

**Dissemination of  
Findings and  
Planning  
Workshop:  
Rapid ART  
Pharmaceutical  
Management  
Assessment in  
Five Missionary  
Hospitals,  
Arusha, Tanzania**

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*July 24–26, 2006*

Management Sciences for Health  
is a nonprofit organization  
strengthening health programs worldwide.



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Edmund Rutta

*December 2006*



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## **About RPM Plus**

RPM Plus works in more than 20 developing and transitional countries to provide technical assistance to strengthen pharmaceutical 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

ADR	adverse drug reaction
AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
ARV	antiretroviral
BCC	behavior change communication
CSSC	Christian Social Service Commission
CTC	Care and Treatment Clinic
DDH	Designated District Hospital
DHMT	district health management team
DMIS	drug management information system
DTC	Drug and Therapeutics Committee
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
ELCT	Evangelical Lutheran Churches of Tanzania
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HIV	human immunodeficiency virus
IEC	information, education, and communication
IMA	Interchurch Medical Assistance
JSI	John Snow, Inc.
M&E	monitoring and evaluation
MEMS	Mission for Essential Medical Supplies
MIS	management information system
MSD	Medical Stores Department
MOH	Ministry of Health
MOHSW	Ministry of Health and Social Welfare
MSH	Management Sciences for Health
OI	opportunistic infection
MTP	monitoring, training, and planning
NACP	National AIDS Control Program
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
SOP	standard operating procedure
TA	technical assistance
RPM Plus	Rational Pharmaceutical Management Plus (Program)
TFDA	Tanzania Food and Drugs Authority
USAID	U.S. Agency for International Development
USD	U.S. dollar



## EXECUTIVE SUMMARY

Management Sciences for Health's (MSH) Rational Pharmaceutical Management (RPM) Plus Program received funding from the U.S. Agency for International Development's mission in Tanzania (USAID/Tanzania) to provide technical support to hospitals affiliated with the Christian Social Services Commission (CSSC) and the Evangelical Lutheran Churches of Tanzania/Mission for Essential Medical Supplies (ELCT/MEMS) to strengthen pharmaceutical management in support of the HIV/AIDS national response. CSSC represents a group of 84 Christian hospitals in Tanzania. To commence the activity, a rapid assessment was determined necessary to establish priority areas for technical assistance.

Five hospitals were selected by CSSC and MEMS for the assessment based on needs and on whether the hospital currently provides antiretroviral therapy (ART) or plans to become an ART site in the near future—

- Haydom Lutheran Hospital, Mbulu district, Manyara region
- St. Elizabeth Hospital and Selian Lutheran Hospital, Arusha region
- Mvumi Hospital, Dodoma region
- Muheza Designated District Hospital (DDH), Tanga region

The dissemination and planning workshop was organized by RPM Plus in collaboration with CSSC, funded through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), and took place July 24–26, 2006, at the Arusha Hotel in Arusha, Tanzania. Twenty participants attended the workshop including representatives from the National AIDS Control Program (NACP), John Snow, Inc. (JSI)–Deliver, Interchurch Medical Assistance (IMA), MEMS, MSH/RPM Plus, and the hospitals included in the survey. Unfortunately, Mvumi Hospital was not represented in the workshop.

The goal of the workshop was to share assessment findings with hospital and program directors and other PEPFAR partners working to strengthen ART in missionary hospitals, discuss solutions to the problems identified, and work with each hospital to develop a facility-based implementation plan to address their individual gaps and challenges.

The three-day workshop included presentations, plenary discussions, and break-out planning sessions. The first half of the workshop comprised presentations followed by plenary discussion and included the following topics—

- Overall objectives and expected outcomes of the workshop
- Overview of HIV/AIDS care and treatment program in Tanzania
- Overview of ART pharmaceutical management in mission hospitals
- Drug and Therapeutics Committees (DTCs)
- RPM Plus tools to improve pharmaceutical management
- Presentation of findings from the rapid ART pharmaceutical management assessment
- Monitoring, training, and planning (MTP) approach

The second half of the workshop was dedicated to group work and the development of action plans for each hospital. Each group was asked to discuss problems identified during the assessment as they related to their particular facilities. For each problem identified and prioritized, groups were requested to suggest possible workable solutions (see Annexes 4–6).

Facilitators and representatives from partners supporting the Care and Treatment Clinic (CTC) Program worked with individual groups to facilitate discussions and development of MTP plans. A strategic planning guide was used as a tool to facilitate discussion among group members.

Technical assistance needed as identified by the facilities includes the following—

- Training staff on HIV/AIDS pharmaceutical management
- Establishing or revitalizing hospital DTCs
- Strengthening of the supportive supervision system
- Strengthening of the facility-based monitoring and evaluation (M&E) system
- Strengthening the drug management information system (DMIS)

## BACKGROUND

As the Government of Tanzania and donors scale up HIV/AIDS-related programs nationwide, there is a growing need to ensure that the pharmaceutical management system for HIV/AIDS interventions, voluntary counseling and testing, prevention of mother-to-child transmission, and ART programs is working effectively. A well-functioning pharmaceutical management system for HIV/AIDS-related commodities ensures availability, quality, and rational use of these commodities.

In response to this need, MSH/RPM Plus received a request from USAID/Tanzania to provide technical support to CSSC- and ELCT/MEMS-affiliated hospitals to strengthen pharmaceutical management in support for the HIV/AIDS national response.

To rapidly identify and prioritize critical areas that require strengthening or support in view of national ART scale-up, a rapid assessment of existing ART pharmaceutical management systems in selected mission hospitals was conducted in March 2006. The hospitals included St. Elizabeth Hospital and Selian Lutheran Hospital in Arusha, Haydom Hospital in Manyara, Muheza DDH in Tanga, and Mvumi Hospital in Dodoma.

To share the findings with the participating hospitals, NACP, and other partners supporting these hospitals and care treatment programs at large, MSH/RPM Plus in collaboration with CSSC conducted a dissemination and planning workshop (see Annexes 1 and 2). The workshop was also designed to give the hospitals involved in the assessment the opportunity to participate in prioritizing the identified problems, proposing interventions, and developing plans for implementation of the proposed interventions (see Annexes 3–6).



