

**RPM Plus Site Visit
to Viet Tiep
Hospital, Hai Phong:
October 6, 2005:**

Report

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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

AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
ARV	antiretroviral
CDC	U.S. Centers for Disease Control and Prevention
CPC	Central Pharmaceutical Company
ESTHER	Ensemble pour une Solidarité Thérapeutique Hospitalière En Réseau
FDC	Fixed-dose combination
GoV	Government of Vietnam
HIV	human immunodeficiency virus
LIFE-GAP	Leadership and Investment in Fighting an Epidemic-Global AIDS Program [Vietnam MoH]
MSH	Management Sciences for Health
OI	opportunistic infection
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
RPM Plus	Rational Pharmaceutical Management Plus [Program]
SOP	standard operating procedure
USG	U. S. Government

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MSH/RPM Plus would like to thank the staff of Leadership and Investment in Fighting an Epidemic-Global AIDS Program [Vietnam MoH] (LIFE-GAP) and U.S. Centers for Disease Control and Prevention (CDC) for their support in facilitating the site visit. Special gratitude is offered to the staff from Viet Tiep Hospital for their tireless and exceptional cooperation during the visit.

LIFE-GAP/CDC

- Dr. Nhan, LIFE-GAP Secretary, Hai Phong

Viet Tiep Hospital

- Dr. Nguyen Quoc Hung, Deputy Director
- Dr. Ngo Viet Hung, Head of ART Clinic
- Mr. Dang Thanh Dong, Chief of Pharmacy
- Ms. Kim, Pharmacist
- Pharmacy Storekeeper

EXECUTIVE SUMMARY

Management Sciences for Health’s (MSH) Rational Pharmaceutical Management (RPM) Plus Program is providing technical assistance to the Government of Vietnam (GoV), U.S. Government (USG), and local partners and stakeholders to procure and distribute antiretroviral medicines (ARVs) to USG-supported sites. It is also strengthening pharmaceutical management capacity to ensure continual and adequate availability of ARVs and other HIV/AIDS commodities, promote their appropriate use, and enhance the quality of pharmaceutical antiretroviral therapy (ART) services. Developing and implementing standard operating procedures (SOPs) for pharmaceutical management have been shown to help standardize procedures to ensure quality and consistency of services, to foster good dispensing practices, and to promote accountability for ART programs.

Key Findings and Recommendations

Topics	Findings	Recommendations
Status of the ART program	<p>U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) ARV dispensing started in September 2005</p> <p>Have three sources of ARVs in stock–</p> <ul style="list-style-type: none"> • PEPFAR-funded ARVs • GoV-funded ARVs • Ensemble pour une Solidarité Thérapeutique Hospitalière En Réseau (ESTHER)-funded ARVs 	<p>RPM Plus to make a follow up visit after two months and then every six months to assist pharmacy to strengthen procedures and address challenges</p> <p>Harmonize procedures, forms, data collection and reporting systems for all sources of ARVs as far as possible.</p>
ARV medicine flow at the facility	<p>ARVs are delivered to, stored by, and dispensed by the pharmacy</p> <p>Stocks are held in two areas</p>	
Receiving ARVs at the site	<p>Central Pharmaceutical Company (CPC) No. 1 delivers directly to site; not consistent in notifying site before delivering ARVs</p> <p>Financial receiving note is prepared by pharmacy from delivery note</p>	<p>CPC No. 1 to notify site before delivering ARVs</p>
Inventory management and record-keeping at the ARV storage area	<p>GoV and ESTHER ARVs are temporarily stored in a non-air-conditioned area</p> <p>Temporary PEPFAR ARV storage area has limited storage space</p> <p>Official inventory record book used</p>	<p>Move GoV and ESTHER ARVs to an air-conditioned area</p> <p>Planned renovation to create a new air conditioned ARV storage area with increased storage space is a priority</p> <p>Monitor temperatures of storage area and refrigerator routinely</p> <p>Record batch number in addition to expiry date when receiving ARVs</p> <p>Check balance with physical stock once a month or when issuing or receiving ARVs</p>

