

**A STUDY ON EXAMINING THE IMPACT OF THE CURRENT MEDICINES
AND CONSUMABLES RETURN MANAGEMENT PROCESS ON THE
WORKLOAD OF FLOOR AND IPD PHARMACISTS IN RAJIV GANDHI
CANCER INSTITUTE**

Dissertation submitted to



The IIHMR University, Jaipur, Rajasthan

For the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

In

Hospital and Health Management

By

SALONI SETHI

Under the Supervision and Guidance of

Mr. Ashish Bandhu (Mentor)

Assistant Professor

2023

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled examining the impact of the current medicines and consumables return management process on the workload of floor and IPD pharmacists in a hospital setting is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

(Signature)

SALONI SETHI

Date:



**Rajiv Gandhi Cancer Institute
and Research Centre**

HR/23

29th May 2023

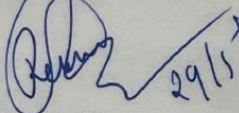
TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms Saloni Sethi** joined **Rajiv Gandhi Cancer Institute and Research Centre, Delhi** on **1st March 2023** as **Management Student Intern(unpaid)** and worked till **29th May 2023**.

During this period, she was actively engaged in analyzing the workload and identifying the gaps in services within the Pharmacy Department.

During the period of her Internship, she demonstrated sincerity, professionalism, politeness, diligence, motivation, good observation skills.

We wish her all the best for her future endeavor.

 29/5/2023

Rekha Sharma
Senior Manager Human Resources



CERTIFICATE

This is to certify that the dissertation titled examining the impact of the current medicines and consumables return management process on the workload of floor and ipd pharmacists in a hospital setting is a record of the research work undertaken by Saloni Sethi in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and his approach to the research study has been sincere, scientific, and analytical.

Faculty Guide
IIHMR University, Jaipur
Jaipur

School Dean
IIHMR University,

Date:

ACKNOWLEDGEMENT

A successful project is a combination of efforts, encouragement, and guidance from the experienced people, express my acknowledge and extend heartfelt recognition to the following individuals, who made the project possible.

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Finally, I'd like to express my gratitude to every companion who directly or indirectly assisted me in completing this assignment. Any omission from this brief affirmation does not imply a lack of gratitude.

Sincerely,
Saloni Sethi
Roll no. – 1386

TABLE OF CONTENTS

CHAPTER 1 :INTRODUCTION	11
CHAPTER 2 : REVIEW OF LITERATURE.....	13
CHAPTER 3.....	18
3.1 RESEARCH QUESTIONS.....	18
3.2 OBJECTIVES	18
Chapter 4 : STUDY DESIGN AND METHODOLOGY	19
4.1 STUDY DESIGN:	19
4.2 SAMPLE DESIGN	19
4.3 METHODS AND MATERIALS	19
Chapter 4: RESULTS.....	20
CHAPTER 5 : DISCUSSION	33
CHAPTER 6: CONCLUSION.....	34
REFERENCES	35
QUESTIONNAIRE ASKED.....	36

LIST OF GRAPHS

Figure 1: Time spent on returns	20
Figure 2: Staff overtime	20
Figure 3: Effect on ability to complete other job responsibilities.....	21
Figure 4: Satisfaction among staff	22
Figure 5: Favour of changes in the process	22
Figure 6: Issues with hardware/software	23
Figure 7: Unsatisfaction among patient/patient's attendant.....	23
Figure 8 : Satisfaction with nurses' communication.....	24
Figure 9 : Stress percentage among staff	25
Figure 10 : Opinion on improvement need	25
Figure 11 : Workload effect on IPD pharmacists	26
Figure 12 : Hours spent on managing returns in IPD	26
Figure 13 : Effect on ability to do other job responsibilities	27
Figure 14 : Encountering of multiple indents per patient per day	27
Figure 15 : Wastage of time and resources due to returns	28
Figure 16 : Return times in a day	29
Figure 17 : Stress due to return management.....	29
Figure 18 : Satisfaction in communication with nurses.....	30
Figure 19 : Opinion on improvement need	31

ABSTRACT

Background: For an organization to be effective and efficient, proper medicines and consumables return is essential. It is crucial that this return process is done smoothly without any errors for patient safety and resource optimization. Nonetheless, excessive returns can cause increase in the workload of floor and IPD pharmacists. To minimise all the negative effects of excessive returns, it is imperative to strike the correct balance between indenting and returning. Therefore, a study on the impact of the current medicines and consumables returns management process on the workload of floor and IPD pharmacists in a hospital can provide valuable information on the factors related to excessive returns.

Method: This work has been based on a cross-sectional study in which quantitative and qualitative analysis conducted at Rajiv Gandhi Cancer Institute and Research Institute (RGCIRC) for 3 months. The qualitative approach involved conducting in-depth surveys of floor and IPD pharmacists respectively including frequency and volume of returns, challenges faced by them, the grounds for excessive returns and the overall impact on their workload. The quantitative data was directly collected from Management Information System of Rajiv Gandhi Cancer Institute and Research Centre (RGCIRC) and then analysed.

Results: On the basis of the analysis of the sale and return quantity in the months of February'23, March'23, and April'23 the return percentage for all 3 months were found to be 13.33%, 12.98% and 13.11% respectively. Also the percentage of patients with return above 10% in the 3 months : February'23, March'23, April'23 were found to be 50.78%, 51.04% and 49.88% respectively.

Various aspects which impacted the workload were analysed and it was found that 50% of the workload could be reduced by taking considerable steps.

Conclusion: This study aided RGCIRC in analysing the effect of return quantity on the workload of the floor and IPD pharmacists. This allowed the hospital to study the various causes behind the excessive returns and eventually reduce workload of the floor and IPD pharmacists.

KEYWORDS: Returns management, floor and IPD pharmacists, multiple indents, workload, frequency and volume, indenting, medications, and consumables

ABBREVIATIONS	FULL FORM
IPD	Inpatient Department
OPD	Outpatient Department
RGCI	Rajiv Gandhi Cancer Institute
CR	Customer Registration
HIS	Hospital Information System
MIS	Management Information System
RCGIRC	Rajiv Gandhi Cancer Institute and Research Centre

CHAPTER 1 : INTRODUCTION

In any hospital setting, the effective management of medicines and consumables return processes is vital for maintaining patient safety and optimizing resource utilization. Medications can be referred to as the injections, tablets or capsules whereas consumables can be referred to as gloves, syringes, needles, urine bags, etc. The return of medicines and consumables occurs due to a variety of factors namely unused and extra supplies, wrong medication/consumable ordered, change of treatment, wrong dose ordered, and damaged consumables. Healthy returns compromise of around 10% of the total returns.

Pharmacists are an essential part of any healthcare team in the hospital.

