

**Rational Pharmaceutical Management Plus
Management Information Systems, Tools for Dispensing and
Quantification of Antiretrovirals in Rwanda:
Trip Report – February 2005**

Laila Akhlaghi
Hare Ram Bhattarai
Michael Gabra

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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: rpmpplus@msh.org

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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

AIDS	Acquired Immunodeficiency Syndrome
ANC	Anti-natal Clinic
ART	Antiretroviral Therapy
ARV	Antiretroviral [Drugs]
CA	Cooperating Agency
CAMERWA	Centrale d'Achats de Médicales Agréées du Rwanda
CDC	Center for Disease Control and Prevention
DOP	Department of Pharmacy
EGPAF	Elizabeth Glazer Pediatric AIDS Foundation
FHI	Family Health International
HIV	Human Immunodeficiency Virus
ITT	Inventory Tracking Tool
M&E	Monitoring & Evaluation
MIS	Management Information System
MOH	Ministry of Health [Rwanda]
MSH	Management Sciences for Health
NGO	Non Governmental Organization
NVP	Nevirapine
PEP	President's Emergency Plan
PMTCT	Prevention of Mother to Child Transmission
RPM	Rational Pharmaceutical Management Plus [Program]
SO	Strategic Objective
SOW	Scope of Work
TA	Technical Assistance
TRAC	Treatment and Research AIDS Centre
USAID	U.S. Agency for International Development
VCT	Voluntary Counseling and Testing
WHO	World Health Organisation

Background

Management Sciences for Health (MSH)/Rational Pharmaceutical Management Plus (RPM Plus) Program has received funds from the USAID Mission in Rwanda under the PMTCT and the Presidential Emergency Plan for AIDS Relief initiatives to assist the Mission in supporting the national scale up of ART activities and to meet health commodity needs in support of the expansion of HIV/AIDS programs. MSH/RPM Plus is currently undertaking a number of activities under its Track 1.5 and 2.0 work plans. These activities include technical assistance to CAMERWA, commodity management training in collaboration with TRAC, operational improvement and site upgrades at 7 ART sites in collaboration with TRAC and the DOP, and technical assistance to the National Reference Laboratories in developing policies and guidelines.

Hare Ram Bhattarai, expert in pharmaceutical MIS and M&E is working in several PEPFAR countries, and has been supporting the project in Rwanda since September 2004. During the last months, he has been developing electronic and manual tools that simplify and facilitate the pharmaceutical management of ARVs both at the facility and distribution level. Laila Akhlaghi's has a broad expertise in quantification of ARVs for program initiation and scaling up. Michael Gabra is the program manager for the Africa Region.

Purpose of Trip

The purpose of the visit of Hare Ram Bhattarai is to present of a dispensing tool (SIMPLE-1) that is aimed to monitor the movement of ARVs and generate reports for management in addition to provide drug history of patients to the dispensers at facility site. Hare Ram will also discuss the requirements of CAMERWA in relation to keeping track of ARV distribution and stock position in the country. Inventory Tacking Tool (SIMPLE-2) developed by RPM Plus will also be presented to CAMERWA. These tools, which have both manual and electronic versions could be customized and implemented in Rwanda if partners agree with the approach.

Laila Akhlaghi will assess the overall quantification system of ARVs in the country and in CAMERWA. She will work closely with Hare Ram Bhattarai to review the existing tools used for quantification of ARVs in the country, and its integration with the dispensing tools. She will also assess the availability to implement the quantification software Quantimed in CAMERWA.

Michael Gabra regularly visits MSH/RPM Plus field offices to provide guidance to the local staff and strengthen the communications with the project partners.

Scope of Work

SOW for Hare Ram Bhattarai:

- Briefing/Debriefing to USAID upon request

- Training on the electronic and manual ARV dispensing tools to selected MSH/RPM Plus local staff
- Review and discuss with Laila Akhlaghi and other MSH/RPM Plus staff the tools and procedures used in the country for quantification
- Provide technical support to MSH/RPM Plus staff in order to prepare and conduct a MIS meeting with the following objectives:
 - Presentation of the ARV dispensing tool
 - Discuss the benefits of the tool for ART sites, HIV/AIDS program managers and CAMERWA, in monitoring ARV consumption and quantifying needs.
 - Discuss the integration of dispensing and other tools and procedures of pharmaceutical management of ARVs (pharmaceutical SOPs under development and Quantimed).
 - Discuss the integration of the tool with the existing MIS systems (SIS and TRAC net)
 - Propose and agree implementation action plan
- Provide technical support to CAMERWA for specific activities, upon request by other staff members, such as solving the problem of capturing demand data from clients
- Provide technical advice to local staff on any activities that have an MIS and M&E component as needed
- Assist in the development of a job description for recruitment of a MIS and M&E local staff

