

Evaluation of Availability and Implementation of the Compulsory Pharmacy Medicines List: A Case Study at X Pharmacy

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Compulsory Pharmacy Medicines (OWA) represent a crucial policy to ensure public access to certain hard drugs within the framework of safe self-medication, yet its implementation at the pharmacy level often faces various challenges. This study aims to evaluate the availability of OWA and analyze the factors influencing its implementation at X Pharmacy. The research employed an evaluative descriptive design with a cross-sectional approach, using direct observation checklists to assess the physical availability of 58 drug items on the OWA list and structured questionnaires to measure pharmaceutical personnel knowledge, with data analyzed using descriptive quantitative methods. The findings indicate that only 38 drugs (65.52%) were available out of the total 58 OWA items, while 20 drugs (34.48%) were unavailable, with the highest distribution in Group 1 (10 unavailable items), suggesting a significant gap between regulation and implementation at the pharmacy level. The availability of OWA at X Pharmacy does not meet regulatory standards, and the unavailability of drugs, particularly in Group 1, potentially diminishes the pharmacy's role in supporting safe self-medication. These findings highlight the urgent need for systematic efforts in inventory management, capacity building for personnel, and strengthening of monitoring systems to enhance compliance with OWA regulations and improve pharmaceutical service quality in community pharmacies.

Keywords: evaluation, drug availability, Compulsory Pharmacy Medicines, policy implementation, pharmaceutical services.

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1. Introduction

Pharmacies as primary healthcare facilities play a crucial role in facilitating public access to medication. The Compulsory Pharmacy Medicines (OWA) policy, regulated through a series of Minister of Health Decrees [1], is intended to support safe self-medication by allowing pharmacists to dispense certain hard drugs without a prescription, but with strict terms and limitations. However, the implementation of this policy in the field faces multidimensional challenges. Previous studies, such as in Pekanbaru, revealed gaps between regulation and practice, where pharmacies with low prescription turnover often deviated from the OWA list, while pharmacies with high prescription turnover tended to neglect its provision [2]. These challenges are further complicated by variations in pharmaceutical personnel knowledge [3] and operational pressures that limit the optimal implementation of pharmaceutical service standards [4].

On the other hand, public behavior in accessing healthcare services has also shifted. Self-medication has become an increasingly popular choice, driven by ease of access, cost considerations, and personal experience [5]. Pharmacies, with flexible operating hours and short waiting times, often serve as the public's first point of contact in the healthcare system [6]. In this context, the availability of OWA and service quality become vital. The physical availability of OWA is the primary foundation for self-medication to be conducted with appropriate drug choices. However, patient satisfaction, which is an important indicator of

service success, does not solely depend on drug availability. Research shows that factors such as clarity of information, empathetic attitudes of staff, and service responsiveness significantly contribute to patient satisfaction and their intention to return to the same service [7].

Therefore, the evaluation of OWA implementation at the pharmacy level must be conducted holistically. It is insufficient to merely examine compliance with the drug list; it is also necessary to consider how the service provision process affects user experience. Failure to provide OWA not only violates regulations but also has the potential to damage patient trust and hinder access to safe therapy. The gap between regulatory obligations and operational reality, influenced by economic factors, stock management, and human resource capacity, needs to be analyzed to gain a comprehensive understanding of the root causes and sustainable solutions [3].

Based on this background, this study aims to analyze the implementation of the OWA list at X Pharmacy. Specifically, the research objectives are to: (1) identify and measure the level of physical availability of OWA; (2) analyze the gaps found by referring to the implementation barriers identified in the literature; and (3) formulate strategic recommendations to improve the availability and quality of OWA services. Thus, this research is expected to contribute to efforts to improve the quality of community pharmaceutical services and the effectiveness of OWA policy in Indonesia.

2. Literature Review and Problem Statement

The Compulsory Pharmacy Medicines (OWA) policy, regulated through Minister of Health Decrees, is designed to support safe self-medication by allowing pharmacists to dispense specific hard drugs without prescription under strict conditions [1]. Previous research has identified several factors influencing OWA implementation. Studies by Ningsih and Zidna Di'inina Fakaubun revealed that variations in pharmaceutical personnel knowledge significantly affect compliance with OWA regulations. Alpuadi and Sunarsih found that operational and economic factors, such as prescription turnover and inventory pressures, heavily influence policy adherence. Herman and Susyanty further emphasized that operational constraints often limit the optimal implementation of pharmaceutical service standards, creating a persistent gap between regulatory requirements and real-world practice.[8] Additionally, Habib Shafa Thariq and Rusmana highlighted that patient satisfaction depends not only on drug availability but also on service quality factors such as information clarity and staff responsiveness.

