

A Study On The Returns Management In Reverse Logistics: Special Reference To Medinges Healthcare

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ABSTRACT

In today's dynamic supply chain, reverse logistics is essential for healthcare companies to enhance customer satisfaction and achieve sustainability. This study analyses the returns management practices at Medinges Healthcare Pvt. Ltd. to identify challenges and provide improvements. Using a descriptive research design and a case study approach, the study sampled 60 employees involved in reverse logistics. Primary data was gathered via structured questionnaires, while secondary data came from internal records and industry reports. Analysis was conducted using percentage analysis and visual charts. The findings reveal a paradox: the company maintains high performance, with 70% of returns processed within 48 hours and 76.7% employee satisfaction. However, the process is undermined by an over-reliance on manual documentation (66.7%) and inconsistent technology use. A critical training gap was also identified, with 46.7% of the workforce receiving little to no formal training, contributing to frequent errors. The results indicate that current efficiency depends more on staff diligence than on robust systems. The study concludes that implementing automated tools, such as barcode scanners, and establishing mandatory training programs are vital to ensure the reverse logistics operation remains scalable and compliant for future growth.

Keywords: Returns Management, Healthcare, Logistics

Introduction

In today's dynamic supply chain environment, reverse logistics has become an essential function for companies aiming to enhance customer satisfaction, reduce operational inefficiencies, and achieve sustainability goals. Reverse logistics refers to the process of moving goods from the customer back to the seller or manufacturer, often for returns, repairs, recycling, or disposal. An effective returns management system is crucial in ensuring smooth reverse logistics operations.

Healthcare supply chains, in particular, demand a highly controlled and accurate reverse logistics process due to the sensitive nature of products, regulatory compliance, and potential cost implications. Medinges Healthcare Pvt. Ltd., a player in the healthcare and pharmaceutical distribution sector, deals with a variety of returns including expired drugs, damaged goods, and excess stock. Managing these returns efficiently is vital to minimize losses, avoid wastage, and improve operational productivity.

This study is undertaken to gain insights into the existing returns management practices at Medinges Healthcare Pvt. Ltd., identify the challenges involved, and provide recommendations to improve the reverse logistics process.

Why is this research important?

This study is significant for several practical reasons. First, it goes beyond high-level strategy to offer a ground-level look at the returns process through the eyes of the staff and managers who handle it every day. By doing so, it uncovers the real-world operational hurdles that might otherwise be missed. Second, it helps **Medinges Healthcare** pinpoint exactly where the friction lies—specifically the heavy reliance on manual paperwork and the gaps in formal training. Addressing these issues allows the company to move away from a system that relies solely on the hard work of individual employees and toward one built on smart, scalable, and automated processes. Finally, in the healthcare industry, efficiency isn't just about saving money; it's about safety. Improving reverse logistics helps prevent the wastage of sensitive medical supplies and ensures the company remains fully compliant with strict health regulations.

Objectives of the Study

◆ Primary Objective:

To study the return management process in reverse logistics with special reference to Medinges Healthcare Pvt. Ltd.

◆ Secondary Objectives:

1. To understand the return management process followed at Medinges Healthcare Pvt. Ltd.
2. To identify the major reasons for product returns within the organization.
3. To evaluate the efficiency and challenges of the current return handling system.
4. To suggest practical improvements to enhance the return management process.

LITERATURE REVIEW

1. Nidhi Joseph & Rahul Das (2025)

This article positioned reverse logistics as a crucial strategic function rather than merely a cost center, advocating for a fundamental shift in business perception. The authors strongly encouraged businesses to deeply embed principles of sustainability and enhance customer satisfaction directly into the core of their returns processes, transforming them into value-adding activities.

contributors to operational excellence and environmental responsibility. Their work particularly highlighted the growing importance of closed-loop systems in achieving circular economy goals. Furthermore, the authors underscored the pressing need for integrated policy frameworks and robust performance measurement systems to ensure the successful and impactful implementation of reverse logistics strategies across various industries.

