

*Training in
Inventory and
Store
Management for
Health Care
Providers and
Health Facility
Managers*

*Participant's Guide
Senegal*

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



USAID
FROM THE AMERICAN PEOPLE

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

May 2007

**TRAINING IN INVENTORY AND STORE MANAGEMENT
FOR HEALTH CARE PROVIDERS
AND HEALTH FACILITY MANAGERS**

PARTICIPANT'S GUIDE

Senegal



CONTENTS

TRAINING CONTENTS	v
SESSION 1. INTRODUCTION	1
Goal and Objectives of Inventory Management Training	1
SESSION 2. MANAGING THE MEDICAL STORE AND ITS INVENTORY	3
Objectives	3
Contents	3
SESSION 3. ESTIMATING THE QUANTITY TO ORDER.....	7
Objectives	7
Contents	7
SESSION 4. RECEIVING AND STORING MEDICINES	11
Objectives	11
Contents	11
SESSION 5. SUPERVISING STOCK MANAGERS.....	13
Objectives	13
Contents	13
APPENDIX 1.....	15
APPENDIX 2.....	17
APPENDIX 3.....	19
APPENDIX 4.....	21
APPENDIX 5.....	23

TRAINING CONTENTS

NO.	SESSION	CONTENTS
1	Introduction	<ul style="list-style-type: none">• Goal and objectives of the training
2	Managing the medical store and its inventory	<ul style="list-style-type: none">• Storage conditions• Completing management tools• Inventory
3	Estimating order quantity	<ul style="list-style-type: none">• Calculation of the average monthly consumption (AMC)• Quantity to order
4	Receiving and storing medicines	<ul style="list-style-type: none">• Qualitative control of medicines• Quantitative control of medicines• Arrangement of medicines
5	Supervising the storekeeper and the community health workers	<ul style="list-style-type: none">• Aspects to be checked in the management of the medicine inventory

SESSION 1. INTRODUCTION

This module was created for health workers and managers of health facilities. It supplements existing inventory management training manuals.

It is intended to reinforce participants' skills in inventory and store management of essential medicines at the health facility level. Medicines are one of the most important links in the chain of treatment for the principal conditions found in our communities.

In addition, provision of medicines is an important component of primary health care. Rational prescribing of appropriate medicines plays a fundamental role in the prevention and treatment of certain diseases and even in promoting health. The availability of medicines is a prerequisite for the population to use health care services on a regular basis, and it is important to ensure availability of medicines so that illnesses are treated appropriately.

Therefore, the key to good care is highly dependent upon the availability of medicines at all health care facilities. It will also affect the quality of services.

It is hoped that after the training, the quality of medical services will be improved by ensuring the continuous availability of essential medicines. The manual is also intended to be a tool to strengthen the skills and knowledge of inventory and store management of health workers and managers in health facilities.

Goal and Objectives of Inventory Management Training

Goal

To improve the skills of the health care providers and in charges of health facilities in inventory and store management so that they can better assist and supervise their store keeper and the community health workers (CHWs) for the health huts under their post.

Objectives

At the end of the training, each participant will be able to—

- Properly prepare the medicine storage area
- Complete the various management tools correctly
- Select medicines and determine the appropriate quantities of each product to order
- Check the qualitative and quantitative aspects of the medicines received
- Arrange the products correctly on the shelves according to the guidelines
- Perform an accurate and periodic inventory of the products
- Monitor and evaluate the inventory management of the storekeepers and the CHWs

SESSION 2. MANAGING THE MEDICAL STORE AND ITS INVENTORY

Objectives

At the end of this module, participants should be able to—

- Properly prepare the medicine storage area
- Complete each management tool used at the facility correctly and in a timely manner

Contents

Preparing the Medicine Storage Area

It must be—

- Clean and well maintained: Sweep and dust the storage area often because it stores medicines to treat people who are ill.
- Well ventilated and dry: The area must be well ventilated so that the medicines are not exposed to high temperatures; it must be dry because moisture can impair product quality.
- Secure (locked with a key): Limit access to the area, thus preventing the risk of theft, etc.
- Well organized: An appropriate arrangement of the medicines in the store is needed to make it easier to locate them when dispensing.

