MEDECINS SANS FRONTIERES

Supply of drugs and medical supplies AND Management of pharmacies

Internal guidelines

2nd edition
2008

MEDECINS SANS FRONTIERES

Supply of drugs and medical supplies

AND

Management of pharmacies

Internal guidelines

2nd edition
2008

Ref. L026PHAM02E-P

Supply of drugs and medical supplies

And

Management of pharmacies

This edition has been coordinated by
Claude Lauro (Ph)

Contributors:

Véronique Aubin (N), Caroline Beetz (N), Marie-eve Burny (N), Jean-Michel Cann (Ph), Thomas Diste (N), Nathalie Goudenèche (Pharmacy technician), Myriam Henkens (MD), Christophe Perrin (Ph), Guillaume Schmidt (Ph), Sophie-Marie Scouflaire (Ph), Cécile de Walque (N)

(N) Nurse, (MD) Medical Doctor, (Ph) Pharmacist

English translation by Marion Lauro and Paloma Marroquin Lerga

Design and layout by Evelyne Laissu

Preface

Médecins Sans Frontières is engaged in providing medical health care in over 80 countries. In order to carry on its activities, the procurement and delivery of medicines, medical supplies and therapeutic food are essential .
These guidelines compiles most of the concepts, procedures and organisation related to pharmaceutical management within MSF.

Additionally, the following tools are complementary to these guidelines:

1. *Essential drugs - practical guidelines*. This handbook includes description of WHO essential drugs, as well as guidelines on key issues such as rational use, management, etc. It is regularly revised and translated into different languages (French, English, Spanish).

2. *Clinical Guidelines - diagnosis and treatment manual*

3. The *MSF Medical Catalogues*, which the International Technical Coordination (MSF-ITC) revises every year, lists the required standards of the essential drugs, medical supplies/devices, and therapeutic food. They contain practical information for the teams in the field.

4. *Procuring medical supplies in the field: MSF policy and guidelines* (C.Perez-MSF, July 2000). Focuses on the procurement of medicines in the field and related quality assurance issues (document under revision).

5. *Drug Management: ensuring optimal treatment for the patient*. Video showing all the aspects concerning drug procurement and management. Useful tool for training and sensitization of all actors involved.

The last updated version of all these tools must be available in each stock pharmacy.

Table of contents

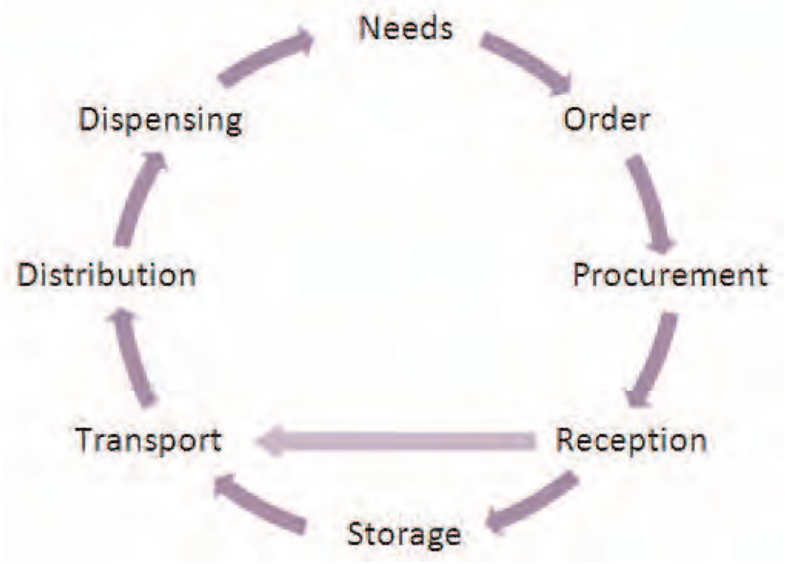
Chapter 5 - Drug management in emergency programmes

Appendices

Introduction

The main purpose of a drug management[1] is to guarantee the availability of quality medicines and medical supplies essential for the accomplishment of the medical activities.

Poor drug management leads to:
– out of stock and the need/obligation to resort to exceptional/emergency orders to compensate for out of stock,
– economical losses due to the expiry of products to its destruction,
– affect negatively the quality of health care.



Good management requires team work between medical, logistic and managing personnel.

Good management of drug and medical supplies requires continuous adaptation to the project needs (changes in the epidemiological context, etc) as well as to the constraints (procurement, etc.).

Examples:
– Proper pharmacy organisation and a well-functioning cold chain should be jointly implemented by medical and logistic staff.
– Prescribers should visit the project pharmacy and/or drug store to check the products available.
– Pharmacy managers should transmit the monthly statement of the central pharmacy to the project manager with information on:
  • products whose consumption pattern shows a great variation,
  • products whose quantity have reached a warning level,
  • products with short expiry date.
– At the time of filing each order the pharmacist should:
  • order from the logistician products such as cold chain indicators,
  • be aware of the changes of activities, introduction of new clinical protocols.

[1] It includes: medicines and all other medical items, laboratory items, surgical items used in MSF medical programmes.

MSF standard list is based on the Essential Medicine concept.

The selection of **essential medicines** is based on their safety, stability, efficacy and their wide use to treat health problems of a large majority of the population.
They are identified by the International Nonproprietary Name (INN) instead of their trade names which are specific to a single manufacturer.
E.g., paracetamol = Doliprane®.
Following this concept, WHO (World Health Organization) created a list of essential medicines which is periodically revised according to therapeutic progress and health priorities. All developing countries have endorsed this concept and have defined their own list of essential medicines: the national essential medicine list.

MSF List
Medicines are selected according to the therapeutic protocols recommended by MSF. MSF supply is done according to this list.
MSF favours essential formulations over the non-essential formulations (drops, syrups, suspensions, suppositories, etc.) *except when*:
– they offer an evident therapeutic benefit,
– they facilitate adherence to treatment by patients (e.g., paediatric formulations).
MSF advocates the use of one dose per drug and breakable tablets.

MSF follows the same principle for the selection of **medical supplies**.
Concerning medical devices, MSF selects a specific model in order to assure quality and ease of maintenance and supply of spare parts

ITC **annually revises and update** the MSF medical products standard list which is then approved by the medical directors. They take into account therapeutic advances as well as suggestions coming from the field. ITC publishes such a list specifying the modifications made and distributes this to all projects through the sections headquarters.
The MSF documents linked to this list are:
– Essential drugs - practical guidelines,
– Clinical Guidelines,
– MSF Medical Catalogues,
– International order forms printed every year by the MSF supply centres.

Caution: projects receive every year a new version of the MSF international order spreadsheet and catalogues (remember to request sufficient quantities!). Older versions should be deleted and all the pharmacies should have the latest MSF catalogues.

The supply of projects in medicines and medical material has to be done in priority through MSF supply centres.

Medical supply system: procurement of medicines and nutritional products require technical skills and are subjected to international and national regulations. International trade liberalisation has often led to counterfeiting and sub-standard drugs in weakly regulated countries. Local markets can provide equally high quality and dangerous products.

MSF is fully responsible for assuring the quality of products distributed in its projects ***under its reponsibility*** and for reporting, recalling and removing defective products.

> **It is MSF's policy to principally purchase medical products through its supply centres.** These procurement centres have developed the expertise to ensure controlled quality at reasonable price.
>
> In cases where imports from MSF supply centres are judged not feasible or undesirable, exceptions to this rule might be made by purchasing in the local market. Also in this case, standard quality must be guaranteed through the expertise of a pharmacist. **Purchasing in the local market can only be started after formal approval by the medical director at HQ**.
>
> *Extract from "MSF Policy of medical supplies"*
> *Procuring medical supplies in the field – May 2000*

Some projects have to resort to purchasing locally when:
– national regulations do not allow medicine imports,
– operational decision (e.g., ARV product-supply approved by MSF and available in the local market).

As for international procurement, MSF ordering list should be the reference. All local orders must be first approved by HQ. HQ's pharmacists are responsible for selecting local suppliers and for field support in case of drug quality problems.

> Please, for specific procedures about local purchases, refer to *Procuring Medical Supplies in the Field – MSF Policy and Guidelines* (under revision).

Special cases: loans and donations

From a pharmaceutical viewpoint, loans and donations must be considered as local purchases. Indeed, those products could:
– come from manufacturers who don't guaranty a satisfactory quality,
– come from distributors who don't guaranty transparency on the origin of their products,
– have been transported and/or stored without following conditions guarantying their quality and efficiency.

Thus, they have to come with a document stating the name of the manufacturer, the batch number and the expiry date.

Can products be borrowed?

Borrowings are under the responsibility of the Medical Coordinator (MedCo).
Products can only be borrowed from sources able to guaranty their origin and their quality (e.g. another MSF project or section).

Can donations be accepted?

Before accepting a donation, the MedCo has to wonder if:
– those products are needed,
– the offered quantities can be used before their expiry date,
– the quality of the product is guaranteed.

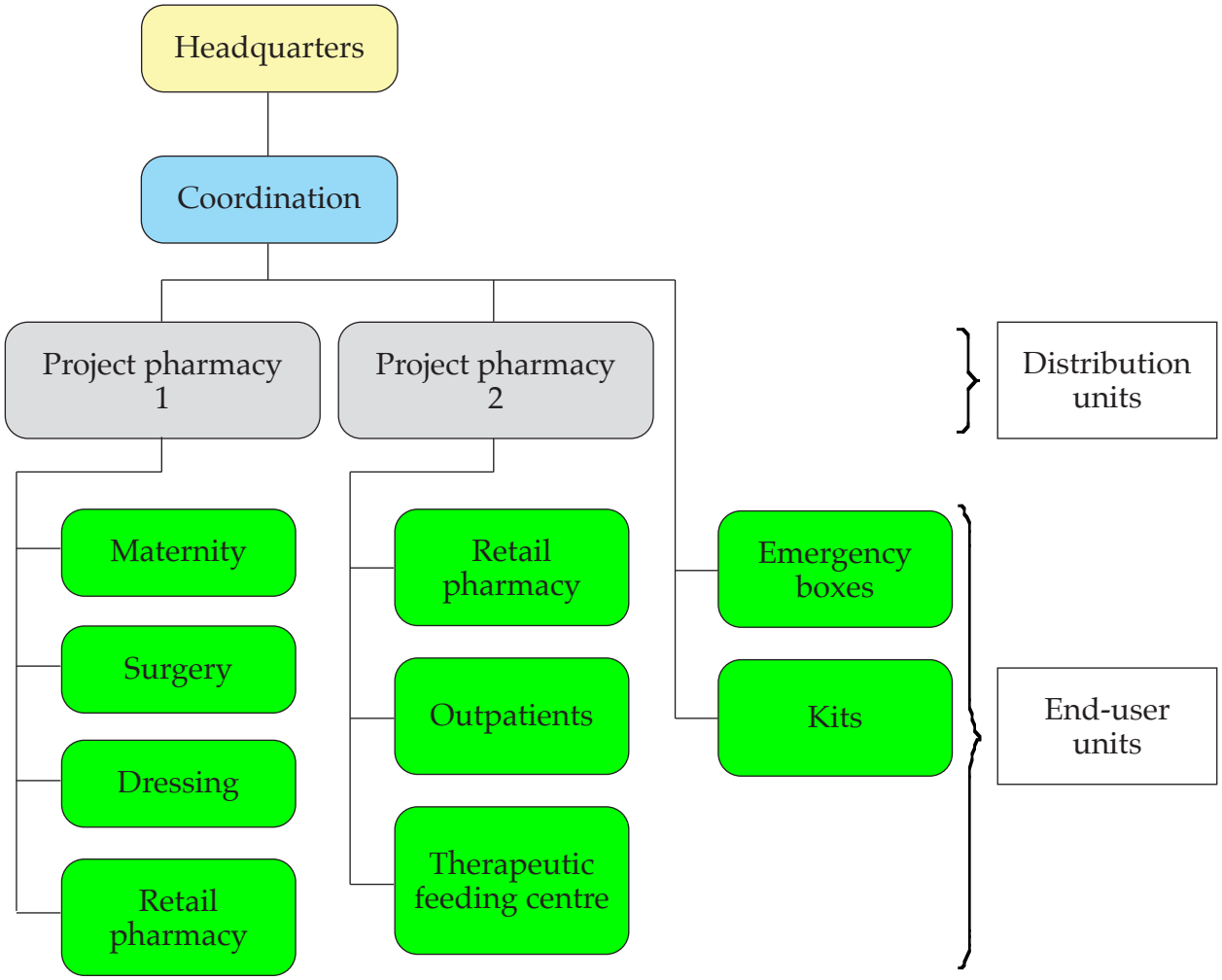
If it is the case, a detailed list mentioning the origin of each product (manufacturer, distributor if there is one and donor) has to be sent to the section pharmacist for evaluation and approbation.

In the past, MSF has experienced several times that donations received by external bodies might present several problems, some of which were a danger to the patients' health. It is true even for donations originating from organizations and institutions of a good reputation (UN agencies, Ministries of Health, NGOs, etc.).

CHAPTER 1

Medicines and medical supplies management in MSF projects

Procurement system in the field



The **coordination team** –usually based in the capital– share responsibility for country procurement with the **cell head at HQ**.

This team is often responsible for more than one project located in the same country. It is assisted at the field level by a **field coordinator** who is the final responsible for drug procurement and management.

The **project pharmacist** ensures medical supply for all activities by quantifying drug requirements and preparing the corresponding orders. Each project orders according to its medical needs and maintain its own stock.

The **MedCo** must ensure the availability of necessary products in each of the projects by 1) planning drug procurement 2) overseeing stock management at all levels and 3) validating both international and national medical orders.

The procurement system implies supply at different levels :
– at distribution units (e.g., project pharmacy, hospital pharmacy),
– at end-user units (e.g., health centres, hospital departments, retail pharmacies).
Note: emergency boxes and pharmacies for MSF staff are considered end-user units.
The Project stock pharmacy assures the supply of the whole project. Its role is to elaborate orders covering the needs of the whole project.

Remark: **the organization must remain simple and logical.**
Do not needlessly multiply the number of intermediary pharmacies. Too many only raise costs (premises, storing, and personnel), increase management and supervision workloads and the risk of drug wastage and losses.

In some countries, an important part of the project stock may have to be stored in a warehouse located in the capital for logistical (e.g. difficulties in guarantying good storage conditions in the peripheral projects) and security reasons.
This stock has to be identified as belonging to a project especially if this warehouse contains stocks belonging to several projects.

Emergency kits (EPREP emergency preparedness) –cholera, haemorrhagic fever, etc.– are stocked in the central store without being assigned to a particular project.

1. Planning procurement in the project

The coordination team should establish a medical ordering periodicity taking into account the geographical, security and operational constraints. The management skills and availability of the staff from the different units also have to be considered. The good management of the supply system relies on timely and accurate planning.

Planning for drug procurement is part of the annual project plan. The plan should at least include:
– project standard list,
– ordering periodicity,
– procurement system (international or local),
– budget,
– staff responsible for the management.

2. 2. Personnel responsible for medicines and medical supplies management

At each level of the procurement system, should be defined:
– a **flowchart** specifying the place and responsibility of each staff member (expat and national staff),
– j**ob descriptions,**
– a **training programme**, including supervisory visits to support performance and provide in-service training,
– an **activity plan** for the pharmacy.

	Level	Description of tasks
Medical coordinator	Capital	Responsible for overseeing all projects pharmacy management. Revises and processes both international and national medical orders.
Field coordinator (FC)	Project	Responsible for the management of the pharmacies of the whole project.
Pharmacist responsible (PhR) (e .g nurse or pharmacist)	Project	FCs can be assisted by PhR on pharmacy management. – Supervises the pharmacies management. – Trains and supervises the staff in charge of the pharmacies. – Validates the medical orders of the consumption units. – Prepares the medical order of the project. – Defines the material needs for the cold chain together with the logistician
Pharmacy manager, storekeeper	Stock Pharmacy	S/he is responsible for the stock pharmacy. S/he is under direct supervision from the FC or PhR. Responsible for the: – stocks management and pharmacy organization; – reception and preparation of medical orders; – store security and maintenance; – cold chain monitoring; – supervision of the work of pharmacist assistants and/or warehousemen.
Pharmacy assistant or warehousemen	Stock Pharmacy	Assists in the preparation and reception of orders, as well as in the maintenance of the warehouse
Dispenser	Retail pharmacy	– Responsible for the pharmacy management and the well keeping of the tools. – Places medical orders. – Prepares prescribed drugs. – Re-explains the drug treatment to the patient and makes sure s/he understood. – Gives either the first or unique dose to the patient.
Responsible nurse	Wards or health structure	– Responsible for the pharmacy management and the well keeping of the tools. – Places medical orders.

Loyalty should be developed in the national staff. They are the ones in charge of assuring a continuous good stock management since the expat turn-over is high. A close collaboration between expatriates and national staff is essential for a good stock management.

Expatriates mustn't upset working habits without a valid justification

Standard medicine list of the project

Each project has to define per level of care (health centre, hospital ward, etc.) the list of medical items that will be used under the responsibility of the medical coordinator. This drug list is based on:
– pathologies and/or medical activities,
– medical staff qualification,
– clinical guidelines in use (national, WHO or MSF),
– MSF standards list and national essential drug list.
The project drug list will be composed of all those lists.

The standard list of the project will also take into account the constraints on the use of some products in the country it is based in: national list of essential medicines, prohibition against the importation of particular products, etc.
That is the reason why it is essential to ask the authorities (Ministry of Health) about the regulations in use concerning medicines.

Each coordinator should ask the authorities about:
– the existence of a national list of essential medicines,
– the national therapeutic protocols,
– the requirements for medicines and medical material imports,
– the regulations concerning psychotropic medicines and narcotics.
Those information should be regularly updated and documented.

Standard lists enable:

– a smoother management,
– a simplification of the orders,
– a decrease of the costs.
The lists are used as a base for the pre-printing of the management documents: this way, less mistakes are made during orders and the management is easier (by following item by item).

