the negotiations currently underway between Paraguay and the World Bank for a loan to purchase essential medicines for Maternal and Child health for MSPBS health services. These medicines would be available free of charge to pregnant women and children under five, through a Maternal-Child Health insurance scheme. Dr. Avila suggested SAIDI contact the World Bank to ask for additional information.

Dr. Avila thanked Ms. Yeager and Dr. Diaz for their visit and reiterated USAID/Paraguay’s support of the initiative.

6. Debriefing with MSPBS officials

At the end of the week, Ms. Yeager met with Dr. Wilma Basulado, Director of the *Dirección de Vigilancia de Salud*, the office coordinating SAIDI activities, to give her an update on the week’s activities.

As mentioned above, Dr. Basulado gave some ideas as to how to disseminate the findings of the two studies in Paraguay and emphasized the importance of this. She also stressed the importance of informing higher political levels of the results and in general, of AMR and rational drug use related issues.

She also discussed the World Bank project and a project currently underway, financed by the Inter-American Development Bank active in five regions of Paraguay (including Central, but not Asuncion). The IDB project has provided essential medicines for the 13 most prevalent maternal and child health problems, for health posts in the five regions. This project also included the creation of “social pharmacies,” which in contrast with the USAID project, was not managed locally and did not include the establishment of revolving fund. According to Dr. Basualdo, a recent evaluation of the project showed many problems with supply distribution and general disorganization. This project was meant to end in November 2005, but has been granted an extension until April 2007. Dr. Diaz will meet with the technical team that is coordinating this project within the Ministry to get more information.

With respect to the World Bank project, Dr. Basualdo said that it was still in negotiations and if everything went as scheduled, would begin late 2006. She mentioned it would involve essential medicines for maternal and child health problems too, but would be focused on other regions in the country and not only at health posts.

7. Other follow-up meetings

In her June visit to Paraguay, Ms. Yeager met with the Supply Office, the office within the MSPBS responsible for receiving purchase requests from the different programs, issuing a technical opinion on these requests and submitting a final list to the Procurement Office. On this trip Ms. Yeager met with Mr. Isidro Segovia and Mrs. Adelaida Portiño to discuss procurement procedures. Unfortunately, Mr. Segovia and Mrs. Portiño have only been in their positions for two months. According to them, their office only handles the public bid process, which is open to all national and international providers. They suggested talking to the General Director of Health Services, Dr. Jorge Grau, for more information. Dr. Grau was traveling the week of the visit. Dr. Diaz will contact him upon his return to Asuncion.

Ms. Yeager also had a brief meeting with Sonia Marchekwa, director of PROMESA to get feedback from her on the proposed qualitative study of use of antibiotics in the community. She commented that after the meeting SAIDI partners had with PROMESA during the February pre-assessment visit, PROMESA had developed a proposal for this activity. She proposed initiating communication with the interested international partners to further this activity. She will send the proposal via e-mail and would then like to have a conference call to discuss it.

Collaborators and Partners

The meetings were arranged by Dr. Cynthia Diaz, Dr. Ivan Allende and Dr. Wilma Basualdo of the MSPBS

Next Steps

Agreement or Understandings with Counterparts

- Zully Vera, Juana Ortellado and Beth Yeager will write the report of the health facility study and present it at the rational drug use meeting, organized by the Universidad Nacional de Asuncion in October
- Cynthia Diaz and Beth Yeager Hill write a draft of the hospital study results and circulate to the study coordinators for their input. These results will be presented in November.
- Cynthia Diaz/PROMESA will send the community use proposal to share with CDC, APUA and LinksMedia.

Important Upcoming Activities or Benchmarks in Program

- SAIDI activities in Paraguay include a quality control training conducted by USP, programmed for the week of September 19.
- As mentioned above, there are two opportunities to disseminate the results of the health facility and hospital studies, and SAIDI activities in general: the October meeting of the UNA (National University of Asunción) and the November Congress of Infectology.

Annex 1: Presentation of Preliminary Results of Antibiotic Use in Health Facility

Resultados del Estudio de Uso de Antibióticos en Establecimientos de Salud

Agosto 2005

Información General

Tipo de establecimiento (N)	Hospital (3)	Centro (8)	Puestos (5)	IPS (3)
Consultas externas (promedio)	77,944	9818	5775	130,648
# de pacientes	Poca información : no mantienen registros			
# de medicinas recetadas	Poca información: no mantienen registros			
Causas mas frecuentes	IRA, EDA, hipertensión, parasitosis, prenatal			

Información general (2)

- Registros manuales
- No personal farmacéutico/bioquímica en centros y puestos
- Solo las 3 clínicas de IPS tienen laboratorio
- No hay copias de guías estándares de tratamiento en los establecimientos

Adquisición de Medicamentos

- 16 establecimientos dicen que manejan listado básico del MSPBS/IPS
- 5 establecimientos dicen que son parte de un “plan piloto” que empezó en junio del 2005 (Programa de medicinas esenciales de BID)
- IPS cuenta con su propia lista, pero también dicen que usan la lista del MSPBS?
- Hacen cuantificación de necesidades por consumo histórico o simplemente no lo hacen – reciben lo que el nivel central envía

Fuentes de Medicamentos

- 16: MSPBS (todos del MSPBS)
- 3: IPS (todos del IPS)
- 9: donaciones de médicos o laboratorios (todos del MSPBS)
- 2: compras “ocasionales”
- Visitador medico entrega muestras gratis al medico, y medico las entrega a los pacientes.

Procesos de Adquisición

- 1) Licitación publica por parte del MSPBS
- 2) Programa de medicamentos esenciales MSPBS: 5 puestos
- 3) Compra directa: solo dos hospitales mencionaron que hacen compra directa
 - 1 hospital dijo que el procedimiento es igual al de licitación pública pero más rápido
 - 1 hospital dijo que el director y el administrador deciden la compra
- 4) Donaciones: visitadores médicos (muestras gratis), fundaciones
- 5) IPS: Las 3 clínicas dijeron que la farmacia solicita del Parque Sanitario, que autoriza previa control de saldo
- 6) "No hay proceso": Los dos establecimientos que han recibido medicamentos por primera vez este año no conocían el proceso.

Manejo de Medicamentos

- 58% NO recibieron instrucciones de manejo
- Mayoría no tiene espacios adecuados para guardar medicamentos (puestos nunca han recibido antes)
- No manejan FIFO
- No manejan tarjetas de inventario (usan cuadernos)
- No controlan temperatura ni humedad

Revisión de historias clínicas

	Hospitales	Centros	Puestos	IPS
Promedio de meds recetados	1.9	2.04	1.88	2.24
% de pacientes recetados ATB	46.19%	50.9%	16.7%	44.4%
Promedio de ATB recetados	1	1.02	1	1
% de ATB en lista	73%	83.9%	64%	100%
% Genérico	49%	49%	52%	100%

Disponibilidad de Medicamentos

- Promedio de 1.7 de los 20 ATB trazadores encontrados
- En solo un puesto se encontraron medicinas para la TB??

Entrevistas con pacientes

	Hospitales	Centros	Puestos	IPS
# de ents	30	77	39	30
Casos de problemas respiratorios	100%	93%	95%	100%
Promedio meds / pac	2.46	2.56	2.56	2.63
% de pac recetados ATB	13.3%	33.8%	30.8%	36.7%