

**Rational Pharmaceutical Management Plus
XV International AIDS Conference in Bangkok Thailand
July 11 to 16, 2004: Trip Report**

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About RPM Plus

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

AED	Academy for Educational Development
AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
ARV	antiretroviral [drugs]
CHAM	Christian Health Association of Malawi
CTT	Commodities Tracking Tool
CPGH	Coast Provincial General Hospital
CRHC	Commonwealth Regional Health Community
CRHCS	Commonwealth Regional Health Community Secretariat
ECSA	East, Central and Southern Africa
FHI	Family Health International
GOK	Government of Kenya
HIV	human immunodeficiency virus
ICASA	International Conference on AIDS and STIs in Africa
IDA	International Development Association
IMPACT	Implementing AIDS Prevention and Care Project [FHI]
MIS	management information system
MOH	Ministry of Health
MoHP	Ministry of Health and Population
MSH	Management Sciences for Health
NASCOP	National AIDS and Sexually Transmitted Diseases Control Programme [Kenya]
OHA	[USAID] Office of HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission [of HIV]
RPF	Regional Pharmaceutical Forum
RPM	Rational Pharmaceutical Management Plus [Program]
SARA	Support for Analysis and Research in Africa [AED] project
SEAM	Strategies for Enhancing Access to Medicines
SO4	[USAID/Washington] fourth strategic objective
STG	Standard Treatment Guidelines
TAC	[FHI AIDS Institute] Technical Advisory Committee [on ART]
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
VCT	Voluntary Counseling and Testing [HIV]
WHO	World Health Organization

Background

Management Sciences for Health (MSH)/Rational Pharmaceutical Management (RPM) Plus Program has received funds from the United States Agency for International Development (USAID) under USAID's fourth strategic objective (SO4) to present and disseminate materials on RPM Plus products and experiences in strengthening HIV/AIDS-related pharmaceutical management systems. As international agencies, donors and countries move forward to develop their response to the HIV/AIDS epidemic, the need for coordination and exchange of information to identify lessons learned and to develop best practices is crucial. There has been considerable interest on developing effective interventions to address the constraints and challenges associated with the procurement and management of drugs and other pharmaceutical products and laboratory supplies to support HIV/AIDS programs as the focus on improving access to care and treatment increases.

RPM Plus is also receiving funding from USAID's Office of HIV/AIDS (OHA) under SO4 to collaborate with Family Health International (FHI)/Implementing AIDS Prevention and Care Project (IMPACT) and Population Council/Horizons to work with the Government of Kenya (GOK), USAID/Kenya, USAID/Washington and local partners to introduce antiretroviral therapy (ART) for selected communities of HIV infected individuals in Mombasa District of Kenya's Coast Province, as part of a comprehensive package of prevention, care and treatment. The Mombasa ART Program is providing valuable implementation and operations research on how to safely and effectively deliver antiretrovirals (ARVs) and how to build capacity to expand access to treatment. The dissemination of assessment and implementation results, tools, and lessons learned is an important component of this activity.

Purpose of Trip

Dr. Laila Akhlaghi, Ms. Hella Witt, Ms. Helena Walkowiak, Senior Program Associates, Mr. Arin Speed, Electronic Communications and Tools Coordinator, Dr. Bannet Ndyanabangi, Project Manager HIV/AIDS and Reproductive Health and Dr. Sameh Saleeb, Project Manager for Prevention of Mother to Child Transmission (PMTCT), RPM Plus attended the XV International AIDS Conference in Bangkok, Thailand from July 11 to 16, 2004 under SO4, Common Agenda, PMTCT core funding and Namibia. Some funds were also made available by the Strategies for Enhancing Access to Medicines (SEAM) Project funded by the Bill and Melinda Gates Foundation. RPM Plus also used SO4 funding to support the attendance of Dr Caroline Olwande, Pharmacist in Charge of the ART Program and Mr Douglas Denje, Laboratory Technologist in-Charge, Coast Provincial General Hospital (CPGH), Mombasa, Kenya at this conference.

The purpose of the trip for the RPM Plus team and Mombasa partners was to give presentations that were relevant to strengthening pharmaceutical management systems for HIV/AIDS programs, including experiences from the Mombasa ART Program and from country-level activities funded under the President's Emergency Plan for AIDS Relief; to disseminate tools and documents prepared by RPM Plus in Years 1 to 4 of the program to assist USAID Missions, USAID-funded cooperating agencies and national governments in USAID-funded procurement and management of pharmaceutical products. Also presented was work from collaborative activities with the Commonwealth Regional Health Community Secretariat for East Central and

Southern Africa [CRHCS (ECSA)] in the area of HIV/AIDS Voluntary Counseling and Testing (VCT), work detailing the impact of HIV/AIDS on the health sector human resource and initiatives in establishing a regional pharmaceuticals forum and pooled procurement in East Central and Southern Africa, and posters on the efforts being made to establish a web-based HIV/AIDS information-sharing network and on HIV/AIDS-related pharmaceutical price comparisons.

Scope of Work for the RPM Plus Team

Scope of work for Laila Akhlaghi

- Present a poster entitled *Assessing the pharmaceutical supply system in Namibia to support expansion of PMTCT and ART activities*
- Present a poster entitled *Review of antiretroviral therapy (ART) guidelines in selected countries of Africa and the Caribbean: A challenge for optimizing treatment and product supply*
- Present Quantimed at the MSH booth
- Attend presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Scope of work for Bannet Ndyanabangi

- Present a poster entitled *Impact of HIV/AIDS on public health sector personnel in Kenya*
- Present a poster entitled *Impact of HIV/AIDS on the Health Workforce in Malawi*
- Present a poster entitled *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*
- Give an oral presentation entitled *A review of policies, guidelines and programs in voluntary counseling and testing in East, Central, and Southern Africa*
- Present a poster entitled *Enhancing collaboration for HIV/AIDS-related pharmaceutical management in East, Central, and Southern Africa: establishing a regional pharmaceutical forum*
- Present a poster entitled *Strengthening the VCT information and commodities supply system and integrating VCT and PMTCT activities in Zambia*
- Attend presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Scope of work for Sameh Saleeb

- Present a poster entitled *Developing commodity procurement support for the PMTCT program in Ethiopia*
- Present a poster entitled *Defining an assessment approach to improve medicine and commodity management for PMTCT programs*
- Attend presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Scope of work for Arin Speed

- Present a poster entitled *HIV/AIDS-related pharmaceutical price comparisons*
- Present a poster entitled *Developing a web-based HIV/AIDS information-sharing network: data collection and dissemination*
- Present the HIV/AIDS Commodities Tracking Tool at the MSH booth
- Attend presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Scope of work for Helena Walkowiak:

- With Dr Caroline Olwande Pharmacist in Charge of the ART Program, CPGH, Mombasa, Kenya present a poster entitled *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*
- With Mr Douglas Denje, Laboratory Technologist in-Charge, (CPGH), Mombasa, Kenya present a poster entitled *Strengthening Good Laboratory Practices in resource-limited settings to support the introduction and scale up of ART: a case from Coast Provincial General Hospital*
- Present a poster entitled *Access to HIV/AIDS-related essential medicines: a framework for measurement*
- Participate in a meeting of the FHI AIDS Institute's Technical Advisory Committee (TAC) on Antiretroviral Therapy
- Attend presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Scope of work for Hella Witt

- Present a poster entitled *Assuring sustained access to PMTCT commodities in Ethiopia through establishment of an integrated distribution system*
- Present a poster entitled *The pharmaceutical supply system in Haiti: An assessment to support expansion of VCT/PMTCT activities*
- Attend presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Activities

Dr. Akhlaghi's

- Presented a poster entitled *Assessing the pharmaceutical supply system in Namibia to support expansion of PMTCT and ART activities*
- Presented a poster entitled *Review of antiretroviral therapy (ART) guidelines in selected countries of Africa and the Caribbean: A challenge for optimizing treatment and product supply* on Thursday July 15
- Presented Quantimed at the MSH Booth
- Attended presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Dr. Ndyanabangi's

- Presented a poster entitled *Impact of HIV/AIDS on public health sector personnel in Kenya*
- Presented a poster entitled *Impact of HIV/AIDS on the Health Workforce in Malawi*
- Presented a poster entitled *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*
- Gave an oral presentation entitled *A review of policies, guidelines and programs in voluntary counseling and testing in East, Central, and Southern Africa*
- Presented a poster entitled *Enhancing collaboration for HIV/AIDS-related pharmaceutical management in East, Central, and Southern Africa: establishing a regional pharmaceutical forum*
- Presented a poster entitled *Strengthening the VCT information and commodities supply system and integrating VCT and PMTCT activities in Zambia*
- Attended presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Dr. Saleeb's

- Presented a poster entitled *Developing commodity procurement support for the PMTCT program in Ethiopia*
- Presented a poster entitled *Defining an assessment approach to improve medicine and commodity management for PMTCT programs*
- Attended presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs
- Met with IDA to discuss cooperation for ARV procurement related to RPM Plus

Mr. Speed's

- Presented a poster entitled *HIV/AIDS-related pharmaceutical price comparisons*
- Presented a poster entitled *Developing a web-based HIV/AIDS information-sharing network: data collection and dissemination*
- Presented the HIV/AIDS Commodities Tracking Tool at the MSH booth
- Attended presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Ms. Walkowiak's

- With Dr Caroline Olwande Pharmacist in Charge of the ART Program, CPGH, Mombasa, Kenya presented a poster entitled *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*
- With Mr Douglas Denje, Laboratory Technologist in-Charge, CPGH, Mombasa, Kenya presented a poster entitled *Strengthening Good Laboratory Practices in resource-limited settings to support the introduction and scale up of ART: a case from Coast Provincial General Hospital*
- Presented a poster entitled *Access to HIV/AIDS-related essential medicines: a framework for measurement*
- Participated in a meeting of the FHI AIDS Institute's Technical Advisory Committee (TAC) on Antiretroviral Therapy
- Attended presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs

Ms. Witt

- Presented a poster entitled *Assuring sustained access to PMTCT commodities in Ethiopia through establishment of an integrated distribution system*
- Presented a poster entitled *The pharmaceutical supply system in Haiti: An assessment to support expansion of VCT/PMTCT activities*
- Attended presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs.
- Met with the International Development Association (IDA) to discuss ARV procurement for Ethiopia

1. RPM Plus presentations at the XV International AIDS Conference in Bangkok, Thailand from July 11 to 16, 2004

Monday, July 12 2004

- **Poster Presentation: *Impact of HIV/AIDS on public health sector personnel in Kenya***
(Dr Ndyanabangi's poster is included as Annex 1)

The severe shortage of health professionals in Africa is a huge barrier to expanding AIDS treatment care and support. Treating patients with AIDS and AIDS-related illnesses places new and increasing demands on an already stretched workforce in Kenya. Many of the health workers—and their families—also suffer from the disease. Absenteeism and attrition erode the quality of care that facilities can provide to their patients and contributes to early burn out of those still on the job. The poster presented by Bannet Ndyanabangi on behalf of a team of researchers from Kenya, Commonwealth Regional Health Community Secretariat, SARA/AED and USAID/REDSO presents findings from a study carried out in Kenya in 2003. The study measured how HIV/AIDS impacts the health system in Kenya, through a descriptive cross-sectional study involving direct observation at facilities, key informant interviews, focus group discussions with doctors, nurses, and administrators, document review, and questionnaires. Data came from the Ministry of Health (MOH) and from 10 public and private health facilities.

- **Poster Presentation: *Impact of HIV/AIDS on the Health Workforce in Malawi***
(Dr Ndyanabangi's poster is included as Annex 2)

This study was similar to the one described above for Kenya. A team of researchers from Malawi, Commonwealth Regional Health Community Secretariat, SARA/AED and USAID/REDSO carried out the study in Malawi in 2003. The study measured how HIV/AIDS impacts the health system in Malawi, through a descriptive cross-sectional study involving direct observation at facilities, key informant interviews, focus group discussions with doctors, nurses, and administrators, document review, and questionnaires. The assessment focused on the two primary providers of health services in Malawi, the Ministry of Health and Population (MoHP), which provides 60% of the services, and the Christian Health Association of Malawi (CHAM), which provides 37% of services and is made up of private, faith-based health facilities. In total, eight hospitals and 12 primary health care facilities, as well as relevant government bodies, medical and paramedical councils, major health training institutions, and the National AIDS Commission were included in the study.

Tuesday, July 13 2004

- **Poster Presentation: *Assessing the pharmaceutical supply system in Namibia to support expansion of PMTCT and ART activities***
(Dr Akhlaghi's poster is included as Annex 3)

Rational Pharmaceutical Management Plus is working with the Government of Namibia to improve the country's pharmaceutical management capacity to support expansion of HIV/AIDS programs. The poster describes the methodology and the results from the assessment of the central medical store, two regional medical stores and 12 health facilities to determine their ability to support the scale-up of PMTCT, VCT and ART services. Major points in the implementation plan were also described.

- **Poster Presentation: *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***
(Dr Ndyabangi's poster is included as Annex 4)

Sub-Saharan Africa faces enormous challenges in increasing access to quality, affordable commodities for care and treatment of HIV/AIDS patients. Even when antiretroviral therapy is available, its effectiveness is undermined by lack of access to a constant supply of drugs. This poster developed by authors from MSH/RPM Plus and the Commonwealth Regional Health Community Secretariat proposes and discusses the feasibility of regional collaboration for the procurement of HIV/AIDS-related pharmaceuticals and commodities as a mechanism for increasing access to these products in the 14 countries belonging to the Commonwealth Regional Health Community (CRHC).

- **Poster Presentation: *Assuring sustained access to PMTCT commodities in Ethiopia through establishment of an integrated distribution system***
(Ms Witt's poster is included as Annex 5)

Prevention of mother-to-child transmission (PMTCT) and HIV/AIDS treatment programs require reliable supply of drugs and other program commodities. The cold storage requirements and short shelf life of some commodities can challenge supply systems and result in service interruptions or overstocking and expiry. The Ethiopian Ministry of Health (MOH) and its partners are implementing PMTCT services at 23 sites, and supplies are required to strengthen pharmacy and laboratory services. Rational Pharmaceutical Management (RPM) Plus assessed the capacity of distribution channels and management information systems (MIS) and designed a PMTCT commodity management system, building on existing structures. The poster discusses pharmaceutical assessment findings, an option appraisal and recommendations for commodity and information flow.

- **Poster Presentation: *HIV/AIDS-related pharmaceutical price comparisons***
(Mr Speed's poster is included as Annex 6)

Ready access to comparative price information for pharmaceuticals is essential to ensure procurement of medicines of assured quality for the lowest price. This is particularly important for new, expensive agents that are used in the prevention and treatment of HIV/AIDS. The poster describes the *International Drug Price Indicator Guide* that is produced by MSH and frames its usefulness as a tool for ensuring a central, independent, updated database of comparative price information that can help facilitate the purchase of antiretrovirals at lower prices.

- **Poster Presentation: *Developing a web-based HIV/AIDS information-sharing network: data collection and dissemination***
(Mr Speed's poster is included as Annex 7)

Access to information is central to good pharmaceutical program management, especially for drugs used in the prevention and treatment of HIV/AIDS and the myriad related donor programs. The availability of a Web-based data-sharing network would facilitate this access. This poster talks about the creation of a database of the HIV/AIDS drugs provided to targeted countries by the U.S. President's Emergency Plan for AIDS Relief and illustrates the numerous features of the software, including reporting and chart-making functions that show any combination of multiple factors (initiative, funding, specific program, year, country, geographic region, and quantity and price of drugs).

- **Poster Presentation: *Developing commodity procurement support for the PMTCT program in Ethiopia***
(Ms Witt's poster was presented by Dr Saleeb and is included as Annex 8)

Rational Pharmaceutical Management (RPM) Plus and the United Nations Children's Fund (UNICEF) carry out drug procurement for U.S. government-supported PMTCT program sites in Ethiopia. RPM Plus assessed the availability of products essential for general services as well as PMTCT services, and products used more specifically for PMTCT and PMTCT Plus services. The poster describes challenges for adequate drug procurement and management and discusses a strategy for increase procurement support and how facility records could be linked to commodity requirements to strengthen quantification and program monitoring and evaluation.

Wednesday, July 14 2004

- **Oral Presentation: *A review of policies, guidelines and programs in voluntary counseling and testing in East, Central, and Southern Africa***
(Dr Ndyabangi's presentation is included as Annex 9)

The burden of HIV is beyond what most national health systems in East, Central, and Southern Africa (ECSA) can handle, and efforts to scale up effective programs have intensified. Voluntary counseling and testing (VCT) is recognized as central to combating the

epidemic through prevention and care. Access to antiretroviral therapy is increasing; however, only about 10% of people who are infected know their status and can take advantage of therapy. This oral presentation provides an overview of VCT policies, programs, and guidelines available in ECSA. It is a result of collaborative work involving independent consultants, the Commonwealth Regional Health Community Secretariat, USAID/REDSO and MSH/RPM Plus.

- **Poster Presentation: *Enhancing collaboration for HIV/AIDS-related pharmaceutical management in East, Central, and Southern Africa: establishing a regional pharmaceutical forum***

(Dr Ndyabangi's poster is included as Annex 10)

Countries in the East, Central, and Southern Africa (ECSA) region are struggling to manage their health care systems in the context of the growing spread of HIV/AIDS. The unreliability and weak capacity that characterize most pharmaceutical and commodity management systems in this region are challenges. To address some of these challenges, the Commonwealth Regional Health Community for East Central and Southern Africa (CRHC-ECSA) and the Management Sciences for Health (MSH) Rational Pharmaceutical Management Plus (RPM Plus) Program (funded by the U.S. Agency for International Development) initiated a regional advisory committee, the Regional Pharmaceutical Forum (RPF) to implement strategies to improve access to quality pharmaceuticals and other medical supplies. The poster discusses the rationale and the structures of the forum.

- **Poster Presentation: *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***

(Dr Olwande's poster is included as Annex 11)

Countries in the developing world are scaling up access to ART and the challenge is to improve ART access quickly while capacitating systems to support long-term quality care. This poster presented by Dr Caroline Olwande, Pharmacist in Charge of the ART Program, CPGH, Mombasa, Kenya and Ms Walkowiak, RPM Plus describes the experiences of integrating ART programs into the existing pharmacy systems of four institutions in Mombasa, Kenya and outlines the evolving role of the pharmacy staff in the effective management of HIV as a chronic disease. The tools and methodologies used can be adapted to other country and program contexts.

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

(Mr Denje's poster is included as Annex 12)

Effective clinical laboratory services are essential to the Government of Kenya ART Program. In many resource-limited settings, practitioners are not familiar with or do not follow good laboratory practice. In this poster Mr Douglas Denje, Laboratory Technologist

in-Charge, CPGH, Mombasa, Kenya and Ms Walkowiak, RPM Plus describe a case study from CPGH, in improving quality assurance, integrity, and reliability of laboratory testing.

Thursday, July 15 2004

- **Poster Presentation: *Review of antiretroviral therapy (ART) guidelines in selected countries of Africa and the Caribbean: A challenge for optimizing treatment and product supply***
(Dr Akhlaghi's poster is included as Annex 13)

Standard Treatment Guidelines (STGs) may contribute to quality of HIV/AIDS treatment programs and facilitate antiretroviral (ARV) product supply. The World Health Organization (WHO) has identified 19 antiretroviral therapy (ART) regimens for adult patients in resource-limited settings and has pre-qualified ARV products to facilitate country program procurement. This poster compared ART recommendations for 13 countries supported by the U.S. President's Emergency Plan for AIDS Relief to (1) determine the extent of (a) agreement among the guidelines and (b) consistency with current WHO ART guidelines; (2) identify the most common listed ARVs; and (3) determine potential for supply with internationally prequalified products.

