NPHCDA

MODULE 14: ESSENTIAL DRUG MANAGEMENT IN PRIMARY HEALTH CARE

February 2024

Learning objectives



At the end of the session, participants should be able understand how to:

- Improve the quality of Essential Drug Management (EDM) in Health Facilities
- Ensure uniformity of procedures across health facilities

Overview of Essential Drug Management (EDM)

Session 14.1	Introduction to EDM
Session 14.2	Drug Management Cycle
Session 14.3	Rational Drug Use and Dispensing
Session 14.4	Financial Management in EDM
Session 14.5	EDM Tools and Drug Consumption Analysis
Session 14.6	Pharmacovigilance and Expired Drugs Handling

Learning objectives



At the end of the session, participants should be able to:

- Understand what drugs and essential drugs are
- Understand the concept of essential drugs management
- List the best practices in essential drugs management

Session overview



- **Introduction:** Definition of drugs and medicines, examples of some drugs and medicines
- **Essential drug management:** Definition and processes involved in EDM

Let's Brainstorm



What is a drug?



What is a Drug?



A drug is a chemical compound used on or administered to humans or animals for the **diagnosis, treatment or prevention** of disease or other abnormal conditions for the purpose of **relief of suffering or to control or improve any physiologic or pathologic state.** *(WHO)*

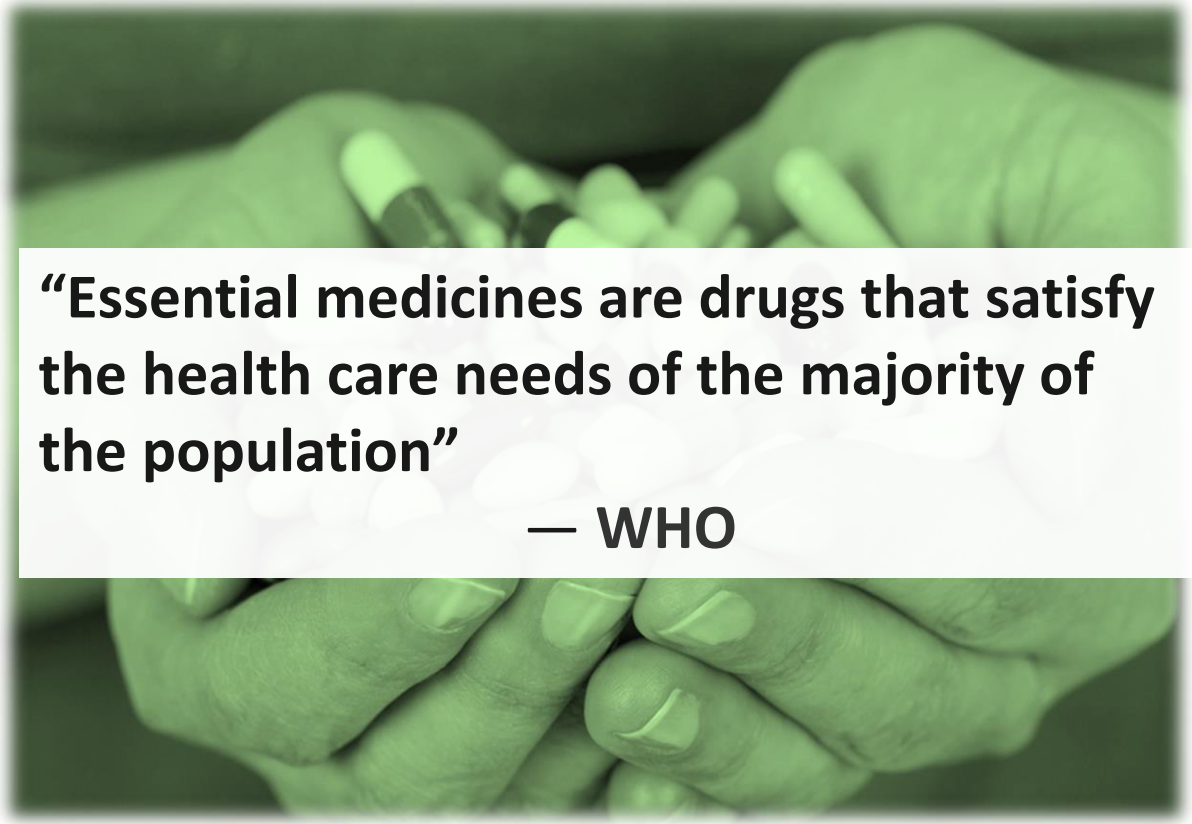
Let's Brainstorm





What are Essential medicines?

What are Essential Medicines?



“Essential medicines are drugs that satisfy the health care needs of the majority of the population”

— WHO

They should therefore be;

- Available at all times
- In adequate amounts
- In appropriate dosage forms
- At a price the community can afford.
- NAFDAC Certified (as in Nigeria).

Essential Medicines List- PHC List (selected drugs)

Analgesics

- Acetylsalicylic acid
- Ibuprofen
- Paracetamol

Antihypertensive medicines

- Amlodipine
- Amiloride
- Hydrochlorthiazide

Antiseptics and Disinfectants

- Benzoin
- Chlorhexidine
- Iodine
- Methylated spirit
- Sodium hypochlorite

Anti allergins

- Chlorpheniramine
- Epinephrine (Adrenaline)
- Promethazine

Dermatological medicines

- Benzoic acid + salicylic acid
- Benzyl benzoate
- Calamine lotion
- Gentamicin
- Methyl salicylate
- Zinc Oxide

