

**RPM Plus Site Visit
to An Hoa Center,
District 6,
Ho Chi Minh City.
October 14, 2005:**

Report

Management Sciences for Health
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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
CPC	Central Pharmaceutical Company
FDC	fixed-dose combination
GoV	Government of Vietnam
HIV	human immunodeficiency virus
MDM	Medicins du Monde
MSH	Management Sciences for Health
OI	opportunistic infection
PAC	Provincial AIDS Committee
Pact	Private Agencies Collaborating Together, Inc.
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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PAC, Ho Chi Minh City

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- Dr. Huynh Thu Thuy, Program Officer, U.S. Centers for Disease Control
- Ms. Ma Bun Cam
- Ms. Nguyen Thi Thu Thao

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- Dr. Diana Measham, Country Representative
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- Dr. Vincent Trias, Program Director, Ho Chi Minh City
- Dr. Gerard Thi Hoang My, Medical Coordinator
- Mr. Tran Tri Danh

An Hoa Center

- Dr. Tran Thuy Nhan, Head of Clinic
- Ms. Huynh Thi Thanh Dieu, Pharmacy Dispenser
- Dr. Hung, ART Prescriber

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 demonstrated to assist in standardizing 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>Only one source of ARVs expected at time of visit</p> <p>U.S. President's Emergency Plan for AIDS Relief (PEPFAR)-funded ARV dispensing started in September 2005</p>	<p>RPM Plus to make a follow-up visit after two months and then every six months to assist An Hoa Center to strengthen procedures and address challenges</p>
ARV medicine flow at the facility	<p>ARVs are delivered by Central Pharmaceutical Company (CPC) No.1 to the pharmacy department of the District Hospital which then send the ARVs to An Hoa Center</p> <p>At An Hoa Center, the ARVs are received, stored, and dispensed by the pharmacy department</p>	
Receiving ARVs at the site	<p>ARVs are delivered by CPC No.1 to the pharmacy department of the District Hospital which then send the ARVs to An Hoa Center</p> <p>Site staff prefer ARVs to be delivered directly to An Hoa Center; working with District Hospital to check on procedures including for reporting receipt of ARVs to finance</p>	<p>RPM Plus to inform CPC No.1 of narrow access road and need for small vehicle</p> <p>CPC No. 1 to notify site before delivering ARVs to minimize the receiving process</p> <p>An official form, such as a Financial Receiving Note, can be used to facilitate financial reporting</p>

Topics	Findings	Recommendations
Inventory management and record-keeping at the ARV storage area	Official stock cards used	Separate record-keeping for ARV storage area from dispensary for scaling up
	ARV stocks held in two areas but share same set of records	Record batch number and expiry date when receiving ARVs
	Receipts—Batch number and expiry date not seen to be recorded	Check balance with physical stock once a month or when issuing or receiving ARVs
	Issues—Patient's name/number not seen to be recorded	Routinely monitor temperature of storage area and refrigerator
Internal distribution of ARVs	Inventory records are shared so no system in place for internal distribution	Use a double copy requisition book to track movement of ARVs from the 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	Temporary dispensing area does not have air-conditioning	Do not keep more than two weeks' supply of ARVs at the dispensary to minimize exposure to high temperatures. Routinely monitor temperature of storage area and refrigerator
	ARVs stored in cabinets with glass doors in open area	Secure cabinets if dispensing area is routinely left unattended
	Space for storage and dispensing adequate for now	
	New air-conditioned, secured dispensary is planned	

