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IMPROVEMENT STRATEGY OF DRUG MANAGEMENT AT PHARMACY INSTALLATION OF HARAPAN INSAN SENDAWAR HOSPITAL BY REVIEWING SUPPORTING MANAGEMENT THROUGH SWOT APPROACH

Agusti Qori Al Mubarak[1], Ismi Rahmawati[2], Oetari[2]

[1]Department of Pharmacy, Sekolah Tinggi Ilmu Kesehatan Samarinda, Samarinda 75242, Indonesia
[2]Master Program of Hospital Pharmacy Management, Faculty of Pharmacy, Universitas Setia Budi, Surakarta 57127, Indonesia.

apt.agustiqori@gmail.com

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ABSTRACT
Optimal drug management and drug inventory control can minimize costs and the number of orders in the next planning period. The purpose of this study was to evaluate drug management in the Pharmacy Installation of Harapan Insan Sendawar Hospital with SWOT analysis improvement strategies. The research design was descriptive based on retrospective and concurrent data. All quantitative data were compared with the indicators of The Depkes RI (2008), WHO (1993), and Pudjaningsih in Satibi (2022). Furthermore, qualitative analysis was carried out with a SWOT approach as an alternative improvement strategy in the Pharmacy Installation based on quantitative data output and internal capital and external influences. The results of the study that meet the standards are: the level of drug availability (15.6 months) and the average prescription service time (non-compounded prescription 23.37 minutes & prescription 39.8 minutes). Results that did not meet the standard were: percentage of stock card matches with drugs (94.73%), inventory turnover ratio (2.22 times), percentage of expired drugs (4.7%), percentage of dead stock (8.97%), number of drug items per prescription sheet (3.57 items), percentage of generic drug prescriptions (76.25%). SWOT analysis of the pharmacy installation falls within the first quadrant, namely focusing on development, improving services and establishing cooperation. The conclusion drawn is that pharmacy installations can adopt aggressive strategies by enhancing the development of management information systems to optimize inventory control.

Keywords: Drug management; indicators; Pharmacy Installation; SWOT analysis

1. INTRODUCTION

The entire provision of hospital pharmacy services is coordinated by the Hospital Pharmacy Installation as the implementing body responsible (Depkes RI, 2008). The current hospital drug management system can impact the growth and development of the hospital. Drug management is just one of many strategic factors required by the hospital system. Thirty percent of the total production (revenue) of healthcare facilities comes from the pharmacy installation. The significant contribution of pharmacy installation revenue to the hospital seems to be a reason for hospitals to prioritize improving the quality standards of pharmacy installation services (Satibi, 2022).

Harapan Insan Sendawar Regional Hospital in West Kutai Regency is a type C public hospital, which is the only government hospital in Kutai Barat Regency. This hospital is the primary healthcare facility that serves as a referral center for surrounding community health centers, making its role crucial as a desired destination for people in need of medical care. Public perception of the hospital comes with various complaints regarding hospital services, indicating existing barriers in service provision (Evi, 2020).

Evaluation of drug management at the pharmacy installation at the Harapan Insan Sendawar Regional General Hospital Kutai Barat Regency needs to be conducted because such an evaluation has never been done before. Research by Mompewa et al. (2019) explains drug management issues at Poso Central Sulawesi Regional Hospital, a type C class hospital, including the inadequacy of available drug items in the hospital compared to the National Essential Drugs List, still not meeting standards a high percentage of expired and damaged drugs, and dead stock. Another study by Nugroho (2022) explains one of the reasons for drug management issues at IFRSAU dr. Efram Harsana is that the hospital sometimes does not comply with the national formulary, as seen in the selection criteria that do not meet the standard at 78,78%. Irrational drug selection or prescription is caused by prescriptions that do not follow treatment guidelines. Another study by Haryani et al. (2022) found that Fatmawati General Hospital, as a referral hospital, still has a number of unfulfilled prescriptions due to drugs not being available in the pharmacy installation or being out of stock.

Supporting management consists of human resources, organization, management information systems, and financial management. Hospitals must reconsider in determining the optimal distribution of pharmacy human resources. Having too many employees is a burden and a waste of money, while having too few can make human resources work too much and decrease service quality. Ngawi Regional Hospital is currently the referral hospital for all community health centers/patients in Ngawi Regency. Research by Yuniarti (2019) explains that the evaluation of supporting management in drug management shows that the hospital experiences an increase in the number of patients every year. According to the hospital's statement, most patients still insist on buying their drugs from pharmacies outside the medical facilities of Ngawi Regional Hospital.