- **Poster Presentation: *Strengthening the Voluntary Counseling and Testing (VCT) information and commodities supply system and integrating VCT and PMTCT activities in Zambia***
(O.Hazemba's and M.Gabra's poster was presented by Bannet Ndyabangi and is included as Annex 14)

Rational Pharmaceutical Management Plus is working with the Government of Zambia to strengthen the VCT information and commodity management system. The poster describes the processes and the preparations involved in initiating and implementing such a system from baseline assessments to rolling out the activity in nine provinces with 72 districts.

- **Poster Presentation: *Defining an assessment approach to improve medicine and commodity management for PMTCT programs***
(Dr Saleeb's poster is included as Annex 15)

The poster describes an assessment approach that is developed by the Rational Pharmaceutical Management Plus Program. The approach serves to rapidly identify weaknesses and gaps in national pharmaceutical systems as they relate to PMTCT and ART programs, thus allowing the implementation of appropriate solutions in preparation of scale-up of PMTCT and ART programs. The poster presents the different steps and the application of the approach in three African countries participating in the Presidential Emergency Plan for AIDS Relief. The experience in using assessment results to develop appropriate pharmaceutical system solutions in these countries is also presented.

- **Poster Presentation: *Access to HIV/AIDS-related essential medicines: a framework for measurement***

(Ms Walkowiak's poster is included as Annex 16)

Despite its widespread use, "access to medicines" is rarely operationally defined and measured. With funding from the Bill & Melinda Gates Foundation, MSH in collaboration with the World Health Organization, developed a framework for defining and measuring access to essential medicines and defined core indicators for each dimension of access - geographic accessibility, availability, affordability, and cultural acceptability. RPM Plus applied this framework to measuring access to HIV-related medicines and as a guide to the design and initiation of an ART Program in Mombasa, Kenya.

- **Poster Presentation: *The pharmaceutical supply system in Haiti: An assessment to support expansion of VCT/PMTCT activities***

(Dr. Derosena's poster was presented by Ms. Witt and is included as Annex 17)

The Rational Pharmaceutical Management (RPM) Plus conducted an assessment to identify the capacity of the Haiti national pharmaceutical system. The poster details the methodology used in assessing the central medical stores, seven departmental peripheral depots, and 14 health service delivery sites. It presents the assessment findings as they relate to the different aspects of the pharmaceutical system including procurement, storage conditions, drug management information systems, inventory control and distribution. The poster also presents a summary of the implementation plan that was developed to address the key gaps in the system.

2. Demonstrate RPM Plus tools and documents

Laila – Quantimed

Quantimed, a software tool that facilitates quantification pharmaceuticals for scaling-up of HIV/AIDS programs, was made available at the MSH Booth for demonstration on two occasions during the course of the week and flyers were present at the booth throughout the conference.

Arin – HIV/AIDS Commodities Tracking Tool

The HIV/AIDS Commodities Tracking Tool (CTT), a web-based program that is designed to facilitate data sharing among donors and HIV/AIDS programs, was made available at the MSH Booth for demonstration on two days during the course of the week and replicas of the poster were present at the booth throughout the conference.

3. Participate in a meeting of the FHI Technical Advisory Committee Meeting on ART on Tuesday, July 13.

In April 2002, Ms. Walkowiak was invited by the AIDS Institute at FHI to serve as an advisor on its newly-created Technical Advisory Committee (TAC) on Antiretroviral Therapy. The purpose of the TAC is to provide technical advice on ART to the FHI AIDS

Institute's strategies and programs, to assist in reviewing various aspects of the AIDS Institute's programs related to ART and to offer relevant and appropriate recommendations. The technical areas to be addressed by the TAC include: the clinical and behavioral management of ART, laboratory assessment and monitoring of patients on ART, monitoring of resistance to ARVs, drug selection and management, and the ethical issues surrounding the use of ART. FHI plan that the TAC will meet for one day each year as part of an appropriate international HIV/AIDS conference with additional consultations being held through teleconferencing and email.

The third meeting of the TAC was held in Bangkok on July 13, 2004 – a copy of the agenda and a listing of invited members of the TAC are included as Annex 18. There was one change to the agenda – the issues for discussion for the meeting concentrated on the issues of providing ART to paediatric patients, especially selection of regimen, pharmaceutical preparation and dosage, and on the programmatic issues for scaling-up of ART programs, especially with regard to data collection, analysis and management. The next TAC meeting will be held at the International Conference on AIDS and Sexually Transmitted Diseases in Africa (ICASA) in Nigeria in 2005.

4. Attend presentations and satellite sessions and participate in discussions relevant to strengthening drug and commodity management systems for HIV/AIDS programs.

The RPM Plus Team attended the plenary sessions and selected presentations and satellite sessions relevant to strengthening pharmaceutical management systems and laboratory services for HIV/AIDS programs throughout the conference. The conference was enormously well attended with some 20,000 participants. It was noteworthy that there were few oral presentations that addressed capacity building of health care systems to support HIV/AIDS programs although the poster presentations provided some useful information on operational and programmatic issues around introducing and scaling up HIV/AIDS programs, especially ART in resource-limited country-settings. Challenges to program implementation identified included reports of nevirapine resistance and toxicity – the clinical implications of these studies on the utility of PMTCT regimens is yet to be determined; lack of human resources in the developing world to scale up ART programs; and programmatic issues around providing ART to paediatric patients. RPM Plus staff received many requests for tools and materials on strengthening pharmaceutical management systems and laboratory services both at the MSH Booth and at the poster sessions.

5. Support the attendance of Dr Olwande, Pharmacist in Charge of the ART program and Mr Denje, Laboratory Supervisor at Coast Provincial General Hospital, Mombasa.

RPM Plus used SO4 funding to support Dr Olwande and Mr Denje's participation in the XV International AIDS Conference. Dr Olwande coordinates activities to strengthen the capacity of the pharmacy department to support the introduction and scale up of ART at CPGH and also to support the pharmacy departments in the other three sites. Mr Denje works with the Chief Pathologist at CPGH to coordinate activities to strengthen the capacity of the laboratory department to support the introduction and scale up of ART at CPGH and also to support the laboratory departments in the other three sites. Mr Denje is responsible for

monitoring and supervising activities to promote Good Laboratory Practice to promote the reliability and timeliness of testing. In addition Dr Olwande is a trainer for the National AIDS and Sexually Transmitted Diseases Control Programme (NASCO) ARV training initiative and Mr Denje leads the laboratory practicum sessions included in the training. CPGH is a site used by NASCO as a learning site for staff preparing to start ART programs at other facilities in Kenya.

At the conference Dr Olwande had the opportunity to disseminate lessons learned from this learning initiative - on July 14 she presented a poster entitled: *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*. In addition, conference participation contributed to capacitating Dr Olwande as a NASCO trainer and as the ART pharmacist in charge at the site by exposing her to experiences from other ART programs in resource-limited settings and by updating her clinical knowledge.

On July 14 Mr Denje presented a poster entitled: *Strengthening good laboratory practices in resource-limited settings to support the introduction and scale up of ART: a case from Coast Provincial General Hospital, Mombasa, Kenya*. Conference participation has contributed to capacitating Mr Denje as contributor to the NASCO training and ART laboratory coordinator for the three sites by exposing him to experiences from other ART programs in resource-limited settings and by updating his knowledge in advances in laboratory monitoring for ART.

Collaborators and Partners

USAID

Cheryl Sönnichsen, USAID/Kenya
John Wasonga, USAID/Kenya

FHI/IMPACT

Dr Y.D. Mukadi, FHI/Washington

Population Council/Horizons

Dr A. Sarna, Population Council, Delhi

Mombasa Partners

Dr K. Shikelly, CPGH
Dr C. Olwande, CPGH
Mr D. Denje, CPGH

Next Steps

1. Ms Walkowiak will participate in a USAID-sponsored workshop "Highlights from the XV International AIDS Conference" on Thursday, August 5, 2004 at George Washington University. She will present during the panel on treatment from 3:00 pm - 4:00 pm, on two of the RPM Plus posters
 - *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*
 - *Strengthening good laboratory practices in resource-limited settings to support the introduction and scale up of ART: a case from Coast Provincial General Hospital, Mombasa, Kenya.*
2. Dr Olwande and Mr Denje will also present the above posters together with updates and highlights to pharmacy and laboratory staff from the four sites in Mombasa. They will also share updates and future directions from the conference, in addition to presenting the posters and reporting on feedback received at the next CPGH ART implementation meeting which is attended by CPGH ART clinical and management teams. The posters will be displayed at CPGH.

Annex 1. Poster Presentation: *Impact of HIV/AIDS on Public Health Sector Personnel in Kenya*

Impact of HIV/AIDS on Public Health Sector Personnel in Kenya

B. K. Cheluget,¹ C. Ngare,¹ J. Wahiu,¹ L. Mwikya,¹ S. Shongwe,² S. N. Kinoti,³ B. A. Ndyabangi⁴

Ministry of Health, Kenya¹ ²Commonwealth Regional Health Community ³Academy for Educational Development/SARA Project ⁴Management Sciences for Health

Introduction

Treating patients with AIDS and AIDS-related illnesses places new and increasing demands on an already struggling health workforce in Kenya. Many of these nurses, doctors, and technicians—and their families—also suffer from the disease. Absenteeism and attrition erode the quality of care that facilities provide and contribute to early burnout of those workers still on the job.

Methods

To measure how HIV/AIDS impacts the health system in Kenya, we conducted a descriptive cross-sectional study using direct observation at facilities, key informant interviews, focus group discussions with doctors, nurses, and administrators, document review, and questionnaires. Data came from the Ministry of Health (MOH) and from 10 public and private health facilities.

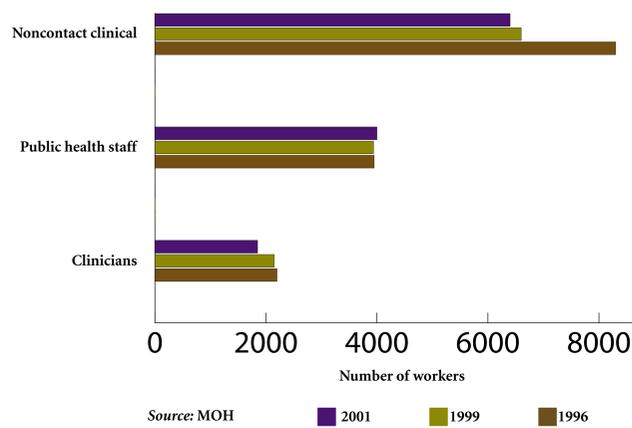
Results

According to MOH data, the health workforce has steadily declined in size, shrinking from 50,504 workers in 1996 to 45,964 in 1999, and down to 43,270 in 2001. At the same time, the number of new HIV/AIDS cases in Kenya has increased, reaching 1.75 million in 2003. The health system is straining to cope with new and greater pressures in several areas.

Attrition

- Deaths, resignations, and other factors have created a shortage of health workers, particularly clinical professionals.

Attrition of health workforce, 1996–2001



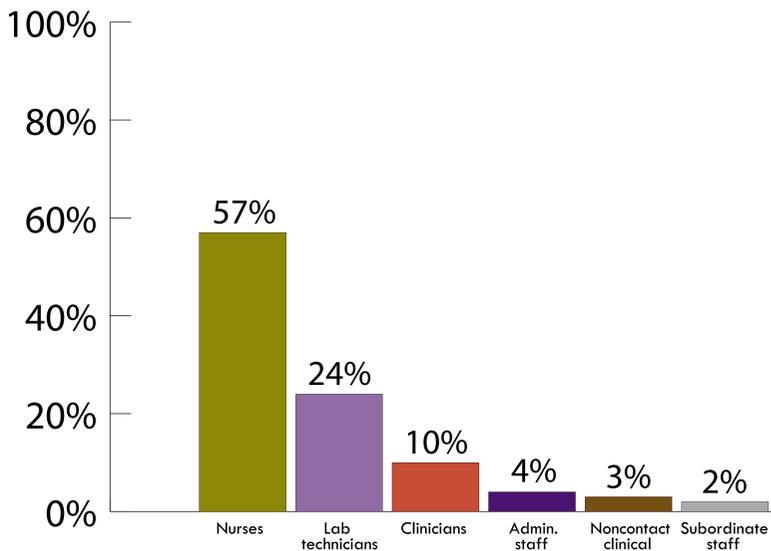
“We hold matanga, which is mourning period for two weeks. You can imagine what happens if someone from your department goes for two weeks with the existing congestion of patients.”

—nurse, Kisumu District Hospital

Absenteeism

- Absenteeism is a chronic problem, with an average rate of 15 percent overall and many younger workers missing work because of their own or a family member’s illness or relatives’ funerals. To quantify levels of absenteeism, the study facilities were asked for health worker attendance records for the previous seven days.

Absenteeism based on cadre (7-day period) (n=152)



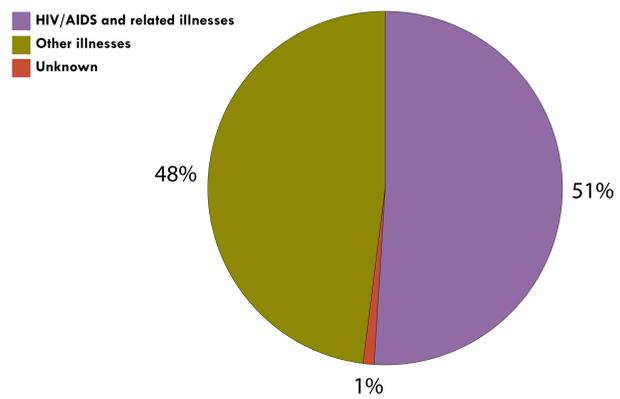
“Some of us might be carrying the virus, though we might not know it. We are also Kenyans.”

—health worker, Coast Province

HIV/AIDS-Related Workload

- Hospital admissions have steadily increased since 1996, with about half of the cases related to HIV/AIDS. Further straining resources, HIV/AIDS-related cases are more complex, require longer hospital stays, and are more likely to result in death.
- Hospital admissions data give an idea of the workloads that health workers face. In this assessment, we sampled 30 percent of the admissions in each facility and found an increase in admissions from 4,379 in 1996 to 6,450 in 1999, and to 7,545 in 2002.
- The HIV/AIDS-related workload affects health workers’ attitudes toward their jobs. Nurses reporting burnout sometimes take time off regardless of the effect their absence has on other staff members, who are already overburdened.

Admissions by diagnosis: 1996, 1999, and 2002 (n=18,191)



Adding New Services

- In addition to their established duties, health workers are called upon to assist with new HIV/AIDS services such as voluntary counseling and testing (VCT) and training family members for home-based care. Assessment results indicate an overload for the service providers in VCT and prevention of mother-to-child-transmission programs based on the programs’ guidelines. For example, a counselor is expected to have an average of 160 clients per month; assessment data show that counselors actually have about two to three times this many clients.

Training and Employment

- Although in-service training is available, health workers are sometimes required to do work for which they have not been trained. Adequate training for tasks required on the job is crucial to health worker preparedness and morale. Although just 61 nurses reported having been trained in opportunistic infection (OI) issues, 750 nurses reported having cared for patients with OIs.
- On the other hand, workers trained in specific services are not necessarily using their skills. Although 100 percent of doctors trained in VCT are using it on the job, only 54 percent of clinical officers trained in VCT are offering the service.
- Finally, in some cases, staff shortages are due to a lack of financial resources.

Conclusion

The time has come to remedy some of these problems. As one doctor observed, “Surveys have become very common, but implementation is not there. Many times, people come to ask us questions, and one wonders whether all these studies are useful.”

In the final analysis, the Kenyan Government, the donor community, and partner organizations must view the quantitative expansion and qualitative upgrade of Kenya’s health system as not only a priority but as a prerequisite in stemming the devastating HIV/AIDS epidemic. Their collaboration is key to avoiding the fragmentation of the health system that would result from divergent approaches to training, incentives, salary, and disease priorities. Strengthening the health sector’s human resources, qualitatively and quantitatively, can improve the health of all Kenyans, as well as the effectiveness and capacity of Kenyan health professionals working in HIV/AIDS care, treatment, and prevention.

The following organizations provided technical and financial support for the study:

- Bill & Melinda Gates Foundation
- AED/SARA Project
- Commonwealth Regional Health Community Secretariat
- Kenya Ministry of Health
- USAID REDSO/ESA

Recommendations for Strengthening Human Resources

Health workers surveyed recommended a number of strategies, including these—

- Refer patients to municipal and peripheral facilities.
- Train patients’ relatives to care for them.
- Delegate some patient care to nursing assistants and other nonprofessionals.
- Hire more trained workers; this will ensure that future workers are being developed, learning the necessary skills.
- Improve salaries; alternatively, establish partnerships with nongovernmental organizations to hire government health workers during free time at presumably higher pay.
- Ensure a reliable supply of equipment to prevent infection; gloves, masks, syringes, and other equipment are reportedly in short supply.
- Raise morale through recognition; select higher-performing workers to attend training or simply recognize and praise them publicly.
- Provide counseling for health workers as well as for patients and the public.
- Plan strategically for AIDS-related services; as VCT and other services become more widespread, the health system must have the personnel, space, and training in place to support them.

Annex 2. Poster Presentation: *Impact of HIV/AIDS on the Health Workforce in Malawi*

The Impact of HIV/AIDS on the Health Workforce in Malawi

A. Gonani,¹ M. Makuti,¹ A. Macheso,¹ S. Shongwe,² S. Kinoti,³ and B. A. Ndyabangi⁴

¹Ministry of Health and Population, Malawi ²Commonwealth Regional Health Community
³Academy for Educational Development/SARA Project ⁴Management Sciences for Health

Introduction

Few studies have assessed how the HIV/AIDS epidemic has exacerbated an already weak human resource pool in African health systems. HIV/AIDS reduces the supply of service providers by attrition due to death, departure from service, and reduced performance and by increased demand for services in terms of both quantity and complexity. To evaluate the impact of HIV/AIDS, we conducted a health workforce assessment in 2003.

Methods

This assessment focused on the country's two primary providers of health services, the Ministry of Health and Population (MOHP), which provides 60 percent of services, and the Christian Health Association of Malawi (CHAM), which provides 37 percent of services and is made up of private, faith-based health facilities.

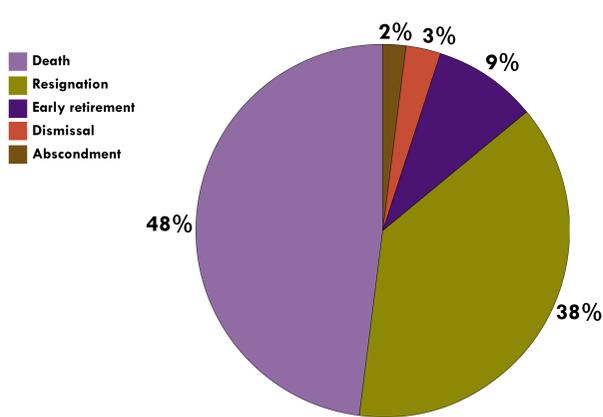
In total, eight hospitals and 12 primary health care facilities, as well as relevant government bodies, medical and paramedical councils, major health training institutions, and the National AIDS Commission were included in the study. The study focused on six districts: Salima, Machinga, Nsanje, Mulanje, Lilongwe, and Rumphii. Data collectors conducted in-depth interviews with facility directors and managers, performed abstracting of institutional and medical records, made direct observations of facility operations, and held focus group discussions with health workers.

Select Results

Attrition

- Retention of health workers is a serious concern. The major causes of attrition among health workers in the six selected districts were death, resignations, and early retirement. AIDS-related illnesses accounted for 73 percent of all health worker deaths. In some districts, death rates have doubled between 1998 and 2002.
- Nurses (58%) represented the majority of staff leaving the health sector, followed by clinicians (29.4%). These health workers provided most of the curative and preventive health services at their facilities and were most likely to be affected by excessive workloads, burnout, and perceived or real risk of infection.
- Health workers cited poor remuneration (79%) as the main reason for leaving. Results from self-administered questionnaires and interviews revealed that 93 percent of workers were dissatisfied/very dissatisfied with their salaries.
- The majority of health workers (58%) had served fewer than four years at their respective facilities.