Executive Summary

Topics	Findings	Recommendations
Record-keeping at the dispensary	Official prescription form in use	
	Inventory records shared with dispensary	Separate inventory record and record issues daily or preferably at time of issue. Record patient name or number for each issue. Check the balance with physical stock at least once a week
	No longitudinal patient dispensing record not seen to be recorded	Establish a patient-centered record to track dispensing by patient and to cross-check prescription as an interim measure
	Interim forms in use to assist in aggregating consumption data for scale up	Interim forms need to be replaced by software that uses one entry at time of dispensing to collect data for inventory management, cross-checking prescriptions, and forecasting
	No software in use	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
Dispensing and medication counseling at the dispensary	No ART reference materials seen	Provide standard set of guidelines and reference materials
	Plastic sealable bags used at present—filled by pharmacy staff; tablet counters seen but not used; pill boxes expected	Minimize handling of ARV products by using gloves, tablet counters, or tweezers Consider teaching patients to refill and clean pill boxes themselves to minimize workload and handling of boxes by the pharmacy
	Labels not used	Consider costs and benefits of using labels
	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—no problems reported	RPM Plus, Provincial AIDS Committee (PAC), Mediciens du Monde (MDM), and Private Agencies Collaborating Together, Inc. (Pact) to monitor and assist site to address problems in completing and submitting the reporting forms to RPM Plus
	Workload implications of reporting and timeliness of forms reaching RPM Plus are potential concerns	
Other issues	ARV dispensing to pediatric patients not started yet	Advantages and disadvantages of dispensing exact quantities of liquids until the next appointment or rounding up to nearest whole bottles need careful consideration
	Site has tablet cutter for solid preparations	

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 pharmaceutical management SOPs have been shown to support standardizing procedures to ensure quality and consistency of services, to foster good dispensing practices, and to further 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 An Hoa Center in District 6, Ho Chi Minh City, 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 An Hoa Center 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 ART program scale-up

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, Arlington, VA
- 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 An Hoa Center, systems and forms are evolving and 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	Dispensing started in September 2005	27 at the end of September 2005	90 at end of March 2006

- Only one source of ARV medicines expected—PEPFAR-funded ARVs—generally single-medicine branded products.
- MDM provides technical assistance to An Hoa Center to support the ART program with funding through Pact.
- Prescriptions are currently not endorsed with source of ARVs to be dispensed as only one source is in stock at the moment.

Recommendations

- As the ART program has just been introduced at An Hoa, a follow-up visit/contact should be made after two months and then every six months to help the site develop and strengthen procedures, address challenges, and monitor the impact of the ART program.

2. ARV Medicine Flow at the Facility

Findings

- The flow of PEPFAR-funded ARVs at An Hoa Center is described in Figure 1.
- ARVs are delivered by CPC No. 1 to the pharmacy department at the District Hospital. The District Hospital then delivers the ARVs to An Hoa Center.
- The site staff would prefer that CPC No. 1 deliver the ARVs directly to An Hoa Center.
 - RPM Plus will assist An Hoa Center to set up direct delivery of ARVs to the site by CPC No. 1
 - Dr. Tran Thuy Nhan, clinic head, An Hoa Center, will work with the District Hospital to set up systems to allow CPC No. 1 to deliver ARVs directly to An Hoa Center and to check on the procedure to be used to report the receipt of ARV medicines to the finance department
- The ARVs are received, stored, and dispensed by pharmacy at An Hoa Center.

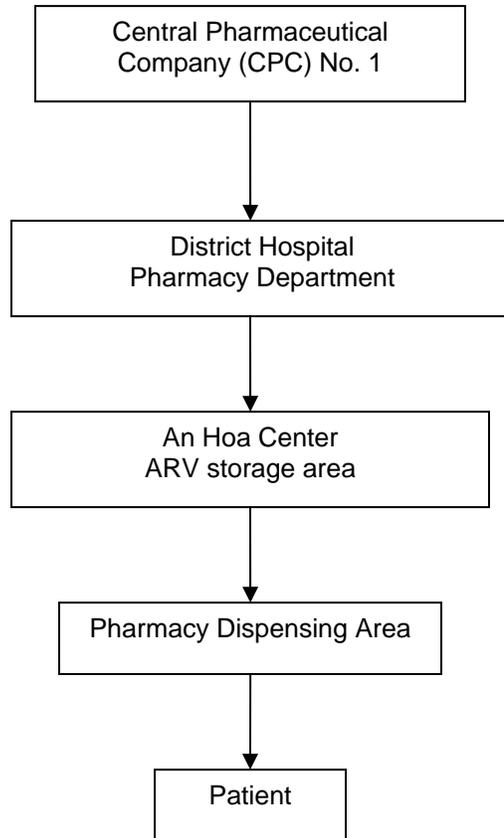


Figure 1. Flow of PEPFAR-funded ARVs at An Hoa Center

3. Receiving ARVs at the Site

Findings

- Procedure—
 - CPC No. 1 delivers PEPFAR-funded ARVs to the pharmacy department at the District Hospital
 - The pharmacy department at the District Hospital forward the ARVs to An Hoa Center
 - The site staff check the order received and inspect it for damaged and expired stock
 - ARVs are put into cupboards in the ARV storage area and receipt is recorded in inventory records
- As mentioned previously, the site staff would prefer that CPC No. 1 deliver the ARVs directly to An Hoa Center.
 - RPM Plus will assist An Hoa Center to set up direct delivery of ARVs to the site by CPC No. 1