Recommendations for preparing and updating medicine standard list

– Use one dosage per drug when possible.
– *Parenterals*
These formulations are only recommended in emergency cases or when oral forms are not suitable –digestive intolerance, ill-absorption. Oral forms should be the first option.

– *Liquids: syrups and suspensions*
  MSF prefers to keep the use of those forms for hospital paediatric services, nutritional programmes and/or specific programmes.
– *Avoid non-MSF standard products*
  These are the products not included in the MSF standard lists. When needed, a project will order non-MSF standard products whose punctual use is authorized by HQ is a specific situation.
  Those products create a great deal of research work (sources, suppliers, skills, etc.) for the MSF centres and therefore lengthen the delivery of the project orders.
– *Obsolete medicines*
  They are items whose use is no longer advised. Their use is to be limited (e.g. the use in the case of a national protocol). They are described in the MSF catalogues with the explicit mention of "Obsolete".

The medicines standard list of the project is not fixed:

This list has to be ***updated*** as often as needed (changes in the medical activities of the project, changes in the MSF list, modification of the regulations, etc.) or at least once per year(not more otherwise it becomes difficult to manage, unless some major changes should appear in the objectives of the project).

Management tools

(see Appendix 1)

Type of document	Name of the document	Project central pharmacy	Intermediary pharmacy (e.g Hospital pharmacy)	End-user unit
Documents related to the storage of products	Standard list	X	X	X
	Stock cards	X	X	
	Psychotropic and narcotic medicines register	X	X	X
	Expired and damaged medicines register	X	X	
	List of medicines to expire in a 6-month period	X	X	X
Documents related to stock movements	International medical order form	X		
	Order / Delivery form		X	X
	Packing list	X	X	X
	Claim form	X	X	X
	Donation certificate	X	X	
	Loan/borrowing certificate	X	X	
	Returned medicines list	X	X	X
Docs. related to drug provision to medical programmes/health services	Monthly consumption table of the pharmacy	X	X	
	Monthly consumption table per unit	X	X	
	Monthly statement of the stock pharmacy	X	X	
Docs related to drug consumption	Daily service registration book OR daily consumption sheet			X
	Weekly and monthly consumption reports			X

MEDICINE QUANTITIES SHOULD BE ALWAYS RECORDED IN STANDARD UNIT OF DISTRIBUTION (i.e. in tablets, vials, bottles, etc.) on all the documents of management because the packaging may vary for the same product.

CHAPTER 2

Stock pharmacy management

Storage and organisation of medicines and medical supplies

Storing conditions must ensure:
– correct preservation of drugs and medical supplies,
– security of products stored and of personnel in charge,
– efficient and simple stock management.

Store organization and cold chain management must be done in close ***collaboration with logisticians***.

1. Storage conditions

Most of the medicines are sensitive to heat and humidity. It is therefore essential to observe the storage conditions mentioned on the packages.
These conditions are also included in *Essential drugs – Practical guidelines* and in the MSF catalogues

Temperature

The temperature of a drug store should not be above 30ºC nor below 0ºC (even at mid-night).

Temperature control

The temperature must be registered twice a day, preferably during the hottest and coldest hours of the day.
It is advised to used a max-min thermometer (Moeller thermometer 102472, -50º to +50ºC, MSF code: PCOLTHER5MM). In this case, one has to note down the actual temperature as well as the lowest and highest temperatures. Do not forget to reinitialize the thermometer.
In cold countries, do not forget that liquids might freeze thus breaking vials and bottles and damaging some medicines. A heating system should be used when needed.

How can the store temperature be improved?

– Install ventilations (one high and one low). Take care not expose products to dust or sand. ***Note***: a fan only reduces room temperature by two degrees.
– Insulate roof by adding thatch, a shade netting or a false ceiling.
– Protect the walls against direct sunlight (overhanging roof, doubling the walls or sandbags).

– Divide the storing space :
  • put the cold chain inside a well-ventilated separate room (fridges and freezers give off heat),
  • air-condition the room where medicines are stored (smaller rooms are easier to air-condition to suitable temperatures).

Remember to keep doors and windows closed where air-conditioning devices have been installed… Place indicative signs.

Humidity

The humidity of a pharmacy should not be above 65% (Relative Humidity).

How to decrease humidity?

– Increase ventilation.
– Install air-conditioning as they partially absorb humidity.
– Place shelves and boxes at least 60 cm away from walls.

Note: it is important to ensure that medicine containers are closed. This is especially relevant in pharmacies where medicines are unpacked.
If drugs are shipped with silicagel bags, do not remove them!

Light

– Medicines must never be exposed directly to light.
– Medicines must be kept inside their opaque packaging, especially injectables.

2. Laying out a medicine store

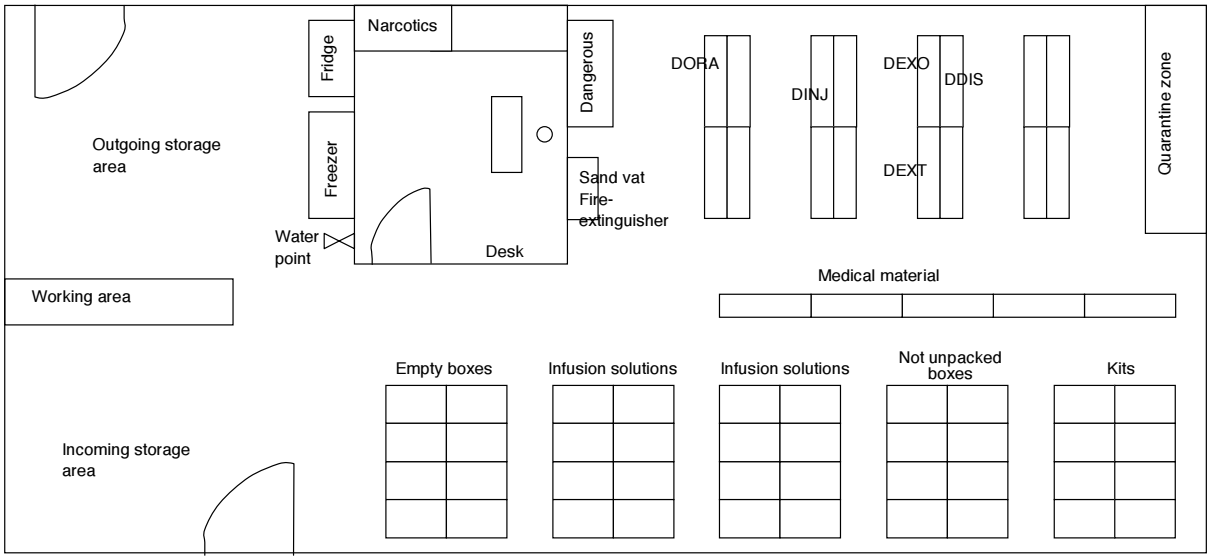
A warehouse has to be found or a construction plan drawn up on a site facilitating the reception, storage and dispatching of the pharmaceutical products while guaranteeing a maximum security. Its dimensions are determined by storage needs and should also have enough space outside to allow vehicles to load and unload freely.
Tents should not be used as stores. Containers should only be utilized if they have been adapted (e.g. direct sunlight protection, air-conditioning, etc.).

Medicines and medical material should not be stored in an area already containing logistical items (especially fuels), chlorine solutions or food (beware of the rats!).

Dimensions and layout

– Better too large than too small! In a cramped storehouse, storing and operating are difficult. And if the stock increases, a new storehouse will have to be found or orders will be more frequent (loss of time and money).
– Avoid multiple storeys.

– Store all medical products in the same storehouse: more storehouses complicate the management and increase the costs.
– Order the quantities that can be properly stored. Suggested product volumes are indicated in the product descriptions located in the MSF catalogues. This also applies to the cold chain.



Interior layout should be logical and correspond to handling circuit: reception, storing and dispatching according to access doors.

Diagrammatically, the store should be divided into 3 zones:

– Zones dedicated to the activities of the pharmacy
  • Incoming storage area: storage of the orders received before the reception control.
  • Outgoing storage area: storage of the orders prepared before the dispatching towards the peripheral units.
  • A working area big enough to accommodate the reception and preparation of the orders.
  • An office for administration (sufficiently big and lit) where all the documents for the management will be kept and archived.

  Arrival and dispatch zones should be physically apart (folding screen, etc.) to avoid mixing errors
– Zone dedicated to storing
  • Area for products that do not need any special storing conditions.
  • Zones appropriate for each category of products following their particular storage or management requirements :
    - cold chain products: a fridge and a freezer for the ice-packs,
    - emergency kits and modules,
    - psychotropic and narcotic drugs: a locked cupboard,
    - dangerous products: inside an aired cupboard or on bottom shelves,
    - expired or damaged products before destruction: quarantine zone (indicated and closed or separated)
  • Area for large or heavy products that can not be deposited on shelves.
  • Area for empty boxes.
– Spaces for stocks circulation

Equipment of the storage zone

Products must be stored on shelves even during emergency situations.
No products or packaging, no matter the size, should be in direct contact with floors or walls (humidity!).

Shelves

Medicines and medical consumables must be deposited on ***solid and stable shelves***.

– Shelves location: movement should be easily achieved. Products must not be placed against the walls. There must be at least 60 cm between rows of shelves and between shelves and walls.
– Metal or wooden shelves: in tropical countries where termites attack wood, metal structures are preferable. If they can be dismantled, it is easier to adjust the spaces between rows to the size of the products. Wooden shelves should be painted to clean with ease.

Pallets

Cardboard boxes (full or empty), kits and modules should be placed on pallets. Pallets should be located 60 cm away from walls to facilitate air circulation and cleaning and isolate products in case of flood.

How to estimate the size for a drug store and the number of shelves?

According to logisticians:
It is easier to consider the storing area alone during the first stage.

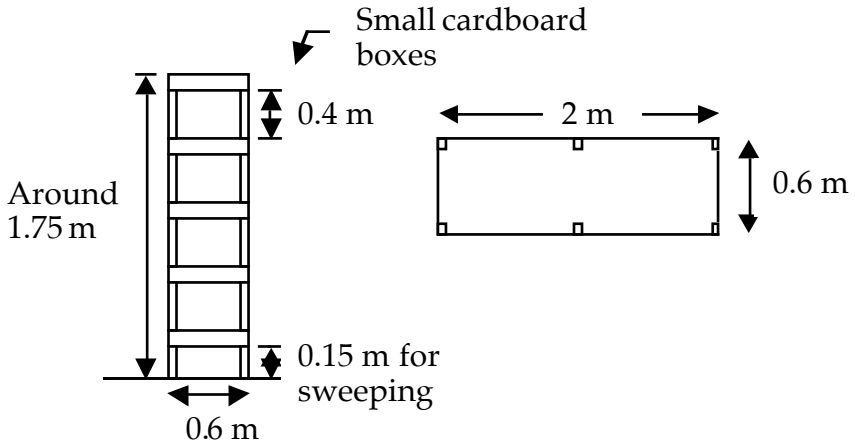
Diagrammatically, the floor surface area is divided in 3 zones:
– 1/3 is dedicated to store activities,
– 1/3 is committed to storing,
– The last third is for circulation.
Therefore, the estimated storing area should be multiplied by 3.

Step 1: calculate the surface area needed for storage

Foresee 2 m^2 of storage surface per 1 m^3 of products. This way the volume of products can eventually be increased.

Example:
For 40 m^3 of products, 2 x 40 = 80 m^2 of surface are needed.

Step 2: calculate the number of shelves needed



The most common shelves found in the field have 4/5 trays of 2.00 m length by 0.60 m depth
Small cardboard boxes are placed on the upper shelf.
The 4 trays total capacity (surface area) is 4.8 m^2.

Thus, 80 / 4.8 = 17 shelves are necessary.

Step 3: calculate the total store surface

Should the storage surface area be 80 m^2 the total store surface area should be of 240 m^2.

This surface area will enable increased volumes of stock to be stored.

Store hygiene and security

Hygiene

- The structure should be permanent. The floor should be resistant (paving stone, slab) and inclined to allow evacuation of water.
- Mosquito nets for windows and pest control measurements should be put in place.
- Place a water sink for washing hands.
- Arrange a filtered water point to enable preparation of syrups, antiseptic solutions, and disinfectants.
- One person should be responsible for cleaning and should have all necessary equipment. Moping floors (to avoid dust clouds) and dusting drug containers should be conducted once per week.

Prevention of robberies

- Doors should have security locks and windows have security grills.
- Restrict the number of keys available. Keys should not be accessible to everyone: take note of who has one and do not leave them lying around.
- Access to the storehouse should be restricted to authorized personnel only.

Fire prevention

– The store should be equipped with fire extinguishers, buckets with sand and shovels or an emergency watering system.
– Indicate clearly the steps to be taken in case of fire.
– Avoid risk situations if inflammable products such as laboratory reagents are stored.

Security of personnel

– Ensure good working conditions (e.g. use of stepladders).
– Avoid risk situations while handling laboratory reagents and ensure a shower or a rinse area is easily accessible (in case of damage and spatter).
– Clearly indicate the steps to be taken in case of accident.

3. Organisation of medicines and medical supplies

Classification of drugs and medical supplies

All MSF sections have adopted an alphabetical classification according to way of administration for drugs and to family for medical supplies.

This system is favored for its simplicity and standardization and because non specialised personnel can work with it. It is applicable to the complete management system (ordering, storage, distribution and dispensing).

This sorting system is used in MSF medical catalogues, in MSF stock management documents and in international medical order forms.

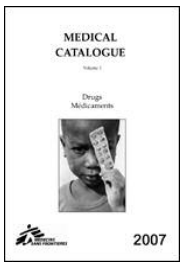
How does it work?

Use the first four letters of the MSF product codes found in the international medical orders sheets and in the MSF catalogues.
The first gives the group and the next three give the family.

Drug codes

Codes always start by D (D = Drug). Their international nonproprietary name (INN) is always used.
They are listed in the MSF catalogue with the blue cover.

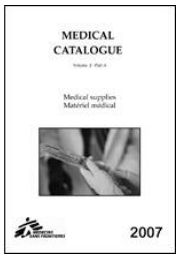
D + ORA = DORA: oral drugs
D + INJ = DINJ: injectable drugs
D + INF = DIN: infusions
D + VAC = DVAC: vaccines
D + EXT = DEXT: drugs external use
D + EXO = DEXO: ophthalmic drugs for external use
D + DIS = DDIS: disinfectants
D + DGT = DDGT: diagnostic tests



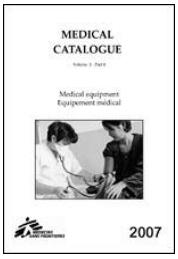
Vol. 1: Drugs

There is a number of medical material groups which are subdivided into families

S Group = Medical Renewable supplies
- CTD: catheters, tubes & drains
- DRE: dressings
- FOS: specialized food
- INS: injection supplies
- LAS: laboratory reagents
- MST: medical stationery
- MSU: small medical supplies
- SUT: sutures
- XRS: x-ray supplies



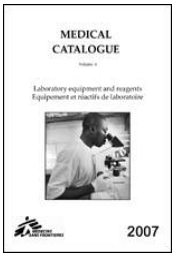
Vol.2 Part A: Medical supplies



Vol.2 Part B: Medical equipment

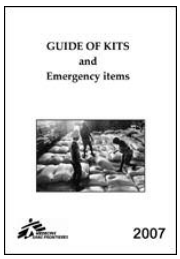
E Group = Medical equipment
- ANE: anaesthesia
- HOE: hospital equipment
- LAE: laboratory equipment
- LIN: linen and clothing
- MEQ: medical equipment
- STE: sterilization
- SUD: dental surgical instruments
- SUF: surgical instruments for external fixator
- SUO: ophthalmic surgical instruments
- SUR: surgical instruments
- XRE: x-ray equipment

Vol.3: Surgical instruments



Vol.4: Laboratory equipment and reagents

K Group = Kits
- MED: medical kits
- SUD: dental surgery kits
- SUR: surgical instrument kits



Guide of kits and emergency items

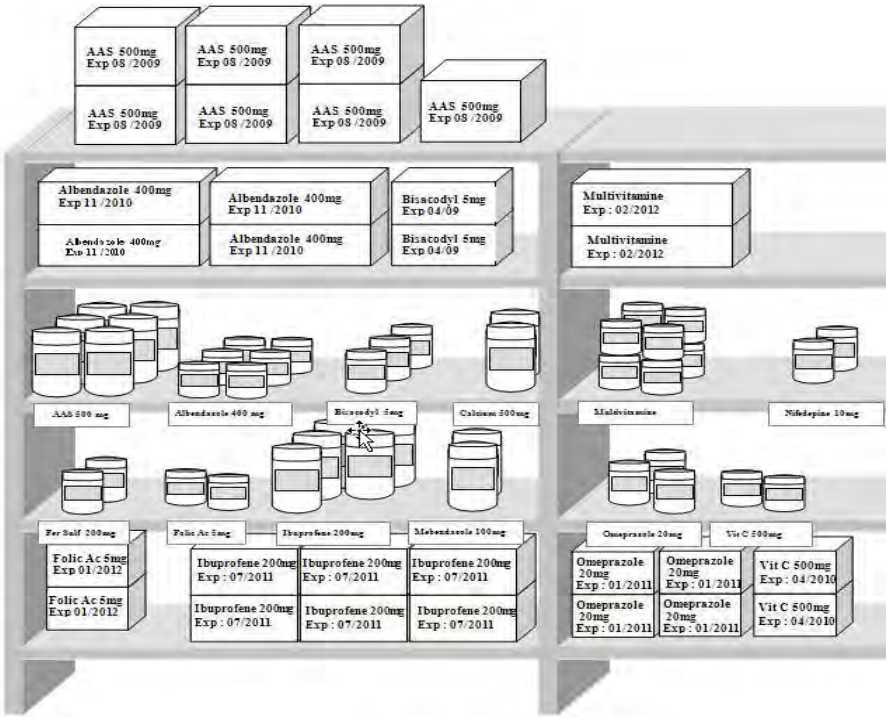
All MSF drug stores should have the international order forms and the latest MSF catalogues. These documents are updated each year.