They are the bridge between doctors and patients who counsel the patients on various drugs to ensure patient safety and increase medication adherence. They guide the nursing staff in indenting the correct drug and dose, thereby, ensuring that the patients do not get any medication that would do harm to them. Pharmacists are available in the IPD, OPD and in various wards to facilitate in patient care. They assist the patients/attendants in smooth return processes of medications/consumables. In Rajiv Gandhi Cancer Institute (RGCI), the floor pharmacists aid in indenting supplies, checking the suitability of the returned medications/consumables and ensuring accurate data entry in the HIS; and then the IPD pharmacists aid in checking the returned medications/consumables and store them for future use of other patients.

There can be various discrepancies in the return processes which can be intricate and time – consuming which can certainly take a toll on the workload of floor and IPD pharmacists. Increasing workload has been a topic of concern in all of healthcare industry as it decreases productivity and has an alarming effect on the health of the staff itself. It increases the chance of medication error. This in turn decreases the quality of care and patient satisfaction. Similar kind of studies : Evaluation of medicine return from wards to inpatient pharmacy in tertiary care hospital(1), and Medicine Returns from Wards to Pharmacies in Tertiary Care Hospital Setting of Karachi: Factor Analysis and its Effect on Pharmacy Services (2) was done which focused on medication return of admitted patients. (1) focused on estimating the number of returned medicines and type of returned medicines from different wards of hospital to inpatient pharmacy of tertiary care hospital in Saudi Arabia. It incorporated the factor that workload is a major factor for medication error, and it discussed few factors which we discussed in this study such as ineffective communication, extra dispensing, etc. (2) focused on similar grounds in a different place where they kept medication return as proportional to medication error incorporating workload as a factor. Therefore, it became imperative to examine the impact of the current medicines and consumables return management process on the workload of floor and IPD pharmacists in a hospital setting.

By looking into this aspect, the probable areas for improvement can be recognised, which in turn might help reduce various causes of excessive returns and improve the efficiency of return management processes. This would help reduce the workload of

the floor and IPD pharmacists. This can, therefore, increase job satisfaction among pharmacists, better quality of care, and effective resource allocation.

The research provided insights into the causes of excessive returns; frequency and volume of returns; and challenges faced by the pharmacists of 3 months (February'23, March'23 and April'23). There can be numerous causes of excessive returns such as multiple indents per patient per day, wrong material indenting, wrong dosage indenting, over indenting, wrong Customer Registration (CR) number indenting by nurses. Such incidents lead to miscommunication between the nursing staff and the pharmacists, thus, leading to degraded interdepartmental collaboration.

Excessive returns led to a variety of issues including waste of staff and time resources, increased stress level among the staff, decreased productivity, affects their ability to fulfil other job responsibilities, causes delay in medication delivery, patient dissatisfaction and thus decreased quality of care.

Since the inventory is replenished regularly, when supplies have been made to various wards, the inventory shows a lack of those supplies and thus more stock is brought. This leads to overstocking/inventory management issues and thus caused delay in timely medication delivery.

Two different google forms were circulated among the 2 groups: Floor pharmacists (12) and IPD pharmacists (32).

By understanding and addressing these challenges, this study aimed to contribute to the concerned people working in the pharmacy. It will help streamline the processes and workload of the pharmacy staff and come up with strategies to help reduce the burden of lessened quality of care and increase productivity.

CHAPTER 2 : REVIEW OF LITERATURE

Sr no	Title	Authors	Objective	Method	Result
1	Evaluation of medicine return from wards to inpatient pharmacy in tertiary care hospital	Ali A. Alshehri ,Azfar A. Ishaqui, Hamad A. Nami, Abdul K. Cara, Muhammad J. Fasih Ibrahim A. Dossary & Muhammad Bilal Maqsood	The intent of the study was to get an idea of the quantity and kind of medications that were returned from multiple hospital wards to the inpatient pharmacy of a tertiary care hospital in Saudi Arabia.	The medications that were returned to the pharmacy throughout the study period with communication blue slips were gathered and assessed for the purpose of data collection.	Parenteral medications accounted for around 1433 (33%) medications while non-parenteral medications were 2977 (67%). Different medicine % were calculated from various departments.
2	Medicine Returns from Wards to Pharmacies in Tertiary Care Hospital Setting of Karachi: Factor Analysis and its Effect on Pharmacy Services	Syed Yasir Ali Hashmi , Asif Khaliq , Jabeen Sultana	To evaluate the incidence, causes, and impact of drug returns from wards to the pharmacy department on medication mistakes.	Ten medications that are part of the nursing floor stock and have the greatest prescription and return rates from wards to pharmacies were selected for this investigation using non-probability sampling techniques. Excluded from the study were all antibiotics, chilled medications, extemporaneous compoundings (sterile or non-sterile), and those given out in an OPD pharmacy scenario. Data on reported errors in medicine was also collected in addition to	60% of the medications that were returned from the wards to the pharmacy were in injectable dose form, with oral dosage form making up the remaining 30%. Discharge of patients (39.1%), ceasing of medication (20.9%), and deactivating medication orders (8.4%) were the main causes of the return of medications from wards to pharmacy. The operating room pharmacy, with a return rate of 34.2%, got the most

				medicine return data.	prescriptions, followed by the medicine pharmacy, with a return rate of 27%. The operating room pharmacy and the medicine ward pharmacy both had the highest rates of reported medication mistakes, at 35.8% and 24.6%, respectively.
3	Management of Medicines Wastage, Returned Medicines, and Safe Disposal in Malaysian Community Pharmacies: A Qualitative Study	Kah Mun Chong ¹ , Kingston Rajiah, David Chong, and Mari Kannan Maharajan, Bekker CL, Gardarsdottir H, Egberts ACG, Bouvy ML, van den Bemt BJF	The study sought to look into how community pharmacies in Malaysia are currently managing prescription waste, dealing with returned drugs, and making sure that used or expired medications are disposed of properly.	A pre-approved interview guide was used to conduct one-on-one telephonic interviews from December 2020 to June 2021. The sampling method employed was purposive, ensuring the inclusion of participants with diverse characteristics such as gender, age, and position within the pharmacy. This approach aimed to achieve heterogeneity among the interviewees, allowing for a comprehensive understanding of perspectives and experiences related to the research topic.	According to the feedback from pharmacists, the occurrence of medicine returns in community pharmacies is infrequent primarily because of inadequate facilities for managing unwanted, expired, and returned medicines. To address this issue, a centralized approach is adopted for the disposal of unused medicines. The unused medicines are collected and stored at a designated