Topics	Findings	Recommendations
Internal distribution of ARVs	Official internal requisition book used	Use a double copy requisition book to track movement of ARVs from the ARV storage area to the dispensary Document the unique requisition number when recording issues at the ARV storage area and receipts at the dispensary
ARV storage and dispensing area at the dispensary	No air-conditioning Space for storage and dispensing inadequate for scale-up	Do not keep more than two weeks' supply of ARVs at the dispensary to minimize exposure to high temperatures Additional storage space needed as a priority; a larger dispensing area will be needed for scale up Monitor temperatures of storage area and refrigerator routinely
Record-keeping at the dispensary	Official prescription form; prescriptions are stamped with source of ARVs to be dispensed Official stock card used to record inventory No longitudinal patient dispensing record seen Interim Excel spreadsheet in use to assist in aggregating consumption data for scale-up No comprehensive software in use	Record patient name or number for each issue. Establish a patient-centered record to track dispensing by patient and to cross-check prescriptions as an interim measure Interim spreadsheet needs to be replaced by a software that uses one entry at time of dispensing to collect data for inventory management, cross-checking prescriptions, and forecasting Software should be capable of aggregating and presenting data for monthly reporting for all sources of ARVs Installing the software is a priority to minimize workload due to record-keeping and catch-up data entry; an interim stand-alone software package can be used while integrated systems are being developed and tested.

Executive Summary

Topics	Findings	Recommendations
Dispensing and medication counseling at the dispensary	No ART reference materials seen in dispensing area	Provide standard set of guidelines and reference materials
	Pill boxes used—filled by pharmacy staff. No gloves, tablet counters, dispensing aids seen	Minimize handling of ARV products by using gloves, tablet counters or tweezers
	Not all patients bring back pill box for refilling	Consider teaching patients to refill and clean pill boxes themselves to minimize pharmacy workload and to resolve issues on cleaning and reuse of boxes
	Labels not used	Consider costs and benefits of using labels, particularly as dispensing is done in advance
	Staffing and workload constrain role of pharmacist in medication counseling	Pharmacist could use time saved by not filling boxes to counsel patient; consider costs and benefits of expanding role of pharmacist in medication counseling and adherence monitoring; develop SOP and forms for pill counts
	No patient information leaflets seen at dispensary	Make leaflets available at the dispensing point in addition to clinic
Pharmacy reporting for the ART program	Interim reporting forms used at time of visit Workload implications of reporting and timeliness of forms reaching RPM Plus are potential concerns	RPM Plus and Leadership and Investment in Fighting an Epidemic-Global AIDS Program [Vietnam MoH] (LIFE-GAP)/CDC to monitor and assist pharmacy to address problems in completing and submitting the reporting forms to RPM Plus
Other issues	Dispensing and record keeping for ART program is already having a considerable impact on the workload of the pharmacy	Pharmacy staffing needs to support the scale-up of the ART program in the long term need to be discussed.

BACKGROUND

MSH/RPM Plus is providing technical assistance to the GoV and USG partners to procure and distribute ARVs to USG-supported sites. In addition, RPM Plus is working collaboratively with GoV, USG, and local partners and stakeholders to strengthen the pharmaceutical management capacity of referral, provincial, district, and other USG-supported sites to ensure continual and adequate availability of ARVs and other HIV/AIDS commodities, promote their appropriate use, and enhance the quality of pharmaceutical ART services. Developing and implementing SOPs for pharmaceutical management have been shown to help standardize procedures to ensure quality and consistency of services, to foster good dispensing practices, and to promote accountability for ART programs.

Site Visit Objectives

In preparation for providing technical assistance to GoV to draft SOPs for ART pharmaceutical management, the RPM Plus team visited Viet Tiep Hospital to—

- Understand the roles and responsibilities of the pharmacy staff in supporting the ART program
- Understand ARV medicine flow at the facility and identify forms and procedures used by the site staff for ordering, receiving, storing, internal distribution, record-keeping, and dispensing ARVs
- Solicit feedback on any problems or issues related to pharmaceutical management identified by Viet Tiep Hospital clinical and pharmacy staff during the start-up period of the ART program
- Explore staff concerns on the robustness of the current pharmaceutical management systems and procedures to support the scale-up of the ART program.

