

**CASE STUDY BASED PUZZLE****ER20-25T:HOSPITAL AND CLINICAL PHARMACY****UNIT 1: HOSPITAL PHARMACY****Section 1: Definition, Scope, National and International Scenario****Case Study Puzzle 1: Global Expansion Dilemma**

In a mid-sized hospital in India, the pharmacy department is expanding to align with international standards. The hospital serves 500 patients daily, with the pharmacy handling drug procurement, dispensing, and basic clinical advice. Nationally, Indian hospital pharmacies follow the Pharmacy Council of India (PCI) guidelines, emphasizing safe dispensing and inventory management. Internationally, organizations like the World Health Organization (WHO) and FIP promote comprehensive scopes including pharmacovigilance and patient safety. However, the hospital's pharmacy lacks integration with electronic health records, leading to medication errors. The puzzle: A patient receives the wrong dosage due to a mix-up in manual records. Identify how aligning with international scopes (e.g., FIP's emphasis on technology) could prevent this, and suggest national vs. international differences in scope that apply here.

**Puzzle questions:**

1. Which core hospital pharmacy functions (as per definition) were involved in this case, and which were missing?

2. Identify two international scope elements (WHO/FIP) that could have directly prevented the dosage error.
3. Classify the pharmacy's current activities into:
  - A.) Traditional scope
  - B.) Expanded clinical scope

## Section 2: Organisational Structure

### Case Study Puzzle 1: Hierarchy Overload

At City General Hospital, the pharmacy department is structured with a Chief Pharmacist overseeing 10 staff pharmacists and 15 technicians. Due to budget cuts, one staff pharmacist is handling both inpatient dispensing and outpatient counseling, causing delays. The structure lacks a dedicated inventory manager, leading to stockouts. Puzzle: During a peak hour, a critical antibiotic is unavailable. Rearrange the structure to optimize workflow and prevent future issues, identifying bottlenecks in the current setup.



#### Puzzle questions:

1. Identify three major organisational bottlenecks in the current pharmacy structure?
2. List two inventory control tools (e.g., ABC, VED, EOQ) that could prevent this issue.
3. Explain how organisational structure directly impacts medicine availability.

## Section 3: Professional Responsibilities, Qualification and Experience Requirements, Job Specifications, Work Load Requirements and Inter Professional Relationships

### Case Study Puzzle 1: Team Conflict Resolution

Dr. Sarah, a hospital pharmacist with a Pharm.D. and 5 years of experience, is responsible for medication reconciliation, requiring collaboration with nurses and physicians. Job specs mandate a minimum B.Pharm with 2 years experience, but workload is high at 200 prescriptions/day per pharmacist. A nurse overrides Sarah's recommendation on drug interaction, causing an adverse event. Puzzle: Evaluate if Sarah meets qualification standards, assess workload overload, and propose ways to strengthen inter-professional relationships (e.g., joint rounds).