					organizational facility before being handed over to outsourced waste management companies for proper disposal. This centralized disposal process ensures the safe and appropriate handling of unused medicines.
4	Product returns management: A comprehensive review and future research agenda	Priya Ambilkar, Vishwas Dohale, Angappa Gunasekaran & Vijay Bilolikar, Abbey, James, Richard Metters	The study aimed to generate a scientific landscape map by examining existing research, to investigate the causes of product returns. By conducting a systematic literature review, the researchers sought to gain insights into the underlying reasons behind customers returning products. This comprehensive approach allowed for a thorough analysis of the existing studies, ultimately providing a comprehensive	To gain comprehensive insights into the current state of knowledge, a rigorous research methodology was employed, which included a systematic literature review of existing literature, quantitative bibliometric analysis, and in-depth content analysis. This multifaceted approach allowed for a thorough examination of the available scholarly works, identifying key trends and patterns through quantitative analysis while delving deeper into the content to extract valuable qualitative information. By	Given the inherent uncertainty surrounding factors such as price, demand, and quality of products, product return poses a significant challenge for businesses. To effectively manage the behavior of end-users regarding product return, it becomes crucial for businesses to enhance their information transparency. By doing so, businesses can improve their ability to address the complexities associated with product return and ensure

			understanding of the factors influencing product return behavior.	employing this methodological framework, a comprehensive understanding of the subject matter was achieved.	better customer satisfaction.
5	Value and Types of Medicines Returned by Patients to Sultan Qaboos University Hospital Pharmacy, Oman	Khalid Al-Siyabi ¹ , and Kassim Al-Riyami	The study's main goal is to assess the value and types of medications that patients at Oman-based tertiary care facility of return.	The study took place at the SQUH Department of Pharmacy from February to June 2003. The focus of the study involved analyzing the medicines that were returned by patients and subsequently collected by the pharmacy staff for the research.	During the study period, a total of 1,171 items were returned to the pharmacy, indicating an average of 3.1 medications per patient. Among the returned medications, cardiovascular drugs constituted the largest pharmacological group, accounting for 24% of the total returned medications. Following cardiovascular drugs, central nervous system drugs were the second most frequently returned medications, comprising 14% of the total.
6	Medication Turnaround Time in Hospital Pharmacy Department	Vijay Pratap Raghuvanshi, Sahara, H., Mekhjian, H.S, Lehman, M.L	The objective of the study was to investigate the causes of delays in the order and delivery system of the In-patient	A time-motion study was conducted at a multi-specialty hospital in Jaipur to assess the operations of the in-patient pharmacy. The study involved	According to the study, it was observed that a significant number of indents experienced delays. Specifically, 25.2% of

			pharmacy, specifically focusing on the delivery of drugs and medical consumables to patients. Additionally, the study aimed to determine the average total time required for the delivery process.	analyzing a sample of 300 indents, which were selected using a non-probability convenient sampling method.	normal indents, 48.7% of new admission indents, and 60% of urgent indents encountered delays. Additionally, the study determined the average delivery time for different types of indents. Normal indents took approximately 1 hour and 8 minutes to be delivered, new admission indents required an average of 48 minutes, and urgent indents had an average delivery time of 1 hour and 20 minutes. Notably, the average delivery time for urgent indents exceeded that of both normal indents and new admission indents.
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CHAPTER 3

3.1 RESEARCH QUESTIONS

1. What is the current process for indenting and returning medications and consumables in RCGIRC, and how does it impact the workload of floor and IPD pharmacists?
2. What is the frequency and volume of returns for medications and consumables?
3. What are the factors associated with excessive returns?

3.2 OBJECTIVES

Primary objectives –

1. To evaluate the impact of the current medication and consumables return management process on the workload of floor and IPD pharmacists in RGCIRC.
2. To assess the satisfaction levels of pharmacists and nurses with the current consumables management process in RGCIRC.

Secondary objectives:

1. Recommend improvements to the current process for consumables management in RGCIRC.
2. Determine the factors associated with excessive returns along with its volume and its effects on the workload of floor and IPD pharmacists in RGCIRC.

Chapter 4 : STUDY DESIGN AND METHODOLOGY

4.1 STUDY DESIGN:

Study type: Cross-sectional study

Data source: 12 floor + 32 IPD pharmacists = 44 pharmacists

Data collection Technique/ Tools: Questionnaire

Data Analysis Tool: Data was collected, filtered, and statistically analysed using Microsoft Excel.

4.2 SAMPLE DESIGN:

Sampling method: Convenience sampling

Study Area: Data was collected from Rajiv Gandhi Cancer Institute

Sample size: 12 floor pharmacists and 32 IPD pharmacists = 44 pharmacists

Study Duration: 3 Months

4.3 METHODS AND MATERIALS:

A cross-sectional study was conducted for a period of 3 months (February 2023 - April 2023) for a study on examining the impact of current consumables and medications return management process on the workload of floor and IPD pharmacists using a cross-sectional survey design to collect data. The sample size was 44 pharmacists (12 floor pharmacists and 32 IPD pharmacists). Two different google forms were circulated among the 2 groups: Floor pharmacists (12) and IPD pharmacists (32). After collecting the data, the data was be analysed using descriptive statistics.

INCLUSION CRITERIA: All floor pharmacists and IPD pharmacists were included for better understanding of the return management process.

EXCLUSION CRITERIA: Patients and other health professionals were excluded from the study.

ETHICAL CONSIDERATIONS: The research was done with appropriate research guidelines and respondents were provided with enough time for responses. Before research, consent, and permission were taken. The identity of the respondents was not disclosed. Primary data was done with reliable and appropriate data collection and analysis.

Chapter 4: RESULTS

Out of 44 pharmacists, 12 were floor pharmacists and 32 were IPD pharmacists. Two different google forms were circulated among these groups.

SURVEY ANALYSIS OF FLOOR PHARMCISTS

On an average, how much time do you spend processing returns of consumables each day?

12 responses

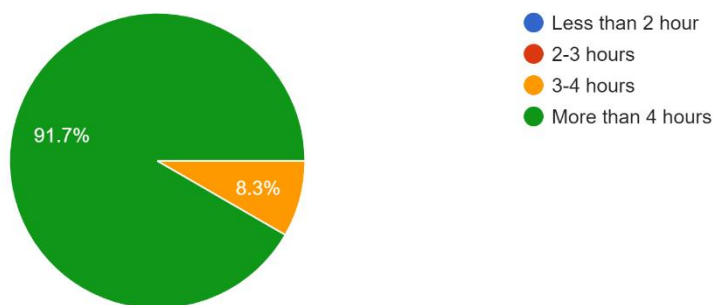


Figure 1: Time spent on returns

Out of 12 floor pharmacists, 91.7% i.e., 11 floor pharmacists spend more than 4 hours each day in processing the returns of medications and consumables while 8.3% i.e., 1 floor pharmacist spend 3-4 hours each day in processing the returns of medications and consumables.

This showed that almost all the pharmacists spend more than half of their working time is dedicated to returns processing and it affected their ability to perform other tasks.

Have you ever had to work overtime to complete the returns processing?