Methodology

The RPM Plus team conducted semi structured interviews with key informants, observed operations and reviewed some records to prepare this report.

The members of the RPM Plus Team were—

- Helena Walkowiak, Senior Program Associate, RPM Plus, U.S. Office
- David Kuhl, Senior Technical Advisor, RPM Plus Vietnam Office
- Nguyen Anh Dao, Program Associate, RPM Plus Vietnam Office
- Nguyen Viet Hung, RPM Plus Information Technology Consultant, RPM Plus Vietnam Office

Caveats and Limitations

The information on which this report is based very often came from one source. Due to the limited time available for the visit and for interviews, RPM Plus staff did not have the opportunity to cross check information. In addition, as the ART program is new to Viet Tiep Hospital, systems and forms are evolving and very often the staff interviewed were still uncertain about the final processes that would be put in place.

The mandate of RPM Plus was to understand and not assess the existing forms and systems although the team did solicit input from implementing staff on problems and issues that need to be addressed. As a result, the team observed and inventoried processes used and records kept, but did not assess the quality of operations and record keeping. For example, we looked at whether a running balance was documented in stock records, but did not perform a physical count to check if the balance was correct.

FINDINGS AND RECOMMENDATIONS

1. Status of ART Program

Findings

Source of ARV Medicines	Client Type	Program Status	Number of Clients on ART	Target
PEPFAR	Adult	<ul style="list-style-type: none"> • Medicines received • Dispensing began September 2005 	21 at the end of September 2005	150 at end of March 2006
	Pediatric	<ul style="list-style-type: none"> • Medicines received • Dispensing not started 	0 at the end of September 2005	20-25 at end of March 2006
GoV	Adult	<ul style="list-style-type: none"> • Medicines received • Dispensing not started 	0 on October 6, 2005	30 patients per year
ESTHER	Adult	<ul style="list-style-type: none"> • Received 40 patients supply for 6 months 	Not certain	Not known

- ARV dispensing commenced with ESTHER medicines but patients have slowly been changed over to PEPFAR medicines.
- Three sources of ARV medicines in stock—
 - PEPFAR-funded ARVs—single-medicine branded products
 - GoV-funded ARVs—fixed-dose combination (FDC) locally-produced generic products
 - ESTHER-funded ARVs—some FDC locally-produced generic products and some single-medicine products
- Viet Tiep Hospital has requested that ESTHER buy opportunistic infections (OI) medicines instead of ARVs now that PEPFAR-funded ARVs are available.
- Chief of Pharmacy is a member of the ART Selection Committee and is able to report on stock status of each source of ARVs to the committee and report back to the pharmacy which source of ARVs a new patient is to receive.
- Prescriptions are stamped by the prescriber with the source of ARVs to be dispensed.
- The LIFE-GAP/CDC program provides some supplies of medicines to prevent and treat OIs.