Organisation of products

On the shelves

– Identify the place allocated to products using fix labels (use descriptions and codes given in the international order sheets).
– Provide enough space for and between two products:
  • to avoid confusion between 2 dosages of the same drug or between 2 similar INN,
  • to clearly see stockouts (empty space behind a label).
– Places boxes and cartons so that labels and expiry dates are well readable

– Identify open boxes and containers clearly (e.g. with a big cross). ***Do not open several boxes and containers at the same time!***
– Should the stock need to be divided for reasons of weight or volume:
  • leave some containers in the corresponding place,
  • indicate on the label that there are more stock reserves located elsewhere (for instance by using a red mark),
  • do not disperse stocks of the same product in several sites (one can use the upper and lower shelves when the weight is not too excessive).



Identify and update boxes

Drugs and materials inside boxes should be clearly identified and quantity should be regularly updated. This way management and inventory is easier.
Use large labels on boxes with the following information:
– product description: INN, formulation, dosage per drug,
– expiry date(s) and batch number(s),
– quantities and last inventory date.

Cross out past quantities and note clearly new quantities (expressed in standard unit of distribution).

Specific storing conditions

Psychotropic and narcotic medicines

These drugs must be stored inside a locked cupboard. These concern all the narcotic and psychotropic medicines which are submitted to the international rules (as mentioned in the MSF list) AND national controls (be aware of the changes of the national legislation). Their entry and distribution should be recorded in a register book (kept with them in the cupboard). The field coordinator and the project pharmacist are responsible for guarding the key.

Cold chain products

Most vaccines and a number of diagnostic tests and medicines are sensitive to, and may lose efficiency when exposed to temperatures above + 8ºC (as well as to freeze for some of them).

Cold chain products must be stored in a refrigerator or a freeze according to storage specifications written on the package, international order form or MSF catalogues.
– All refrigerators and freeze must be equipped with a thermometer and all-working cold chain indicators (one card 3M and one Freeze tag) in use.
– Temperature must be recorded twice a day (included day off) and notified on the temperature sheet posted on the refrigerator's door.
– Do not store medicines in the door of vertical refrigerators
– In the event the cold chain breaks down , the products must be clearly identified and kept in the refrigerator (between +2°C and +8°C). Logistic and medical responsible must be immediately informed (see page 42).

Dangerous products

These products should be stored in well-airy cupboards or on the bottom shelves of the main storing area.
A fire-extinguisher should be available (or sand vat).

Emergency modules and kits

These products should be stored in specific areas that are well indicated and individually managed. Each module or kit should be considered as a single unit.

Expired and/or damaged products

These products should be deposited in a locked quarantine area separated from the main storage area so as to prevent mixing them with legitimate products.

Stocks rotation

All drugs and sterile medical material with an expiry date should be stored following the FEFO rule (First Expired First Out).
– Clearly identify the expiry date: re-write it or circle it using a felt pen.
– **Always place at the front the product with the earliest expiry date and the product with the latest expiry date at the back.**

Notes:
– At the time of physical inventory, verify if the products arrangement is correct.
– When new orders are received, products should be re-organized according to the expiry date of the newly arrived products.

Note: pay attention to the different ways of expressing the expiry dates in different languages.
In French, MM/YY is normally used (e.g., 06/09 or June 2009) while in American English, the YY/MM formulae is used (thus 09/06 for June 2009).
Since this can lead to confusion, it is advised to write years with four digits YYYY. This way, there is no doubt!
Ex.: 06/2009
If the expiry date is written in month/year (MM/YYYY) or in year/month (YYYY/MM), it means that the product can be used till the last day of the indicated month.
Ex.: expiry date = 06/2010 then the product can be used until the 30th June 2010.

For the rest of the products without an expiry date, the FIFO rule is to be applied: first product in first product out.

Good drug management

Any incoming and outgoing movement should be recorded.
A notebook should be at hand in the store to write down movements when the staff in charge are absent.

1. Organisation of management tools

Standard product list of the pharmacy

This document lists all the products that should be held in stock.
Brand names should be written down aside the INN. Products needing special storing conditions –cold chain, psychotropics and narcotics, dangerous products– can be marked in order to facilitate their location in the store.
The stock pharmacy can also mention on this list the products given out to each unit.

CODE	Designation	Operating theater	Gynecologic ward	Digestive	Trauma ward	Medicine	Paediatric Emergency	Dar-es-Salam	Belle-Ville
	ORAL DRUGS								
DORAALBE4T-	ALBENDAZOLE, 400 mg, tab.		X	X	X	X	X	X	X
DORAASCA5T-	ASCORBIC ACID, 500 mg, tab.		X			X		X	X
DORAATEN5T-	ATENOLOL, 50 mg, tab.		X			X			X
DORACHLO2C-	CHLORAMPHENICOL, 250 mg, caps.		X	X	X	X	X		X
DORACHLP4T-	CHLORPHENAMINE MALEATE, 4 mg, tab.					X			
DORAETHL3T1	ETHINYLESTR. 0.03 mg + LEVONORGESTREL 0.15 mg, plaq. 28 tab.		X						
DORAMETN5T-	METRONIDAZOLE, 500 mg, tab.			X		X			X
DORAPARA5T-	PARACETAMOL (acetaminophen), 500 mg, tab.	X	X	X	X	X	X	X	X
DORAPENV1S1	PENICILLIN V, 125ml/5ml, dry powd.fr 100ml oral susp., bott.						X		
	INJECTABLE DRUGS								
DINJAMPI1V-	AMPICILLIN, 1 g, (IM-IV), powder, vial	X	X	X	X	X	X		
DINJAMPI5V-	AMPICILLIN, 500 mg, (IM-IV), powder, vial					X	X		
DINJARTE2A-	ARTEMETHER, 20 mg/ml, 1 ml, amp.						X	X	X
DINJARTE8A-	ARTEMETHER, 80 mg/ml, 1 ml, amp.		X	X		X	X	X	X
DINJCEFT2V-	CEFTRIAXONE, 250 mg powder, vial			X	X	X	X		
DINJDIGO5A-	DIGOXINE, 0.5 mg/ml, 2 ml					X			
DINJWATE1A-	WATER for injection, 10 ml, plastic amp.	X	X	X	X	X	X	X	X
	INFUSIONS								
DINFDEXT1P6	DEXTROSE, 10%, 500 ml, plastic pouch + INFUSION SET	X	X			X	X		
DINFRINL1P5	RINGER LACTATE, 500 ml plastic pouch + INFUSION SET	X	X	X	X	X	X		
DINFSODC9P1	SODIUM CHLORIDE, 0.9%, 1 l, plastic pouch + INFUSION SET		X	X	X	X			
	VACCINES								
DVACATET2S-	IMMUNOGLOBULIN HUMAN. ANTITETANUS, 250 UI/ml, syr	X	X		X	X			
DVACVBG1VD	VACCINE BCG, multidose, 1 dose, vial + solv l		X				X	X	X
	DRUGS EXTERNAL USE								
DEXTANTH1C3	ANTIHAEMORROID, cream, 30 g, tube		X			X			X
DEXTBENS6O4	BENZOIC ACID 6% + SALICYLIC ACID 3% ointment 40 g, tube	X	X		X	X	X	X	X
DEXTIODP1S2	IODINE POVIDONE, 10%, solution, 200 ml, dropper bot.	X	X	X	X	X	X	X	X
	DIAGNOSTIC TESTS								
DDGTMALF2--	TEST, MALARIA, rapid (Paracheck Pf), 25 tests, kit		X	X	X	X	X	X	X
DDGTMENT1--	TEST MENINGITIS (Slidex – kit 5), 25 tests, kit					X			
DDGTPREG1S-	TEST, PREGNANCY SET, (RST/hCG), one strip		X						

Stock cards

Stock cards are an essential management tool. In case of emergency, it is the first management tool to be set up, promptly and in all the pharmacies.

The importance of a stock card

Stock cards enable to:
– register and follow all stock movements (in and out) every time they take place,
– know at any time the quantity of each item in stock (stock available).

ITEM: ARTESUNATE		DOSAGE/TYPE: 50 mg, tab.			
CODE: DORAARTS5T-		UNIT OF DISTRIBUTION:			
REMARKS: AMM = 9000 Warning level = 2700					
Date	Origin/destination	IN	OUT	STOCK	Remarks/Signature
	REPORT			20 000	
1/02/07	MSF log 07/001	80 000		100 000	Exp: 08/2009 lot n°56987
2/02/07	Hosp.		3 000	97 000	
6/02/07	Dispensary 1		1 000	96 000	
6/02/07	Dispensary 2		1 000	95 000	
7/02/07	Mobil clinic		1 000	94 000	
1/03/07	**INVENTORY**			**94 000**	10000(03/07) 4000 (01/08) 80000 (08/09)
2/03/07	Hosp.		5 000	89 000	
5/03/07	Dispensary 1		2 000	87 000	
5/03/07	Dispensary 2		1 000	86 000	
6/03/07	Mobil clinic		1 000	85 000	
31/03/07	Expired March 2007		1 000	84 000	EXP 03/2007
1/04/07	Hosp.		6 000	78 000	
5/04/07	Dispensary 1		3 000	75 000	
5/04/07	Dispensary 2		2 000	73 000	
6/04/07	Mobil clinic		1 000	72 000	

Important: do not skip lines!

One stock card = one item

– *For medicines*: a medicine is defined by its INN, dosage form and strength
  • Each strength of the same drug will require a stock card (one drug strength = one stock card).
  • If one drug has two packages but the same INN name, dosage form and strength = one stock card.
– It is useful to add the MSF item code:
  • This way, products can easily be sorted by family (middle letters give the product family in English; e.g., DRE = dressings)
  • Also, it helps to ensure the correct article is ordered; medical materials descriptions are often long and complex for unfamiliar staff.

Note: MSF emergency kits have an MSF code. Each kit should have its own stock card.

One stock movement = one line

Dates should be recorded of each line.The year should at least be mentioned once per card to facilitate their filling.

– Each movement should be entered on one line. Use several lines for several movements even in the same day.
– Stock arrivals in the project pharmacy:
  • order reference into ORIGIN column,
  • expiration date in the REMARKS column. When there are several expiration dates, the closest date should be entered.
– In the OUT column, do not forget to mention the damaged or expired products removed from the stocks (quantities, reason in the origin/ destination column).

One inventory = one line (written in red)

Record the inventory date and the available stock using another color pen.
The inventory result will always be used as a base for the new calculations.

Where do the stock card go?

There are two possible options:
– Each card is placed along with the product where it is stored.
– All stock cards are filed together inside a box using an alphabetic order system per route of administration and family.

Note: The stock cards should be kept in the pharmacy and not in the MedCo's office!

What to do when a stock card is full?

– Transfer on the new card the theoretical stock of the previous stock card (this way, calculations errors are avoided).
– Keep only the latest stock card and archived the previous ones.

Where to archive the stock card and for how long?

– They have to be properly archived in a box for 5 years.

Monthly consumption table of the stock pharmacy

This table –filled on a monthly basis– is used to calculate the consumption at the end of the month.
This document is based on the stock pharmacy standard list. There is one column per supplied health unit and one more for the "total consumption".

In each health unit, monthly consumption derives from the stocks received and recorded in the stock record cards.

In the following example, the project pharmacy delivers medical products to two health centres: Dar-el-salam and Belle-ville.

Monthly consumption table
Project pharmacy

June 2007

	Dar-el-salam	Belle-ville	Total consumption
Oral drugs			
ALBENDAZOLE, 400 mg, tab.	300	400	700
AMOXICILLIN, 250 mg, tab. breakable	1900	4950	6850
ATENOLOL, 50 mg, tab.	0	0	0
CHLORAMPHENICOL, 250 mg, caps	0	400	400
COTRIMOXAZOLE, 200 + 40 mg/5 ml, syrup	15	5	20
COTRIMOXAZOLE, 400 + 80 mg, tab. Breakable	1100	1050	2150
DIAZEPAM, 5 mg, tab.	0	0	0

Monthly consumption tables of each unit

Each stock pharmacy should establish:
– a montlhy Consumption Table per health structure it supplies,
– a monthly Consumption Table for the itself.

Theses two tables are filled using the pharmacy(ies) stock(s) monthly consumption data.

Consumption tables per provisioned health structure offer the following advantages:

– Calculate the average monthly consumption (AMC) which is one of the parameters used in the orders.

– Visualize the evolution of the consumptions of the pharmacies and of those it supplies.
The consumptions of some medicines change due to seasonal pathologies (antimalarial, etc.). An increase in the consumption of some medicines may indicate either the beginning of an epidemic or a management mistake.

– If on of the supplied units closes, the pharmacy can easily recalculate its AMC.
Example: should the project choose to close the Dar-el-salam dispensary from July 2007 onwards, the project pharmacy would have to take it into account when ordering. It would have to recalculate its AMC to avoid an over estimation of needs.

Following the above example, here are 3 tables established for the 6 first months of 2007:

Monthly consumption table
Dar-El-Salam

Year: 2007

	Jan	Feb	March	April	May	June	…….	AMC
Oral drugs								
ALBENDAZOLE, 400 mg, tab	100	500	300	550	500	300		375
AMOXICILLIN, 250 mg, breakable tab.	2700	1300	3100	2000	2000	1900		2 167
ATENOLOL, 50 mg, tab.	261	50	50	0	0	0		60
CHLORAMPHENICOL, 250 mg, caps	1600	700	200	0	0	0		417
COTRIMOXAZOLE, 200 + 40 mg/5 ml, syrup	0	1	0	3	15	15		6
COTRIMOXAZOLE, 400 + 80 mg, breakable tab.	1850	1300	2200	850	900	1100		1 367
DIAZEPAM, 5 mg, tab.	0	0	0	0	0	0		0

Monthly consumption table
Belle-Ville

Year: 2007

	Jan	Feb	March	April	May	June	…….	AMC
Oral drugs								
ALBENDAZOLE, 400 mg, tab	50	300	500	250	400	400		317
AMOXICILLIN, 250 mg, breakable tab.	2150	3750	7600	0	8210	4950		4 443
ATENOLOL, 50 mg, tab.	400	100	0	0	0	0		83
CHLORAMPHENICOL, 250 mg, caps	600	250	100	300	650	400		383
COTRIMOXAZOLE, 200 + 40 mg/5 ml, syrup	1	0	12	9	8	5		6
COTRIMOXAZOLE, 400 + 80 mg, breakable tab.	1700	800	2300	500	700	1050		1 175
DIAZEPAM, 5 mg, tab.	30	370	0	0	0	0		67

Monthly consumption table
Project pharmacy

Year: 2007

	Jan	Feb	March	April	May	June	…….	AMC
Oral drugs								
ALBENDAZOLE, 400 mg, tab	150	800	800	800	900	700		692
AMOXICILLIN, 250 mg, breakable tab.	4850	5050	10700	2000	10210	6850		6 610
ATENOLOL, 50 mg, tab.	661	150	50	0	0	0		144
CHLORAMPHENICOL, 250 mg, caps	2200	950	300	300	650	400		800
COTRIMOXAZOLE, 200 + 40 mg/5 ml, syrup	1	1	12	12	23	20		12
COTRIMOXAZOLE, 400 + 80 mg, breakable tab.	3550	2100	4500	1350	1600	2150		2 542
DIAZEPAM, 5 mg, tab.	30	370	0	0	0	0		67

Monthly statement of the stock pharmacies

This table records the essential of the monthly activity data of a pharmacy.

The advantages of monthly statement of the pharmacy; it gives:

– An overview of stock movements of one given month.
– A simplified stock analysis at the end of the period.
– A report for Field and medical coordinator.

Data included in this record

– Stocks at the beginning of the period
  • Stock quantity which is:
    - the theoretical stock of the previous month if the inventory has not been carried out,
    - the physical stock if an inventory has been carried out.
  • Earliest expiry date for that particular product which helps the manager to remember to verify the validity of the products.
– Incoming stocks
  • Supplier per product should be indicated (MSF Supplier Centres or local supplier).
  • In « others » column : stock donated, borrowed and returned.
– Outgoing stock
  • All quantities supplied in the month taken from the stock pharmacy monthly consumption record donated or transferred or damaged stocks.
  • The total consumption resumes all the quantities distributed during the month and mentioned on the stock pharmacy monthly consumption statement.
  • Donations, loans and products returned are written down in the "Other" column.
  • The removal of expired or damaged products are also put down.
– Stocks at the end of the period
  • Calculation fo the theoretical stock.
  • If the pharmacy has conducted an inventory, the physical stock is put down.
  • Stock expressed in months of consumption.
– Stockouts: here should be put down the length of the stockout –in days– if there's one.

Analysis of the stock using the monthly record of consumption

The available stock expressed in months of consumption is an indicator easy to interpret.

$$\text{Available stock (in months)} = \frac{\text{Available stock}}{\text{Average monthly consumption}}$$

For the example shown in the next page, the pharmacy has:
– an order periodicity (OP) of 4 months,
– a lead time (LT) of 2 months,
– a security stock (SS) of 1 month.

When the available stock –expressed in months– is less than the warning level (LT + SS) there is a risk of out of stock
In this example, the warning threshold is equivalent to 3 months.
– Albendazole 400 mg tab presents a risk of stockout both if the consumption remains constant or increases.
  All products whose stocks are higher than (LT + SS + OP) present overstocks. In this example: 7 months.
– Atenolol 50 mg tab is overstocked.

