

CHAPTER 7

SUPPLY MANAGEMENT

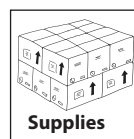
INTRODUCTION

Your health centre strives to use practises that have proved to be effective in delivering high-quality services. These best practises should not change when you add new supplies needed to provide HIV prevention, care and antiretroviral treatment (ART) services. Patients will receive ART treatment for life and each centre will care for increasing numbers of patients over time. The need for regular delivery of medicines and other supplies used to treat a chronic illness will be a new challenge for many centres. Following the basic rules of supply management is even more important when you must have a constant supply of antiretroviral drugs (ARVs) and other supplies on hand.

As centre staff, you will need to successfully manage your medicines and other supplies to treat the patients who visit your centre. This chapter outlines a plan to help guide your management of supplies.

7.1 HOW TO PREPARE YOUR STORE

Find out how much space is needed for the ARVs and other supplies including laboratory supplies needed to treat all of the patients your centre serves. Make sure that your centre has the space for storing extra supplies. Discuss with your staff about where you might store the new supplies. These may be kept in the dispensary store or elsewhere. Organize your store before you receive the new medicines and other supplies.



Remove supplies you do not use or need

Check all medicines and other supplies in stock. Remove any items from the store that have expired or are no longer used in order to make space for new medicines and other supplies for your HIV services. Always follow government procedures and/or your centre's policy on removing items that have expired. Be sure to return broken or expired medicines and other supplies to the supplier (such as the district hospital or a central, regional or area medical store).

Tidy the store

Clean and tidy all stores in your centre. Organize medicines and other supplies in stock.

Estimate how much storage space will be needed

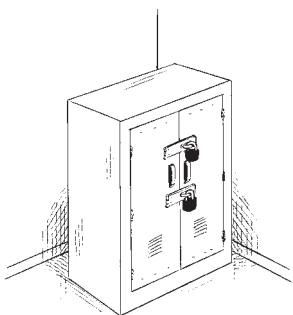
Talk with your staff members who provide HIV services and try to estimate how much space is needed for each item and what storage conditions are needed. Make sure you have enough storage space to store the supplies needed to add new HIV services (for example, supplies needed for testing, counselling, and ART). Make sure you are aware of temperature, space, and security requirements for your centre (see Infrastructure chapter). For each item, answer the following questions as a guide to help you figure out how much space you will need:

- How many supplies will be received?
- When are your supplies delivered (for example, every Wednesday or every other month)?
- Where will the items be stored? If they are going to be put on a shelf, which one?
- How much space does each item need?
- How long will each item stay in the store?
- Is cold storage needed? If so, in a refrigerator or freezer? (This generic manual assumes no refrigeration; therefore, think about whether any supplies you order will need to be kept cold.)
- How often does the space for storage need to be reviewed as you are adding new HIV services?

- Is there a way to check the temperature of the store?
- If you have supplies from donors, is there space for any special storage conditions? (see Infrastructure chapter).

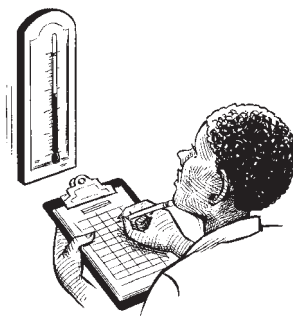
Lock your store

Put two locks on the door of the room or cabinet to prevent theft of costly medicines and other supplies. Each lock should have a different key. Limit the number of keys that are made. Locking the store helps to control the movement of stock and keeps medicines and other supplies from disappearing.

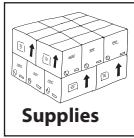


Check the temperature in the store

Check the temperature in the store regularly (at least once a day), and record it on the form called the “Temperature Control Log”.



7.2 HOW TO ORDER SUPPLIES BASED ON PAST USE



Successful supply management means that the required items are always available for the patients who need them. Supplies are more likely to be available if you order enough of them and do so regularly. The amount of supplies to be ordered should be based on the amount your centre has used in the past (defined as past consumption) and the amount that you anticipate you will need in the future (expected use for the next month).

For new programmes such as chronic HIV care and ART services, you may not have enough data on the past consumption of supplies. The number of patients may increase rapidly every month, prompting you to increase your services and supplies. The number of patients to be treated or added each month at your centre might be decided by your national programme manager or district coordinator. It is your job to make sure that ARVs, medicines, rapid HIV test kits and other supplies are always available at your centre. Use the section called ‘Order supplies for HIV services’ on p. 46 to order ARVs, other medicines and supplies as you scale up HIV services at your centre.

This section covers ordering supplies based on past supply needs and when supply needs are expected to stay the same for next few months. These supplies might include other chronic medicines such as for hypertension or diabetes commonly prescribed for patients attending your centre. These supplies also include drugs used to treat common infections such as pneumonia and diarrhoeal disease and routine supplies for maternal and child health services. Special approaches are needed in high malaria transmission areas to assure an adequate safety stock of artemisinin-based combination treatment packs and diagnostic supplies for malaria, given the high case-load seen during peak transmission seasons.