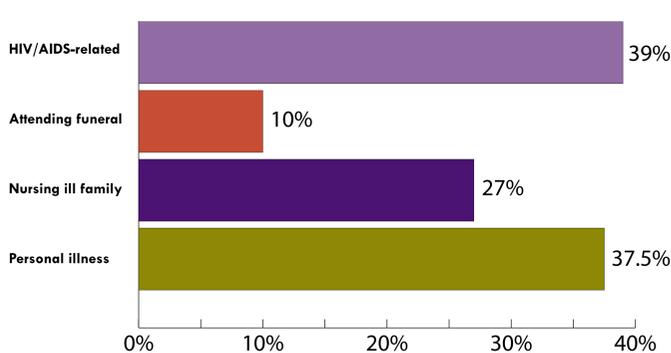
Causes of Attrition among Health Workers in the 6 Selected Districts, Malawi, 1996–2002 (n=527)



Absenteeism

- On average, 25 percent of health workers were absent over a 7-day period in the selected health facilities. Absenteeism was more pronounced in health facilities that had fewer staff and was more common among MOHP staff (26.7%) than among CHAM staff (19.7%).
- Nurses (87.2%) were absent more than any other staff. Young health workers, ages 25–39, were also most commonly absent during the 7-day period (73.5%). Absent workers were overwhelmingly female (86%).

Reasons Staff Cited for Absenteeism



Stigma, Perceived Risk of Infection, and Performance

- Stigma is a major concern among health workers. According to focus group discussions, lack of HIV/AIDS services such as counseling, care, and protection from infection are primary factors contributing to stigma. The degree of stigma attached to HIV/AIDS is reflected in the extremely low level of testing among health workers (2%).
- Ninety percent of health managers interviewed reported the perceived risk of infection among health workers to be high or very high. Focus group discussions revealed that fear of HIV/AIDS infection and related opportunistic infections such as tuberculosis contribute to poor performance and low motivation and morale.

Increased Workload and Low Provider/Patient Ratios

- Data on provider/patient ratios revealed low levels of staff coverage at most health facilities in the six districts, especially by physicians.
- No physicians were available in 60 percent of the public hospitals (Rumphii, Mulanje, and Nsanje District Hospitals) during the survey period. These hospitals also had low staff/patient ratios for other staff groups.

- Mulanje Mission and Machinga District hospitals had the best staff-to-patient coverage, averaging one staff person from each cadre per 18 patients.
- Nsanje District Hospital had the lowest provider-to-patient ratios, with night nurses providing the lowest coverage (one nurse to 342 patients).
- Ninety percent of health workers interviewed felt that their workloads were increasing. All health workers interviewed (100%) reported the HIV/AIDS disease burden as the primary reason for increased workloads.
- Because of excessive workload, only limited HIV/AIDS-specific services (e.g., voluntary counseling and testing (VCT), prevention of mother-to-child transmission (PMTCT), home-based care (HBC), and prevention of sexually transmitted infections) are being provided at the health facilities.
- Seventy-one percent of health workers did not provide HIV counseling despite having received training in this skill, because of high workloads.
- Eighty-five percent of health workers interviewed felt that poor availability of supplies reduced the quality of services, especially for HIV/AIDS.

Training of Health Workforce

- Most randomly selected health workers (85%) reported acquiring knowledge and skills in HIV/AIDS-related services through in-service training. A little more than half (53%) reported receiving training in various HIV technical areas within the previous 2 years.
- Guidelines on VCT, PMTCT, antiretroviral therapy (ART), and HBC were available in few study facilities. Most policies on HIV technical areas, including VCT, HBC, and use of antiretroviral drugs, are still in draft form. Malawi's comprehensive National HIV/AIDS Policy was since launched, in October 2003.

Bed Occupancy and Workload in 6 Districts in 2003 (in 7-Day Period)

Facility	Inpatients Admitted	HIV-Related Cases Admitted (% of Total)	HIV-Related Patients Given VCT (% of Total)	Bed Occupancy (%)
Salima District Hospital	142	28	20	96
Machinga District Hospital	280	37	19	147
Nsanje District Hospital	242	30	1	122
Trinity Mission Hospital	88	22	21	72
Mulanje Mission Hospital	51	29	100	59
Mulanje District Hospital	238	15	0	119
Lilongwe Central Hospital	430	18	58	162
Rumphii District Hospital	122	5	0	97
Total	1593	23%	5.3%	119%

Percentage of Facilities with Training Curricula Available for HIV-Related Services

HIV-Related Service	CHAM Service Facilities	MOHP Service Facilities	CHAM Training Facilities	MOHP Training Facilities	UNIMA Training Facilities
VCT	14	36	33	0	50
PMTCT	0	18	21	0	50
Universal blood precautions	12.5	38.5	55.6	0	100
ART	0	8.3	11	0	50
Male motivation	0	25	11	0	50
Community-based distribution	37.5	41.3	11.1	0	100
HBC	25	0	33.3	0	50

UNIMA = University of Malawi

Conclusions

- HIV/AIDS-related care and treatment have tremendously increased the workload for health workers.
- Attrition of health workers is high, and there are no adequate strategies in place to encourage retention.
- HIV/AIDS policies, guidelines, and care protocols, including training curricula for VCT, PMTCT, and ART, are lacking in all facilities.
- Among the small number of health workers trained in VCT, most do not actually provide the service.

Recommendations

- Increase both pre-service and in-service training capacity
- Strengthen HIV/AIDS-related services at tertiary and district-level hospitals
- Improve coordination between pre-service educational institutions and the MOHP
- Provide flexible employment arrangements or other types of incentives to increase staff retention
- Improve human resources information and management systems
- Introduce concepts of quality assurance and performance management

The following organizations provided technical and financial support for the study:

- Bill & Melinda Gates Foundation
- AED/SARA Project
- Commonwealth Regional Health Community Secretariat
- Kenya Ministry of Health
- USAID REDSO/ESA

Annex 3. Poster Presentation: *Assessing the Pharmaceutical Supply System in Namibia to Support Expansion of PMTCT and ART Activities*

Assessing the Pharmaceutical Supply System in Namibia to Support Expansion of PMTCT and ART Activities

Objective

Management Sciences for Health/Rational Pharmaceutical Management (RPM) Plus Program is assisting the Government of Namibia in its efforts to improve the country's pharmaceutical management capacity to support expansion of HIV/AIDS programs.

Methodology: RPM Plus Approach

1. Diagnostic assessment of performance
2. Development of strategic options for improvement
3. Options analysis with stakeholders
4. Implementation of preferred option

In 2003, RPM Plus assessed the central medical store (CMS), two regional medical stores (RMS), and 12 health facilities to determine their ability to support the scale-up expansion of prevention of mother-to-child transmission (PMTCT), voluntary counseling and testing (VCT), and antiretroviral therapy (ART) services. The assessment included—

- Review of facility operations and interviews with key informants from the government, public, and private sectors using a structured questionnaire
- Review of the infrastructure, staffing, training, selection, quantification, drug use, and the operation of PMTCT, VCT, and ART programs at the facility level
- Commission of a financial audit of the CMS "Trade Account"

Selected Results

Overall

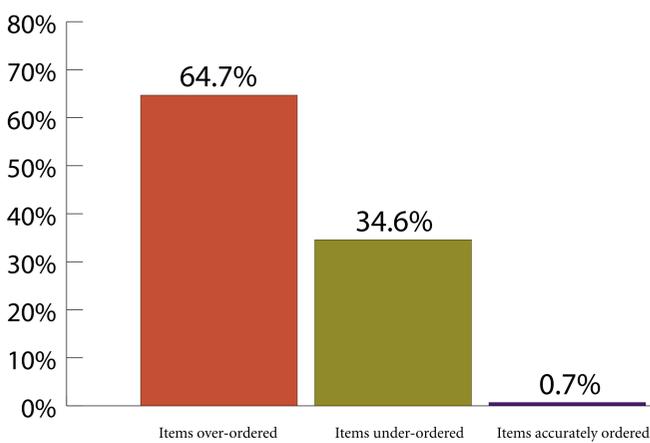
- A critical lack of human resources for all sectors and activities
- Lack of communication among facilities
- Lack of organized training
- Low staff morale and perceived lack of recognition

Procurement and Quantification

- Weak quantification systems at all levels of the supply chain due to unreliable inventory control and information systems
- No effective systems for deciding when, what, and how much to order

The graph below shows the variation between CMS's contracted quantities and actual order quantities. On average, actual order quantities are almost 250 percent of contract quantities, because of a poor quantification system that leads to inefficient procurement.

Variation in CMS Orders from One Supplier



Distribution

- Inadequate maintenance of stock records at all levels
- Poor stock rotation systems
- Frequent emergency orders
- Inadequate transport management and old vehicles

The table below shows that poor record-keeping systems contribute to inventory management challenges.

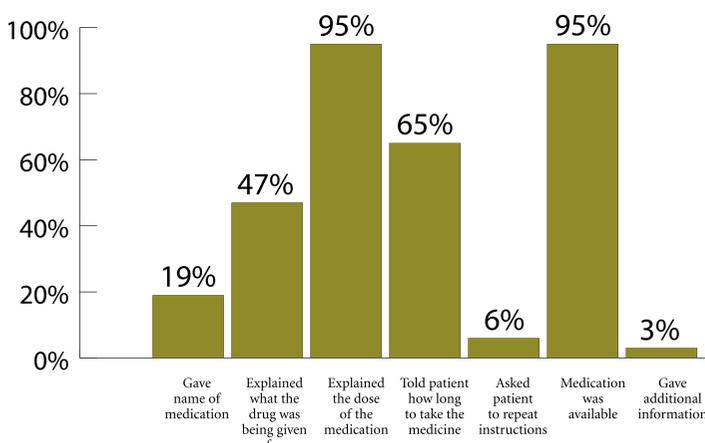
Inventory Logistics Measures across All Levels				
	CMS	RMS #1	RMS #2	Health Facilities
Average % of individual variation for set of indicator drugs	12	N/A	2	27
Average % of stock records that correspond with physical counts	34	N/A	57	70
Average % of set of unexpired indicator drugs available	91	91	100	96
Average % of time out of stock for set of indicator drugs	3	N/A	N/A	1
N/A = not measured				

Rational Drug Use

- Poor prescribing and dispensing practices
- No private counseling areas in pharmacies
- Weak ART drug management information systems
- Lack of functioning drug and therapeutics committees
- No national drug information system

The chart below presents data based on observations of 79 interactions between pharmacy workers and patients. The average amount of time spent with each patient was less than one minute.

Observation of Pharmacy Workers



Pharmaceutical Management Support

- No functioning pharmaceutical management information system
- Poor monitoring and evaluation systems
- Inadequate maintenance and security

Implementation Plan

To address the issues uncovered by the assessment, RPM Plus is working with stakeholders in Namibia to implement steps in several areas to strengthen the pharmaceutical management system to support HIV/AIDS programs.



Adequate and secure storage is necessary.

Overall

- Design and implement training programs in pharmaceutical management and standard operating procedures for HIV/AIDS programs
- Evaluate job content and draft job descriptions and motivation strategies
- Strengthen the pharmacist assistant training program

CMS and RMS Levels

- Develop appropriate systems for quantification
- Review/strengthen inventory control policies and procedures
- Hire a Pharmaceutical Management Adviser and an Information Systems Adviser
- Upgrade computerized inventory control system and roll out to regional medical stores
- Develop appropriate ordering forms and systems based on revised inventory control system
- Conduct physical inventory counts at all levels and update stock records
- Provide training in proper maintenance of stock records
- Review/strengthen standard operating procedures for storekeeping operations
- Undertake in-depth analysis of transportation and storage needs



Good record keeping is important to track inventory.

Health Facility Level

- Refurbish pharmacies, addressing infrastructure, equipment, and security needs
- Review/strengthen pharmacy practice standard operating procedures
- Review and revise registry and management information system for antiretroviral therapy programs
- Strengthen supervision, monitoring and evaluation systems, and external audits

For more information

Web: www.msh.org/rpmpplus • E-mail: rpmpushiv@msh.org

Annex 4. Poster Presentation: *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*

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

Introduction

Sub-Saharan Africa faces challenges in increasing access to high-quality, affordable pharmaceuticals for treating people living with HIV/AIDS. Even when antiretroviral therapy is available, its effectiveness is undermined by lack of access to a constant and uninterrupted supply of antiretroviral (ARVs). Groups of countries in various parts of the developing world have had success in pooling their resources to more efficiently procure essential medicines and supplies. Regional collaboration for the procurement of HIV/AIDS-related pharmaceuticals and commodities was proposed as a way to increase access to these products in the 14 countries belonging to the Commonwealth Regional Health Community (CRHC) of Eastern, Central, and Southern Africa.

Assessment Methods

The Rational Pharmaceutical Management (RPM) Plus Program of Management Sciences for Health administered a questionnaire to assess the structure of public sector pharmaceutical management to support pooled procurement in 11 CRHC member states: Kenya, Lesotho, Malawi, Mauritius, Mozambique, the Seychelles, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe. Prior to this study, no standardized approach had been used to guide groups of countries in selecting the best model for collaboration. Our methodology identified favorable conditions that point a group of countries toward a particular model, based on the group's characteristics. Steps of the assessment, which was conducted between June and October 2002, included—

- Collaborative development of a questionnaire by RPM Plus and the Center for Pharmaceutical Management's Rockefeller Foundation—funded project to assess the feasibility of using regional blocs for pooled procurement of HIV/AIDS drugs and commodities.
- Identification of favorable conditions for each model, which were linked to questions in the survey instrument.
- Intensive follow-up to the initial questionnaire, including document reviews and interviews with key personnel.
- Analysis of data from 28 questions to determine whether favorable conditions exist for countries to embark upon any of four models of procurement collaboration.
- Computation of the proportion of favorable conditions to determine a country's readiness to participate in a particular model. We assigned a cutoff point of 70 percent as representing the proportion of favorable factors required for successful participation in any model of collaboration.

What Is Regional Collaboration for Procurement?

The concept of collaborative procurement covers a range of options from simple information sharing to pooling of resources combined with joint contracting and purchasing carried out by an agency acting in behalf of a group of facilities, health systems, or countries. The four models of collaboration considered in the assessment are informed buying, coordinated informed buying, group contracting, and central contracting.

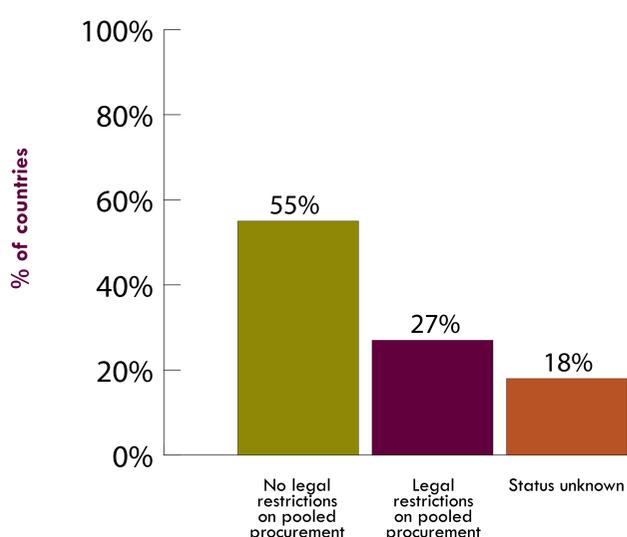
Information Sharing		Pooled Procurement	
Informed Buying	Coordinated Informed Buying	Group Contracting	Central Contracting
Member countries share information about prices and suppliers.	Member countries undertake joint market research, share supplier performance information, and monitor prices.	Member countries jointly negotiate prices and select suppliers. Member countries agree to purchase from these suppliers.	Member countries jointly conduct tenders and award contracts through an organization acting on their behalf.
Countries conduct procurement individually.	Countries conduct procurement individually.	Countries conduct purchasing individually.	Central buying unit manages purchases on behalf of countries.

Select Assessment Results

Legal or Policy Mechanisms for Participation in Multicountry Information Sharing

Countries were assessed as to whether they had legal or policy mechanisms that would permit or restrict participation in multicountry information sharing. Six countries—Kenya, Lesotho, Malawi, the Seychelles, Tanzania, and Zimbabwe—reported having no restrictions to participating in pooled procurement. Three countries—Swaziland, Uganda, and Zambia—reported having restrictions. For two of the countries, the policy was unknown.

Degree of Similarity of Legal Framework Favoring Pooled Procurement



Similarity of Essential Medicines Lists for HIV/AIDS-Related Products

It is important to evaluate whether essential medicines lists (EMLs) and standard treatment guidelines (STGs) are similar among a group of countries considering procurement collaboration. Such similarity supports information sharing among countries and gives them a better starting point for harmonizing their STGs and EMLs. Countries indicated which of 34 drugs commonly used for treating opportunistic infections and 14 ARVs appeared on their EMLs or formularies.

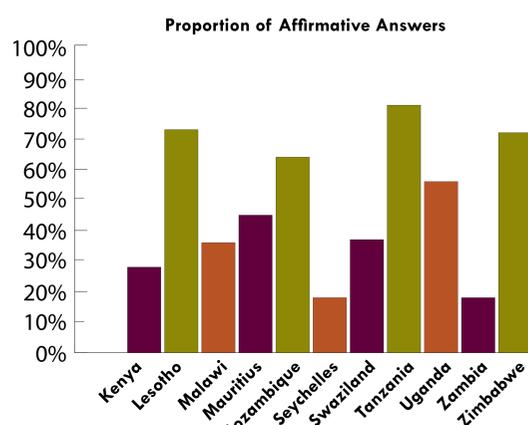
Condition	Model			
	Informed Buying	Coordinated Informed Buying	Group Contracting	Central Contracting
Adequate in-country quality assurance capacity	—	—	✓	✓
Common language among participating countries	—	—	✓	✓
Evidence of reliable payment of suppliers by the countries	—	—	✓	✓
Existence of convertible currencies among participating countries	—	—	—	✓
Existing legal/policy mechanism for participating in multicountry information sharing	✓	✓	—	—
Existing legal/policy mechanism for jointly negotiating prices and selecting suppliers	—	—	✓	—
Existing legal/policy mechanism to jointly negotiate/outsource negotiation of prices and selection of suppliers	—	—	—	✓
In-country capacity to computerize and standardize supplier and price information	✓	✓	—	—
Political will and financial commitment	—	—	—	✓
Reliable quantification of national health-sector commodity needs	—	—	✓	✓
Similarity of drug registration policies and procedures	—	—	✓	✓
Similarity of EMLs and STGs	—	—	✓	✓
Similarity of procurement policies and procedures	—	—	✓	✓

✓ critical for collaboration; — not critical for collaboration.

Conclusions

Our assessment results showed that three countries—Lesotho, Tanzania, and Zimbabwe—representing 27 percent of countries studied, appear ready to initiate coordinated informed buying. This method of collaboration for procurement requires dedicated human resources and a budget to conduct market research on pharmaceutical suppliers. A number of the 11 countries surveyed do not currently have the needed resources, and are not ready to participate in this type of collaboration.

Readiness of Countries to Undertake Coordinated Informed Buying (70% Required)



Next Steps

RPM Plus is collaborating with the CRHC Secretariat to initiate a coordinated informed buying (CIB) model in the region; however, most countries will have to reform their policies and administrative procedures before CIB can be fully implemented. Enacting these reforms will require considerable human and financial resources, time, and most of all, political will.

As a first step, RPM Plus helped establish and support a regional body that serves as a mechanism for addressing issues identified in this research—the Regional Pharmaceutical Forum. Additional steps necessary for establishing a CIB model include—

- Soliciting and securing funding
- Designing data collection tools and protocols
- Developing information dissemination tools
- Conducting a training workshop in the use of CIB tools
- Identifying personnel in each member state to be trained in market research techniques
- Providing office space and recruiting CIB staff
- Procuring and installing hardware, software, and office equipment and supplies
- Subscribing to relevant journals and purchasing relevant publications and documents
- Conducting monitoring/evaluation and support visits to member states

The use of CIB is expected to enable member states to make more rational and informed buying decisions, leading to potential cost savings, better service from manufacturers and suppliers, quality assurance of products, and improved access to pharmaceuticals. Once the CIB model is established, it could possibly evolve into a regional pooled procurement model. National governments that take the steps to implement a coordinated informed buying model in the region can make HIV/AIDS pharmaceuticals more accessible to their people.