MONTHLY RECORD OF THE STOCK PHARMACY **Month/year: June 2007**

Central project pharmacy Order frequency (OF): 4 months Lead time (LT): 2 months Safety stock (SS): 1 month

	Stock at the beginning		Incoming stocks				Outgoing stocks				Stocks at the end of the period				
designation	stock	earliest expiry date	MSF supplier	local purchase/ supplier	others (donation transfers received)	total receipt (E= B+C+D)	total consum-ption	donation transfers	expired or damaged	total outs (I= F+G+H)	theoretical stock (J=A+E-I)	physical stock (inventory)	stock deviations (L= L-J)	stock in months of consumption	AMC
	A		B	C	D	**E**	F	G	H	**I**	**J**	K	L	M	N
ORAL DRUGS															
ALBENDAZOLE, 400 mg, tab.	2 000	fev 07				0	700			700	1 300			**1,9**	692
AMOXICILLIN, 250 mg, breakable tab.	40 000	jan-08				0	6850			6850	33 150			5	6610
ATENOLOL, 50 mg, tab	2 000	aoû-07				0	0			0	2 000			**13,9**	144
CHLORAMPHENICOL, 250 mg, caps	4 000	déc-07				0	400			400	3 600			4,5	800
COTRIMOXAZOLE, 200 + 40 mg/5 ml, syrup	100	nov-07				0	20			20	80			**6,7**	12
COTRIMOXAZOLE, 400 + 80 mg, breakable tab.	12 000	mars-08				0	2150			2150	9 850			3,9	2542
DIAZEPAM, 5 mg, tab.	300	mai-09				0	0			0	300			4,5	67

Important: check the validity of your stock depending on expiry dates.
For instance, there is a stock of cotrimoxazole syrup equivalent to 6,7 months of consumption, but this product is expiring in November = in 5 months (July to November). Therefore, the stock really available is only equivalent to 5 months and not to 6,7. The rest could be donated or will have to be destroyed after November.

2. Monitoring stocks

Physical Inventory

Why to conduct physical inventories?

Physical inventories of stock pharmacy are necessary and useful to:
– check if the actual amount stocked (physical stock) is the same as the stock recorded on the stock cards (theoretical stock),
– correct stock cards if needed,
– identify causes of deviation and take corrective actions,
– verify product conditions: absence of expired and/or damaged products and if present remove them,
– identify and count products whose expiry date is less than 6 months.

Physical inventories are also a time to verify:
– the product arrangement depending on the expiry dates,
– that the reserve stocks are not dispersed (find boxes "stored" at the back of the garage, etc.).

When to conduct physical inventory

Inventories should be carried out regularly.

The project pharmacist should conduct an inventory at least before any order is placed.

Intermediary stock pharmacies should conduct at least one inventory every three months.

Preparing the physical inventory

Choose the date to make sure no products will be received or dispatched from the store during the inventory.

Tidy up the storehouse and the products.

Check stocks cards are updated: all item movements (in/out) should have been recorded.

During the physical inventory

At least two persons should conduct the physical inventory: the pharmacy manager and the supervisor.

– Expired and damaged products will be immediately removed from the stock and placed in the quarantine zone. The stock card and the register of expired drugs will be filled-in with the date and reasons.
– Estimate the amount of tablets from opened containers.
– Write down the physical stock in the corresponding stock card: date, « inventory » in the origin/destination column and the quantity in the stock column in RED INK.

After the physical inventory

Compare theoretical and physical stocks for each card.

When these are different, investigate the possible cause: re-count products, verify the theoretical stock, search for reserve stocks in the store…

The most frequent causes for deviations between theoretical and physical stocks are:

– Counting errors: verify units per container or per box.
– Calculation errors on stock card.
– Filling errors: check the quantities registered in the documents related to stock movements (delivery order, packing list, etc.).
– Confusions between similar items: overstock on one side = under stock on the other.
– Incoming stocks not registered:
  • drug non-used so returned from health facilities,
  • packing list remains in the logistics office,
  • specialized material too difficult to verify at arrival for non-specialized staff (tubes and catheters, surgical instruments).
– Outgoing stocks not registered:
  • delays in orders registration,
  • complementary orders for some items not documented,
  • products taken out of the store for emergencies and not recorded (often because of the expat).
– Losses:
  • because of expiry, damages or breakages from bad transport or storage conditions (e.g. humidity, rats): the quantities should be recorded as outgoing under supervision and stored in the expired zone;
  • due to misappropriation: errors are possible, but multiple errors in the same direction should be considered suspicious.

When there are many and/or important differences between the theoretical and physical stock, inventories should be conducted more frequently and/or be more specific (focused on certain products according to the problems encountered).

Prepare a list for all products whose expiry date is less than 6 months
It is an important component of drug management: it allows to chek the validity of the stock and be attentive to the follow-up of expiry dates.

Will the products with a close expiry date be used?
Compare the quantities in stock with the Average Monthly Consumption (AMC).
Example: inventory realized on the 30th of June 2007.
– Acetylsalicylic acid 300 mg, tab. Stock = 5 000 tab that expire at the end of September 2007; AMC = 1 000 tab/month

From now till the end of September (3 months after the inventory) the pharmacy should consume 3 x 1 000 = 3 000 tab. Thus, 2 000 tab will not be used (as long as the activities remain stable).
Forecast a new order and consider making a donation of the products you will not use rather than letting them expire on the shelves: do not procrastinate!

Avoid stockouts: the warning level

This warning level is calculated for each product and corresponds to the minimum quantity that should be in stock. If the product quantity is less than the warning level, there is a risk of stockout.

Calculate the warning level of each product

Warning level = consumption during lead time + security stock

Example: calculation a the warning level of a project pharmacy
Lead time for this particular pharmacy = 2 months
Security stock = 1 month
Paracetamol 500 mg tab AMC = 2 000 tab/month
Warning level = 2 000 x (2 + 1) = 6 000 tab

Compare the available stock to the warning level for each product
The pharmacy manager should compare the stock available for each product to its warning level:
– for each movement registered on the stock card,
– when filling the pharmacy monthly record.

At the project pharmacy level, the store keeper should inform the chief pharmacist of any product reaching the warning level. The chief pharmacist should then decide whether a borrowing is possible of if he needs to place an emergency order.
In the other pharmacies, the managers have to place an emergency order.

Reduce losses from product expiries: returns and donations

– *At the end-user units (service units) level*: return non-used products to the project pharmacy.
– *At the project pharmacy level*: make a donation.

Never donate what you would not want to receive!
Before making the donation, check that:
– the beneficiary really needs these products,
– they have the capacity to use them before the expiry date.

Each donation should come with a donation certificate (see Appendix 1, *Management tools*). This certificate:
– should mention the exact content of the donation: product description, quantities, expiry dates, manufacturers and batch numbers,
– has to be approved by the MedCo (no donation should be conducted without his formal agreement),
– should mention the name of the recipient of the donation who has to sign the certificate upon reception.

Important: psychotropics and narcotics cannot be donated without prior approval from authorities.

3. 3. Expired and damaged products

Expiry dates are expressed by MM/YY just after « EXP » or the equivalent symbol (see left).
Products may be utilised or administered until the last day of the indicated month.

Do not mistake:
(manufacturing date, « Mfg date »),
with (expiry date, « Exp. Date »).

Product damage might be linked to:
– product handling (breakages),
– insects and rats,
– bad preservation conditions (temperature, humidity and light).

When the colour, the appearance (stains), the odour, the solubility (at the time of reconstitution of injectables) or the consistency (tablets friability) seem abnormal:
– place the product in quarantine,
– immediately report to the pharmacist responsible.
S/he should pass the information on to the coordinator who in turn should fill out and transmit IMMEDIATELY the « QUALITY REPORT FORM » (See Appendix 2, *Report a quality problem*) to the section pharmacist who will recommend how to proceed (possible use or destruction).

Be aware of:
– Suppositories, ovules, creams and ointments having melted because of the heat can not be used because the active ingredient is no longer homogenously distributed.
– Oral Rehydration Salts (ORS) non-flavoured may be used as long as they keep their aspect of white powder. Humidity transforms them into a compact mass more or less brownish, insoluble and unfit for consumption.

What to do in case of cold chain breakdown?

– The product must be clearly identified, isolated and kept in a cold chain between +2° C and +8° C (in a refrigerator which is functioning correctly or in a cool box containing ice packs and temperature indicators).
– If vaccines have Vaccine Vial Monitor (VVM) , indicate their status (see MSF catalogue: Volume 1, *introduction on drugs*).
– Inform immediately the headquarters referent for reporting: name of the product, manufacturer, batch number, expiry date, and quantity. Precise also temperatures and duration of exposure of the products in order to know whether these products can be still used.
– If the breakdown appeared during the transport of the products from the supply centre, send data from Spy Temp® as well.

What to do with the expired or damaged products?

Expired drugs and sterile medical devices must be immediately withdrawn from the consumption circuit in order to be destroyed.

– Move the products to the quarantine zone.
– Record the quantities on their stock cards and the reason for their withdrawal.
– Fill in the expired and damaged register
– Check if the same products are also present in other stocks (end-user units, intermediary stocks, kits, etc.).

Those products have to be periodically returned to the project pharmacy. **Do not let the damaged and expired products accumulate for years**.
The quarantine zone is not a dump!
Destructions must be done under the responsibility of the coordination team according to the national legislation.

Damaged and expired register

It enables to register all the products withdrawn from the stock and put in quarantine zone because of damage or expiration.

It allows:
– to easily draw up a list which will be transmitted to the one responsible of the pharmacy then to the MedCo,
– to organize their destruction,
– to evaluate the corresponding financial loss.

Damaged and expired register
Project pharmacy

Date	Designation	Quantity	Date of expiration	Remarks
1st March 2007	ATENOLOL, 50 mg, tab.	1 000	Feb-07	
1st April 2007	GLUCOSE, 5%, 1 l, plastic pouch	6	Jan-08	Damaged during transportation

Medical orders

All medical orders issued by projects should be first validated by the MedCo, then by headquarters (HQ). This applies to both international and local medical orders.

Project ordering stages:

1. Prepare the order at project level then send to the capital
2. MedCo checks the medical order (analysis of monthly consumptions, validity of remaining stock, forecasted activities, etc.).
3. Order is sent to HQ.
4. HQ validates the order: this step often includes "back and forth" with HQ. Do not hesitate to use a phone instead of e-mails!
5. MSF Procurement Centre prepares the order (4-6 weeks) and send to the field necessary documents to get import authorisations.
6. As soon as the field obtains import authorisations it must give green light to MSF Procurement centre to ship the order (Not before!).
7. Shipment according to the transport system chosen.
8. Arrival in the capital where customs procedures are carried out.
9. Expedition to projects with all relevant documentation.
10. Reception, control, and record into stock.
11. Send the claim report to the Procurement centre if needed.

Cold chain products, dangerous products and psychotropics and/or narcotics need specific transport conditions or have special import procedures. This is the reason why international orders are usually handled by the MSF centres in separate files depending on the type of product: cold chain products, dangerous products, psychotropics and narcotics, the remainder of your order.

Communication is crucial as up to 15 people can be directly involved in medical orders at all levels (field, capital, HQ, procurement centre).
Respect communication channels and make sure each project is timely informed on the order changes during the revision process or its preparation.

Order planning may be discussed and revised in collaboration with headquarters.

Order planning is very important no matter whether orders are sent to MSF Procurement Centres or to local suppliers.

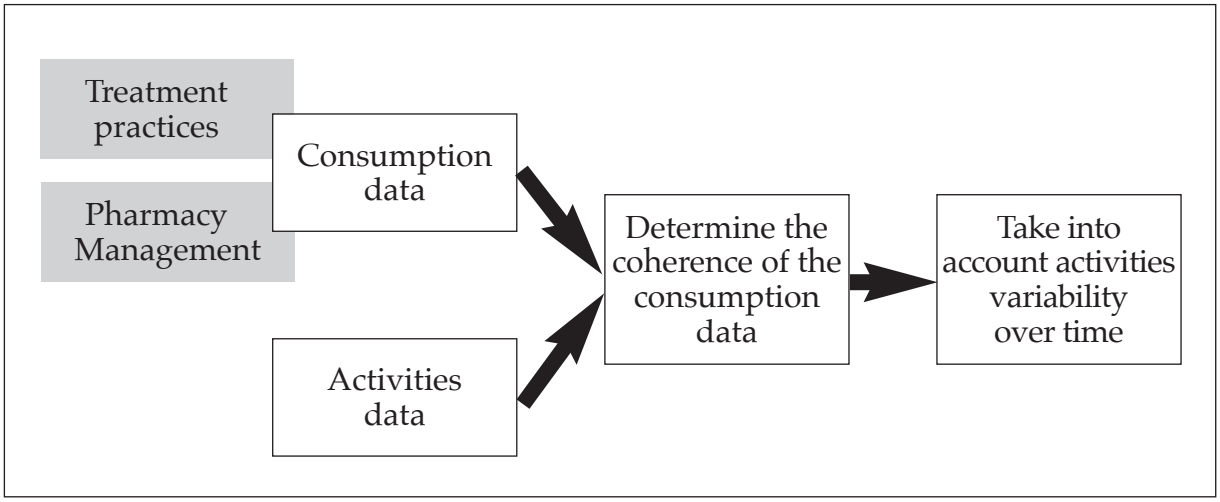
Consolidation of all orders from one country, reduces transport costs and bureaucracy related to import authorisations and customs clearance.

1. Parameters for preparing a medical order

In MSF projects, except for the project opening period, needs are dictated by consumption-based estimates. This method results in better procurement of medical items as it takes into account actual needs.

The downside of this methode is that it includes prescription habits and problems derived from a poor pharmacy management.

Therefore one has to:
– ensure the coherence of the consumption data,
– take into account project activities and variability over time.



Average monthly consumption (AMC)

Calculation of the AMC from previous consumption-based figures

For the stock pharmacy: consumption data equals the amount of products monthly supplied to any health unit.

Consumption ≠ outgoing stocks. Not all outgoing stocks can be considered as consumption. Donations outside the programmes, transfers, loans and withdrawals due to expiry should not be considered for monthly consumption calculations.

$$\text{AMC} = \frac{\text{Sum of monthly consumptions}}{\text{Number of months of consumption}}$$

– The AMC of each product, used for estimating needs, is the AMC of the project central pharmacy. An attentive and regular supervision is required at the management and prescription levels (correlation between consumption and activities).
– Stockouts have an impact on the AMC: drop-off the consumption of the products lacking and increase of the consumption of the products "consumed" instead… The consumption of these products has to be "corrected" when calculating the AMC.

– Reference period to calculate the AMC: the AMC should be calculated for the last three months of consumption if the project activities vary or over longer periods of time if project activities are stable. To determine the effects of time impact on the AMC, the AMC can be calculated and compared for both 3 month and 12 (or more) month periods.

Important: the AMC should be always recalculated before each project order.

Prospective evaluation of the AMC

– ***Take into account seasonal pathologies***
It is important to take into account the seasonal variations of the pathologies in order to adapt the drug quantities concerned during the time covered by the order (example: malaria).
The AMC for drug and medical supplies related to the seasonal pathologies should be estimated during the "epidemiological" period (high AMC) and outside of this period (low AMC).

– ***Take into account a cessation of one or more medical activities***
This will result in a re-calculation of the AMC for certain products and eventually to the revision of the entire project standardised list.
Example: "Hospital" MSF project including in the past a pediatric ward which has been closed down.
The AMC of the project central pharmacy includes the quantities supplied to this service. The AMC should be re-calculated to subtract consumptions of this service, otherwise there would be an overestimation of needs.
This explains the relevance of having monthly consumption tables for each medical unit (see page 35).

– ***Take into account the variation in the number of consultations (number of new cases)***
Consumption and activity are linked. Attendancy is measured by the number of new cases. The AMC should be re-calculated according to the average number of new cases expected during that period. (NC expected).
The AMC and the average NC should be calculated for the same period of time e.g., last three months.

$$\text{AMC expected} = \frac{\text{AMC x NC expected}}{\text{Average NC}}$$

– ***Take into account the expansion of existing activities***
The consumption-based method also allows estimation of the needs of similar activities (when the epidemiological characteristics are comparable) to the ones already existing.

Periodicity of orders (PO)

This periodicity corresponds to the time between 2 consecutive orders. For the project pharmacy, the stock order frequency is planned with the Supply Centre and the HQ allowing for a degree of flexibility.

Ordering planning is established with logisticians who assure transport. This plan has to take into account:
– the storage capacity,

– the distance between each health unit and the dispatch conditions (transport means: road, canoe, etc.; weather: rainy season, winter, etc.),
– the security conditions,
– the management capabilities of the peripheral pharmacies (the longer the lead time is, the bigger the peripheral stocks are and the more qualified the staff has to be in order to decrease the risks of poor management).

Lead Time (LT)

It is the time between the preparation of an order and the reception of the ordered products.
Caution: Lead time ≠ transport time.

LT includes:
– the order validation,
– the order preparation,
– the transport of the order to the capital, custom clearance and transporting to the project.

LT depends on the transport chosen according to security, time and cost criteria.

Security stock (SS)

SS is an amount of product that should be stored in normal conditions and kept to deal with unforeseen situations: delay of delivery (difficulties with imports or with transport during the raining season) or unexpected increased consumption.
It is meant to avoid stockouts.

SS can be defined for all products or for a specific number.

SS is usually defined as the consumption during half of the lead time but it is important to take into account the circumstances and specificity of some products.

At the project stock pharmacy
– SS is important when:
  • lead time (LT) is long,
  • procurement is difficult (strict purchasing conditions, imports authorisation, few suppliers, patented drugs, cycle production),
  • the medical activity is predicted to increase and the drug is frequently in use.
– SS will be small if :
  • the lead time is short,
  • procurement is easy,
  • medical activity is stable for such a product.