12 responses

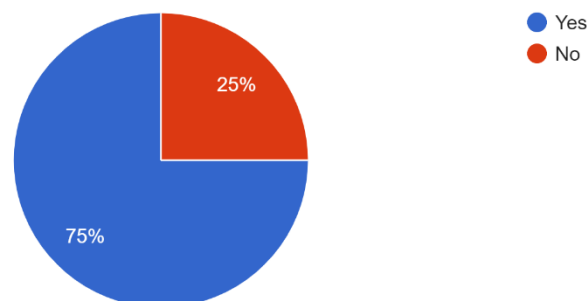


Figure 2: Staff overtime

Out of 12 floor pharmacists, 75% i.e., 9 floor pharmacists had to work overtime to complete the returns processing whereas 25% i.e., 3 floor pharmacists did not work overtime to complete the returns processing.

This showed that most of the pharmacists had to work overtime for extra unnecessary returns which meant a disbalance in their work life balance and thus decreases their productivity and motivation to work, thereby increasing stress.

How much do the issues with medications and consumables returns processing impact your ability to complete other job responsibilities?

12 responses

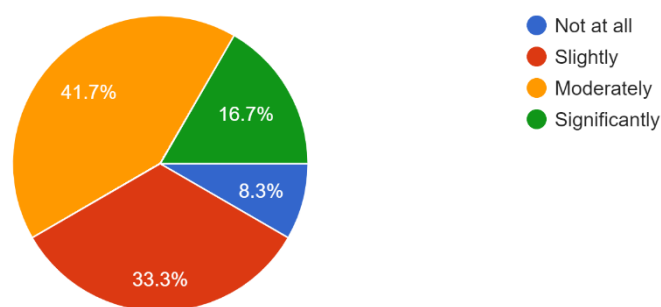


Figure 3: Effect on ability to complete other job responsibilities

Out of 12 floor pharmacists, 8.3% i.e., 1 floor pharmacist felt that the issues with medications and consumables returns processing did not impact their ability to complete other job responsibilities at all, 33.3% i.e., 4 floor pharmacist felt that the issues with medications and consumables returns processing impacted their ability to complete other job responsibilities slightly, 41.7% i.e., 5 floor pharmacist felt that the issues with medications and consumables returns processing impacted their ability to complete other job responsibilities moderately, and 16.7% i.e., 2 floor pharmacist felt that the issues with medications and consumables returns processing impacted their ability to complete other job responsibilities significantly.

This showed that more than 90% of the floor pharmacist felt that their ability to do other job responsibilities was affected somehow by excessive returns which meant they were not able to work with their full productivity.

Overall, how satisfied are you with the current medications and consumables management process? (including the number of returns and multiple indents/patient)

12 responses

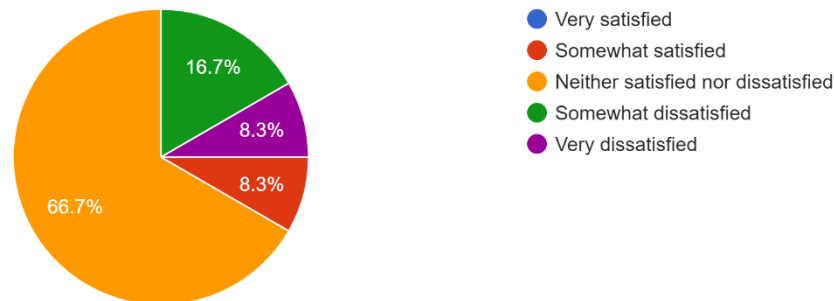


Figure 4: Satisfaction among staff

Out of 12 floor pharmacists, 8.3% i.e., 1 floor pharmacist was somewhat satisfied with the current consumables management process, 66.7% i.e., 8 floor pharmacist was neither satisfied nor dissatisfied with the current consumables management process, 16.7% i.e., 2 floor pharmacist was somewhat dissatisfied with the current consumables management process, and 8.3% i.e., 1 floor pharmacist was somewhat dissatisfied with the current consumables management process.

This showed that most of the floor pharmacists had a neutral reaction to the current consumables management process, indicating that they are neither too happy about it or too disappointed.

Do you believe that changes to the return management process could alleviate (decrease) some of the workload burden on floor pharmacists?

12 responses

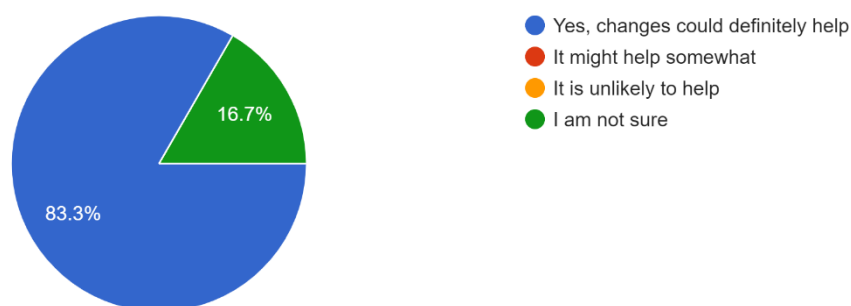


Figure 5: Favour of changes in the process

Out of 12 floor pharmacists, 83.3% i.e., 10 floor pharmacists believed that changes could definitely help to alleviate (decrease) some of the workload and 16.7% i.e., 2 floor pharmacists were not sure that changes would help to alleviate (decrease) some of the workload.

This showed that most of the floor pharmacists were in favour of making changes to the return management process to alleviate some of the workload burden on floor pharmacists.

How often do you face issues regarding the hardware (computer, etc.) or the software that you are working on?

12 responses

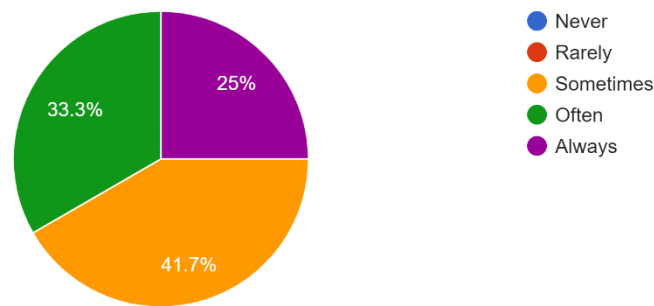


Figure 6: Issues with hardware/software

Out of 12 floor pharmacists, 41.7% i.e., 5 floor pharmacists faced issues sometimes regarding the hardware (computer, etc.) or the software that they are working on, 33.3% i.e., 4 floor pharmacists often faced issues regarding the hardware (computer, etc.) or the software that they are working on, and 25% i.e., 3 floor pharmacists always faced issues regarding the hardware (computer, etc.) or the software that they are working on.

This showed that all the pharmacists faced hardware and software issues leading to delays in the return process, which meant increase in crowd of patients for returns.

How often do you find the patient/patient's attendant feel unsatisfied due to the excessive number of returns?