- Dr. Nhan will work with the District Hospital to set up systems to allow CPC No. 1 to deliver ARVs directly to An Hoa Center and to check on the procedure to be used to report the receipt of ARV medicines to the finance department
- The access road to An Hoa is very narrow with little space for parking a truck outside of the facility.

Recommendations

- Due to the narrow access road, CPC No. 1 will need to use a small vehicle to deliver ARVs. RPM Plus will discuss this constraint with CPC No. 1.
- An Hoa would need to be notified of the delivery so that the staff are prepared to unpack, check, and receive ARVs while the CPC No. 1 driver waits. RPM Plus will request CPC No. 1 to notify sites of date and time of ARV deliveries.
- Consider using an official form for reporting receipt of medicines to the finance department at the District Hospital, if appropriate. For example, Viet Tiep Hospital uses a financial receiving note to report receipt of ARV medicines to finance.
- 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).
- Consider using a standard form to facilitate the reporting of shipment discrepancies.

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

Findings

ARV Storage Area		
Topics	For Current ART Patient Numbers/Stock	For ART Scale-Up
Organization	<ul style="list-style-type: none"> ● Neat and tidy ● Organized with first expiry to front 	NA
Space	<ul style="list-style-type: none"> ● Adequate shelf space with room for expansion 	<ul style="list-style-type: none"> ● Probably adequate
Security	<ul style="list-style-type: none"> ● Adequate ● Well secured inner room 	<ul style="list-style-type: none"> ● Adequate
Air-conditioning	<ul style="list-style-type: none"> ● Adequate 	<ul style="list-style-type: none"> ● Adequate
Temperature monitoring of storage area	<ul style="list-style-type: none"> ● None seen 	NA
Refrigerator	<ul style="list-style-type: none"> ● Neat and tidy with no food ● Opened bottles marked with date of opening ● Room for expansion 	<ul style="list-style-type: none"> ● Probably adequate
Temperature monitoring of refrigerator	<ul style="list-style-type: none"> ● Not seen 	NA

- Storage area has been recently upgraded.
- Record-keeping
 - Official inventory records in use—stock cards (the kho)
 - Records observed to be neat, legible, and well kept.
 - Appears that one inventory record is shared between ARV storage area and dispensary
 - Receipts—in sample of ARV records observed
 - Only one order received for most medicines
 - Date, quantity received, balance recorded
 - Batch number and expiry date of medicines received, but not recorded
 - Issues—in sample of ARV records observed
 - Issues—date, stock out, and balance recorded; patient name and/or number not seen to be recorded

Recommendations

- Consider establishing separate inventory records for the ARV storage area and the dispensary to facilitate checking of stock balances and tracking the movement of ARVs as the program scales up
- For receipts at the ARV storage area—
 - Record the date, supplier, delivery note number, and quantity received for each product—recalculate the balance
 - Record the batch number and expiry date to facilitate tracking and implementing product recall
- For issues at the ARV storage area—
 - Make the entries at the time of issuing stock to the dispensary
 - Record the date, internal requisition number (see below) or patient name/number, quantity issued, and recalculate the balance
- For balance—
 - Check with the physical stock once a month or at the time of receipt or issue

- Make 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
- Use a stock discrepancy form to help record and report stock discrepancies that cannot be resolved
- Temperature charts can be used to verify if the routine temperatures in the storage area and the refrigerator are appropriate for the products held.
- A chart to monitor expiry date of ARV products may be useful.

5. Internal Distribution of ARVs

Findings

- No mechanism seen for tracking the movement of ARVs from the storage area to the dispensary. One inventory record appears to be shared between the two areas.