Calculate the average monthly consumption (AMC) of each item in your store

The monthly consumption of an item is the number of units your Centre uses in a month. This means the number of tablets, capsules, or other well defined unambiguous supply units: for instance a tin or a box that is not labelled with the specific number of units in it would be ambiguous.

■ **Add the number of units dispensed to patients during the last three to six months**

Please note that the units dispensed each month does not include the items returned or issued for disposal or destruction due to bad quality, or those that have been lost, wasted or have expired. If possible, include medicines for emergency use such as for post exposure prophylaxis (PEP).

Assess six months of supply information to take into account seasonal changes for items whose use is stable. Three months of supply information may be better for centres where medicine and supply use is changing

■ **Divide the total number of units dispensed to patients by the number of months counted.**

This results in the average monthly consumption (AMC). The AMC = the total number of units dispensed on average to patients at your centre each month. Calculating the AMC does not work well if there are months when an item is not available. If this is your situation, calculate the AMC only by the data from the months when the item was available. If an AMC is any fraction of a whole number, round up to the next whole number (1/2 becomes 1, and 2.4 becomes 3).

Example 1: Monthly consumption (use)¹

One method of calculating monthly consumption is to add the quantity of drugs in stock at the beginning of a period (for example, six months) to the quantity of drugs received during that same period, and then subtract the quantity of drugs remaining at the end of the period.

April 2007, quantity of paracetamol 1,000 • 500-mg tablet containers in stock = 14

June 2007, quantity of paracetamol 1,000 • 500-mg tablet containers received = 8

September 2007, quantity of paracetamol 1,000 • 500-mg tablet containers, remaining stock = 6

Therefore, total quantity of paracetamol 1,000 • 500-mg tablet containers consumed over a six-month period = 14 + 8 - 6 = 16.

Average monthly consumption = 16/6

Average monthly consumption to the nearest container = $2 \frac{2}{3} = 3$

1 Management of Drugs at Health Centre Level. <http://www.who.int/medicinedocs/en/d/Js7919e.7.4>. WHO. 2004.

Determine how often your centre receives supplies

The delivery of supplies varies from place to place. Your supplier for medicines and other necessities (such as the district hospital or a central, regional or area medical store), may deliver supplies on a regular schedule, such as monthly or every two or three months. Sometimes supplies may be delivered on different schedules for different services or products. If your suppliers do not deliver on a regular schedule or only deliver supplies when they are available, try to change the delivery to a regular schedule, such as monthly, every two months, or every three months, depending on the availability of transportation and the storage space at your centre.

■ Note the day that your centre receives supplies

This could be the first day of every month or the last Monday of every three months, for example. Know your centre's delivery schedule. This information is useful when you are organizing your store.

The rest of this section is based on an assumption that your centre orders and receives supplies every month with a lead time (period between ordering and receiving) of two weeks. If your centre has a different order and delivery schedule, you have to adjust the maximum and minimum stock levels.

See the Adaptation Guide for instruction on adapting stock levels to fit your delivery schedule.

Calculate the maximum stock level

The maximum stock level is the greatest number of a particular item you wish to have in your store. This is to avoid overstocking and expiration of the item. The recommended maximum stock level for an item that is delivered every month is three times the AMC of the item.

Maximum stock level for monthly ordering = $AMC \times 3$

Calculate the minimum stock level

The minimum stock level is the lowest number of a particular item you wish to have in your store. This can be set as the emergency stock level. If your stock of an item goes below this level you have to place an emergency order to avoid the item going out of stock.

Minimum stock level for monthly ordering = $AMC \times 1$

Decide how much to order

On the day of the month that your centre orders supplies, check the balance in stock of each item in your store against that item's maximum stock level. Order any items with a balance in stock that is less than the maximum level. The amount to order is the difference between the item's maximum stock level and the amount of the item in stock.

- **Check the stock level monthly of all products with valid expiry date (> three months) in your store**
- **Check the balance of each item against that item's maximum stock level**
- **If the balance is less than the maximum stock level, it is time to order the item**

Calculate the amount to order. This is to bring your stock up to the maximum stock level.

Amount to order = maximum stock level - (minus) amount in stock

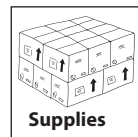
- **If the balance is more than or equal to the maximum stock level, it is NOT time to order that item**

Do NOT order the item. This should not be common, as every order should bring the balance in stock back up to the maximum stock level.

Place an order for the supplies needed at your centre

- **Make a written request for supplies**

Use a requisition or order form to make a written request to obtain medicines and other supplies for your centre. If your centre does not already have a requisition form, use or modify one Requisition and Issue Voucher or Requisition for Pharmaceutical Supplies (see Annexes 2-3 to meet the needs of your centre). Sometimes different order forms are used for different programmes, such as special donor programmes. Be sure to follow instructions.



- **Complete your centre's order information accurately**

Always use generic names of the medicine such as amoxicillin or paracetamol (acetaminophen).