## METHODOLOGY

The dissemination and planning workshop was organized by the RPM Plus Program in collaboration with CSSC, funded through PEPFAR, and took place July 24–26, 2006, at the Arusha Hotel in Arusha, Tanzania. Twenty participants attended the workshop including representatives from NACP, JSI, IMA, MEMS, MSH/RPM Plus, and participating hospitals. Mvumi Hospital was not represented during the workshop.

The overall goal of the workshop was to share assessment findings with hospital and ART program directors and other PEPFAR partners working to strengthen ART in missionary hospitals, discuss solutions to the problems identified, and work with each hospital to develop a facility-based implementation plan to address their individual gaps and challenges.

The workshop sessions used a combination of the following methods—

- Presentations
- Plenary discussions
- Facility-based planning sessions

RPM Plus staff made presentations on objectives of the workshop, the MTP approach, and RPM Plus tools. Presentations on DTCs and the ART pharmaceutical management system were made by IMA and MEMS on behalf of CSSC. A representative from the NACP made a presentation on the HIV/AIDS care and treatment program in Tanzania and addressed questions and concerns from participants on issues related to the topic. A member of the assessment team and staff from a participating hospital presented the assessment findings.

### Overview of Workshop Proceedings

#### *Presentation on Objectives of the Workshop*

The presentation started with background on how RPM Plus embarked on an initiative to support strengthening of the ART pharmaceutical management system in mission hospitals. The initiative was based on historical work that MSH's Strategies for Enhancing Access to Medicines Program had done with MEMS prime vendor program. It was further explained that the prime vendor program was established to fill Medical Stores Department (MSD) supply gaps. To help address problems on the demand side, MSH agreed with CSSC that pharmaceutical management systems in the participating hospitals need to be strengthened. A brief overview of the workshop objectives was then provided. Objectives were to—

- Present and discuss general findings observed from all mission hospitals included in the assessment
- Discuss and agree on proposed interventions, recommendations, and approaches to rectify identified gaps

- Introduce and review various RPM Plus tools and resources that might be adapted for use in the mission hospitals
- Develop facility-based workplans for addressing the identified gaps

### ***Presentation on Overview of HIV/AIDS Care and Treatment Program in Tanzania***

The estimated prevalence of HIV was reported to be 7.7 percent, with more women being infected (7.7 percent) than men (6.3 percent). The National HIV/AIDS Care and Treatment Plan was approved by the cabinet in October 2003. The program officially started October 2004. Its target is to provide about 400,000–500,000 HIV-infected Tanzanians with ART over a period of five years. The total number of sites that are currently providing ART has reached 200.

The presentation went through the stages Tanzania has followed to prepare for initiation of the ART program, which included developing the required tools and materials, site assessments to determine the capacity to deliver ART, and training of health care workers.

During this presentation, general challenges of and constraints in the implementation of the National HIV/AIDS Care and Treatment Plan were outlined. These include low uptake of ART among pediatric patients, lack of an adherence monitoring tool or a system to track patients, inadequate number of human resources, and difficulty in filling out and submitting M&E forms.

Other challenges outlined include inadequate linkage with community home-based care providers; demand for information, education, and communication (IEC) materials being higher compared to materials produced; service availability and increased awareness not being translated into increased use and positive behavior; stigma and discrimination, which disempower people living with HIV/AIDS from utilizing available services; installation of laboratory equipment being slow; and the lack of laboratory equipment in many hospitals.

### ***Plenary Discussions on Overview of HIV/AIDS Care and Treatment Program in Tanzania***

Participants discussed why the uptake of pediatric patients into the ART program is slow. In response, it was explained that plans exist to improve the management of pediatric HIV/AIDS by strengthening HIV pediatric management training, which has always been weak because the initial focus was on adult HIV/AIDS treatment. A training curriculum has been developed, and training on pediatric management is being implemented by NACP in collaboration with other partners using maternal and child health clinics and pediatric wards as entry points. Other outcomes associated with the slow uptake of pediatric patients include piling up and expiry of pediatric formulations in some facilities.

The reasons the targets set by NACP for patient enrollment have not been attained were also discussed. The hindering factors mentioned were lack of equipment to confirm the number of CD4 cells, lack of trained staff, and insufficient funds to support scaling up the ART program. In addition, participants commented that the target set was very high and will need to be reviewed to come up with an achievable target.

In addition, participants observed that the number of eligible patients is higher than the number of patients starting antiretroviral (ARV) treatment. NACP's response was that some patients are reluctant to start ARV treatment despite the preparedness process they go through. Stigma is one reason that patients do not come back for treatment.

In discussing the challenges of implementing a care and treatment program, it was clear that the main obstacle to filling out and submitting the M&E forms is the shortage of human resources; the few available staff are overly weighed down with many other duties in the facilities. NACP plans to develop M&E forms that are user-friendly to facilitate easy completion without compromising the staff's technical responsibilities for refilling prescriptions, counseling patients on ARVs, and doing all their other tasks. The forms currently used require filling in the same information repeatedly in more than one form.

***Presentation on Overview of Pharmaceutical Service of ART Program in the Mission Hospitals (CSSC-Affiliated Facilities)***

This presentation highlighted the CSSC initiatives in support for pharmaceutical services in mission hospitals. These initiatives include—

- Improving the availability of essential commodities in mission hospitals in Tanzania through expanding revolving drug funds
- Providing support for commodity management through training and increased access to ARVs and opportunistic infection (OI) medicines
- Improving rational use of medicines in mission hospitals in Tanzania
- Providing pharmaceutical information, literature, and references
- Supporting the establishment of DTCs, which will have representation from and liaison with the Government of Tanzania and donors for the interest of mission hospitals pharmaceutical services (MSD, Tanzania Food and Drugs Authority [TFDA], Ministry of Health [MOH], AIDS Relief, Gesellschaft für Technische Zusammenarbeit, MEMS, and MSH)
- Coordinating pharmaceutical donations (e.g., Diflucan, Tibozole) and support of ART care and treatment (e.g., through AIDS Relief and newly introduced regionalization strategy)

This session introduced the concept of pharmaceutical management in mission hospitals, particularly focusing on selection, procurement, quantification, inventory control, storage, and use of medicines.