12 responses

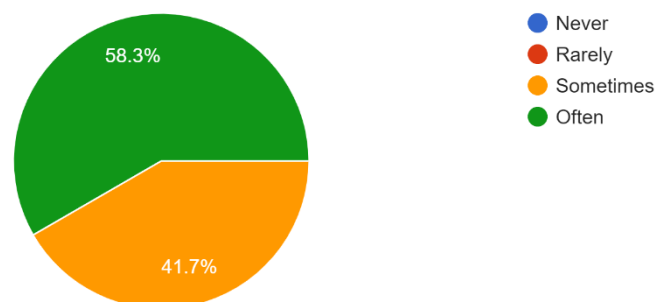


Figure 7: Unsatisfaction among patient/patient's attendant

out of 12 floor pharmacists, 41.7% i.e., 4 floor pharmacists find the patient/patient's attendant feel unsatisfied due to the excessive number of returns sometimes, and 58.3% i.e., 7 floor pharmacists find the patient/patient's attendant feel unsatisfied due to the excessive number of returns often.

This showed that all the pharmacists agreed to patient being dissatisfied which meant degradation in patient care and patient getting upset on the pharmacist would lead to dissatisfaction for the staff.

How satisfied are you with the nurses' communication regarding the returns ?
12 responses

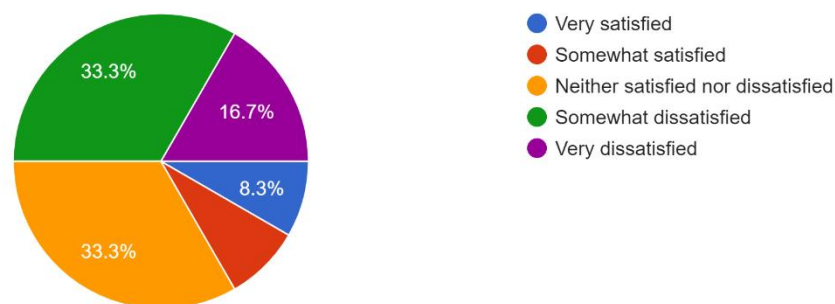


Figure 8 : Satisfaction with nurses' communication

Out of 12 floor pharmacists, 8.3% i.e., 1 floor pharmacist are very satisfied with the nurses' communication regarding the returns, 8.3% i.e., 1 floor pharmacist are somewhat satisfied with the nurses' communication regarding the returns, 33.3% i.e., 4 floor pharmacists are neither satisfied nor dissatisfied with the nurses' communication regarding the returns, 33.3% i.e., 4 floor pharmacists are somewhat dissatisfied with the nurses' communication regarding the returns, and 16.7% i.e., 2 floor pharmacists are very dissatisfied with the nurses' communication regarding the returns.

This showed that the pharmacists were not satisfied at all and somewhat disappointed due to the nurses' communication regarding the returns which would mean the nurses indenting more and excessive returns thus leading to bad interdepartmental collaboration.

How often do you feel stressed or overwhelmed due to the workload of managing medications and consumables returns?

12 responses

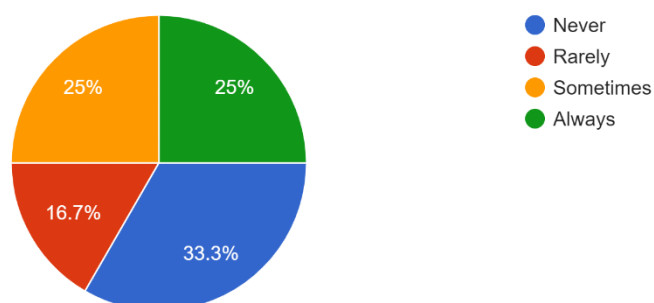


Figure 9 : Stress percentage among staff

Out of the 12 floor pharmacists, 33.3% i.e., 4 floor pharmacists never felt stressed or overwhelmed due to the workload of managing medications and consumables returns, 16.7% i.e., 2 floor pharmacists rarely felt stressed or overwhelmed due to the workload of managing medications and consumables returns, 25% i.e., 3 floor pharmacists sometimes felt stressed or overwhelmed due to the workload of managing medications and consumables returns, and 25% i.e., 3 floor pharmacists often felt stressed or overwhelmed due to the workload of managing medications and consumables returns.

Do you feel that the current medications and consumables management process could be improved to reduce your workload and improve efficiency?

12 responses

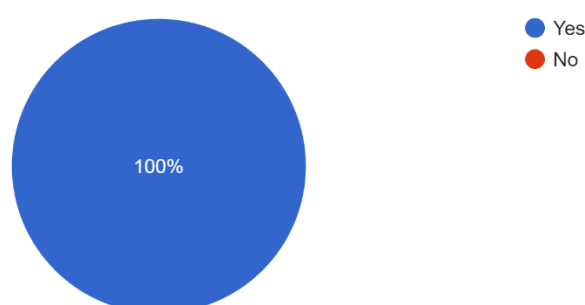


Figure 10 : Opinion on improvement need

Out of 12 floor pharmacists, 100% i.e., 12 floor pharmacists felt that the current consumables management process could be improved to reduce their workload and improve efficiency.

SURVEY ANALYSIS OF IPD PHARMCISTS

Do you think the current return process affects the workload of IPD pharmacists?

32 responses

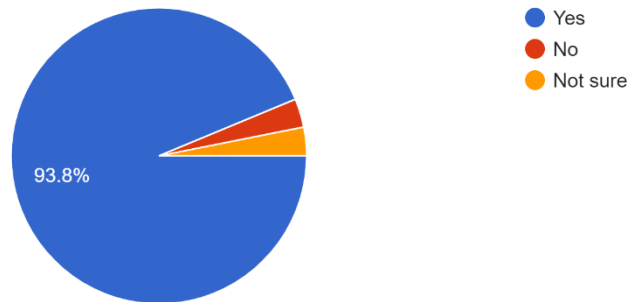


Figure 11 : Workload effect on IPD pharmacists

Out of the 32 IPD pharmacists, 93.8% i.e., 30 IPD pharmacists believed that the current return process affects the workload of IPD pharmacists, 3.1% i.e., 1 pharmacist believed that the current return process does not affect the workload of IPD pharmacists, and 3.1% i.e., 1 pharmacist were not sure that the current return process affects the workload of IPD pharmacists.

This showed that most of the IPD pharmacists felt that the return process affected their workload, thereby affecting their productivity.

How many hours per day do you spend on managing the returned consumables and medicines in the IPD?