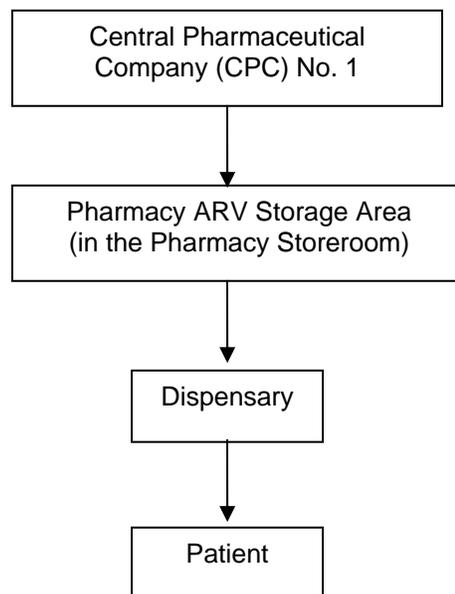
Recommendations

- As the PEPFAR-funded ART program has recently started at Viet Tiep Hospital, and the pharmacy is now having to manage three separate sources of ARVs, a follow up visit/contact should be made after two months and then at six month intervals to assist the site to develop/strengthen procedures, address challenges, and monitor the impact of the ART program on the pharmacy.
- The impact of managing three sources of different brands of ARV medicines on the pharmacy department can be minimized by—
 - Harmonizing procedures and forms/software used to receive, manage, issue/dispense and report on ARVs as far as possible.
 - Establishing one record keeping/software system that is able to track receipt, inventory, and consumption of ARVs by source.
 - Maintaining good communication between clinical and pharmacy services to ensure that the pharmacy staff know which source of ARVs a patient is selected to start on and should receive at each visit. For example, the Chief of Pharmacy or his representative to continue to attend ART Selection Committee meetings and share minutes with ART dispensing staff.

2. ARV Medicine Flow at the Facility

Findings

- Flow of PEPFAR-funded ARVs at Viet Tiep Hospital—



- All sources of ARVs are delivered to, held by and dispensed by pharmacy.
- GoV-funded ARVs are delivered to Hai Phong Health Services and then to the pharmacy at Viet Tiep Hospital.
- ESTHER-funded medicines are ordered by Viet Tiep Hospital and delivered directly to the pharmacy.
- ARVs are held in two areas, each with a separate record to track receipt and issue of ARVs.
- ARVs purchased with funding from the Global Fund for AIDS, Malaria and Tuberculosis are expected soon—head of outpatient clinic reports that these ARVs will be reserved for the district level.

3. Receiving ARVs at the Site

Findings

- Procedure—
 - CPC No. 1 delivers PEPFAR-funded ARVs directly to the pharmacy with—
 - One original and two copies of the CPC No. 1 Delivery Note
 - Copy of the Ministry of Health-approved Distribution Plan
 - Pharmacy storekeeper checks the order received against the delivery note and inspects the items for damage and expired stock.
 - If everything is in order the pharmacy storekeeper endorses the delivery notes and takes them to the Chief of Pharmacy and the Director of the Hospital for signatures and stamps.
 - CPC No. 1 driver waits for the delivery to be inspected and the documents to be signed. One signed and stamped delivery note is given to the CPC No. 1 driver.
 - The storekeeper uses the delivery note to complete an official form, Financial Receiving Note, for reporting receipt of medicines to finance. The form is sent to the finance department.
 - ARV medicines are put into the ARV storage area and receipt recorded in inventory records.
- No procedure for handling damaged, expired, or delivery discrepancies of ARVs has yet been developed. So far no damaged or expired ARVs have been received but the pharmacy plans to use the system that exists for returning other medicines for ARVs, should the need arise.

- The pharmacy department was informed when the first delivery from CPC No. 1 was scheduled but not for the second. The pharmacy asked that they be notified so they can be ready to receive and inspect the delivery and obtain the necessary signatures and stamps.

Recommendations

- RPM Plus to request CPC No. 1 to notify sites of date and time of ARV deliveries.
- Review procedures after six months when ARV orders become larger to check if revisions are needed, e.g., CPC No. 1 driver waiting during what may become a lengthy receiving process.