SOW of Laila Akhlaghi:

- Briefing/Debriefing to USAID upon request
- Review and provide technical advice to improve reports and other tools needed for quantification of ARVs at facility site
- Review and discuss with Hare Ram Bhattarai and other MSH/RPM Plus staff the tools and procedures used in the country for quantification.
- Participate in the MIS meeting and provide support to local MSH/RPM Plus staff to present Quantimed in the meeting, in relation to the ARV dispensing tool
- Provide technical advice to CAMERWA in quantification of ARVs
- Conduct an exercise of Quantimed with the data of the latest forecast of ARVs done by CAMERWA
- Review the method and results used for quantification of national needs of ARVs for the Common Basket
- Assess the convenience of using Quantimed by CAMERWA, and discuss recommendations with CAMERWA and MSH/RPM Plus staff
- Assess other problems related to quantification of essential drugs and commodities in CAMERWA, if time allows

SOW of Michael Gabra:

- Briefing/Debriefing to USAID upon request
- Provide technical support to the Rwandan MSH/RPM Plus team and review the status of the objectives of the project

- Provide managerial support to the senior staff of MSH/RPM Plus
- Provide support to strengthen communications between MSH/RPM Plus and the main project partners, including Direction of Pharmacy, CAMERWA, National Laboratory of Reference, and TRAC
- Briefing/Debriefing to the Government of Rwanda, upon request

Activities

1. Demonstrate RPM Plus Tools

Laila presented Quantimed, a software tool that facilitates quantification of pharmaceuticals for scaling-up HIV/AIDS programs was presented at several meetings in Rwanda. Quantimed was demonstrated to RPM Plus staff, including Hare Ram Bhattarai. This presentation initiated discussion on data needs of Quantimed and how the ART dispensing tool can be adapted to provide the data. Quantimed was also demonstrated to a meeting on Feb 23rd at CAMERWA that included staff from CAMERWA, TRAC, Clinton Foundation and facility pharmacist to assess its usability and need in CAMERWA.

Hare Ram presented ART dispensing tool (SIMPLE-1) to Rwanda staff. The purpose of this presentation was to familiarize the local RPM Plus staff and to discuss if the system could be useful in the local context. It was felt that the system will be useful and Gege Buke was assigned as the local support person for the tool. Manual version of the tool including expiry dates tracking sheet was also discussed and it was thought that manual system would be modified as necessary and suggest using in facilities where computerization is not possible.

RPM Plus shared information with collaborating partners before implementation, a presentation session was organized to share the ARV Dispensing Tool developed by RPM Plus with other partners. Fuchia, a Microsoft Access based dispensing tool developed by Lux Corp was presented by MSF. These presentations gave a chance to all concerned to ensure that there was a very little overlap between the two tools. Fuchia primarily dealt with clinical aspect while SIMPLE-1 is solely a pharmaceuticals dispensing and management tool.

CAMERWA is responsible for the management and distribution of ARVs in the country and they needed a system that accurately kept track of ARVs coming in to the store and an account of distribution. CAMERWA lacked a system that tracked the consumption of ARVs by the facilities. RPM Plus demonstrated the Inventory Tracking Tool (ITT) tool that could be used by CAMERWA for ARV management. This presentation was attended by representatives from CAMERWA, TRAC, Clinton Foundation and facility pharmacist. A system schematic (Annex-2) was also presented that showed interrelationships among different tools (e.g. ARV Dispensing tool, Quantimed and ITT)

2. Participate in Meetings

Michale Gabra— Staff meeting, SOW for the visiting staff (Feb16)

Michael and Belen went to CAMERWA (Feb 16)

Michael went to USAID and met Nancy (Feb 17)

Michael and Antoine went with Nancy to meet the Minister of Health (Feb 17)

CAMERWA meeting with Sophie from Clinton Foundation.

