ASSESSMENT OF DRUG AVAILABILITY FROM DISTRICT HOSPITAL PHARMACIES OF PUNJAB

DURATION
3 MONTHS

PRESENTED BY
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DISSERTATION PRESENTATION

Background & Rationale

- **Medicines are essential for health and survival:**
  Medicines play a critical role not only in treating diseases but also in preventing complications, managing chronic conditions, and improving overall health outcomes. Ensuring consistent access to essential medicines is fundamental to a functioning healthcare system.
- **District Hospitals (DHs) in Punjab provide free essential medicines:**
  As part of the state's commitment to Universal Health Coverage (UHC), DHs in Punjab are mandated to provide essential medicines at no cost to patients. This initiative is especially important for reducing health-related financial burdens on low-income and vulnerable populations.
- **Stockouts persist despite adequate procurement:**
  Although medicines are procured centrally through mechanisms such as the Punjab Health Systems Corporation (PHSC), patients often report unavailability at the point of care. This suggests that issues lie not with procurement itself, but with distribution, inventory management, and on-ground implementation.
- **High Out-of-Pocket Expenditure (OOPE) remains:**
  When essential medicines are unavailable in public hospitals, patients are forced to purchase them from private pharmacies. This defeats the purpose of free public healthcare and contributes significantly to OOPE, which is a leading cause of financial hardship among Indian households.

RESEARCH QUESTION

WHAT ARE THE PRIMARY DETERMINANTS OF INADEQUATE DISPENSATION OF ESSENTIAL MEDICINES TO PATIENTS IN DISTRICT HOSPITAL PHARMACIES IN PUNJAB?

OBJECTIVES

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

ORGANISATION STRUCTURE

CHAIRPERSON
CHIEF MINISTER OF PUNJAB
(Sh. Bhagwant Mann)

Vice Chairperson

Secretary, PDC

Member, PDC

Joint Advisor

Senior Research Officer

Good Goverance Fellow

HYPOTHESIS

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

METHODOLOGY

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, IPD patients.

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.

SAMPLE SIZE AND SAMPLING TECHNIQUE

SAMPLE SIZE CALCULATED OF SELECTED DISTRICTS BASED ON TREND OF STOCK AVAILABILTY AND AVERAGE OPD		
REGION	BEST PERFORMING	WORST PERFORMING
Malwa	Patiala	Sangrur
	Ludhiana	Fatehgarh Sahib
	Mohali	
Doaba	Jalandhar	Nawanshahr

Districts	AVG OPD (Based on 3 months)	Sample Size based on Cochran's Formula	10% of Sample Size of Cochran's calculations
Patiala	29774	379	**38**
Ludhiana	36354	380	**38**
Mohali	36397	380	**38**
Jalandhar	28925	379	**38**
Sangrur	19994	376	**38**
Fatehgarh Sahib	15133	375	**38**
Nawanshahr	19118	376	**38**
TOTAL	**235164**	**3768**	**266**

KEY FINDINGS – DRUG AVAILABILITY

DH MOHALI

TOTAL NUMBER OF RESPONDENTS = 38

NUMBER OF RESPONDENTS WHO DID NOT RECIEVE ALL DRUGS = 11

PERCENTAGE = 28.95%

DH FATEHGARH SAHIB

TOTAL NUMBER OF RESPONDENTS = 37

NUMBER OF RESPONDENTS WHO DID NOT RECIEVE ALL DRUGS = 9

PERCENTAGE = 24.32%

DH PATIALA

TOTAL NUMBER OF RESPONDENTS = 30

NUMBER OF RESPONDENTS WHO DID NOT RECIEVE ALL DRUGS = 8

PERCENTAGE = 26.67%

KEY FINDINGS – DRUG AVAILABILITY

DH LUDHIANA

TOTAL NUMBER OF RESPONDENTS = 38

NUMBER OF RESPONDENTS WHO DID NOT RECIEVE ALL DRUGS = 11

PERCENTAGE = 28.95%

DH SANGRUR

TOTAL NUMBER OF RESPONDENTS = 22

NUMBER OF RESPONDENTS WHO DID NOT RECIEVE ALL DRUGS = 6

PERCENTAGE = 27.27%

DH JALANDHAR

TOTAL NUMBER OF RESPONDENTS = 38

NUMBER OF RESPONDENTS WHO DID NOT RECIEVE ALL DRUGS = 9

PERCENTAGE = 36.68%

DH NAWANSHAHR

TOTAL NUMBER OF RESPONDENTS = 37

NUMBER OF RESPONDENTS WHO DID NOT RECIEVE ALL DRUGS = 8

PERCENTAGE = 21.62%

REASON OF UNAVAILABILTY OF DRUGS

PATIENT IN THE PHARMACY QUEUE

DOES NOT RECEIVE COMPLETE SET OF MEDICATION

- THE DRUG IS OUT OF STOCK
- THE DRUG IS NOT PRESENT IN EDL/NON EDL LIST
- FALSE UNAVAILABILITY
- PRESENT IN THE MAIN STORE BUT NOT AT POINT OF DISPENSATION

DOES NOT PREFER TO BUY THE DRUGS FROM DH PHARMACY

- LONG QUEUES/WAIITNG TIME

INCREASE IN OOPE

Patient Response & Satisfaction

- **Most turned to private pharmacies:**
  A majority of patients who did not receive their full prescription from the hospital pharmacy resorted to purchasing the remaining medicines from private outlets. This not only imposed an unplanned financial burden but also highlighted a systemic failure in delivering on the promise of free public healthcare. It undermines the objective of reducing Out-of-Pocket Expenditure (OOPE).

