



Linking Human Resource Management to Pharmaceutical Supply Chain Performance: A Case Study of Drug Distribution in Remote Public Health Systems

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Abstrak: Penelitian ini bertujuan untuk menganalisis peran manajemen sumber daya manusia (SDM) dalam mendukung efektivitas distribusi obat pada Gudang Farmasi Dinas Kesehatan P2KB Provinsi Papua Tengah. Pendekatan yang digunakan adalah kualitatif dengan desain studi kasus. Data dikumpulkan melalui wawancara mendalam, observasi, dan dokumentasi terhadap tujuh informan kunci, kemudian dianalisis menggunakan teknik analisis tematik dengan triangulasi sumber dan metode. Hasil penelitian menunjukkan bahwa manajemen SDM telah berjalan secara fungsional, namun belum optimal, terutama pada aspek kecukupan tenaga kerja, pemerataan beban kerja, serta pengembangan kompetensi berkelanjutan. Kompetensi dan pengalaman SDM terbukti berkontribusi terhadap akurasi pengelolaan stok dan ketepatan distribusi obat. Namun, keterbatasan infrastruktur, tantangan geografis, serta sistem evaluasi kinerja yang belum terstruktur menghambat konsistensi efektivitas distribusi. Penelitian ini merekomendasikan penguatan perencanaan SDM berbasis kompetensi, peningkatan pelatihan teknis logistik farmasi, serta pengembangan sistem evaluasi dan motivasi kerja yang lebih sistematis untuk meningkatkan kinerja distribusi obat, khususnya di wilayah dengan karakteristik geografis yang kompleks..

Kata kunci: Manajemen SDM, Distribusi Obat, Logistik Kesehatan, Gudang Farmasi, Efektivitas Distribusi..

Abstract: This study aims to analyze the role of human resource management (HRM) in supporting the effectiveness of drug distribution at the Pharmaceutical Warehouse of the P2KB Health Office in Central Papua Province. A qualitative approach with a case study design was employed. Data were collected through in-depth interviews, observations, and document analysis involving seven key informants, and analyzed using thematic analysis with source and method triangulation. The findings reveal that HRM practices have been implemented functionally but remain suboptimal, particularly in terms of workforce adequacy, workload distribution, and continuous competency development. Human resource competencies and experience contribute significantly to stock accuracy and timely drug distribution. However, geographical constraints, limited infrastructure, and an underdeveloped performance evaluation system hinder the consistency of distribution effectiveness. This study recommends strengthening competency-based HR planning, enhancing technical training in pharmaceutical logistics, and developing a more structured performance evaluation and motivation system to improve drug distribution performance, especially in geographically challenging regions.

Keywords: Human Resource Management, Drug Distribution, Health Logistics, Pharmaceutical Warehouse, Distribution Effectiveness.

INTRODUCTION

The effectiveness of drug distribution is a critical component of healthcare systems,

particularly in ensuring the availability of essential medicines across service delivery points. Healthcare supply chains play a strategic role in optimizing procurement, storage, and distribution processes, thereby directly influencing service

quality and patient outcomes ([Firdaus et al., 2026](#)). In developing countries, however, pharmaceutical supply chains often face persistent challenges, including inefficiencies in logistics systems, limited infrastructure, and poor coordination among stakeholders, which ultimately lead to stock-outs and delays in medicine distribution ([Pookkaman & Mayakul, 2026](#)).

One of the most overlooked yet critical determinants of supply chain performance is human resource management (HRM). Recent studies emphasize that HRM plays a fundamental role in enhancing logistics and supply chain effectiveness, as competent and well-managed personnel are essential for ensuring operational accuracy, timely delivery, and inventory control ([Jannat & Arefin, 2025](#)). In the context of pharmaceutical logistics, inadequate workforce capacity, uneven workload distribution, and limited training opportunities have been identified as major barriers to achieving optimal supply chain performance, particularly in low-resource and geographically challenging regions ([Duwiewua et al., 2025](#); [Konduri et al., 2017](#)).

Empirical evidence indicates that weaknesses in human resource capacity can lead to inaccuracies in stock management, delays in distribution, and increased risks of expired or excess inventory ([Bates et al., 2023](#); [Meilianti et al., 2025](#)). These issues are more pronounced in remote and underserved areas, where geographical constraints and limited infrastructure exacerbate operational inefficiencies. Despite advancements in digital logistics systems and supply chain optimization models, the effectiveness of these innovations remains highly dependent on the competencies and performance of human resources managing the system ([Bacci et al., 2019](#); [Blum et al., 2020](#)).