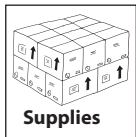
■ **Keep a record of the order**

Make and keep a copy of the requisition or order form, or record the name of item, its strength and form and unit size. Write down the CODE NUMBER if the number is available in a medical supplier's catalogue or list, and the amount requested. Sign the form.

■ **Send or deliver your requisition or order form to your suppliers**

Write down the date your order was sent to your suppliers.

ORDER SUPPLIES FOR HIV SERVICES



Supplies needed to add HIV services. Your centre may decide to expand services, add HIV services, or receive new patients from other centres while continuing to treat its existing patients. This is known as “scaling up” existing ART services. Providing HIV services including prevention, care and

treatment (ART) is a challenge. You have to make sure that all essential ARVs, medicines for opportunistic infections (OI) treatment such as cotrimoxazole, and HIV diagnostics are always available for both new and current patients to avoid treatment interruptions. You may not have enough data on the past consumption of all medicines to use the past consumption method to determine the monthly supplies needed. Furthermore, the number of patients on ART may increase rapidly every month. Each ARV may have different stock levels, as the same medicines might be used for different programmes such as ART, PMTCT and PEP.

Order supplies for ART services under the ‘Push’ system

Your national programme or district coordinator and your HIV team may decide the number of patients who will receive treatment at your centre, and calculate the quantities of each ARV and other medicines needed for these patients (defined as the ‘Push’ system). In this case your job is to know the number of patients who will come, and to make sure that your centre receives all supplies needed to treat them.

Know the number of patients for ART services

Have regular meetings with your HIV team and establish as accurately as possible the number of patients expected for ART services at your centre during the next few months (see estimates in Planning Chapter).

Know the treatment regimens you will dispense to your patients

ART is a combination of three medicines (triple therapy). Some ARVs come as a fixed dose combination or FDC (a combined product that contains two or three medicines in one tablet). FDC that contains three medicines in one tablet will be supplied as triple combination (for example, d4T+3TC+NVP). FDC with two medicines in each tablet (for example, AZT+3TC) will be used with a tablet containing an additional ARV (for example, NVP or EFV). Other products containing a single medicine in each tablet are also used for ART. Identify other supplies needed for these patients including medicines for the treatment and prophylaxis of OI such as cotrimoxazole and fluconazole.

Monitor the use of supplies for ART services

Monitor the use of ARVs and other supplies closely. It is important to tell your district coordinator or national programme manager when you notice unexpected loss, damage, or change in the treatment regimens or other supplies you have used.

Report on the use of supplies

Follow the instruction of your district coordinator or national programme manager on how and what to report on the use of ARVs and other supplies at your centre. For ART services, monthly reporting on the following items is recommended:

- number of units of ARVs and other OI medicines dispensed during the past month;
- number of units of HIV diagnostics consumed during the past month;
- current stock level for each supply for ART services;
- numbers of adult patients (male or female) on each ART regimen;
- number of children (age, body weight) on each ART regimen.

Know the number of patients for ART services for the next month

Have regular meetings with your HIV team and establish as accurately as possible the number of patients expected for ART services at your centre during the next few months. Your national programme or district coordinator may decide to increase the number of patients who will receive ART services at your centre. If you have a waiting list for ART services you need to know the

number of patients on the list. This will help you to estimate the number of new patients to be added during the next month. Prepare to take appropriate action to receive and organize additional supplies for the greater number of patients. If you do not have enough space to store all expected supplies, discuss this problem with your district coordinator or national programme manager to find a solution.

Receive supplies for the next month

Receive supplies from your national programme or district coordinator. They may provide additional instructions if the supplies are provided by a donor.

Order supplies for ART services under the 'Pull' system

If your HIV team can estimate and decide on the number of patients on ART treatment and you are able to place an order for ARVs and other necessary supplies ('Pull' system), follow the steps below:

- Count the number of patients currently on ART at your centre and find the regimens they receive.
- Discuss with your ART team and estimate the number of new patients who will start ART at your centre during the next month. This may include the new patients who start ART for PEP and PMTCT. You may start providing ART service to patients who are already on ART at other centres and are now transferred to yours. For example, in April, it is time to estimate the number of patients who are expected to start receiving ARVs and other medicines at your centre during May.
- Estimate the amount of ARVs needed for the next month. This is done in three steps:

Step 1: Estimate the amount of ARVs current patients will use in the next month

Calculate the monthly consumption of ARVs used last month by the patients currently on ART at your centre. Some patients need new ARVs to substitute or switch current regimens due to side-effects or the development of drug resistance. Include them in your calculation.

Step 2: Estimate the amount of ARVs new patients will use in the next month

Patients who are already on ART at other centres and transferred to your centre will need to continue the same ARVs. The remaining new patients will start ART for the first time at your centre. If NVP is one of the three medicines for ART at your centre, it is important to remember that during the first two weeks of ART, NVP is given at a half dose (once daily) and patients start a full dose (twice daily) of NVP in the third week. It is also important to consider that the same FDCs may not be used for this period. Remember to also include the expected ARV consumption for PEP and PMTCT.