Despite the established importance of OWA, significant research gaps remain. Most existing studies have focused on individual factors such as knowledge levels or economic considerations, without comprehensively examining the physical availability of OWA items as a direct measure of compliance. The specific patterns of drug unavailability across different OWA groups and their implications for patient satisfaction and healthcare access remain underexplored, particularly in Indonesian community pharmacies.[9]

Problem Statement: Based on these gaps, this study seeks to answer: (1) What is the level of physical availability of OWA at X Pharmacy based on the complete regulatory list? (2) What patterns and contributing factors explain the gap between regulatory OWA requirements and actual implementation? The study aims to evaluate whether X Pharmacy meets its regulatory obligations, identify which drug groups are most affected by unavailability, and analyze contextual factors influencing compliance, including inventory management, personnel capacity, and economic considerations. The findings are expected to provide empirical evidence and inform recommendations for improving pharmaceutical service quality and regulatory compliance.

3. Method

This study employed an evaluative descriptive design with a cross-sectional approach to assess the implementation of the Compulsory Pharmacy Medicines (OWA) list at X Pharmacy. This method was chosen because it enables the researcher to capture a comprehensive snapshot of OWA availability and implementation at a specific point in time, providing accurate and objective data that reflects real-world conditions at the pharmacy. The cross-sectional design is particularly suitable for descriptive evaluative research as it allows for systematic observation and measurement without manipulating variables, producing stable and consistent results that align with the characteristics of the data being analyzed.

The research focused on a census of all 58 drug items listed in the official OWA regulations (Kementerian Kesehatan Republik Indonesia, 1990; Kemenkes, 1993; Permenkes, 2021[10]; Kemenkes, 1999[1]; Permenkes, 1999).[11] Data collection employed two main instruments: (1) an observation checklist to record the physical availability of each drug on storage and sales shelves, and (2) a structured questionnaire adapted to measure the basic knowledge of pharmaceutical personnel regarding OWA provisions.[12] The observation procedure involved a complete inventory of all stock, while questionnaires were distributed to all pharmacy staff willing to participate. The analysis technique applied was descriptive quantitative analysis, where OWA availability data were processed into frequencies and percentages for each group (Groups 1, 2, and 3) and presented in tabular form. Knowledge questionnaire data were analyzed by calculating the average respondent scores.[13] The underlying assumptions for this method include the completeness of the OWA list as the standard reference, the accuracy of physical observation as a valid measure of availability, and the representativeness of the questionnaire in capturing personnel knowledge. These assumptions are essential for ensuring the method operates optimally and produces reliable findings that can inform evidence-based recommendations.

4. Results And Discussion

The observation results on the availability of Compulsory Pharmacy Medicines (OWA) at X Pharmacy showed a significant gap between regulatory requirements and actual physical availability. Table 1 presents a comprehensive summary of the findings.

Table 1. Recapitulation of OWA Availability at X Pharmacy per Group

OWA Group	Required Items	Available Items	Availability (%)	Shortage (Items)
Group 1	28	18	64.3	10
Group 2	18	12	66.7	6
Group 3	12	8	66.7	4
Total	58	38	65.5	20

The visualization of results in Table 1 reveals several key patterns. Overall, OWA availability at X Pharmacy reached only 65.5%, indicating that nearly one-third (34.5%) of the required drug items were unavailable. The distribution of shortages across all three groups was relatively even in terms of percentage (approximately 64-67% availability), but Group 1 had the highest absolute shortage with 10 unavailable items. This pattern suggests that while pharmacies may prioritize maintaining some stock across all categories, the actual fulfillment of regulatory obligations remains incomplete, with the most frequently needed medications (Group 1) being the most affected. Comparison with previous research shows consistency with findings by Alpuadi and Sunarsih in Pekanbaru, which also found suboptimal OWA implementation with significant gaps between regulations and practice. [2]

The findings also align with Herman and Susyanty who identified operational pressures as a major barrier to pharmaceutical service standards[4]. However, the results differ from studies by Zidna Di'inina Fakaubun, Azril Mahulauw and Dzulfikri Mewar, which reported good knowledge levels among pharmaceutical personnel but did not translate to complete OWA availability. This discrepancy suggests that knowledge alone is insufficient; organizational and economic factors play a more decisive role in implementation.[6]