The following table summarizes key issues in pharmaceutical supply chain management and their implications:

Table 1. Key Issue and Implications

Issue	Empirical Evidence	Implication
Stock-outs and delayed distribution	Common in developing regions	Reduced healthcare service quality
Limited HR capacity and skills	Insufficient trained personnel	Inaccurate inventory and distribution errors

Issue	Empirical Evidence	Implication
Unequal workload distribution	Operational inefficiency	Decreased employee performance
Weak performance evaluation systems	Lack of structured monitoring	Inconsistent distribution outcomes
Infrastructure and geographical constraints	Remote and underserved regions	Logistics delays and supply disruptions

Despite the growing body of literature on healthcare supply chains, most prior studies have focused on technical and technological aspects such as system optimization, digital integration, and logistics efficiency. Limited attention has been given to the strategic role of HRM as a key driver of pharmaceutical distribution effectiveness, particularly in the context of public sector warehouses in geographically challenging areas. This indicates a clear research gap in understanding how HRM practices—such as competency development, workload management, motivation, and performance evaluation—contribute to improving drug distribution outcomes.

This study is urgently needed as it addresses the critical gap between human resource capacity and pharmaceutical supply chain performance, particularly in remote regions with complex geographical conditions. Strengthening HRM in public health logistics is essential not only to improve operational efficiency but also to ensure equitable access to essential medicines, which remains a fundamental challenge in many developing regions.

Research Questions

Based on the background above, the research questions are formulated as follows:

1. How effective is drug distribution at the Pharmaceutical Warehouse of the P2KB Health Office in terms of timeliness, stock accuracy, and medicine availability?
2. How is human resource management—covering workforce planning, competency, training, and workload distribution—implemented in supporting pharmaceutical logistics processes?
3. How can performance evaluation systems and work motivation mechanisms be

optimized to enhance the effectiveness of drug distribution?

LITERATURE REVIEW

Human Resource Management in Public Sector Organizations

Human Resource Management (HRM) is widely recognized as a strategic function that significantly influences organizational performance, particularly in service-oriented sectors such as public health. Contemporary HRM perspectives emphasize aligning human resources with organizational goals through effective workforce planning, competency development, and performance management systems ([Armstrong & Taylor, 2026](#)). In public sector contexts, HRM faces additional challenges, including bureaucratic structures, limited flexibility, and resource constraints, which may hinder optimal workforce utilization ([Hendren et al., 2018](#)).

Recent studies highlight that effective HRM practices—such as training, performance appraisal, and employee engagement—are positively associated with operational efficiency and service delivery outcomes ([Rachman et al., 2024](#); [Rumopa et al., 2025](#); [Susanti et al., 2024](#)). In healthcare systems, HRM plays a critical role in ensuring that personnel possess the necessary competencies to manage complex processes, including pharmaceutical logistics and supply chain operations ([Meilianti et al., 2025](#)).

Human Resource Competency and Capacity in Health Logistics

Human resource competency refers to the combination of knowledge, skills, and abilities required to perform specific tasks effectively. In the context of health logistics, competency is a key determinant of supply chain performance, as it directly affects inventory management accuracy, demand forecasting, and distribution efficiency ([Bates et al., 2023](#); [Meilianti et al., 2025](#)).

Workforce capacity, on the other hand, relates to the adequacy of personnel in terms of number and workload distribution. Insufficient staffing levels and uneven workload allocation often lead to operational inefficiencies, including delays in drug distribution and errors in stock management ([Bates et al., 2023](#)). Furthermore, continuous training and professional development are essential to ensure that personnel can adapt to

evolving logistics systems and technological advancements ([Bandhaso et al., 2023](#)).

In pharmaceutical warehouses, competent human resources are crucial for implementing standard operating procedures such as First-In-First-Out (FIFO) and First-Expired-First-Out (FEFO) ([Wafula et al., 2012](#)), which are essential for maintaining drug quality and minimizing waste ([USAID, 2021](#)).