Step 3: Calculate the expected amount of ARVs all patients will use in the next month

Add the estimations (in Step 1) and (in Step 2) to find the total amount of supply needed for each ARV for the next month.

$$\begin{array}{l} \text{Amount of ARVs current patients will use in the next month (a)} \\ \quad + \text{ (plus)} \\ \text{Amount of ARVs new patients will use in the next month (b)} \\ \quad = \text{Expected consumption of ARVs for the next month} \end{array}$$

Estimate the amount of medicines and other supplies you will need for the next month

For example, medicines to treat OIs and supplies for HIV diagnostic tests. This estimation of the amount of supplies you will need for the following month is done in two steps:

Step 1: Calculate the average increase of supplies over the last quarter (3 months)

If you are in April, divide the increase in use of supplies from January to April by three (number of months).

$$\frac{\text{(Monthly consumption for April – (minus) Monthly consumption for January)}}{3 \text{ (number of months)}} = \text{AMC increase}$$

Step 2: Calculate the expected use of supplies for the next month

Add the average monthly use increase (above) to the monthly use for the last month (April). This will be the expected monthly use of supplies for the next month (May).

$$\text{Monthly use for April} + \text{AMC increase} = \text{Expected monthly use for May}$$

Calculate new maximum and minimum stock levels

Based on the estimated quantities required for the next month, re-calculate the maximum and minimum stock levels for ARVs, medicines for OI treatment and prophylaxis, and HIV diagnostics. The number of months you used to calculate the maximum and minimum stock levels will not change as you add more patients. For example, in April, these are the maximum and minimum stock levels for May.

$$\begin{aligned} \text{New minimum stock level} &= \text{Expected use for the next month} \times 1 \\ \text{New maximum stock level} &= \text{Expected use for the next month} \times 3 \end{aligned}$$

Decide how much to order

Check the balance in stock of each item in your store against that item's new maximum stock level. Order any items with a balance in stock that is less than the new maximum level. The amount to order is the difference between the item's new maximum stock level and the amount of the item currently in stock. If you are in April, this is the amount of supplies to be delivered in May.

$\text{New maximum stock} - (\text{minus}) \text{Amount in stock} = \text{Amount of stock to order}$
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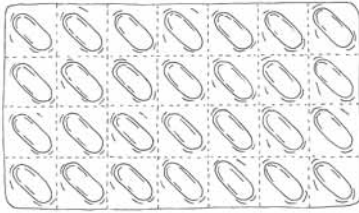
The use of medicines and other health supplies may not be stable throughout the year. For example, the use of malaria medicines changes with seasons. There may be more patients with malaria in one season/month compared with another. The rainy season or bad weather conditions may also disrupt regular monthly supply for your centre. In these cases, you have to adjust the amount to order in consultation with your district coordinator. For instance, if the delivery is expected to be disrupted during the coming months, you may have to order a quantity which brings your stock level higher than the maximum, and place an order earlier than planned.

Place an order for ARVs and other supplies

Order enough of all ARVs and other supplies such as HIV diagnostics so that your stock rises to the maximum stock level of each item. Follow all steps described in the previous section.

TB TREATMENT SUPPLIES

The national TB programme provides complete regimens of anti-TB drugs free of charge for all TB patients. Patients do not have to be concerned with the cost of their drugs, and therefore cost is eliminated as a barrier to taking the correct drugs for the recommended duration.

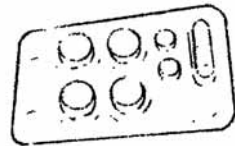


Anti-TB drugs are provided by manufacturers in various different strengths, presentations and methods of packaging. WHO strongly recommends blister packs or strips, preferably of FDCs (fixed dose combinations) to facilitate correct drug intake:

- strips



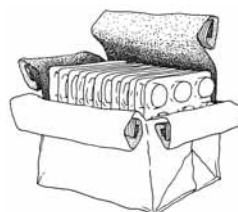
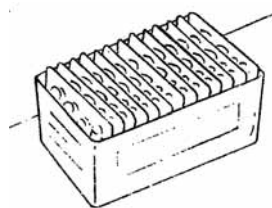
- blister packs of several tablets for a daily dose on one card, or a week's tablets on one card;



- blister packs of 28 FDC tablets on a card, such as 28 (HRZE) or 28 (HR) tablets.

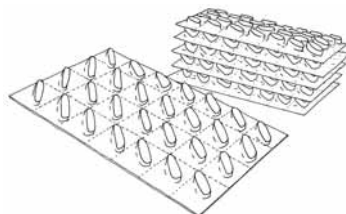
In addition, some manufacturers package anti-TB drugs in boxes or bags containing a full treatment regimen for one patient. Each box or bag contains the correct number of pre-packaged daily blister packs or envelopes for the regimen. These **drug boxes** are an important tool to ensure correct drug treatment and avoid interruptions of supply during treatment. Drug boxes are strongly recommended by WHO.