For more information please contact—

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Annex 5. Poster Presentation: *Assuring Sustained Access to PMTCT Commodities in Ethiopia through Establishment of an Integrated Distribution System*

Assuring Sustained Access to PMTCT Commodities in Ethiopia through Strengthening of an Integrated Supply Management System

Background

Prevention of mother-to-child transmission (PMTCT) and HIV/AIDS treatment programs require a reliable supply of commodities to be successful. Inadequate storage, weak inventory control, and short shelf life of PMTCT products challenge supply management systems and result in inefficient service.

The Ethiopian Ministry of Health (MOH) and its partners, with support from the U.S. Agency for International Development, are initiating PMTCT services at 23 sites that require stronger pharmacy and laboratory services. To design a PMTCT commodity management system based on existing structures, the Rational Pharmaceutical Management (RPM) Plus Program of Management Sciences for Health assessed infrastructures, supply and information systems, and human resources capacity for PMTCT services.

Better availability of medicines and supplies increases the number of women seeking prenatal care, and therefore increases PMTCT coverage. The aim is to strengthen existing supply management structures to improve overall commodity management for PMTCT, no matter what the source of procurement.

Main Distribution Systems Supplying Commodities to Public Health Facilities

PASS

Commodities for special public health programs are usually distributed by the MOH to the regions. The Pharmacy Administration and Supply Service (PASS) is the central agency responsible for distributing commodities for various programs (e.g., tuberculosis, family planning) to regional health bureaus. The regions distribute program supplies to regional facilities and district health offices and sometimes to zonal health desks. PASS also manages commodities provided to the AIDS Control Program, including HIV test kits and medical supplies but not antiretrovirals.

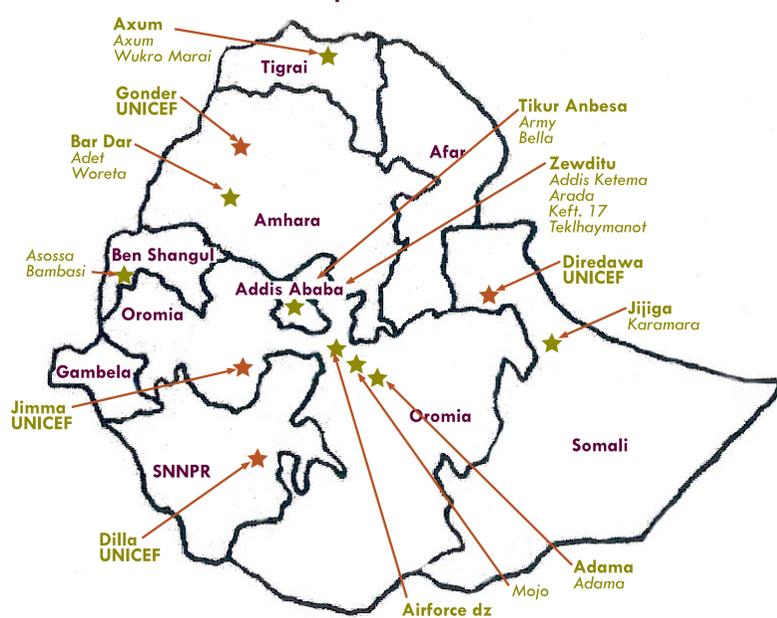
PHARMID

PHARMID is a parastatal import and distribution company, with all shares currently held by the Government. PHARMID has eight branches throughout the country. Public health facilities buy from PHARMID with their own budgets. PHARMID has been contracted by the MOH to provide drug management services for specific programs. Because of past experiences, procurement regulations, and regional policies, PHARMID is still the main supplier to the public sector, though the for-profit private sector is gaining momentum in distribution services.

PMTCT Assessment and Findings

The map below shows an overview of PMTCT implementation sites in the various regions. The sites include public health facilities, university facilities supervised by the Ministry of Education, and facilities of the armed forces.

Ethiopia PMTCT Sites



Overall Findings

Ethiopia needed a rapid start-up of PMTCT services. However, the RPM Plus assessment of these sites found that poor inventory and information management and lack of communication and commodity exchange mechanisms resulted in stock-outs and expiry at health facilities, especially for products with a short shelf life, such as HIV test kits. In addition, regional restructuring of the public health sector led to interruptions in the supply chain.

Assessment of Distribution Systems

RPM Plus compared the drug management capacities of PHARMID and PASS. PHARMID was found to be better prepared to support commodity management for the start-up phase of PMTCT services.

One shortcoming of the PHARMID distribution system is a lack of representation at the district level. RPM Plus recommended that facilities directly collect commodities; this is the most feasible and efficient option, since the majority of facilities regularly visit PHARMID branches to procure budget supplies. However, delivery services may be considered.

Comparing Capacity: PASS and PHARMID

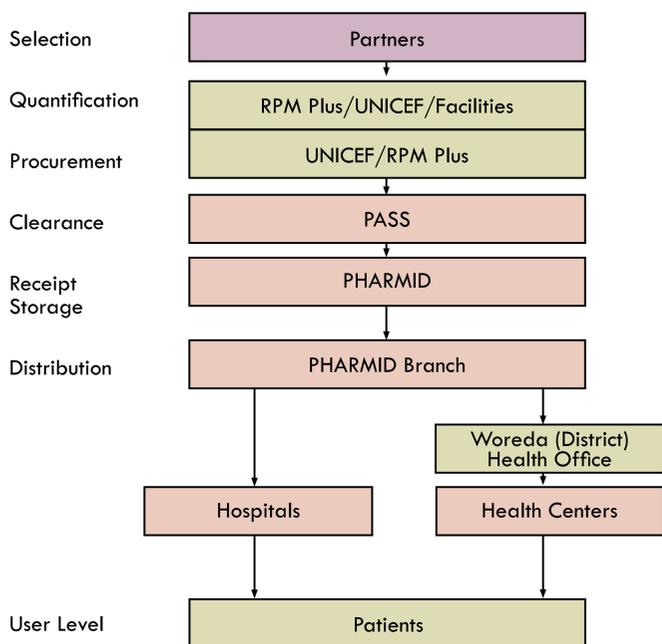
	PASS and Regional Structures	PHARMID
Distribution network throughout the country	+++	++
Accessibility to public and non-public health facilities (e.g., military facilities selected for PMTCT implementation)	+	+++
Storage capacity, including cold storage	+	+++
Capacity to procure, distribute, manage inventory	+	++
Functional management information system	+	++
Willingness to cooperate with the project	+++	+++
Delivery services	+	+

Proposed Implementation Plan

Proposed Commodity Flow for PMTCT Products

- UNICEF, in consultation with RPM Plus, procures commodities and keeps them in their transit store until cleared by MOH or PHARMID.
- PHARMID stores and distributes PMTCT commodities via their regional branches.
- Hospitals and health centers (or the respective District Health Office for the health center) collect supplies from PHARMID on a monthly or quarterly basis. Initially, delivery services will be limited to facilities that cannot regularly access a PHARMID branch, but may be expanded in the long term, and in particular, where antiretroviral therapy (ART) is introduced.

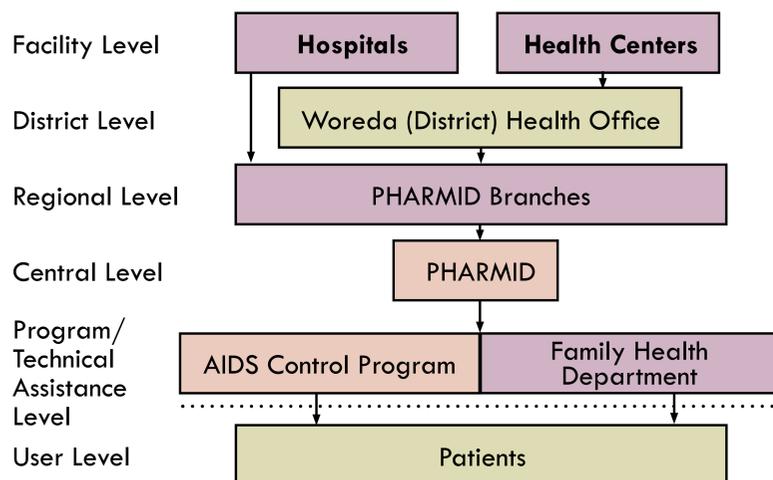
Proposed PMTCT Product Procurement & Distribution



Proposed Information Flow for PMTCT Products

- Facilities receive lists of drugs procured by Hareg (name of PMTCT project).
- Pharmacies tally their consumption of PMTCT commodities and report quarterly/monthly consumption and PMTCT services provided to PHARMID when requesting new supplies.
- PHARMID compiles information centrally and forwards to MOH and Hareg.

Proposed Information Flow for PMTCT Products



Next Steps/Update

- PHARMID, the parastatal wholesaler, is the preferred option for managing PMTCT supplies. RPM Plus will provide technical assistance to PHARMID, which will be responsible for storage, inventory management, and distribution of PMTCT-related products under this program.
- Additional facilities, including facilities managed by missions, police, or private entrepreneurs, have been identified to provide PMTCT as well as ART services. RPM Plus is implementing an approach to use the same supply channel for the commodity distribution to these sites.
- Scheduled distribution to program sites and reporting to regional pharmacy services and HIV/AIDS programs will be coordinated.
- A monitoring and evaluation system to track selected supply indicators is being developed, and a management information system will track stock level and expiry of PMTCT products at target sites.
- To sustain access to PMTCT products, the pharmaceutical management capacity at project sites needs to be strengthened concurrently.
- Infrastructural improvements are being made to meet minimum storage and handling conditions.

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Annex 6. Poster Presentation: *HIV/AIDS-Related Pharmaceutical Price Comparisons*

HIV/AIDS-Related Pharmaceutical Price Comparisons

International Drug Price Indicator Guide

J. McFadyen, K. Johnson, and A. Speed

The *International Drug Price Indicator Guide*, produced annually, provides an indication of pharmaceutical prices on the international market. Over the past few years, the *Guide* has been expanded to include products used in HIV/AIDS initiatives such as voluntary counseling and testing, prevention, and treatment programs. The explanatory text is in English, French, and Spanish, and contains links to other price sources, particularly for HIV/AIDS-related products.

The *Guide* can be used for—

- Making pharmaceutical price information more widely available for research and action
- Planning budgets and programs
- Determining the probable cost of pharmaceutical products
- Comparing current prices paid to prices available on the international market
- Assessing the potential financial impact of changes to a current drug list
- Supporting rational drug use education

List I is intended for procurement reference and has products in alphabetical order by international nonproprietary or generic name to allow a quick search for a particular item.

The *Guide* has prices from nearly 20 sources—actual prices paid by government agencies, as well as prices from pharmaceutical suppliers, procurement agencies, and international development organizations, which are included in a separate listing.

The *Guide* includes prices for more than 860 pharmaceuticals, test kits, contraceptives, and vaccines. The focus is on essential medicines and other health commodities.

The unit price is calculated by dividing the package price by the package size. This facilitates comparison of different pack sizes. The unit used to compare prices varies with the type of pharmaceutical preparation.

List I: Products Sorted Alphabetically (Agency Prices Only)

ITEM DESCRIPTION AGENCY	PACKAGE	PACKAGE PRICE (US\$)	UNIT PRICE (US\$)	COMMENTS	DEFINED DAILY DOSE	WHO EML	ATC CODE
LACTULOSE 3.35 G/5 ML SOLUTION (PO) GUATEMALA	1 BOTT (120 ML)	5.52	Price/Ml 0.0460	SYRUP	6.7 G	N	A06AD11
LAMIVUDINE 150 MG TAB-CAP (PO) CRSS	100 TAB-CAP	10.39	Price/Tab-Cap 0.1039	TABLETS	0.3 G	E	J05AF05
OECS/PPS	60 TAB-CAP	15.80	0.2633	TABLETS			
GUATEMALA	60 TAB-CAP	26.17	0.4362	TABLETS			
BDS	60 TAB-CAP	220.21	3.6702	TABLETS			
			Median Price/Tab-Cap=0.3498				High/Low Ratio=35.32
LAMIVUDINE 10 MG/ML SOLUTION (PO) GUATEMALA	1 BOTT (240 ML)	13.67	Price/Ml 0.0570		0.3 G	E	J05AF05
BDS	1 BOTT (240 ML)	68.51	0.2855				High/Low Ratio=5.01
LAMIVUDINE+ZIDOVUDINE 150MG+300MG TAB-CAP (PO) OECS/PPS	60 TAB-CAP	36.95	Price/Tab-Cap 0.6158	TABLETS		P	J05AF30
GUATEMALA	1 TAB-CAP	0.70	0.7044	TABLETS			
BDS	60 TAB-CAP	46.22	0.7703	TABLETS			High/Low Ratio=1.25
			Median Price/Tab-Cap=0.7044				
LATANOPROST 0.005% OPHT DROP (OPHT) GUATEMALA	1 BOTT (2.50 ML)	16.07	Price/Ml 4.3476	DROPPER	0.1 ML	N	S01EX03
ELSALV	1 BOTT (2.50 ML)	13.56	5.4240	DROPPER			
BDS	1 BOTT (2.50 ML)	19.35	7.7381	DROPPER			High/Low Ratio=1.78
			Median Price/Ml=5.4240				

On **List II**, the products are in alphabetical order within the WHO Essential Medicines List (EML) classification. This format assists with, for example, formulary development, and allows a convenient comparison of medicines within classes.

List II: Products Sorted by Therapeutic Category (Supplier Prices Only)

ITEM DESCRIPTION	WHO EML	DEFINED DAILY DOSE
Number of Suppliers=3 Highest Price=3.0384/Vial Lowest Price=2.0918/Vial High/Low Ratio=1.45		
SULFADIMIDINE 500 MG TAB-CAP (PO) Number of Suppliers=1 Price=0.0063/Tab-Cap	T	4 G
TETRACYCLINE HCL 250 MG TAB-CAP (PO) Number of Suppliers=3 Highest Price=0.0109/Tab-Cap Lowest Price=0.0064/Tab-Cap High/Low Ratio=1.70	P	1 G
6.2.3. ANTILEPROSY MEDICINES		
CLOFAZIMINE (LAMPRENE) 50 MG TAB-CAP (PO) Number of Suppliers=2 Highest Price=0.0670/Tab-Cap Lowest Price=0.0409/Tab-Cap High/Low Ratio=1.64	E	0.1 G
DAPSONE 100 MG TAB-CAP (PO) Number of Suppliers=2 Highest Price=0.0088/Tab-Cap Lowest Price=0.0070/Tab-Cap High/Low Ratio=1.26	E	50 MG
RIFAMPICIN 150 MG TAB-CAP (PO) Number of Suppliers=3 Highest Price=0.0593/Tab-Cap Median Price=0.0377/Tab-Cap Lowest Price=0.0366/Tab-Cap High/Low Ratio=1.62	E	0.6 G
RIFAMPICIN 300 MG TAB-CAP (PO) Number of Suppliers=4 Highest Price=0.0779/Tab-Cap Median Price=0.0703/Tab-Cap Lowest Price=0.0327/Tab-Cap High/Low Ratio=2.38	E	0.6 G
6.2.4. ANTITUBERCULOSIS MEDICINES		
ETHAMBUTOL 400 MG TAB-CAP (PO) Number of Suppliers=9 Highest Price=0.0413/Tab-Cap Lowest Price=0.0113/Tab-Cap High/Low Ratio=3.65	E	1.2 G
ETHAMBUTOL+ISONIAZID 400+150 MG TAB-CAP (PO) Number of Suppliers=4 Highest Price=0.0227/Tab-Cap Median Price=0.0163/Tab-Cap Lowest Price=0.0122/Tab-Cap High/Low Ratio=1.86	E	
ETHIONAMIDE 250 MG TAB-CAP (PO) Number of Suppliers=1 Price=0.1667/Tab-Cap	C	0.75 G
ISONIAZID (INH) 100 MG TAB-CAP (PO) Number of Suppliers=5 Highest Price=0.0054/Tab-Cap Median Price=0.0043/Tab-Cap Lowest Price=0.0037/Tab-Cap High/Low Ratio=1.46	E	0.3 G

Nearly every class in the WHO EML is represented in the *Guide*.

The median price is a type of average; it is whatever value splits a series of values in half when the series is put in ascending order. This is likely to be more useful than a simple average for estimation and comparison when there is a skewed distribution.

The defined daily dose is the assumed average maintenance dose per day for a drug used for its main indication in adults. Its main use is for estimating drug consumption, based on inventory/distribution data.

The high/low ratio compares the highest unit price with the lowest and indicates how much prices vary.

Use the **Web version** to create custom lists, compare your prices, and estimate your budget. Data from the 1996 edition to the present edition are available online.

MSH International Drug Price Indicator Guide Home

My List English Français Español

Introduction Page New Search

Welcome: Lori Wieder Log Out

Use this page to manage your personal lists.

Sort by List name	Products in List	Sort by Creation Date	Summary Information	Compare Your Prices	Plan Your Budget	Delete List
Non-nucleoside reverse transcriptase inhibitors	1	30-Jun-04 08:53 PM	Summary	Compare	Budget	Delete
Nucleoside reverse transcriptase inhibitors	1	30-Jun-04 08:52 PM	Summary	Compare	Budget	Delete
Protease inhibitors	2	30-Jun-04 08:54 PM	Summary	Compare	Budget	Delete

Search for a Drug by Name: Search

Introduction | Data Notes | Using the Guide | Reference Currency Calculator

Return to the ERC Questions or comments? We want to hear from you!

Create and save a custom list of products for easy reference.

Enter your package quantities and their prices, and the site will compare the prices you pay with the median prices for the selected drug. This comparison helps indicate how efficient procurement practices are.

Calculate the expected costs, based on international median prices, for your budget or tender by entering the quantities you plan to buy.

Print and CD-ROM copies available from the MSH eBookstore. E-mail bookstore@msh.org
Web version available at the MSH Electronic Resource Center, http://erc.msh.org/pricguide

Annex 7. Poster Presentation: *Developing a Web-Based HIV/AIDS Information-Sharing Network: Data Collection and Dissemination*

Annex 8. Poster Presentation: *Developing Commodity Procurement Support for the PMTCT Program in Ethiopia*

Developing Commodity Procurement Support for the Ethiopia PMTCT Program

Background

Prevention of mother-to-child transmission (PMTCT) and antiretroviral therapy (ART) services require a reliable supply of medicines and commodities. Rational Pharmaceutical Management (RPM) Plus and the United Nations Children's Fund (UNICEF) carry out drug procurement for U.S. government-supported PMTCT program sites in Ethiopia. The goal of procurement support in Ethiopia is to strengthen existing structures and improve availability of supplies at the facility level.

Assessment of PMTCT Program Sites

Site assessments were carried out at 23 sites and looked at pharmacy and laboratory services, regional and district authorities and supply systems, and the parastatal wholesaler, PHARMID. RPM Plus also assessed the availability of pharmacy and laboratory commodities required for comprehensive PMTCT and PMTCT Plus services.

