

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

*Trainer'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**

TRAINER'S GUIDE

Senegal



CONTENTS

FOREWORD	v
TRAINING CONTENTS	vii
SESSION 1. INTRODUCTION	1
Time	1
SESSION 2. MANAGING THE MEDICAL STORE AND ITS INVENTORY	3
Teaching Objectives.....	3
Preparation	3
Teaching Methods.....	3
Teaching Materials.....	3
Evaluation Methods	3
Time	3
Procedure	4
SESSION 3. ESTIMATING THE QUANTITY TO ORDER.....	9
Objectives	9
Preparation	9
Methodology	9
Teaching Materials.....	9
Evaluation Method.....	9
Contents	9
Time	9
Procedure	10
SESSION 4. RECEIVING AND STORING MEDICINES	15
Objectives	15
Methodology	15
Teaching Materials.....	15
Contents	15
Time	15
Procedure	15
SESSION 5. SUPERVISING STOCK MANAGERS.....	19
Time	19
Objectives	19

FOREWORD

This trainer's guide is designed for those responsible for training health care providers and managers of health facilities in pharmaceutical inventory and store management. The document is intended to provide all the assistance needed by trainers, at the same time giving them a reference for conducting appropriate training and thus achieving the objectives desired.

This guide gives a training strategy that can be adopted as is by trainers or used as the trainer thinks best. The guide provides the various steps for trainers to follow so that participants in the training can understand the process, and all aspects are reinforced by exercises.

Trainers should always keep in mind that they are not being asked to give an in-depth course, but rather to identify the key points that cannot be ignored if the objective is proper inventory management. From this perspective, trainers must always ensure that the participants are in step with them (monitor each one's progress) before moving on to the next step. Trainers will need to have a certain level of skill, discretion, and flexibility in this regard, and therefore, a certain degree of experience.

The training course is designed for health care providers and others working as managers of health facilities. This course fills a gap in inventory management, which is a very important and sensitive component of the health pyramid.

TRAINING CONTENTS

NO.	SESSION	CONTENTS	TIME
1	Introduction	<ul style="list-style-type: none"> • Goal and objectives of the training 	10 minutes
2	Managing the medical store and its inventory	<ul style="list-style-type: none"> • Storage conditions • Completing management tools • Inventory 	45 minutes
3	Estimating order quantity (OQ)	<ul style="list-style-type: none"> • Calculating the average monthly consumption (AMC) • Quantity to order 	45 minutes
4	Receiving and storing medicines	<ul style="list-style-type: none"> • Qualitative control of medicines • Quantitative control of medicines • Arrangement of medicines 	30 minutes
5	Supervising stock managers (storekeepers and community health workers)	<ul style="list-style-type: none"> • Aspects to be checked in the management of the medicine inventory 	20 minutes
	Total time	2 hours and 30 minutes	

SESSION 1. INTRODUCTION

Time: 10 minutes

As an introduction, explain that the training 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.

Explain why store management is important.

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.

Write on the flipchart and present the goal and objectives of the training—

Goal

To improve the skills of the health care providers and managers of health facilities in inventory and store management so that they can better assist and supervise their storekeeper and the 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 community health workers (CHWs)

SESSION 2. MANAGING THE MEDICAL STORE AND ITS INVENTORY

Teaching Objectives

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

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

Preparation

- Study the inventory management training module for health care providers and health facility managers participant's guide.
- Familiarize yourself with the exercises.

Teaching Methods

- Questions and answers
- Summary
- Exercises

Teaching Materials

- Flipchart
- Markers
- Slide (transparency) pens
- Photocopies of the management tools
- Slides
 - Stock card
 - Ledger of medicines dispensed by patient
 - Ledger of daily medicine distribution
 - Order/delivery book

Evaluation Methods

- Question and answer

Time: 45 minutes

Procedure

The trainer begins by presenting the course plan on the flipchart.

Title “Training Module for Inventory and Store Management for Health Care Providers and Managers of Health Facilities in the IMCI Framework”—

1. Managing the store and its inventory
2. Estimating quantity to order
3. Receiving and storing medicines
4. Supervising stock managers

Step 1: Introduction

The trainer begins by emphasizing the importance of medicines in Integrated Management of Childhood Illness (IMCI) before saying: “Good pharmaceutical inventory management cannot exist without management tools, and using management tools means completing them correctly. This session will help us improve how we complete our management tools.”