4. Inventory Management and Record Keeping at the ARV Storage Area

Findings

Pharmacy ARV Storage Area		
Topics	For current ART Patient Numbers/Stock	For ART Scale Up
Organization	<ul style="list-style-type: none"> • PEPFAR ARVs kept on open shelves in an inner room in storeroom • GoV and ESTHER-funded ARVs kept in locked cupboards in outer storeroom • Organized with first expiry to front 	NA
Space	<ul style="list-style-type: none"> • PEPFAR ARVs <ul style="list-style-type: none"> ○ Viet Tiep also stores the ARVs for the Hai Phong Pediatric Hospital ○ Adequate but shelves and room are crowded with other medicines ○ RPM Plus to provide locked cupboards—quotes provided at time of visit ○ New cupboards will provide more shelf space but make the room crowded • GoV and ESTHER ARVs—some room in cupboards for expansion 	<ul style="list-style-type: none"> • New space has been identified in a adjacent room—renovations are planned
Security	<ul style="list-style-type: none"> • Adequate. • RPM Plus to provide locked cupboards for PEPFAR ARVs—quotes provided at time of visit 	<ul style="list-style-type: none"> • New space has been identified in a adjacent room—renovations to improve security are planned
Air-conditioning	<ul style="list-style-type: none"> • PEPFAR ARVs—adequate • GoV and ESTHER ARVs are stocked in a non-air-conditioned room 	<ul style="list-style-type: none"> • New space has been identified in a adjacent room—renovations to include air-conditioning are planned
Temperature monitoring of storage area	<ul style="list-style-type: none"> • Not seen 	NA

Findings and Recommendations

Refrigerator	<ul style="list-style-type: none"> • RPM Plus to provide refrigerator—quotes provided at time of visit 	<ul style="list-style-type: none"> • New refrigerator will probably be adequate
Temperature monitoring of refrigerator	<ul style="list-style-type: none"> • No refrigerator 	NA

- Currently using temporary storage areas—plan to renovate adjacent room and move all ARVs into air-conditioned, secure space with room for expansion.
- Record-Keeping
 - The same record keeping forms and procedures are used for managing all three sources of ARVs
 - Official inventory records in use—*Monitoring ARV Category Book*
 - Records observed to be neat, legible, and well kept
 - Receipts in sample of ARV records observed—
 - Date, received from, invoice number, expiry date, and quantity received recorded
 - Batch number of medicines received and balance not recorded
 - No issues seen in sample of ARV records observed

Recommendations

- Move the GoV and ESTHER ARVs into an air-conditioned space to minimize exposure to higher than recommended temperatures.
- Renovation of the adjacent storage area to include air conditioning should be made a priority to relieve congestion in the room where PEPFAR ARVs are stored and also to allow GoV and ESTHER ARVs to be stored in an air- conditioned space.
- Record Keeping
 - For receipts—
 - Record the batch number in addition to the expiry date to facilitate tracking and implementation of product recalls and recalculate the balance
 - For issues—
 - Make the entries at the time of issuing stock to the Dispensary
 - Record the date, internal requisition number (see below), quantity issued and recalculate the balance

- The balance—
 - Can be checked with the physical stock once a month or at the time of receipt or issue
 - Making a notation in the record that the balance is correct can help staff to look for errors if they know the last date when the balance was correct
 - A stock discrepancy form can be used to facilitate the recording and reporting of stock discrepancies that cannot be resolved
- Temperature charts can be used to monitor if the routine temperature in the storage area and the refrigerator is appropriate for the products held.
- A chart to monitor expiry date of ARV products may be useful.

5. Internal Distribution of ARVs

Findings

- Dispensary uses an internal requisition book to order and receive ARVs from the storeroom.
- Requisition book not seen so unknown if each requisition has a unique number and a detachable copy
- Internal requisition number not observed to be recorded when issuing stock from storeroom or receiving stock at the Dispensary.

Recommendations

- Each requisition should have a unique number and a copy. The department requisitioning ARVs (the dispensary) should keep the book—and the requisition copy that remains in the book—and the department issuing ARVs should retain the original which is detached from the book when the transaction is complete.
- The unique requisition number should be documented when recording the issue at the pharmacy ARV storage area and the receipt at the dispensary to facilitate tracking and auditing of ARVs.