Calculate order quantity

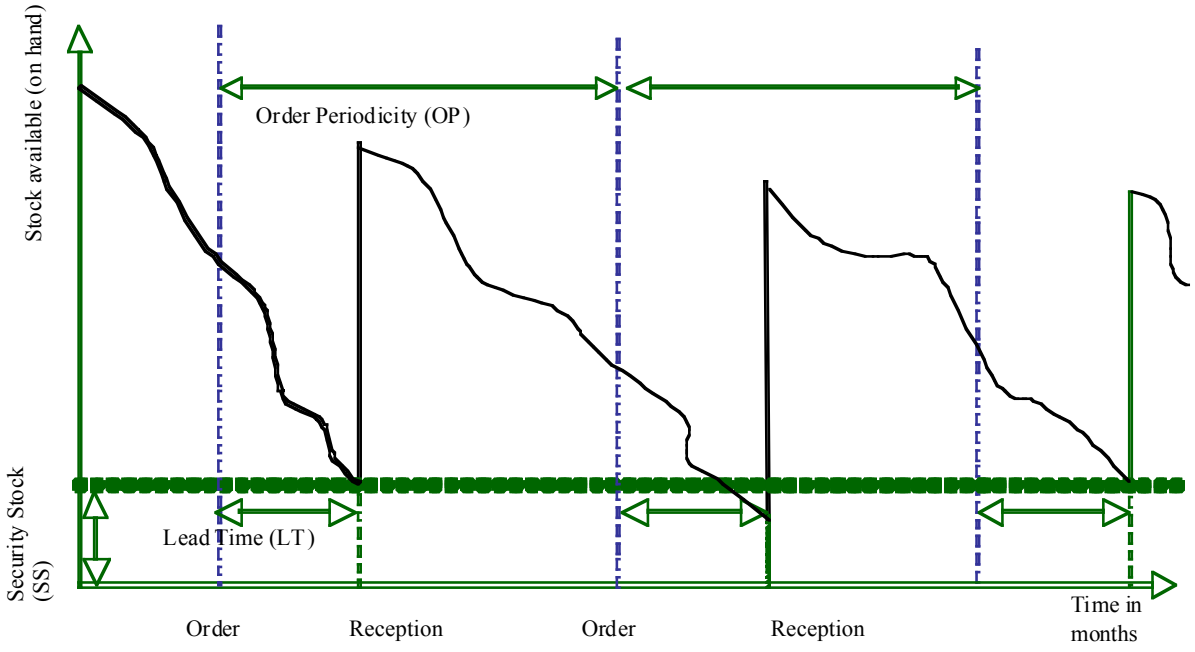
Order quantity should cover consumption of the stock pharmacy between 2 orders taken into account the lead time.
Anticipate a SS to avoid any stock rupture.

Likewise, stock on hand and stock on order (in inventory) should be taken into account.

Quantity to order =
AMC x (OP + LT + SS) — Stock available — Stock on order

– AMC of each product [expressed in standard unit of distribution units]
– OP = Order Periodicity [expressed in months]
– LT = Lead Time [expressed in months]
– SS = Security Stock for the product [expressed in months]
– Stock available/in inventory [expressed in standard unit of distribution]
– Stock on order (or backorder) which has not yet been delivered [expressed in standard unit of distribution]

Caution: the result of this calculation is based on past consumption and should be put into perspective with the evolution of the project, as shown in the "Prospective evaluation of the AMC" part.



2. Checklist for a project order

– Physical inventory prior to an international order to verify stock quantities and expiry dates.
– Order monitoring determines whether new orders or pending orders should be delivered. (see *Follow-up of project orders*, page 52)
– Evaluate the situation on the borrowings and loans: the borrowed quantities have to be added to the order and it is important to verify if the loans have been returned.

– Emergency kits: are there products needed to be renewed? Is it indispensable to keep them in stock?
– Remember to renew products from staff pharmacy and from emergency boxes.

3. What documents should be used to place an order?

International order forms

Use the standardised international medical order forms supplied by MSF Supply Centres for a programme order, a non-programme order, an emergency order and an international or local order.
– MSF-Log: order form available on the MSF Logistique web (www.msflogistique.org). All necessary explanations are at `Read me´ sheet. This document includes a number of tools to help in the order.
– For MSF-H missions, please contact the "Amsterdam Procurement Centre".
– MSF Supply: orders are passed on using Logistix.

Orders numbering principle (order reference)

The numbering principle applies in the same way whether it is an order for the Supply Centre or for a local supplier. Project numbers are assigned by the logistician coordinator in the capital.

Example: 07/024/BE/AO146
07 = year
024 = chronological order number for the year
BE = MSF section (here MSF Belgium)
AO = country code
146 = project code
The reference 07/024/BE/AO146 should be read: 24th order of the year 2007 placed by the project 146 opened in Angola by MSF-Belgium.
At project level the logistician would indicate the chronological number to use.

Note: chronological numbers are not exclusive to medical orders but are also used for logistic orders, etc.
Having a medical orders reference list would help to better arrange and archive orders.

4. Complementary orders

Placing a complementary order is preferable to being in shortage of an essential product between two planned orders.

However, a good management and an order elaborated with care should prevent stockouts. Complementary orders would be sent by air cargo or DHL.

It is necessary to accurately and cautiously estimate what products and which quantities to order.

Complementary orders do not replace ordinary and planned orders. They are only meant to satisfy project needs while waiting for the delivery of the planned orders.

Before placing an urgent order

– Verify if an order has been sent and the expected arrival date.
– Look for any overstock in a pharmacy: either in the project store or in another project using the monthly statement of the stock pharmacy.
– Try to borrow from another project or another MSF section: plan their return (order more).
– Order only indispensable products to treat patients in need.

It is unnecessary to place an urgent order when:
– the drug is available in different dosage for the same route of administration,
– a therapeutic equivalent drug is available in the project.
Example: promethazine 25 mg tab. and chlorphenamine 4 mg tab. are equivalent and with equal dosage (2 tab/day for adults).

What quantities should be ordered?

Quantities should cover until the arrival of the scheduled order and include a security stock which should be estimated according to its delivery time.
Example: if the delivery time of the planned order is 2 months, the security stock for the emergency order should then be 1 month.

Order reception

Reception procedures are also applicable to donated, borrowed and returned drugs.

1. Reception procedure

a) A pharmacy staff member must be present when the order is delivered.
   – Check the presence of the following documents which have to come with the order:
     • Packing list: a document describing the order content per box.
     • Backorder balance or order/delivery form: a document enabling to check the concordance between the delivery and the order.
   – Put the order in the "reception area" at its arrival.

> **If the order includes :**
> – *cold chain products*: they should be immediately checked then placed in the fridge and Spy temp must be read to check storage conditions during transport. In case of cold chain breaking, products must be clearly identified and kept into the fridge. MSF supply centre should be immediately informed.
> – *psychotropics and narcotics*: they should be checked and locked away.

b) Verify the content of the delivery
   Plan a time when no distribution or dispensation takes place in order not to be interrupted.
   – Open the boxes and take all products out for inspection in the working area.
   – Check product descriptions and quantities and compare to the packing list.

c) Check the expiry dates
   – Do not accept expired products[2].
   – Re-write the expiry dates over the packages.

d) Check the quality of the products
   – Products purchased locally should be inspected following the quality control procedure described in MSF Guidelines *Procurement in the field*.
   – Check the packaging conditions: if one is damaged, open it to check its content.

e) Arrange stored products following the principle of stock rotation and fill in the corresponding stock cards.

f) Classify all the documents (packing list, back order balance, etc.) and archive them only when the order is complete.

---

2 MSF Procurement Centres ensure that products shipped to projects still have at least 1/3 of their shelf life.

In case of problems[3]

– For orders coming from MSF Procurement Centres: use the following documents:
  • MSF-Log attaches to all orders a claim form (article/order quality). It is possible to download it from:
    http://www.msflogistique.org/professionnel/ pro_an/pro.htm)
  • MSF Supply: it is possible to download the claim document from the web site http://www.msfsupply.be/pages/uk/downloads.php).
– For local purchases, refer to *Procurement in the field* guideline.
– For the project internal orders: indicate in the column ´remarks´ in the request/delivery form

2. Follow-up of project orders

It is advised to establish an order follow-up table at the project pharmacy level in order to know if there is product awaiting reception (stand-by orders). Orders are not completely closed until all the products have been received.

order shipping date	Field order reference	Type of product	Operational ref.	Packing ref.	Nb of parcels	arrival date in capital	Remarks
01/09/07	07/043/F/LR111	misc	27379	31594	83	11/11/2007	Products on stand-by
	07/043/F/LR111	misc	27379	31636	1	20/10/2007	Products on stand-by
	07/043/F/LR111	misc	27379	31668	12	28/10/2007	Products on stand-by
	07/043/F/LR111	misc	27379	31997	1	20/11/2007	Products on stand-by
	07/043/F/LR111	misc	27379	32261	3		
	07/043/F/LR111	cold	27386	31637	1	28/10/2007	Products needing cold chain on stand-by
	07/043/F/LR111	cold	27386	32020	2	20/11/2007	Cold chain completed
	07/043/F/LR111	psy & narcotics	27396	31603	1	28/10/2007	Psy and narcotics completed
	07/043/F/LR111	Order closed					

[3] Problems might be related to damage during transport or errors on quantities delivered.

Distribution of drugs and medical supplies

Orders need to be **validated** by the medical responsible of the unit before being supplied.
It is important to establish a **calendar** of order/distribution for the different units (not all units the same day) and to dedicate time to this activity (no delivery during a preparation).
Stock pharmacies have to verify the **expiry date** of the products distributed to health unit or service.

1. How to prepare a distribution

a) Use a container or a trolley to take products from the shelves and put them on the preparation table. Then check:
   – the description, formulation and strength,
   – the expiry date,
   – the integrity of the packaging and the product appearance.

   If products with an expiry date close in time are distributed to consumption units (because they are the only products available, etc.) then the stock pharmacy has to:
   – visibly write down this expiry date on the order/delivery form (in red, for example) and has to make sure that the delivered quantity of those products can be consumed before the expiry date,
   – recover the non-consumed products at the expiry date and place them in the quarantine zone.

b) Fill the stock cards in.

c) Prepare and check the order/delivery form.
   – While packing, repeat the previous step by filling in the "quantity delivered" column of the order/delivery form.
   – Sign and date the order/delivery form.
   – If quantities delivered are different from those ordered, notify and explain it in the "remark" column.

   If 2 people work in the pharmacy, it is recommended to leave this step for the other person, thus allowing a double check.

d) Pack and close box(es):
   Make sure packed materials are well wrapped to prevent breakage during transport.
   Number the packages and fill in a packing list or write the number of parcels on the order/delivery form.

e) Fill in other management documents:
   – Photocopy the order/delivery form:
     • the original is shipped with the packages,
     • the copy remains in the pharmacy
   – Inform the logistician who will issue a way bill.

f) Once all is done: put boxes into outgoing storage (if there are more than one order at the same time in the zone, separate them distinctly).

2. Prepare transportation for products requiring cold chain

Products requiring cold chain should be transported under specific conditions.
It is therefore important to inform the logistician early enough.

It is always necessary to:
– Use iceboxes or isotherm cartons
– Place inside cold chain indicator(s):
  • Card 3M (MSF code: PCOLCONT1C+) to verify temperature conditions during transportation.
  • Add a freezing indicator for products that should not be frozen.
– Products can be picked up and put in an envelope together with the packing list but should be kept in the fridge till the last minute. The icebox will be prepared and products transferred into it just before leaving.

How to prepare an icebox?

– Take the ice packs out of the refrigerator half an hour earlier. This will be enough to set the temperature at around 0ºC - otherwise there is a risk of freezing the products.
– Wipe them carefully before placing them inside the icebox.
– Do not place products in direct contact with ice packs: place cardboard between the two.
– If possible, put products inside a plastic bag to limit condensation over the packaging (which could provoke unreadable labels, damaged boxes).
– Place a cold chain indicator between the products.

3. Prepare the disinfectants and/or the antiseptics

Preparation and management of these solutions should be centralised to avoid errors of dilutions, contamination or use of expired products. This activity should be conducted in the sterilisation room or inside the pharmacy.
Refer to *Infection control in health care settings*, MSF.

4. Unpacking and re-packing

As much as possible avoid unpacking products and supply health services with original packaging.

Sometimes however it is necessary to divide tins of 1 000 tablets or boxes of 100 ampoules before dispatching them (in case of low consumption for instance).

Select the appropriate packaging

Drugs should be re-packed using clean and appropriate packaging: clean plastic tins (MSF code: EMQTACT1—); small plastic bags for drugs (MSF code: SMSUBAGPO6).

Plastic bags and injectable ampoules should not be exposed directly to light.

If packages are re-used they should be carefully cleaned and previous labels should be removed.

Packages labelling

On each packaging should be visibly written with a marker:
– the description of the product (INN), its formulation and strength,
– the expiry date,
– the batch number and the manufacturer name,
– the quantity of unit in the packaging.

If plastic bags for drugs (minigrips) are utilised, information should be written before bags are filled with medicines.

Counting tablets and capsules:

This operation should be conducted in the pharmacy in a clean working area. Staff should be trained on basic hygiene rules and verify that all required equipment is present: water, sink and soap.

Non-sterile gloves are not recommended (the staff tend to believe this saves them from washing their hands and wear them all the time) except for cases of wounds or eczema.

Use the tablet counter (MSFcode: EMEQTACO17-)or a large spoon for counting tablets and capsules.

Important:
– Do not unpack several different products at the same time (risk of mixing-up similar pharmaceutical forms: lots of tablets are similar, etc.)
– Ensure packages are well closed: most medicines are sensitive to humidity (important in countries MSF work in) and to light.

Special remarks on management for stock pharmacies

Expiry dates of products within Emergency Boxes and/or Kits should be checked regularly to ensure their validity at all times.

1. Emergency boxes

Emergency boxes should always be functional. They are normally carried inside cars and MSF houses. Therefore, it is important for concerned MSF staff to be sensitize to their management.

Prepare a detailed list of content and make it readily available to record each movement of product.

Quickly replace the articles taken from the emergency box.

The medical coordinator needs to:
– know the exact number of emergency boxes available,
– schedule a periodical verification.

2. Kits for emergencies

Each kit should be clearly identified. All parcels from the same kit should be grouped.
Display the detailed content of the kit (detailed packing list or copy the corresponding page from the MSF catalogue Kits) and highlight the closest expiry date.

At each international order:
– check if the kits are still necessary (adequacy with the project context),
– if they are, check the expiry dates of those kits and re-order all the products which will expire in the following year.

CHAPTER 3

Drug management in end-user units

Storage and organisation of drugs and medical supplies

Drugs and medical material should be organised in a place suitable for their storage. That can be a cupboard or an entire room according to the stock size. In any case, it should be locked and be the responsibility of the drug manager.

It is important to consider preservation conditions: light, humidity and temperature.

Within a health unit, determine storing space for products needing cold chain, psychotropics and narcotics and ensure all staff receive specific training.

1. Arranging cupboards

Its location should be:
– close to the nurse's working area: reduce travel time,
– well illuminated to avert errors,
– placed not too high to prevent the need for stools (staff will tend to place items to match their height).

Interior organisation:
– enables to follow the products organisation rules (see further on),
– use a storing cupboard which offers good visibility and ease of access to each product,
– washable.

2. Organisation of medicines and medical supplies

Effective organisation will facilitate management and reduce risks of errors during dispensing. A standarised list of products should be visible. All medicines should be identified by their description (INN), dosage and strength. Brand names may be added next to the INN.

Product organisation have to observe the basic rules cited for stock pharmacies:
– route of administration and alphabetical order,
– labelling of locations,
– stock rotation.

Physical inventory

Physical inventories are carried out with the stock pharmacy manager. Inventories aim to:

– count stock on hand and check there are no expired product,

– withdraw non-expired products no longer used (they should be returned to the pharmacy responsible for supply),

– evaluate management performance.

Select a management system adapted to the context

There are several possibilities for drug management in hospital services according to the context:

– Treatments are supplied by the retail pharmacy on an individual prescription, generally carried by a patient's relative. Within the service, there is a pharmacy cupboard exclusively reserved for emergencies outside (retail) pharmacy hours. Only the necessary quantities will be removed for hospitalized patients to last until the re-opening of the pharmacy while whole treatments will be removed for outpatients.
– The service writes a collective prescription for 24 hours and keeps an emergency stock in its pharmacy cupboard.
– Treatments are supplied from the ward's pharmacy. Wards place an order, using a order/delivery form, to the stock pharmacy on a regular basis according to the planning set up by the pharmacy. It is important to set up an effective consumption monitoring system.

	Individual prescriptions + Emergency stock in a cupboard	Collective prescriptions for 24 hours + Emergency stock in a cupboard	Pharmacy Cupboard (treatments available in the wards)
Staff management skills		Low importance	High importance
Risks of losses	Low risk	Medium risk	High risk
Supervision necessary – retail pharmacy – services management – dispensing to patients – adherence	 yes reduced to emergency cupboard yes yes	 yes less important yes yes	 yes very important yes yes
Workload for the pharmacist responsible	Very important	Important	Less important
Supply frequency	When needed	Daily	Every weekly or more
Order forms	Ward register	Collective prescription + service register (emergency cupboard)	Order/Delivery form

Whichever the management system, treatments should be registered in the patient card (admission card). Treatments should be administered/supervised by medical personnel.

Particular case : quota

For each structure and for each drug and item, a maximum quantity is fixed (= the quota) by the medical staff in charge.
Drug managers should advise on what products are no longer in stock. Therefore, it is important to carry out an inventory before each order.

To define a quota it is necessary to:
– determine the type of pathologies the structure will deal with,
– define the therapeutic protocols which will be used,
– estimate the number of new cases,
– take into account the supply periodicity.
The quota will have to be reviewed when necessary (modifications of the protocol, increase of activity, modification of the supply periodicity, etc.).

Quota often induce an increase of consumption as the personnel tends to think that the quantity fixed by the quota can be used without justification.
Therefore a monitoring system has to be set up.

Management tools

1. Order tools

Ward (service) register of cupboards used for emergencies

The list of items stored in the cupboard is defined by the medical staff in charge of the service. The list with all products -description and quantity of each medicine- must be clearly displayed.

Each drug dispensed is recorded in the ward register along with the patient's name. This register is used to place new orders.

Example of a ward register

Date	Designation	Qty	Patient's name Bed or Health card number	Remarks
25/08/2007	Amoxicillin, 250 mg, tab	4	Aminata Hamadou (bed N° 5)	

Similarly, the manager uses this register to order the needed medical materials for the health unit.