This research encourages the authors try to understand and analyze the level of suitability of drug management based on indicators from the Depkes RI (2008), WHO (1993), and Fakhriadi (2011) as stated in Satibi's book (2022) (**Table 1**), alongside quantitative results of drug management in the pharmacy Installation of Harapan Insan Sendawar Regional Hospital in West Kutai Regency. Then, a comprehensive SWOT analysis is conducted to identify internal and external elements that impact drug management and areas that still need development. The research objective is to apply SWOT analysis to the question of how best to advance the pharmacy installation at Harapan Insan Sendawar Regional Hospital in West Kutai Regency.

2. METHODS

This research employs a descriptive method utilizing retrospective data collection to evaluate the drug management system at Harapan Insan Sendawar Hospital in Kutai Barat Regency in 2021. Both primary and secondary sources are utilized to compile information. Primary research data are derived from interviews, field notes, and reports, such as the duration spent on prescribing and the accuracy of the number of drugs listed on the prescription card, purchasing reports, orders, and drug delivery invoices are examples of primary sources used to compile retrospective data. Turnover ratio, drug availability rate, number of drug items per prescription, percentage of drugs by generic name, and percentage of fully labeled drugs are all collected retrospectively, while concurrent data collection is performed on indicators such as the accuracy of the number of drugs on stock cards, prescription service time, and interview.

Table 1. Drug management indicators in hospitals.

Stages	Indicators	Objectives,	Calculation methods	Standard values
Distribution	1. Accuracy of drug quantity data on stock cards (***)	To determine the precision of warehouse personnel	Observe drug stock cards and match them with available items. Calculate the number of drugs that match the stock (X) and the total number of stock cards checked (Y) Calculate : Z= X/Y x 100%	100%
	2. Turn Over Ratio (TOR) (**)	To determine the turnover of capital in one year of inventory	The cost of goods sold (x) and the average value of drug inventory (y) TOR= X/Y times	10-23 times
	3. The drug availability rate (***)	To determine the range of drug sufficiency	Calculate: X= The annual drug stock Y= The average monthly drug consumption Z= X/Y	12-18 month
	4. The percentage for the value of expired and damaged drugs (***)	To determine the extent of hospital losses	Calculated from the records of expired drugs within 1 year X: The value of expired drugs (x) Y: stock opname value Z: (X/Y) x 100%	0%
	5. The dead stock percentage (***)	To determine the number of drug items unused for 3 months	Calculated by determining the quantity of drug items unused for 3 months (X) and the total quantity of drug items in stock (Y) Z = X/Y x 100%	0%
Use	1. Number of drug items per prescription (**)	To measure the degree of polypharmacy	Take a 10% sample. Calculate the total number of drug items written on the prescription (X) and the Average number of prescription sheets (Y). Z=X/Y	1.8-2.2 Indonesia 3.3
	2. The percentage of prescriptions with generic names (**)	To measure generic drug prescribing	Calculated from the report of generic prescription writing. Calculate the number of drug items with generic names (X) and the total number of drug items prescribed (Y) Z= X/Y x 100%	82-94% Indonesia 59%
	3. The average time taken to serve prescription (*)	To determine the level of pharmacy service speed in the hospital	Record the time prescription enter the pharmacy (X) and record the time they are finished and received by the patient (Y)	≤60 menit Compounded prescription ≤30 menit non-compounded

Stages	Indicators	Objectives,	Calculation methods	Standard values
			Z=Y-X/the total number of prescription received	prescription

Information:

* : Indicators of the Department of Health (2008) *** : SNARS (2018)

** : Indicators Pudjaninsih (1993)

3. RESULTS AND DISCUSSION

The pharmacy installation oversees the hospital's drug management process, which comprises four key stages: selection, planning and procurement, distribution, and utilization (Satibi, 2022). The results of observations conducted during the distribution and use phase are as follows (Table 2) :

Table 2. Results of drug management at the distribution and use stage

Stages	Indicators	Results	Standard values
Distribution	Accuracy of drug quantity data on stock cards	94.73%	100%
	Turn Over Ratio (TOR)	2.22 times	10-23 times
	The drug availability rate	15.6 month	12-18 month
	The percentage for the value of expired and damaged drugs	4.7%	0%
	The dead stock percentage	8.97%	0%
Use	Number of drug items per prescription	3.57	Indonesia 3.3
	The percentage of prescriptions with generic names	76.25%	82-94%
	The average time taken to serve prescriptions	1. Non-compounded prescriptions = 23.37 minute 2. Compounded prescriptions = 39.8 minute	1. Non-compounded prescriptions = ≤30 minute 2. Compounded prescriptions = ≤60 minute

3.1. Distribution

Medication is stored according to alphabetical order, dosage form/type, and temperature/stability storage system, utilizing FIFO (First In First Out) and FEFO (First Expired First Out) methods to ensure freshness and potency. Stock retrieval occurs at the end of each month and at the end of the year to determine the inventory level at those points in time, which is used as the starting point to estimate next year's needs.