6. ARV Storage and Dispensing Area at the Dispensary

Findings

Dispensary ARV Storage and Dispensing Area		
Topics	For Current ART Patient Numbers/Stock	For ART Scale-Up
Organization	<ul style="list-style-type: none"> • Opened bottles of ARVs kept in bottom of refrigerator • Opened bottles marked with date of opening • Unopened ARVs kept in a very packed cupboard • Space restrictions do not allow the pharmacist to organize the ARVs easily 	NA
Space	<ul style="list-style-type: none"> • Inadequate storage space • Dispensing space is shared with staff filling requisitions for inpatient wards and departments • Space for dispensing ARVs is very limited—particularly in the mornings when the dispensary is very busy 	<ul style="list-style-type: none"> • Not adequate • More cupboard space and space for dispensing will be needed • RPM Plus to provide refrigerator—quotes provided at time of visit
Security	<ul style="list-style-type: none"> • Adequate • Locked cupboards in secured room 	<ul style="list-style-type: none"> • Probably adequate
Air conditioning	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • May need to plan for air-conditioned storage space in the future
Temperature monitoring of storage area	<ul style="list-style-type: none"> • Not seen 	NA
Refrigerator	<ul style="list-style-type: none"> • Not seen 	<ul style="list-style-type: none"> • RPM Plus to provide refrigerator—quotes provided at time of visit
Temperature monitoring of refrigerator	<ul style="list-style-type: none"> • Not seen 	NA

Recommendations

- Additional storage space for ARVs is a priority. Organizing the different sources of ARVs to particularly important to avoid dispensing errors and to facilitate dispensing of shortest dated stock first.
- A larger dispensing space will be needed for scale-up
- As air-conditioning the dispensary is difficult, it is recommended that the no more than two weeks' supply of ARV be stocked to minimize exposure to higher than recommended temperatures. The pharmacy may need to plan for an air-conditioned storage space for the dispensary in the future.

- Temperature charts can be used to monitor if the routine temperatures in the storage area and the refrigerator are appropriate for the products held.

7. Record-Keeping at the Dispensary

Findings

- Prescription—
 - Official prescription form in use
 - Prescriptions are stamped with source of ARVs to be dispensed
- Inventory records—
 - Purpose—To track receipts and consumption by product and monitor losses and wastage; the dispensary uses an official stock card
 - Receipts—Record date, stock in, and balance; number of internal requisition not seen to be recorded
 - Issues—Record date, stock out, and balance; patient name and/or number not seen to be recorded but pharmacist reports that the entries are made and the stock balance is checked with the physical count at the end of each day
- Longitudinal patient dispensing record—
 - Purpose—To facilitate pharmaceutical care to patient – to cross-check medicines and doses prescribed and to identify source of medicines to be issued.
 - None seen
- Record to assist in aggregating consumption data by regimen and product dispensed—
 - Purpose—To forecast needs, the pharmacy will need to look at consumption patterns by regimen and also by product dispensed, e.g., to distinguish between consumption of 30 mg and 40 mg stavudine capsules for adults and between solid preparations and liquids for pediatrics
 - The Chief of Pharmacy uses an interim Excel spreadsheet Daily ART Service Register for Adult prepared by RPM Plus to collect and aggregate data and also to prepare a weekly dispensing schedule of patients expected to collect ARVs in that week; this dispensing schedule is used by the pharmacist to dispense the ARVs into pill boxes in advance
 - The prescriptions are filed with the dispensing schedule at the end of each week; at the end of the month the pharmacist reconciles the quantity of each medicine issued on the

stock card with the prescriptions, the dispensing schedule, and with the physical stock—process reported to take two hours each month

- Software—
 - The Excel spreadsheet is used as an interim measure to facilitate the collection and analysis of dispensing data for ARVs

Recommendations

- Inventory records—
 - For receipts at the dispensary—
 - Record the internal requisition number, batch number, and expiry date of product received to facilitate tracking and implementation of product recalls; recalculate the balance
 - For issues at the dispensary—
 - Ideally, the entries should be made at the time of dispensing ARVs to the patient
 - Record either the patient name or patient number to create an audit trail
 - Checking the balance—
 - Making a notation in the record that the balance is correct can help staff to look for errors if they know the last date when the balance was correct
 - A stock discrepancy form can be used to facilitate the recording and reporting of stock discrepancies that cannot be resolved
- Longitudinal patient dispensing record—
 - A patient-centered form can be used to track ARV dispensing by patient as an interim measure; however, software will be needed before the facility reaches its March 2006 target of 150 adults
- Record to assist in aggregating consumption data by regimen and product dispensed—
 - Interim RPM Plus excel spreadsheet will need to be replaced by a software before the facility reaches its March 2006 target of 150 adults
- Software—
 - A software package that allows one entry at the time of dispensing to collect data for inventory management, pharmaceutical care and forecasting is needed to reduce the impact of ART record keeping on the workload of the pharmacy