Work Motivation and Performance in Organizational Contexts

Motivation is a central factor influencing employee performance and organizational outcomes ([Indou et al., 2025](#); [Inggesi et al., 2025](#)). One of the most influential frameworks is Herzberg's Two-Factor Theory, which distinguishes between hygiene factors (e.g., salary, working conditions) and motivators (e.g., recognition, achievement) ([Anwar, 2020](#)). While hygiene factors prevent dissatisfaction, motivators are necessary to enhance job satisfaction and performance.

Additionally, Expectancy Theory (Vroom, 1964) posits that employees are motivated when they believe their efforts will lead to desirable outcomes. This theory is particularly relevant in operational environments such as pharmaceutical warehouses, where clear performance targets and reward systems can improve accuracy and efficiency in distribution processes.

Recent empirical studies confirm that motivated employees are more likely to adhere to standard procedures, demonstrate higher levels of accountability, and contribute to improved operational performance ([Indou et al., 2025](#); [Inggesi et al., 2025](#)). In contrast, low motivation may result in negligence, reduced productivity, and increased operational errors.

Performance Evaluation Systems in HRM

Performance evaluation is a critical component of HRM that ensures employees' activities are aligned with organizational objectives. Modern performance management systems emphasize continuous feedback, measurable indicators, and data-driven decision-making ([DeNisi & Murphy, 2017](#)).

In healthcare logistics, performance indicators typically include accuracy of stock records, timeliness of distribution, and availability of medicines at service delivery points ([Bates et al., 2023](#)). A well-structured performance evaluation system not only measures outcomes

but also identifies gaps and provides a basis for improvement through training and capacity development ([Meilianti et al., 2025](#)).

However, in many public sector organizations, performance evaluation systems remain underdeveloped and lack clear metrics, leading to inconsistent performance and limited accountability ([Paembonan et al., 2024](#); [Randan et al., 2025](#)).

Pharmaceutical Supply Chain and Drug Distribution Effectiveness

The pharmaceutical supply chain encompasses a series of interconnected activities, including procurement, storage, distribution, and monitoring of medicines. The effectiveness of drug distribution is commonly measured by indicators such as timeliness, accuracy, availability, and minimal wastage ([Bates et al., 2023](#); [Meilianti et al., 2025](#)).

According to supply chain management theory, operational performance depends not only on systems and infrastructure but also on human factors, including workforce capability and coordination ([Mentzer et al., 2001](#)). Inefficiencies in any stage of the supply chain can disrupt the availability of essential medicines, particularly in resource-constrained settings ([Bates et al., 2023](#)).

In geographically challenging regions, logistical barriers such as limited transportation infrastructure and difficult terrain further complicate distribution processes ([Meilianti et al., 2025](#)). As a result, the role of human resources becomes even more critical in ensuring adaptability and problem-solving in dynamic operational environments ([Bates et al., 2023](#); [Mentzer et al., 2001](#)).

Theoretical Framework and Conceptual Linkages

This study is grounded in the integration of HRM theory ([Armstrong & Taylor, 2026](#)), motivation theory ([Anwar, 2020](#)), and supply chain management theory ([Mentzer et al., 2001](#)). The conceptual relationship can be described as follows:

- **HRM Practices (competency, training, workload, evaluation)** influence
- **Operational Performance (accuracy, efficiency, discipline)**, which in turn affects
- **Drug Distribution Effectiveness (timeliness, availability, stock accuracy)**

This relationship is supported by the resource-based view (RBV), which posits that human resources are strategic assets that contribute to sustainable organizational performance when effectively managed (Barney, 1991).

Thus, this study proposes that improving HRM practices in pharmaceutical warehouses will enhance operational performance and ultimately lead to more effective drug distribution.

METHODS

This study employed a qualitative research approach with a descriptive case study design to explore in depth the role of human resource management (HRM) in supporting the effectiveness of drug distribution within a specific organizational context. The case study design was selected because it allows researchers to investigate complex phenomena within real-life settings, particularly when the boundaries between the phenomenon and context are not clearly evident (Creswell & Poth, 2018). This approach is appropriate for capturing the dynamics of HRM practices, operational processes, and contextual challenges in pharmaceutical logistics, especially in geographically constrained regions.