Table 2 shows the conformity results between the recorded quantity of medication in the stock card and the actual physical quantity, which is 94,73%. The actual standard value should be 100% according to the WHO standard. This indicates that the administration and Standard Operating Procedures (SOP) in the warehouse are not ideal and therefore not being executed effectively. Based on the observations made, this discrepancy is due to the fact that the staff not only handle warehouse duties but also concurrently serve in outpatient services, causing them to overlook recording every medication withdrawal from the warehouse. According to the study by Oviani & Indraswari (2020) medication conformity with the stock card should be executed

properly, and controlling it daily, such as recording incoming and outgoing medications, should be the responsibility of pharmacy staff to ensure medication is left unrecorded.

The Inventory Turnover Ratio (ITOR) is recorded at 2.22 times, indicating a low value below the WHO standard range of 10–23 times. This suggests a substantial amount of unsold inventory remains. From an economic perspective, this reflects cash flow constraints, hindering profit generation through effective inventory management. Research by Indriana *et al*. (2021) states that the obtained ITOR result is very low and does not meet the standard. The potential loss for the pharmacy installation, especially the warehouse, is the accumulation of drugs in the warehouse leading to dead stock.

The average drug availability rate at the pharmacy installation at the Harapan Insan Sendawar Regional General Hospital is 15,6 months, which falls within the standard range according to the Depkes RI (2008), which is 12-18 months. Therefore, it can be considered efficient. Despite limited procurement funds, the drug availability rate meets the standard due to the direct purchasing system from the hospital to the distributor for drugs that have run out, ensuring the continuity of healthcare services in the hospital.

The percentage value of expired and damaged drugs at 4.7%, with a standard value of 0%. Based on observations, there are drugs in the inventory that have expired one to two years ago. Recording of expired drugs on the stock card is still done manually, and sometimes slow-moving drugs that have been marked are overlooked because their storage is not based on FEFO (First Expired First Out) principle. Research by Bakti (2022) at the Pharmacy Installation of Dirgahayu Samarinda Hospital in 2021, class C type, identified a total of 968 drug items that have expired. Expired drugs should have been disposed of to prevent their use, thereby avoiding stockpiling in the drug warehouse.

The percentage of dead stock of drugs at 8.97%, with a standard value of 0%. This data indicates that the planning of inventory levels according to drug needs is not being met, or there are deviations in usage patterns, leading to drug accumulation in the pharmacy warehouse. The role of the Pharmacy and Therapeutics Committee (PFT) in the hospital has not been effectively implemented in applying the hospital formulary as a guideline for prescribing patterns according to patient needs. Research by Indriana *et al.* (2021) explains that dead stock occurs because these drugs are remaining inventory from purchases that were not utilized during changes in doctors' practices at the hospital Based on inventory reports, it's evident that many drugs are experiencing shortages or stock depletion, leading to expiration. The research by Rofiq *et al.* (2020) indicates that the majority of drugs classified under Group C are slow-moving, resulting in decreased usage and eventual expiration.

3.2. Use

Data collection for the indicators of the number of drug items per prescription and the percentage of generic drug usage retrospectively took place from the prescription recording data of the Pharmacy Installation in 2021. Meanwhile, data collection for the average service time was done concurrently in 2022.

The research results indicate that the average number of drug items per prescription at the pharmacy installation at the Harapan Insan Sendawar Regional General Hospital is 3.57, which implies a high indication of polypharmacy. According to the Head of Hospital Pharmacy Installation, the number of prescribed drug items is based on the patient's disease pattern, but doctors are already prescribing the minimum necessary number of drug items according to the patient's needs. Research by Indriana *et al.* (2021) explains that the indication of polypharmacy in prescribing is due to the relationship between the patient's diseases, leading doctors to prioritize treatment that aligns with the patient's medical history. The research findings indicate that the percentage of generic drug prescriptions at the pharmacy installation at the Harapan Insan Sendawar Regional General Hospital is 76,25%, which means there is still a significant usage of non-generic drugs prescribed by doctors. This suggests that the lack of awareness among

doctors regarding prescription practices, as well as inadequate collaboration and communication between professions, leads to the inefficient utilization of generic drugs within the scope of the pharmacy installation.