- As the facility is managing three sources of ARVs, the software should aggregate and record data for all three sources to allow the site to prepare individual reports for the three donors
- The software should be able to produce a weekly dispensing schedule to help the pharmacist dispense in advance
- Installing the software is a priority to minimize workload due to record keeping and catch up data entry; an interim stand-alone software package can be used while integrated systems are being developed and tested

8. Dispensing and Medication Counseling for ARVs at the Dispensary

Findings

Topics	Observations/Information Reported
Reference materials on ART	<ul style="list-style-type: none"> ● None seen at ARV dispensing area
Container	<ul style="list-style-type: none"> ● Pill boxes used for solid preparations ● Pharmacist fills pill box ● Due to pill box shortages, morning doses are dispensed in pill box and evening doses are dispensed loose in the plastic bag ● Reported that about 50 percent of patients forget to return pill boxes ● Plan to use pill boxes continuously for all patients regardless of source of ARVs ● Not clear what happens to the pill boxes returned by patients—whether they are cleaned before reuse and/or returned to the same patient who used it before
Labels	<ul style="list-style-type: none"> ● None seen to be used
Dispensing process	<ul style="list-style-type: none"> ● Chief of Pharmacy prepares a weekly ARV dispensing schedule using the Daily ART Service Register for Adult spreadsheet ● Pill boxes are prepared in advance—pharmacist works extra hours to get the dispensing done each week ● No tablet/capsule counters seen ● Uses fingers to place capsules into pill box ● ARV dispensing schedule <ul style="list-style-type: none"> ○ First month—weekly ○ Second month—twice weekly ○ Third month—monthly ● Dispensed ARVs are stored in a box for collection in the afternoon ● Patient brings prescription to the pharmacy ● Prescription received and checked ● No patient-centered record observed to be available for cross-checking prescription ● Records made at end of the day

Topics	Observations/Information Reported
Patient Flow	<ul style="list-style-type: none">• Patient observed to be seen by—<ol style="list-style-type: none">(1) Receptionist at clinic(2) ART doctor(3) Pharmacy personnel(4) Clinic staff for further medication counseling• Journey between the pharmacy and the clinic involves crossing a busy road and passing through security• Clinic staff report that eventually patient will only return for further medication counseling at the clinic if needed—so pharmacy will be the last encounter• Head of the Clinic reports that pharmacy is responsible for doing pill counts
Medication counseling area at the dispensary	<ul style="list-style-type: none">• Table and two chairs set up in the entrance hall to the pharmacy• Counseling area is not confidential but pharmacy is quiet in the afternoon so the encounter is relatively private
Content of medication counseling at the dispensary	<ul style="list-style-type: none">• Chief of Pharmacy would like to expand the role of the pharmacist to provide medication counseling on ART but existing workload does not allow• No counseling given during three encounters observed• No adherence monitoring or pill counts seen to be done by pharmacy staff
Patient information leaflets	<ul style="list-style-type: none">• None seen at dispensary

Recommendations

- Reference materials—
 - Provide a standard set of reference materials and clinical guidelines for the dispensing pharmacist
 - Identify a mechanism to keep the materials updated
- Container—
 - Pill boxes—
 - Consider adopting the procedure used at Binh Thanh, Ho Chi Minh City, where the patient is given a pill box, taught to fill, and given instructions on how to clean it. Pharmacy could then dispense the medicines in plastic bags and allow the patient to fill the pill box. As the pharmacy dispenses in advance, this procedure would address the concerns on cleaning and reusing the pill box and also reduce the time taken to dispense per patient.
 - For liquids—
 - If Viet Tiep plans to dispense to pediatric clients, decide if original bottles will be dispensed or if medicine bottles will be needed to allow the pharmacy to dispense precise quantities to facilitate adherence monitoring