Findings

Public health facilities receive their supplies through three main channels—

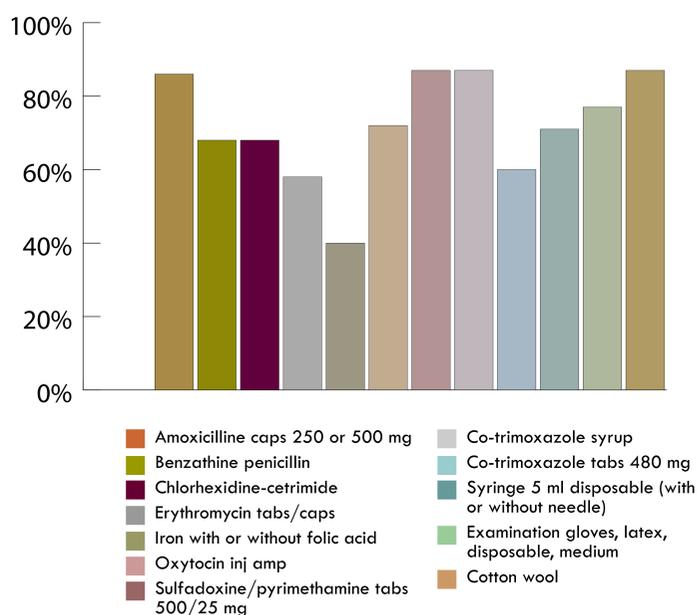
- Purchases from regional budget allocations
- Ethiopian Ministry of Health: Supplies provided free to the facilities and patients at a national level for specific programs
- Essential drug kits: Annually procured from World Bank funds

Interviews with facility health staff revealed that facilities use their budgets to procure essential drugs, with a priority given to life-saving drugs such as antibiotics and antimalarials. Other drugs and supplies are less likely to be purchased, either because they are not considered a priority or because they are too expensive. However, these commodities are sometimes provided through special programs.

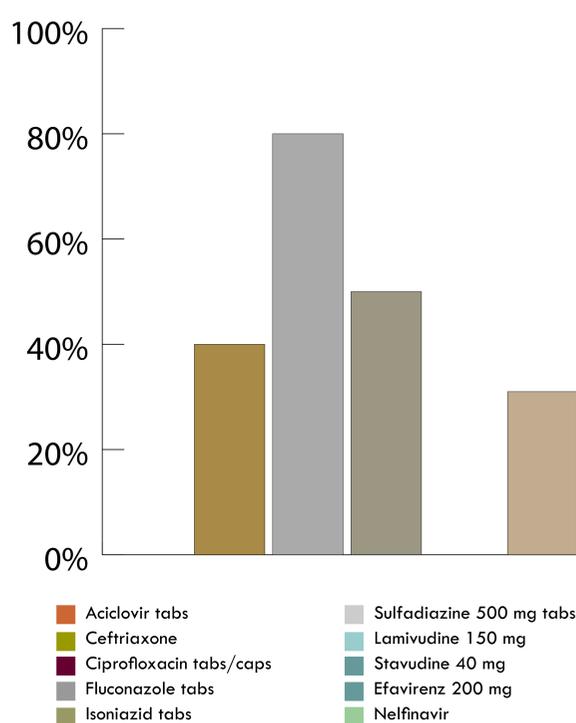
Managerial issues also caused drug supply problems. The RPM Plus assessment corroborated prior government assessment findings in the sector. Constraints and challenges identified include—

- Shortage and high attrition rate of professional staff
- Limited management capacity at zonal, district, and health facility levels
- Inadequate inventory control and weak monitoring and evaluation system, resulting in overstock, stock-outs, and expiry of certain products
- Limited quality assurance of imported or locally manufactured drugs due to shortage of human resources, weak information system, and lack of quality control equipment
- Periodic shortage of essential drugs due to lack of reliable consumption and/or morbidity data for procurement
- Irregular updating of inventory management tools such as stock cards or bin cards
- Inadequate storage, equipment, and handling capacity in pharmacies and laboratories, compromising product security and safety
- Lack of standard operating procedures, current reference materials, and manuals for use at health facilities
- Lack of space at pharmacies to ensure confidentiality for testing, counseling, and treatment

Availability of a Tracer Set of Essential Supplies



Availability of a Tracer Set of PMTCT Plus & ART Commodities



Proposed Implementation Plan

RPM Plus provides procurement support according to a staggered approach, with core supplies provided in the first phase, followed by a wider range of commodities later, together with strengthened management information systems and monitoring. Procurement should emphasize HIV-testing materials, drugs inaccessible in the local market, and commodities to strengthen prenatal care.

Planned interventions to address the recommended areas include assistance in quantification for procurement, in-service training, quality assurance, storage improvements, inventory control, record keeping and reporting, and development of manuals and standard operating procedures.

Creating Strong Information Links between PMTCT Program Activities and PMTCT Commodity Supply Activities

Good record keeping and information management are key to improving quantification of requirements as well as supply management, which will ultimately lead to better pharmaceutical procurement practice. The planned actions for improving record keeping include—

- Link service provision records with supplies, which will strengthen reporting of PMTCT services (see below table)
- Put in place an active stock management system and ensure availability of basic tools (e.g., stock cards, bin cards, inventory status reports, adverse drug reaction reports) for all PMTCT products at the sites
- Institute a quarterly reporting system for PMTCT product consumption and stock status

Facility Records Recommended for Calculating Supplies (Select List)

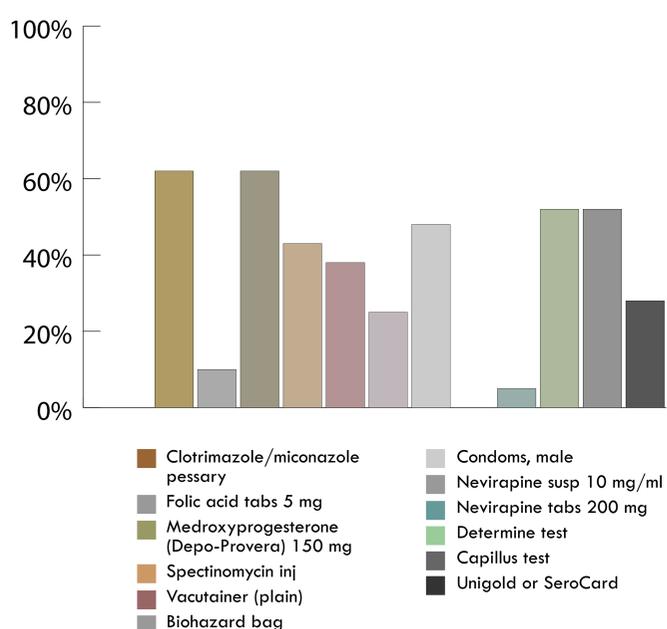
Facility records	Supplies
Number of prenatal care visits	Examination gloves, urine sticks, iron
Number of pregnant women tested	Rapid HIV test kits, Vacutainer
Number of pregnant women tested HIV-positive	Confirmatory tests for HIV
Number of women receiving ARV prophylaxis	Nevirapine
Consumption recorded at pharmacy dispensary	Streptomycin, aciclovir, sulfadoxine/pyrimethamine

Training Pharmacy Clerks to Improve Record Keeping and Reporting

A functioning inventory management system is required to prevent stock-outs. For the introduction of PMTCT services, pharmacy staff from the PMTCT implementation sites have been trained in PMTCT inventory management. Scarcity of pharmaceutical personnel presents a challenge to keeping up with the continuous demand for accurate recording and reporting. Pharmacy clerks, who are available in greater numbers in the labor pool, will be trained at facilities where pharmacy staff is in short supply.

For more information:
 Web: www.msh.org/rpmpplus
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Availability of a Tracer Set of PMTCT Commodities



Annex 9. Oral Presentation: *A Review Of Policies, Guidelines and Programs in Voluntary Counseling and Testing in East, Central, and Southern Africa*

Review of Policies, Programs and Guidelines in Voluntary Counseling and Testing (VCT) in East Central and Southern Africa (ECSA)

Bannet Ndyabangwi¹, G. Osewe², B. Ncube³, S. Shongwe⁴, J. Hayman⁵, Mary Pat Kiefer⁵

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VCT in ECSA: Presentation Outline

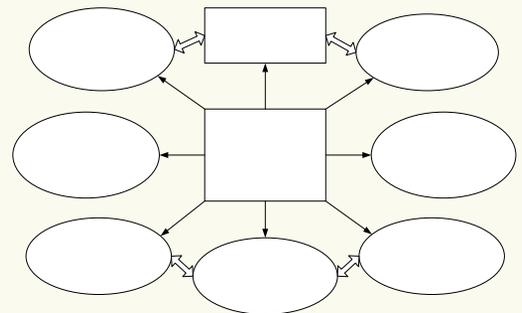
- Acknowledgments
- Overview of VCT in ECSA
- VCT Policy Development
- Guidelines for VCT
- VCT Programs
- Way Forward
- Final Thoughts

VCT in ECSA: Acknowledgments

Funding and technical support for the review was provided by:

- U.S. Agency for International Development/Regional Economic Development Services Office for East and Southern Africa (USAID/REDSO)
- The Commonwealth Regional Health Community for East Central and Southern Africa
- Management Sciences for Health (RPM Plus Program)

VCT in ECSA: Why is VCT a Key Intervention?



VCT in ECSA: Methods



Qualitative review (2002)

- Questionnaire for Program managers and stake holders
- Face to face interviews
- Focus Group Discussions
- Observation at sites
- Document reviews

Countries reviewed: Lesotho, Namibia, Swaziland, Mozambique
Zimbabwe, Tanzania, South Africa, Mauritius, Malawi
Botswana, Kenya, Seychelles, Uganda, Zambia
Countries visited: Zimbabwe, Malawi, Kenya, Uganda, Zambia

VCT in ECSA: Overview



VCT is a key intervention

- Pivotal to prevention & care strategies
- Voluntary counseling & voluntary testing

HIV testing available in all ECSA

- Mandatory & diagnostic testing > VCT
- Rural populations largely underserved
- Government following, NGOs leading
- High donor support: USAID - FHI/PSI, CDC, MSF, NORAD, DFID, JICA key partners
- Increasing use of rapid HIV test kits

VCT in ECSA: Overview, cont.



VCT implementation in 1 of 4 stages

1. NGO/private sector with little/no government involved
Lesotho, Namibia
2. NGO/private sector & government pilots
Swaziland, Mozambique
3. Consolidation of pilots/limited expansion
Zimbabwe, Tanzania, South Africa, Mauritius, Malawi
4. Scaling up to nationwide coverage
Botswana, Kenya, Seychelles, Uganda, Zambia

VCT in ECSA: VCT Policy Development



Status of VCT policy

- VCT a component of HIV/AIDS policy, strategy and/or HIV/AIDS framework
 - No detailed national VCT/testing policy in most of ECSA
 - Testing policies exist within other contexts

VCT addressed in broad terms

- As strategy to prevent HIV and promote care
- Negative: mandatory testing, discrimination
- Positive: access, availability, consent, confidentiality, and counseling

VCT in ECSA: VCT Policy Development, cont.



VCT implementation ahead of policy

- Programs guided by lessons learned in pilots/research, not national policy
- Couples planning marriage, pregnant women, and youth are identified as target groups for VCT

Limited evidence of implementation, monitoring, & funding of policy

- No framework/targets for monitoring of policy
- Emerging issues/gaps not addressed by guidelines
- Seychelles and Botswana implementing national policy
- Kenya funding part of VCT expansion

VCT in ECSA: VCT Policy Development, cont.



Key policy gaps

- Minimum standards for all HIV testing
 - Current focus on public sector/VCT detailed
 - Special circumstances: opt-out versus opt-in
- Recognition of counseling as a specialized profession with different cadres
- Testing of minors/children
- Disclosure/when confidentiality breached
- Who can administer HIV (rapid) tests, when, & where
- Involvement of people living with HIV/AIDS

VCT in ECSA: Guidelines for VCT



Status of VCT guidelines

- Guidelines developed by major implementing NGOs as implementation progressed in all ECSA
 - Reflect service biases of respective NGOs
- Government (MOH) participation/high ownership
 - Kenya: comprehensive guidelines for C & T
 - National training curriculum undergoing field-testing
 - Uganda: national guidelines for counseling under development (collating, reviewing, field-testing)
 - Malawi & Tanzania: Guidelines completed
- WHO/UNAIDS and CDC guidelines adapted and/or implemented (Seychelles – WHO guidelines)

VCT in ECSA: Guidelines for VCT, cont.



Utilization of guidelines

- NGO guidelines “de facto” national standards
 - Address testing, pre/post-test counseling protocol, referrals, & quality assurance
- Level of dissemination/implementation is limited, especially in integrated settings
- Quality of service differs significantly
 - Urban/rural, different providers, different models
- Resource constraints impact on standards of service at lower levels of the health system

VCT in ECSA: Guidelines for VCT, cont.



Gaps in scope of guidelines

- VCT site selection/establishment/management
- Counseling under special circumstances
 - Couples (esp. discordant), family, group, and children
- Testing protocol for different settings
- Quality assurance for both counseling and testing
 - QA tools and processes
 - Data collection, analysis and management
 - Criteria for recruitment and training of counselors
 - Counselor support & supervision

VCT in ECSA: VCT Programs



VCT delivery models

- Public sector provider
 - Most common - integrated into health care facilities
 - Designed to increase access at point of service
- NGO provider (as part of community service)
- Free standing/direct/stand alone
 - Strategically located in densely populated areas
 - Managed directly by implementing NGO
 - Highest average client flow/flexible hours
- Private sector
 - Closed communities and commercial enterprises
 - Varying standards of service, confidentiality issues

VCT in ECSA: VCT Programs, cont.



Strategies to promote VCT

- Increasing access, availability, and uptake
 - Expansion of VCT sites
 - Mobile/outreach services
 - Social marketing/branding
 - Special promotions
- Community mobilization for VCT
 - Mass media campaigns
 - Community sensitization

VCT in ECSA: VCT Programs, cont.



Unique features/best practices

- Accelerated, simultaneous, decentralized implementation by multiple partners – Botswana, Kenya
- Strong collaboration among key partners through national VCT coordinating forums – Zambia, Malawi
- Strong institutionalized linkages to post-test support - Uganda
- Social marketing of VCT- Zimbabwe – “New Start”
- Effective quality assurance mechanisms
 - Monitoring & evaluation, accreditation, supervision (Kenya Zimbabwe, Uganda)
- Nationwide roll-out of VCT for PMTCT (Botswana)
- Expanding capacity for counseling and testing
 - Lay counselors providing bulk of counseling (South Africa)
 - Nurse counselors conducting rapid tests (Kenya and

VCT in ECSA: VCT Programs, cont.



Implementation challenges

- Establishing quality systems
 - Quality assurance, logistics, data management, standardization (national & regional)
- Strengthening human and infrastructural capacity of VCT providers
 - Shortage of trained staff, training & support supervision for counselors, encouraging local ownership (integrated sites)
- Creating awareness and demand
 - Community mobilization: uptake and reduced stigma
 - Delivering a comprehensive “VCT package”
 - Programming focus on vulnerable groups – youth

VCT in ECSA: The Way Forward



- Addressing gaps in policy development
 - **Develop/revisit VCT policy**
- Supporting VCT implementation
 - National, district, and program levels
- Promoting regional collaboration
- Operational research to guide program planning

VCT in ECSA: Addressing Gaps in Policy



- Develop/revisit VCT policy to support program implementation and scaling up
 - Establish policy targets to track implementation
 - Identify risk groups/populations/issues to be targeted in each country
 - Define specific needs to be addressed and/or interventions to be implemented

VCT in ECSA: Supporting VCT Implementation



- Government/national
 - Development & dissemination of national policies, guidelines, & standards, and creation of technical capacity
 - Facilitating national dialogue
- District
 - Technical support for program implementation (e.g., training, networks, community mobilization)
 - Dissemination of, and training on, policies & guidelines
- Operational/site
 - Provision of high quality VCT services
 - Monitoring client satisfaction

VCT in ECSA: Promoting Regional Collaboration



- Utilization of existing regional resources
 - Regional reference labs for ongoing evaluation and recommendation of HIV test kits, bulk procurement
- Harmonization of guidelines for training, counseling, testing, and quality assurance
- Advocacy
 - Recognition of counseling as a profession in its own right, including the development of career paths
 - Increased government involvement and ownership of VCT
- Training-of-trainers, networking, sharing of experiences
- Resource mobilization

VCT in ECSA: Operational Research



- VCT & stigma reduction
 - Role of Religious Institutions and other social structures
- Impact of VCT on long-term behavior
- Expanding capacity for counseling & testing personnel
- Elements of successful post-test support clubs and long-term impact of participation
- Making VCT youth-friendly and part of popular culture
- VCT models most suitable for special populations

VCT in ECSA: Final Thoughts



In a nutshell . . .

- No minimum standards established (counseling, testing, quality assurance)
- Many good, replicable practices across ECSA
- Strong donor support for VCT (financial & technical)
- Scale-up needs in ECSA > VCT technical capacity

Collaboration at Regional level to enhance VCT response in ECSA:

- Some ECSA issues well addressed by regional solutions
- CRHCS/SADC/WHO-AFRO, UNAIDS-ICT partnership
 - Harmonization of policies, guidelines, curricula, and overall coordination of the VCT response
 - Country assessments, strategic planning, training-of-trainers

Annex 10. Poster Presentation: *Enhancing Collaboration for HIV/AIDS-Related Pharmaceutical Management in East, Central, and Southern Africa: Establishing a Regional Pharmaceutical Forum*

Enhancing Collaboration for HIV/AIDS-Related Pharmaceutical Management in East, Central, and Southern Africa: Establishing a Regional Pharmaceutical Forum

Introduction

Countries in the East, Central, and Southern Africa (ECSA) region are struggling to manage their health care systems in the context of the expanding HIV/AIDS epidemic. The unreliability and weak capacity that characterize most pharmaceutical and commodity management systems in the region undermine countries' ability to combat HIV/AIDS with antiretrovirals and medicines for treating opportunistic infections, pharmaceuticals that have dramatically improved quality of life and outcomes for patients in the developed world. Another obstacle is the lack of a central, regional mechanism for sharing information on pharmaceuticals, especially those relevant to the management of HIV/AIDS and related infections. These factors affect the quality of health care—and the quality of life—for people in the region.

Creation of the Regional Pharmaceutical Forum

To address these problems, the Commonwealth Regional Health Community (CRHC) established a regional advisory committee, the Regional Pharmaceutical Forum (RPF). The RPF works with collaborators, including the Management Sciences for Health (MSH) Rational Pharmaceutical Management (RPM) Plus Program (funded by the U.S. Agency for International Development [USAID]), to implement strategies for improving access to quality pharmaceuticals and other medical supplies.

The following steps are critical to the RPF's successful creation—

- Discussion and confirmation of objectives, functions, and terms of reference
- Identification of appropriate RPF members
- Appointment of a coordinator/focal person and member-state contacts
- Establishment of technical working groups
- Development and implementation of business plans, funding plans, and work plans
- Assistance to member states in implementing reforms necessary for collaboration
- Advocacy and consensus building

The RPF was launched in August 2003. Its main goal is to provide CRHC member states with technical leadership and support as they move to improve access to high-quality, affordable pharmaceuticals and other health commodities. The RPF's specific objectives are to—

- Coordinate with member states to strengthen national drug policies, legislation, and regulations
- Coordinate the regional harmonization of standard treatment guidelines (STGs) and essential medicines lists (EMLs) and facilitate the development of a regional formulary
- Help strengthen regional and in-country mechanisms to assure the quality of medicines in the region
- Help strengthen pharmaceutical management systems in member states, including selection, procurement, storage, distribution, and rational use
- Establish a mechanism to research regional collaboration on procurement of pharmaceuticals and essential medical supplies

Organization

Directors' Joint Consultative Committee

The Directors' Joint Consultative Committee (DJCC) is the foremost technical expert committee. It meets once a year to review key strategic issues and monitor progress in implementing CRHC Secretariat programs.

RPF Governing Body

This main technical body will have general oversight in defining policies aimed at achieving the goals of the RPF; it will be responsible for formulating RPF strategy and policy, promulgating operational plans, monitoring and evaluation of programs and activities, and building capacity in member state pharmaceutical systems.

Collaborators

The CRHC Secretariat has collaborated with several partners in developing and sustaining the RPF, including USAID's Regional Economic Development Services Office (REDSO) for East and Southern Africa, USAID's Regional Logistics Initiative (RLI), MSH/RPM Plus, MSH/Rockefeller Foundation, the Bill & Melinda Gates Foundation, and others.

RPF Technical Working Groups

The TWGs are expert panels for managing HIV/AIDS-related pharmaceuticals, pharmaceutical policy, quality assurance, pharmaceutical information, pharmaceutical procurement, and other areas to be determined.

