

Rational Pharmaceutical Management Plus Provide Technical Assistance to Support Program Implementation for the President's Emergency Plan for AIDS Relief in Zambia April 17-30, 2005: Trip Report

Helena Walkowiak
Laila Akhlaghi
Michael Gabra

January 23, 2006



Rational Pharmaceutical Management Plus
Center for Pharmaceutical Management
Management Sciences for Health
4301 N. Fairfax Drive, Suite 400
Arlington, VA 22203
Phone: 703-524-6575
Fax: 703-524-7898
E-mail: rpmlushiv@msh.org
Supported by the U.S. Agency for
International Development

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

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.

This document does not necessarily represent the views or opinions of USAID. It may be reproduced if credit is given to RPM Plus.

Recommended Citation

Walkowiak, Helena, Laila Akhlaghi, and Michael Gabra. 2006. *Trip Report to Provide Technical Assistance to Support Program Implementation for the President's Emergency Plan for AIDS Relief in Zambia: April 17-30, 2005*. Submitted to the U.S. Agency for International Development by the Rational Pharmaceutical Management Plus Program. Arlington, VA: Management Sciences for Health.

Rational Pharmaceutical Management Plus
Center for Pharmaceutical Management
Management Sciences for Health
4301 North Fairfax Drive, Suite 400
Arlington, VA 22203 USA
Telephone: 703-524-6575
Fax: 703-524-7898
E-mail: rpmplus@msh.org
Web: www.msh.org/rpmplus.org

Contents

Acronyms	v
Background	1
Purpose of Trip	3
Scope of Work	3
Activities	5
Collaborators and Partners	7
Adjustments to Planned Activities and/or Additional Activities	7
Next Steps	9
Annex 1	11
Annex 2	17
Annex 3	19

Acronyms

AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
ARV	antiretroviral [drugs]
CBoH	Central Board of Health
FHI	Family Health International
HIV	human immunodeficiency virus
HMIS	health management information system
IMPACT	Implementing AIDS Prevention and Care Project [FHI]
MSH	Management Sciences for Health
PEP	[HIV] post-exposure prophylaxis
PMTCT	prevention of mother to child transmission [of HIV]
RPM Plus	Rational Pharmaceutical Management Plus [Program]
SOP	standard operating procedure
USAID	United States Agency for International Development
VCT	voluntary counseling and testing [for HIV]
ZPCT	Zambia Prevention, Care and Treatment Partnership

Background

Management Sciences for Health (MSH) Rational Pharmaceutical Management Plus (RPM Plus) Program has received funding from the United States Agency for International Development (USAID) under the United States President's Emergency Plan for AIDS Relief to provide technical assistance to strengthen the pharmaceutical management and laboratory services to support the expansion of access to antiretroviral drug therapy (ART) in Zambia.

RPM Plus has received funds from USAID/Zambia under the Emergency Plan (track 1.5) to assist the Mission, Zambian counterparts and cooperating agencies to strengthen the pharmaceutical management and laboratory services to support the expansion of access to antiretroviral drug therapy in nine provincial hospitals. USAID is also providing field support to RPM Plus to strengthen and implement the pharmaceutical management system, specifically in working with the ART sites and the Central Board of Health (CBoH) to build capacity for pharmaceutical and laboratory management, including but not limited to forecasting, distribution channels and supply chains, and good dispensing and laboratory practices.

RPM Plus in partnership with Family Health International (FHI)/Implementing AIDS Prevention and Care Project (IMPACT) and Population Council/Horizons program has been providing technical assistance to the Mombasa ART Initiative since 2001. The role of RPM Plus is to support the strengthening of both the pharmaceutical and the laboratory systems and services. The results of the program review provided a good measure of best practices that could be replicated and adapted in other settings. In November 2003, CBoH requested RPM Plus to build the capacity of pharmaceutical and laboratory personnel based on the Mombasa initiative. RPM Plus was requested to provide technical assistance to adapt the Mombasa experience to provide a comprehensive ART service in the nine ART sites in Zambia. Technical support for ART clinical services is provided by JHPIEGO. RPM Plus has worked in a similar co-operating arrangement in Mombasa where clinical aspects are managed by FHI/IMPACT. On December 12, 2003, the USAID Zambian Mission requested RPM Plus to propose a one year program that could realistically be achieved and produce tangible results to support the Zambian Government to mitigate HIV/AIDS. In response to the two requests RPM Plus developed a proposal with the following objectives:

