

## CASE STUDY BASED PUZZLE

ER20-25T:HOSPITAL AND CLINICAL PHARMACY

UNIT 2: DOCUMENTATION - PURCHASE AND INVENTORY

## Case Study Puzzle

### “The Cold Chain Conundrum at Central Drug Store”

#### Background Story

A 500-bed tertiary care hospital has a Central Drug Store (CDS) that supplies medicines to OPD, IPD, ICU, Oncology, and Emergency departments.

Recently, the hospital pharmacy audit committee noticed several issues related to cold storage, inventory control, expiry handling, and documentation.

You are appointed as a Junior Hospital Pharmacist. Your task is to identify problems and solve them using correct pharmaceutical principles.

### Puzzle – Part 1: Cold Storage Mystery

The CDS has the following storage facilities:

Device	Items Stored	Observed Issue
Domestic Refrigerator	Vaccines, Insulin, Oxytocin	Temperature recorded once weekly
ILR (Ice Lined Refrigerator)	Vaccines	No power backup
Walk-in Cold Room	Oncology injectables	Door frequently left open

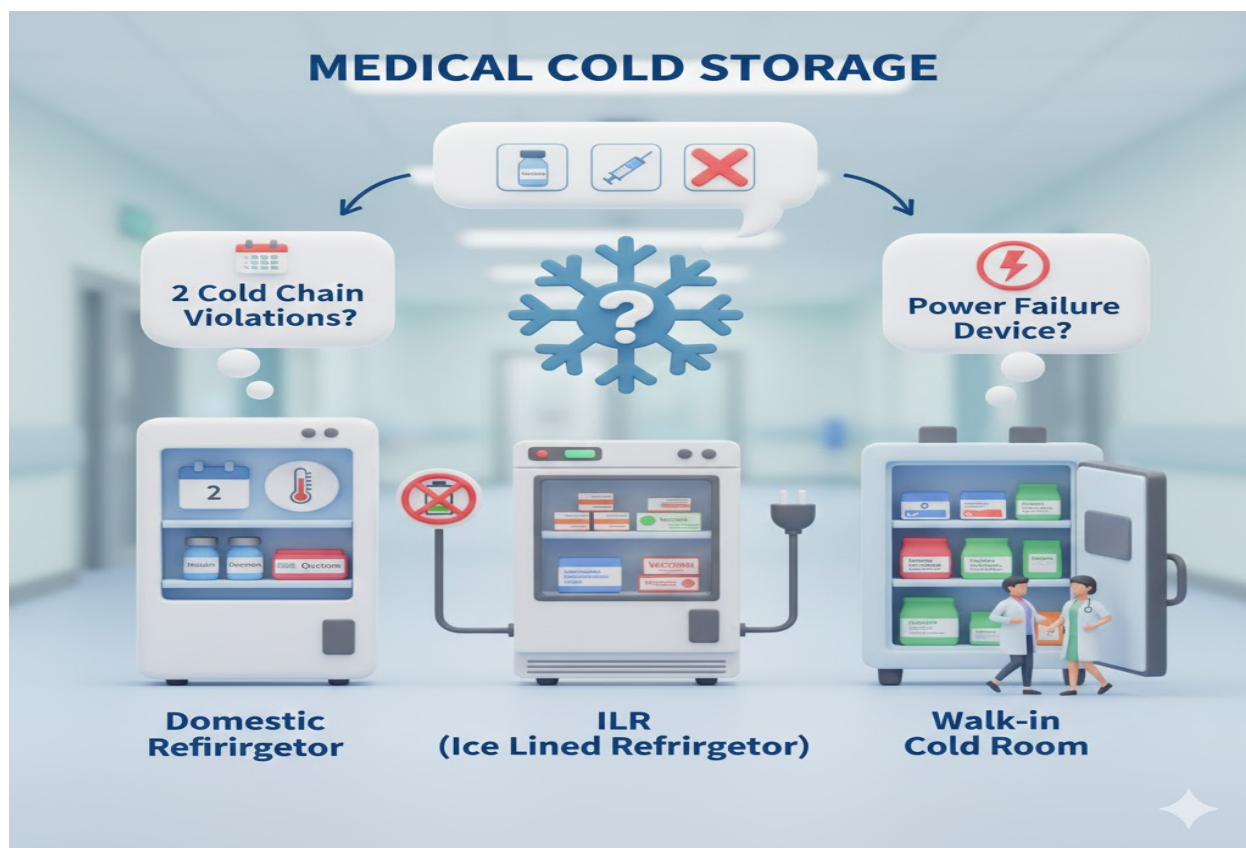
#### Puzzle Questions

- Match the correct device to the most suitable drug group:
  - Vaccines
  - Insulin
  - Cytotoxic injectables
- Identify TWO cold chain violations in the table above.
- Which device maintains temperature during power failure?

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## Puzzle – Part 2: FIFO vs FEFO Confusion ↻

The store has three batches of Amoxicillin Injection:

Batch No.	Date of Purchase	Expiry Date
A101	Jan 2025	Dec 2026
B205	Mar 2025	Jun 2025
C309	Feb 2025	Dec 2027

### 🔍 Puzzle Questions

- Which batch should be issued first using:
  - a) FIFO
  - b) FEFO

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1. Which method is more appropriate for pharmaceutical stores and why?



### Puzzle – Part 3: Expired Drug Alert ⚠

During monthly inspection, the following were found:

- Expired Morphine injections
- Expired Cyclophosphamide vials
- Expired Paracetamol tablets

They were kept together in a cardboard box labeled “Expired Medicines”.

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Q Puzzle Questions

1. Identify TWO errors in handling expired drugs.
2. Match the drug with its correct disposal method:

Drug	Disposal Method
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Morphine	_____
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Cyclophosphamide	_____
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Paracetamol	_____
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(Options: Incineration, Authorized narcotic destruction, Return to manufacturer)

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