This presentation briefed participants on the supportive supervision and the M&E plan of NACP. NACP has requested that partners provide supportive supervision in line with the national plan. Additional monitoring tools on adherence, management information systems (MIS), and financing are being used in some mission facilities.

It was further explained that mission hospitals follow the National HIV/AIDS Care and Treatment Plan and that they receive support from various partners such as AIDS Relief, MSH, and Médecins Sans Frontières (Doctors Without Borders) in terms of technical assistance, donated commodities, OI medicine procurement, systems improvement, preceptors, M&E, and strengthening referrals and linkages.

To coordinate PEPFAR partner support to the CTC program a regionalization strategy has been introduced that will also involve mission hospitals.

***Plenary Discussion on Overview of Pharmaceutical Service of ART Program in the Mission Hospitals (CSSC-Affiliated Facilities)***

A comment was made that a system must be put in place to ensure sustainability of ARV supply even when donors end their support. Participants from mission hospitals requested that they should be allowed to charge some amount of money to patients receiving ART treatment. National policy requires ARVs and medicines for OIs to be distributed for free. It was expressed that facilities have difficulty complying with this policy because the amount of funds allocated by the Government of Tanzania to the mission hospitals is not enough to cover all hospital needs and operational costs. Previously, mission hospitals received much support from donors, but this is no longer the case.

The decision to allow private retail pharmacies to dispense and handle ARVs was queried. Participants commented that irrational use of these medicines might result because some patients might start using ARVs without determining whether they are eligible to start treatment. Following up on patients' adherence to ARV treatment is also difficult.

Some facilities reported a recent shortage of certain ARVs, particularly nevirapine. ARV supply system inefficiency was cited as the probable reason for the shortage. Participants were informed that ARV procurement is funded from different sources. Nevirapine is procured through the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), and the lengthy process of making funds available to MSD can delay the procurement process. The monies must go through Ministry of Finance before being transferred to the Ministry of Health and Social Welfare (MOHSW), from where they are released to MSD for purchase of ARVs.

While some facilities were experiencing stock-outs, it was also reported that ARVs are piling up in some facilities, especially in recently certified ART sites. This imbalance is due to the fact that the first supply of ARVs is normally pushed to the facilities rather than based on previous month's consumption, and the rate of consumption will depend on how fast the new patients will be enrolled in the CTC program.

The issue of how a supply chain management system will fit into the ARV supply chain in Tanzania was discussed. Currently, Tanzania has two ARV procurement systems, one funded by PEPFAR and the other supported by the Government of Tanzania through (1) a medium-term expenditure framework and (2) GFATM, Canadian, Norwegian Agency for Development Cooperation, and Swedish funding. JSI-Deliver provides technical support to NACP in quantifying ARV requirements and is also involved in procurement of PEPFAR-funded ARVs.

Procurement through Government of Tanzania funds is executed by MSD, which is the sole distributor for ARVs irrespective of funding source. It was also pointed out that a parallel procurement system is not foreseen in the near future.

Participants put forth a proposal on capacitating MEMS to help in ARV supply. MEMS could play a coordination role, by aggregating the demands and distributing ARVs to the mission sector. Since this recommendation touches system issues, any decision will require negotiation and discussions with the central level.

There was a suggestion that the range of OI medicines donated to the mission hospitals should be expanded from Diflucan and co-trimoxazole to include a broad range of medicines. The reason for selecting those two medicines, it was explained, is that, at global level, Diflucan and co-trimoxazole have been proven to provide greater benefits to people living with HIV/AIDS compared to other OI medicines.

Facilities also expressed their concern about management systems for laboratory supplies—laboratories do not receive much support from partners and the government in general. The response was that it is true that management of laboratory supplies is still weak because for a long time the priority has been given to strengthening the pharmaceutical management system for essential medicines. Participants proposed expanding the scope of support to include other essential supplies and making a special appeal to treatment partners who currently support the supply of HIV/AIDS-related medicines.

In this session, a concern was raised about the cost of medicines procured through MEMS. It was mentioned that the prices for medicines purchased through MEMS are higher than those procured from other sources. Facilities were reminded to consider the benefits and total cost for procuring all items from one supplier against cost associated with acquiring individual items from other supplier.

### ***Presentation on Drug and Therapeutics Committees (DTCs)***

The objectives of DTCs are to—

- Provide leadership and structure in selection of appropriate medicines for the formulary
- Identify medicine use problems
- Promote rational use of medicines
- Help reduce medicines costs to acceptable levels

The composition, benefits, roles, and functions of DTC were highlighted.

During the plenary discussion session on the DTC presentation, the need for more clarification about the composition of a DTC was expressed. It was reported that some hospitals had management committees that meet regularly to discuss different issues and are more or less like DTCs. Facilities were advised to use the existing system to integrate DTC activities but were reminded that the committees should comprise technical staff, including the nurse in charge, medical officer in charge, laboratory in charge, hospital directors, and heads of other units who

will be able to discuss technical issues, and should work separately from a hospital advisory committee.

It was further explained that the main role of a DTC is to optimize rational use of medicines in the facilities. In an effort to improve rational use of medicines it was reported MEMS had done a baseline survey in some mission hospitals and determined that they will need support in addressing the identified gaps.

### ***Presentation on the ART Pharmaceutical Management Assessment Findings***

In this session, the objectives of the ART pharmaceutical management assessment were discussed. The objectives are to assess—

- Availability and use of policies and guidelines for HIV/AIDS services delivery
- Status of human resources in terms of capacity and training in pharmaceutical services
- State of infrastructure in support of HIV/AIDS commodity management
- Standard operating procedures (SOPs) that support HIV/AIDS commodity management
- Status and use of MIS
- ART prescribing and dispensing practices
- Commodity financing in support of HIV/AIDS services

The gaps that were identified during ART pharmaceutical management assessment were highlighted and include—

- Shortage of pharmaceutical staff in all facilities
- No, or limited, SOPs available for pharmacy
- Need for training in pharmaceutical management—aimed at pharmaceutical assistants, technicians, and nurses
- Inadequate space for storage of medicines and for dispensing
- Need for improved record-keeping
- Need for good storage practices
- No facility-based M&E system in place for the hospital pharmaceutical services
- Hospital DTCs not established or not functioning
- Need for improved process for medicine disposal

Hospital assessment reports were then distributed for review, and comments that will lead to finalization of reports were collected.