- To strengthen pharmaceutical services in support of a comprehensive ART services at nine level 2 and 3 ART sites
- To strengthen laboratory services in support of a comprehensive ART services at nine level 2 and 3 ART sites
- Complement JHPIEGO-supported activity in strengthening of comprehensive ART clinical services at nine level 2 and 3 ART sites.

To implement the program objectives, RPM Plus designed a three step strategy based on a results framework as guided by the USAID approach. These strategies are:

1. Adaptation of training materials
2. Training of health care teams, particularly pharmacy and laboratory staff
3. Development and dissemination of standard operating procedures (SOPs)

In pursuance with these steps and activities developed to address the supply management of antiretroviral drugs (ARVs) and laboratory supplies in support of ART in the nine centers, the activities aim at strengthening an integrated and comprehensive ART program. RPM Plus is working with ART experts within the country and expect that the support will produce the following results:

1. National pharmacy and laboratory policies and SOPs for ART services.
2. Pharmacy and laboratory personnel in all 9 provincial hospitals trained in appropriate use of ARVs and supplies.
3. National drug selection, quantification and procurement procedures for ART commodities developed and disseminated.
4. Improved functionality of the ART program monitoring and evaluation linked to voluntary counseling and testing (VCT) / prevention of mother to child transmission (PMTCT) information and commodity management system already being provided and being mainstreamed into the health management information systems (HMIS).

The specific activities are outlined below:

1. Policy and Standards

- Facilitate in the development of policies and SOPs for ART in pharmaceutical and laboratory management.

2. Human Resources

- Provide technical assistance and national experts to strengthen central, provincial and district level commodity management to support the implementation of ART/PMTCT services.
- Adapt and develop ART training modules for pharmacy and laboratory with counterparts and conduct training of pharmacy and laboratory staff as per project requirement.
- Train laboratory staff on management of a total ART laboratory testing program (liver function tests, urea and electrolytes, HIV testing, CD4/CD8 counts, viral load, full hemoglobin, lipid profile, glucose, chest X-ray).

3. Monitoring and Evaluation

- Develop a monitoring and evaluation plan with pharmacy and laboratory indicators.
- RPM Plus in collaboration with CBoH to conduct a rapid assessment of the existing ART and PMTCT commodity management systems including quantification of training needs, policy needs, management needs, materials and fixtures and equipment needs.
- Facilitate the development and adaptation of indicators and formats to routinely track, assess and monitor selected supply indicators for the ART program.
- Assist CBoH to develop linkages between HMIS, VCT/PMTCT and ART information management systems to track stock levels, expiry of commodities, adverse drug reactions and in-house program implementation.
- Facilitate site supportive supervision.
- Facilitate procurement and distribution of reference materials, books, and internet access.
- Monitoring of staff load in both laboratory and pharmacy.
- Provide technical assistance to develop training materials and reference information to assist both health workers and clients to make informed decisions.

4. *Selection of Drugs and Reagents*

- RPM Plus will hold a workshop on selection to support the Pharmacy and Procurement Units in CBoH and Zambia National Formulary Committee to ensure that ART commodities are based on scientifically and socially sound criteria.

5. *Procurement*

- RPM Plus will provide technical assistance to CBoH Procurement Unit and ART site staff teams to develop quantification and procurement procedures for ART commodities.

6. *Distribution and Inventory Management*

- RPM Plus will provide technical assistance to improve availability, inventory control and assist USAID in the acquisition of PMTCT and ART commodities throughout the selected sites. Activities will include setting up ordering procedures and designing reporting systems.
- RPM Plus will provide technical assistance to help create appropriate facilities and environment for ARV storage.
- Facilitate procurement of systems for ARV security, inventory control supported by automated systems.
- Expiry management of drugs and supplies.