Step 2: Questions and Answers

The trainer uses an active question-and-answer teaching technique to determine whether the participants visit their medicine stores and whether they work closely with their storekeeper. The trainer begins by asking the following questions—

- “Do you visit your health facility’s store?”
- “How many times per week do you visit your facility’s store?”
- “Is the store clean and well maintained?”

After some responses, the trainer touches on the characteristics of an adequate and well-prepared storage area (well ventilated, dry, clean, well maintained, secure, and organized). The trainer asks what the characteristics of a well-prepared storage area are. For this, the trainer uses the brainstorming technique and writes the appropriate answers on the flipchart. Then, the trainer gives the participants the characteristics of an adequate and well-prepared storage area.

Then, the trainer asks the following questions to start a discussion on store management tools—

- “What management tools do you consult at the store?”
- “Are these tools well maintained?”
- “Do you discuss store management with the storekeeper? And if so, when?”
- “Do you help them in store management? If so, how?”

Step 3: Summary

The trainer asks a participant to recall the various tools that can improve pharmaceutical management in health posts. After discussion, the trainer summarizes as follows—

The following are the different tools that health posts must have—

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

The trainer asks what the advantages are of correctly completing the store management tools. After listening to several responses, he summarizes the key points.

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

- Knowing existing inventory (how much is in stock)
- Knowing the quantity dispensed per day and the medicine consumption of the facility for a month, etc.
- Knowing when and how the medicines are used
- Being able to make subsequent use of the data recorded

Therefore, appropriate completion of the management tools saves management time because one has only to consult them to know the inventory status. Completing management tools also makes it possible to document the inventory movement.

The trainer gives instructions for completing the forms using the examples in the appendixes of the participant's guide.

A. Ledger of medicines dispensed by patient (Appendix 1 in the participant's guide)

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 in the participant's guide)

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 in the participant’s guide)

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.

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

Step 4: Exercise

The trainer then gives an exercise to participants to complete individually and then discuss as a group.

Exercise 1:

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).

On April 5, 2003, you performed an inventory and determined that you have 1,300 bottles of chloroquine syrup.

Correctly complete the stock card (Appendix 3 of the participant's guide) using the information provided above.

What did you note? How can you explain it?

Exercise 1 (with answer):

Stock card

Date	Origin/ Destination	In	Out	Balance	Comments
				<i>100</i>	
<i>3/20/03</i>	<i>District Store</i>	<i>1500</i>		<i>1600</i>	<i>04/2004</i>
<i>3/22/03</i>	<i>Keur Ali</i>		<i>95</i>	<i>1505</i>	
<i>3/25/03</i>	<i>Keur Bara</i>		<i>150</i>	<i>1355</i>	
<i>3/26/03</i>	<i>Sindone</i>		<i>250</i>	<i>1105</i>	
<i>3/30/03</i>	<i>NGO gift</i>	<i>300</i>		<i>1405</i>	<i>4/12</i>
<i>4/05/03</i>	<i>Inventory</i>			<i>1300</i>	

SESSION 3. ESTIMATING THE QUANTITY TO ORDER

Objectives

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

- Determine the average monthly consumption for each medicine
- Correctly order medicines in appropriate amounts

Preparation

- Study the inventory management training module participant's guide.
- Familiarize yourself with the exercises.

Methodology

- Presentation/discussion
- Questions and answers (brainstorming)
- Exercises

Teaching Materials

- Flipchart
- Markers
- Copies of the exercises
- Order sheet
- Calculators

Evaluation Method

- Question and answer

Contents

Definition and calculation of—

- Average Monthly Consumption (AMC)
- Order Quantity (OQ)

Time: 45 minutes

Procedure

Step 1: Question and Answer

Referring to the course plan, the trainer introduces the theme by reminding the participants of the importance of correctly completing the management tools, especially the stock card, and explaining that this step is important to accurately estimate the medicine needs.

To stimulate a discussion the trainer asks the following questions—

- “How do you estimate the quantities to be ordered and when do you place the order?”
- “Are you able to order if your store keeper is absent? “
- “If so, on what do you base your calculations of the order quantity?”
- “What store management tool would you use in this case? Why?”
- “How do you choose which medicines to order?”
- “Does your storekeeper usually prepare the orders? Do you check them?”

After the participants respond, the trainer explains—

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).

Determining the AMC

Then the trainer says: “Now we will see how to estimate the amount of medicines to order.” And he asks: “What is the average monthly consumption?” The trainer notes the definitions given by the participants on the flipchart and summarizes as follows—

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

The trainer gives the following calculation formula—

For example—

$$\text{AMC} = \text{total consumption for the last 3 months} \div 3$$

It is better if the AMC can be calculated over a 12-month period because it is more exact.

