

Study on Multiple Indent Generation in Hospital Pharmacy Systems

AT

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INTRODUCTION



- Effective pharmacy operations are vital in inpatient care.

Multiple indent generation leads to:

- Duplication of work-
- Delays in patient care
- Inventory mismatches
- Reduced efficiency



Problem Statement



- Repetitive indent generation for the same patient in hospital pharmacy system leads to process redundancy, inventory discrepancies, and workflow inefficiencies.
- Poor communication, lack of SOPs lead to repeated indenting.



AIM & OBJECTIVE

AIM

- To evaluate the difficulties related with several indent generation in hospital pharmacy system and suggest sustainable solutions to lower duplicates, increase operational effectiveness, and improve patient care delivery.

OBJECTIVES

- To determine the reason and frequency of multiple indent generation.
- To find out the operational challenges leading to duplicate indent generation.
- To find out the impact of multiple indent on patient care and pharmacy operation.
- To evaluate staff training level, confidence on HMIS and indenting process.
- To provide recommendation to streamline the indenting process



STUDY	FOCUS AREA	KEY FINDINGS	RELEVANCE TO MULTIPLE INDENTS
Shukla et al.(2023)	Supportive supervision in indenting by senior nurses	94% non-adherence to indenting protocols; manual system ;staff transfer; poor training	Identifies root causes like manual records and supervision gaps
Shroff et al.(2019)	Online indent turnaround times in South Indian hospital	Delays due to logistics and calls; nurses re-submitted indents when deliveries were delayed	Shows how delays trigger repeat indenting
Adil et al. (2017)	Indent delay analysis in large hospital (540 indents)	29%–39% of indents delayed; led to stock fluctuation, wastage, substitution	29%–39% of indents delayed; led to stock fluctuation, wastage, substitution
Almalki et al. (2023)	implementation of ADCs in Saudi hospital	83% reduction in TAT; 72% reduction in drug returns; improved real-time access to meds	Demonstrates how automation can reduce unnecessary indenting
Fonseca et al. (2023)	Decision-making by pharmacy staff in English hospitals	Absence of SOPs led to over-supply and duplicate orders	Points to policy-related gaps and unclear procedures causing inefficiency

Research Gap



Although several studies touch upon medication delays, inventory issues, and staff-related errors, none directly address multiple indent generation as an independent operational issue. There is a lack of focused research on its causes, impact on workflow, and sustainable solutions. This dissertation aims to bridge that gap through practical, evidence-based analysis.



METHODOLOGY

- **Design:**

Descriptive, cross-sectional.

- **Participants:**

Nursing staff from inpatient departments.

- **Tool:**

Structured questionnaire (pilot tested).

- **Sample size:**

350 staff members.



Data Collection & Analysis



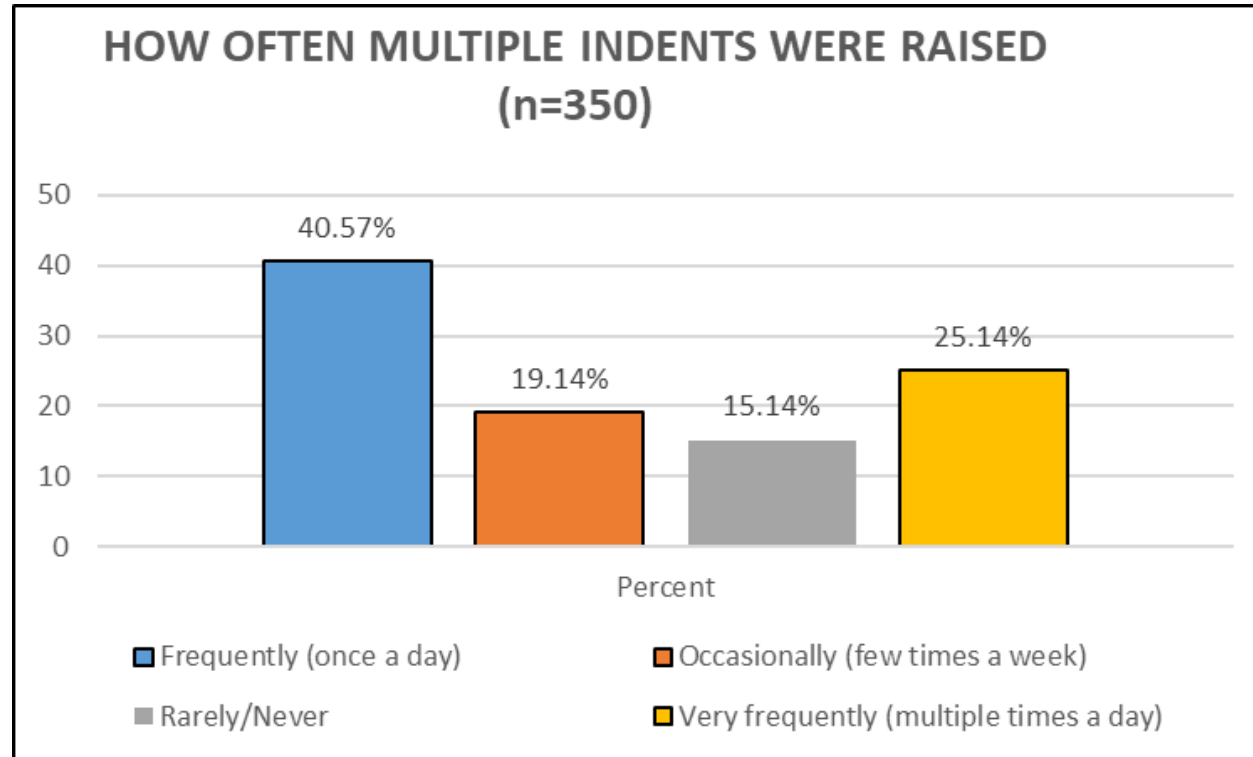
- Questionnaire distributed with informed consent.
- Voluntary and anonymous responses.
- Data entered in Stata for descriptive statistics.