7. *Promoting Rational Use*

- Train pharmaceutical ART site staff in the rational use of ARVs and supplies
 - Pre-packing including labeling instructions
 - Patient counseling and adherence
- Train laboratory staff in the rational use of equipment and supplies according to standard operating protocols.

Purpose of Trip

Ms Helena Walkowiak, Senior Program Associate RPM Plus traveled to Ndola, Zambia from April 17-23, 2005 to participate in and facilitate at an ART Commodity Management Training for Pharmacy and Laboratory Staff. Dr Laila Akhlaghi, Senior Program Associate, RPM Plus and Mr Michael Gabra, Project Manager for Africa, RPM Plus joined Ms Walkowiak in Ndola from April 24-30, 2005 to participate in and facilitate at a Quantification Training Workshop for pharmaceutical staff.

Scope of Work

Scope of Work for Helena Walkowiak

1. Participate in and facilitate at an ART Commodity Management Training for Pharmacy and Laboratory Staff in Ndola from April 18 to 22, 2005. Provide technical assistance to train pharmacy staff in medication counseling, counseling for medication adherence, and ARVs selection and use.
2. Participate in and facilitate at a Quantification Training Workshop in Ndola from April 25 to 29, 2005. Provide technical assistance to train pharmacy staff in quantification methodologies and the application of a quantification tool *Quantimed* for quantification of

ART medicines and supplies. Work with Zambian counterparts to quantify ARVs and medical supplies required for selected sites.

3. Make observations on the ART pharmaceutical management at Ndola Central Hospital.
4. Brief and/or debrief USAID officials, as requested.

Scope of Work for Laila Akhlaghi

1. Participate in and facilitate at a Quantification Training Workshop in Ndola from April 25 to 29, 2005. Provide technical assistance to train pharmacy staff in quantification methodologies and the application of a quantification tool *Quantimed* for quantification of ART medicines and supplies. Work with Zambian counterparts to quantify ARVs and medical supplies required for selected sites
2. Brief and/or debrief USAID officials, as requested.

Scope of Work for Michael Gabra

1. Participate in and facilitate at a Quantification Training Workshop in Ndola from April 25 to 29, 2005. Provide technical assistance to train pharmacy staff in quantification methodologies and the application of a quantification tool *Quantimed* for quantification of ART medicines and supplies. Work with Zambian counterparts to quantify ARVs and medical supplies required for selected sites.
2. Brief and/or debrief USAID officials, as requested.
3. Conduct meetings with country office staff on planning and execution of activities according to the work plan and budget

Activities

1. Participate in and facilitate at an ART Commodity Management Training for Pharmacy and Laboratory Staff in Ndola from April 18 to 22, 2005.

Ms Walkowiak joined Dr Oliver Hazemba, Regional Technical Advisor from the RPM Plus/Lusaka office, Ms Gail Bryan, Senior Advisor, Pharmaceutical Management, Zambia Prevention, Care and Treatment Partnership (ZPCT), and other facilitators from the CBoH, RPM Plus, ZPCT team for the ART Commodity Management Training Workshop for Pharmacy and Laboratory Staff. The training plan for the workshop is attached as Annex 1. Ms Walkowiak developed and presented sessions on Quantification, Medication Counseling and Adherence, Standard Operating Procedures and Adverse Drug Reaction Monitoring and Reporting. Ms Walkowiak also reviewed the training materials during the week and submitted recommendations to Dr Hazemba for suggested revisions and updates needed, most of which were minor improvements. The workshop was well received and the participants reported that they had especially enjoyed the participatory approach. A report of the workshop will be submitted separately.

