

Synopsis: Assessment of Adequate Dispensation of Drugs to Patients through District Hospital Pharmacies in Punjab

1. Introduction

Access to essential medicines is a fundamental aspect of healthcare delivery, yet many patients in Punjab's District Hospitals face challenges in receiving prescribed drugs despite adequate procurement levels. This study investigates the factors contributing to the inadequate dispensation of medicines in District Hospital Pharmacies. This study aims to explore systematic inefficiencies, supply chain issues, and administrative barriers that hinder effective medicine distribution.

2. Research Question

What are the primary determinants of inadequate dispensation of essential medicines to patients in District Hospital pharmacies in Punjab?

3. Objectives

- a. To assess the prevalence and extent of essential drug unavailability in DH pharmacies across selected districts of Punjab.
- b. To identify the key factors (e.g., stock management, distribution timelines, administrative controls) responsible for gaps in medicine dispensation.
- c. To analyze the impact of inadequate drug dispensation on patient health outcomes and financial burden.
- d. To evaluate current DH pharmacy operational workflows and suggest actionable improvements to enhance medicine distribution.

5. Hypotheses

- **Hypothesis 1:** Patients frequently purchase prescribed medicines from private pharmacies due to unavailability of drugs at DH pharmacies.
- **Null Hypothesis:** There is no significant difference in private pharmacy purchases among patients irrespective of DH drug availability.
- **Hypothesis 2:** Inadequate dispensation of drugs in DH pharmacies is primarily attributable to distribution inefficiencies rather than procurement shortages.
- **Null Hypothesis:** Procurement shortages are the principal cause of inadequate drug dispensation in DH pharmacies.

6. Material and Methods

STUDY DESIGN:

Cross-sectional descriptive and analytical study.

SETTING:

Selected District Hospitals based on average OPD and stock availability in both urban and rural regions of Punjab. Each hospital's central OPD pharmacy will be the main locus of data collection.

STUDY POPULATION:

Inclusion criteria: Patients receiving prescriptions at DH outpatient pharmacies.

Exclusion criteria: Emergency ward dispensations

STUDY TOOLS:

- Structured patient exit interviews to capture prescription fulfillment data.
- Key informant interview guides for pharmacists, administrators, and PHSC officials.
- Standardized inventory review checklist adapted from the National List of Essential Medicines (NLEM) for stock record assessment.

DURATION OF STUDY: Three months, from 08 March 2025 to 31 May 2025.

SAMPLE SIZE AND SAMPLING TECHNIQUE: *Mentioned in the attached Excel File.*

DATA COLLECTION PROCEDURE: Patient exit interviews will be conducted at dispensing counters immediately after medicine procurement. Inventory audits will review monthly stock registers for the preceding six months.

OPERATIONAL DEFINITIONS:

Drug Unavailability: The inability of a DH pharmacy to dispense at least one prescribed item at the time of the patient's visit.

Adequate Dispensation Rate: Ratio of the number of prescriptions fully dispensed to the total number of prescriptions issued.

7. Data Analysis Plan

Data will be entered in MS Excel initially and analyzed using SPSS. Descriptive statistics will assess the drug unavailability patterns.

8. Ethical Considerations

Informed verbal consent will be secured from all participants. Data confidentiality and privacy will be maintained with utmost confidence.

9. Implications of Research

Findings will inform Punjab System Health Corporation (PSHC) and state health authorities about critical supply chain bottlenecks, guiding policy reforms to optimize medicine distribution. Improved DH pharmacy performance is expected to reduce patient out-of-pocket expenditure and enhance equitable access to essential drugs.

10. References

Government of India. National List of Essential Medicines (NLEM) 2022. Ministry of Health and Family Welfare.

<https://cdsco.gov.in/opencms/opencms/en/consumer/Essential-Medicines/>