The population of this study consisted of all personnel involved in pharmaceutical logistics and drug distribution activities at the Pharmaceutical Warehouse of the P2KB Health Office in Central Papua Province. Given the focused nature of the study, a purposive sampling technique was applied to select key informants who possess relevant knowledge and direct experience in managing pharmaceutical logistics. The sample included seven informants occupying strategic roles, such as warehouse managers, logistics coordinators, and operational staff. The selection criteria required participants to have a minimum of two years of work experience and active involvement in drug distribution processes. This sampling approach aligns with qualitative research principles that prioritize information-rich cases to achieve depth of understanding rather than generalizability (Patton, 2015).

The study was conducted at the Pharmaceutical Warehouse of the P2KB Health Office in Central Papua Province, Indonesia, which serves as a central hub for drug storage and distribution to healthcare facilities across the

region. The location was chosen due to its strategic role in the public health supply chain and its exposure to significant logistical challenges, including geographical barriers and infrastructure limitations. Data collection was carried out over a two-month period, allowing sufficient time for comprehensive field observations, interviews, and document analysis to ensure data saturation (Miles et al., 2021).

Data were collected using multiple techniques, including in-depth semi-structured interviews, direct observation, and document analysis. Interviews were conducted to capture participants' experiences and perceptions regarding HRM practices, including workforce planning, competency development, workload distribution, motivation, and performance evaluation. Observations were undertaken to examine actual operational practices within the warehouse, such as inventory handling, storage procedures, and distribution processes. In addition, relevant documents, including stock records and logistics reports, were reviewed to triangulate findings and enhance data credibility. The use of multiple data sources is consistent with qualitative research standards to strengthen the validity and reliability of findings (Miles et al., 2021).

The data analysis was conducted using thematic analysis, following a systematic process of data reduction, data display, and conclusion drawing as proposed by Miles et al. (2021). Initially, interview transcripts and field notes were organized and coded to identify recurring patterns and themes. These themes were then categorized based on key aspects of HRM and drug distribution effectiveness. To ensure the trustworthiness of the findings, triangulation of sources and methods was applied, along with member checking, where participants were invited to validate the interpretation of data. This approach enhances the credibility, dependability, and confirmability of qualitative research outcomes (Yin, 2018).

Overall, the methodological framework adopted in this study enables a comprehensive understanding of how HRM practices influence drug distribution effectiveness within a real-world public health logistics system, particularly in regions characterized by geographical and infrastructural challenges.

RESULTS AND DISCUSSION

Overview of the Research Object

The Pharmaceutical Warehouse of the P2KB Health Office in Central Papua Province serves as a central node in the regional public health supply chain, responsible for the storage and distribution of essential medicines to various healthcare facilities, including primary health centres and district hospitals. Operating within a geographically challenging environment, the warehouse faces logistical constraints such as limited transportation access, uneven infrastructure development, and high dependency on air and sea routes for distribution.

Organizationally, the warehouse is staffed by a limited number of personnel with varying roles, including warehouse management, logistics coordination, stock administration, and operational handling. Despite its strategic importance, the warehouse operates under resource constraints, particularly in terms of workforce capacity, training opportunities, and technological support systems. These contextual conditions significantly influence the effectiveness of drug distribution processes.

Respondent Characteristics

The study involved seven key informants selected based on their direct involvement in pharmaceutical logistics and drug distribution activities.

Table 2. Characteristics of Respondents

No	Code	Position	Work Experience	Education Level
1	R1	Warehouse Manager	8 years	Bachelor
2	R2	Logistics Coordinator	6 years	Bachelor
3	R3	Pharmacist Staff	5 years	Professional
4	R4	Administrative Staff	4 years	Diploma
5	R5	Warehouse Operator	3 years	Senior High
6	R6	Distribution Staff	4 years	Diploma
7	R7	Supporting Staff	2 years	Senior High

Source: Primary data processed (2026)

The respondents represent diverse roles within the warehouse, enabling a comprehensive

understanding of HRM practices and operational challenges from multiple perspectives.

Findings from Interviews

The interview findings reveal several critical issues related to HRM practices and drug distribution effectiveness.