2. Make observations on the ART pharmaceutical management at Ndola Central Hospital.

On April 20, 2005 Ms Walkowiak made a site visit to Ndola Central Hospital where she was received by Mr Billy Mweetwa, pharmacist in charge of the ART program. Ms Walkowiak visited the ART clinic, the laboratory and the pharmacy to observe ART services and to discuss implementation issues with key staff. Ndola Central Hospital is a 750 bedded hospital providing ART to 2098 adult patients at the time of the visit. Paediatric patients are served from a separate facility. Ms Walkowiak was very impressed by the dedication and hard work of the staff to ensuring that patients receive the best services possible despite infrastructural and other constraints. The record keeping at both the ART clinic and the pharmacy were particularly remarkable – many simple and useful tools had been developed to track patient care. The ARV bulk store was very impressive – it was well stocked, bincards were up to date and monthly checks seen to be performed regularly. Expiry date charts were used to track ARV shelf life. In the ARV dispensing area the ARV dispensing tool was in use to validate prescriptions, track patients and stocks and to facilitate patient counseling and promote adherence.

Gaps and problems identified in discussions with the staff included problems with supply of medicines to prevent and treat opportunistic infections and other HIV/AIDS medicines, such as for palliative care – RPM Plus staff observed that stock levels of several critical medicines were precariously low or at zero in the dispensary; absence of a system to follow up when ART patients did not return for their medicines – the pharmacy had established some informal links with faith based organizations who assisted in tracing patients who did not return; and very little demand for HIV post-exposure prophylaxis (PEP) – on average only one occupational exposure is treated per month in the busy 750 bedded hospital. The facility also reported shortages of fluconazole under the Diflucan program (RPM Plus were later

informed that the problem had been resolved and supplies were now again available from CBoH). Finally it was observed that ART patients had a long journey from the ART clinic to the Pharmacy due to the closure of the outpatient pharmacy (it now serves fee-paying patients only) including having to climb two sets of stairs which may present problems for some patients.

3. Participate in and facilitate at a Quantification Training Workshop in Ndola from April 25 to 29, 2005.

Dr Akhlaghi, Mr Gabra and Ms Walkowiak were the principal trainers of a five day Quantification Training Workshop held in Ndola from April 25 to 29, 2005. Dr Hazemba, Ms Bryan and Ms Mumbi Musonda, ZPCT assisted in facilitating the workshop. Many of the materials had been specifically developed for this workshop that targeted facility-level staff and some regional staff in recognition that successful national ARV quantifications depend on strong capacity to accurately quantify needs and collect, analyze and submit accurate, timely data at facility-level. The agenda for the workshop is attached as Annex 2 and a list of participants as Annex 3. As the materials were being field tested for the first time, participants were given the opportunity to evaluate and comment on approaches and materials throughout the workshop. Participants were given a manual tool adapted to the Zambian context to test and were also introduced to *Quantimed*, a computerized tool. A report of the workshop will be submitted separately. Next steps include revising the manual tool based on initial comments, adapting the tool in Excel for larger facilities and submitting these two tools for field testing at selected sites, and developing a training manual for facility level quantification based on the materials delivered and tested at the workshop.

4. Brief and/or debrief USAID officials, as requested.

On April 22, 2005, Mr Gabra and Ms. Walkowiak met and debriefed Barbara Hughes, Deputy Director, Population Health and Nutrition Office in addition to holding some brief discussions with Abdi Mohamed, Senior Technical Advisor, Child Survival, Nutrition and Malaria, USAID/Zambia on RPM Plus activities during the visit. The RPM Plus team gave an update on the scope of work for the visit and on progress made in capacity strengthening activities for both the pharmaceutical management systems and the laboratory services in support of ART roll out and plans for next steps. Ms Walkowiak gave a brief report on issues arising from the ART Commodity Management Training Workshop for Pharmacy and Laboratory staff held that week. Some ARV procurement issues were also discussed in addition to plans for smooth transition and coordination of RPM Plus HIV/AIDS work into the ZPCT program activities.