The phenomenon of low OWA availability, particularly in Group 1, is consistent with expectations based on the economic pressures identified by Rokhman, where efficiency considerations often override regulatory obligations[1]. The contributing factors can be explained through several mechanisms. First, inventory management practices appear to prioritize drugs with higher economic value or more predictable demand, as evidenced by the tendency for low-value or low-demand items to be unavailable.[14] This pattern suggests that pharmacies may be using simplistic inventory approaches rather than differentiated strategies based on drug characteristics and patient needs. Second, the even distribution of shortages across groups indicates a systemic issue rather than isolated failures, pointing to weaknesses in procurement planning, stock monitoring, and regulatory enforcement. Third, although pharmaceutical personnel may possess adequate knowledge[3], this knowledge has not translated into consistent procurement decisions, likely due to competing operational pressures and limited oversight mechanisms. These findings align with the multidimensional framework proposed by Muchromin, Wijayanti and Dewi, where service quality depends on solid management structures and processes rather than individual factors alone.[15]

Based on these findings and interpretations, preliminary conclusions indicate that X Pharmacy has not met its regulatory obligations regarding OWA availability. The most critical finding is the high rate of unavailability for Group 1 drugs, which are essential for daily self-medication needs, potentially reducing the pharmacy's role as a reliable primary health facilitator and negatively affecting patient satisfaction. These results highlight the need for comprehensive interventions addressing inventory management systems, personnel capacity building, and regulatory enforcement. The findings serve as a basis for further analysis, particularly longitudinal studies to examine stock fluctuation patterns and qualitative research to understand the decision-making processes behind procurement.[16] These preliminary conclusions bridge the results to actionable recommendations for improving pharmaceutical service quality and regulatory compliance in community pharmacy settings.

5. Conclusion

This study evaluated the availability and implementation of the Compulsory Pharmacy Medicines (OWA) list at X Pharmacy. The main findings reveal that overall OWA availability reached only 65.5% (38 out of 58 items), indicating that nearly one-third of regulatory obligations remain unfulfilled. Group 1 drugs, which are essential for daily self-medication needs, contributed the highest absolute shortage with 10 unavailable items. These findings directly address the research objectives by demonstrating that X Pharmacy has not met regulatory standards and that the gap between regulation and implementation is both significant and systemic, affecting all OWA groups but with the most critical impact on first-line medications.

The relationship between these findings and existing literature shows both consistency and important nuances. The results align with previous research by Alpuadi and Sunarsih in Pekanbaru, which identified suboptimal OWA implementation due to economic and operational pressures. Similarly, the findings support Herman and Susyanty (2013) regarding how operational constraints limit pharmaceutical service standards. However, while studies by Ningsih et al. (2023) and Zidna Di'inina Fakaubun, Azril Mahulauw

and Dzulfikri Mewar (2023) reported adequate personnel knowledge, the current study reveals that knowledge alone does not ensure compliance—organizational factors, inventory management practices, and economic considerations play more decisive roles. This discrepancy suggests that individual capacity must be supported by robust management systems and regulatory enforcement mechanisms.

The general interpretation of the phenomena found indicates that the unavailability of OWA, particularly for Group 1 drugs, stems from multiple interconnected factors: inadequate inventory management systems that prioritize economic efficiency over regulatory compliance, insufficient differentiation in procurement strategies based on drug characteristics and demand patterns, and weak oversight mechanisms that fail to ensure consistent adherence to OWA regulations. These patterns reflect a broader systemic issue in community pharmacy management, where operational pressures and financial considerations often overshadow public health obligations. The findings have significant scientific and practical significance, contributing to the understanding of pharmaceutical service implementation challenges and highlighting the need for integrated approaches that combine capacity building, system strengthening, and regulatory reinforcement.

The implications of this research are threefold. First, methodologically, this study demonstrates the value of direct observation and census approaches in evaluating compliance, providing a more accurate picture than self-reported data. Second, scientifically, the findings extend existing knowledge by identifying specific patterns of drug unavailability across OWA groups and explaining the interplay between knowledge, management, and economic factors. Third, practically, the results provide a foundation for targeted interventions at X Pharmacy and similar community pharmacies. The study has several limitations, including its cross-sectional design that captures conditions at only one point in time, inability to observe stock fluctuations and dynamic stock-out patterns, and limited exploration of root causes from the perspective of procurement management, supply chain, or internal pharmacy policies. Future research should conduct longitudinal studies to monitor OWA availability patterns over time, utilize qualitative approaches such as in-depth interviews with pharmacy managers and staff to understand decision-making processes and barriers, and expand the scope to multiple pharmacies to compare implementation patterns and identify best practices. These directions will strengthen, expand, and refine the current findings to support more effective OWA policy implementation and improved pharmaceutical service quality.

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