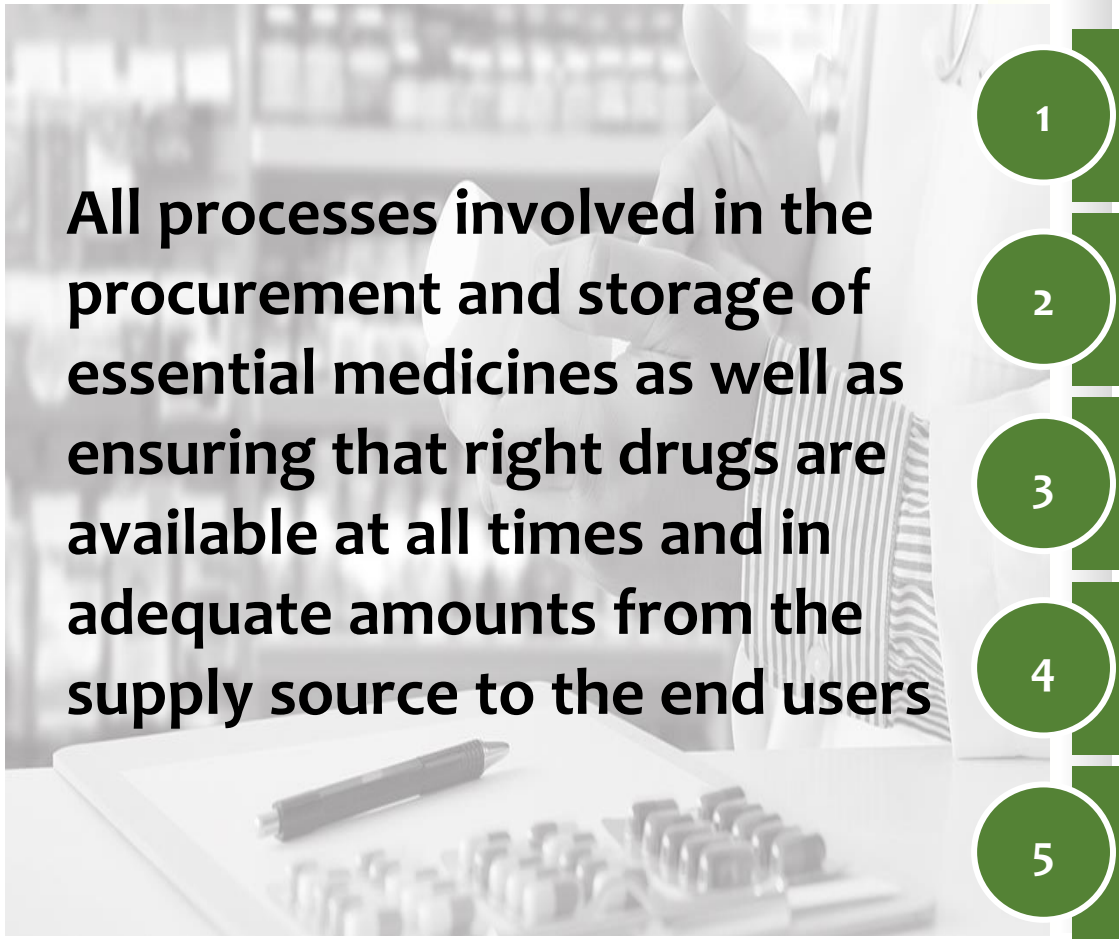
Let's Brainstorm





What is Essential Drugs Management?

Essential Drugs Management



All processes involved in the procurement and storage of essential medicines as well as ensuring that right drugs are available at all times and in adequate amounts from the supply source to the end users

These processes include:

1. Selection and quantification (use data for planning and decision making)
2. Procurement as approved by standard guidelines
3. Storage and Distribution through appropriate conditions
4. Dispensing of medicines
5. Documentation

Key messages

RECAP

- A drug is used to alter a psychologic or physiologic state
- Essential medicines satisfy healthcare needs
- The management of drugs involves the selection, procurement, storage, dispensing, distribution and documentation of drugs for use.

Overview of Essential Drug Management (EDM)

Session 14.1	Introduction to EDM
Session 14.2	**Drug Management Cycle**
Session 14.3	Rational Drug Use and Dispensing
Session 14.4	Financial Management in EDM
Session 14.5	EDM Tools and Drug Consumption Analysis
Session 14.6	Pharmacovigilance and Expired Drugs Handling

Learning objectives



At the end of the session, participants should be able to:

- Ensure appropriate Human Resources capability for EDM
- Explain the best practices in essential drugs management

Session overview



1	Who should manage drugs/medicines in a health facility?
2	Drug/Medicines Management Cycle
3	Selection of drugs/medicine
4	Procurement of drugs/medicine
5	Storage of drugs/medicine
6	Requisition of drugs/medicines for use

Brainstorm





Who should manage the drugs in a Health Facility?

Who should Manage The Drugs/Medicines in A Health Facility?

01

A pharmacist

OR

02

A pharmacy technician

If not available

03

A staff with health background and trained on Essential Drugs Management (JCHEW, CHEW, CHO).

Drug/Medicines Management Cycle

Cycle of Drug Management



Selection of Drugs/Medicine



Essential medicines/drugs for use at health facilities are determined by the Food and Drugs department of FMoH

However, facilities can select their medicines/drugs as follows

1. Based on patients needs
2. Use of consumption data

Procurement of drugs/medicine

1. All procurement must be from State Drug Management Agency and **accredited pharmacies by State Ministries Of Health (SMOH)** in line with procurement guideline
2. A list of certified pharmacy premises should be provided by the SMOH and updated yearly
3. All drugs procured must reflect the certified pharmacies (sources) on the invoice
4. All drugs procured must be in their generic names and should be National Agency for Food and Drug Administration and Control (NAFDAC) certified

Procurement of drugs/medicines cont'd

DRUG RECEIPT CHECKLIST

01 The responsible person receiving them should check the goods from the supplier

02 The delivered items should correspond with the attached requisition / issue form

03 All discrepancies should be highlighted and addressed immediately

04 All delivered items are of assured quality with appropriate expiry dates

Procurement of drugs/medicines cont'd

CRITERIA FOR SELECTION OF PHARMACY TO PROCURE FROM



1. Price with respect to quality
2. Delivery time
3. Benefit of Bulk purchase
4. Accessibility
5. Geographic Proximity to PHC
6. Reputation of the Pharmacy

Storage of drugs/medicines

01	Availability of a clean, well ventilated space that meets with the minimum standards as recommended
02	Drugs are arranged on shelves; well labelled in therapeutic and alphabetic order using the First-In-First-Out (FIFO) and First-Expired-First-Out (FEFO) method
03	Store similar dosage forms together
04	Correct use of store ledger
05	Correct use of stock (bin) card
06	Medical supplies and other commodities without expiry dates should be stored by using the FIFO procedures
07	Drugs in cartons should be kept on pallet and away from the wall as recommended.
08	Availability and use of store thermometer and hygrometer

What do you see?

(A)



(B)



What do you see?

(A) Disorderly Pharmacy stock keeping



(B) Orderly Pharmacy stock keeping



Requisition of drugs/medicines for use



How do we obtain drugs from the Pharmacy to the dispensary?