- **Low awareness of helplines:**
  Very few patients were aware of government-supported medical helplines (such as the 104 service) or official grievance redressal mechanisms. This lack of awareness means that patients often do not report stock issues or seek timely support, missing opportunities for institutional accountability or assistance.

- **Pharmacists polite but limited by supply:**
  Patients generally appreciated the behavior and professionalism of the pharmacy staff, describing them as polite and helpful. However, the effectiveness of the staff was limited by factors beyond their control, such as medicine shortages, lack of support staff, or outdated inventory systems.

- **Satisfaction tied to availability:**
  While interactions with pharmacists were positive, overall patient satisfaction was strongly linked to whether they received the complete set of prescribed medicines. Even courteous service could not compensate for the frustration caused by incomplete dispensation, emphasizing the critical role of reliable medicine availability in public trust.

SYSTEMIC GAPS IDENTIFIED

- **Procurement–Dispensation Errors:**
  Procurement processes are not aligned with real-time demand, leading to inadequate supply at the facility level. No forecasting methods and irregular procurement cycles result in stock levels that fail to match the actual patient load.

S.No	NAME OF THE DRUG	REQUIRED QUANTITY	RECEIVED QUANTITY
1	Domperidone 30mg Cap. + Rabeprazole Sodium 20mg [M-237]	1,00,000	10,000
2	Pantoprazole 40 mg tab [M-159]	1,00,000	30,000
3	Thiocolchicoside 4mg + Aceclofenac 100mg, IP Tab [M-206]	20,000	2,000
4	Zinc Sulphate Dispersible Tab 20mg [M-222]	10,000	1,000
5	Vildagliptin 50 mg Tab [M-217]	20,000	2000
6	Levetiracetam 500mg tab [M-123]	5,000	3,000
7	Tranexamic Acid Tab 500 Mg [M-212]	15,000	5000
8	Cholecalciferol 60000 IU [M-51]	5,000	NIL
9	Clotrimazole + Beclomethasone cream IP (1%+ 0.025%) w/w 10 gin tube [M-61].	500	NIL

S.No	NAME OF THE DRUG	REQUIRED QUANTITY	RECEIVED QUANTITY
1	Tablet Asprin (Acetyl Salicyclic Acid)	1,00,000	2,000
2	Tablet Estilo-plus	30,000	200
3	Tablet Udiliv 300	10,000	2,000
4	Tablet Sertaline 50	10,000	100
5	Tablet Clona 1mg	20,000	100
6	Inj. Amikacin 500	5,000	2,000
7	Tablet Levetiracetam 500mg	7,000	500
8	Inj. Meropenem 200	5,000	100
9	Tablet Progesterone 200mg	15,000	NIL

SYSTEMIC GAPS IDENTIFIED

- **DRUGS PRESCRIBED ARE NOT PART OF EDL/NON EDL:**

  A majority of patients who did not receive their full prescription from the hospital pharmacy resorted to purchasing the remaining medicines from private outlets. This not only imposed an unplanned financial burden but also highlighted a systemic failure in delivering on the promise of free public healthcare. It undermines the objective of reducing Out-of-Pocket Expenditure (OOPE).

S.No.	NAME OF THE DRUG	PART OF EDL	PART OF NON EDL	IN STOCK
1	Protein Powder	NO	NO	NO
2	Pcosfre	NO	NO	NO
3	Cap Magnifree	NO	NO	NO
4	Cap HS	NO	NO	NO
5	F Heal Ointment	NO	NO	NO
7	Syp Ibuprofen	NO*	NO	NO
8	Tab Tramadol	YES	-	YES
	Drug Name Illegible			

S.No.	NAME OF THE DRUG	PART OF EDL	PART OF NON EDL	IN STOCK
1	Protein Powder	NO	NO	NO
2	Tablet Mefex	NO*	NO*	NO
3	Cream Clotrimazole + Beclomethasone	YES	-	YES
4	Cream Fluocinolone	YES	-	YES
5	Tab Acebrophyllin SR 200mg	NO*	YES	YES
7	Tab Vitamin E 400mg	YES	-	YES
8	Tablet L-Carnitine	NO	NO	NO
	Drug Name Illegible			

SUGGESTIONS

- **Digitize Inventory (Dashboards, Alerts)**

  While Punjab Health Systems Corporation (PHSC) currently uses the e-Aushadhi portal, its functionality remains suboptimal. A key concern is the lack of real-time data flow between the main hospital store and the pharmacy unit, leading to a critical information gap—main stores are often unaware of the actual stock levels in individual pharmacies.

- **Improve Demand Forecasting**

  There is no forecasting/ predictive modelling system placed. The current system depends on online dispensation which varies from district to district.

- **Establish SOPs for Pharmacist Communication:**

  SOPs are to be placed for pharmcists for the dispensation of drugs. Recurtiment of pharmcists are required as most of the government sanctioned posts are vacant.

- **Establishing PHSC Complaint Helpline:**

  To address and better understand the unavailabilty of medicines, and hearing the concerns of the patients.

Thank You