5. Conduct meetings with country office staff for the planning and execution of activities according to the work plan and budget

Mr Gabra held meetings with country office staff to plan for close out activities for Emergency Plan funded RPM Plus work and to review budgets and pipelines. In addition, Mr Gabra met with Dr Abdi to discuss potential RPM Plus work in tuberculosis and malaria.

Collaborators and Partners

USAID

Barbara Hughes, Deputy Director, Population Health and Nutrition Office, USAID
Abdi Mohamed, Senior Technical Advisor, Child Survival, Nutrition and Malaria, USAID

CBoH

Dr Matonga

FHI/ZPCT staff

Adjustments to Planned Activities and/or Additional Activities

None

Next Steps

1. ART Commodity Management Training for Pharmacy and Laboratory Staff

- A report of the workshop will be prepared and submitted to USAID in July 2005.
- RPM Plus will make the necessary revisions to the training materials based on Ms Walkowiak's recommendations by August 2005.

2. Quantification Training Workshop in Ndola from April 25 to 29, 2005.

- A report of the workshop will be prepared and submitted to USAID in July 2005.
- The site-level manual and Excel quantification tool will be field-tested in July and August 2005.
- The first draft of the quantification training manual for facility level quantification based on the materials delivered and tested at the workshop will be prepared in June 2005.

3. RPM Plus staff will continue to plan for close out activities and identify staffing needs to close out activities.

Annex 1.

Pharmaceutical and Laboratory Services in Support of ART Workshop, April 18-22, 2005 Training Plan

Unit	Time	Content	Presenter	Moderator	Participants	
	08:30 – 09:00	Registration	Rose Malunga L. Kalusa	Carolyn Yeta	Pharmacy and Laboratory Personnel	
	09:00 – 09:30	Official Opening - Introductions - Keynote Address	Guest of Honor			
	09:30 – 10:30	Introduction to Pharmaceutical and Laboratory Supply Management for ART Services <ul style="list-style-type: none"> • Pre Test: Listing of real or perceived Problems encountered in course of providing ART Services 	Carolyn Yeta	Billy Mweetwa		
	10:30 – 10:45	TEA BREAK				
	10:45 – 11:30	Overview of HIV/aids situation in the World and in Zambia <ul style="list-style-type: none"> • Management Support Systems <ul style="list-style-type: none"> - Organizational structure - Financial Sustainability - Human Resources • Policy and Legal Framework 	Dr. Velepi Mtonga & Dr. Mwaba			
Introduction	11:30 – 12:30	Virology and Immunology of HIV <ul style="list-style-type: none"> ▪ Historical background of HIV ▪ Dynamics of HIV transmission ▪ HIV structure and replication ▪ HIV diversity and classification ▪ Targets for ARV drugs ▪ Immunological responses after HIV infection ▪ Stages of HIV progression 	Dr. H. Mantina			

Unit	Time	Content	Presenter	Moderator	Participants
		LUNCH BREAK			
Unit 1 ART Commodities Supply Management System	14:00 – 15:00	Introduction to Pharmaceutical and Health Commodity Management <ul style="list-style-type: none"> • Selection • Quantification • Procurement Activity: Group Work	Oliver Hazemba Albert Lupupa	Dr. H. Mantina	
	15:00 – 15:30	TEA BREAK			
	15:30 – 17:00	<ul style="list-style-type: none"> • Distribution -Transportation - Inventory Control • Rational Use 	Oliver Hazemba		
	End of Day 1				
Unit 3 A. Concepts of Rational ART Commodities Use	DAY 2				
	8:30 – 09:00	Recap of Day 1		B. Tembo	
	09:00 – 09:30	Dispensing Practices & Dispensing Process	Gail Bryan		Pharmacy Personnel
	09:30 – 10:30	Counseling Techniques & Medication Use and Concordance Counseling			
	10:30 – 10:45	TEA BREAK			
	10:45 – 13:00	Counseling Techniques & Medication Use and Concordance Counseling Continued - Role Play			
	13:00 – 14:00	LUNCH BREAK			