When a TB patient is identified, the health worker determines their category of treatment and specifies the regimen and dosages needed (based on the patient's body weight). A drug box containing the appropriate regimen is labelled with the patient's name and kept for him or her only. In this way, the health facility is certain to be able to provide the full course of drug treatment needed by the patient. The health worker and the patient can be confident that the patient will never come for treatment and find the health facility has run out of drugs. Daily drug administration is simplified for the staff because the drugs are labelled for the patient and are pre-packaged in daily doses. Determining when the patient has completed the treatment is also easy, because the patient continues until all the drugs in the box have been taken as recommended.



If anti-TB drugs are not pre-packaged as a complete regimen for one patient, WHO recommends assembling drug boxes at your health facility. Health workers may assemble boxes for different treatment categories and body weight ranges ahead of time, or they may partially assemble boxes that will be completed when a TB patient is identified. As soon as a diagnosis of TB is made, a drug box is taken from the shelves. If a box is not already assembled for the category and weight of patient, it is quickly assembled. For example, an additional number of tablets may be added to a box to increase the daily dose for a heavier patient. The box is labelled with the patient's name and kept for them.

Be sure that enough drugs are in stock for all persons with TB expected to start treatment during the next quarter (all categories of treatment).



District TB coordinator will order sufficient drugs to cover approximately the same new patients next quarter

It is assumed that the number of new patients in each treatment category next quarter will be the same, or approximately the same, as it was in the previous quarter. At the beginning of each quarter, the district TB coordinator will determine these numbers from records of current cases and will order drugs to be sent to your health facility to meet the expected need.

Make a special order if the health centre stocks are not sufficient.

Though you may not be required to place drug orders each quarter, you should be aware of the usual quantities used, so that you will know whether the supplies you receive are adequate or may be too little.

With experience, you will be aware of the number of people with TB entering treatment each quarter and the quantities of drugs needed to treat them. If you think that the health centre's stocks do not contain sufficient quantities for the quarter, a special order may be needed. Take action or inform the person responsible for drug supplies.

If you are intensifying case finding for TB, you may be finding more cases of TB in your HIV patients and in other patients.

Maintain a TB treatment reserve stock

The expected new cases in each category the following quarter, multiplied by 2, is the number of drug regimens that should be available when your health facility's drug storeroom is fully stocked. The reserve stock allows for possible increases in the number of cases and extra supplies in case of delay in drug deliveries are delayed.

Some additional tablets will be needed for patients who need one extra month of initial-phase treatment (about 10% of patients in treatment Categories I and II) and for heavier adults who need larger than standard doses. Some loose tablets will be needed for children who need less than standard doses.

7.3 HOW TO RECEIVE SUPPLIES

Your centre will usually receive medicines and other supplies from central, regional, or area medical suppliers. However, some supplies might come from other sources, such as donors for example.

RECEIVE SUPPLIES FROM SUPPLIERS

Receive the supplies in person

All supplies should be received by at least one staff member at the time of delivery. Sometimes there will be an additional designated person to receive specific items, such as ARVs, narcotics or psychotropic medicines. If this is the case, both you and the designated person must be present to receive and check the supplies.

Check the delivery form that came with the supplies

Check to make sure that the number of boxes you receive is the same as the number listed on the delivery form. See sample Delivery Form.

Check the outside of the boxes for theft

Check for opened or damaged boxes. Check to make sure that the bottom of the box has not been opened. Someone may have tried to empty the contents from a tin, place the empty tin back into the carton, and carefully reseal the bottom of the box.

Check the supplies against the delivery form and the requisition form

Remove the supplies from the box. Read the delivery form. Check the items ordered against the requisition form. Review the items and the number you received in the box. Check that what you ordered is the same as what you received. If you receive many boxes, open some of them randomly to cross-check the contents.

Ask the driver or delivery person to note the discrepancy

If the supplies received are less than what was ordered, or if you receive items that were not ordered, or that are not listed on the requisition form, ask the driver or delivery person about this and write it on the delivery form. If your centre has a form to report and return items, use it. If not, check with your supervisor or district coordinator and use the Discrepancy Report (Annex 5) to record a missing item or items to be returned.

Ask the delivery person to sign the form before leaving your centre

Do NOT sign for the delivery person. This signature is proof that the supplies have been delivered to your centre.

Write down delivery information in a ledger book

Each time you receive supplies, you must record delivery information in a ledger book or follow the deliveries recording system that you and your staff already use. Always write down a record of deliveries with a pen and not a pencil. Be sure to record the following delivery information:

- date and time of delivery
- requisition order, or issue (delivery) voucher numbers
- delivery person's name and signature
- vehicle registration number
- number of boxes, external packaging, and item quantities
- name and signature(s) of staff who received the supplies
- designated or second staff person's signature.

CHECK RECEIVED SUPPLIES AFTER DELIVERY

Keep all delivery forms in a safe place

After the delivery person has left your centre, carefully check all supplies received. If you find items that were not ordered or that are not listed on the delivery form, follow your centre's policy for returning medicines and supplies and use the Discrepancy Report. If extra supplies, were delivered by mistake, you may be able to keep and use some of them. Check with your supervisor or district coordinator.