- Labels—
 - Consider cost implications and benefits of labeling medicines with name and dose to be taken to facilitate adherence
 - As the pharmacy dispenses in advance, labeling the dispensed medicines will assist in avoiding prescription errors when the pharmacist searches through the box to find the pre-dispensed medicines for each patient
 - Labels will be needed for pediatrics if medicine bottles are used to dispense precise quantities
- Dispensing process—
 - Tablet counters and using tweezers/gloves to load the pill boxes can minimize contamination during dispensing
- Patient flow
 - Facilitate the process of patients passing through hospital security to reach the pharmacy
- Medication counseling—
 - Consider the cost implications and benefits of expanding the role of the highly trained pharmacist to play a greater role in medication counseling and possibly adherence monitoring for ART
 - As it is intended that eventually the pharmacy will be the final encounter for the patient, the pharmacist in charge of dispensing will play a crucial role in checking that the patient has understood all instructions and if there are any concerns that might impact adherence the pharmacist or someone else has addressed them
 - A standard operating procedure should be developed for adherence monitoring at the pharmacy including forms for documenting pill counts and training given to the pharmacist responsible for dispensing ARVs
- Patient Information Leaflets—
 - Make information leaflets available at the dispensing point in addition to the clinic
- Identify a mechanism to make pill boxes available for all clients receiving ART regardless of source.

9. Pharmacy Reporting for the ART Program

Findings

- Each facility receiving PEPFAR-funded ARVs completes two forms to facilitate forecasting of ARV medicine needs and one order form at the end of each month.
- The three interim forms are—
 - ARV Patient Reporting Form
 - ARV Stock/Usage Reporting Form for health facility
 - ARV Ordering and Receipt Form for health facility
- The forms need to reach RPM Plus by the tenth of each month to ensure that orders are dispatched promptly
- LIFE-GAP/CDC have requested that the forms pass through their office
- The pharmacy had completed the forms for the first time at the time of the site visit. Concerns/issues reported by the pharmacy staff—
 - The time needed to aggregate the data for completing the form for forecasting was reported by the pharmacist in charge of dispensing ARVs to be an estimated two hours every month
 - The pharmacy staff requested that software to assist in the process be made available as soon as possible

Recommendations

- The RPM Plus team to work with LIFE-GAP/CDC to monitor and if necessary, address site problems in completing the reports and delays in the reports reaching RPM Plus by the tenth of each month.
- As mentioned previously, software to aggregate and report data in a format that facilitates reporting for ARV medicines will reduce the workload for the pharmacy considerably.
- The software will be needed before the facility reaches its March 2006 target of 150 adults.
- One software program should be used to collect and aggregate data and facilitate reporting for all sources of ARV medicines. Ideally, the same procedure and form should be used for reporting for all sources of ARV medicines held at the facility.

10. Other Issues Discussed

Human Resources

The Chief of Pharmacy reported that dispensing for 20 patients for the ART program was already having an impact on the workload of the pharmacy. The pharmacist responsible for dispensing ARVs reports that she is working additional hours to complete the dispensing and the current workload does not allow her to provide comprehensive medication counseling to patients or to perform pill counts. Record keeping and reporting is a significant burden that could be addressed by making software available. Additional human resources will be needed at the pharmacy to support ART scale-up.

NEXT STEPS

- The site visit report will be shared with the staff from the pharmacy department at Viet Tiep Hospital and LIFE-GAP/CDC for review and comments.
- The findings and recommendations in this report will be aggregated with the reports from the other seven ART sites visited by the RPM Plus team in October 2005 and shared with site staff, implementing agencies, and stakeholders.
- RPM Plus will work with site staff, implementing agencies, and key stakeholders to identify how current procedures and tools could be harmonized to facilitate the development of SOPs for pharmaceutical ART services. Lessons learned and best practices identified from the sites visited can be used to improve current practices.