To ensure accountability and availability of drugs to the patients, there must be:

- **A requisition book**
- **It should contain the name of drugs, quantity requested, quantity received and signature of both the personnel in the pharmacy store and dispensary.**
- **First-In-First-Out (FIFO) maintained and First-Expired-First-Out (FEFO) applied**

Key messages

RECAP

- A pharmacist or technician with a drug management background should be responsible for drug storage within the facility
- Drugs/medicines must be stored and labelled neatly and correctly
- Drugs/medicines must be procured and distributed using the appropriate channels

Overview of Essential Drug Management (EDM)

Session 14.1	Introduction to EDM
Session 14.2	Drug Management Cycle
Session 14.3	**Rational Drug Use and Dispensing**
Session 14.4	Financial Management in EDM
Session 14.5	EDM Tools and Drug Consumption Analysis
Session 14.6	Pharmacovigilance and Expired Drugs Handling

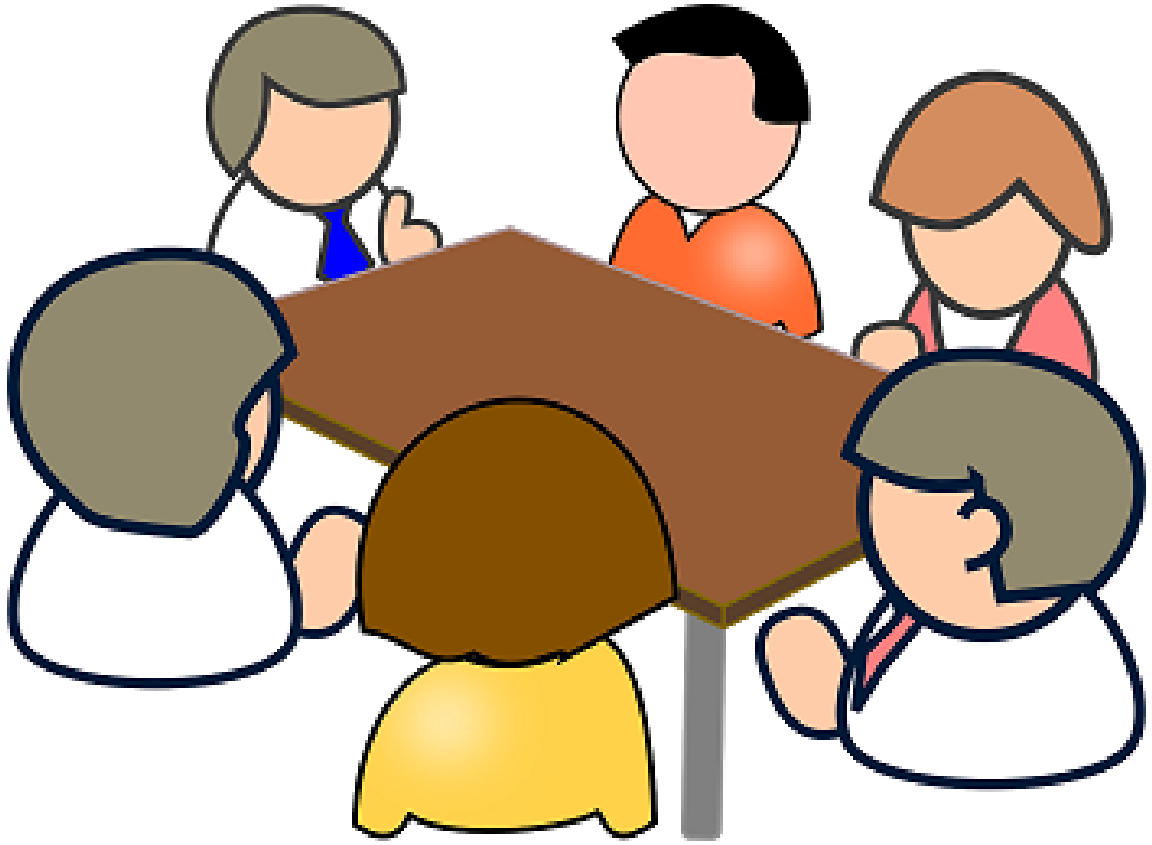
Learning objectives



At the end of the session, participants should be able to:

- Understand the concept of rational Drug use and proper dispensing
- Understand the need for the use of data for decision making and strategic planning

Session overview



- Rational drug use
- Drug dispensing
- Use of data for EDM

Rational Drug Use

Rational use of drug requires that a particular patient with a specific health problem receives drugs according to the following; (WHO 2016)



- Appropriate medication
- Appropriate dose
- Appropriate dosage form/route of administration
- Appropriate frequency of administration
- Appropriate duration of treatment
- Appropriate information to patient
- Adequate follow-up

Drug Dispensing

While dispensing drugs to a patient, the following should be considered:

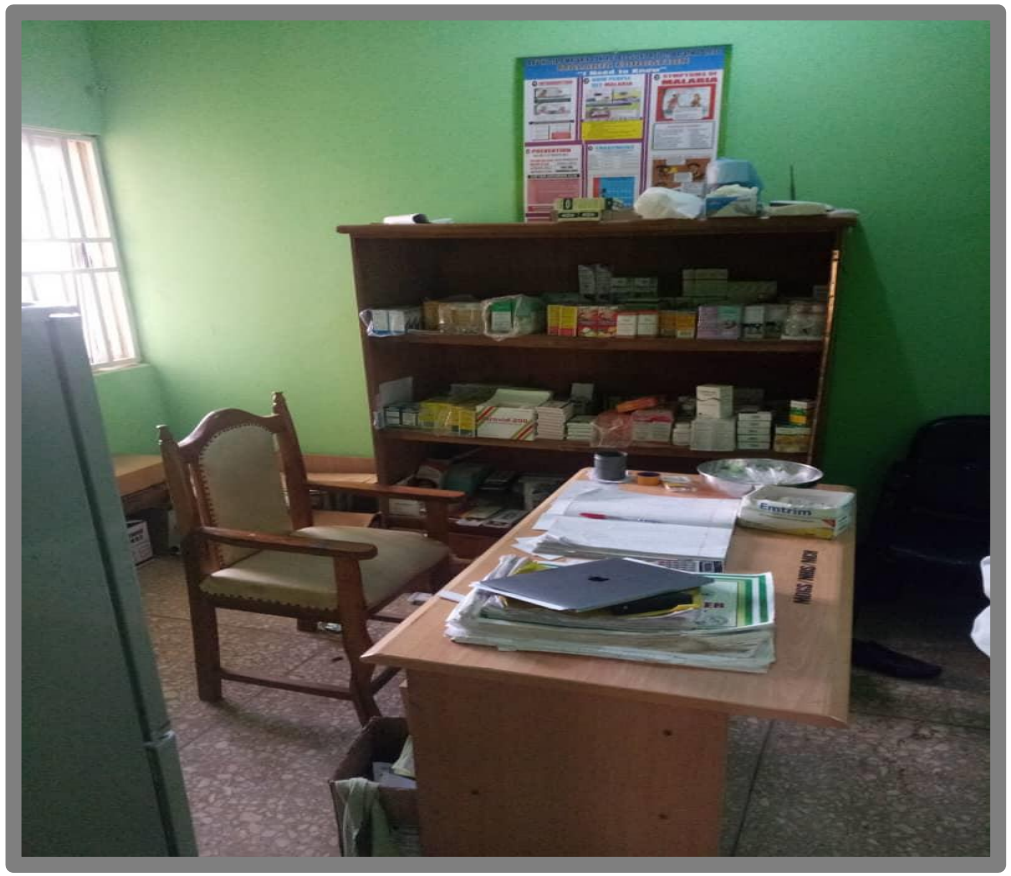
1	Drugs should be dispensed by certified personnel with appropriate skills and qualification
2	First-In-First-Out(FIFO) maintained and First-Expired-First-Out (FEFO) applied
3	Availability of a private counselling area for patient confidentiality
4	Standard guidelines for handling expired drugs are maintained
5	Client prescription must be used in dispensing drugs to patients
6	Check that the prescription is appropriate for the patient
7	Check expiry date and quality of the medicines to be dispensed
8	Label the package to be given to the patient
9	Count the quantity needed in a clean, safe manner and hand to the patient
10	Counsel the patient on appropriate drug use and the storage conditions
11	Keep accurate dispensing records

What Do You See?