2. Alok Varma & Sanya Mehta (2025)

This industry report provided a comprehensive review of various strategies designed to transform product returns from a burden into a competitive advantage for businesses. The authors strongly emphasized the importance of implementing faster return cycles, adopting more customer-centric return policies, and strategically utilizing data analytics to effectively reduce financial losses and significantly increase recovery value from returned products.

3. Vikas Mehta & Aishwarya S. (2025)

This research discussed various optimization methods applicable to reverse logistics networks, including advanced techniques such as genetic algorithms, Mixed-Integer Linear Programming (MILP), and sophisticated nonlinear modeling techniques. The study strongly emphasized the critical need for developing agile and resilient networks capable of rapidly adapting to unforeseen supply chain disruptions and volatile market conditions.

4. Sneha Rajan & Deepak Mathew (2023)

This investigation thoroughly examined the drivers and barriers influencing the adoption and effectiveness of reverse logistics in the pharmaceutical sector. The study identified key motivating factors, including increasing regulatory pressure and a growing emphasis on corporate social responsibility, while also highlighting significant impediments such as the pervasive lack of standardized operating procedures (SOPs) and inherent logistical complexities.

5. Ramesh Kumar & Anjali Sharma (2022)

This study specifically focused on developing efficient systems for the collection and subsequent treatment of home-generated medical waste. It highlighted that optimizing the collection network design is absolutely key to significantly reducing operational costs and minimizing potential environmental harm caused by improper disposal of medical waste from households.

STATEMENT OF THE PROBLEM

The management of product returns is a critical function in the healthcare supply chain, directly impacting operational efficiency and regulatory compliance. At Medinges Healthcare Pvt. Ltd., while reverse logistics is a routine activity, the process faces challenges such as short product shelf lives, handling errors, and documentation inconsistencies. A significant knowledge gap exists regarding how manual processes and training deficiencies affect the organization's performance. Currently, efficiency relies heavily on the diligence of a predominantly new workforce rather than on robust, automated systems. Failure to address these gaps can lead to increased financial losses, inventory wastage, and high error rates within a sensitive medical environment. Therefore, this study aims to systematically analyze the returns management process at Medinges Healthcare to identify specific friction points—such as manual documentation and inconsistent technology use—and propose practical solutions for optimization.

RESEARCH QUESTIONS

1. What challenges do you face most during return handling?
2. How satisfied are you with the return handling process?
3. In your opinion, what could improve the return process?
4. Are returned products ever reused/refurbished for future use?

RESEARCH METHODOLOGY

In this research, primary data was collected by distributing a structured questionnaire to the employees of the company to obtain their perspectives on the returns process¹¹¹¹. Secondary data was obtained from internal organizational records, such as SOPs and return logs, as well as external sources like academic journals and industry reports².

The population of the study comprises the warehouse staff, logistics supervisors, and department managers at the main facility of Medinges Healthcare Pvt. Ltd³³³³. The sample size for this research is 60 respondents, and the sampling technique adopted in this study is convenience sampling, chosen due to time constraints and operational schedules⁴⁴⁴⁴. Data analysis was conducted using percentage analysis and visual tools like pie and bar charts⁵⁵⁵⁵.

- Percentage Analysis

Percentage analysis is used to evaluate the relationship between a specific component and the whole to find which factors are significant among a number of factors⁶.