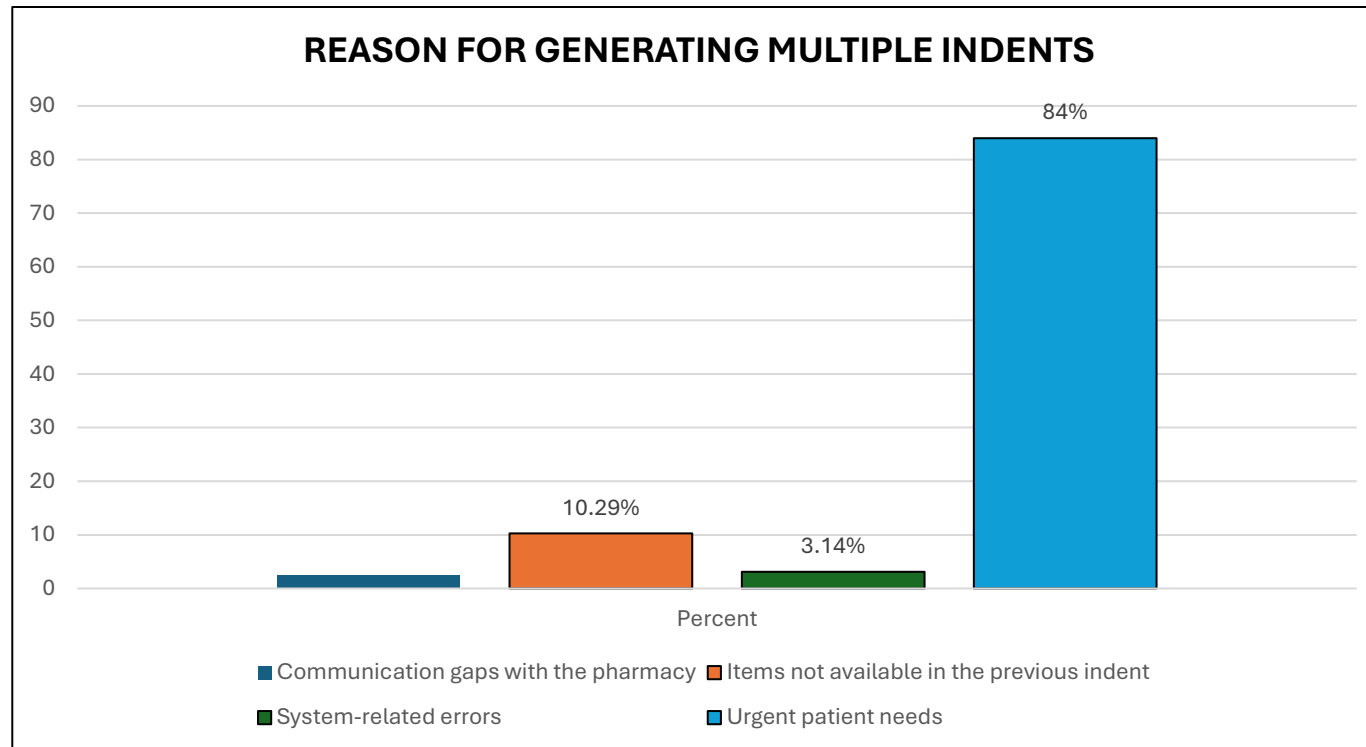
Focus on:

- Frequency of indenting
- Communication issues
- Stock availability
- Confidence and training

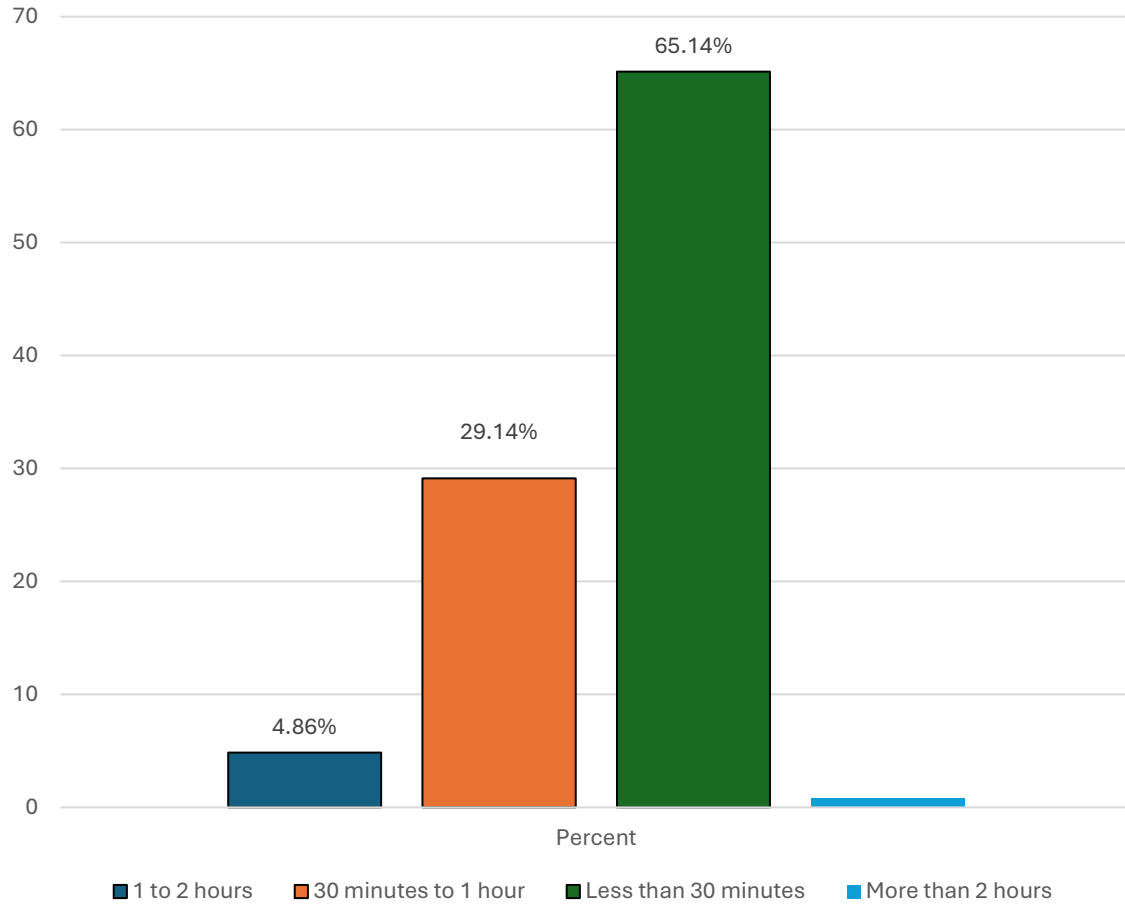


RESULTS

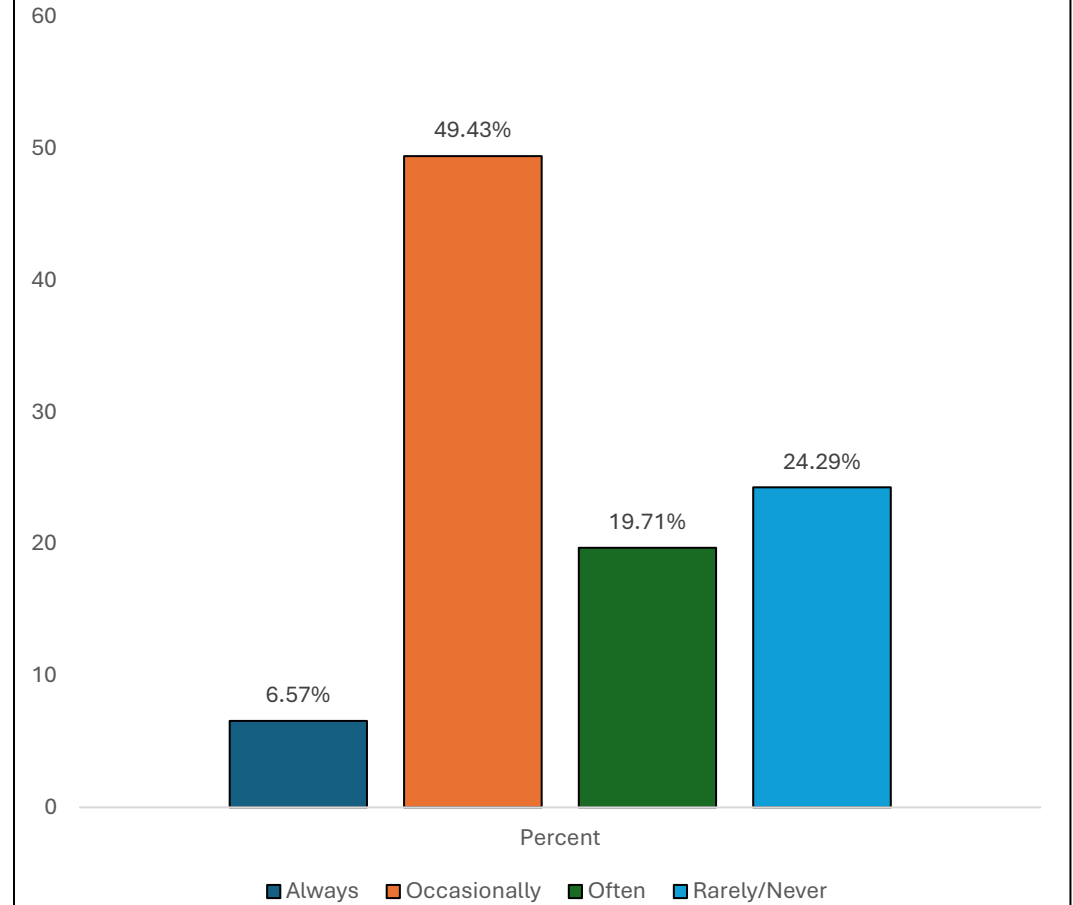