32 responses

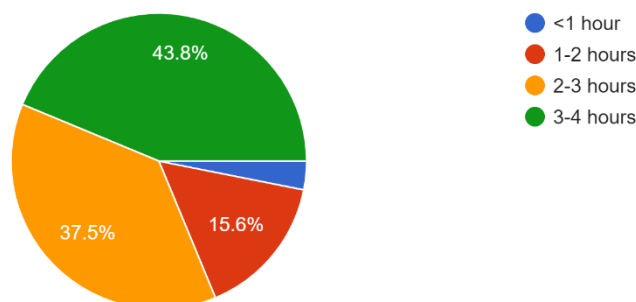


Figure 12 : Hours spent on managing returns in IPD

Out of the 32 IPD pharmacists, 3.1% i.e., 1 pharmacist said they spent >1 hour on managing the returned consumables and medicines in the IPD, 15.6% i.e., 5

pharmacists said they spent 1-2 hours on managing the returned consumables and medicines in the IPD, 37.5% i.e., 12 pharmacists said they spent 2-3 hours on managing the returned consumables and medicines in the IPD, and 43.8% i.e., 14 pharmacists said they spent 3-4 hours on managing the returned consumables and medicines in the IPD.

This showed that majority of the IPD pharmacists spent 25-50% of their time in processing returns which is like an extra responsibility/task to do. The more the returns, the bigger the task and greater the workload.

How much does the returns process impact your ability to complete other job responsibilities?
32 responses

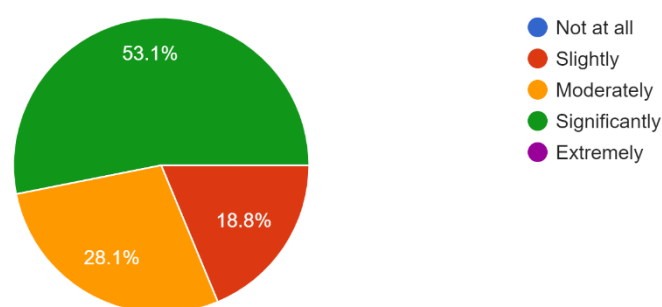


Figure 13 : Effect on ability to do other job responsibilities

Out of the 32 ipd pharmacists, 18.8% i.e., 6 pharmacists said that their ability to do other job responsibilities was slightly affected, 28.1% i.e., 9 pharmacists said that their ability to do other job responsibilities was moderately affected, and 53.1% i.e., 17 pharmacists said that their ability to do other job responsibilities was significantly affected.

This showed that majority of the IPD pharmacists said that their ability to do other job responsibilities was affected by excessive returns, thus affecting their workload.

How often do you encounter multiple indents of the same patient on the same day?
32 responses

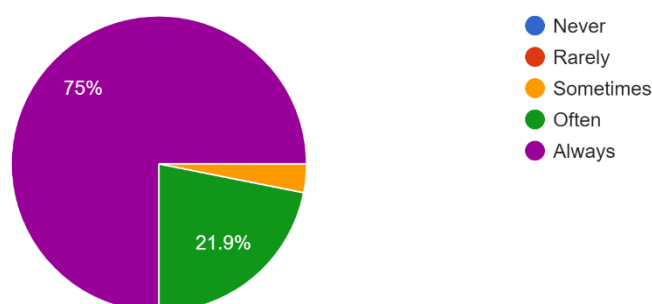


Figure 14 : Encountering of multiple indents per patient per day

Out of the 32 IPD pharmacists, 3.1% i.e., 1 pharmacist said they encountered multiple indents per patient per day sometimes, 21.9 % i.e., 7 pharmacists said they often encountered multiple indents per patient per day, and 75% i.e., 24 pharmacist said they always encountered multiple indents per patient per day.

This showed that majority of the IPD pharmacists encountered multiple indents per patient per day which meant excessive and unnecessary indenting thus excessive returns, thereby increasing the workload.

How often do you feel that the current return process of medicines and consumables leads to wastage of staff time and resources?

32 responses

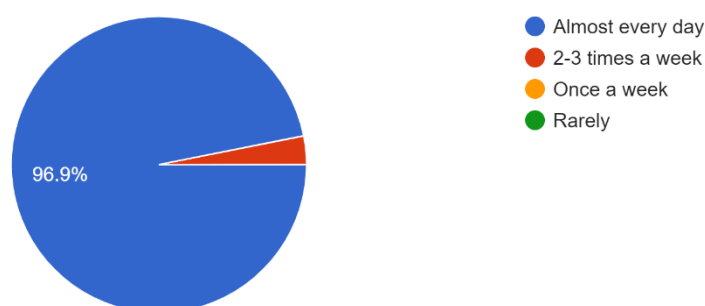


Figure 15 : Wastage of time and resources due to returns

Out of 32 IPD pharmacists, 96.9% i.e., 31 IPD pharmacists feel that the current return process of medicines and consumables leads to wastage of staff time and resources almost every day, 3.1% i.e., 1 IPD pharmacists feel that the current return process of medicines and consumables leads to wastage of staff time and resources 2-3 times a week.

Majority of the IPD pharmacists believed their time and resources were wasted due to the excessive returns. If those excessive returns were not present, their workload could have reduced, and they would have utilised the wasted time in other job responsibilities.

How often do you need to process returns of consumables and medicines in your daily workload?
32 responses

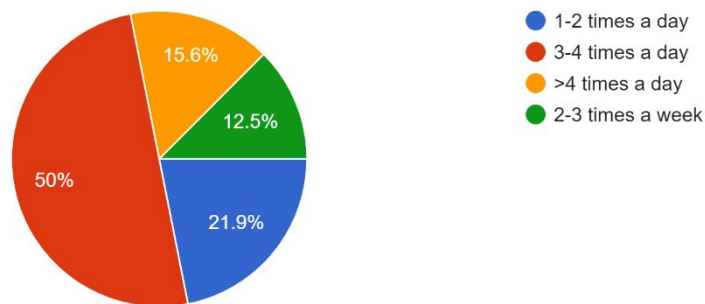


Figure 16 : Return times in a day

Out of 32 pharmacists, 21.9% i.e., 7 IPD pharmacists said that they need to process returns of consumables and medicines 1-2 times a day in their daily workload, 50% i.e., 16 IPD pharmacists said that they need to process returns of consumables and medicines 3-4 times a day in their daily workload, 15.6% i.e., 5 IPD pharmacists said that they need to process returns of consumables and medicines >4 times a day in their daily workload, and 12.5% i.e., 4 IPD pharmacists said that they need to process returns of consumables and medicines 2-3 times a week in their daily workload.

This showed that if half of the workforce i.e., 16 pharmacists (50%) spend their time 3-4 times a day doing returns (assuming they spent 1 hour each time), the workload doubles for the rest 50% workforce.