The average prescription service time, starting from the receipt of the prescription, and dispensing, until the delivery of the medication to outpatient patients, is from 08.00 am to 03.00 pm. The average service time for non-compounded prescriptions is 23.37 minutes, while for compounded prescriptions, it is 39.8 minutes. The average prescription service time at the pharmacy installation at the Harapan Insan Sendawar Regional General Hospital is in line with the standard, indicating that the pharmaceutical service provided by pharmacy staff exceeds the hospital's target, in line with the hospital's desire to continually improve healthcare services in Kutai Barat Regency.

3.3. Inventory control analysis

Medication management implemented at the pharmacy installation Harapan Insan Sendawar Regional General Hospital throughout 2021, according to previous medication management evaluations, still falls short of standards such as evaluating the match between procurement and actual usage, expiration value, and the dead stock of medication, which remains below standard. Subsequently, inventory control was conducted using the ABC-VEN combination analysis as a method to manage medication inventory and predict planning for the upcoming period.

Table 3 shows that essential medicines dominate other categories of drugs. Medicine classified under the CE category has a low usage value but is available in large quantities. This means that drugs of the same type will experience minimal usage and risk of expiration. Therefore, the pharmacy installation should reduce the use and ordering of drugs of the same type and control the existing inventory levels through inventory control calculations such as EOQ.

Table 3. ABC-VEN categorization

	A	B	C
V	26 items (4.50%)	21 items (3.63%)	15 items (2.60%)
E	43 items (6.23%)	133 items (23.01%)	280 items (48.44%)
N	4 items (0.69%)	23 items (3.98%)	33 items (5.71%)

Research by Priatna *et al.* (2021) explains that drugs classified under AV, AE, and BV categories require more supervision based on high usage rates and medical care. Drugs in the V category should have controlled availability, meaning a small quantity but frequent procurement.

Based on Table 4, drugs with high usage rates (Bactesyn, Pregabalin, Symbicort, Imipenem, Hydrochlorothiazide, Diviti, Albapure, Sevodex, Terfacef, and Albunom) have a low EOQ value compared to usage rates. The EOQ method is needed to control drug usage in the upcoming period to avoid overstocking or expiration. The EOQ Method can also minimize the cost of high-priced drug items, such as Symbicort, with a price per item of 1,000,000 and a selling price of 1,247,505.

Table 4. Usage amount selling price, storage cost, and calculation of Economic Order Quantity (EOQ) and Economic Order Interval (EOI) of the top five drugs in JKN, regular, and Liquid Inventory at the pharmacy installation Harapan Insan Sendawar Regional General Hospital.

	Drug name	Usage (items)	Selling price (Rp)	EOQ (items)	EOI (days)
JKN	Bactesyn	13,298	62,044	384	11
	Pregabalin 50 mg	3,208	217,447	189	21
	Symbicort turb	390	1,247,505	66	62
	Imipenem cilastatin inf	2,150	209,837	155	26
	Hydrochlorotiazide	30,300	9,240	580	7
Regular	Diviti inj	2,014	344,781	147	27
	Albapure 20	220	1,000.000	48	80
	Sevodex 250 ml	67	2,970,000	27	146
	Terfacef inj	747	260,035	89	44
	Albunorm 25% 100 ml	73	2,524,126	28	140
Liquid	RL Wida	2,014	9,538	389	11
	Asering	220	12,058	331	13
	Na-Cl Wida	67	8,550	387	11
	Aquadest 25 ml	747	4,469	531	8
	Futrolit	73	55,210	139	31

The EOI in Table 4 indicates that the ordered quantity of a drug can be consumed within a predictable period based on that calculation. Research by Widodo & Pujiyanto (2020) explains that the calculations of EOQ and EOI do help pharmacy installation determine order quantities, at times the determined quantities may not align with the stock provided by the distributor due to the limited availability of the drugs.

Table 5. Calculation of lead time, average daily usage, safety stock, minimum stock, and maximum stock for the top five drugs in JKN, Regular, and Liquid inventory at the pharmacy installation of Harapan Insan Sendawar Regional General Hospital.