A



B



What Do You See?

Disorderly Dispensary



Improved Dispensary



Brainstorm





What do we use Data for?

Data For Planning and Decision Making

Uses of EDM data

- Decision making at HF,LGA , State
  - Monthly planning meetings
- To avoid stock outs
- To meet the population needs of the health facility
  - Seasonal planning of health needs of the population served
  - Reduction/increase in malaria, under 5 infections
- To prevent excess stock and therefore wastage through expiry

Key messages

RECAP

- Rational drug use requires appropriate medication, administration and follow up
- While dispensing drugs to a patient, strict guidelines should be followed
- Data on essential drugs and medicines informs planning and decision making processes

Overview of Essential Drug Management (EDM)

Session 14.1	Introduction to EDM
Session 14.2	Drug Management Cycle
Session 14.3	Rational Drug Use and Dispensing
Session 14.4	**Financial Management in EDM**
Session 14.5	EDM Tools and Drug Consumption Analysis
Session 14.6	Pharmacovigilance and Expired Drugs Handling

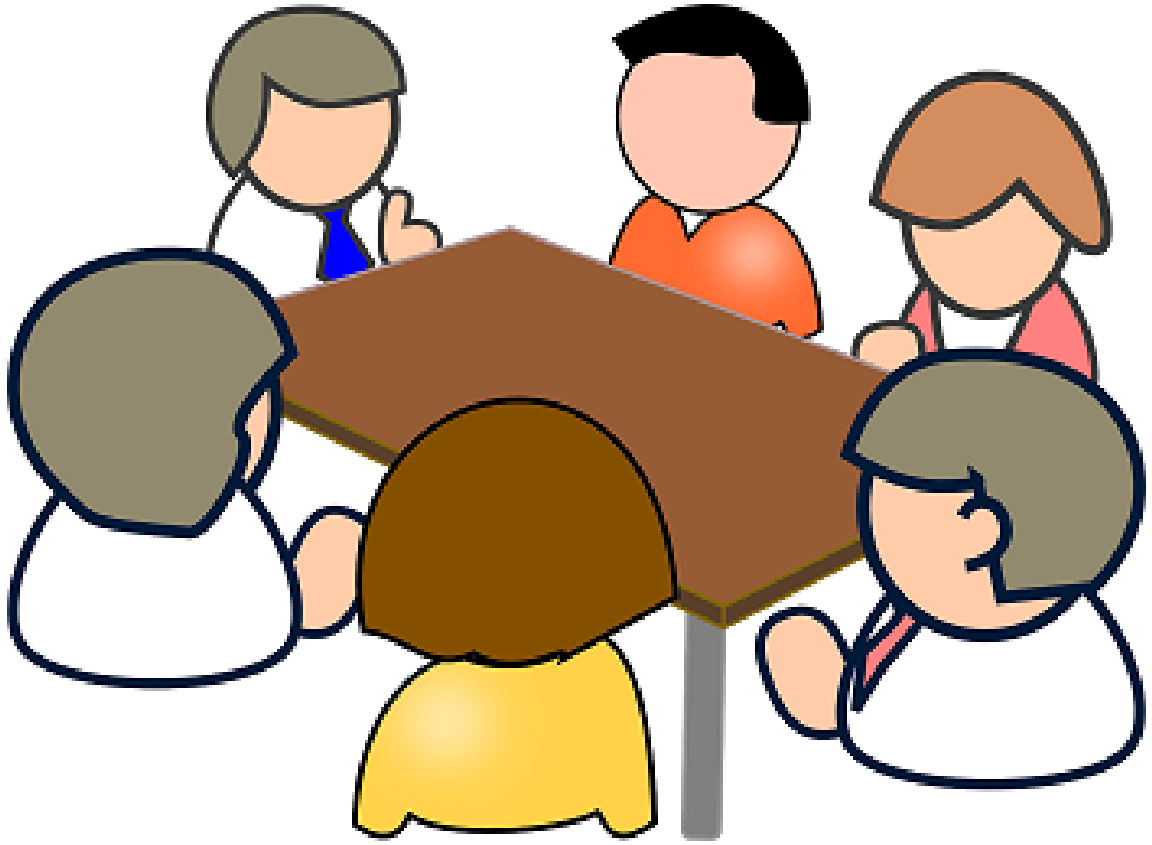
Learning objectives



At the end of the session, participants should be able to:

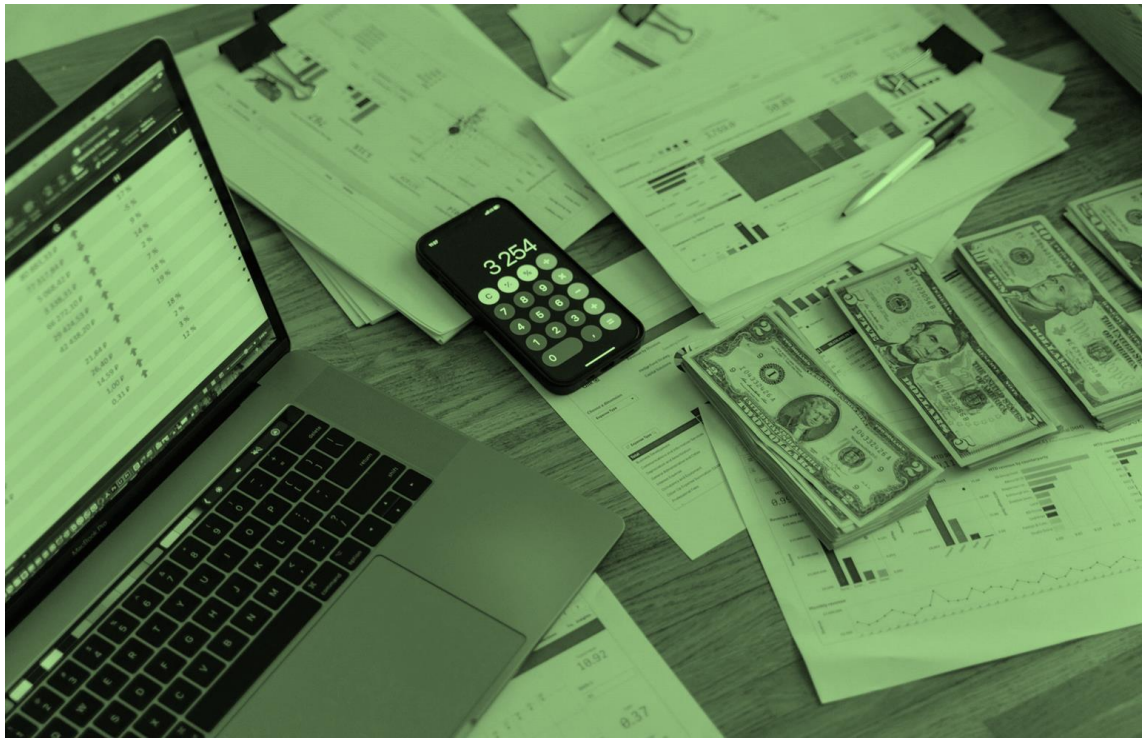
- Understand the need for Financial management in Essential Drugs management