Check the expiry date of items that need to be kept cool and store them first

Write down the expiry date and batch number on the delivery form and quickly put them in a cool area or if you have a refrigerator refrigerate the items. If refrigerated items such as certain protease inhibitors were not kept in cold packs during transport, they may have spoiled.

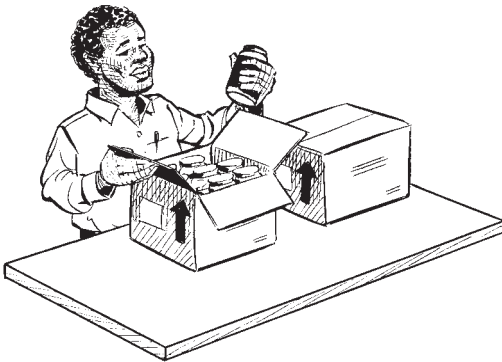
Check the expiry dates of all other items received

Write down the expiry date and batch number of supplies on the delivery form and ledger book. Expired items may harm a patient or have no beneficial effect. Expired test kits or reagents may not give correct results. Follow your centre's policy to return or dispose of them.

Check the basic quality of all items delivered

Check all delivered supplies and write down the names of any medicines or other supplies that are broken or have spoiled.

- Check the colour of medicines and vaccines
If medicines or vaccines are discoloured (i.e. not the colour they usually are), do NOT accept them; return them to the supplier.
- Check for broken containers and for leaks.



Carefully remove broken containers. If there is a leak, remove the item concerned and throw away any other supplies damaged by the leak (be sure to safely throw away or return broken items).

- Check for unsealed or unlabelled items
If labels or seals are missing, someone may have tampered with the items. Do NOT accept instead, return them.
- Check tablets and capsules
Open sealed containers only if you think they have spoiled. Check for unusual odours, or tablets and capsules that are cracked broken, powdery or sticky. Request new items and return those that are defective.

- Check injectable liquids
Shake the vial and hold it to the light. A clear liquid should not have small pieces in it that reflect light. If a vial has small pieces in it, the medicine has spoiled. Do NOT accept the vial return to the supplier.
- Put any damaged or poor-quality items in a box with a sign or label indicating the contents should be returned to the supplier. Dispose of or return any expired and poor-quality supplies at the earliest opportunity. Always follow your centre's policy on removing poor-quality supplies from your store.

Store the checked supplies in their proper place in the store immediately after checking them

This keeps the store tidy at all times. Apply the storage rules in the next section; 'How to organize supplies.'

Document all discrepancies

Write down all missing or over-issued supplies and expired, damaged, and poor-quality items. If your centre has a form to report and return the items, use it. If this is not the case, check with your supervisor or district coordinator and follow your centre's policy on reporting a discrepancy. Sign the form and keep it on file at your centre.

7. 4 HOW TO ORGANIZE SUPPLIES

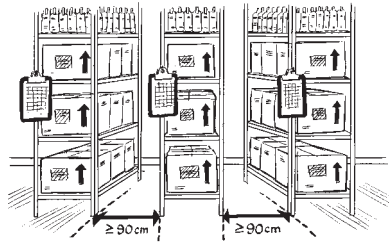
Keeping medicines and other supplies neat and orderly will help your staff run the centre and serve patients better. Anyone who works in your store should be able to find supplies easily. As a general rule, do not put any medicines or other supplies directly on the floor or on the ground. Instead, put them on shelves.

Store similar items together on the shelves

"Similar" refers to the route of administration (external, internal, or injectable) and form of preparation (dry or liquid medicines). In the case of ARVs, store them separately from other medicines (for example, in a lockable cupboard or cabinet). Arrange them in an orderly fashion for example, by therapeutic class (nucleoside reverse transcriptase inhibitor: NRTI, non- nucleoside reverse transcriptase inhibitor: NNRTI, protease inhibitor: PI) or by their inclusion in first-line, substituted first-line or second-line ART regimens.

If there are three or more shelves in your store, organize your supplies in the following way:

- **Top shelves:** Dry medicines (tablets, capsules, oral rehydration packets). If the top shelf is near the ceiling, use it to store items that are NOT sensitive to heat.
- **Middle shelves:** Liquids, including injectables and ointments. Do not put products for internal and external use next to each other. Do not put dry medicines below them. If liquids leak, the medicines below them may spoil.



- **Bottom shelves:** Store other supplies, such as surgical items, laboratory supplies, condoms, and labels.

Use the generic name of each medicine in your store

The generic name of a medicine including fixed dose combination should be listed on its label. There may be many brand names for the same generic medicine. For example, cotrimoxazole (sulfamethoxazole + trimethoprim) may be supplied under the brand names of Cotrex, Cotrim, Bactrim and Septrin.

Arrange and label the supplies on the shelves

Within each group, arrange the supplies in alphabetical order by generic name.