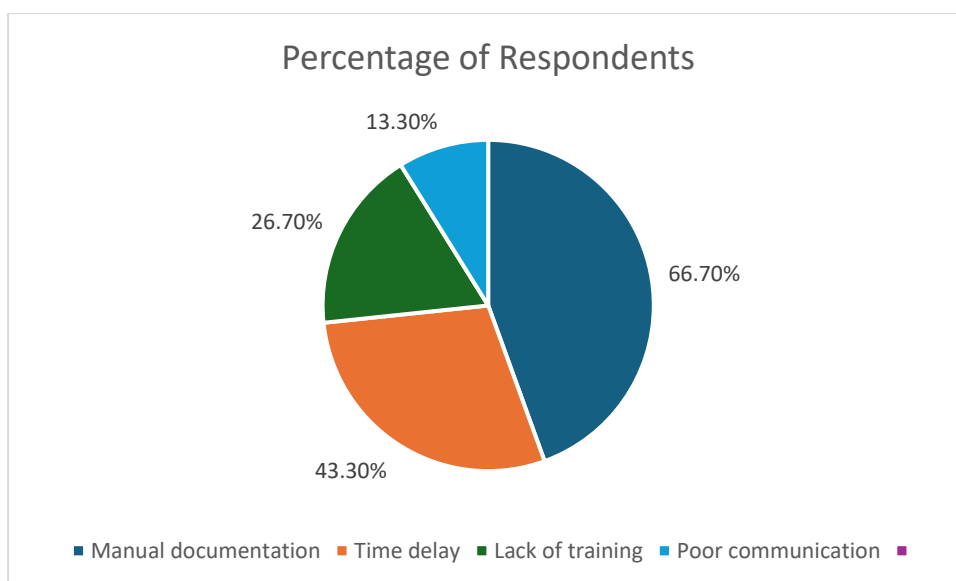
- Visual Representation

Data is further interpreted through pie charts and bar charts to illustrate numerical proportions and category frequencies, providing a visually intuitive understanding of the data set.

Analysis

Research question 1: What challenges do you face most during return handling?

	No. of Respondents	Percentage of Respondents
Manual documentation	40	66.70%
Time delay	26	43.30%
Lack of training	16	26.70%
Poor communication	8	13.30%

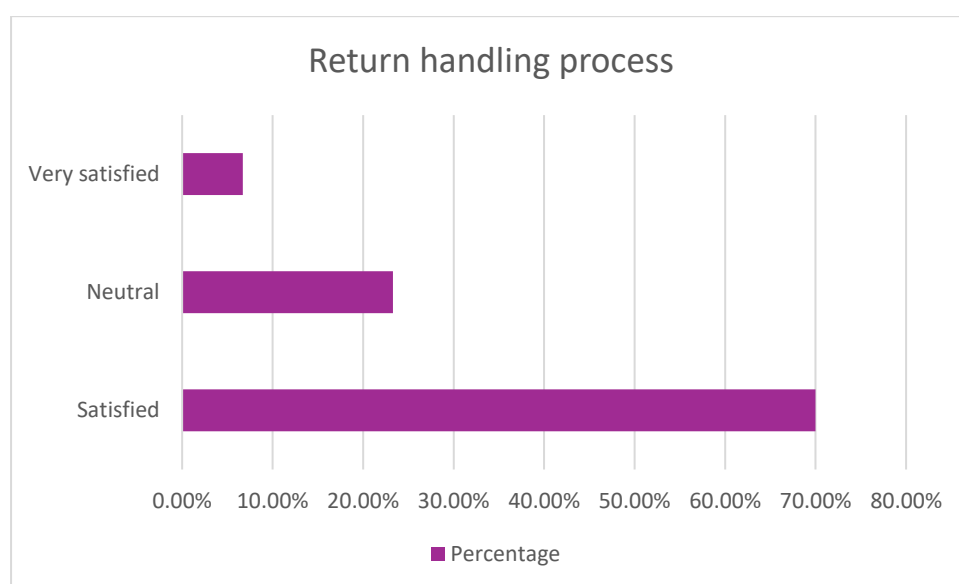


Interpretation:

This is a critical finding. The #1 challenge, cited by 66.7% of staff, is "Manual documentation". This seems to contradict Q9 ("Doc efficient? Yes"). This suggests that while the *process* is efficient, the *method* (manual) is the problem. Staff are asking for automation. "Time delay" (43.3%) is the second-biggest challenge.

Research question 2: How satisfied are you with the return handling process?