Session overview



- Definition of financial management
- The Essence of Financial Management

Definition



WHAT IS FINANCIAL MANAGEMENT?

- It is the efficient and effective management of funds in such a manner as to accomplish the objectives of an organization.
- Financial Management means **planning, organizing, directing** and **controlling** the financial activities such as procurement and utilization of funds of an organisation
- The foregoing definitions and descriptions are all about **"Management of Funds"**

The Essence of Financial Management is to Ensure:

1. Proper recording of funds received
2. Transparency, accountability and proper utilization of funds
3. Re-allocation of un-utilized funds to where it is needed subject to approval
4. Proper planning, budgeting
5. Provision of complete, accurate and timely reports to stakeholders for decision making and policy formulation

Key messages

RECAP

Financial management is crucial in essential drug management because it informs the planning, budgeting, accountability and allocation of funds

Overview of Essential Drug Management (EDM)

Session 14.1	Introduction to EDM
Session 14.2	Drug Management Cycle
Session 14.3	Rational Drug Use and Dispensing
Session 14.4	Financial Management in EDM
Session 14.5	**EDM Tools and Drug Consumption Analysis**
Session 14.6	Pharmacovigilance and Expired Drugs Handling

Learning objectives



At the end of the session, participants should be able to:

- Understand how to use the EDM tools
- Understand the important calculations in EDM

Session overview



Content

- Essential Drug Management Tools
- Advantages of Stock Keeping
- Correct use of a stock card
- Procedures for accurate stock keeping
- Important calculations in EDM
- Definition of terms

Brainstorm



What EDM tools do you have?

Are they being utilized?



Essential Drug Management Tools

1	Requisition and issuing forms
2	Registers or store ledgers
3	Stock/bin cards and Inventory Control Card
4	Prescription forms used at the dispensary

Sample Requisition / Issue Book

REQUISITION/ISSUE VOUCHER FORM						
TO BE COMPLETED BY REQUISITION OFFICER					TO BE FILLED BY ISSUING STORE KEEPER	DATE:…… SIGNED:…… DESIGNATION:……
FROM	TO	REQUISITION NO. DATE				
PLEASE SUPPLY TO	REQUISITION AUTHORIZED BY: SIGNED:…… DESIGNATION…… DATE:……				TO BE COMPLETED BY RECEIVING OFFICER	DATE:…… SIGNED:…… DESIGNATION:……
REQUISITION					**ISSUES**	
ITEM NO.	DESCRIPTION	UNIT	QUANTITY IN STOCK	QUANTITY REQUIRED	QUANTITY	STOCK BALANCE
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Sample Inventory Control Card

FEDERAL MINISTRY OF HEALTH
NIGERIA STATE HEALTH INVESTMENT PROJECT - PBF (NSHIP)

INVENTORY CONTROL CARD

NAME OF FACILITY …… LGA ……

STATE ……

PRODUCT …… UNIT ……
(PRODUCT NAME, DOSAGE FORM AND STRENGHT)

S/N	DATE	SIV/SRV No.	FROM/TO	QUANTITY RECEIVED	QUANTITY ISSUED	LOSSES	ADJUSTMENTS	BALANCE	SIGNATURE REMARKS

Sample of a prescription form

No. _____

BAUCHI STATE DMMA DRF SCHEME

PRESCRIPTION FORM

A. PATIENT'S IDENTIFICATION

Name _____

Address: _____

Date: _____

Phone No: _____

Sex: _____

Age: _____

R/X	AMOUNT
PRESCIPER'S NAME SIGNATURE	AMOUNT
	TOTAL

B. PHARMACY PROVIDER IDENTIFICATION

PHARMACIST: _____ SIGNATURE: _____

DATE: _____

Advantages of Stock Keeping

- Account for the number of medicines in stock at any given time
- Get rid of drugs that are about to expire using standard procedures
- Keep track of how much stock is used on a regular basis
- Know when and how much of an item should be reordered

Correct use of a stock card

- Make a stock card for each item in your store
- Keep the stock card with the item on the shelf
- Record every time you receive or issue an item on the stock card
- Issued items should be recorded in **blue/black ink** and Received items in **red ink**
- Received items and issued items should be recorded on separate lines

Procedures for accurate stock keeping

To keep accurate stock, these procedures should be followed:

1. Always keep an accurate running tally of the number of units, in the balance column on the stock card

2. Count your stock (stock taking) at regular intervals, such as once every month

3. Investigate any discrepancies in the information on the stock card

First Group exercise : EDM Inventory Control Card

NIGERIA STATE HEALTH INVESTMENT PROJECT: *INVENTORY CONTROL CARD*

NAME OF FACILITY	UTAKO PRIMARY HEALTHCARE
STATE	FCT ABUJA
LGA	MUNICIPAL AREA COUNCIL
PRODUCT	AMOXICILLIN CAPS 500MG
MAC:	

DATE	SEC/SRV NO	FROM/TO	QUANTITY RECEIVED	QUANTITY ISSUED	LOSSES	ADJUSTMENTS	BALANCE		SIGNATURE REMARKS
02/01/24			0	1			11		
03/01/24	Rg00765	LAN Pharmacy	12	1					
06/01/24			0	2					
09/01/24			0	1					
12/01/24			0	1					
17/01/24			0		3				
20/01/24	DN023	Donor	5						
29/01/24					4		9		

First Group exercise : EDM Inventory Control Card

Group work: Context

- You are the verifier attached to Utako Primary Health Centre and you have arrived to do your monthly verification in the facility
- At the pharmacy store, you pick up the stock card for Amoxicillin capsules and your observation is as recorded above
- However, in the store, you notice 16 packs of Amoxicillin Capsules on the shelf

Activities

1. I. Fill out the balance section of the stock card above
   II. Does the balance as at 29/01/24 coincide with what is available in the store?
   III. Upon further enquiry, the facility Manager tells you they had taken out three packs of Amoxicillin for an outreach on the 17/01/24, but forgot to record in the stock card
   IV. Additionally, he informs you that he noticed four packs of Amoxicillin had expired this morning 29/01/24 and had to remove them from the store
2. I. With this information, does the balance as at 29/01/24 coincide with what is available in the store?
3. I. What are the drug management issues you can deduce from the case scenario?