Follow the first expiry, first out procedure to store all medicines and supplies that have expiry dates

- Manufacturers print dates called 'expiry dates' on containers to show how long the contents will remain effective.



As a general rule, do NOT use expired products.

Put items with shorter expiry dates in front of those with longer expiry dates regardless of the date of delivery. This method is referred to as 'FEFO'; which stands for FIRST EXPIRY FIRST OUT. FEFO procedures reduce waste caused by product expiry especially of supplies that have a short shelf life such as HIV rapid tests and other reagents for HIV tests. For example, if products received today expire before products received previously, you should put these newly arrived products in the front of those in stock.

Follow the first in, first out procedure to store medicines and other supplies that do NOT have expiry dates

Store items with no expiry dates in the order they are received. Put newly received items behind the items already on the shelves. This method is referred to as 'FIFO', which stands for FIRST IN FIRST OUT.

Remove expired and poor-quality items from the store

Poor-quality or damaged medicines and related supplies are as risky as expired ones. For a quick reference on indicators of poor-quality or damaged supplies procedures, see Indicators of Poor -Quality or Damaged Supplies in Annex 6.

- Identify all expired and other poor-quality medicines and related supplies.
- Identify overstocked items and any that are no longer used at your centre.
- Keep a record of the removal of medicines and related supplies.



7.5 HOW TO KEEP RECORDS OF SUPPLIES

Keeping records (a written history of each item's use and movement) serves as the basis for the information needed when ordering new stocks of medicines and other supplies, and also as evidence of transactions. This is especially important for chronic care programmes such as HIV prevention, care and treatment programmes that will continuously enroll new patients. Keeping records on stock cards can save you time and can show that you are not responsible for problems such as theft or misuse because you documented the movement of all items. An example of a Stock Card is provided Annex.

Make a stock card for each item in your store

This includes medicines, vaccines, diagnostic kits and related supplies. More than one card may be needed for the same item depending on the source, form and strength.

- Write down all the information concerning each item.
This includes name, form (tablet, liquid, ointment), strength, regular pack size (50, 100, 500 tablets in a tin). For example, cotrimoxazole, 400+80 mg, 1000 tablets in bottle.
- Write down the supply and stock information of each item at your centre
This includes the price or cost per unit cost, minimum and maximum stock levels, regular pack size, and expiry date.

Keep the stock card with the item on the shelf

Attach the card to the front of the shelf near the label of the item, or place it with the containers of the item on the shelf.

Record on the stock card every time you receive or move an item

Use a pen, not a pencil. Record any changes at the time of movement, and NOT at the end of the clinic session, and specify the day, the week, or the month. This information should not change once it has been written down. If you make an error, do not erase or write over, but put a line across it and write a correction above.

- Record the following information on the item's stock card whenever receiving or updating the new balance in stock:
 - date of receipt;
 - where the item was received from;
 - number of units received;
 - requisition number of the order, expiry date and batch number (in the remarks column).

Add the quantity received to the previous balance in stock and record the new stock. Use a different colour pen to record the items received. These should be marked in a different colour from the items issued.

- Write down when an item is issued out of the store and the new balance in stock. This includes:
 - date of issue
 - where the item was issued to
 - quantity issued in units.

Subtract the quantity issued from the previous balance in stock and record the new balance.

- Write down any important information about the movement of an item in the remarks column.

Keep an accurate running tally of the number in the balance in stock column and count your stock at regular intervals, i.e. once a month

Counting the number of containers of each item is called a physical count or physical inventory. Make sure that the balance of any item reflected on the stock card is the same as the number of containers in the store.

- Review the information on the top of the stock card.
- Make a physical count of an item.
- Write down the physical count number in the balance in stock column. Draw a double line after the last entry on the card. Record the date of the count, the number you count, and write the words “PHYSICAL COUNT” across the columns. Draw double lines before and after the physical count information.

Discrepancy and investigation

If the physical count and the previous balance are not the same, write “discrepancy” and note how many are missing or in excess, and investigate.

Replace a completed stock card with a new one

Write down the words, “BALANCE BROUGHT FORWARD” in the first line of the new stock card. Keep completed stock cards for two to five years, or for as long as instructed to do so by your supervisor or district coordinator.

7.6 HOW TO DISPENSE MEDICINES

Dispensing (giving or handing out) medicines to a patient consists of the following: checking the prescription, collecting, counting and packaging the medicine, and giving the medicines with clear instructions to the patient. When a medicine is dispensed, it is important that the patient receives: the correct medicine in the correct amount and the correct information on how to take. For a quick reference on dispensing medicines procedures, see the Checklist to Manage and Dispense Medicines and Other Supplies Annex and the Monthly Report and Requisition Form Annex.