Unit	Time	Content	Presenter	Moderator	Participants
	14:00 – 15:30	Capacity assessment on ART services Field Visit	Billy Mweetwa		
	15:30 – 15:45	TEA BREAK			
	15:45 – 17:00	Plenary session			
		End of Day 2			
DAY 3					
	08:30 – 09:00	Recap of Day 2		Loyce Lishimpi	
	09:00 – 09:45	Irrational ART Commodity Use,	Gail Bryan		
Unit 3 B Strategies to Promote Appropriate ART Commodities Use	09:45 – 10:30	Managerial, Regulatory, Educational and Economical Strategies	Gail Bryan		
	10:30 – 10:45	TEA BREAK			
DAY 3					
Unit 2 Safety & Ethics	09:00 – 10:30	<ul style="list-style-type: none"> ▪ Hazards in unsafe laboratory premises ▪ Safe laboratory practice ▪ National code of ethics of Medical Laboratory Personnel 	Fales Mwamba	Dr. H. Mantina	Laboratory Staff only
	10:30 – 10:45	TEA BREAK			
Unit 3 Specimen Collection, Handling and Processing	10:45 – 13:00	<ul style="list-style-type: none"> ▪ Know importance of requests forms ▪ Know general guidelines to be applied during specimen collection and handling ▪ Know types of specimens required for different tests used in an ART program ▪ Know factors that affect specimens during collection and processing 	Fales Mwmba	Dr. H. Mantina	

Unit	Time	Content	Presenter	Moderator	Participants
	13:00 – 14:00	LUNCH BREAK			
	14:00 – 15:45	<ul style="list-style-type: none"> ▪ Field visit 			
	15:45 – 16:00	<ul style="list-style-type: none"> ▪ TEA BREAK 			
	16:00 – 17:00	<ul style="list-style-type: none"> ▪ Plenary 			
	End of Day 2				
	DAY 3				
	08:30 – 09:00	<ul style="list-style-type: none"> ▪ Recap of Day 2 			
Unit 4 Quality Assessment Systems	09:00 – 10:30	<ul style="list-style-type: none"> ▪ Define Terms in Quality Assurance ▪ Know the components of QA ▪ Learn Quality Control phases and procedures ▪ Describe ways of administering EQA ▪ Know the benefits of EQA 	Fales Mwamba	Dr. Mantina	
	10:30 – 10:45	TEA BREAK			
Unit 5 HIV diagnosis, Monitoring and Follow up	10:45 – 13:00	<ul style="list-style-type: none"> ▪ Methods used for HIV testing ▪ False positive and negative results ▪ Tests for monitoring and follow up of HIV disease 	Dr. H. Mantina	Fales Mwamba	
	13:00 – 14:00	LUNCH BREAK			
Unit 6 SOPs used in an ART Program	14:00 – 15:00	<ul style="list-style-type: none"> ▪ Describe features and contents of Laboratory SOP ▪ Know essential SOPs specific for an ART program ▪ Know the importance of SOPs in an ART program 	Fales Mwamba	Dr. H. Mantina	
	15:00 – 15:30	TEA BREAK			
	15:30 – 17:00	Introduction to ART Commodity Information	Derrick	Albert Lupupa	Pharmacy

Unit	Time	Content	Presenter	Moderator	Participants
		Management System	Muneene		and Laboratory
		End of Day 3			
DAY 4					
	08:30 – 09:00	Recap of Day 3			
	09:00 – 09:45	Transforming ART commodity data into information for decision making	Derrick Muneene		
	09:45 – 10:30	M & E for ART commodity management	Derrick Muneene		
	10:30 – 10:45	TEA BREAK			
	10:45 – 13:00	Process, Indicators, Formats, Information Flow	Bill Mweetwa & Derrick Muneene		
LUNCH BREAK					
	14:00 – 15:30	Process, Indicators, Formats, Information Flow Continued	Bill Mweetwa & Derrick Muneene		
	15:30 – 15:45	TEA BREAK			
	15:45 – 16:30	Process, Indicators, Formats, Information Flow Continued	Bill Mweetwa & Derrick Muneene		
	16:30 – 17:00	CLOSE	Carolyn Yeta		

Annex 2.