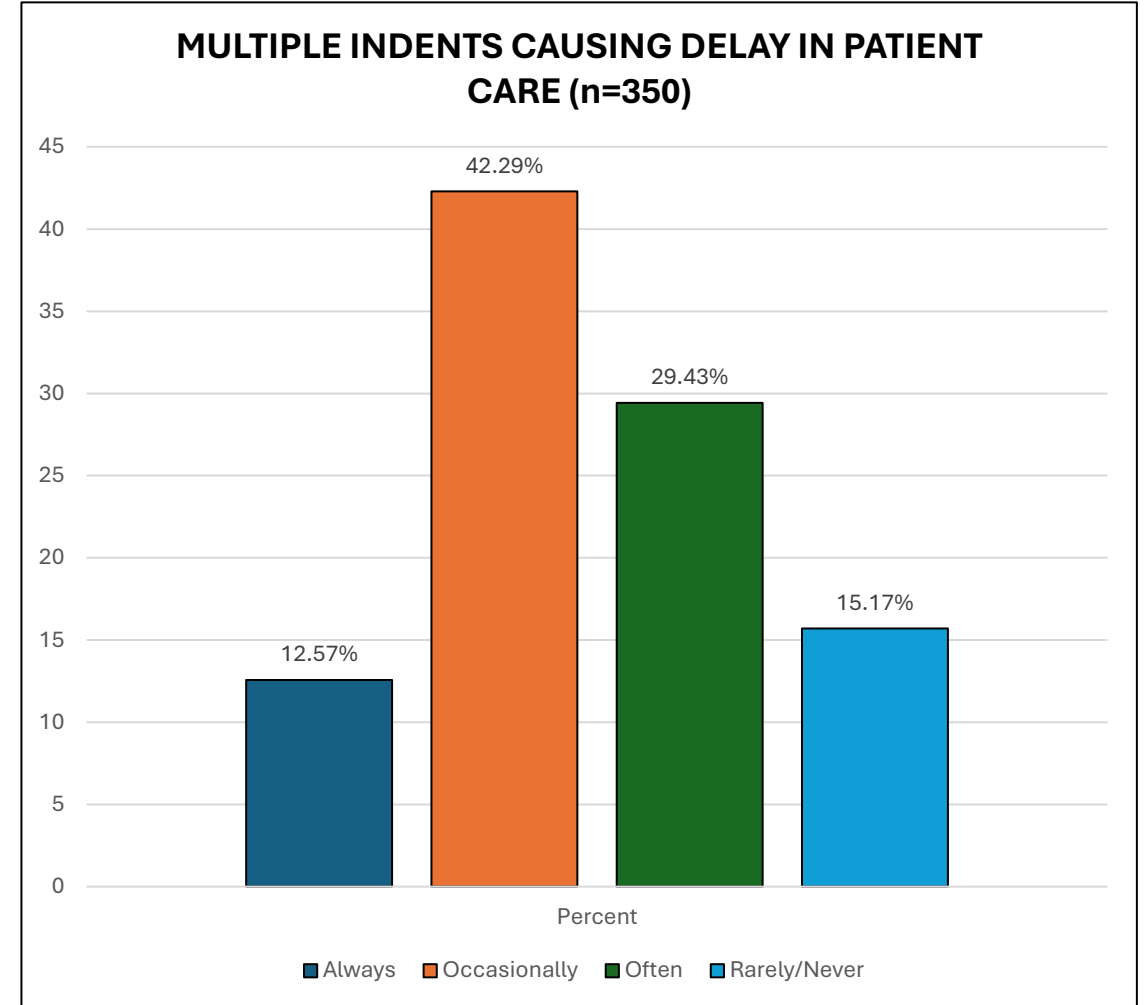
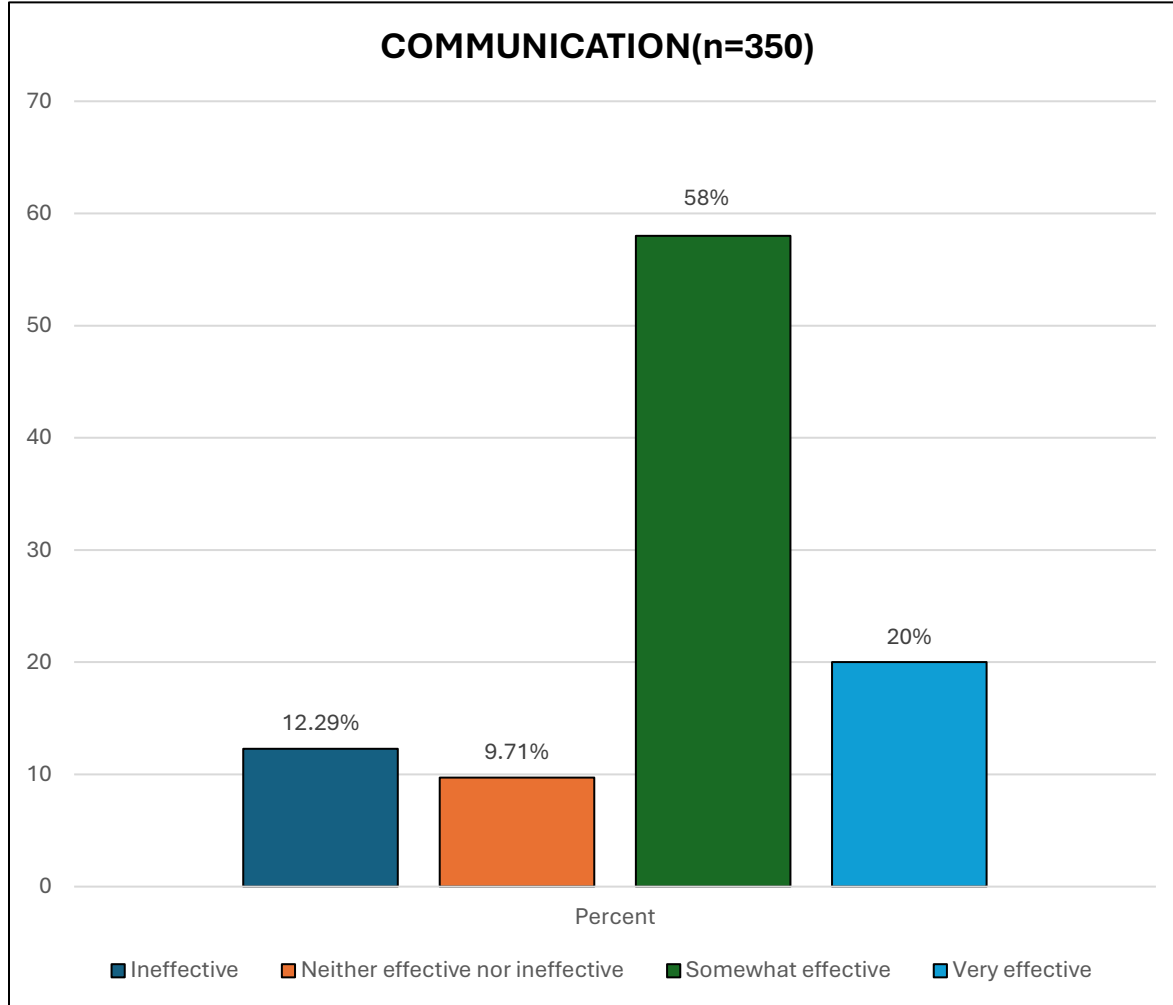