The following TWGs are in place—

1. HIV/AIDS-Related Pharmaceuticals (HIV-TWG)
2. Policy and Quality Assurance (PQA-TWG)
3. Procurement, Storage, and Distribution (PSD-TWG)
4. Therapeutics and Drug Information (TDI-TWG)

HIV/AIDS-Related Pharmaceuticals Technical Working Group

The main objective of the HIV-TWG is to provide the RPF and CRHC member states with technical leadership and support as they work to improve access to and rational use of high-quality, affordable HIV/AIDS-related pharmaceuticals and other commodities. The HIV-TWG's main areas of focus are treatment and care, procurement, and information management.

Treatment and Care

The HIV-TWG's work includes developing and strengthening treatment protocols, standard commodity lists, and formulary systems within member states. The group also coordinates harmonization of member states' STGs and EMLs for HIV/AIDS-related medicines and commodities, as well as the development of regional lists and guidelines.

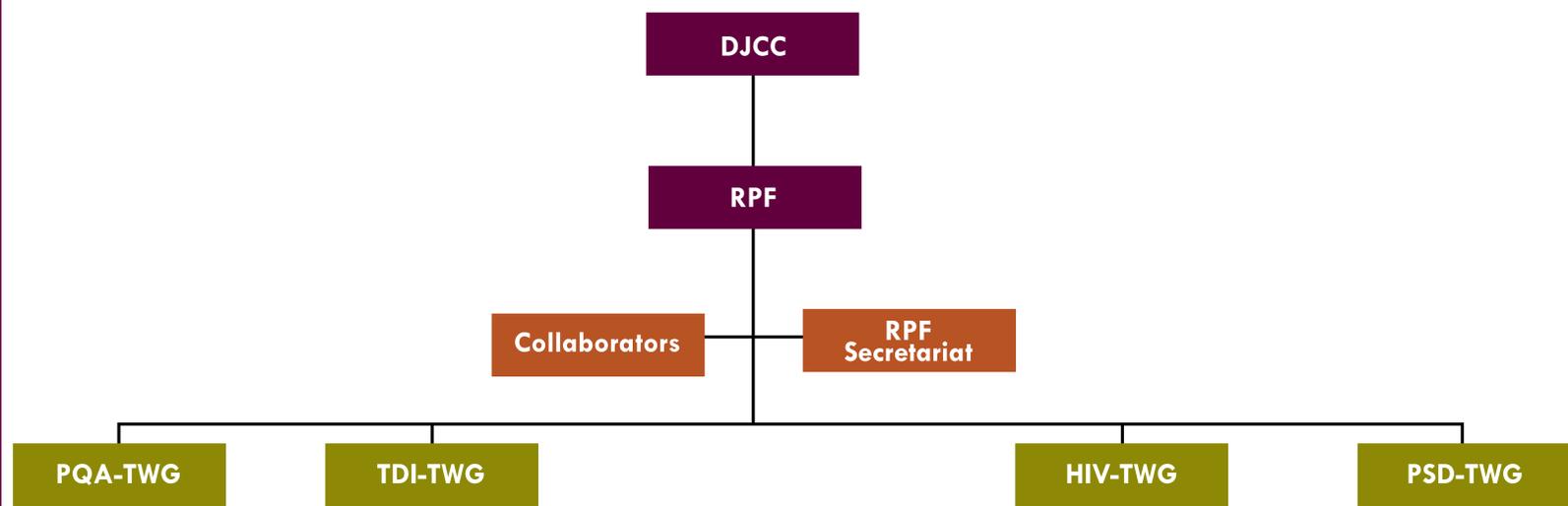
Procurement

Initially, this TWG will oversee the implementation of the coordinated informed buying program of the CRHC Secretariat, an information-sharing system that, it is hoped, will serve as a first step toward regional pooled procurement. The HIV-TWG will also be responsible for developing and strengthening procurement, storage, and distribution systems for HIV/AIDS-related pharmaceuticals within member states and at the regional level.

Information

This TWG will establish regional and in-country mechanisms for collecting, managing, and sharing information on pharmaceuticals and treatment regimens used in managing HIV/AIDS and related conditions. The TWG is also responsible for exploring and implementing regional pharmacovigilance and adverse drug reaction systems for HIV/AIDS-related pharmaceuticals.

RPF Organizational Structure



Expectations

In summary, the establishment of the RPF, a central mechanism for coordinating regional pharmaceutical and commodity management activities, is expected to bring about several major benefits—

- Strengthened pharmaceutical management systems of member states
- Establishment of a regional mechanism for information gathering and sharing
- Establishment of a regional mechanism for collaboration for procurement
- Improved access to and use of pharmaceuticals in member states, which in turn would improve quality of life

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Annex 11. Poster Presentation: *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*

Strengthening while Implementing: Improving Drug Management Systems to Support Scale-Up and Expansion of ART in Mombasa, Kenya

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1 Background

Countries in the developing world are scaling up access to antiretroviral therapy (ART). The challenge for them is to improve ART access quickly while strengthening systems to support long-term quality care. One of the key components of a successful ART program is a pharmaceutical management system able to assure constant availability and rational use of quality-assured antiretrovirals (ARVs).

The Government of Kenya initiated an ART program at four sites in Coast Province, and technical assistance was requested from RPM Plus and partners, with funding from the U.S. Agency for International Development. The four sites are—

- Coast Provincial General Hospital (CPGH), with 700 beds and 800 outpatients per day; ART program introduced June 2003
- Port Reitz District Hospital, with 116 beds and 150 outpatients per day; ART program introduced June 2004
- Bomu Medical Centre, with 250 outpatients per day; ART program introduced May 2004
- Magongo Municipal Clinic, with 80–100 outpatients per day; ART program to start in September 2004

3 Program Management and Linkages

In September 2002, RPM Plus conducted an assessment of the capacity of the pharmaceutical management systems of the four sites to support the ART program.

Baseline at Assessment

Vertical channels of communication and management existed and functioned well; two-way communication between clinical services and pharmacy was weak.

Actions

- Multidisciplinary, participatory meetings were conducted to debrief site staff on assessment findings and jointly identify strategies.
- An implementation plan was developed to set priorities on what needed to be addressed immediately, early in the program, and long term.
- The ART program was integrated into existing pharmacy systems.
- A forum for cross-departmental communication was created to address management issues.

Monitoring and Supervision

A biweekly pharmacy activity report was developed covering staff workload, availability of ARVs, and ART program constraints.

5 Human Resources

Baseline at Assessment

Site staffing levels varied; pharmacists were not available at all sites. Linkages between site pharmacy departments were informal. Highly trained pharmacists were undervalued and underutilized. Pharmacy staff were motivated to provide ART, as they had seen how HIV/AIDS was affecting their communities.

Actions

- Existing staff at three sites who were dispensing ART took on additional duties appropriate to their cadre on a rotational basis, leading to greater participation and ownership.
- Clusters were developed from informal linkages among sites, with pharmacists at the initial site mentoring their colleagues and assisting other sites with clinical activities.
- A five-day multidisciplinary workshop in HIV and ART management was conducted, combined with profession-specific training on priority topics and ongoing monthly training.
- Motivators for pharmacy staff were employed, including opportunities for training; recognition of their professional value by other cadres; an expanding clinical role; involvement in national-level training activities; and the opportunity to “do something” about the HIV epidemic.

Monitoring and Supervision

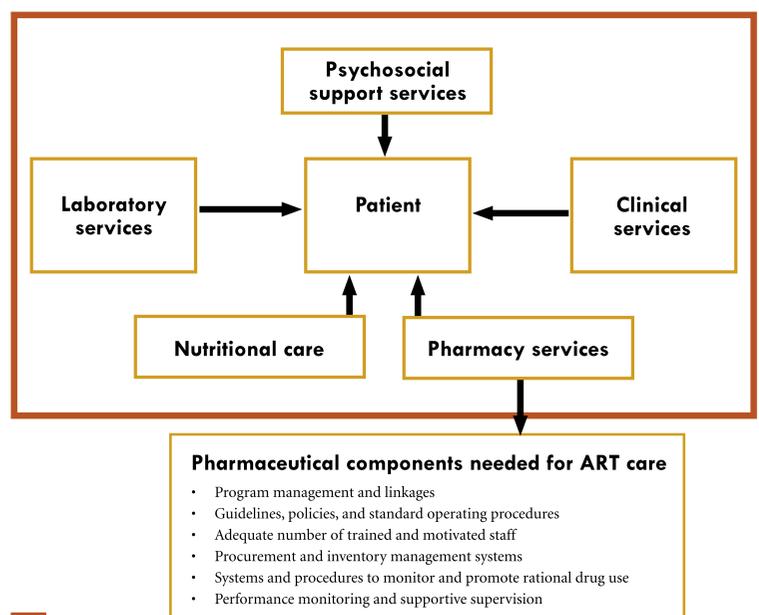
An internal audit team monitors performance indicators monthly and provides supportive feedback.

For more information please contact—

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 E-mail: rpmpplus@msh.org

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2



4 Guidelines, Policies, and Standard Operating Procedures

Baseline at Assessment

National ART guidelines existed but were unavailable at sites; none of the sites had standard operating procedures (SOPs) available.

Actions

- Updated Kenya and international ART and opportunistic infection guidelines were made available at sites.
- SOPs built on existing site systems and forms were developed and tested for three sites.

Monitoring and Supervision

The availability of ART guidelines in the dispensary is monitored quarterly.

7

Monitoring and Promoting Rational ARV Use

Baseline at Assessment

Pharmacists were trained in rational drug use concepts, but their contribution was underutilized by medical staff and constrained by a lack

of resources. Patient counseling was impeded by the lack of a confidential counseling area and a lack of appreciation for the importance of adherence.

Actions

- Pharmacists were nominated to serve as Secretary of the hospital ART Eligibility Committee.
- An adverse drug reaction monitoring and reporting system for ARVs was established.
- Reference books were supplied, enabling pharmacists to provide drug information to prescribers.



- New, patient-centered medication records were created to help monitor rational drug use.

- New counseling booths at pharmacy windows and counseling training were provided, promoting appropriate, confidential medication counseling for ART patients and others.
- Training in rational drug use was conducted for ART.

Monitoring and Supervision

An internal audit team makes quarterly observations on the quality of medication counseling.

8

Lessons Learned and Recommendations

1. Developing a formal mechanism of “clustering” sites to maximize pharmacy staff’s ability to support ART programs should be further investigated, as pharmacists are few in the public sector in sub-Saharan Africa.
2. Despite initial opposition, the pharmacists’ role in monitoring prescriptions, counseling patients, and providing drug information to prescribers is strongly appreciated and supported. Essential inputs include training, adequate staffing levels, and access to up-to-date information.
3. Integrating the ART program strengthened existing systems by improving confidentiality and medication counseling for all patients and improving the quality of pharmaceutical management for all drugs.
4. Incorporating stock management and ARV dispensing into existing pharmacy systems and schedules supported ART scale-up.
5. Program implementers should understand the existing pharmaceutical management system and work with staff to build on strengths and set priorities to address weaknesses in order to build capacity during ART program implementation.

Annex 12. Poster Presentation: *Strengthening Good Laboratory Practices in Resource-Limited Settings to Support the Introduction and Scale Up of ART: a Case from Coast Provincial General Hospital*

Strengthening Good Laboratory Practice in Resource-Limited Settings to Support the Introduction and Scale-Up of ART:

The ART Program at Coast Provincial General Hospital, Mombasa, Kenya

D. Denje,¹ K. Mandaliyia,¹ E. N. Njagi,² and C. Onyango³

¹Kenya Ministry of Health ²Department of Human Pathology, University of Nairobi ³Management Sciences for Health

Background

The Government of Kenya has initiated an antiretroviral therapy (ART) program at four sites in Mombasa, starting with Coast Provincial General Hospital (CPGH), a 700-bed referral hospital serving Coast Province. The facility handles 800 outpatients and 75 admissions per day, with 30–40 percent of patients in the medical wards estimated to have HIV/AIDS.

A well-functioning clinical laboratory producing reliable and timely results is an essential component of an ART program, but practitioners in Kenya are often unfamiliar with good laboratory practices (GLPs). To help address these issues, CPGH is working to improve the quality assurance, integrity, and reliability of laboratory data that support the new ART program, with technical assistance from the Rational Pharmaceutical Management (RPM) Plus Program.

Objective

The objective is to provide effective laboratory support for the ART program by assuring the availability of reagents, equipment, and supplies and improving the quality assurance, integrity, and reliability of laboratory practices at CPGH.

Approach

1. Conducting Baseline Assessment

2. Training Laboratory Staff

- Laboratory information management
- HIV/AIDS topics
- ART-related laboratory test procedures and monitoring
- Good laboratory practice concepts
- Safety and waste disposal

3. Strengthening Laboratory Systems

- Handling of specimens
- Use, maintenance, and calibration of laboratory equipment
- Management of reagents, standards, controls, and consumables
- Development of performance indicators
- Internal performance monitoring weekly
- Development of standard operating procedures (SOPs) for routine procedures
- Laboratory documentation process
- External performance monitoring to check progress

Baseline Assessment Results

- Inadequate staffing levels and capacity
- Poor specimen requisition, handling, and transport
- Periodic breakdown of equipment and insufficient maintenance procedures
- Lack of knowledge about ART monitoring and quality assurance concepts
- Weak storage, processing, and documenting of laboratory information
- Absence of guidelines and SOPs

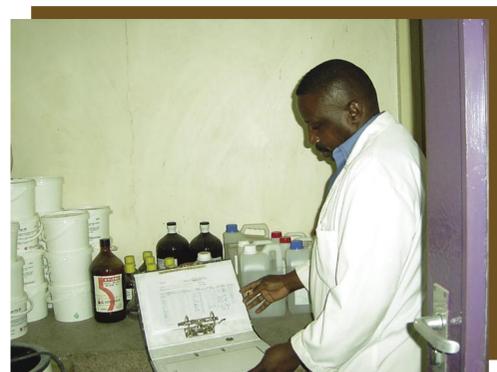
Outcomes of Introducing GLP Concepts

1. Improved Staff Capacity

- Staff motivation is higher.
- More staff practice universal safety measures.
- Generation of data on workload has justified the need for staff increases and better remuneration.

2. Management Systems in Place

- Equipment and supply management have improved.
- Results and specimen tracking have been streamlined.
- Data are now being used for monitoring, planning, and budgeting.
- SOPs have been prepared and are in use.



3. Test Results of Assured Quality

- The number of inadequate specimens has been dramatically reduced.
- The relationship between clinicians and laboratory has improved.
- More private practitioners are using the laboratory services.



For more information please contact—

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Lessons Learned

1. GLP concepts can be introduced and maintained in laboratories that support ART programs in resource-limited settings.
2. A lengthy timeframe may be necessary to improve quality assurance results.
3. Staff motivation is increased by providing training and recognizing their importance and contribution to the ART program.
4. GLP is not a once-only event; therefore, ART program planners need to include strengthening laboratory activities in the long-term program design and budget.
5. Educating provincial management and other hospital staff provides support and helps ensure efficient use of the laboratory.
6. Developing tools to monitor equipment maintenance and service improves reliability.
7. Regular training, monitoring, and supervision are mandatory to improve laboratory services and results and sustain their quality.

Kenya Ministry of Health



Provincial Medical Officer, Coast Province

Coast Provincial General Hospital



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Population Council/Horizons



Annex 13. Poster Presentation: *Review of Antiretroviral Therapy (ART) Guidelines in Selected Countries of Africa and The Caribbean: A Challenge for Optimizing Treatment and Product Supply*

Review of Antiretroviral Therapy Guidelines in Select Countries of Africa and the Caribbean: A Challenge for Optimizing Treatment and Product Supply

Background

Standard treatment guidelines (STGs) may contribute to the quality of HIV/AIDS treatment programs and facilitate antiretroviral (ARV) product supply. The World Health Organization (WHO) has identified 19 antiretroviral therapy (ART) regimens for adult patients in resource-limited settings and has prequalified ARV products to facilitate country program procurement.

Objective

Management Sciences for Health's Rational Pharmaceutical Management Plus (RPM Plus) Program, funded by the U.S. Agency for International Development, compared ART recommendations for 13 countries supported by the U.S. President's Emergency Plan for AIDS Relief to (1) determine the extent of (a) agreement among the guidelines and (b) consistency with current WHO ART guidelines; (2) identify the most commonly listed ARVs; and (3) determine potential for supply with internationally prequalified products.

Method and Information Sources

Draft or published guidelines were collected for Botswana, Côte d'Ivoire, Ethiopia, Guyana, Haiti, Kenya, Namibia, Mozambique, Rwanda, South Africa, Tanzania, Uganda, and Zambia. Guidelines for Nigeria and Vietnam were not obtained. Adult ART recommendations were compared among countries and with WHO's revised *Scaling Up Antiretroviral Therapy in Resource-Limited Settings* (2004). Potential supply with WHO-prequalified products was determined from the list in WHO's *Pilot Procurement, Quality and Sourcing Project: Access to HIV/AIDS Drugs of Acceptable Quality*. ARV prices were obtained from Médecins Sans Frontières' *Untangling the Web of Price Reductions: A Pricing Guide for Developing Countries* (sixth edition).

Results

Common Recommended Treatment Combinations

- No treatment recommendation was common to all 13 countries.
- The 13 countries recommended up to 95 different first- and second-line treatment combinations for adults, ranging from 3 to 78 in any given country. Of the 95, 19 combinations were consistent with WHO recommendations.
- All but one country (Guyana) listed treatment recommendations not included in the WHO guidelines; 22–100% of individual country recommendations were consistent with WHO guidelines (average, 53%).
- Forty of the recommended treatment combinations were listed in only one country and were not consistent with current WHO recommendations.
- The four most commonly recommended treatment combinations included five antiretroviral agents—
 - Zidovudine (ZDV)
 - Stavudine (d4T)
 - Lamivudine (3TC)
 - Nevirapine (NVP)
 - Efavirenz (EFV)

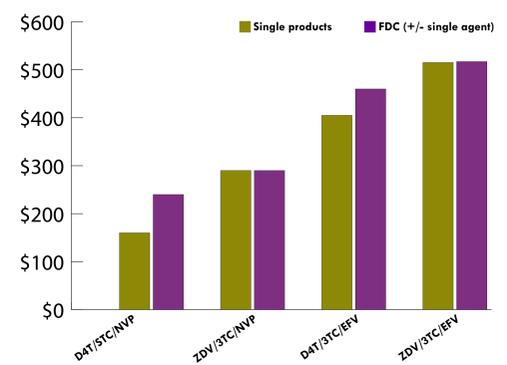
Potential Supply by WHO-Prequalified Sources

- Recommended by 11 countries (by 8 as first-line treatment and by 3 as second-line treatment), the zidovudine/lamivudine/nevirapine combination can be fully supplied with WHO-prequalified products.
- Recommended by 11 countries as first-line treatment, the stavudine/lamivudine/efavirenz combination can be supplied with a WHO-prequalified fixed-dose combination product of stavudine/lamivudine and a single-agent product of efavirenz.
- Recommended by 10 countries (by 9 as first-line treatment and by 1 country as second-line treatment), the zidovudine/lamivudine/efavirenz combination can be supplied with a WHO-prequalified fixed-dose combination of zidovudine/lamivudine and a single-agent product of efavirenz.
- Recommended by 9 countries (by 8 as first-line treatment and by 1 as second-line treatment), the stavudine/lamivudine/nevirapine combination can be supplied with a WHO-prequalified fixed-dose combination product.
- Two WHO-recommended combinations, 1 listed by 7 countries and 1 listed by 9 countries, may be supplied with prequalified fixed-dose products that contain all agents.