This meeting was attended by Belen Terafeta, Hare Ram Bhattarai, Laila Akhlaghi and Antoine Gatera of RPM Plus and Mr. Leon, commercial director, Mr. Musonera, program manager of CAMERWA. During the meeting Sophie briefed that there is no systematic way of collecting data on ARVs from the facilities on periodic basis and that she designed some formats to collect data on advice from TRAC. This data was used in the quantification of ARVs and that the last order was placed in January 2004. Some of the difficulties encountered in quantification as reported by Sophie included: lack of proper data collection system, different regimens used in different sites and that the regimens were also changing all the time. They had an unexpected experience when a manufacturing company was taken out of WHO qualification list after placing the order.

Participants recognized that RPM Plus was working on the ARV MIS and Quantification and that systems and tools developed by RPM Plus and Clinton Foundation needs to be shared.

Michael Gabra met with Earnest of CAMERWA on February 18 to discuss activities and future plans of RPM Plus.

Hare Ram met Ms Sarah Kesey of Columbia University who is handling the MIS/M&E activities. Hare Ram, Laila Akhlaghi and other RPM Plus colleagues met Dr. Fidel of TRAC to understand how they collect data from the facilities every month. Of the thirty-nine ARV sites they were collecting data from, 21 sites were using TRACNET and the rest from regular channel. TRAC had a standard reporting format. TRAC did not collect data separately on PMTCT and PEP.

Laila Akhlaghi joined Belen Tarrafeta and Antoine Gatera at a USAID Pharmaceutical Procurement meeting on Feb 21st to plan and discuss USAID pharmaceutical Procurement activities.

On February 22nd, Belen Tarrafeta , Laila Akhlaghi, Hare Ram Bhattarai, Senior Program Associates and Antoine Gatera, Senior Technical Advisor with RPM Plus met with Jennifer Rubin and Nancy Fitch of USAID to discuss quantification activities and future plans. Sophie Weirich and Elizabeth Collins of Clinton Foundation joined the meeting to continue discussions on ARV quantification.

3. Provide Technical Support to RPM plus staff in Rwanda

Laila Akhlaghi reviewed and made recommendations to improve a quantification tool to be used at facility sites in determining orders of ARVs. Written instructions were also given to improve the workbook. Laila Akhlaghi also trained Gege Buke, Program associate with Rwanda RPM Plus, on Quantimed and the data needs for an HIV/AIDS quantification using Quantimed.

Hare Ram Bhattarai worked with Gege Buke and Felix Hitayezu on some inventory management manual formats. Electronic copies of all the manual formats developed in Ethiopia were provided for possible use with necessary changes in consultation with partners.

Hare Ram extensively worked with Gege Buke on the Dispensing Tool. Both of them went to Butare hospital and installed the tool on a pilot basis. The chief pharmacist of Butare hospital was trained on the use of the tool.

4. Conduct Quantification exercise

A quantification Excel workbook developed by the Clinton foundation was reviewed by Laila Akhlaghi to gather necessary data required for quantification of ARVs for CAMERWA. Questions regarding the data collected by the Clinton Foundation were confirmed by Sophie. Additional data required for a national ARV quantification were collected from TRAC and Dr. Fidel, Director of TRAC. The data collected were entered into Quantimed and the resulting requirements were shared with the Rwanda RPM Plus team. The results of the exercise are attached in Annex 1.