Quantification Training Workshop in Ndola, April 25 to 29, 2005

Agenda

Monday April 25

Morning

Welcome
Introduction of participants and facilitators
Objectives of the workshop
Introduction to quantification
Planning a quantification
Quantification requirements and challenges group exercise
Quantification methods

Afternoon

General consumption and morbidity group exercise
HIV/AIDS related considerations group exercise
Summary presentation on group exercise

Tuesday, April 26

Morning

Quantifying ARVs for pediatrics-special considerations
Review of data collected and check list
Data collection Tools? Are data needs being meet? Group discussion
How do you Quantify ARVs now?

Afternoon

Making assumptions
Workbook as a training tool-Introduction
Workbook exercise: Adult first-line
Workbook Exercise: Adult second-line
Workbook Exercise: Adult PEP

Wednesday, April 27

Morning

Workbook Exercise: Pediatric first-line
Workbook Exercise: Pediatric second-line
Workbook Exercise: Pediatric PEP

Afternoon

Practicing with own data

Thursday, April 28

Morning

Opportunistic infections group exercise and discussion
Palliative care

Afternoon

National level quantification
Quantimed presentation and demonstration

Friday, April 29

Hands on with ART dispensing tool
Continuation of *Quantimed* demonstrations
Closing / Evaluation / Feed back

Annex 3.

Quantification Training Workshop in Ndola, April 25 to 29, 2005 Participants

No	Name	Organization	E-mail Address
1	Charity Kalunga	CIDRZ	charity@cidrz.org
2	Davy Nanduba	Kabwe – PHO	dnanduba@hotmail.com
3	Abiayi K. Maduka	Mazabuka DHMB	madukakalu@yahoo.co.uk
4	Mary Mwanakufwa	Mkushi DHMT	
5	Cyril Uramu	Solwezi General Hospital	c_uramu@yahoo.com
6	Zhetty Sipiliye Mbao	Chingola DHMT	
7	Karen Kabubi	Nchanga North Gen Hospital	
8	Cornelius Nkanka	Kasama PHO	nkankacorn@yahoo.com
9	Maxwell Kasonde	Lusaka DHMB	maxwell_kasonde@yahoo.com
10	Machayi Christopher	Kabompo DHMT	
11	Anthony K. Chishimba	CBoH Lusaka	achishimba@cboh.org.zm
12	Chingalika K. Abraham	Kitwe Central Hospital	
13	Nomsa Munkonge	Chainama Hospital	nomsabm@yahoo.com
14	Bekpanke G. Iwheye	Lewanika Gen Hospital	bgiwheye@yahoo.com
15	Chukwuma A. Ogbonna	Kabwe General Hospital	anokeuk@yahoo.co.uk
16	Nyakulo Peter	Kabwe DHMB	
17	Moonga Jennipher	Kabwe Mine Hospital	
18	Ngulube Caesar	Kabwe General Hospital	
19	Banda Wezi	Ndola DHMT	
20	Dr. Malawo	Kabwe Mine Hospital	hikuuku@yahoo.com
21	Sondashi Davies	Arthur Davison Hospital	
22	Orji Uchenna C	Ronald Ross Gen (Mufurila)	ukezie@yahoo.com
23	Mambwe D. Justine	Nakonde DHMT	
24	Mabel M. Lukwesa	Livingston General Hospital	zapamec@zamnet.com

Trip Report to Provide Technical Assistance to Support Program Implementation for the President's Emergency Plan for AIDS Relief in Zambia: April 17-30, 2005

No	Name	Organization	E-mail Address
25	Charles Sakala	Mansa General Hospital	
26	Syvia Kabwe	Chipata General Hospital	
27	Louise Kalusa	MSH	louise_kalusa@yahoo.co.uk
28	Kangwa Kalunga	Solwezi Gen Hospital	
29	Enock Chikatula	UTH	echiks@yahoo.com