How often do you feel stressed or overwhelmed due to the workload of managing returns?
32 responses

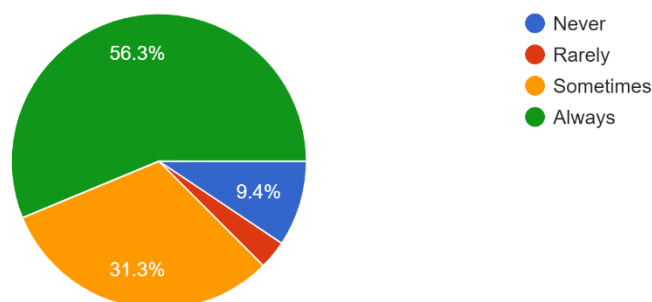


Figure 17 : Stress due to return management

Out of 32 IPD pharmacists, 9.4% i.e., 3 IPD pharmacists said they never feel stressed or overwhelmed due to the workload of managing returns, 3.1% i.e., 1 IPD pharmacist said they rarely feel stressed or overwhelmed due to the workload of managing returns, 31.3% i.e., 10 IPD pharmacist said they sometimes feel stressed or overwhelmed due to the workload of managing returns, and 56.3% i.e., 18 IPD pharmacist said they always feel stressed or overwhelmed due to the workload of managing returns.

More the stress, less the productivity and lesser the work output, thereby causing an effect on the workload.

How satisfied are you with the nurses' communication when you express your worry regarding multiple indents per patient?

32 responses

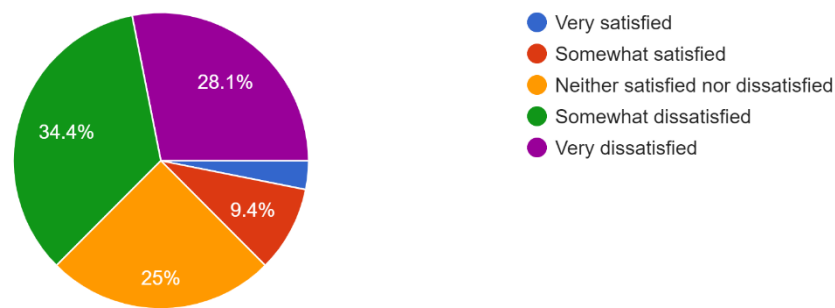


Figure 18 : Satisfaction in communication with nurses

Out of 32 IPD pharmacists, 3.1% i.e., 1 IPD pharmacist are very satisfied with the nurses' communication when they express their worry regarding multiple indents per patient, 9.4% i.e., 3 IPD pharmacists are somewhat satisfied with the nurses' communication when they express their worry regarding multiple indents per patient, 25% i.e., 8 IPD pharmacists are neither satisfied nor dissatisfied with the nurses' communication when they express their worry regarding multiple indents per patient, 34.4% i.e., 11 IPD pharmacists are somewhat dissatisfied with the nurses' communication when they express their worry regarding multiple indents per patient, 28.1% i.e., 9 IPD pharmacists are very dissatisfied with the nurses' communication when they express their worry regarding multiple indents per patient.

Do you feel that the current consumables and medicines return process could be improved to reduce your workload and improve efficiency?

32 responses

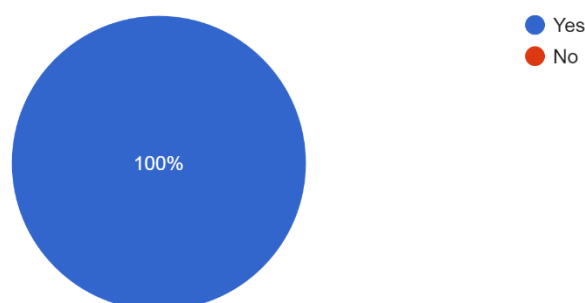


Figure 19 : Opinion on improvement need

Out of 32 IPD pharmacists, 100% i.e., 32 IPD pharmacists felt that the current consumables management process could be improved to reduce your workload and improve efficiency.

FREQUENCY AND VOLUME OF RETURNS

MONTH	SALE QTY.	RETURN QTY.	% of Return
February	482517	64322	13.33%
March	565806	73430	12.98%
April	515563	67566	13.11%

Table 4.25 Percentage of return

The above represented table shows the sale quantity, return quantity and the return percentage for the months of February'23, March'23 and April'23.

Interpretation – The above calculated data showed that the return percentage was highest in the month of February. Also, the return percentages are approximately DOUBLE the percentage than the healthy return percentage (10%). This indicated that double work had to be done for the return of the medications and consumables.

MONTH	% of patients with return above 10%
February	50.78%
March	51.04%
April	49.88%

Table 4.26 Percentage of patients with return above 10%

The above table shows the percentage of patients with return above 10% in the 3 months (February'23, March'23, April'23).

Interpretation – Half of the patients in each month had return percentages more than the healthy percentage which indicates that 50% of the work done by the floor and IPD pharmacists was not needed and it was a waste of time and effort.

CHAPTER 5 : DISCUSSION

Pharmacists are a crucial part of any healthcare team. This study focused on examining the impact of the current medicines and consumables return management process on the workload of floor and IPD pharmacists in RGCIRC. By analysing various aspects of this study including the factors related to excessive returns, the main aim was to get insights to streamline the return process and reducing the workload of the pharmacists.

The current medications and consumables return process had various drawbacks due to excessive returns, multiple indents per patient per day, double/over indenting, wrong indenting, etc. Extra indents meant ordering extra medicines and consumables thereby leading to returning of all the excess medicine. All of these factors are somehow interconnected and led to the issue of excessive returns encircled under the whole returns process.

The results gave some apprehension as to what and how much effect does the return process has on the workload of both floor and IPD pharmacists separately using a mixed method approach (qualitative – with the help of surveys and quantitative – with the data analysed from HIS directly) in RGCIRC.

The volume of returns taken for 3 months in RGCIRC were found to be double the healthy return percentage – 13.33% (February'23), 12.98% (March'23) and 13.11% (April'23). These percentages were found out considering the sale and return quantity for each month as a whole. This portrayed that double the amount of effort is being put into returning the medications and consumables by the floor pharmacists, who checked the suitability of the returned items and made proper record of it. When the returned items are sent back to the IPD pharmacy, they need to be rechecked and then stacked, which again uses double the ideal time and double the workforce.

Looking at the data for each day separately in each of the 3 months respectively, it was found that 50% of the patients in February'23 had a return percentage of more than 10%. Similar results i.e., 51.04% (March'23) and 49.88% (April'23) were concluded. These figures indicated that half of the patients received excess medications and consumables which eventually end up being returned to the pharmacy. These figures speak for themselves and clearly the amount of 50% extra workload is put upon the floor and the IPD pharmacists for the excessive returns in RGCIRC.

Taking into account the surveys done for floor and IPD pharmacists, similar levels of dissatisfaction was found among the staff. Both the floor and IPD pharmacists spent more than 50% of their time and efforts in the return management process, and they felt that this was a wastage of time and resources. They experienced IT issues 40-45% of the time which delayed the return process further and also led to decreased satisfaction in patient/patient's attendant. Their ability to focus on other job responsibilities was moderately affected and this led to less staff satisfaction and more unproductivity.