Collaborators and Partners

USAID

Nancy Fitch
Jennifer Rubin

HIV/AIDS Technical Advisor
HIV/AIDS Health Specialist

MoH

Minister of Health

Health Facilities - MoH

Noel

Pharmacists-Butare Hospital

CAMERWA

Earnest
Musonera

Director
Coordinator of Programs

TRAK

Denise Murekatete

CDC

Clinton HIV/AIDS Foundation

Sophie Weirich
Elizabeth Collins

Country Director

Others

Next Steps

Immediate Follow-up Activities

1. Finalize HIV/AIDS quantification exercise.
2. Finalize Rwanda facility site quantification manual.

Recommendations

1. HIV/AIDS quantification activity:
 - a. Pharmacy Management Information system for the purposes of collecting data for quantification of HIV/AIDS pharmaceutical did not exist at the time of visit. ARV quantification had been performed by the Clinton HIV/AIDS Foundation with the assistance of the MoH based on data collection at facilities prior to CAMERWA ARV procurements. This process increases the potential for transcription errors and discrepancies which were found when compared to TRAC monthly reports. By developing and implementing a pharmacy management information system in Rwanda (at the facility level and the national level), data of better quality will be available to be used in future quantification exercises, instead of assumptions based on lack of or inaccurate data.
 - b. However, assumptions will still need to be made in future quantification and these assumptions should be reviewed by a committee representing key players in procurement and treatment (e.g. TRAC, FHI, CAMERWA and the CF). Review of assumptions by these representatives will ensure that all view points have been considered and that there is a consensus on the data and assumptions used for determining HIV/AIDS pharmaceutical requirements. It is therefore recommended that a committee be created for the purpose of facilitating and making decisions on assumptions used in quantification. Committee members should include: representatives from CAMERWA, who can provide information on product packaging and prices, tenders, international ARV shortages, quantity in stock and on order; representatives from MoH/TRAC, who can provide information on standard treatment guidelines and possible changes, number of adult and pediatric patients on treatment at each facility, treatment goals and policy changes that might impact future delivery of ART; PMTCT coordination department in TRAC, if assistance is required in quantifying ARVs used in PMTCT (currently treatment is NVP based); Clinicians and/or pharmacy staff responsible for ART at TRAC Clinic and CHK clinic (since these two sites are the largest providers of care and treatment in Rwanda and have a more diverse patient population. The patients treated at these two facilities include pediatric patients and patients on 2nd line or salvage therapies not included in the Rwanda standard treatment guidelines); representatives from donor organizations, to keep informed on funds and donations available and restrictions on procurement

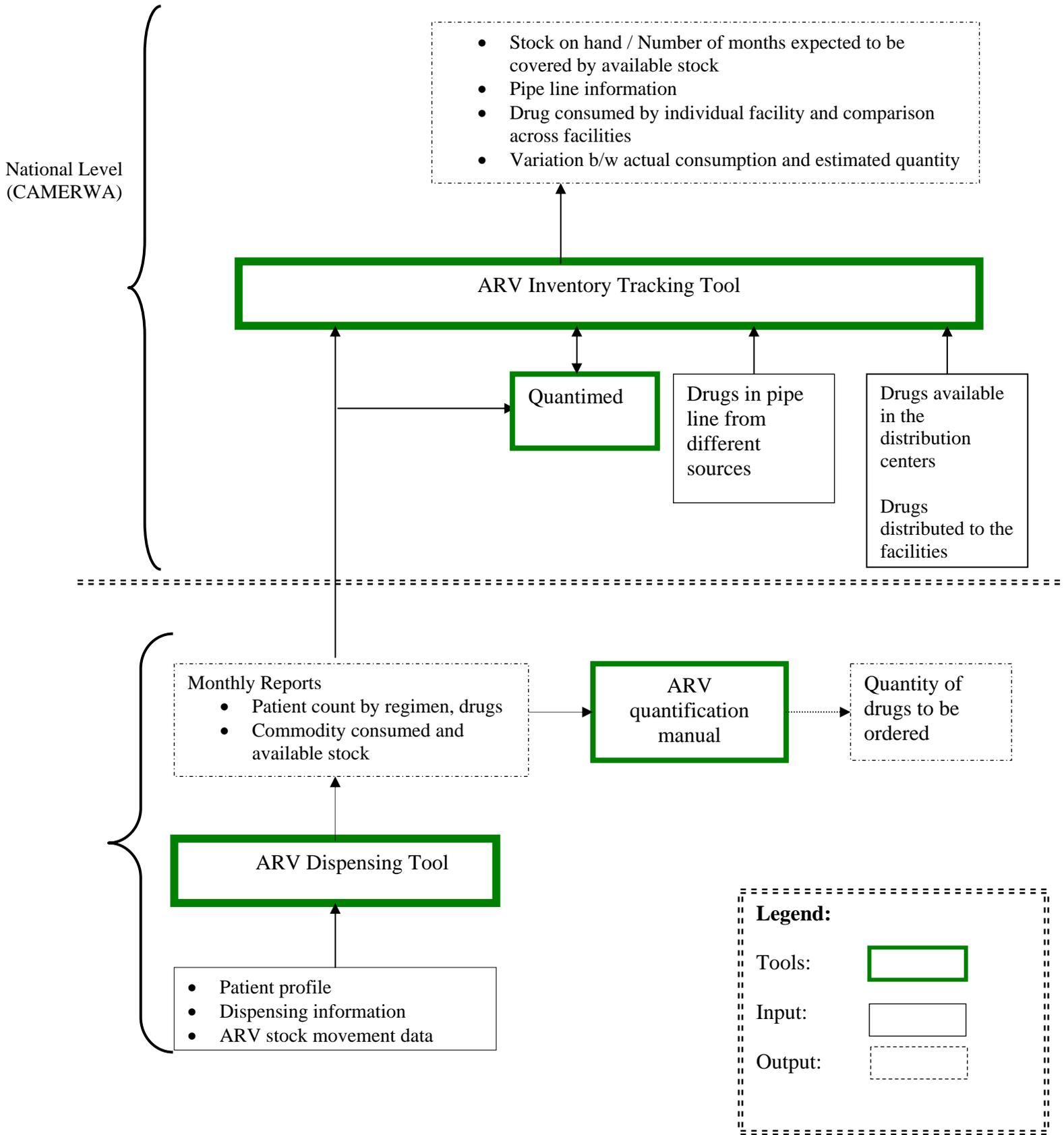
- procedures and any other organization that is providing HIV/AIDS treatment, care and support.
- c. Quantification exercise updated based on additional data or changes to data. This data may include, but not limited to:
 - i. Growth trends: Changes to treatment goals or expected growth and increases in patient figures each month.
 - ii. Prices and packaging of products to be procured for the next round of quantification.
 - iii. Additional information on PMTCT goals and treatment.
 3. Provide continued support to Butare hospital on the implementation and operation of the Dispensing Tool
 4. Based on the experience of the piloting at Butare explore the possibilities of implementing tool in other facilities as well. Provide appropriate training to the facilities. Communicate with Hare Ram Bhattarai or other regional technical person in case technical help is needed
 5. Install the Inventory Tracking Tool at CAMERWA. The tool will need translation into French language before installation. Use this tool to compile the data that is collected at the facility level.
 6. Speed up the process of hiring a person at RPM Plus to deal exclusively with MIS and provide support. A job description for such a person has already been drafted.
 7. Collaborate with the partners to modify the manual formats as necessary and implement in sites as appropriate.
 8. Explore the mechanism of working with TRAC and SIS to avoid duplication of work.