Collective prescription for 24 hours

Every day after the doctors round, the nurse prepares an order sheet for 24 hours for all the patients hospitalized in the service.

Using the patients' health cards, the nurse sums up the quantities of drugs needed.

This collective prescription is used as order/delivery form.

Service: General Medicine											
Date: 06/11/07											
Bed Number	1	2	3	4	5	6	7	8	9	10	TOT
Cotrimoxazole, 480 mg, tab	4			4	4				4		16
Paracetamol, 500 mg, tab	4	4		3		6			4		21
……..											

Example of a patient's health card.

Patient: Jay Mal bed n°1

	6-nov				7-nov			
	8h	14h	20h	24h	8h	14h	20h	24h
Cotrimoxazole, 400 + 80 mg tab	~~2 o~~		~~2 o~~		2		2	
Paracetamol, 500 mg tab	~~1 o~~	~~1 o~~	1 o	(1 o)				

o = ordered / = dispensed O = undispensed

Health cards can also be used as a way to control the dispensing to patients.
For instance: « o » indicates quantities ordered and when the drug is dispensed to the patient, the quantity is crossed out; when the drug is not, it is circled.

Order/delivery form of pharmacy cupboards

The wards prepare their own order.
This order needs to be **validated by the medical supervisor of the ward** before being transmitted to the pharmacy. At the pharmacy level, the pharmacy responsible has to check the coherence between the ordered quantities and the past consumption of the ward and inform the medical supervisor of the ward in case of important variation.

The **periodicity of orders** varies according to staff management skills and storage capacity.
In a hospital, it should be possible to evolve from a daily supply system to a weekly system. In optimal conditions a « closed container » distribution (entire packagings distributed to the unit) can be initiated which simplifies the work of the pharmacist. But it does requires good supervision of the effective consumption.

The document introduced page 66 is standard form. **Some columns can be deleted according to management skills**.

Person responsible for ordering:

– Completes the heading of the purchase/delivery order.
– Fills in the columns:
  - (1) *Initial stock* (even at the time of a distribution -quota supply method- since the stock may be different to the quota if some products were in stock out at the last delivery). Initial stock can be either the theoretical of physical (if an inventory has been carried out).
  - (2) *MSF supply*: all orders (plan and complementary orders) received.
  - (3) *Other entries*: donations, loans and borrows (in the remarks column).
  - (4) *Consumption outgoings*: for the stock pharmacy = quantities supplied; for consumption units/structures = quantities given to patients.
  - (5) *Other outgoings*: expired, damaged, breakages, donations outside programme, returned products, etc.).

- ⑥ *Theoretical stock*: initial stock + total entries – consumption outgoings – other outgoings.
- ⑦ *Physical stock* when an inventory is conducted.
- ⑧ *Order quantity* according to prior consumption calculated from physical inventories or from data compiled on daily consumption sheets.

– At the bottom of the document, write name and sign.

The person responsible to validate this order (all orders should be approved):
– approves the quantities and can modify them if deemed necessary (with regard to the foreseen activity),
– dates and signs the document.

The receiver (responsible for the health unit supply):
– indicates the quantities delivered in the ⑨ column,
– if delivered and ordered quantities do not match s/he writes down the reasons for this in the "remarks" column,
– dates and signs the document.

Order references

To facilitate the classification and filling of orders a reference system for order/delivery forms should be used. The sequential number ensures all orders are filed.

Example: BCL 07/003/Dar-CPh refers to the third order/delivery form of 2007 placed by Dar-el-Salaam dispensary to the project central pharmacy (CPh).

From: Dar-el-Salam dispensary

To: Central pharmacy

Order date: 01/03/2007

Delivery date:

Order reference: 07/003/Dar-PhC

			Entries		Out						
	Quota	Initial stock	MSF supply	Other entries	Out consum.	Other out	Theoretical stock	Physical stock	Quantity ordered	Quantity delivered	Remarks
	a	b	c	d	e	f	b+c+d-e-f				
Oral drugs											
ACETYLSALICYLIC ACID 300 mg		500 ①	2 000 ②	③	1 500 ④	⑤	1 000 ⑥	⑦	1 000 ⑧	⑨	
ALBENDAZOLE, 400 mg											
AMODIAQUINE, eq. 200 mg base											
AMOXICILLIN, 125 mg/5 ml syrup											
AMOXICILLIN, 250 mg											
Drugs external use											
ANTIHEMORRHOID, cream, 30 g											
BENZOIC Ac/ SALICYLIC Ac oint. 40 g											
BENZYL BENZOATE, 25%, lotion, 1 l											
CALAMINE, 15%, lotion, 500 ml											

Responsible of the order	**Order validated by**	**Order prepared by**	**Delivery controlled by**
Name:	Name:	Name:	Name:
date:	date:	date:	date:
signature	signature	signature	signature

2. Management tools

Daily consumption sheet

These documents are used to record the quantities dispensed (outgoings) by the retail pharmacy or the wards. It replaces the stock cards[4] for retail pharmacy. They are pre printed from the standard list of each unit.

It is possible to follow critical items per unit according to workload and required supervision level. In this case, global follow up of consumption is based on physical inventories.

Daily Consumption Sheet

Date: 20th May 2007

Dar-el-Salam dispensary

		Total
Oral drugs		
ALBENDAZOLE, 400 mg, tab	3+ 2+ 4	**9**

* Each figure corresponds to basic units dispensed to one patient. Here, the first patient has received 3 tab, the second 2 and the third 4.

Add a stiff band on a regular notebook and stick the standard list on it. This way, tedious copying are avoided and errors are limited.

4 *Remark*: retail pharmacies do not need stock cards which would require a lot of work to register each drug outoing every day.

Weekly and monthly consumption reports

Daily consumption is summarised in the weekly and monthly consumption sheet.

Weekly consumption report

Dar-el-Salam dispensary	Consumption week 20							
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	**total consumption**
	16-may	17-may	18-may	19-may	20-may	21-may	22-may	
Oral drugs								
ALBENDAZOLE, 400 mg, tab	10	9	10	9	9	10	10	**67**
……								

Monthly consumption report

Month: May 2007

Dar-el-Salam dispensary	week n°	week n°	week n°	week n°	week n°	**total consumption**
	18	19	20	….		
Oral drugs						
ALBENDAZOLE, 400 mg, tab	……	……	67	…….	…….	**238**
……						

Orders reception

Verification should include:
– delivery conformity: products descriptions and quantities,
– labels: legibility and expiry dates.

If packaging is damaged the content should be checked.

Drug dispensing to patients

« All the resources involved in having the medicine reach the patient will come to nought if the patient does not receive the medicine, the form, the dose or the posology prescribed, along with clear instructions and a packaging assuring its quality. »[5]

1. Factors contributing to effective dispensing practices

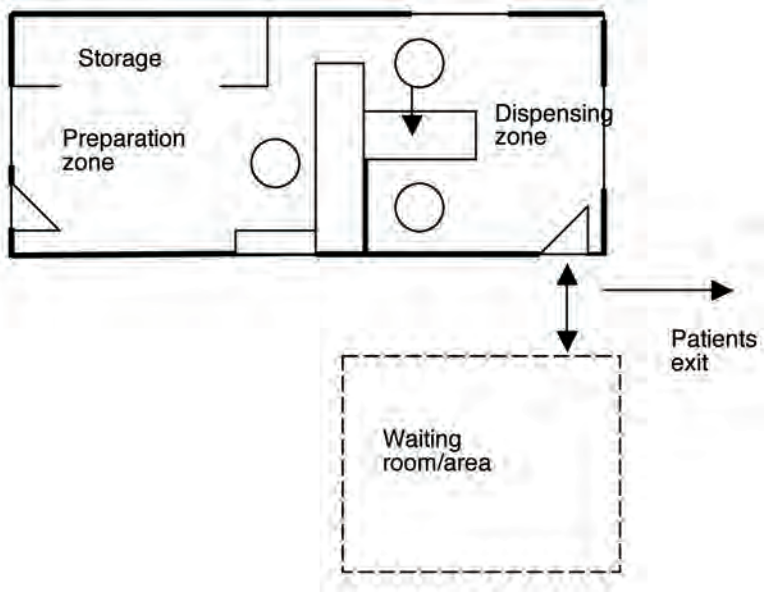
The dispenser has to issue the correct medicine in the form and dose prescribed, and in quantity corresponding to the duration mentioned on the prescription. He express himself in the language of the patient.
Ideally, he has to be able to detect an error done at the time of the prescription, a misunderstanding from the patient about his illness and his treatment.
He has to be rigorous in registering all drug movements in the management record book.

The dispensing room must allow the correct storage of drugs: a lot of medicines are sensitive to heat, humidity and light. The room must have a large counter, easily washable, enabling the proper preparation of the medicines, and an office to keep all management files. The room has to be equipped with a water sink and a filter (administration of first doses to the patients, hygiene for dispensing).

Dispensing of products

Before reaching the pharmacy, the patients have usually waited for the consultation. They are often tired and in a hurry to go home and therefore not always listening to information. It is therefore important that the dispensing rooms are:
– tranquil (not in the middle of the courtyard full of people),
– comfortable (have a bench, in the shade and with drinking water available),
– confidential: as far as possible, the patient should receive his treatment without a "public"; that way, he will be more comfortable and may actually ask questions (respect of confidentiality).

5 Extract from *Managing drug supply*, MSH/IUED.



2. Dispensing stages

Step 1: understanding and validating prescriptions

Prescriptions are written on the patient's health card, on a prescription form or on the hospitalisation card.
In these documents, must be included:
– the prescriber's name, ward or health centre,
– the prescriber's signature,
– the patient's name (address too if surveillance is intended),
– the age/weight for children, for adults as well depending on the pathology,
– the prescription date.

The set up of the prescription must observe the following rules:
– description of drugs using the generic names ; dosage (mg/tab, etc.) and form (tab., inj., etc.),
– number of times per day and total number of days to complete treatment,
– using well-known acronyms: « g » for gram, « ml » for millilitre,
– clear and legible writing to avoid mistakes when dispensing,
– information must be written in a language dispensers understand.

In case of doubt, the dispenser should not hesitate to demand clarification from prescribers.

Step 2: preparation of prescribed medication

The dispenser has to have clean hands and use clean tools and/or equipment. (tablet counter or spoons): this in order to preserve the quality of the product.

It is recommended to double-check prescriptions when possible. If two people work in the pharmacy, treatment should be prepared by one of them and checked by the second. This reduces the risk of mistakes with the prescription.

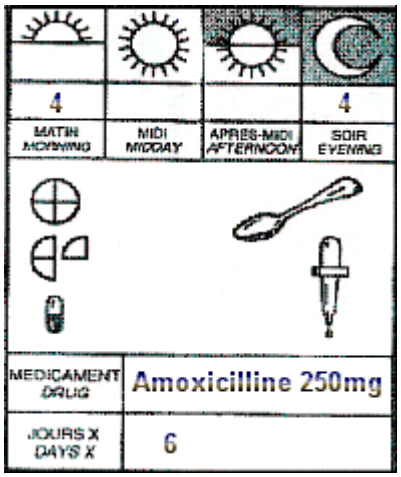
Preparing tablets and capsules

Oral forms are often supplied in bulk (containers of 1 000 tab., for example). The number of tablets to treat one patient is given inside a plastic bag.

Medicines pre-packed in blister (ACT, contraceptives) should not be unpacked.

Preparing plastic bags : ***use one bag for each prescribed drug***.
Preferably utilise « minigrip » plastic bags (MSF Code: SMSUBAGP06-). They are meant for capsules and tablets.
Important note: plastic bags can be used for treatments no longer than 7 days. They are neither opaque nor water-resistant. The quality of the products is not assured beyond that time.

For chronic treatments or for treatments longer than a week, a plastic bag can be used for drugs which can then be placed inside an opaque and hermetically closed container (MSF code: EMQTACT1--).



- Using a ballpoint-pen or a marker, write legibly on each plastic bag before packing the drugs:
  - drug description (INN) and strength,
  - dose under each pictogram indicating the time of intake,
  - treatment duration.
- Add patient's name (important when several members of one family receive treatment at the same time).
- Calculate the number of tablets necessary for the whole treatment.
- Use a spoon or a tablet-counter. Never use fingers to count tablets.
- Clean regularly the tablet counter (or use different spoons) to prevent any cross contamination, some patients being allergic to very small quantities of medicines (e.g. penicillin).
- If the dosage is given in halves, the patients have to be told how to divide tablets (do not prepare half tablets in advance).
  For chronic treatments, supply one tablet-cutter (MSF code: EMEQTACU1--) and show patients how it works.
- Use a spoon to pour tablets and capsules inside the plastic bags.
- Carefully close the bag.
- Clean the spoon.

Avoid errors in preparation:
- Confirm that the label of the product packaging corresponds to the prescription.
- Close the container. Do not leave drug containers open on the working table.

Preparing standardised treatments

For standardised treatments, it is preferable to have them in blister (never remove the tablets from the blister).

For drugs that are not in blister, it can be prepared in bags in advance (maximum the day before to prevent any degradation of the product). Adequate labeling of such bags is crucial.

Pre-packing allows safer and faster dispensing with less risks of error.

Keep the bags from humidity and light.

Preparing liquids

As good storage conditions are not guaranteed at home, syrups and oral solutions should neither be prescribed or dispensed to outpatients except for particular cases.

In case of powder form syrups, the reconstitution of the first bottle must be done in front of the patient to show him how to prepare the syrup and ensure a proper dilution.
If the patient has to take away a second bottle, the level of water should be clearly marked with indelible ink.

The dispenser has to use filtered water at health centre and will explain to patients (often mothers) that water must be boiled at home and only used once it has cooled down.

For syrups, he will provide to the patient a spoon or graduated syringe, and instructions on how to administer the correct dose and clean the syringe.

Step 3: register the quantities dispensed

The dispenser must fill in carefully the daily consumption sheet.

Step 4: explanation to patients

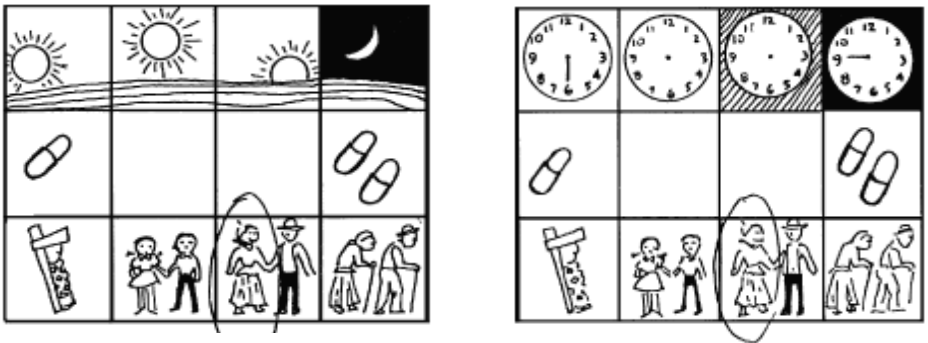
Dispensers must ensure patients understand when and how to take their medicines. Patient should be in a position to repeat the instructions.

The important aspects are:
– When to take the medicines: at what times of the day, before or during meals, together or separated to other drugs (antiacids).
– For how long: it is important to be clear on the treatment duration, particularly with antibiotics and antipaludics so as to avoid resistance of the drug.
– How to take the drugs: swallow or chew the tablets; powder to reconstitute (ORS); tablets that have to be crushed for children, etc.

How to facilitate a good comprehension of the treatments by the patients?

– Administer the first dose
  It is one way to inform the patient. The retail pharmacy has to have filtered water and cups.

– Pictograms
  You can draw the pictograms yourself and photocopy them.
  Examples of pictograms explaining who in the family the drugs are for:



Source: WHO, Guide to good prescribing: a practical manual

– Information sessions performed in the waiting room/area
  Before the consultations with the support of images over the correct use of medicines.

3. Adherence

A good adherence relies on:

– the disease and its patient's understanding;
– the patient´s family (the support of his relatives);
– the prescriber: he has to take the time taken to explain the illness, the prescribed treatment and side effects;
– the medicine: facilitate its route of administration, utilization of medicine at fixed dose, dosage limited per day, no food restrictions;
– dispensing: legible packaging, trust, first dose on site. The dispenser must ensure the patient interprets correctly the pictograms which help the understanding of the treatment;
– access to health care: facilitate the patient care near the patient's home.

CHAPTER 4

Supervision of drug management

The medical coordinator has to perform regular supervisions in order to:
- Check that the correct storing conditions are applied.
- Check correct filling up of management tools and absence of stock discrepancies.
- Check monitoring of expiry dates; are there products for destruction?
- Give technical assistance to the staff in charge of the pharmacy (in-service training).
- Identify difficulties of staff management. Provide in-service training.
- Make sure pharmacy staff, prescribers and logisticians do work in collaboration and have regular meetings to analyse the stock level.

Supervision of drug management in stock pharmacies

1. Supervision checklist

The use of supervisory check lists enables verification of effective organisation of pharmacies (see Appendix 3).

2. Management tools - selective inventory

This type of inventory allows verification of correct use of management tools.

Selective inventory is only carried out for certain stock products. These may be chosen randomly or with regards to certain criteria such as:

– Products of which consumption and price are among the highest (ABC method).
– Drugs for which no out of stock is allowed without very important consequences (ARV, antituberculosis, etc.).

Examples of supervision conducted by selective inventory:

– Choose three products as a sample. Depending on the results, a further investigation might follow.
– Collect the necessary documents: order/delivery form, way bill, stock cards.
– Are the documents available and filled correctly?
– Does the physical stock correspond with the theoretical stock written on the stock card?
– Do the entry quantities on the stock card correspond to the delivered quantities on the order/delivery form?