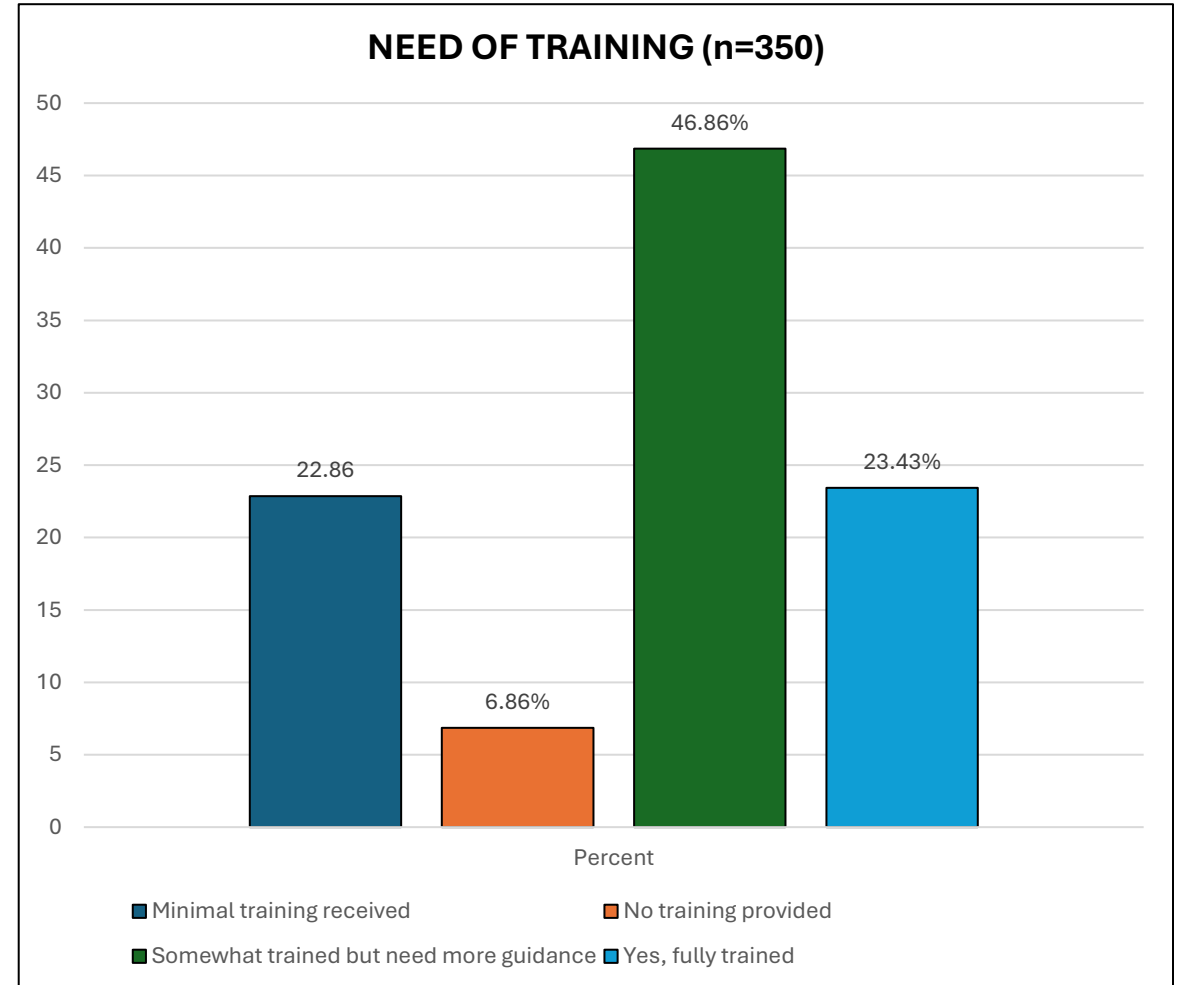