Cost Implications (Four Most Common Treatment Combinations, at Currently Available Low Prices)

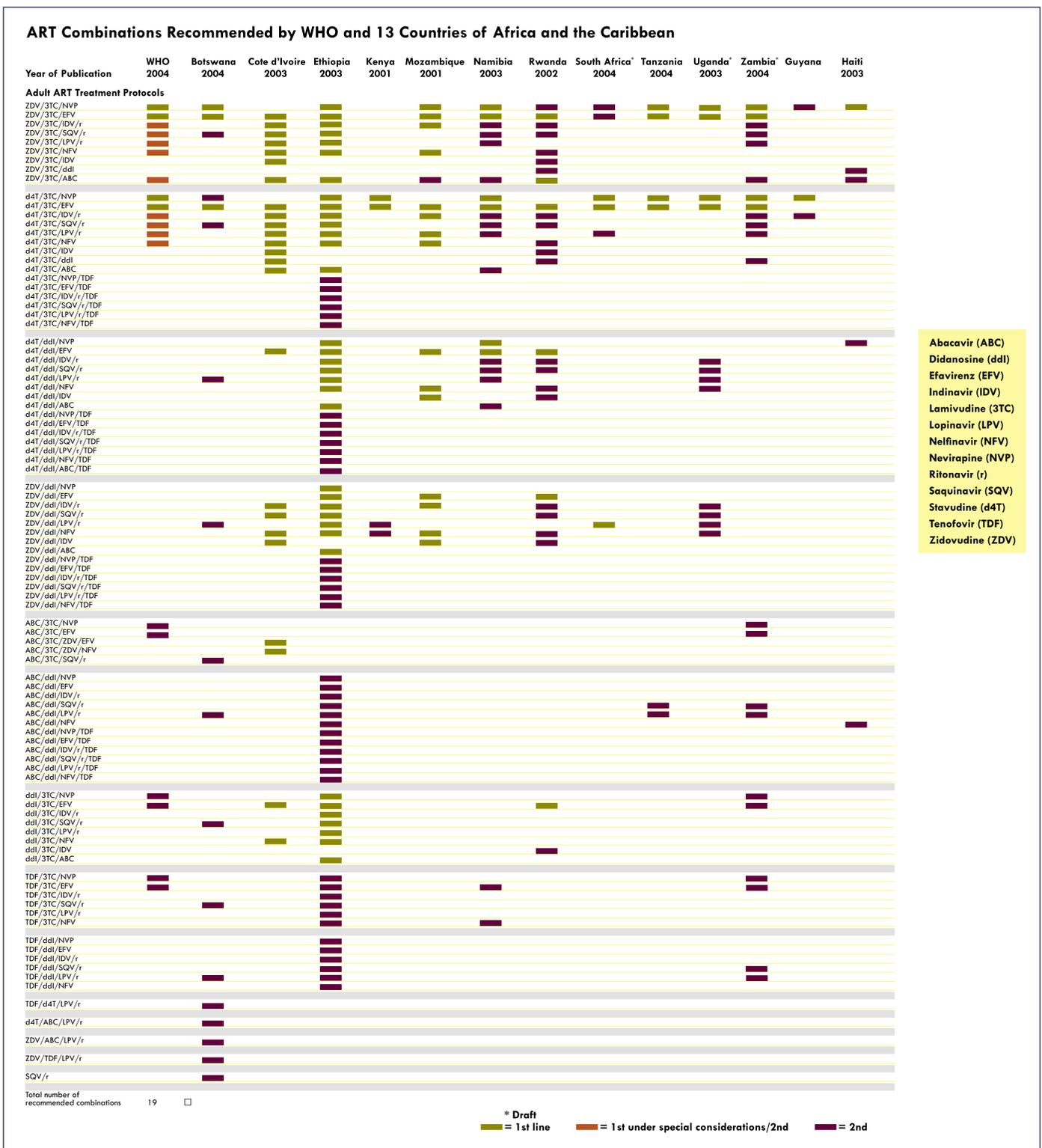
- The least costly treatment combination is stavudine/lamivudine/nevirapine, with single-agent products.
- The most costly treatment combination is zidovudine/lamivudine/efavirenz, as single-agent products or as a fixed-dose combination with single-agent products.
- Treatment combinations with efavirenz are the most costly, as efavirenz alone is twice the cost of the least costly treatment combination.

Comparative Costs (per Person per Year) for the Most Commonly Recommended ART Combinations



Discussion

- The findings in this comparative analysis can be used to assess and guide multi-country and national planning for ARV supply procurement and supply chain management, including product quality assurance; they can also be used to guide development and implementation of appropriate clinical and supply management training programs.
- Operations research is needed to assess the extent to which product availability, prescribing, and use are consistent with national ART guidelines, and to determine what actions will be needed to scale up existing programs.



Annex 14. Poster Presentation: *Strengthening the VCT Information and Commodities Supply System and Integrating VCT and PMTCT Activities in Zambia*

Strengthening the VCT Information and Commodity Supply System and Integrating VCT and PMTCT Activities in Zambia

Background

The Zambian Government has incorporated voluntary counseling and testing (VCT) as an important part of its efforts to prevent HIV/AIDS transmission and control the epidemic. VCT gives people an opportunity to learn their serostatus in a confidential environment, with counseling and referral as needed for ongoing emotional and medical care. At the request of the Zambian VCT centers and the U.S. Agency for International Development (USAID)/Zambia Mission, the Rational Pharmaceutical Management (RPM) Plus Program is helping the Government of Zambia improve service quality and coverage by strengthening the VCT information and commodity management system.

History of VCT in Zambia

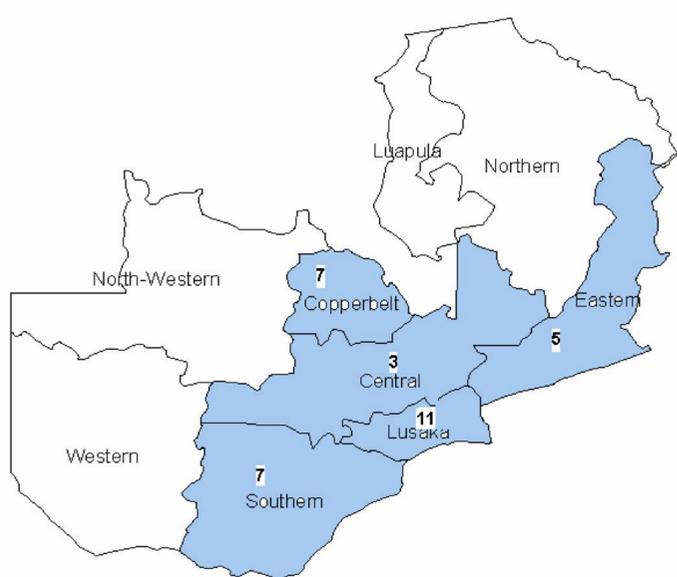
- VCT was piloted in 1999 with 22 sites.
- A consolidation and expansion phase followed.
- A revised information and commodity management system was introduced in 2003 with RPM Plus support.
- Currently, there are more than 200 VCT sites nationwide.

Activities

Assessment

In November 2002, RPM Plus conducted a baseline assessment of the VCT program in 33 sites to better understand financing, management support, supply of test kits, and information needs and practices.

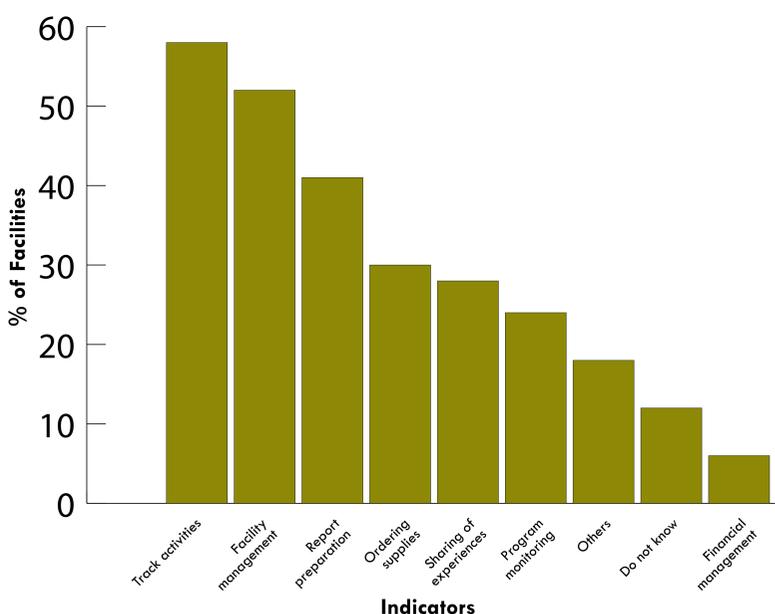
Assessment of 33 VCT sites in Zambia



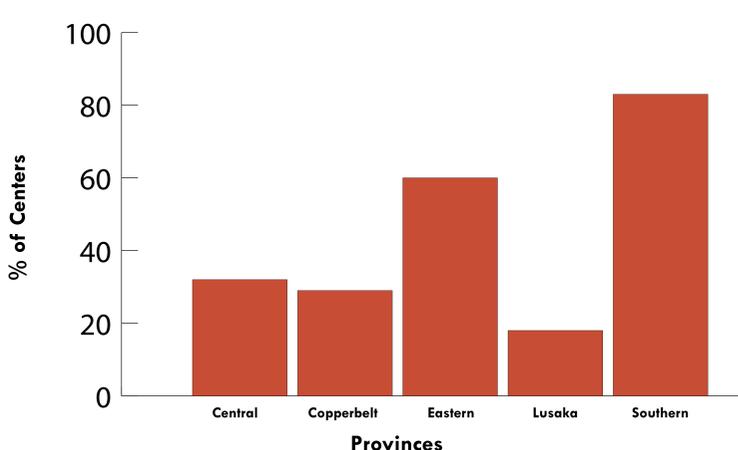
The assessment found that—

- The monitoring and commodity management systems were inadequate in providing information to make decisions on human resources, service quality, and inventory management.
- The district- and provincial-level health administration units were not integrated. Information flowed directly from the service center to central level.
- The supply and management of test kits were erratic.
- The quality and consistency of supervision needed improvement.
- Service data were underutilized in most of the facilities.

Use of Information Management Tools (n=33)



Percentage of Facilities with Supply Stock-outs (n=33)



Post-Assessment Implementation Plan

RPM Plus is helping the Zambia VCT program strengthen its information and commodity supply system and improve confidence in the service through—

- Assisting with the collection and analysis of program data, enhancing VCT capacity in programming and implementation, to support scaling up services
- Developing a database for the VCT information and commodity management system
- Providing training and support in data gathering, entry, analysis, use, and dissemination, including the new, user-friendly software package
- Ensuring that information is fed back to the VCT centers

Current Status

- The new VCT commodity management information system consists of a set of standards, indicators, forms, and procedures that facilitates VCT-related data management.
- RPM Plus and stakeholders trained trainers from all nine provinces, who in turn trained their colleagues from 72 districts countrywide.
- Nearly 200 VCT centers are currently using the redesigned information and commodity management system.
- Since the new VCT information and commodity management system was rolled out in July 2003, Zambia has seen improvement in the quality and timeliness of information received from the service sites and district management team. Use of information at the local level has also increased.
- Efforts are underway to extend the system to cover other HIV-related services.



Urban VCT sites are usually established in public health centers ...

Lessons Learned

The success of the VCT information system encouraged the Government of Zambia to extend the system to cover PMTCT activities. RPM Plus worked with stakeholders to integrate the PMTCT and VCT information and commodity management systems to increase efficiency. Prenatal VCT is now offered as part of PMTCT services, making it easier to access information on infant feeding, family planning, seropositivity, male involvement, and other issues.



... As are rural public VCT sites.

Establishing an inclusive process to facilitate coordination, communication, and collaboration among stakeholders was essential in strengthening VCT services in Zambia. It was important to include all stakeholders: the national government, nongovernmental organizations, community-based organizations, the private sector, U.N. agencies, and international donor agencies. A process that relies on partnerships and collaboration has strengthened VCT services by—

- Identifying key stakeholders and mapping roles in providing or supporting VCT
- Identifying gaps and duplication in process and services
- Allowing stakeholders to build on their strengths
- Identifying successes to build on and replicate
- Identifying opportunities for harmonizing and streamlining roles and approaches
- Enabling stakeholders to plan for collaborative action

Next Steps

1. Pilot the extended VCT information system for use in PMTCT activities
2. Modify the software package to cover new requirements
3. Integrate information management systems for all HIV/AIDS programs, especially antiretroviral therapy pharmaceutical and laboratory services
4. Ultimately, integrate the VCT/PMTCT system into the Zambian national health management information system, to ensure its sustainability

For more information

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Central Board of Health/Zambia

Zambia Ministry of Health

Zambia Voluntary Counseling and Testing Services

Annex 15. Poster Presentation: *Defining an Assessment Approach to Improve Medicine and Commodity Management for PMTCT Programs*

Defining a Rapid Assessment Approach to Improve Medicine and Commodity Management for VCT, PMTCT, and ART Programs

Background and Description

As a key donor, the U.S. Agency for International Development (USAID) needs to identify specific intervention strategies that will promote better commodity management practices among the VCT, PMTCT, and ART programs that it supports. In response to this need, RPM Plus has worked to develop a rapid assessment approach for pharmaceutical management systems that identifies areas for improvement and provides intervention options for government agencies and donors to guide the scale-up of HIV/AIDS programs. The approach combines RPM Plus's traditional indicator-based assessment expertise with in-depth analysis of critical drug management areas. Two phases result in a set of findings and recommended options for strengthening pharmaceutical and commodity management for HIV/AIDS services.

Phase 1: Situational Diagnosis

- A country team gathers background information and reviews country data, reports, and strategic program plans for VCT, PMTCT, and ART.
- In-country, the team identifies local stakeholders' contributions to the pharmaceutical sector and maps the flow of drug and commodities specifically for HIV/AIDS services, from the international down to the user level.
- Interviews are conducted with a variety of stakeholders, including MOH policy makers, pharmaceutical experts, central procurement units, and central medical stores; donors; national AIDS commissions; stakeholders in the laboratory sector; drug manufacturers (if any); pharmaceutical regulatory and professional agencies; private sector wholesalers and/or distributors; and staff at service delivery sites.

Phase 1 provides critical information on the national policy and legal framework around pharmaceuticals. The assessment team looks at the availability of standard national treatment guidelines related to HIV/AIDS, staffing policies, quality assurance, distribution systems, inventory management and control procedures, availability of essential products, national practices for rational drug use, and monitoring and evaluation systems.

This phase culminates in the identification of key strengths and weaknesses of the overall pharmaceutical system, as well as potential areas for improvement related to HIV/AIDS services.

Selected Outcomes with Rapid Approach

Ethiopia

Assessment findings:

Warehousing and distribution systems for PMTCT products at the central level were lacking. Pharmaceutical and laboratory structures at the facility level were limited in terms of space, storage, and handling capacity, compromising product security and safety and confidentiality for patients.

RPM Plus response:

- Evaluated different options for the distribution of PMTCT supplies and started negotiations with PHARMID to serve as a warehousing and distribution agent to PMTCT delivery sites.
- Conducted engineering assessments in more than 10 target facilities and designed a renovation plan to ensure minimum operational conditions. In five sites, renovations have been initiated to expand space, improve shelving, and ensure safety and security of PMTCT products.
- Currently developing standard operating procedures for the management of PMTCT supplies and providing training to pharmacy staff.

Namibia

Assessment findings:

Inadequate capacity and information hampered procurement planning and quantification. Inventory control systems in the supply chain were weak.

RPM Plus response:

- Will assist in developing and implementing systems to strengthen the procurement, storage, inventory control, and distribution functions of the central and regional medical stores
- Assisted in the quantification of rapid HIV test kits and antiretroviral drugs
- Will help develop standard operating procedures for pharmaceutical management for VCT, PMTCT, and ART programs in Namibia

Phase 2: In-Depth Analysis

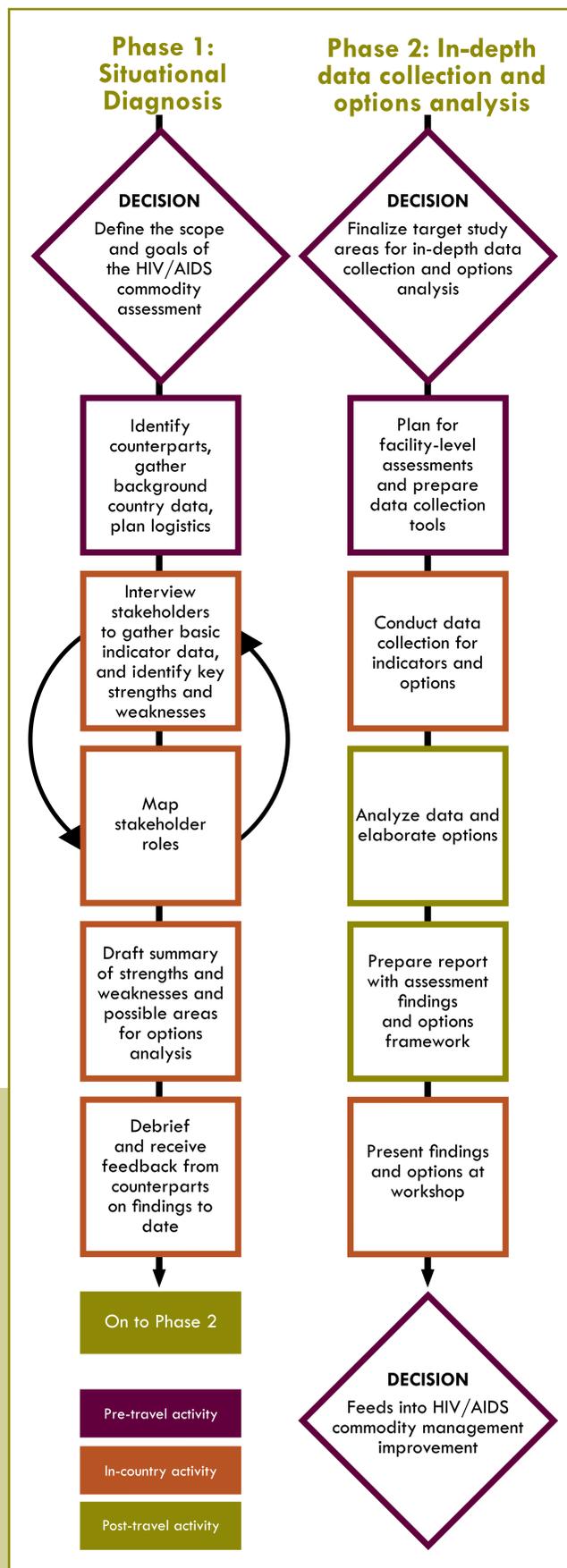
Phase 2: In-Depth Analysis

- Assessors use Phase 1 data to select study areas and indicators and generate options analysis matrices.
- In collaboration with country counterparts and donors, the team chooses study sites.
- Data collection addresses pharmaceutical management system weaknesses and improvement options related to staff capacity, infrastructure, product selection, procurement, distribution, drug availability, storage conditions, inventory control and management practices, drug use, and management information and reporting systems.
- After analysis and interpretation of findings, the team compiles a full report with all assessment findings and the feasibility of improvement options.
- Local stakeholders attend an options analysis workshop where results are presented and priorities proposed, and options are selected.
- The selected options constitute the basis upon which RPM Plus prepares its developmental action plans for improving pharmaceutical management for VCT, PMTCT, and ART programs.

Considerations

There are several vital issues to consider in using the approach for fast-track planning and implementation for HIV/AIDS programs—

- Ability to quickly mobilize the assessment team, once a country need has been identified
- Continuity of the team throughout the different phases of the approach and their solid understanding of the methodology
- Experienced assessors to facilitate interviews with national policy makers and officials, interpret policy data, and develop improvement options
- Full engagement of local stakeholders throughout the assessment phases
- Ability to support data collection, entry, and analysis



For more information:

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Rwanda

Assessment findings:

There was a lack of capacity to quantify and coordinate national needs for PMTCT and ART services.