Correctly Completing the Management Tools

The primary management tools to be completed are—

- Ledger of medicines dispensed by patient
- Ledger of daily medicine distribution
- Stock card
- Order/delivery book

The advantage of correctly completing the management tools is that it makes it possible at all times to—

- Know the existing inventory (how much is in stock)
- Know what amount is dispensed per day and the facility's medicine consumption per month, etc.

- Know when and how the medicines are used
- Be able to use the recorded data at a later time

Therefore, by completing the management tools correctly, you save time because you need only refer to them to know the inventory status. Completing the tools also permits documenting the product movements.

Instructions for Completion

A. Ledger of medicines dispensed by patient (Appendix 1)

It should be completed each time medicine is dispensed, noting—

- Consultation or order number
- Patient's name and originating department
- Medicines dispensed and quantity
- Price

B. Ledger of daily medicine distribution (Appendix 2)

At the end of each day, the following must be filled in for each medicine regularly stocked in the health facility—

- Write the total number of pills or units dispensed in the column corresponding to the date.
- For each medicine, copy this total onto the stock card.

At the end of the month, complete the “Monthly Total” column for each medicine.

C. Stock card (Appendix 3)

It must be completed as follows—

- For **medicines received** (purchase or donation)—
 - Write the date.
 - Record the source of the medicine in the “Origin/Destination” column.
 - Note the quantity received in the “In” column.
 - Complete the “Balance” column, taking into account the quantity received.
 - Record the expiry date in the “Comments” column.
- For **medicines distributed or dispensed** or removed from inventory (including those expired, broken, or stolen, etc.)—
 - Write the date.
 - Indicate the destination of the medicine in the “Origin/Destination” column.

- Record in the “Out” column, the amount removed from inventory (distributed, dispensed, expired, broken, or stolen); this amount can be taken from the ledger of daily medicine distribution.
- Complete the “Balance” column, taking into account the quantity removed from inventory.
- **Inventory (or physical count)**—
This record makes it possible to continuously monitor the inventory, and it must be carried out in a logical manner. For example, you may decide to count three to five key products in the inventory each week, and the stock card must be completed as follows—
 - Write the date.
 - Record (in red) **Inventory** in the “Origin/Destination” column.
 - Indicate the quantity counted in the “Balance” column.
 - Write the expiry date in the “Comments” column.

Note: Storage of management tools

The management tools must be stored in a dry and well-ventilated area where they are protected from moisture, insects, or rodents.

Exercise 1 (to be completed individually):

You are in charge of the Keur Samba health post.

On March 20, 2003, you received 1,500 bottles of chloroquine syrup, which expire on in April 2004.

On that day, you had 100 bottles of chloroquine syrup in stock.

On March 22, 2003, you gave out 95 bottles for the Keur Ali health hut; on March 25, 2003, you gave 150 bottles to the Keur Bara health hut, and the next day (March 26), the Sindone health hut took 250 bottles.

On March 30, 2003, your health post receives a donation of 300 bottles of chloroquine syrup (with an expiry date of December 2004) from a supporting nongovernmental organization (NGO).

Correctly complete the stock card (Appendix 3) using the information provided above.

What did you note? How can you explain it?

SESSION 3. ESTIMATING THE QUANTITY TO ORDER

Objectives

At the end of this module, participants should be able to—

- Determine the average monthly consumption (AMC) of each medicine
- Correctly order medicines in appropriate amounts

Contents

It is possible to have good medicine availability if orders are placed on a regular basis. These orders should be based on past consumption. If you do this, the required medicines will be on hand when needed.