Prepare medicines and other supplies to be dispensed from your store

- Select the supplies needed from the store.
Based on the amount used in the past or the storage space available in the dispensary (an area other than the store set aside to give out medicines and other supplies), estimate the number of units of each item that will be needed for the day or the clinic session. Go to your store and record the movement of each item that you issue out of the store on its stock card.
- Take the medicines to the dispensing area.
Dispensing (giving out) medicines should NOT be done from the store. Once items are issued to a dispensing area, keep them there and do not return them to the store.
- Keep supplies in the dispensing area safe and organized.
Make sure that the dispensary is as secure as possible in the same way as the store. Staff should always be present in the dispensing area when it is not locked.
- Organize supplies in the same way as they are organized in the store.

Dispense a medicine (or another item) to a patient

- Check that the prescription is appropriate for the patient.
Review the prescription and crosscheck with the dispensing record or card. Find the medicine's generic name and check that the prescription is appropriate for the age, weight, and sex of the patient. Also check that the medicine prescribed is appropriate in form, strength and dosage, and in line with the agreed treatment guideline for this medicine. The dosage includes:
 - when to take the medicine (for example, in the morning);
 - how much of the medicine to take (for example, one tablet);
 - for how long to take the medicine (for example, two days);and
 - how to take the medicine (for example, with food or with plenty of water).

- Collect a container of the item, and check its expiry date. Check that it is the correct form, strength, and unit size. Check that the item has not expired yet and will not expire in the next month.
- Prepare the label for the package to be given to the patient. Print clearly on the label. Include the following information:
 - the patient's name
 - today's date
 - the item's name, strength and form
 - the quantity dispensed
 - instructions that tell the patient how to take the medicine.
 - special instructions for storage.

Use pictures or numbers to record the dose and also; include written instructions. Patients who cannot read may need pictures for instructions and should have someone at home who can read the instructions to them.

- Attach the label. After you record the information on a label, attach it to the package before putting the medicines in it. If a complete package(s) of the item will be issued, attach the label directly on each package.
- Check the quality of medicines in the container. Open the container. Check the quality of its contents for any signs of deterioration or damage (odd smell, cracked, broken, powdery, or sticky tablets or capsules).
- Count the units needed in a clean and safe manner. Count tablets or capsules using a counting tray and a clean spatula. If you do not have a tray, you can make one from a sheet of paper or a used x-ray film, or you can use a clean surface covered with paper and a spoon. Do NOT use your hands and the same tray to count new medicines without cleaning the tray. Count the desired amount of medicine and separate this from the rest.

- Put the correct amount of the medicine into the package for the patient to take home
- Place the label directly on the package.
- Put any extra tablets or capsules back into the appropriate container
Always close one container before you open another one. Prepare all of the prescribed items required before dispensing them to the patient.
- Give the package to the patient.
If you are dispensing ARVs or other medicines that come in a box containing the quantity needed for a month, give the boxes with the label attached to the patient.

Teach the patient how to take his/her medicine

Carefully follow the steps below to teach the patient how to take the medication. This is especially important if it is the first time the patient is taking the prescribed medicine or ARV. If this is not the first time the patient will take the prescribed medicines or ARVs, you may ask another staff member to take care of the patient following the steps in the Medication Use Counselling Checklist for ART Annex to make sure the patient knows how to take their medicines.

- Explain the medicines to the patient.
Tell the patient the name of the medicine, its form (tablet, syrup, etc.), the dosage and what it is for.
Remember to counsel the patient on possible side-effects of taking the medicines.
Show the patient how to prepare the dose and ask them to practise measuring the dose.
If you are dispensing syrup, show the patient how to measure the correct amount. Use the cap of the syrup bottle or show the patient that common spoons can be used. Using the medicine that you have already packaged for, ask him or her to read and repeat the instructions. Make sure that the patient understands how to prepare the dose.
- Tell the patient to take all of the prescribed medicines.
Tell patients that even if they feel better it is important to take all prescribed medicines to stay well, as taught in adherence counselling. Also tell patients

on ART that they need to return for follow-up treatment and to collect ARVs for the next month. Ask them to bring any leftover medicines when they return for their follow-up visit.

- Tell the patient to keep all medicines and related medical supplies in a safe place at home.
Tell them that medicines are expensive and need to be stored in a cool, dark and dry place safe from pests, and out of reach of children.
- If the patient is a child, go through the above steps with the parent (or caregiver).
Make sure that the parent or caregiver is the person who is going to give the medicines to the child.

Ask the patient about missed doses and side-effects

If the patient does not bring an accurate record of when he or she took the prescribed medicines or ARV drugs, ask how many doses have been missed during the past month. Record the number of missed doses. Also ask about symptoms of possible side-effects and if necessary refer patients with any symptoms to a member of staff trained to deal with side-effects.

Keep accurate dispensing records

Use a notebook or a card to note the details of a patient's dispensing records of medicines and follow the instructions given by your supervisor or district coordinator. This is useful when you collect information about medicines and related supplies given to patients to treat certain illnesses. See chapter 5, 'Patient Monitoring', for an example of dispensing records.

Dispense a medicine (or other item) to a community carer

Dispense medications for home-based palliative care

If a very sick or dying patient is not able to come to the health centre, the medicines should be dispensed to a family member or caregiver. These should be recorded on the patient's record.