	No. of Respondents	Percentage
Satisfied	42	70.00%
Neutral	14	23.30%
Very satisfied	4	6.70%
Total	60	100.00%

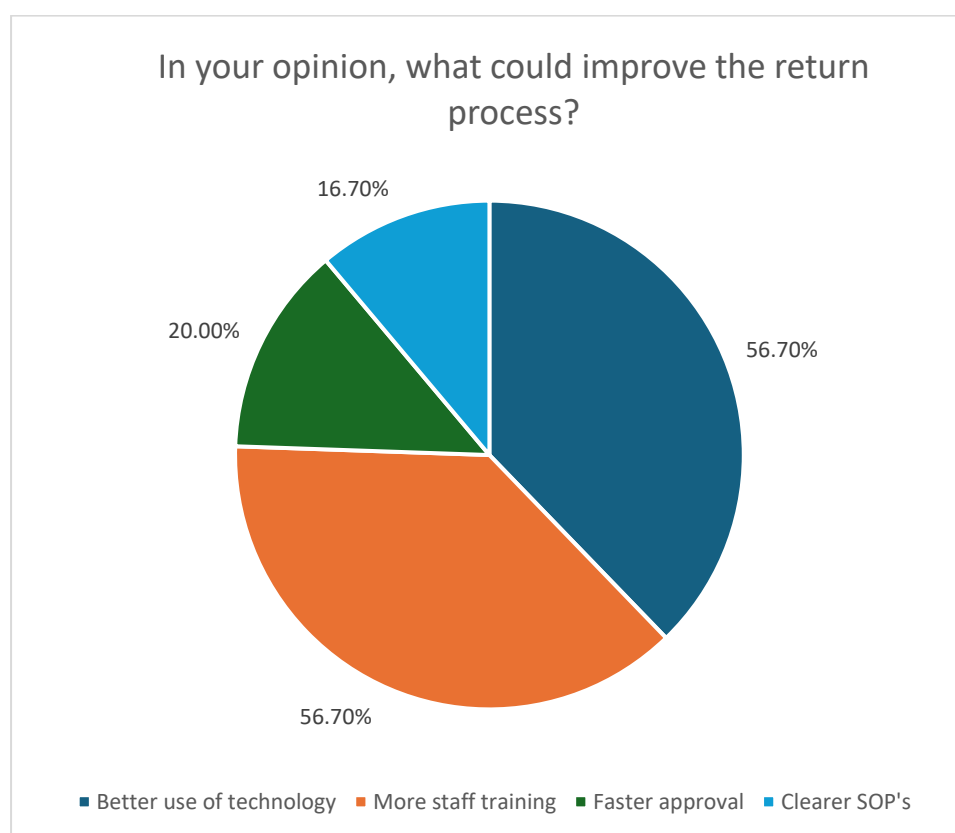


Interpretation:

Satisfaction with the process is very high. A combined 76.7% are "Satisfied" (70.0%) or "Very satisfied" (6.7%). This is a positive result, showing that despite the challenges, employees are generally happy with the system.

Research question 3: In your opinion, what could improve the return process?

	No. of Respondents	Percentage of Respondents
Better use of technology	34	56.70%
More staff training	34	56.70%
Faster approval	12	20.00%
Clearer SOP's	10	16.70%