In discussing the findings, it was observed that despite the gaps observed, facilities still have a lot of good features upon which to build and that not all gaps were caused by lack of resources.

Some were due to process inefficiency, and it was reported that facilities had already started addressing them.

The great variation in mission hospitals in terms of resources they receive from donors was also discussed. Some facilities are highly resourced compared to others depending on the type of donors a particular hospital has. Because of this disparity, it was cautioned that the findings from this assessment should not be used represent the whole mission sector. However, there was a comment that by starting improvement at highly resourced hospitals would result in models for replication for less resourced facilities.

Facilities expressed their concern about rapid staff turnover, and it was reported that staff leave mission hospitals for better pay. This exodus occurred after the government increased salary scales for staff working in public hospitals.

The problem of a weak inventory control and record-keeping system observed during the ART assessment was said to be due in part to untimely availability of an M&E tool from NACP and MSD, hence hindering the reporting process. Some facilities were forced to make photocopies of the tools, which are usually not bound properly and can easily be lost. The hospitals recommended that the responsible authority work to improve this situation.

Adverse drug reaction (ADR) issues were also discussed. Participants noted they have observed that some brands of ARVs cause ADRs to the patients using them. ADRs often occur after patients have been switched from one brand to another. Participants were advised that for the responsible authority to be able to make an informed decision on a particular product, facilities need to quantify the risk of the effect by documenting all incidences of ADR and sending the reports to TFDA. Some facilities reported that they have sent the yellow forms but have not received any feedback from TFDA.

In an effort to strengthen the quality of pharmaceutical services in mission hospitals, it was reported MEMS conducts supportive supervision in pharmaceutical management in general, but with less focus on ART management. In addition, MEMS has also developed inventory management training modules, which will be used in on-site training during their regular supervisory visits. The initiative was well supported, and there was a suggestion that MEMS should be supported to further expand their scope of supervision to include ART pharmaceutical management.

There was also a comment that in some facilities the OI medicines are put in the main outpatient pharmacy, and there was a suggestion that they should be kept at ART pharmacy to help patients get counseling and medicines from the same place where they get their ARVs.

To be able to monitor the quality of pharmaceutical services at the hospital level, facilities were advised to introduce supportive supervision using local staff rather than wait for external support. The idea of using staff from referral hospitals was found to be unrealistic because referral hospitals do not have an adequate number of staff to be able to supervise other hospitals. It was further explained that in Uganda, a team of experts has taken on the responsibility of rotating

countrywide implementing supportive supervisory activities, but it was noted that following this model would require capacity in terms of funds and skills.

It was reported that in Tanzania, AIDS Relief has an M&E section but one with less focus on pharmaceutical management, and the section works only to support M&E in the regions to which it has been assigned.

The availability and use of guidelines in mission hospitals was discussed. It was reported that some facilities have developed their own guidelines. NACP's response was that the effort is well supported; however, mission hospitals still need to comply with national guidelines. It was further explained that on HIV/AIDS-related issues, NACP treats mission hospitals on the same level with publicly owned hospitals.

### ***Presentation on Introduction to the RPM Plus Tools***

This presentation introduced some of the RPM Plus–developed tools, including the ART pharmaceutical management SOPs, the ART dispensing tool, the ART Pharmaceutical Management Training Package, and Quantimed.

In this presentation, SOPs were defined as approved sets of written detailed instructions that document all repetitive or routine operations and activities of the pharmacy. The benefits of SOPs for pharmaceutical ART services were outlined to include—

- Ensuring quality and consistency of services
- Clarifying roles
- Providing training tools
- Establishing a means for delegation
- Providing standards for monitoring and supervision

This presentation also briefly explained the key components of the ART Pharmaceutical Management Training Package and noted that it is designed to be adapted by users to respond to their local needs.

A brief presentation on the Quantimed tool was also provided. Quantimed can be used to facilitate the calculation of pharmaceutical needs using different quantification methods—past consumption, adjusted consumption, morbidity (including scale-up patterns), or any combination of these elements.

The ART dispensing tool was also introduced. It was highlighted that the tool maintains a dispensing record for each of the patients getting medicines from the dispensing pharmacy and is primarily targeted for use by ARV medicine dispensers for dispensing purposes and for keeping stock management records.

Key features of the ART dispensing tool were also provided, which include the following—

- Keeps a dispensing record for each patient
- Provides monthly consumption reports by medicine
- Provides reports on the total number of active patients per month by regimen and medicine
- Creates an attendance list and a list of patients who miss appointments

Participants asked about the experience of using the ART dispensing tool in the field. It was explained that the tool has been used in Zambia and Kenya, and has proven to have worked very well at the facility level.

Facilities were informed that some of these tools are in the public domain and that facilities may decide individually to adopt them according to their own situations.

In addition to manual MIS tools, two hospitals requested a computerized ART dispensing tool to be used to improve inventory management and reporting in their facilities.

### ***Presentation on MTP***

This presentation defined MTP as an intervention geared toward promoting the use of knowledge and skills learned during training in the workplace. The MTP approach was introduced because it was observed that traditional training methods alone are often ineffective in changing practice.

MTP creates ownership of an ongoing performance monitoring process to the local staff, which is critical for success because it improves understanding of underlying causes of problems, influences change, and sustains improvements in the long term. Ownership can be achieved through building capacity of local staff on problem solving—especially on identification and prioritization of problems and on planning interventions according to the identified problems.

In implementing MTP, focus should be on interventions that are likely to result in the greatest impact and within limited resources. A multidisciplinary team approach is needed to design and implement effective interventions.

Selecting appropriate indicators to measure progress in strengthening the pharmaceutical management system and on setting realistic and achievable targets were also stressed.

The presentation concluded that for maximum impact of MTP, intermittent external supervision may be necessary and ongoing technical support may be needed.

### ***Working Group Discussions***

Despite the assessment findings revealing that almost all participating hospitals face the same set of challenges, each hospital worked independently to develop facility-based action plans.

Participants were divided into three groups based on where they came from. Each group was asked to discuss the problems related to ART pharmaceutical management that had been identified during the ART assessment in their particular facilities. For each problem identified and prioritized, groups were requested to suggest possible workable solutions.