Analysis of consumption of the health units

1. Consumption follow-up

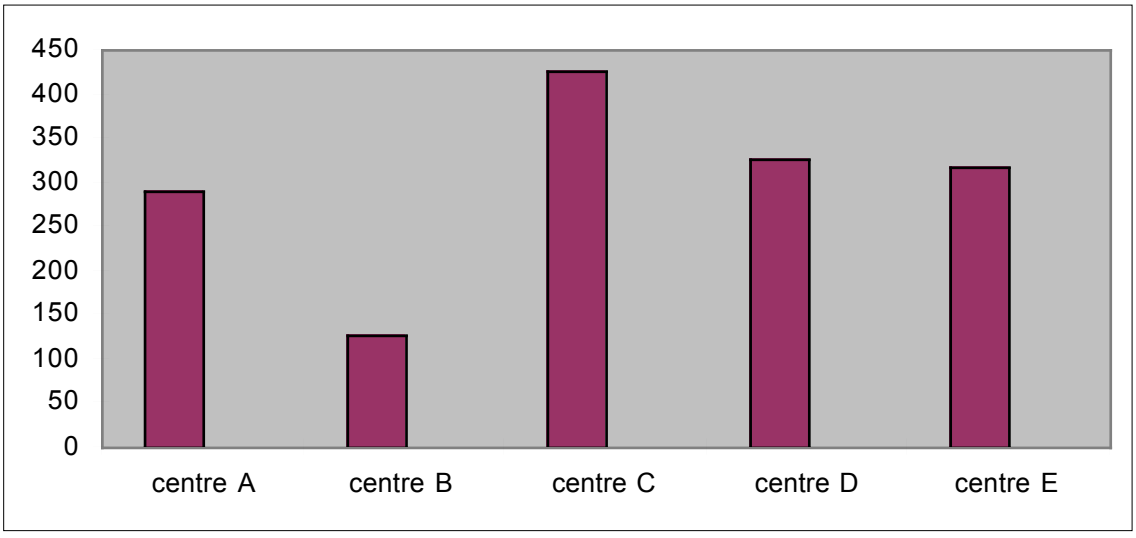
Monthly consumption table of each unit.

2. Compare the consumption between the health units

Important:
– Consumption = distributed quantities.
– Compare only data from health centres with the same type of medical services and comparable epidemiological information.
– Take into account the frequenting rate: calculate the monthly consumption (MC) per 100 new cases (NC) for example.

Example: consumption of amoxicillin 250 mg tab. in different health centres

centre	centre A	centre B	centre C	centre D	centre E	Average
NC / month	2839	2679	4763	2100	2348	2946
MC	8216	3436	20240	6861	7429	9236
MC / 100NC	289	128	425	327	316	314



Conclusion: data from B and C centres are very different and far from the average consumption.
– Verify the accuracy of the data.
– Verify whether there has been a stock rupture in centre B.
– Verify the drug use in the centre C (prescription records) and the drug management.

Supervision of drug management in end-user units

Supervision is performed in several phases. This is always conducted when the drug manager of that unit/structure is present.

1. Correlation between prescriptions and daily consumption sheets

It is important to correlate the quantities copied in the daily consumption sheets (or in the ward register or in the emergency cupboard) with the notified prescriptions in the hospital cards or the consultation registers.
Monitoring three medicines is generally sufficient to verify the quality of management and identify any problem.
Concerning the consumption of the consumable medical devices, it has to be in correlation with the medicine consumption (e.g., number of infusions/number of solutions) or with the medical activities (e.g., number of gynecological gloves and number of obstetric consultations).
Important deviations should be remedied through sustained training of the staff.

2. Data accuracy between daily, weekly and monthly consumption records

For the same three medicines chosen above, verify the daily, weekly and monthly totals respectively. Errors in calculating or poor understanding of management tools are commonplace.

3. Coherence of order/delivery forms

It may be interesting to perform a supervision of the wards when order/delivery forms are prepared, to see if quantities ordered or present already in the ward do match with the medical activity. This supervision include a selective inventory or a more complete inventory using the different aspects described earlier.

4. Survey on dispensing practices in retail pharmacies

To ensure the quality of information a dispenser gives, the supervisor interrogates some patients to verify their level of understanding on dose and treatment duration for each medicine received.
If this level of understanding is not satisfactory, an explanation should be reformulated to the patients and specific training and monitoring of the dispenser needs to be planned.

CHAPTER 5

Drug management in emergency programmes

Two priorities before the arrival of goods:
– Appointing competent staff for management (expat if needed).
– Getting prepared for storage (location, number of fridges, etc.).

Estimating needs and procurement

Needs are estimated by HQ (emergency cell or concerned desk) using a method based on the context, environment morbidity and acquired experience.
Procurement is done with Kits and modules completed by different products (in bulk).

This estimation is theoretical thus approximate, but enables a rapid supply of drugs and medical supplies necessary for patients care.
A system for monitoring distributions must put be in place rapidly. This will enable the project to record their consumption and work on a more accurate order for the next shipment.

Kits can be used either for rapid dispatch, or as a stock at capital level as emergency prepareness.

Preparation for shipment arrival

Before arrival of the ordered products, a number of tasks must be completed. Products will be more rapidly accessible to medical teams if the organisation of the pharmacy is rapidly set up.

Three documents are useful. They are emailed and send by DHL to the coordination team who must forward them to the concerned field as soon as received. The orders content can also be downloaded from MSF-log web site or from MSF Supply Extranet.

– **Packing lists** and detailed packing lists for each kit will enable preparation of stock cards (the best is to do it in the plane)
– The **backorder balance** (bilan de commande) allows to follow if products are undelivered in the initial order.
– The **cargo manifes**t shows which orders are shipped .

The person in charge of the pharmacy should be informed (from the desk or MedCo) which kits should be unpacked after arrival to the field and which should remain intact.

1. Preparing the management tools

List all articles that will be available to the teams (full kits description is found in the MSF catalogues *Guide of kits and emergency items* volume in ITC CD rom as well).
– Fill in the header of stock cards.
– Prepare blank order / delivery forms or notebooks per end-user- units.

2. Preparing drug storage with logisticians

Packing lists provide the content order but also:
– the number of parcels received;
– the volume of cold chain items (number of fridges),
– the total volume of the order which in turn will be used to calculate the ground surface area necessary and the number of shelves (see page 26).

3. Preparing the products reception

– Do not hesitate to engage daily workers.
– Identify key personnel and make sure they are able to read the parcel stickers.
– Prepare the necessary tools: pen-markers, scissors, scotch tape, calculator, pens, etc.

Reception of order

1. Verify the number of parcels and their condition while the transporter is present

– Pay careful attention to those parcels containing heavy products, expensive or fragile: injectables, autoclave, microscope,etc.
– In case of doubt over the condition of the products, write the relevant information down on the transport document (way bill, cargo manifest, etc.) « subject to its state after unpacking ».

In case of discrepancies in the quantities delivered or damage of any product, fill the "claim form" and send it to MSF procurement centre.

2. Control the order using the packing list

– Collect all parcels from one kit and check if all modules are present and well identified with detailed packing list above the parcels.
– Identify clearly the kits that should not be unpacked. For instance by writing « Do not open ».
– For parcels containing only one product, mark legibly the quantity.

Organisation of the pharmacy

– Put aside kits that don't need to be open immediately.

  These kits must be grouped together in a clearly identified area of the pharmacy store. They are strictly reserved and under no circumstances can be unpacked without authorisation.

  Boxes must be organised in such a way that labels are legible. The box containing the packing list should be identified and accessible.

  To facilitate the follow-up of all products expiry dates, the closest expiry date should be highlighted in the packing list. The packing list should be put inside a plastic file and stuck onto the parcel.

– Unpack the rest of the shipment : where there are identical kits, unpack them progressively.

– Organise all the products following the sorting system (see page 28).

Order follow-up and filling documents

– Collect all documents related to the order in one file: backorder balance, packing list, packing list of all kits unpacked.

– Make a table to follow-up order progress:

Order reference	Reception date	Operational reference	Packing list reference	Freight manifest reference	Order status
07/030/F/PK105	3-jan-08	28843	32751		
07/013/F/PK105	5-jan-08	27917	32679	244	
07/028/F/PK105	5-jan-08	28771	32775	244	028 closed
07/029/F/PK105	5-jan-08	28780	32769	244	
07/030/F/PK105	5-jan-08	28840	32753	244	
07/030/F/PK105	5-jan-08	28841	32777	244	
07/030/F/PK105	5-jan-08	28785	32755	244	
07/030/F/PK105	5-jan-08	28785	32789	244	
07/029/F/PK105	19-jan-08	28780	32983	263	
07/030/F/PK105	19-jan-08	28785	33032	263	
07/030/F/PK105	3-feb-08	28841	33229	285	
07/029/F/PK105	3-feb-08	28961	33241	285	029 closed
07/030/F/PK105	3-feb-08	28840	33302	285	030 closed

Management documents

1. Priorities

– Stock cards (notebook to record carefully all outgoings from the pharmacy and their destination).

– Fill in the stock cards if it has not been done before (see page 84).

– Establish a list of products available in the pharmacy together with the corresponding MSF codes.[6]

– Distribute this list to the medical staff to let them know what is available.

– Put in place order/delivery forms for the services:
  • At first use either blank order/delivery forms with the name of the service or notebooks (one per service).
    The use of sheets may be more practical as they can be kept at the pharmacy, but there is a risk of losing them if there is no good classification system.
    Hand out sheets to each service and store some in advance in the pharmacy. If the pharmacy spreads over several rooms, you might want to put some in each location available ready to hand.
    Sheets should be filed in the pharmacy. Quantities have to be recorded on the stock cards.
  • Put progressively in place order/delivery forms preprinted from the service standard list.
    This list has to be rapidly defined for all the services with the medical supervisor, etc.

  It is advised that the order/delivery form should not exceed 3 pages. Products not on the standard list should be ordered on a blank order/delivery form.

2. Importance of physical inventories

– It is a way to check that every movement is recorded and to update stock cards with real available quantities.

– The inventory should be conducted at least once a month and before any international order:
  • The first priority is to record the available quantities of each product.
  • Expiry dates should be followed for all cold chain products, especially for diagnostic tests that usually have short expiry dates.

6 MSF codes ensure all personnel refer to the same product. Descriptions are often abbreviated or ambiguous which can lead to errors.

Psychotropics and narcotics in emergency situations

In emergency situations where there is no authority to deliver import authorization, MSF procurement centres can export these drugs without that document.

BUT if these drugs are issued by MSFlogistique, the teams still need to send back ASAP the receipt notice of those products!

Establish a folder « psychotropics and narcotics » as soon as possible which should include:

– copy of the packing list pertaining to these products,
– copy of the order balance concerning these products,
– copy of the receipt notice.

It is extremely important to ensure effective monitoring of the use of these products. This will facilitate future negotiations with the authorities for importing these products once the emergency situation is over.

Appendices

Certificate of Donation

REF._____

Date:

FROM:

Phone nr / *N° Tel.*

TO:

Phone nr / *N° Tel.*

The oversigned parties declare that the following listed items are donated by Médecins Sans Frontières- without any exchange of currency.

Sending date: Delivery date:

	MFS Code and Item designation	Manufacturer	Batch	Expiry date	Quantity	Remarks
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Médecins Sans Frontières .. will bear no responsibility with regard to legal claims or claims for damage, injury, disability or death caused by the items or the items use.

Executive name & signature:

date and place:

Name and signature of the person in charge of delivery:

Date and place:

Certificate of loan/borrowing

MEDECINS SANS FRONTIERES

Loan / Borrowing* (delete as appropriate)
Date:

REF._____
Forecasted date of return:

FROM:

Phone nr / *N° Tel.*

TO:

Phone nr / *N° Tel.*

Sending date:

Delivery date:

	MFS Code and Item designation	Manufacturer	Batch	Expiry date	Quantity	Remarks
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Executive name & signature:
date and place:

Name and signature of the person in charge of delivery:
Date and place:

Return of article

Return of items

Date:

REF._____

MEDECINS SANS FRONTIERES

Fom:

To:

Sending date:

Delivery date:

	MFS Code and Item designation	Quantity	Expiry date	Remarks
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Executive name & signature:

date and place:

Name and signature of the person in charge of delivery:

Date and place:

Extra order

Extra order

Date:

REF._____

MEDECINS SANS FRONTIERES

From:

To:

	MFS Code and Item designation	Stock on hand	Ordered qty	Supplied qty	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Requisition validated by
Name:
date:
signature:

Supplied by
Name:
date:
signature:

Delivery checked by
Name:
date:
signature:

Packing list

MEDECINS SANS FRONTIERES	PACKING LIST PA …../……. Y Y/ N N N	
Page: …….. /………..	Freight Manifest n°.:	Date:

Parcel N°	Weight (kg)	Description	Qty	Order reference	Item N°	Remarks

Freight manifest

MEDECINS SANS FRONTIERES	**FREIGHT MANIFEST**	Page ...../.....
	FM . . / . . . / . . . - . . . / . . . YY/NNN / OFF – REQ /NNN	..... pages of Packing List(PA) attached

Requested date of arrival:	To:	From:
Transport by: *by air/charter/local/office/sea/road/train/ express*	Registration:	Name driver/pilot:

Parcel N°	Weight (kg)	Description	Qty	PA Ref.	Order Reference	Item N°	Remarks
		Total					

RECEPTION REMARKS	
Parcel N°missing:	Freight claim report made up? Yes / no. If so, ref. n°: ……..
Parcel N°damaged:	Other remarks:

	Shipper	Carrier	Consignee
Name:			
Address:			
Phone/fax:			
Date:			
Signature:			

Stock card

STOCK CARD – FICHE DE STOCK

DESCRIPTION **dosage / form**	
CODE	**AMC** [•] **CMM** [•]
UNIT OF DISTRIBUTION **UNITÉ DE DISTRIBUTION**	**WARNING LEVEL** **SEUIL D'ALERTE**
PACKAGING **CONDITIONNEMENT**	**SECURITY STOCK** **STOCK DE SÉCURITÉ**
REMARKS / REMARQUES **LOCATION / EMPLACEMENT**	

DATE	ORIGIN DESTINATION Reference Document	IN	OUT	STOCK	REMARKS SIGNATURES EXPIRY DATES DATES DE PÉREMPTION
STOCK TRANSFERRED FROM PREVIOUS CARD **STOCK TRANSFÉRÉ DE LA FICHE PRÉCÉDENTE**					

[•] AMC = average monthly consumption
[•] CMM = consommation mensuelle moyenne

Report a quality problem

Description of quality problems encountered with drugs and medical supply

Type of supply

Drug ☐
Medical supply ☐

1. Problematic item description

Item name	
Dosage	
Manufacturer	
Batch Number	
Manufacturing date	
Expiry date	
MSF Code	

Paste or copy item label

Number of unit per packaging	
Number of concerned packaging	
Date of reception	
Date of problems discovery	

2. Suppliers

MSF Logistique ☐
MSF Amsterdam ☐
MSF Supply ☐
other ☐

Name
Address

Country

Date of Order	
Order number	

3. Description of the problem

(for drug: abnormal aspect, colour, smell, precipitate aggregate leaky container, confusing labelling…)

Description:

.....

.....

Describe adverse reactions occurring in patients on a separate sheet of paper

4. Action taken

Claim report sent to supplier		on (date)		by (Name and function)
Put in quarantine	yes		no	
Destruction	yes		no	
Return to supplier	yes		no	

Others _____

Reaction of the supplier _____

5. Report by

Name	
Function	
Country	
MSF section	
Date	

Signature _____

To send or fax to medical director in your headquarters.
Send specimens to your headquarters if possible

Pharmacy supervision sheet

Place:	**Date:**
Facility:	
Name of the person in charge:	

Organisation of the pharmacy

1. Characteristics of the site	YES	NO	YES	NO
- The size of the allocated area is sufficient to store everything properly	O	O	O	O
- The security of the pharmacy is guaranteed (1)	O	O	O	O
- The temperature is checked twice a day and correct	O	O	O	O
- The roof is watertight and the level of humidity is correct	O	O	O	O
2. Interior organisation				
- The organisation of the site is logical and corresponds to	O	O	O	O
flow of the stock, reception, storage and distribution	O	O	O	O
- The shelves are strong and stable	O	O	O	O
- There is an area allocated for arriving stock (2)	O	O	O	O
- There is an area allocated for departing stock (3)	O	O	O	O
- There is an area for the storage of empty boxes	O	O	O	O
- There is a desk	O	O	O	O
- There is a work-surface for the preparation of the orders	O	O	O	O
- None items are stored directly on the ground	O	O	O	O
3. Arrangement of the stock				
- The stock is arranged according to categories (4)	O	O	O	O
- The medicines are arranged alphabetically (5)	O	O	O	O
- There is a list available in the pharmacy of which	O	O	O	O
commercial drug names correspond to which	O	O	O	O
generic (INN)name	O	O	O	O
- Each stock item :				
—> has a sufficient and well defined space	O	O	O	O
—> this should be labelled with the name (INN), the	O	O	O	O
form (i.e. tablet,) and the dose				
- The labels on the boxes and bottles are in good condition (6)	O	O	O	O
- The expiry dates are written clearly on the boxes and circled	O	O	O	O
- The expiry dates are written on the stock cards	O	O	O	O
- After checking, there are no expired items	O	O	O	O
- The items are arranged according to their expiry dates,	O	O	O	O
earliest expiry at the front (7)				
- Cartons are stored according to the rules	O	O	O	O

*Expired or damaged items	YES	NO	YES	NO
-These items are stored in a quarantine area	O	O	O	O
-An expired or damaged products register is available and used	O	O	O	O
*Narcotics and psychotropics				
- these drugs are kept in a locked cupboard (9)	O	O	O	O
- a register for narcotics and psychotropics is available and used(10)	O	O	O	O
* Products sensitive to heat:				
- A refrigerator is available in the pharmacy	O	O	O	O
- monitoring of the cold chain:				
—> Thermometer in use	O	O	O	O
—> Sheet for registering the temperature, twice daily	O	O	O	O
—> cold chain indicators in use	O	O	O	O
—> The list is posted on the wall (11)	O	O	O	O
- The medicines and diagnostic agents sensitive to heat are stored correctly	O	O	O	O

Management of the pharmacy

1. Organisation of the activities	**yes**	**no**	**yes**	**no**
- One person is put in charge of the pharmacy	O	O	O	O
- A job description :				
—> exists	O	O	O	O
—> is know to the person responsible	O	O	O	O
2. Management of the stock				
* Stock cards (12)				
- Stock cards are:				
—> available	O	O	O	O
—> correctly filled in	O	O	O	O
—> MSF code is notified	O	O	O	O
—> arranged according to categories and alphabetically order	O	O	O	O
* Monthly statement of the stock pharmacy and monthly consumption tables of all units (13 and 14)				
- These tools are:				
—> available	O	O	O	O
—> correctly filled in	O	O	O	O
* Order / delivery forms				
- The order / delivery forms are :				
—> available	O	O	O	O
—> filled in according to the rules	O	O	O	O
—> correctly filed	O	O	O	O

	YES	NO	YES
- The method of estimating the needs is correct (16)	O	O	O
- during the last three months no shortage has been observed	O	O	O
3. Receiving the delivery			
- The delivery is always accompanied by a packing list or delivered quantities are specified on the order/delivery form(17)	O	O	O
- The delivery is checked on arrival (18)	O	O	O
- The items are arranged and entered on the stock cards	O	O	O
4. Inventory			
- An inventory is done regularly, (19) how often:	O	O	O
5. Distribution			
- The activities are scheduled (20)	O	O	O
- repacking of drugs for distribution is done according the rules(21)	O	O	O
Emergency boxes			
- Number of emergency boxes on the mission			
- Is the number sufficient	O	O	O
- Is the location of the emergency boxes well know to all members of the team	O	O	O
- The emergency boxes are complete	O	O	O
- They are checked after every use	O	O	O
- The expired medicines have been replaced	O	O	O
Team pharmacy			
- A team pharmacy exists	O	O	O
- A standard list of this pharmacy is available	O	O	O
- Is it locked	O	O	O
- The expiry dates of the medicines are controlled	O	O	O

How to use the pharmacy supervision grid

The objective of this grid is to improve drug management practices and quality of the supply.
It must be completed in the presence of the person in charge of the pharmacy.