All of them encountered delays in providing medications due to the excessive workload and this led to degradation in the interdepartmental collaboration with the nursing staff. This was also seen in Raghuvanshi, V. P., & Choudhary, H. (2013). Medication

turnaround time in hospital pharmacy department, *International Journal of Research and Development in Pharmacy and Life Sciences*, 2013(3) and similar findings on increased TAT for medication delivery were seen. Both the studies conclude that efficient handling of returns is crucial for minimizing the TAT and reduce the time spent on return processing and then the employees can allocate their valuable time to more critical tasks. Increased workload in constrained settings (such as staff and space shortage), indicates increased stress, low morale and high absenteeism.

Although, this study was done in a private hospital setting and the return process was considered for the admitted patients before their discharges, some similarities were found between this study and Chong, K. M., Rajiah, K., Chong, D., & Maharajan, M. K. (2022)(4). Management of medicines wastage returned medicines and safe disposal in Malaysian community pharmacies: A qualitative study. *Frontiers in Medicine*, 9, 884482. Both the studies focused on the challenges faced by pharmacists in handling returns and in order to ease the load on the pharmacists, it highlights the necessity for effective return management systems.

A thorough analysis of managing the product returns in the reference Product returns management: a comprehensive review and future research agenda *International Journal of Production Research*: Vol 60, No 12(5). This study did not concentrate on the return of medicines and consumables in a hospital context, it provides an overall perspective on the problems and solutions associated with product returns. Medicines and consumables being a more critical problem since it involves patient care was demonstrated in the study done above. Potential simplified and streamlined solutions can be identified from this literature review and used in this study to improve the return management process.

In the reference Al-Siyabi, K., & Al-Riyami, K. (2007), Value and types of medicines returned by patients Oman, Sultan Qaboos University Medical Journal, 7(2), 109–115(6), it does not addresses the workload of the pharmacists (as done in our study), it shows the importance of returned medications as a product of waste of efforts/medicine itself. It talks about the expired/damaged medications returns, which is a smaller part of the whole return process as discussed in our study. This study involves checking the suitability of the returned items and this literature review also focuses on reducing the waste in medications.

Considering all the above factors, it is evident that the current medications and consumables return management process can have a substantial effect on the workload of the floor and IPD pharmacists in a hospital setting. Overall, there was a unanimous agreement on behalf of all the pharmacists that changes must be made to the current medications and consumables return management process to alleviate burden of the workload.

CHAPTER 6: CONCLUSION

The study examined the impact of the current medications and consumables return management process on the workload of the floor and IPD pharmacists. This was done with the help of cross-sectional study using quantitative data (from the HIS) and qualitative data (surveys) collected at RGCIRC.

The findings of this study revealed the volume and frequency found that every second patient had an unhealthy return percentage (above 10%). The various causes of excessive returns such as multiple indents per patient per day, wrong material indenting, exchanged indenting, double/over indenting, other errors in indenting, staff and space shortage, and miscommunication during handovers between nurses were identified. These causes had detrimental consequences on the workload of floor and IPD pharmacists, leading to waste of time and staff resources, increased stress levels, decreased productivity, and patient dissatisfaction.

By pinning down the excessive returns, the study in RGCIRC gave clarified and defined insights for improving the current return management process. The recommendations aim to streamline processes, decreasing indenting issues, enhancing communication and collaboration between healthcare teams, software improvement, keeping a regular ward stock, checking patient bedside before indenting, need to increase staff as per the requirement and decrease workload in RGCIRC. Execution of these recommendations could lead to better interdepartmental communication and collaboration, effective resource allocation, decreased stress levels, increased productivity, improved patient satisfaction and better quality of care.

Overall this study contributed to understanding the impact of the current medications and consumables management process on the workload of the floor and IPD pharmacists in RGCIRC. It highlighted the importance of interdepartmental communication and collaboration and better optimization of these processes to control the volume of returns for better staff satisfaction, resource utilization, patient safety and the well-being of healthcare professionals.

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QUESTIONNAIRE ASKED

1. Floor pharmacist

On an average, how much time do you spend processing returns of medications and consumables each day?

1. More than 4 hours
2. 3-4 hours
3. 2-3 hours
4. Less than 2 hours

How often do you experience delays in processing returns due to overstocking or inventory management issues?

1. Rarely
2. Sometimes
3. Frequently
4. Often
5. Never

Have you ever had to work overtime to complete the returns processing?

1. Yes
2. No

How much do the issues with medications and consumables returns processing impact your ability to complete other job responsibilities?

1. Not at all
2. Slightly
3. Moderately
4. Significantly
- 5.

Overall, how satisfied are you with the current consumables management process? (including the number of returns and multiple indents/patient)

1. Very Satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Very dissatisfied

Do you believe that changes to the return management process could alleviate (decrease) some of the workload burden on floor pharmacists?

1. Yes, changes could definitely help
2. It might help somewhat
3. It is unlikely to help
4. I am not sure

How often do you face issues regarding the hardware (computer, etc.) or the software that you are working on?

1. Never
2. Rarely
3. Sometimes

4. Often
5. Always

How often do you find the patient/patient's attendant feel unsatisfied due to the excessive number of returns?

1. Never
2. Rarely
3. Sometimes
4. Often

How satisfied are you with the nurses' communication regarding the returns ?

1. Very Satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Very dissatisfied

How often do you feel stressed or overwhelmed due to the workload of managing medications and consumables returns?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

Do you feel that the current consumables management process could be improved to reduce your workload and improve efficiency?

1. Yes
2. No

2. IPD pharmacist

Do you think the current return process affects the workload of IPD pharmacists?

1. Yes
2. No
3. Not sure

How many hours per day do you spend on managing the returned consumables and medicines in the IPD?

1. <1 hour
2. 1-2 hours
3. 2-3 hours
4. 3-4 hours

How much does the returns process impact your ability to complete other job responsibilities?

1. Not at all
2. Slightly

3. Moderately
4. Significantly

How often do you encounter multiple indents of the same patient on the same day?

1. Never
2. Rarely
3. Sometimes
4. Often
5. Always

How often do you feel that multiple indents per patient causes delays in providing medications to patients?

1. Almost every day
2. 2-3 times a week
3. 4-5 times a week
4. Once a week
5. Rarely

How often do you feel that the current return process of medicines and consumables leads to wastage of staff time and resources?

1. Almost every day
2. 2-3 times a week
3. 4-5 times a week
4. Once a week

How often do you need to process returns of consumables and medicines in your daily workload?

1. 1-2 times a day
2. 3-4 times a day
3. >4 times a day
4. 2-3 times a week

How often do you feel stressed or overwhelmed due to the workload of managing returns?

1. Never
2. Rarely
3. Sometimes
4. Always

How satisfied are you with the nurses' communication when you express your worry regarding multiple indents per patient?

1. Very Satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Very dissatisfied

How often has IT issues caused delays in providing medications to the patients?

1. Never
2. Rarely
3. Sometimes

4. Often
5. Always