Organizers and representatives from partners supporting the CTC program worked with individual groups to facilitate discussions and development of MTP plans. The strategic planning guide was used as a tool to facilitate discussion among group members.

Unfortunately, representatives from one ART site (Mvumi Hospital) were unable to attend the workshop and so were unavailable to discuss relevant gaps and develop action plans.

Technical assistance needed as identified by the facilities included—

- Training staff on HIV/AIDS pharmaceutical management
- Establishing or revitalizing hospital DTCs
- Strengthening of the supportive supervision system
- Strengthening of the facility-based M&E system
- Strengthening the DMIS

### ***Plenary Discussion on Facility-Based Action Plans' Presentations***

Because of a shortage of staff, on-site training was highly recommended. The big challenge is that staff are now used to getting allowances even when the trainings are conducted in their workplace. Some participants commented that trainings normally take longer hours than normal working hours so it is fair to pay them allowances.

In terms of supervision, it was commented that ad hoc supervisory visits should be discouraged; instead, planned supervisory schedules should be put in place to allow the facilities to plan for their activities.

It was also reported that some partners (e.g., AIDS Relief), in addition to providing technical support to mission hospitals, also fund procurement of medicines for OIs, recruitment of staff, procurement of equipment, and improvement of infrastructure. Facilities must, however, prepare proposals requesting help in those areas.

### **Other Recommendations**

- To ensure timely and regular supply of ARVs, the need for strengthening the ARV supply system at the central level through improving quantification and procurement procedures was expressed.
- CSSC must effectively facilitate linkages between MOHSW, MSD, TFDA, and the mission hospitals to ensure that problems from the mission hospitals are presented to the higher level.

- Perspectives of all parties involved in the workshop should be taken into account in the implementation of the developed plans.
- Lessons learned from implementation of plans from these five hospitals should be fed back to policy makers and implementers and successfully be scaled up and replicated in other facilities and at a bigger scale.

### **Follow-Up Activities**

- Consolidate the workplans and finalize the budget for implementation of proposed interventions.
- Explore possibilities of meeting potential partners before implementation of developed plans to discuss the level of support by different partners.
- Meet with CSSC and NACP to provide the debriefing on the dissemination and planning workshop, and share with them areas identified as needing technical support.
- Facilitate and support the implementation of the developed action plans.



## CONCLUSION

ART pharmaceutical management is an integral part of ART programs, and this pharmaceutical management workshop served to influence ART programs in several ways. In addition to prioritizing identified gaps and developing action plans for addressing them, participants were given a forum to discuss other ART pharmaceutical management issues in the mission hospitals. The workshop also created participant awareness on the issues related to the ARV supply chain at the central level and on availability of different RPM Plus tools that could be used by these facilities to strengthen ART pharmaceutical management.

In addition, the presence of other stakeholders at this workshop was a crucial opportunity to communicate the situation in these hospitals. These communications will be helpful in determining how future support to the mission hospitals could be improved through the joint effort and collaboration of different partners.

At this workshop, participants were also able to build their knowledge and skills of the MTP approach and apply it in strategic planning sessions.

In conclusion, the main outputs of this workshop were the following—

- The assessment report was reviewed, and comments were collected for finalizing the ART pharmaceutical management assessment report.
- Facility-specific action plans were developed based on the ART pharmaceutical management assessment findings.
- Priority areas that require MSH/RPM Plus and CSSC technical support were identified by the participating hospitals.



## ANNEX 1. REGISTRATION FORM, JULY 24, 2006

### Dissemination and Planning Workshop: Assessment of Pharmaceutical Management System of ART Program

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## ANNEX 2. WORKSHOP AGENDA

<b>Day 1: Monday, 24 July – Overview and Presentation of Findings</b>		
Time	Topic	Presenter
8: 00 – 9:00	Registration	<i>All</i>
9:00 – 9:45	Introduction and Opening Remarks	<i>CSSC/MEMS/MSH</i>
9: 45 – 10:15	<b>Break</b>	
10:15 –10:45	Overview and Workshop Objectives	<i>Dr. Edmund Rutta</i>
10:45 – 11:30	Overview of HIV/AIDS Care and Treatment Programs in Tanzania  Discussion—Q&A	<i>Dr. May Bukuku - NACP</i>
11:30 – 12:15	Overview of Pharmaceutical Services of ART Program in the Mission Hospitals  Discussion—Q&A	<i>Roman/Mavere</i>
12:30 – 13:45	<b>Lunch</b>	
14:00 – 17:00	Presentation of major findings from ART pharmaceutical management assessment for five mission hospitals included in the assessment	<i>Marsha/Joyce</i>

<b>Day 2: Tuesday, 25 July – Discussion and Presentation of Proposed Interventions</b>		
<b>Time</b>	<b>Topic</b>	<b>Presenter</b>
9:00 – 10:00	Review and discussion of findings from rapid assessment	<i>All</i>
10:00 – 10:15	<b>Break</b>	
10:15 – 11:00	MTP Approach: Capacity strengthening, improving supervision and monitoring structure within each facility  Discussion—Q&A	<i>Dr. Lloyd Matowe</i>
11:00 – 11:45	Hospital Drug Therapeutic Committees (DTC): Strengthen/establish DTC, benefits and their roles in the hospital pharmaceutical management  Discussion—Q&A	<i>Marsha/Mavere</i>
12:30 – 13:45	<b>Lunch</b>	
14:00 – 14:45	Overview of some of the RPM Plus tools and resources that might be appropriate for mission hospitals ART sites. <ul style="list-style-type: none"> <li>• MTP training package for ART commodity management</li> <li>• Drug Therapeutic Committee (DTC) package.</li> <li>• Standard Operating Procedures for ART – Pharmacy and Laboratory.</li> <li>• ART Commodity Management Training Package: Pharmacy and Laboratory.</li> <li>• ART Dispensing Tool</li> <li>• Facility-level quantification of HIV/AIDS related commodities.</li> </ul>	<i>Dr. Edmund Rutta/ Dr. Lloyd Matowe/Salama</i>
14:45 – 17:30	<ul style="list-style-type: none"> <li>• Introduction to group work and guidelines for facility—workplans and presentations</li> <li>• Group work by hospital</li> </ul>	<i>Edmund/Lloyd/Marsha</i>