Answer

Question	Answer
1	As at 29/01/24 the balance does not coincide with the stock available. Also the balance remaining as at 29/01/24 is 9 packs of Amoxicillin
2	No
3	Poor documentation in the correct use of stock card

Brainstorm





What are the important calculations in EDM?

Important Calculations in EDM

CALCULATIONS



1
AVERAGE MONTHLY CONSUMPTION



2
MINIMUM STOCK LEVEL/SECURITY STOCK LEVEL

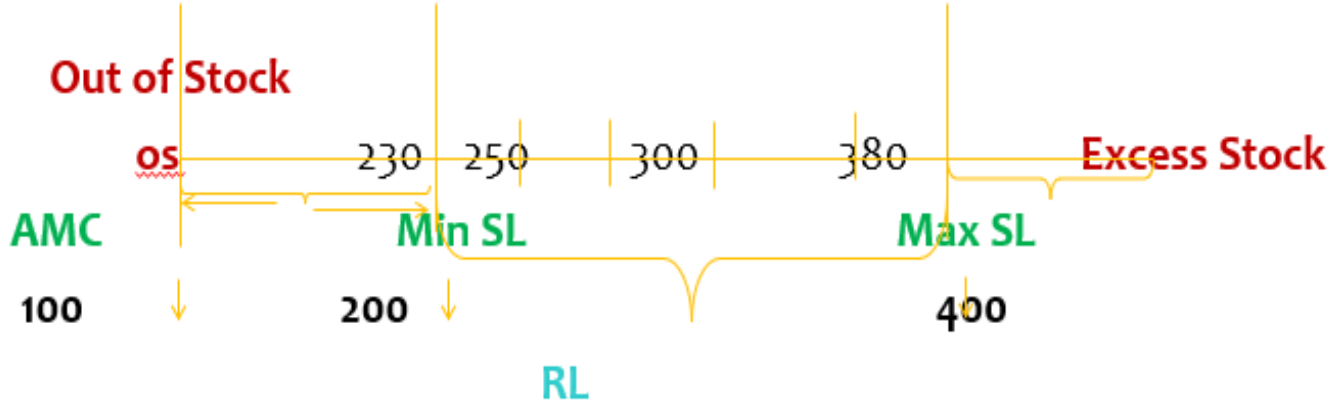


3
MAXIMUM STOCK LEVEL

Definition of Terms

TERM	DEFINITION	FORMULA
Average Monthly Consumption (AMC)	▪ Total consumption over a period of time (usually 6 months) divided by the number of months the drug dosage form was consumed. ▪ This can be collated with data gotten from ➢ Bin (stock) cards ➢ Daily Drug Dispensing Register	AMC = **Total no. of drug consumed within specified months** / **No. of months in question**
Minimum stock level or Security stock level (MS or SS)	▪ Is set in line with normal demand and lead times from suppliers. This should prevent under stocking and stock outs.	Minimum Stock Level= **AMC X 2** (For each drug, the stock level should always be above AMC X 2 months consumption)
Minimum stock level or Security stock level (MS or SS)	▪ Is set in line with consumption demand and storage space available. This should prevent overstocking	Maximum Stock Level= **AMC X 4**

Definition of Terms Cont'd

TERM	**Re-order level**
DEFINITION	Is set between the maximum and minimum levels taking account of the minimum level, lead time and normal demand. This should prevent stock outs
ILLUSTRATION	

Group exercise : Calculating AMC and SS

GROUP EXERCISE: CALCULATING MONTHLY AVERAGE CONSUMPTION AND MINIMUM STOCK

The table below shows the monthly consumption of paracetamol tablets in Facility A. Use the information to calculate the monthly average consumption (MAC) and the security stock (SS)

Month	Quantity of Paracetamol
January	362
February	52
March	623
April	714
May	625
June	62
July	332
August	420
September	532
October	354
November	67
December	632

Group exercise



Calculate the following for six months

(i) Average Monthly Consumption

(ii) Minimum Stock Level / Security Stock Level

(iii) Maximum Stock Level

Answer

Question	Answer
I	**AMC**= Total PCM consumed/ no of months consumed 2436/6=**406.33** tabs
II	**Min. stock level or SS** = AMC X2 =406.33 x 2 =**812.66** tabs
III	**Max. stock level** = AMC X4 = **1,625.32** tabs

Key messages

RECAP

- Examples of EDM tools include prescription forms, stock cards and inventory cards
- Stock keeping is a crucial part of EDM and as such must be carried out according to procedure
- Calculating stock levels helps in keeping track of drugs

Overview of Essential Drug Management (EDM)

Session 14.1	Introduction to EDM
Session 14.2	Drug Management Cycle
Session 14.3	Rational Drug Use and Dispensing
Session 14.4	Financial Management in EDM
Session 14.5	EDM Tools and Drug Consumption Analysis
Session 14.6	**Pharmacovigilance and Expired Drugs Handling**

Learning objectives



At the end of the session, participants should be able understand how to:

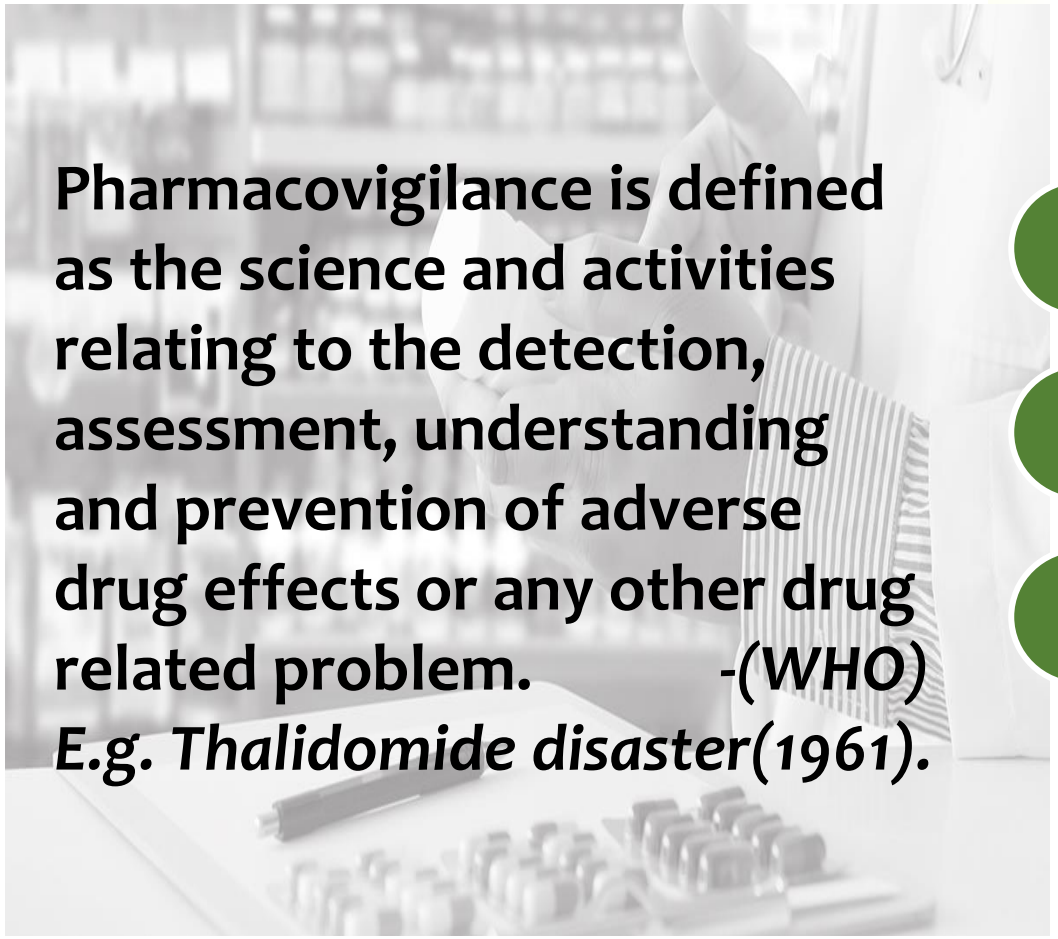
- Understand the concept of Pharmacovigilance and be able to fill the pharmacovigilance form
- Explain the disposal of expired drugs (in line with national protocol)

Session overview



- Pharmacovigilance
- Adverse drug reaction
- Unwholesome products
- Handling Of Expired Products At The Facility Level

Pharmacovigilance



Pharmacovigilance is defined as the science and activities relating to the detection, assessment, understanding and prevention of adverse drug effects or any other drug related problem. -(WHO)

E.g. Thalidomide disaster(1961).

Why pharmacovigilance ?

1. To prevent or minimize patient hazards,
2. To improve public health outcomes
3. To track evaluation and monitoring of drug safety.

.

To achieve this goal, an efficient Pharmacovigilance and Adverse Drug Reporting System should be established

Group work



- Discuss examples of adverse drug reactions that have been reported to the health facility and how you handled it.
- Attempt to fill the Pharmacovigilance form.

Adverse Drug Reaction To Co-trimoxazole (SEPTRIN)

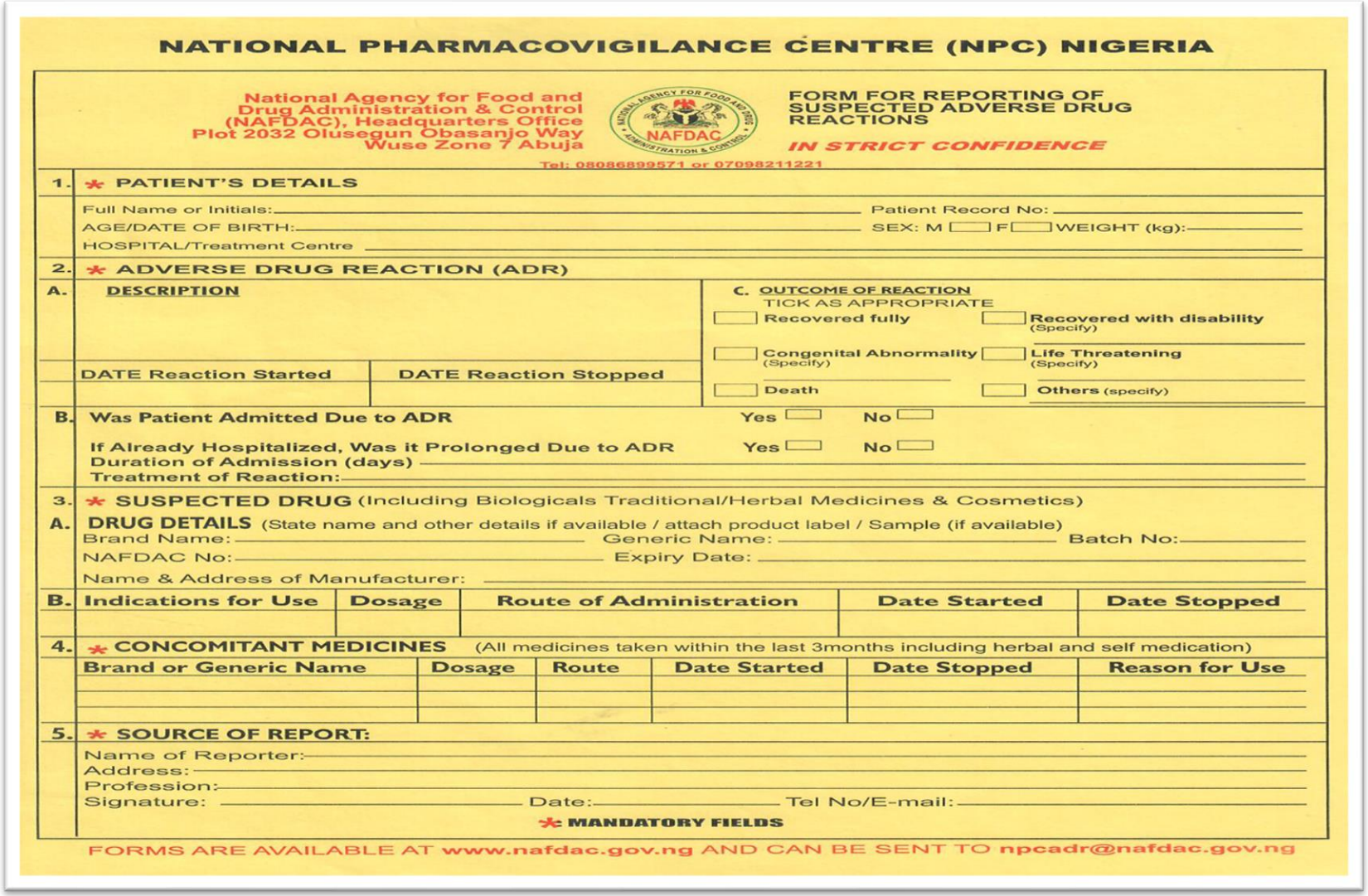
BEFORE TAKING SEPTRIN



AFTER TAKING SEPTRIN



Pharmacovigilance form



NATIONAL PHARMACOVIGILANCE CENTRE (NPC) NIGERIA

National Agency for Food and Drug Administration & Control (NAFDAC), Headquarters Office
Plot 2032 Olusegun Obasanjo Way
Wuse Zone 7 Abuja
Tel: 08086899571 or 07098211221