Monthly orders are placed at the district store to which the health post is assigned. These orders should be made at a specific time of the month (for example, between the **23rd** and the **1st** of each month).

The **average monthly consumption** can be calculated for each product based on the stock card.

The AMC is the average quantity of a product that the health facility uses during a month.

Calculating the AMC

- a. Count the product quantity distributed during one month.

Use the example of the stock card. The quantity (“Out”) is the quantity of product consumed.

The sum of the product quantities consumed must be calculated (but not including losses—for example, expired products that were destroyed) for as many months as are recorded on the stock card (up to 12 months is perfect, if possible). The quantities vary from month to month because consumption is highly dependent on demand for medicines.

- b. Add the quantities consumed for each month and divide by the number of months studied.

Example:

The following quantities dispensed of 500 mg tablets of paracetamol appear on the stock card—

Month of November: 200 tablets

Month of December: 160 tablets

Month of January: 240 tablets

Total consumption for the 3 months is $200 + 160 + 240 = 600$ tablets.

The .AMC is $600 \div 3 = 200$ tablets.

When you return to your respective facilities, you are going to individually calculate the average monthly consumption for each of your products.

Exercise 2 (to be completed individually):

Calculate the AMC of metronidazole tablets for a health post that consumed the following quantities during the first quarter of 2002—

January: 500 tablets

February: 650 tablets

March: 530 tablets

Determining What Quantity to Order

Order Quantity (OQ)

The quantity to be ordered for one month is two months' stock ($2 \times \text{AMC}$) in order to ensure continuous availability and to cover unforeseen events. The formula to calculate the OQ is—

$\text{OQ} = 2 \times \text{AMC}$

Example: What is the quantity of chloroquine tablets that must be ordered for one month when the AMC is 400 tablets?

Quantity of chloroquine to be ordered—

$$\text{OQ} = 2 \times \text{AMC}$$

$$\text{OQ} = 2 \times 400 = 800 \text{ chloroquine tablets}$$

Note: Although the community health workers are being trained with simplified calculations for the OQ, they are asked to use the above formula. For the next order, if the existing inventory is less than ($2 \times \text{AMC}$), this product should be ordered and the OQ will be ($2 \times \text{AMC}$). If the existing inventory is at least equal to ($2 \times \text{AMC}$), it is not necessary to order the product.

Therefore in the above example, if fewer than 800 chloroquine tablets are in stock, the OQ calculated above should be ordered. If more than 800 tablets are in stock, an order is not necessary this month.

Exercise 3 (to be completed individually):

The "Healthy Acres" health post wishes to order 500 mg paracetamol tablets in its monthly order. In the last inventory, the nurse in charge had counted with the storekeeper 2,000 paracetamol tablets, 800 of which were expired. Knowing that the post's average monthly consumption of 500 mg paracetamol tablets is 2,000, what quantity must be ordered?

Exercise 4 (to be completed individually):

When performing his inventory, a nurse in charge realizes that there are no more 150 mg chloroquine tablets and the rainy season is approaching. He wants to order enough to cover the three months of the rainy season because after the first rains, his post is not accessible.

Knowing that his average monthly consumption of chloroquine is 3,000 tablets and that he is expecting a donation of 4,000 chloroquine tablets from a supporting NGO, what quantity must he order to cover the three months of the rainy season without any stock-outs?

Ordering Medicines

After having estimated the medicine needs, the storekeeper must initiate the order. To do so, the storekeeper must prepare the list of medicines to be ordered in the **order/delivery book** (Appendix 4). In this book, the following must be filled in—

- date;
- name, form, and dosage of product;
- quantity to be ordered;
- the price of each product;

and the total price of the order must be calculated.

The order process consists of the following steps—

- Submit the order to the manager of the health facility for approval.
- Inform the health committee of the new order so that it can make any financial provisions that may be necessary.
- Send the order to the district store.
- Make an appointment to pick up the medicines.