<b>Day 3: Wednesday, 26 July – Development of Facility-Specific Plans and Presentations</b>		
Time	Topic	Presenter
9:00 – 10:00	Group work by hospital	<i>Groups</i>
10:00 – 10:15	<b>Break</b>	
10:15 – 12.15	Group work by hospital	<i>Groups</i>
12:15 – 13:00	<b>Lunch</b>	
13:00 – 13:20	Presentation of Hospital Plans–1	<i>Presenter from Facility/Group</i>
13:20 – 13:40	Presentation of Hospital Plans–2	<i>Presenter from Facility/Group</i>
13:40 – 14.00	Presentation of Hospital Plans–3	<i>Presenter from Facility/Group</i>
14:00 – 14:20	Presentation of Hospital Plans–4	<i>Presenter from Facility/Group</i>
14:20 – 14:40	Presentation of Hospital Plans–5	
14:40 – 15:00	Wrap-up and Next Steps	<i>Lloyd/Edmund/Marsha</i>
15:00 – 18:00	Closing	



### ANNEX 3. TEMPLATE FOR HOSPITAL IMPLEMENTATION STRATEGIES

Work through the following questions systematically, giving practical responses according to the assessment findings and your knowledge of the situation in your hospital.

- (1) List all HIV/AIDS pharmaceutical management problems identified by the assessments in your hospital.

- (2) Among the problems you listed above, select key ones for solving.

- (3) What are the best practical methods for solving your priority problems?

(4) Identify barriers to the problem-solving activities you suggested above.

(5) Taking the barriers you listed in question 4 above into consideration, formulate a practical problem-solving strategy (including training) for HIV/AIDS pharmaceutical management for health care workers in your hospital. If you choose training for example, consider in your strategy; *who will be trained; who will train; where will the training take place; how long will the training last; how will the training be conducted.*

(6) After formulating a practical problem-solving and training strategy, discuss how your hospital can apply the MTP approach to ensure ongoing performance improvement.

(7) Describe how you can demonstrate improvement in practice within your hospital. Include what you will measure, how you will measure it, and who will do the measurement.

(8) Suggest a budget for your proposed activities.

Activity	Cost (USD)

Develop a time frame for your activities.

**Plan of Activities**

Activity	Description	Timeline

## ANNEX 4. IMPLEMENTATION STRATEGIES—MUHEZA DDH

### Muheza DDH HIV/AIDS Pharmaceutical Problems Identified in the Rapid Assessment

1. Inadequate reference ART materials
2. Only 1 out of 3 people managing ARV have been trained
3. Supportive supervision on pharmaceutical management
4. SOPs are not reviewed and disseminated
5. Prescription-related issues
  - Use of brand name
  - Illegible handwriting
  - Age, strength, weight, dose and duration, name and signature of prescriber not indicated
6. Dispensing-related issues
  - Incomplete labeling
  - No medication use counseling
  - No packaging materials
  - Patient information
7. Inadequate documentation of adverse drug reactions (ADR)
8. ARV supply system weaknesses
9. No functional DTC
10. Financial sustainability
11. No computerized system for tracking ART patients at the pharmacy
12. Facility-based monitoring and evaluation (M&E) tools not in place

Key priority problems—

- A. Training
- B. Drug and Therapeutics Committee (DTC)
- C. Supportive supervision
- D. Implementing computerized MIS tool
- E. Monitoring and evaluation

### Best practical methods for solving prioritized problems

Activity	Details	Barriers
Training on ART pharmaceutical management	Adoption of training package Training 12 dispensing staff (5 days) Methodology—combination of methods Onsite training (2 phases of 6 persons each)	Human resources (Trainers) Time factor Financial
Implementing facility-based M&E system	Training on M&E Developing indicators	Technical skills
Establishing or revitalizing DTC	Identify potential members  Adapt DTC guidelines  Orientation of 12 members (2 days) Develop guidelines and terms of reference	Technical skills
Implementing ART dispensing tool	Identify staff with basic computer skills Training them on how to use the software (5 days)	—
Implement supportive supervision	Identify key stakeholders to support the activity Adapt NACP tool	—

### ***MTP approach***

- Identify MTP committee
- Continuous monitoring of situation
- Identify problems
- Quantify the problems
- Implement training/problem solving
- Evaluate the results
- Planning based on the evaluation
- Documentation

### **Budget**

Activity	Cost (USD)
Training on management of HIV/AIDS-related commodities	4,500
DTC	4,200
ART dispensing software	2,500
Implementation of M&E	1,500
Supportive supervision	5T
Grand total	12,700

## ANNEX 5. IMPLEMENTATION STRATEGIES—HAYDOM LUTHERAN HOSPITAL

Work through the following questions systematically, giving practical responses according to the assessment findings and your knowledge of the situation in your hospital.

(1) List all HIV/AIDS pharmaceutical management problems identified by the assessments in your hospital.

1. Human resources—the number of pharmaceutical personnel—pharmacists; pharmaceutical technician and pharmaceutical assistant in place are not enough. Nurses are the ones doing the dispensing and management of pharmaceuticals including ARV.
2. Majority of staff involved in pharmaceutical management do not have the necessary skills, lack of on-job training on basic pharmaceutical skills/logistics management.
3. No DTC in place.
4. Lack of working tools—No prescriptions (*available through MSD*); no ARV registers (*ordered from NACP*); no ledger books (*MTUHA /ILS*), dispensing tool (*will need TA from MSH*)
5. No supervision on pharmaceutical services.
6. No SOPs in place.
7. Interrupted ARVs supply from MSD.
8. No M&E indicators on pharmaceutical services routinely collected for the hospital use.

(2) Among the problems you listed above, select key ones for solving.

1. Supervision
  2. Training
  3. Monitoring & evaluation
  4. DTC
  5. SOPs + dispensing tool.
- Listed in order of priority.*

(3) What are the best practical methods for solving your priority problems?