Annex 1. Results of Quantification Exercise

Completed on March 20, 2005

Product	units	Demand									
		Procurement period						4 months safety stock			
		Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06
3TC 10MG/ml SYRUP	ml	33439	36787	40135	43483	46831	50178	53526	56874	60222	63570
3TC 150MG/tab TAB	tab	11387	12162	12938	13713	13798	14509	15049	15751	16454	17157
3TC-D4T 150MG+30MG/tab TAB	tab	102160	108015	113870	119724	121738	127308	119203	124168	129132	134097
3TC-D4T 150MG+40MG/tab TAB	tab	47915	50528	53140	55753	56816	59307	60897	63388	65879	68371
3TC-D4T-NVP 150MG+30MG+200MG/tab TAB	tab	336828	361196	385564	409932	416122	438801	397024	416505	435987	455468
3TC-D4T-NVP 150MG+40MG+200MG/tab TAB	tab	143594	153564	163534	173504	178173	187650	160768	168442	176116	183790
ABC 300MG/tab TAB	tab	12659	13260	13860	14460	14830	15409	15471	16024	16577	17130
AZT 10MG/ml SYRUP	ml	8835	9690	10545	11400	12255	13110	13965	14820	15675	16530
AZT 300MG/tab TAB	tab	1171	1216	1262	1307	1352	1398	1443	1489	1534	1579
AZT-3TC 300MG+150MG/tab TAB	tab	177198	187254	197311	207367	213583	223286	229249	238774	248299	257823
AZT-3TC-NVP 300MG+150MG+200MG/tab TAB	tab	59035	62350	65666	68982	71353	74581	71795	74725	77654	80584
D4T 10MG/ml SUSPEN	ml	5107	5619	6131	6643	7156	7668	8180	8692	9204	9716
D4T 20MG/tab TAB	tab	7584	8209	8834	9459	9394	9955	10516	11077	11638	12199
D4T 30MG/tab TAB	tab	561	583	605	627	649	671	693	715	737	759
D4T 40MG/tab TAB	tab	15067	15627	16186	16745	17304	17864	18423	18982	19542	20101
DDI 200MG/tab TAB	tab	19540	20270	21000	21730	22461	23191	23749	24470	25192	25913
DDI 50MG/tab TAB	tab	329	342	354	366	378	390	403	415	427	439
EFV 200MG/tab TAB	tab	19422	20637	21852	23067	23587	24738	24804	25901	26998	28095
EFV 50MG/tab TAB	tab	11931	12666	13400	14135	14453	15149	13933	14534	15135	15736
EFV 600MG/tab TAB	tab	147834	156707	165581	174455	179160	187646	189214	197358	205501	213644
IDV 400MG/tab TAB	tab	12959	13445	13931	14416	14902	15387	15873	16359	16844	17330
LPV-r 133.33MG+33.33MG/tab TAB	tab	46717	48465	50213	51960	53708	55456	56687	58409	60131	61853
NFV 250MG/tab TAB	tab	839	881	923	964	1006	1047	1089	1131	1172	1214
NVP 10MG/ml SUSPEN	ml	36088	39734	43380	47025	50671	54316	57962	61607	65253	68898
NVP 200MG/tab TAB	tab	8799	8812	8825	8838	8339	8352	6977	6981	6986	6991
TDF 300MG/tab TAB	tab	468	485	502	520	537	554	571	589	606	623