Exercise 5 (group discussion):

The storekeeper who manages the medicine store submits to you a list of medicines with certain quantities to be ordered. You do not know the monthly consumption for the different products that the store keeper wishes to order.

What must you first do to order the correct quantities of the medicines?
What is the biggest advantage of preparing a correct order?

SESSION 4. RECEIVING AND STORING MEDICINES

Objectives

At the end of this module, participants should be able to—

- Appropriately receive medicine, that is, verify whether the items ordered are in fact those received in terms of quantity and quality
- Correctly arrange the medicines received on the stock shelves

Contents

Receiving Medicines

Good control over products received is important because it can detect delivery mistakes and ensure the quality of the delivery, that the medicines have not expired, and that there was no theft of or damage to the products.

The document necessary to receive medicines is the page from the order/delivery book (Appendix 4).

Control of quantity—

Mistakes can often be made at the time of delivery, which is why it is necessary to check that the products delivered and their quantities correspond to the delivery slip.

Control of quality—

- Check whether the packages are intact and the expiry dates are sufficiently far off.
- Check the dosage, form, and packaging

Receiving must be done by the receiving committee designated by the health committee.

Arranging Medicines

After the delivery is checked, each product must be placed in the stock by arranging products in the same form together, according to alphabetical order and with the expiry dates clearly displayed.

Example: Tablets will be stored in alphabetical order and according to the “FEFO” (first-expiry, first-out) system. Products with the earliest expiration dates must be stored in front of the others, so that they will be used before the others.

Products that have no expiration date, such as bandages, compresses, or other material, should be stored according to the “FIFO” (first-in, first-out) system.

Another very important aspect of pharmaceutical management is dispensing, but this was already covered in the Integrated Management of Childhood Illnesses (IMCI) module “Treating Children.”

Dispensing includes the following steps—

- Identifying the products prescribed
- Obtaining and packaging the products prescribed
- Clearly explaining the dosage in terms of numbers per dose, number of doses, and number of days of treatment
- Making the patient repeat the dosage instructions

SESSION 5. SUPERVISING STOCK MANAGERS

Objectives

At the end of this module, participants should be able to—

- Monitor and evaluate the activities of the storekeepers and CHWs at the health huts
- Use a checklist to supervise storekeepers and CHWs
- Supervise the storekeeper and CHWs in inventory and store management activities

Contents

The manager of the health facility must regularly supervise the activities of the storekeeper at the post as well as the CHWs in the health huts that fall under it. Specifically, the manager of the health facility should—

- Assess the medicine storage conditions (area is clean, dry, and well ventilated, well organized).
- Confirm the existence of the various inventory management tools (stock card, order/delivery book, ledger of medicines dispensed by patient, ledger of daily medicine distribution).
- Check for the correct and timely completion of these tools.
- Confirm that the physical stock corresponds to the recorded inventory (on the stock cards) for some products.
- Monitor the appropriate storage of the medicines according to the guidelines and check the expiry dates.
- Check the calculation of the AMCs and the order quantities with the storekeeper and the CHWs.
- Identify the storekeepers' and the CHWs' training needs.
- Add to the supervision book the suggestions made to the storekeeper and the CHW.

The chart included in Appendix 5 may be a useful guide to supervision.

APPENDIX 5

Supervision Chart

<i>Storage Area</i>	Yes	No
Medicine storage conditions (area is clean, dry, well ventilated, and well organized)		
Medicines are stored correctly according to the guidelines		
Presence of expired medicines		
<i>Inventory Management Tools</i>		
The storekeeper or CHW has the various inventory management tools: <div style="text-align: right; padding-right: 50px;">Stock card Order/delivery book Medicines dispensed by patient ledger Daily medicine distribution ledger</div>		
These tools are completed correctly and on time		
The physical stock corresponds to the recorded inventory (on the stock cards) for some products		
<i>Product Ordering</i>		
Calculation of the AMC and the quantity to be ordered is correct?		