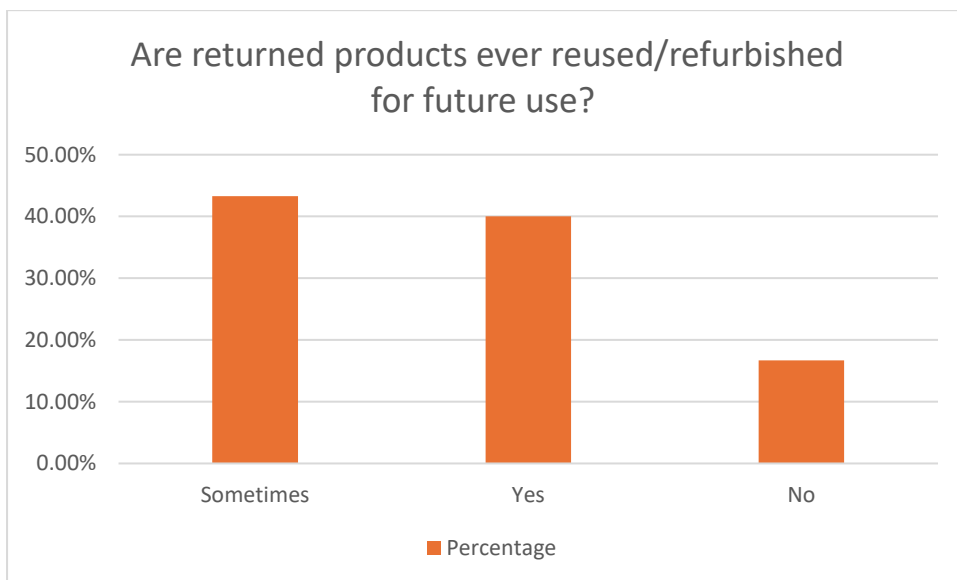
Interpretation:

The staff know exactly what the solutions are. The top two suggestions are tied: "Better use of technology" (56.7%) and "More staff training" (56.7%). These suggestions directly address the main problems identified in Q11 (inconsistent tools), Q12 (lack of training), and Q14 (manual documentation).

Research question 4: Are returned products ever reused/refurbished for future use?

	No. of Respondents	Percentage
Sometimes	26	43.30%

Yes	24	40.00%
No	10	16.70%
Total	60	100.00%



Interpretation:

Value recovery is a well-established practice. A combined 83.3% of staff confirm that products are "Yes" (40.0%) or "Sometimes" (43.3%) reused or refurbished. This aligns with Q5 and confirms that sustainable, value-saving processes are a known part of the operation.

FINDINGS

- The percentage analysis indicates that **40 out of 60 employees (66.7%)** identify **manual documentation** as their primary challenge. The current method of handling paperwork is a significant operational hurdle.
- The percentage analysis indicates that employees are satisfied with the return process, as **46 out of 60 employees (76.7%)** reported being satisfied or very satisfied. The process generally meets staff expectations despite manual challenges.
- The percentage analysis indicates a strong desire for improvement, with **48 out of 60 employees (80%)** believing the process can be enhanced. Staff are engaged and not complacent with the current system.
- The percentage analysis shows that **34 out of 60 employees (56.7%)** suggest **better technology** and **34 out of 60 employees (56.7%)** suggest **more training** as key improvements. These two factors are seen as the most significant drivers for future efficiency.
- The percentage analysis indicates that the organization practices value recovery, with **50 out of 60 employees (83.3%)** confirming that products are reused or refurbished. The department's sustainability practices are well-established.

SUGGESTIONS

- Invest in technology** such as barcode scanners and dedicated returns management software to automate the current manual documentation process.
- Develop a mandatory training program** for all staff to ensure they are fully familiar with the official Standard Operating Procedures (SOP) and return policies.
- Conduct a root-cause analysis** on the most common return reasons, specifically "Damaged products" and "Supplier mistakes," to create targeted preventive measures.

- **Enhance internal communication** by placing visual aids like checklists and process maps in the warehouse to improve SOP awareness.
- **Establish a formal feedback mechanism** where employees can suggest specific manual tasks that are most in need of digitization.
- **Leverage high employee engagement** by implementing staff-led suggestions, which will validate their feedback and maintain high morale.

CONCLUSION

The results of this study highlight the critical importance of a structured and technology-driven reverse logistics process in the healthcare sector. At Medinges Healthcare, the efficiency of the operation currently relies more on the diligence of its staff than on robust, automated systems. While the company maintains fast processing times and high employee satisfaction, these strengths are undermined by an over-reliance on manual documentation and a lack of formal training for a predominantly new workforce.

The study's findings offer practical advice for logistics managers to improve their returns handling by prioritizing automation and standardized training. By addressing these gaps, the organization can reduce costly errors and build a scalable, compliant reverse logistics operation that supports future growth and sustainability.

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