FORM FOR REPORTING OF SUSPECTED ADVERSE DRUG REACTIONS

IN STRICT CONFIDENCE

1. * **PATIENT'S DETAILS**

Full Name or Initials: _____ Patient Record No: _____
AGE/DATE OF BIRTH: _____ SEX: M ☐ F ☐ WEIGHT (kg): _____
HOSPITAL/Treatment Centre _____

2. * **ADVERSE DRUG REACTION (ADR)**

A. **DESCRIPTION**

DATE Reaction Started | DATE Reaction Stopped

C. **OUTCOME OF REACTION** TICK AS APPROPRIATE

☐ Recovered fully ☐ Recovered with disability (Specify)
☐ Congenital Abnormality (Specify) ☐ Life Threatening (Specify)
☐ Death ☐ Others (specify)

B. Was Patient Admitted Due to ADR Yes ☐ No ☐
If Already Hospitalized, Was it Prolonged Due to ADR Yes ☐ No ☐
Duration of Admission (days) _____
Treatment of Reaction: _____

3. * **SUSPECTED DRUG** (Including Biologicals Traditional/Herbal Medicines & Cosmetics)

A. **DRUG DETAILS** (State name and other details if available / attach product label / Sample (if available)
Brand Name: _____ Generic Name: _____ Batch No: _____
NAFDAC No: _____ Expiry Date: _____
Name & Address of Manufacturer: _____

B. Indications for Use	Dosage	Route of Administration	Date Started	Date Stopped

4. * **CONCOMITANT MEDICINES** (All medicines taken within the last 3months including herbal and self medication)

Brand or Generic Name	Dosage	Route	Date Started	Date Stopped	Reason for Use

5. * **SOURCE OF REPORT:**

Name of Reporter: _____
Address: _____
Profession: _____
Signature: _____ Date: _____ Tel No/E-mail: _____

* **MANDATORY FIELDS**

FORMS ARE AVAILABLE AT www.nafdac.gov.ng AND CAN BE SENT TO npcadr@nafdac.gov.ng

- The form should be filled by the essential drug management officer in the facility
- The form should be filled in triplicates
- One goes to the National Pharmacovigilance Centre
- Another copy goes to the state NAFDAC office
- The third form is documented in the facility

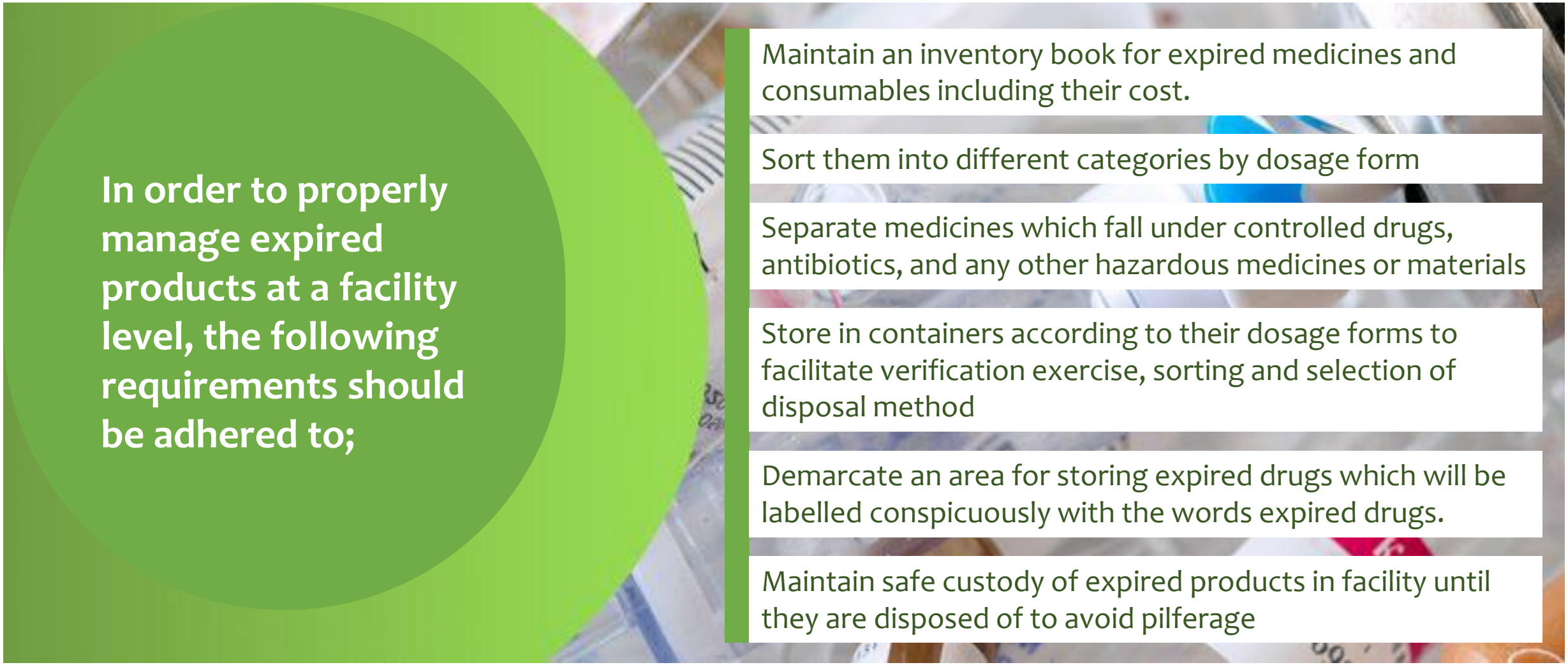
Unwholesome products

Medicines and other regulated products shall be considered as unwholesome when they are:



- Expired
- Improperly sealed
- Damaged, and improperly stored
- Improperly labelled
- Counterfeit and adulterated
- Prohibited or Unauthorized

Handling Of Expired Products At The Facility Level



In order to properly manage expired products at a facility level, the following requirements should be adhered to;

- Maintain an inventory book for expired medicines and consumables including their cost.
- Sort them into different categories by dosage form
- Separate medicines which fall under controlled drugs, antibiotics, and any other hazardous medicines or materials
- Store in containers according to their dosage forms to facilitate verification exercise, sorting and selection of disposal method
- Demarcate an area for storing expired drugs which will be labelled conspicuously with the words expired drugs.
- Maintain safe custody of expired products in facility until they are disposed of to avoid pilferage

Key messages

RECAP

Pharmacovigilance consists of the detection, assessment, understanding and prevention of adverse drug effects or any other drug related problem.

Expired medicines should be disposed properly and according to instructions.


Thank
you