**Supervision**

- Internal—The i/c of the pharmacy need to carry out once-a-month supervision of ART clinic/sites, wards, and other satellite health facilities (pharmaceutical-focused supervision).
- External—NACP, MSD, MEMS, and other agencies when they develop their supervision schedules, should share with hospitals. MEMS can provide supervision per site on request at no cost; JSI role currently does not include facility/site supervision.
- Clear guidelines of what needs to be looked at during supervision (partners to work together to develop a structured guidelines as opposed to quick site visit)

**Training**—priority is for on-site training to increase coverage or grouping the sites together at zones or regions.

**Monitoring & evaluation**—Select priority areas for M&E that are a priority for the facility and select indicators that they can regularly follow and monitor. Choose indicators for the facility to monitor their performance routinely. Orientation of key staff on selected indicators and the need to utilize M&E indicator for own performance improvement.

**Establishing the DTC** (adapt guidelines to suit the facility situation, will need TA to establish them)

**SOPs**—Identify existing SOPs from MOH, other programs, partners and adapt them to facility specific situation. Dispensing tool will need some support/training?

(4) Identify barriers to the problem-solving activities you suggested above.

The availability of resourceful people at the facilities to provide/conduct supervision, training, establish DTC, do M&E, and identify SOPs is limited. Haydom will need external support (TA) to kick start the process; the challenge is how to organize that.

- (5) Taking the barriers you listed in question 4 above into consideration; formulate a practical problem-solving strategy (including training) for HIV/AIDS pharmaceutical management for health care workers in your hospital. If you choose training for example, consider in your strategy; *who will be trained; who will train; where will the training take place; how long will the training last; how will the training be conducted.*

**Supervision**

- External supervision barrier—inability of the people at the central level NACP, MSD, MEMS, and other partners to do site pharmaceutical services supervision. Facilities have no control of that process. However, the minimum the facility requests is the dates/schedule of when the supervision will take place. Sharing the schedule will give time for facility to prepare.
- Internal supervision—personnel who receive training on pharmaceutical management, etc., should be allowed to carry out internal supervision within the hospital.

**Training**

- *Who to train*—all hospital personnel involved in pharmaceutical/logistic management services. Avoid training same personnel every time there is training opportunity available (facility responsibility). Give opportunity to other key staffs for external training to build capacity of resource people at the facility level.
- *Who will train*—NACP, external partners JSI/MSH/CSSC for key hospital staff, who in turn train the rest of staff at the facility.
- *Where*—to the extent possible on-site; however grouping at zonal or regional training for key staff will also be appropriate.
- *Duration/how long*—It will vary, depending on what will be covered in the training and the staff involved.
- *How will the training be conducted?*

**M&E**

- Who will select key indicators—facility staff/MTP core team/management?
- How often/frequency—need to be timed with other ongoing reporting. Whenever possible selected indicators need to be derived from routine data that are already collected and recorded.
- Staff orientation on the use/importance of M&E indicators in facility performance—monitoring need to be done by key personnel. For this to happen, involve the people who will be doing data collection in the indicator selection process (brainstorm and FGD with personnel in pharmaceutical services) on data management process.

**DTC**—identify resource people who will help the facility to establish DTC (process and materials).

**SOPs**—identify existing SOPs and adopt and use the existing ones as guide.

(6) After formulating a practical problem-solving and training strategy, discuss how your hospital can apply the MTP approach to ensure ongoing performance improvement.

- Ownership of the process, beyond external TA and how to sustain quality improvement at the facility.
- MTP group once formed will prioritize areas that need support at the facility and request for TA.
- Document the process/keep diary.
- Keep the MTP group intact and continue working with partners providing TA as well as the hospital management team.

(7) Describe how you can demonstrate improvement in practice within your hospital. Include what you will measure, how you will measure it, and who will do the measurement.

Monitoring and evaluation component once strengthened will set target for improvements.

(8) Suggest a budget for your proposed activities.

Activity	Cost (USD)
Supervision (external at least twice a year)—budget to be determined by the agency.	
Training—5 days	4,233
Monitoring & evaluation—3 days of training and orientation at facility	1,650
DTC establishment at the facility	4,210
SOPs + dispensing tool.	4,120
<b>TOTAL</b>	<b>14,213</b>

(9) Develop a time frame for your activities.

**Plan of Activities**

<b>Activity</b>	<b>Description</b>	<b>Timeline</b>
Supervision		Ongoing process after training
Training		<i>September</i>
M&E		<i>October</i>
DTC establishment at the facility		<i>October</i>
SOPs + dispensing tool		<i>Early November</i>



## **ANNEX 6. IMPLEMENTATION STRATEGIES—ST. ELIZABETH AND SELIAN HOSPITALS**

### **Pharmaceutical Management Problems at St. Elizabeth Hospital (Assessment Question 1)**

- Human resources (not enough staff), no pharmacist at the moment (pharmacist or pharm tech needed to assist current pharm tech.)
- No pharmaceutical management training, inadequate training
- Lack of support supervision with ARV focus
- Available supervision is random
- Bin cards not updated
- No ADR forms
- No forms/charts to track ARV expired drugs
- No bin cards in ART pharmacy and sub store
- No SOPs for receiving, storage, distribution, ADR monitoring and reporting, disposal of ARVs
- Not receiving co-trimoxazole for free although it should be
- Handling of donation for medical supplies needs improvement
- Don't have CD4 count machine
- Patients age and weight not indicated in prescription (accurate prescription filling)
- Adherence counseling during dispensing needs to be improved
- Need to add space for counseling at dispensing
- Inventory management
- Weekly ordering (in addition to monthly ordering)
- Lack of M&E systems
- Support infrastructure
  - Lack of space
  - No refrigerator, no temperature recording
  - No air conditioning, no temperature control
  - No tablet counters
  - Not enough dispensing trays
  - No firefighting equipment
- Financing of OI medicines

**Pharmaceutical Management Problems at Selian Hospital**  
(Assessment Question 1)

- SOPs for ART not available
- Some of the staff have left
- Inadequate staff
- Limited/no computerized system
- Inadequate support supervision
- Dispensing unit is small; not specifically for ARV dispensing (no other unit)
- No written procedures (security, ARVs, stock count)
- Patients carry their files
- Frequency of ordering and adequacy of supplies
- No M&E system for pharmaceutical management
- No system for adherence monitoring
- No adherence counseling room
- Small CTC room
- No storage cabinet, ARVs in a box on the floor
- No thermometer for room temperature

### **Key Pharmaceutical Management Gaps and Practical Solutions**

(Assessment Questions 2 and 3)