Recommendations

- If a decision is made to separate the inventory records for the ARV store and the dispensary, identify an appropriate requisition book that can be used by the dispensary to requisition ARVs from the ARV store. The internal requisition book used by the pharmacy department at Viet Tiep Hospital can be used as a model.
- Each requisition should have a unique number and a copy. Generally, the department requisitioning ARVs keeps the book (and the requisition copy that remains in the book) and the department issuing ARVs retains the original which is detached from the book when the transaction is complete.
- Suggested procedure—
 - Pharmacy staff completes a requisition with name, strength, formulation, and quantity of each ARV needed, and signs and dates the requisition
 - The staff member responsible for issuing ARVs from the ARV storage area endorses the requisition with quantities that should be issued, and signs and dates the requisition
 - The receiving pharmacy staff checks the ARVs received for discrepancies and signs and dates the requisition if all is correct
- The unique requisition number should be documented when recording the issue at the ARV storage area and the receipt at the dispensary.

6. Dispensary ARV Storage and Dispensing Area

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"> • Temporary dispensing area is a counter in the center of the clinic outside the clinic room • Medicines are stored in a glass fronted cabinet behind the dispensing counter • Neat and tidy • Organized with first expiry to front • Opened bottles marked with date of opening 	NA
Space	<ul style="list-style-type: none"> • Glass cabinets are full of medicines — not much room for expansion • Space for dispensing ARVs is probably adequate 	<ul style="list-style-type: none"> • New air-conditioned, secured dispensary is planned following renovations in December
Security	<ul style="list-style-type: none"> • Glass cabinets in an open area • May need additional security if dispensing area is routinely left unattended 	<ul style="list-style-type: none"> • Renovations planned
Air conditioning	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Renovations planned
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"> • Renovations planned
Temperature monitoring of refrigerator	<ul style="list-style-type: none"> • Not seen 	NA

Recommendations

- Consider securing the glass fronted cabinets if the temporary dispensing area is routinely left unattended.
- As air conditioning the dispensing area is difficult, it is recommended that the dispensary keeps no more than two weeks supply of ARV stocks to minimize exposure to higher than recommended temperatures.
- Temperature charts can be used to monitor if the routine temperature in the dispensing area and the refrigerator is appropriate for the products held.

7. Record-Keeping at the Dispensary

Findings

- Prescription—
 - Official prescription form in use
 - Only one source of ARVs available at present so prescription is not stamped/marked with source at present
- Inventory records—
 - Track consumption by product and monitor losses and wastage
 - Share inventory records with the ARV storage area
 - Patient name/number not seen to be recorded for issues
- Longitudinal patient dispensing record—
 - Facilitate pharmaceutical care to patient by cross-checking 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—
 - 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 pediatric patients)
 - Interim forms prepared by RPM Plus are available and staff have been trained to use them (not seen)
 - Daily ART Service Register for adult patients
 - Daily ART Service Register for pediatric patients
 - Daily ART Service Register for prevention of mother-to-child transmission
- Software—
 - No software is in use at the moment to facilitate the collection and analysis of dispensing data for ARVs
 - An Hoa staff requested software to assist with record-keeping at the dispensary

Recommendations

- Prescription—
 - When more than one source of ARVs become available, stamps can be used by the prescriber to endorse the ART prescriptions with source of medicines to be dispensed—the stamped information can be used as a cross-check with pharmacy records
 - File the ART prescriptions separately to facilitate auditing of issues
- Inventory records—
 - As mentioned previously, consider establishing separate inventory records for the ARV storage area and the dispensary to facilitate checking of stock balances and tracking the movement of ARVs as the program scales up
 - For receipts at the dispensary—
 - Record the date, 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 stock to the patient, but should at a minimum be done daily as the program scales up
 - Record the date, either the patient's name or number, quantity issued, and recalculate the balance; including the patient's name or number will create an audit trail
 - Checking the balance—
 - Can be checked with the physical stock once a week (increase to daily as patient numbers increase) or at the time of receipt of ARVs from the ARV storage area
 - 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 90 adult patients
- Record to assist in aggregating consumption data by regimen and product dispensed—