First, in terms of workforce adequacy, most respondents indicated that the number of personnel is insufficient relative to the workload. One informant stated:

“The number of staff is still limited, especially when distribution demand increases. We often have to handle multiple tasks at the same time.” (R2)

Second, regarding competency and training, respondents acknowledged that while they possess basic operational skills, opportunities for continuous training are limited:

“We have learned from experience, but formal training on pharmaceutical logistics is still lacking.” (R3)

Third, workload distribution emerged as a significant concern, with some staff experiencing overlapping responsibilities:

“Sometimes administrative work and physical handling of goods are done by the same person, which affects efficiency.” (R4)

Fourth, in terms of motivation and performance evaluation, respondents noted the absence of a structured evaluation system:

“There is no clear performance measurement or reward system, so motivation depends mostly on personal responsibility.” (R1)

Finally, geographical and infrastructural challenges were consistently highlighted as external constraints:

“Distribution is often delayed due to transportation limitations, especially to remote areas.” (R6)

Thematic Analysis

The data were analyzed using thematic analysis to identify key patterns related to HRM and drug distribution effectiveness.

Table 3. Thematic Analysis Results

Theme	Description	Supporting Evidence
Workforce Limitation	Insufficient number of personnel relative to workload	R2, R5
Competency and Training	Limited formal training and reliance on experiential learning	R3, R7
Workload Distribution	Uneven and overlapping job responsibilities	R4, R6
Motivation and Evaluation	Lack of structured performance appraisal and reward system	R1, R3
External Constraints	Geographical and infrastructural barriers affecting distribution	R2, R6

Source: Primary data processed (2026)

Discussion

Effectiveness of Drug Distribution in the Pharmaceutical Warehouse

The findings indicate that the effectiveness of drug distribution in the Pharmaceutical Warehouse remains inconsistent, particularly in terms of timeliness, stock accuracy, and availability at healthcare facilities. Delays in delivery and discrepancies in inventory records were observed as recurring issues. These outcomes can be explained by both internal operational limitations and external environmental constraints.

From a supply chain perspective, distribution effectiveness is highly dependent on coordination, responsiveness, and reliability across logistics processes ([Mentzer et al., 2001](#)). In the present study, geographical barriers and limited transportation infrastructure significantly disrupt delivery schedules, especially to remote areas. This confirms prior research indicating that healthcare supply chains in geographically challenged regions are more vulnerable to delays and stock imbalances ([Meilanti et al., 2025](#)).

However, what distinguishes this study is the identification of human resource factors as a central determinant of distribution effectiveness. While previous studies tend to emphasize

infrastructure and system-related issues, the current findings demonstrate that even within constrained environments, the effectiveness of distribution is strongly influenced by how human resources are managed. This suggests that operational inefficiencies are not solely structural but also managerial in nature, highlighting a critical gap in existing literature.

Human Resource Management Practices in Supporting Pharmaceutical Logistics

The study reveals that HRM practices in the pharmaceutical warehouse have been implemented at a basic functional level but lack strategic alignment. Key issues include insufficient workforce capacity, limited competency development, and uneven workload distribution. These findings can be explained through the lens of strategic HRM theory, which posits that organizational performance depends on the alignment between HR practices and operational demands ([Armstrong & Taylor, 2026](#)).

The shortage of personnel relative to workload results in role overlap and multitasking, which ultimately reduces efficiency and increases the likelihood of errors. This is consistent with empirical findings that inadequate staffing levels negatively affect supply chain performance and service delivery outcomes ([Bates et al., 2023](#)). Furthermore, the lack of structured training programs limits the development of technical competencies necessary for managing pharmaceutical logistics, particularly in areas such as inventory control, demand forecasting, and adherence to standard procedures.

Another critical issue identified is the imbalance in workload distribution. Employees are often required to perform multiple roles simultaneously, leading to fatigue and reduced productivity. This condition aligns with workload theory, which suggests that excessive or uneven workload can impair employee performance and increase operational risks ([Bacci et al., 2019](#)).

In contrast to prior studies that treat HRM as a supporting factor, this research highlights its role as a core driver of operational effectiveness. This represents a significant contribution to the literature, particularly in the context of public health logistics, where HRM has often been underexplored.

Optimization of Performance Evaluation and Work Motivation Systems

The findings further indicate that the absence of a structured performance evaluation system significantly affects employee motivation and accountability. Employees reported a lack of clear performance indicators, feedback mechanisms, and reward systems, which reduces their engagement and commitment to achieving organizational goals.