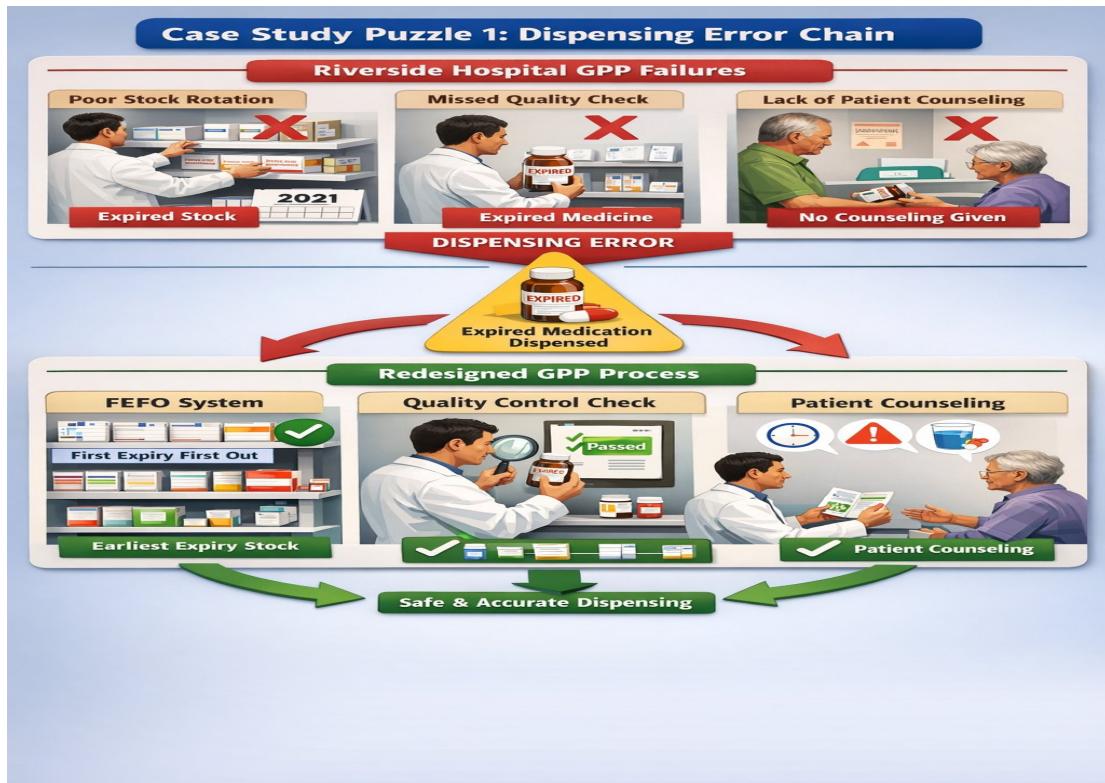
#### Puzzle questions:

1. Does Dr. Sarah meet and exceed the qualification and experience requirements as per job specifications? Justify.
2. Critically evaluate whether the workload (200 prescriptions/day) may compromise professional responsibilities and patient safety.
3. Identify the inter-professional relationship failure in this case and propose three strategies (e.g., joint rounds, SOPs, communication protocols) to prevent recurrence.

## Section 4: Good Pharmacy Practice (GPP) in Hospital

### Case Study Puzzle 1: Dispensing Error Chain

In Riverside Hospital, GPP requires accurate labeling, storage under controlled conditions, and patient education. A pharmacist dispenses an expired medication due to poor stock rotation. GPP guidelines (per WHO/FIP) emphasize "first expiry first out" (FEFO) and quality checks. Puzzle: Trace the error back to GPP violations and redesign the process to comply, preventing recurrence for high-risk drugs.



### Puzzle Questions:

Problem Identified	Possible GPP Action
1. Expired drugs on shelf	?
2. No FEFO practice	?
3. High-risk drugs mixed with others	?
4. Pharmacist skipped final check	?

## Section 5: Hospital Pharmacy Standards (FIP Basel Statements, AHSP)

### Case Study Puzzle 1: Standard Compliance Gap

Under FIP Basel Statements (e.g., Statement 1: Overarching role in medicines management), and ASHP (American Society of Health-System Pharmacists) standards focusing on patient-centered care, a hospital pharmacy fails to implement seamless care transitions. A patient is readmitted due to post-discharge medication non-adherence. Puzzle: Map the issue to specific Basel Statements (e.g., #4 on procurement) or ASHP guidelines, and propose compliance measures.

**Diagram: Standards Alignment Pyramid (ASCII representation)**



#### Puzzle questions:

1. Identify and match the relevant FIP Basel Statements violated (minimum two), such as:
  - A) Statement on medicines management
  - B) Statement on continuity of care
2. Link the failure to at least one ASHP standard related to patient-centered care or transitions of care.
3. Propose two compliance measures a hospital pharmacist should implement to prevent such readmissions.