- Interim RPM Plus forms will need to be replaced by a software before the facility reaches its March 2006 target of 90 adult patients
- Software—
 - A software package that allows staff to enter data for inventory management, pharmaceutical care, and forecasting all at time of dispensing is needed to reduce the impact of ART record-keeping on the pharmacy’s workload
 - The software should aggregate and report data in a format that facilitates reporting of workload, consumption, and data for forecasting
 - 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 have not been received yet ● Plastic bags are used for dispensing ARVs ● Small bags are used to package each set of morning and evening doses of ARVs ● Larger plastic bags are used to package three or four days supply
Labels	<ul style="list-style-type: none"> ● None used
Dispensing process	<ul style="list-style-type: none"> ● Prescription received and checked ● No patient-centered record observed to be available for cross-checking prescription ● Tablet counters seen ● Open boxes are kept in a metal tray on the dispensing counter ● Uses fingers to place capsules into bags ● Records made at the end of the day
Patient flow	<ul style="list-style-type: none"> ● Patient observed to be seen by— <ul style="list-style-type: none"> - ART doctor - Pharmacy staff
Medication counseling area at the dispensary	<ul style="list-style-type: none"> ● Medication counseling given at dispensing counter ● Encounter is not confidential
Content of medication counseling at the dispensary	<ul style="list-style-type: none"> ● Observation was limited due to time constraints. ● Dispenser explained which medicines to take in the morning and which in the evening ● Adherence monitoring by pharmacy staff not formalized yet
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 dispenser
 - Identify a mechanism to keep the materials updated
- Container—
 - Pill boxes—
 - When pill boxes arrive, consider adopting the procedure used at Binh Thanh in Ho Chi Minh City where the patients are taught to fill the pill boxes themselves and given instructions on how to clean them. Pharmacy could then dispense the medicines in plastic bags and allow the patients to fill the pill boxes themselves; this procedure would address concerns on cleaning the pill boxes and also reduce the time taken to dispense per patient.
 - Liquid containers—
 - Plan for start up of dispensing 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
 - 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 information leaflets—
 - Make information leaflets available at the dispensing point in addition to the clinic

9. Pharmacy Reporting for the ART Program

Findings

- Each facility receiving PEPFAR-funded ARVs completes two report 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.
- An Hoa Center had completed the forms for the first time at the time of the site visit and reported that they had not encountered any difficulties with filling the forms or preparing the estimates of new patients.
- The site staff suggested adding a section to the forms to report on medicines that are not being used or that are short-dated so that these ARVs can be collected and redistributed to other sites.
- The site is very eager to receive software to collect ARV dispensing data and offered to be a test site for an appropriate tool.

Recommendations

- The RPM Plus team to work with PAC, MDM, and Pact 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 considerably for the pharmacy.
- The software will be needed before the facility reaches its' March 2006 target of 90 adult patients.

10. Other Issues Discussed

ARV Dispensing for Pediatric Patients

An Hoa staff have not as yet started dispensing ARVs to pediatric patients but have some children who have been identified as needing ART—the children are 5, 7, and 12 years old and all of them weigh less than 30 kg. In addition, five HIV positive mothers are expected to deliver

children in the near future. The clinic staff were able to find pill cutters/crushers for sale in a local pharmacy in Ho Chi Minh City; however, they asked for advice on dispensing liquids—should they dispense supplies in whole bottles or issue the exact quantity needed until the next appointment.

The RPM Plus staff explained the advantages and disadvantages of the options—

Dispensing Options	Advantages	Disadvantages
Rounding up to the nearest whole bottle	<ul style="list-style-type: none">• Easier and quicker to dispense• Easier for caregiver to distinguish between bottles—makes medication counseling easier• Can dispense without a label although all containers should be labeled with dose and frequency as part of Good Dispensing Practice	<ul style="list-style-type: none">• Difficult to calculate consumption from inventory card issues• Harder to monitor adherence and/or identify under or overdosing
Dispensing the exact quantity	<ul style="list-style-type: none">• Allow easier monitoring of adherence• Easier to identify if caregiver is overdosing or underdosing• Calculation of monthly consumption from inventory records is easier	<ul style="list-style-type: none">• Need clean, dry, amber medicine bottles with suitable screw top lid in multiple sizes• Need labels to label medicine bottles• May need a glass measure to measure liquids precisely• May need additional oral syringes/spoons/ measuring cups if dispensing less than a whole bottle — most brand products only provide one measuring device per original bottle• Still need to add some overage for losses when measuring doses

NEXT STEPS

- The site visit report will be shared with the staff at An Hoa Center, MDM, Pact, and PAC, Ho Chi Minh City, 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.