This phenomenon can be explained using Herzberg's Two-Factor Theory, which emphasizes the importance of recognition and achievement as key motivators for improving performance ([Anwar, 2020](#)). Without adequate motivators, employees may perform at a minimum acceptable level rather than striving for excellence. Similarly, Expectancy Theory suggests that motivation is influenced by the perceived relationship between effort, performance, and rewards ([Pereira & Mohiya, 2021](#); Vroom, 1964). In this study, the absence of a clear reward-performance linkage weakens employees' motivation to improve their performance.

Previous research has demonstrated that well-designed performance management systems contribute significantly to organizational effectiveness by enhancing accountability and continuous improvement ([Inggesi et al., 2025](#); [Susanti et al., 2024](#)). However, in many public sector organizations, including the case examined in this study, performance evaluation systems remain underdeveloped and lack measurable indicators ([Paembonan et al., 2024](#)).

The novelty of this study lies in its emphasis on the interaction between HRM practices and motivational mechanisms in shaping operational outcomes. While earlier studies have examined these factors separately, this research integrates them into a unified framework, demonstrating how their combined effect influences drug distribution effectiveness.

Practical Implications

The findings of this study provide several important practical implications for improving pharmaceutical logistics in public sector organizations. First, there is a need to strengthen workforce planning by aligning staffing levels with operational demands. This can be achieved through systematic workload analysis and competency-based recruitment.

Second, continuous training and capacity development programs should be prioritized to enhance technical competencies in

pharmaceutical logistics. Investment in human capital is essential for improving accuracy, efficiency, and adaptability in distribution processes.

Third, organizations should develop structured performance evaluation systems with clear indicators, regular feedback, and reward mechanisms. Such systems can enhance employee motivation, accountability, and overall performance.

Finally, given the geographical challenges, integrating HRM improvements with logistical planning and infrastructure support is crucial to achieving sustainable improvements in distribution effectiveness.

Theoretical Implications

This study contributes to the existing body of knowledge by extending the application of HRM theory within the context of public health supply chains. Specifically, it demonstrates that HRM is not merely a supporting function but a strategic determinant of operational performance in pharmaceutical logistics.

Furthermore, the study integrates multiple theoretical perspectives, including strategic HRM, motivation theory, and supply chain management, into a coherent framework that explains the relationship between human resource practices and distribution effectiveness. This integrative approach offers a more comprehensive understanding of performance drivers in healthcare logistics systems.

In addition, the study provides empirical evidence from a geographically challenging context, thereby enriching the literature with insights from underrepresented regions. This is particularly important, as most existing studies are conducted in urban or well-resourced settings, limiting their applicability to remote areas.

CONCLUSION

Three key findings emerge from this study. First, the effectiveness of drug distribution is not solely determined by logistical infrastructure or geographical conditions, but is significantly shaped by the quality of human resource management practices. Even within a resource-constrained and geographically challenging environment, the ability of personnel to manage inventory, coordinate distribution, and respond to operational demands plays a decisive role in ensuring timely and accurate delivery of medicines.

Second, the study reveals that existing HRM practices remain largely administrative rather than strategic. Limitations in workforce capacity, uneven workload distribution, and insufficient competency development hinder operational efficiency. These conditions indicate a misalignment between human resource capabilities and the complexity of pharmaceutical logistics, ultimately affecting distribution performance.

Third, the absence of structured performance evaluation and motivation systems reduces employee accountability and engagement. Without clear performance indicators, feedback mechanisms, and reward structures, employees tend to rely on personal responsibility rather than institutionalized performance standards, leading to inconsistent outcomes in drug distribution effectiveness.

This study is not without limitations. The use of a qualitative case study design with a limited number of informants restricts the generalizability of the findings to other contexts. Additionally, the study focuses primarily on internal HRM factors, without quantitatively measuring the interaction between human resources and broader supply chain variables such as technology adoption or policy frameworks.

Future research is encouraged to adopt mixed-method or quantitative approaches to test the causal relationships between HRM practices and supply chain performance across multiple regions. Comparative studies between urban and remote healthcare systems would also provide deeper insights into contextual differences. Furthermore, integrating digital health logistics systems into the analysis could offer a more comprehensive understanding of how human and technological factors jointly influence distribution effectiveness.

Ultimately, this study underscores a critical insight: strengthening pharmaceutical distribution systems requires more than logistical improvements—it demands a strategic rethinking of human resource management as a central driver of performance. Without investing in people, even the most advanced systems will struggle to deliver equitable and reliable access to essential medicines.

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