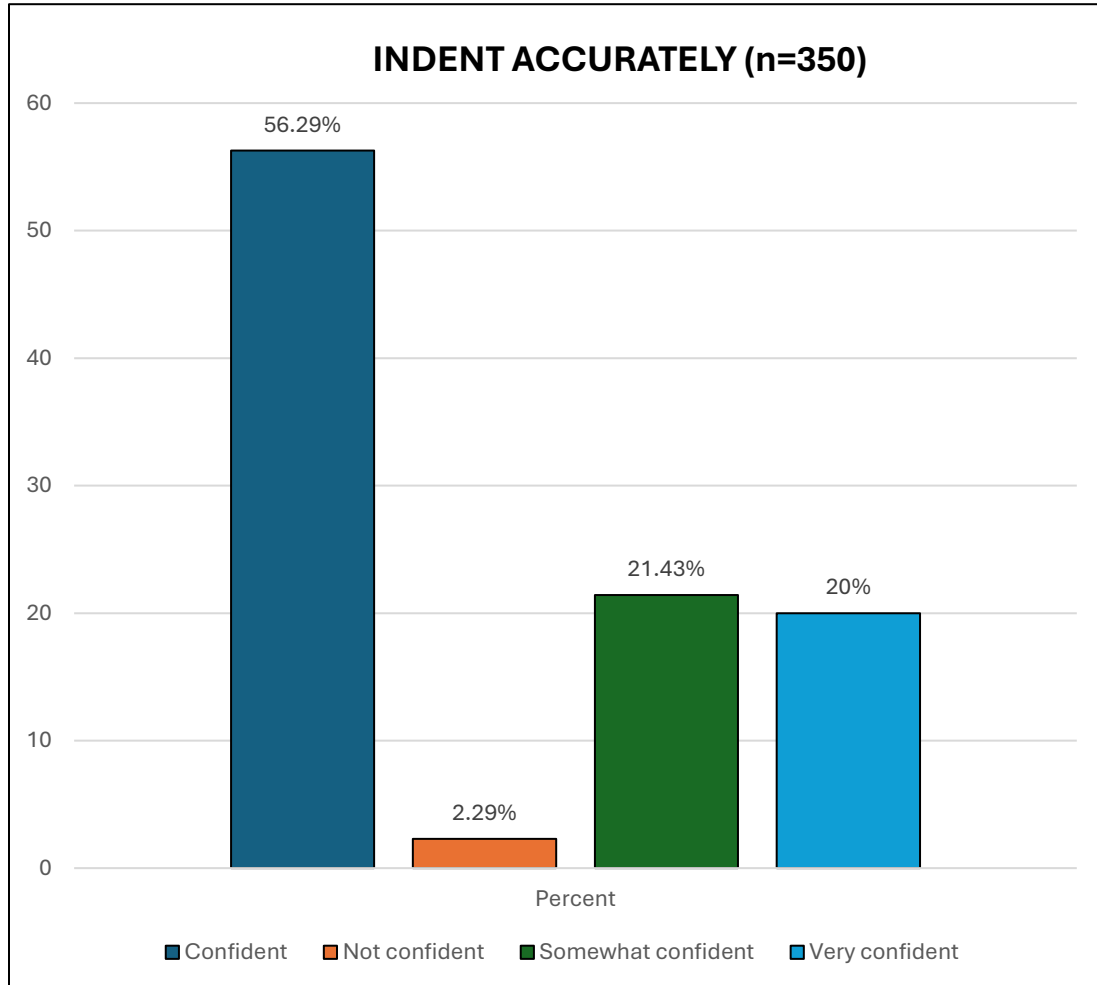
TIME SPENT ON INDENTING(n=350)