Annex 2. Information Flow and DMIS Tools



Annex 3. RPM Plus Strategy in Rwanda

Slide 1



Slide 2



Slide 3



Slide 4

MEHI MANAGEMENT SCIENCES for HEALTH

AFRICA REGION

- Where we are today...
- Wide Scope of work of the Portfolios
- Maintain synergy between portfolios
- Coordination and integration is key
- Stream line our work

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Slide 5

MEHI MANAGEMENT SCIENCES for HEALTH

Expected outcomes for Africa

- The high expectations in a new and rapidly changing environment
- The importance and characteristics of our work in Africa
- The life cycle and high turnaround that is expected from us
- Emergency Plan for HIV/AIDS - but we can not ignore the rest ...

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Slide 6

MEHI MANAGEMENT SCIENCES for HEALTH

Conclusions

- Future Trends
 - Global Initiatives
 - USAID
- New trends in the field:
 - Outsourcing some of the work
 - Collaboration and partnerships with Faith based and Private Sector

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Slide 7

MEH MANAGEMENT SCIENCES for HEALTH

Key Messages (1)

- Scaling-up and expansion efforts consider the absorptive capacity of existing systems and all options and sectors (public and private)
- Need to combine an emergency response with capacity building
 - Building on what exists to the extent possible
 - Assessing and identifying priority short, medium, and long term responses for overcoming challenges
 - Being creative in meeting human resource needs to fill gaps in critical management functions

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This slide is titled 'Key Messages (1)' and features a blue border. It contains two main bullet points. The first bullet point discusses scaling-up and expansion efforts, emphasizing the need to consider the absorptive capacity of existing systems and all options across public and private sectors. The second bullet point focuses on the need to combine an emergency response with capacity building, which is further detailed in three sub-points: building on what exists, assessing and identifying priority short, medium, and long-term responses, and being creative in meeting human resource needs to fill gaps in critical management functions. The slide includes the MEH logo and name at the top, and copyright information at the bottom.

Slide 8

MEH MANAGEMENT SCIENCES for HEALTH

Key Messages (2)

- Sustainable improvement involves system strengthening and building local ownership.
- This in turn requires sustained investment in resources and time.
- The ability to measure and evaluate gains in "access" should be incorporated into program planning.
- Coordination and clarity of objectives, methods, data sources, etc. among all stakeholders

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This slide is titled 'Key Messages (2)' and features a blue border. It contains four main bullet points. The first point states that sustainable improvement involves system strengthening and building local ownership. The second point notes that this requires sustained investment in resources and time. The third point emphasizes that the ability to measure and evaluate gains in 'access' should be incorporated into program planning. The fourth point highlights the need for coordination and clarity of objectives, methods, and data sources among all stakeholders. The slide includes the MEH logo and name at the top, and copyright information at the bottom.