	<b>Gaps</b>	<b>Practical solution</b>
	<b>St. Elizabeth and Selian</b>	
<b>Human resources</b>	Inadequate number of staff for both hospitals  St. Elizabeth (2)  Selian (3)	Employment—St. Elizabeth (2) and Selian (3)  Overtime for both  Part time basis
<b>Training status of staff</b> 1. On-the-job training  2. NACP training  3. Pediatric pharmaceutical management	Needed for Selian and St. Elizabeth  Relevant staff  Needed	On site training of CTC staff once every month by partners and DTC. Strengthen DTC  Communicate with partners; Communicate with NACP; Create a budget line for staff training  Training CTC members to be done by partners
<b>Supportive supervision (SS)</b>	Needed to be scheduled and blunt (tools and appraisal)	Scheduled supervision (with partners) Developing SS tools  Planning with partners  Share reports
<b>DMIS</b>	Update bin cards and SOPs	Develop/adopt SOPs  Relevant tools need to be in place—dispensing register, report request form, forms CTC1, CTC2, prescriptions, bin cards, ledgers, GRN, referral documents

	<b>Gaps</b>	<b>Practical solution</b>
<b>Lab support</b>	Inadequate supplies	Strengthen lab systems by procurement of equipment and supplies by developing budget line  Specific training  Quality assurance
<b>Infrastructure</b>	Inadequate dispensing space for ARVs	Pharmacy and lab need expansion (renovations)  Relocation to bigger rooms

**Barriers and Problem-Solving Strategies**

(Assessment Questions 4 and 5)

		<b>Barriers</b>	<b>Problem solving</b>
		<b>St. Elizabeth and Selian</b>	
<b>Human resources</b>		Financial resources Personnel	Fund-raising by the hospital admin and diocesan heads Motivation/training/incentives
<b>Training status of staff</b>	On job training	Financial resources Coordination Staff scarcity	Fund-raising (communicate with partners) for facilitations Communication/collaboration, joint planning (hospitals, partners) Staff time compensation
	NACP training	Coordination	Communicate with NACP and partners Budget development
	Pediatric pharmaceutical management	Facilitation	Facilitation and training CTC by partners
<b>Supportive supervision</b>		Planning with partners	Coordinate supportive supervision with partners—regular, scheduled, and onsite. Share report.
<b>DMIS</b>		No barriers	Rectify the problem
<b>Lab support</b>		Financial	Hospital administration prepare budget and proposal, share with partners (stakeholders)  Hospital to advocate the importance of the lab service in the ART CT
<b>Infrastructure</b>		Financial Lack of space	Write proposal and raise funds from partners, MOH, basket fund etc Relocation

**MTP Approach and Improvement Measure**

(Assessment Questions 6 and 7)

	<b>Monitoring</b>	<b>Training/problem solving</b>	<b>Planning (end year indicators)</b>
Human resources	Inadequate staff	Recruitment Overtime Part time	Indicators: adequate staff in place and retained Staff working overtime Part-time staff recruited
Training	On the job: staff trained on the job  NACP trained staff  Pediatric pharmaceutical management staff training	Training ART staff  Training—5 staff from St. Elizabeth, 7 staff from Selian  Train ART staff	Number of staff trained on the job  Number of trained staff by the NACP curricula Practice improve  Increase number of pediatric patients on ART
Support supervision	Ad hoc supervision and blunt	–Coordination –Partners involvement –Scheduling support supervision –Develop tools for support supervision	–Frequency of support supervision –Number of partners involved –Tools developed –Supervision reports shared
DMIS	SOP  Bin card	Developing or adapting SOPs  Update bin cards	SOPs developed/adopted for reach pharmaceutical management step and used % of bin cards up to date
Lab + medical supplies	Equipment	Develop list of essential HIV/AIDS commodities  Procure CD4  Hematology	List developed % of items in the list available all the time  CD4 available and tests done and results utilized Hematology equipment and tests done and results utilized

*Annex 6. Implementation Strategies—St. Elizabeth and Selian Hospitals*

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	<b>Monitoring</b>	<b>Training/problem solving</b>	<b>Planning (end year indicators)</b>
		Medical supplies Reagents	% of medical supplies available
Infrastructure	Inadequate dispensing and counseling space	Relocation  Renovation	Dispensing moved to a new adequate space – adherence and counseling done  New dispensing site for CTC renovated and used

**Suggested Budget**  
(Assessment Question 8)

<b>Activity</b>	<b>Description</b>	<b>Budget (USD)</b>
Human resources	Recruitment	11,560
	Overtime	
	Part-time hiring	
Training	On-the-job training (specific topics to be selected)	4,534
	NACP training	
	Pediatric pharmaceutical management training (staff to be trained under national curriculum and train other hospital staff)	
Supportive supervision	Provision of scheduled technical assistance partners and relevant experts (NACP, EGPAF, MEMS, DHMT and MSH)	1,200
DMIS	Developing or adapting SOPs	100
	Update bin cards	
Lab + medical supplies	Procure CD4 (35,000)	50,500
	Procure hematology (3,500)	
	Procure supplies (12,000)	
	Develop essential HIV/AIDS commodity list (0)	
Infrastructure	Relocation	45,000
	Renovation (45,000)	
<b>Total</b>		<b>123,694</b> (43,694)

**Timeline for activities**  
(Assessment Question 9)

<b>Activity</b>	<b>Description</b>	<b>Time frame</b>
Human resources	Recruitment	Six months time frame
	Overtime	Months 1–12
	Part-time hiring	Months 1–12
Training	On-the-job training (specific topics to be selected)	Once every month
	NACP training	Quarterly (start month 3)
	Pediatric pharmaceutical management training (staff to be trained under national curriculum and train other hospital staff)	Twice a year
Supportive supervision	Provision of scheduled technical assistance partners and relevant experts (NACP, EGPAF, MEMS, DHMT and MSH)	Quarterly
DMIS	Developing or adapting SOPs	Month 1
	Update bin cards	Month 1
Lab + medical supplies	Procure CD4	Month 6–12 (once)
	Procure hematology	Month 6–12 (once)
	Procure supplies	Month 1–12
	Develop essential HIV/AIDS commodity list	Month 1–12
Infrastructure	Relocation	Month 1–3
	Renovation	Month 3–9