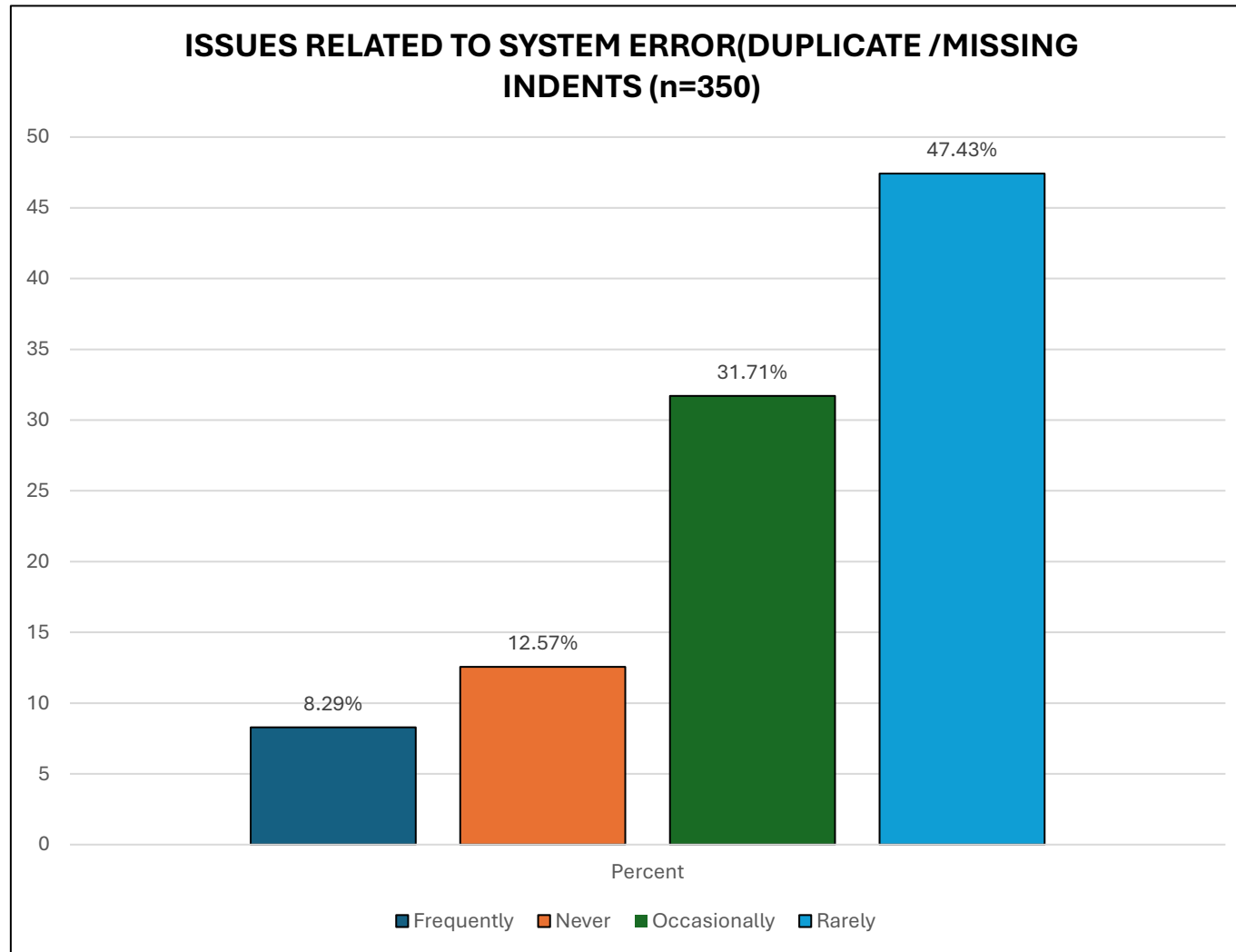


FACE STOCKOUT OF INDENTED ITEMS(n=350)









CONCLUSION



Frontline healthcare staff face significant delays in the hospital indent generation process, with over 37% citing slow system responses and 39% reporting delays in receiving prescription drugs from the pharmacy. These bottlenecks compromise timely access to essential medications, increase staff workload, and negatively impact patient care. Key factors contributing to these delays include system inefficiencies, miscommunication, and inadequate IT infrastructure. Addressing these issues is crucial to enhance operational efficiency and improve patient outcomes.



RECOMENDATION

PROCESS	PROCESS IMPLEMENTATION
Streamline Urgent Indent Processes	Introduce a fast-track or priority-based indenting system within HMIS to categorize and process urgent requests separately, reducing repeat entries.
Strengthen Inventory Planning and Replenishment	Implement real-time inventory dashboards integrated with HMIS for both nursing and pharmacy teams.
Strengthening Real-Time Communication Between Pharmacy and Nursing Staff	To establish a dedicated, real-time communication platform—such as an integrated chat function in the HMIS, or a shift-based indent status board visible to both pharmacy and ward staff.
Training and Continuous Capacity Building	Regular refresher sessions, onboarding training for new or transferred staff, and practical simulations should be conducted to improve accuracy and system adoption.
Enhancing Interdepartmental Communication	It is advised to establish a dedicated communication channel or liaison for each shift or unit.