The trainer clearly explains the concept of average monthly consumption and that this figure is necessary to prepare orders. He explains the process of 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.

The trainer gives an example, making sure that everyone has understood, and then gives the participants some exercises.

The trainer notes that the health post must place **one order per month** for medicines to the district level. The trainer gives the following example on the flipchart—

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.

Step 2: Exercises

Exercise 2:

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

January: 500 tablets

February: 650 tablets

March: 530 tablets

Exercise 2 (with answer):

Metronidazole

AMC = $(500 + 650 + 530) \div 3$

AMC = 560 tablets

Then, the trainer moves on to the component “Quantity to order” by saying, “Now that we have calculated the AMC, we are going to see how to calculate the quantity to be ordered.”

Determining What Quantity to Order

The order quantity (OQ) per month should be two times the AMC. The trainer gives the calculation formula below, which makes it possible to know the OQ—

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

The trainer says that although we know that one must normally take into account the existing inventory, because of the relatively low level of training of the storekeepers and CHWs, it is simpler to have them use this formula to calculate the OQ.

The trainer gives an example of calculating the OQ.

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: The trainer explains to the participants that 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.

Give the following exercises to be completed individually, and ask a participant to come to the board to correct them.

Exercise 3:

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 3 (with answer):

Inventory: 2,000 paracetamol tablets, 800 tablets of which are expired

The existing usable stock is: $2,000 - 800 = 1,200$ tablets

Average monthly consumption: 2,000 tablets of paracetamol.

To cover one month, the following must be ordered—

$(2 \times \text{AMC}) = (2 \times 2,000) = 4,000$ tablets of paracetamol because the existing inventory is less than the OQ.

Exercise 4:

When performing his inventory, the 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?

Exercise 4 (with answer):

The inventory showed the nurse in charge that no more chloroquine tablets were in stock. The average monthly consumption of chloroquine is 3,000 tablets. He expects 4,000 chloroquine tablets to be donated by an NGO. To cover the three months of the rainy season, he will need—
 $3 \times (2 \times 3,000) = 18,000$ tablets
Therefore, he must order—
 $18,000 - 4,000 = 14,000$ chloroquine tablets

Ordering Medicines

The trainer explains that 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 participant's guide). 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 store submits to you a list of medicines with certain quantities to be ordered. You do not know the monthly consumption of the various products 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?

Exercise 5 (with answer):

Important points—

- Verify the AMC of each product on the stock cards.
- Check the stock on hand for each product in the store (inventory).
- Verify the calculation of the OQ ($2 \times \text{AMC}$).

Advantages of placing a correct order—

- Money is not wasted.
- Ensures that the necessary medicines are always available.

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

Methodology

- Questions and answers (brainstorming)

Teaching Materials

- Flipchart
- Markers
- Page from the order/delivery book

Contents

- Receiving the medicines (control of quantity and quality)
- Arranging the medicines

Time: 30 minutes

Procedure

Step 1: Question and answer

The trainer begins by posing this question—

“When the medicines ordered arrive, are you present to receive them?” and the trainer continues with the following questions—

- “What aids do you use to verify that the quantities received correspond to the quantities ordered?”

- “How do you control the quality of the products received?”
- “How are the medicines stored in your facility?”

Then, the trainer tells the participants why it is important to check the 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.”

Using the page from the order/delivery book, the trainer states that it is important to check the quantity and quality of the medicines and explains the two types of control.

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.

The trainer also tells the participants that receiving must be carried out by the receiving committee designated by the health committee.

After this, the trainer addresses storing the medicines. The trainer tells the participants that each product must be arranged in the store by putting together products of the same form in alphabetical order and with the expiration dates clearly displayed.

For 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, which was already covered in the IMCI module “Treating Children.” Nevertheless, the trainer conducts a brief review, session asking what the different steps are in the dispensing process. After listening to the responses, he summarizes on the flipchart—

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

Time: 20 minutes

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 storekeepers and CHWs in inventory and store management activities

The trainer addresses the participants, telling them that the health care provider and manager of the health care facility must regularly supervise the activities of the storekeepers and the CHWs of the health huts. Specifically, the health care provider in charge 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.

Then, the trainer tells them that in Appendix 5 of the participant's guide, there is a supervision chart that they may use and adapt as needed in their supervision.