It allows to:
– control the functioning of the pharmacy
– make sure that the staff realizes activities with efficacy and that skills are correct.
– identify problems
– motivate and whip up the staff.

---

1. The security of the pharmacy is guaranteed
The security of the building is guaranteed (solid doors, locks, solid windows and ceiling, presence of a guardian if necessary).
Entrance is forbidden to non authorised people to the stock pharmacy.

2. There is an area allocated for arriving stock
To store, unpack newly arrived boxes/parcels and control of the products before putting them in their storage place.

3. There is an area allocated for departing stock
To store prepared orders before dispatching to peripheral structures, each destination is well distinguished.

These 2 areas are located near entry and exit to facilitate handling.

4. The stock is arranged according to categories

– Drugs: orals, injectables, external use and disinfectants, infusions
– Medical equipment: dressing, injection supply, renewable supply, catheters and drains, sutures, anaesthesia equipment, small equipment, linen, sterilisation
– Laboratory
– Medical equipment
– Kits and modules

5. The medicines are arranged alphabetically

Alphabetical order following the INN name/label of each product (International Nonproprietary Name).

6. The labels on the boxes and bottles are in good condition

The sticker on the box and bottle is in good state (if unreadable: remake a sticker but never glue it over the old sticker; leave the original label on the container).

The following information must be available on all package:
– name expressed in INN name,
– dosage,
– form,
– expiry date,
– manufacturer and batch number.

7. The items are arranged according to their expiry dates, earliest expiry at the front

Expiry dates are clearly visible on all boxes: underlining the date or rewriting the date with a marker pen.
The products having the furthest expiration date are placed/stored on the back of the shelf.

8. Cartons are stored according to the rules

For the big and voluminous stocks: a small quantity is put on the indicated space, full boxes are stored on the shelves below or above or on pallets if possible. The spare stock is clearly identified and kept together.

9. Narcotics and psychotropics are kept in a locked cupboard

These concern all the narcotic and psychotropic products which are submitted to the rules of international AND national controls (be aware of the changes of the national legislation).

10. A register for narcotics and psychotropics is available and used

Narcotics and psychotropics book placed inside the narcotic cupboard to register IN/OUT.
The following information is reported in the book:
– INN name of the drug, dosage and form,
– exit date, name of patient, name of the health service (destination)
– the name and the signature of the health structure responsible which came to get these products.

11. List of the heat sensitive items

Consult specifications written on international order form or MSF catalogues.

12. The stock cards are correctly filled in

Contain the following information: INN name of the product, form, dosage, expiry date, batch number (only for local purchase).
Advisory, contain the following information: warning level, security stock.
– All movements are written on the date they take place: entries, exits, loans, donations, spoilage, origins, destination, and calculation of new stock.
– Only one movement is written per line (even if different movements occur the same day).
– Dates of inventories are written (on the date they took place).
– International order reference should be written.
– Quantities are written in unit (never according to the packaging).

13. Monthly statement of the stock pharmacy is used or other tool which compiles stock movements

It is absolutely necessary to:
– proceed to the control of pharmacy management and assess continuously the consumptions,
– keep a permanent stock of drugs and appropriate consumables,
– save time and optimise work of the staff (quick and sure overview of consumption and stock level).

On the register, will be mentioned every month:
– name of product expressed in INN, form and dosage,
– monthly consumption,
– present stock (balance).

14. Monthly consumption tables of all units

These tables are necessary to:
– Follow supplied quantities which should be linked to medical activities,
– Calculate average monthly consumption.

15. Order/ delivery forms are available

Standardized order/delivery forms are used for each order.

Pre printed order/delivery forms facilitate order and avoid many mistakes.
List of product of each unit is arranged according to categories and alphabetical order.
Following information must be reported:
– name, dosage and form,
– available stock,
– montly consumption,
– ordered quantities,
– delivered quantities,
– received quantities.

Example:

Date	Stock	Consumption	Ordered quantity	Delivered quantity	Received quantity

16. The method of estimating the needs is correct

Quantity to order = average monthly consumption (order periodicity + Security stock + delivery delay) – stock on hand at order time

Average monthly consumption
It is calculated from monthly consumption tables. Add delivered quantities during 3 months for example and divide per 3.

Example:

aspirin tab 500 mg :
delivered quantity during the last 3 months = 75 000
average monthly consumption = 25 000

Order periodicity
This periodicity corresponds to the time between 2 consecutive scheduled orders.

Security stock (reserve)
Amount of product that should be stored in normal conditions and kept to deal with unforeseen situations: delay of delivery (difficulties with imports or with transport during the raining season) or unexpected increased consumption.
Is usually defined as the consumption during half of the lead time. If the delivery delay is about 2 months, security stock corresponds to one month of consumption.

Delivery delay or lead time
It is the time between the planning of an order and the reception of the ordered products (it includes the order validation time).

Example : quantity to order (aspirin tab 500 mg):

aspirin tab 500 mg :

average monthly consumption	= 25 000
consumption during months between 2 orders (order periodicity = 3 months)	= 75 000
security stock (25.000 x 1	= 25 000
consumption during delivery delay (delivery delay = 2 months)	= 50 000
stock on hand at order time	= 12 200

75 000 + 25 000 + 50 000 - 12 200 = 137 800 tablets

Round up quantity to order according to the number of units per packaging.
Here: 138 000

17. Orders are accompanied of a waybill and packing list

Orders are accompanied of a waybill and packing list.
Those documents indicate the contents, weight, volume of each parcel.
When a stock pharmacy supplies peripheral units, order/delivery forms are enough.

18. Checking of reception are realized

Checking must be done immediately after reception.
The correspondence with the contents of packing list is checked according to items delivered.
Checking of the packaging, the labelling and the expired dates of each product is done.
The external quality control of each product is done.
The supplier is informed of all kind of abnormality (claim report procedure).

19. Physical inventory is regularly carried out

At least before each order, a physical inventory of real quantities in stock is carried out including verification of expiry dates.
One objective of a physical inventory is to identify discrepancy between stock card and physical stock. Discrepancies should result from calculation mistakes, stock movements not registered or misappropriations.

20. Activities are scheduled

The first objective is to meet the needs by a regular supply to the health structures.
Each pharmacy sends to the central stock an order sheet in 2 copies (one for the stock, one for the health structure) including date, location, name and signature of the responsible.

Time table and schedule of activities (placing orders,distributions) will be planned in order to distribute the work load as regularly as possible.

21. Re-packaging of drugs before their dispatching are done according the rules

Sometimes however it is necessary to divide tins of 1 000 tablets or boxes of 100 ampoules before dispatching them (in case of low consumption for instance).
Re-packaging of drugs before their dispatching is done in a clean working area and basic hygiene rules should be respected.

On each packaging should be visibly written with a marker:
– the description of the product (INN), its formulation and strength,
– the expiry date,
– the batch number and the manufacturer name,
– the quantity of unit in the packaging.

Useful internet addresses

MSF Procurement Centres
MSF Logistique: http://www.msflogistique.org
MSF Supply: http://www.msfsupply.be

Access to essential medicines - MSF
http://www.accessmed-msf.org/
The Campaign is pushing to lower the prices of existing medicines in developing countries, to bring abandoned drugs back into production, to stimulate research and development for neglected diseases that primarily affect the poor, and to overcome other barriers to access.

Essential medicines – WHO
http://www.who.int/topics/essential_medicines/en/
This page provides links to descriptions of activities, reports, news and events, as well as contacts and cooperating partners in the various WHO programmes and offices working on this topic. Also shown are links to related web sites and topics
Essential medicines are those that satisfy the priority health care needs of the population. They are selected with due regard to public health relevance, evidence on efficacy and safety, and comparative cost-effectiveness. Essential medicines are intended to be available within the context of functioning health systems at all times in adequate amounts, in the appropriate dosage forms, with assured quality and adequate information, and at a price the individual and the community can afford. The implementation of the concept of essential medicines is intended to be flexible and adaptable to many different situations; exactly which medicines are regarded as essential remains a national responsibility.

Related sites
– Essential drugs and medicines policy
– Commission on Intellectual Property Rights, Innovation and Public Health (CIPIH)
– Antiretrovirals (Region of the Americas - PAHO)
– Pharmaceuticals (Western Pacific Region)

Fact sheets
– Substandard and counterfeit medicines

Publications
– Essential drugs and medicines: publications and documentation centre

Related links
– Health action in crises - essential medicines
– Policy, access and rational use of medicines
– Rationale of essential medicines
– Access to essential medicines

British National Formulary
http://bnf.org/bnf/
The BNF provides UK healthcare professionals with authoritative and practical information on the selection and clinical use of medicines in a clear, concise and accessible manner.

International network for rational use of drugs
http://www.inrud.org/
A key responsibility for any health program or organization is ensuring that high-quality essential drugs are available, affordable, and used rationally. For both health systems and individuals, pharmaceuticals represent a major expenditure. Misuse of scarce resources, makes a difficult situation even worse. To improve this situation, it is crucial to improve the use of medicines. INRUD's mission is to identify the best ways of improving their use and to disseminate these findings.

Réseau Médicaments et Développement
http://www.remed.org/
Network for medicines and development. It is a French association focusing its thinking and action on problems existing in the field of medicines in the developing countries.

Counterfeit Medicines
http://www.pharmacistscombatcounterfeiting.org/
The International Pharmaceutical Federation (FIP) has launched a dedicated webpage on Counterfeit Medicines. It's a global tool where pharmacists can obtain needed resources on Counterfeit Medicines in order to better serve their patients and the public and combat counterfeit medicines.
This webpage will allow pharmacists who are active in the fight against counterfeit medicines to obtain more information on this issue, with five main areas being addressed including: policy and guidelines; initiatives; publications; information for patients and public; reporting a counterfeit case.

Glossary

Français	English	Español
Accusé de réception des psychotropes et stupéfiants	Delivery confirmation note for psychotropic or narcotic drugs	Acuse de recibo para estupefacientes y psicótropos
Bilan des commandes	Backorder balance	Balance de pedidos
Bon de commande /livraison	Order/delivery form	Hoja de pedido/Hoja de entrega
Bons de commandes vierges	Blank order forms	Hojas de pedido en blanco
Bordereau de livraison	Waybill	Hoja de entrega del transportista
Cahier de service	Ward (or service) register	Registro de servicio hospitalario
Cargo manifest	Cargo Manifest	Manifiesto de carga (Cargo manifest)
Certificat de conformité des livraisons	Compliance certificate of deliveries	Certificado de conformidad con la entrega
Certificat de donation	Donation certificate	Certificado de donación
Commande urgente Commande complémentaire Commande exceptionnelle	Emergency order Complementary order Extra order	Pedido urgente Pedido complementario Pedido extra
Commandes en cours / reliquats / reste à livrer	Backorder / product on stand by	Pedidos en curso / remanentes / pendientes de entrega
Consommation mensuelle moyenne (CMM)	Average monthly consumption (AMC)	Consumo Medio Mensual (CMM)
Délai de livraison	Lead time or delivery time or delivery delay	Tiempo de entrega
Dispensation des médicaments	Drug dispensing	Dispensación de medicamentos
Documents de gestion	Management forms	Documentos de gestión
Dosage Dose	Dosage Dose	Dosificación Dosis
Prêts / Emprunts Donations / retour	Loans / Borrowings Donations / Return	Préstamos Donaciones / Devolución de préstamos
Feuille de commande	Order form (or order sheet)	Hoja de pedido
Feuille de commande Internationale	International order form	Hoja de pedido Internacional
Feuille de pointage journalière	Daily consumption sheet / tally sheet	Hoja de movimientos diarios

Français	English	Español
Fiche de stock	Stock card	Ficha de stock
Fiche de réclamation	Claim form	Hoja de reclamación
Grille de supervision des pharmacies	Pharmacy Supervision check list	Hoja de supervisión de las farmacias
Inventaire	Inventory	Inventario
Kits	Kits	Kits
Liste de colisage	Packing list	Albarán de entrega
Liste standard du projet	Project standard list	Lista estándar del proyecto
Malles d'urgence	Emergency boxes	Maletines de emergencia
Observance	Adherence	Adherencia
Ordonnance collective de 24 heures	Collective prescription for 24 hours	Prescripción (receta) colectiva para 24 horas
Outils de gestion	Management tools	Herramientas de gestión
Périmés et détériorés	Expired and damaged drugs	Medicamentos caducados y dañados
Périodicité des commandes	Order periodicity	Periodicidad del pedido
Pharmacie de stock Pharmacie centrale Pharmacie du projet	Stock pharmacy Central pharmacy Project pharmacy	Farmacia de stock Farmacia central Farmacia del proyecto
Pharmacie de détail	Retail pharmacy	Farmacia de detalle
Pharmacie de stock intermédiaire	Intermediate stock pharmacy	Farmacia de stock intermediaria
Psychotropes et stupéfiants	Psychotropic and narcotic drugs	Psicótropos y estupefacientes
Relevé hebdomadaire/ mensuel de consommation	Weekly/monthly consumption report	Balance semanal/mensual de consumos
Ruptures de stocks	Stock shortages Out of stock	Rupturas de stock
Seuil d'alerte	Warning level/ alert stock	Umbral de alerta
Stock Physique	Physical stock	Stock físico o real (Existencias)
Stock théorique	Theoretical stock	Stock teórico
Stock prépositionés pour situation d'urgence	Emergency preparedness (EPREP)	Stock de emergencia (EPP)
Stock de sécurité	Security stock / buffer stock	Stock de seguridad
Stock disponible / stock restant	Available stock / stock on hand / remaining stock	Stock disponible /Stock residual
Stockage	Storage	Almacenamiento

Français	English	Español
Système d'approvisionnement de medicaments	Drug Supply system	Sistema de aprovisionamiento de medicamentos
Tableau mensuel des consommations des pharmacies de stock	Monthly consumption table of the stock pharmacy	Tabla de consumo mensual de las farmacias de stock
Tableaux de consommations mensuelles par unité	Monthly consumption tables per unit	Tabla de consumo mensual por unidad
Tableau de bord mensuel des pharmacies de stock	Monthly statement of stock pharmacies	Balance de consumo mensual de las farmacias de stock
Unité de soin / service Centre de santé Structure de soin	Health unit / ward Health structure Health centre	Unidad de cuidados / servicio hospitalario Estructura de salud Centro de salud
Unités de consommation	Final drug dispensing unit End-user units	Unidades de consumo
Unités de distribution	Distribution units or distribution points or centres or pharmacy from where drugs… are distributed	Unidades de distribución
Unités de distribution (médicaments et matériel ou équipement médical)	Drugs supplied expressed in basic units	Unidades de distribución (medicamentos y material renovable o equipamiento médico)

Belgium

Médecins Sans Frontières / Artsen Zonder Grenzen
Rue Dupréstraat 94, 1090 Bruxelles / Brussel
Tel.: +32 (0)2 474 74 74
Fax: +32 (0)2 474 75 75
E-mail: info@msf.be

France

Médecins Sans Frontières
8 rue Saint-Sabin, 75544 Paris cedex 11
Tel.: +33 (0)1 40 21 29 29
Fax: +33 (0)1 48 06 68 68
Telex: (042) 214360 MSF F
E-mail: office@paris.msf.org

Netherlands

Artsen Zonder Grenzen
Plantage Middenlaan 14, 1018 DD Amsterdam
Tel.: +31 (0)20 52 08 700
Fax: +31 (0)20 62 05 170
Telex: (044) 10773 MSF NL
E-mail: office@amsterdam.msf.org

Spain

Medicos Sin Fronteras
Nou de la Rambla 26, 08001 Barcelona
Tel.: +34 933 046 100
Fax: +34 933 046 102
E-mail: oficina@barcelona.msf.org

Switzerland

Médecins Sans Frontières
78 rue de Lausanne - Case postale 116 - 1211 Genève 27
Tel.: +41 (0)22 849 84 84
Fax: +41 (0)22 849 84 88
Telex: (045) 421 927 MSF CH
E-mail: office-gva@geneva.msf.org