RPM Plus response:

- Facilitating linkages between the Ministry of Health, the central medical stores of Rwanda (CAMERWA), and VCT/PMTCT facilities
- Helping CAMERWA establish systems to collect data that will improve the accuracy of quantification for procurement
- Developing standard operating procedures for VCT/PMTCT and ART sites to facilitate operation and scale-up

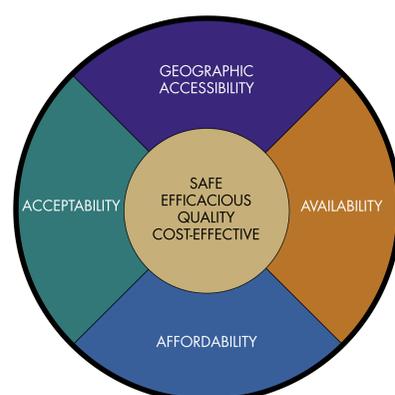
Annex 16. Poster Presentation: *Access to HIV/AIDS-related Essential Medicines: a Framework for Measurement*

Access to HIV/AIDS-Related Essential Medicines: A Framework for Measurement

Background

Despite its widespread use, the term *access to medicines* is rarely operationally defined and measured. Essential characteristics of a medicine include its safety, efficacy, cost-effectiveness, and quality. Dimensions of access include the medicine's geographic accessibility, availability, affordability, and cultural acceptability. To design strategies to improve access to HIV/AIDS-related medicines, it is necessary to understand the determinants of these dimensions.

Management Sciences for Health (MSH), in collaboration with the World Health Organization (WHO), developed a framework for defining and measuring access to essential medicines and identified core indicators for each dimension. MSH's Rational Pharmaceutical Management (RPM) Plus Program applied this framework to measure access to HIV/AIDS-related medicines as a guide to the design and initiation of an antiretroviral therapy (ART) program in Mombasa, Kenya.



Applying the Access Framework in the Mombasa ART Program

1. Geographical Accessibility

Findings

Because the assessment was limited to Mombasa, typical indicator data for geographical accessibility, such as estimation of the population's proximity to an ARV dispensing site, were not collected.

Actions

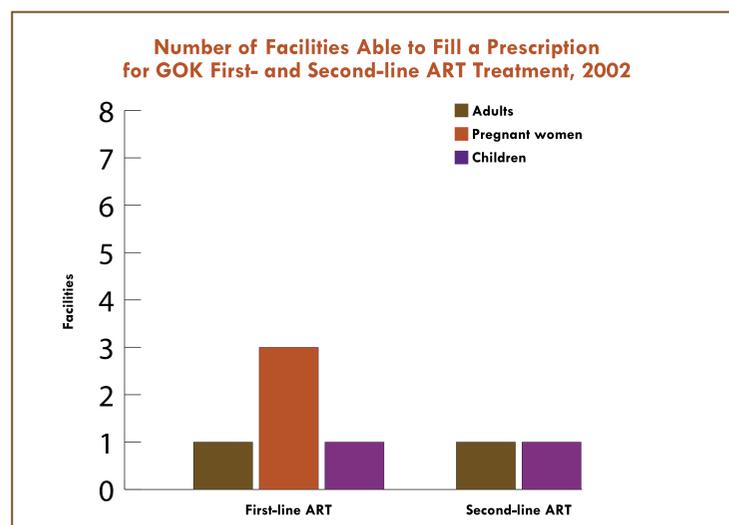
ART was made available at four sites in a single health care system, instead of only one: a regional hospital, a district hospital, a public health clinic, and a nongovernmental health clinic.

2. Availability

Findings

Data were collected using simulated purchases in 23 private pharmacies and inventory review in 2 private hospitals and 6 private pharmacies.

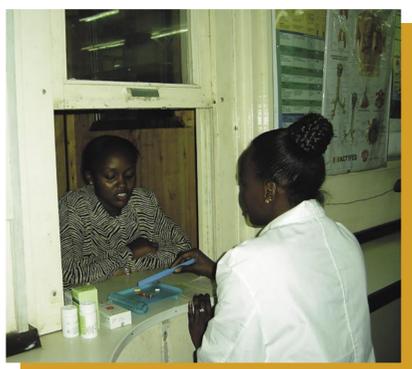
- During simulated purchases, 16 of 23 private pharmacies reported that they did not stock antiretrovirals (ARVs) because their high cost made them too expensive for customers. Only one pharmacy reported having any ARVs available.
- There was no indication of ARVs being available from unlicensed drug sellers.
- Of 13 ARVs assessed, stock availability was erratic at the private hospitals and private pharmacies.
- Very few sites had the stock available to implement Government of Kenya (GOK) first- or second-line treatment guidelines for men, women, or children, or even had the guidelines on site.



Actions

The following actions were carried out to enhance good availability.

- Established sensitive inventory management system and procurement system to respond quickly to scale-up challenges and assure stock availability
- Decreased the likelihood of stock-outs by—
 - Installing secure storage cabinets
 - Establishing an internal audit committee to regularly monitor stock availability
 - Establishing an eligibility committee to monitor patients starting ART
- Trained prescribers on using the GOK treatment guidelines, resulting in more accurate quantification of medicine and commodity needs; provided guidelines



Time and space for confidential counseling are important

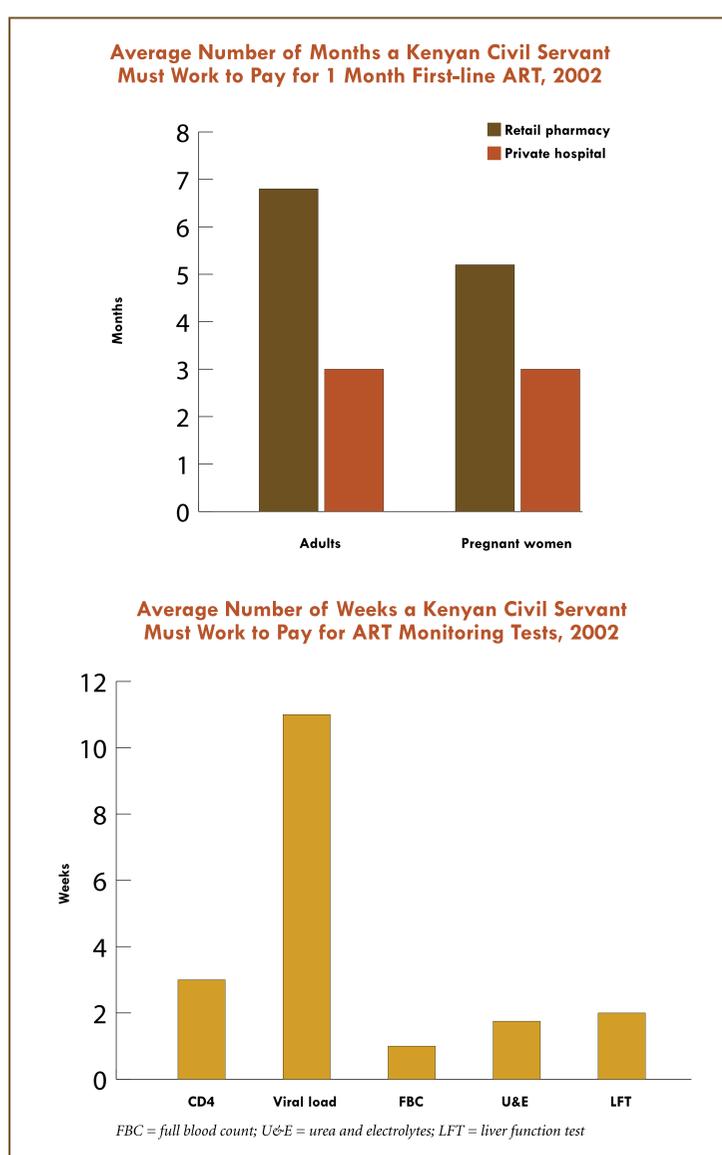
For more information please contact—

Web: www.msh.org/rpmplus
E-mail: rpmplushiv@msh.org

3. Affordability

Findings

To assess affordability, the cost of ARV regimens at private pharmacies and hospitals and the cost of laboratory monitoring tests at private hospitals were each averaged. Average costs were then compared with the monthly salary of the lowest-rank GOK civil servant (Group A) (which was about KSH 2,880, or USD 36, in 2002). Affordability determined availability, as pharmacies stocked what patients could afford. Also, drug interruptions were related to affordability.



Actions

The cost of medicines is typically the primary determinant to access and adherence to an ART program. Because drugs dispensed through the Mombasa ART program are free to patients, however, other program access dimensions became more important.

The cost of laboratory monitoring tests needed to support ART was found to be prohibitive. Policy changes resulted in free monitoring tests for the first Mombasa ART center, but other facilities may still charge patients.

4. Cultural Acceptability

Findings

From in-depth interviews with patients, confidentiality, stigma, and lack of information and understanding were found to be potential constraints to participating in an ART program.

Proportion of Patients Reporting (n=11)	Factors Affecting Acceptability of ART in the Community
5/11	Concerns about confidentiality
3/11	Knowing others on ARVs
8/11	Lack of adequate community education on ART and HIV

Actions

- Fear of social stigma was reduced by providing counseling booths for confidential consultation for all patients.
- Pharmacy staff were trained in counseling, and ample time was allotted for patients to consult with pharmacy staff.
- Regular patient satisfaction monitoring was implemented.
- Observation of medication counseling for quality was instituted.

Overall

Nurses regularly check with patients on problems accessing ARVs, such as transport costs, availability, and cultural acceptability.



Kenya Ministry of Health

Annex 17. Poster Presentation: *The Pharmaceutical Supply System in Haiti: An Assessment to Support Expansion of VCT/PMTCT Activities*

The Pharmaceutical Supply System in Haiti: An Assessment to Support Expansion of VCT/PMTCT Activities

Background

Haiti has the highest prevalence of AIDS outside Africa; the number of people living with AIDS reached 250,000 in 2001. Among the HIV/AIDS initiatives of the Haiti Ministry of Health (MOH) is the National Strategic Plan of Prevention and Care of STI/HIV/AIDS. The MOH is supported by nongovernmental organizations, such as the Haitian Study Group of Kaposi Sarcoma and Opportunistic Infections (GHESKIO) and public institutions, such as the Haiti State University Hospital (HUEH), public departmental hospitals, and selected health centers.

Haiti is one of 15 countries to benefit from the U.S. President's Prevention of Mother-to-Child-Transmission Initiative (PMTCT) and Emergency Plan for AIDS Relief. The Rational Pharmaceutical Management (RPM) Plus Program is working with the MOH and stakeholders to build up the pharmaceutical management system in support of new HIV/AIDS-related programs.

Objective

RPM Plus's objective is twofold: (1) to assess the capacity of the pharmaceutical management system in Haiti, including drug and commodities procurement, inventory control, management information systems, and distribution; and (2) based on the assessment findings, to develop interventions to strengthen the overall pharmaceutical supply network and facilitate scale-up of voluntary counseling and testing (VCT), PMTCT, and antiretroviral therapy (ART) programs. The assessment was done in November 2002.

Assessment Methodology

- Interviewed key stakeholders, including representatives of the MOH, GHESKIO, HUEH, departmental depots and hospitals, and peripheral facilities providing HIV/AIDS services
- Evaluated pharmaceutical management operations at three levels of service: Central Medical Stores (PROMESS) (1), peripheral drug outlets (7), and health service delivery facilities (14)
- Selected sites from nine geographical departments representing 75 percent of the population
- Reviewed patient records, orders, stock cards, invoices, and delivery sheet forms

Assessment Findings

Procurement

- Due to cash flow problems, PROMESS does not maintain a regular procurement schedule, which contributes to shortages.
- PROMESS does not buy from local distributors because of quality concerns, so supply is restricted.
- Other facilities procure most of their medicines and supplies from PROMESS, so procurement problems at PROMESS affect them.
- Although in principle, the departmental depots should get their supplies from PROMESS, no written guidelines mandate it. If products are not available or are too expensive at PROMESS, the peripheral depots turn to private sources.

Storage Conditions

- PROMESS storage space will need to be increased to accommodate expansion of HIV/AIDS-related programs.
- Most departmental warehouses do not have good storage conditions; expired items are often on the shelves.
- The space is adequate in most health facilities, although not in all hospitals; however, maintenance conditions are sometimes inadequate.

Management Information Systems

- The national health information system is disorganized and relies more on individual motivation than on a coherent network.
- PROMESS does not record what client facilities have asked for or received, thus not capturing the demand information needed for quantification.
- The quality of consumption data is poor in depots and worse at service delivery points, which hampers drug quantification efforts.

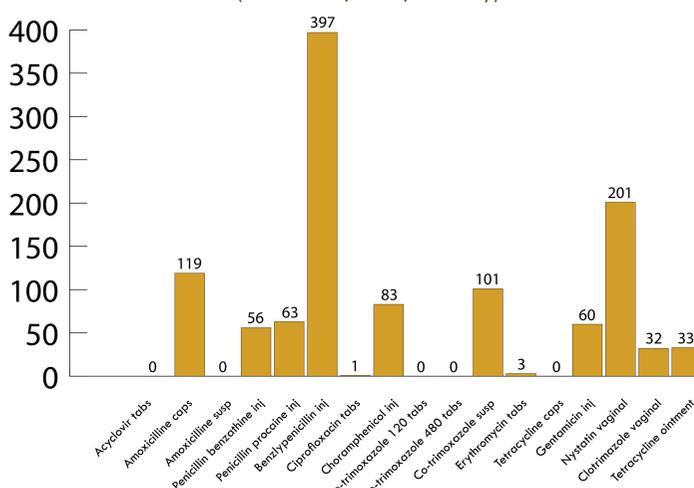
Inventory Control

- PROMESS maintains a computerized inventory management system, but no backup manual system is in place.
- An analysis showed discrepancies between records of issue from PROMESS and records of receipt by the peripheral depots, ranging from a high of 84 percent to a low of 34 percent.
- None of the peripheral stores or service delivery points had accurate data on stock management when tools were present and used.

Drug Availability

- PROMESS does not maintain a minimum stock level or buffer stock, resulting in shortages.
- PROMESS experiences stock-outs of certain products for six or more months in a year. Detailed analysis showed that of 44 products, 25 percent were out of stock in 2001 and 32 percent were out of stock in 2002. These stock-outs result in stock-outs at the facility level.
- Of 17 antimicrobial products, five products were out of stock (about 30 percent). Four products were overstocked by 100 percent or more, and one product was as much as 400 percent overstocked, leading to wastage from expiry.

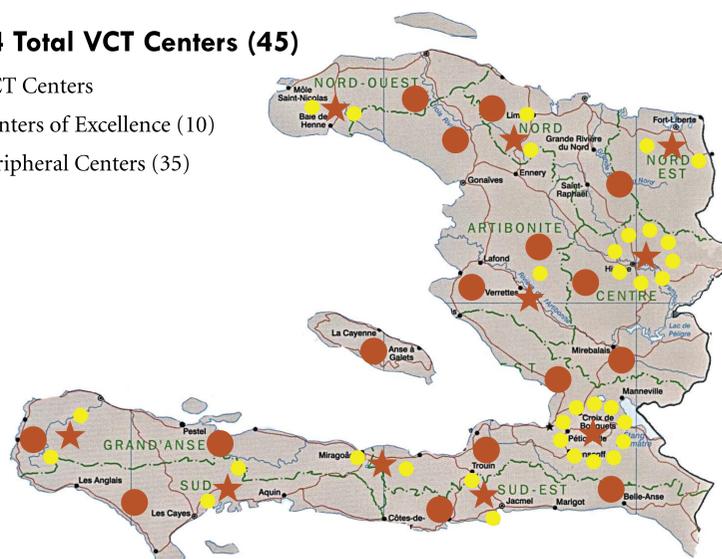
Percentage Availability of Selected Antibiotics and Antifungals at PROMESS (October 16, 2002, Inventory)



National Expansion of VCT Integrated Services

2004 Total VCT Centers (45)

- VCT Centers
- ★ Centers of Excellence (10)
- Peripheral Centers (35)



Distribution

- PROMESS uses a "pull" system, where clients determine order quantities and make requisitions.
- The quantity of supplies ordered is determined not by the peripheral depots or facilities' actual needs, but by the amount of money they are able to pay.
- Absence of transportation and lack of communication between various levels of the health system make monitoring stock levels and dealing with shortages difficult.

Implementation Plan

To address the assessment findings, RPM Plus is implementing the following plan to strengthen the pharmaceutical system—

- Strengthen the management information system, since the quantification process depends on the availability and quality of data.
- With technical assistance, establish an information baseline and follow-up data system for VCT/HIV/AIDS centers for planning, management, and reporting.
- Develop standard operating procedures for ordering, receiving, storing, and dispensing drugs.
- Conduct drug management training courses specifically for warehouses and health facilities.
- Supervise follow-up of trainees and provide technical assistance to improve drug management at the departmental depots and service delivery points.
- Collaborate with nongovernmental organizations and the public sector to implement a transitional distribution system for VCT/PMTCT/HIV/AIDS products.



Pharmaceutical storage should be neat and shelves clearly labeled.

For more information

Web: www.msh.org/rpmlplus • E-mail: rpmlushiv@msh.org

Facilities Using Drug Management Tools and Their Data Accuracy

Facility	Manual Stock Card	Computer System	General Ledger	Ordinary Notebook	Inventory Sheet	Inventory Report	Accurate Data on Tool
PROMESS (n = 1)	0/1	1/1	0/1	0/1	1/1	1/1	1/1
Peripheral Medical Stores (n = 7)	7/7	0/7	0/7	0/7	0/7	2/7	0/7
Service Delivery Points (n = 17)	11/17	1/17	5/17	2/17	4/17	2/17	0/17
Total Percentage	72	8	20	8	20	20	4

Annex 18. Agenda FHI AIDS Institute: Technical Advisory Committee on Antiretroviral Therapy

(TAC on ART)

Lunch Meeting at the Rama Gardens Hotel Bangkok

**Tuesday, July 13, 2004
10:00 a.m. – 1:30 p.m.**

- | | |
|-----------|---|
| 10:00 | Arrival |
| 10:10 | Welcome statement to the TAC by Dr. Peter Lamptey |
| 10:15 | TAC member self-introductions |
| 10:25 | FHI Institute for Family Health ART update by Dr. Ward Cates |
| 10:40 | FHI Institute for HIV/AIDS ART update by Dr. Ya Diul Mukadi |
| 11:00 | Issues for discussion

Theme: Patient response to antiretroviral therapy; patient response data from the first six months on ART. <ul style="list-style-type: none">• Discuss issues regarding:<ul style="list-style-type: none">○ Drug adherence○ Management of side effects○ Regime selection/ change○ Providing ART for children○ Staffing constraints |
| 12:30 | Lunch served (Discussion continues) |
| 1:15-1:30 | Wrap up: <ul style="list-style-type: none">• Preparations for on-going communication with the TAC• Discussions for the 2005 group meeting |

Invited Participants

	Name	Affiliation
1	Al Siemens	FHI
2	Carl Kendall	Tulane School of Public Health
3	Catherine Sozi	UNAIDS
4	Charles Gilks	WHO
5	Chawalit Natpratan	FHI/Cambodia
6	David Stanton	S/GAC
7	Elly Katabira	Makerere University Medical School
8	Eric van Praag	FHI/Tanzania
9	Fred van der Veen	FHI/Namibia
10	Gary West	FHI/ NC
11	Greg Gonzsalves	GMHC
12	Helena Walkowiak	MSH
13	Ian Sanne	University of Witswaterstrand
14	John Adungosi	FHI/Kenya
15	Joseph Saba	AXIOS
16	Kenneth Chebet	NASCOP/Kenya
17	Kwasi Torpey	FHI/Ghana
18	Luc Kestens	ITM
19	Martin Ngabonziza	FHI/Rwanda
20	Miriam Maluwa	UNAIDS
21	Mukadi	FHI/Washington
22	Myron Cohen	UNC
23	Peter Lamptey	FHI/Washington
24	Richard Marlink	Harvard AIDS Institute
25	Robert Colebunders	ITM
26	Robert Magnani	FHI/Washington
27	Steve Mills	FHI/Thailand
28	Thomas Coates	UCLA
29	Thomas Quinn	JHU Academic Alliance
30	Tim Mastro	CDC
31	Ward Cates	FHI/NC