	Drug name	Lead time (days)	Average usage (items)	Safety stock (items)	Minimum stock (items)	Maximum stock (items)
JKN	Bactesyn	6	36.43	219	437	1.530
	Pregabalin 50 mg	6	8.79	53	105	369
	Symbicort turb	6	1.07	6	13	45
	Imipenem cilastatin inf	6	5.89	35	71	247
	Hydrochlorotiazide	6	83.01	498	996	3.487
Regular	Diviti inj	6	5.52	33	66	232
	Albapure 20	6	0.60	4	7	25
	Sevodex 250 ml	6	0.18	1	2	8
	Terfacef inj	6	2.05	12	25	86
	Albunorm 25% 100 ml	6	0.20	1	2	8
Liquid	RL Wida	6	38.96	234	468	1.636
	Asering	6	28.19	169	338	1.184
	Na-Cl Wida	6	38.55	231	463	1.619
	Aquadest 25 ml	6	72.37	434	868	3.040
	Futrolit	6	5.00	30	60	210

Based on research observations, the average lead time per item is approximately six days. Minimum and maximum stock are calculated based on the safety stock of the drug. The minimum stock above is an example of controlling the minimum stock limit of drugs in the warehouse and can be used as a reference for planning when to reorder the drugs. Research by Melizsa *et al.* (2021) explains that calculating the reorder point is intended to help pharmacy installations reorder drug inventory that is about to run out.

3.4. Supportive management

Based on the drug management cycle, supportive management is identified as a fundamental factor for success in implementing drug management in the pharmacy installation. Therefore, a descriptive exploration is conducted regarding supportive management at the Pharmacy Installation of Harapan Insan Sendawar Regional Hospital, which consists of several assessment elements: organization, human resources, and technology in the year 2021.

Based on the discussion with the head of Hospital Pharmacy Installation, the organizational structure at Harapan Insan Sendawar Regional Hospital has been designed according to its tasks, duties, and functions. The head of the Hospital Pharmacy Installation mentioned that in its implementation, there are some areas where miscommunication occurs regarding the drug storage process. Many drugs in the warehouse expire, and slow-moving drugs are overlooked, not based on the First Expired First Out (FEFO) principle, resulting in them not being used for several months, leading to dead stock and expiration. Based on research Yuniarti (2019) explains that manual recording of Drug Expire Dates (ED) requires accuracy and routine monthly updates, followed by internal evaluations for further planning. Effective drug demand planning can be achieved through good coordination among departments within the pharmacy installation.

Based on the analysis of the Bed Occupancy Rate (BOR) at Harapan Insan Sendawar Regional General Hospital in 2021, which is standard at 63%, it indicates that the utilization of hospital care facilities meets standards and includes patient networking. However, this percentage is still within the safe standard limits, hence requiring evaluation. According to Satibi (2022), the number of pharmacists in the hospital pharmacy installation is proportional to the workload in each pharmacy field, especially outpatient and inpatient care.

The Management Information System (MIS) currently utilized by the pharmacy installation at the Harapan Insan Sendawar Regional General Hospital is limited to administrative activities and is not integrated with the hospital's information system services. The information system used remains local, specifically for Hospital Pharmacy Installation, and does not fully meet all the pharmacy installation's needs related to drug management.

Indicators used in drug management to assess the influence of supportive management, especially management information systems are the percentage of expired drugs and the percentage of dead stock.

3.5. SWOT analysis

The quality of service in the pharmacy installation can be measured through various analyses, one of which is the SWOT analysis. The issues occurring at the Pharmacy Installation of Harapan Insan Sendawar Regional General Hospital, based on the evaluation of drug management and supportive management, are that many stages of drug management still do not meet standards, and supportive management, is the fundamental factor for the success of drug management in the pharmacy installation, has not yet achieved optimal results based on pharmacy service standards in the hospital. Therefore, a SWOT analysis is conducted to examine the factors that are strengths and weaknesses of the pharmacy installation in implementing improvement strategies for drug management at the Pharmacy Installation of Harapan Insan Sendawar Regional General Hospital.

The benchmark for internal and external factors presented in the following tables, based on discussions and assumptions made by the head of the pharmacy installation, with weighting values obtained, can be seen as the readiness and quality of service of the pharmacy installation in Table 6 and Table 7.

Table 6. The results of the discussion Internal Factor Analysis Strategy.

Strength factors	Weight	Rating	Score	Description
The presence of new education and standard	0.10	4	0.40	Determining quality

Strength factors	Weight	Rating	Score	Description
operational procedures for Hospital Pharmacy Installation staff				
Maximum medication delivery service time	0.20	3	0.60	Benefiting patients
Human resources meeting the needs of the pharmacy installation	0.10	2	0.20	Time efficiency
The availability of drugs to meet the needs of the West Kutai District Community	0.15	2	0.30	Benefiting patients
Number		11	1,50	
Weakness factors				
The formulary has not been updated (Format from 2018)	0.10	4	0.40	Determining planning
Suboptimal facilities and infrastructure	0.15	3	0.45	Hindering work
Suboptimal PFT team collaboration	0.10	2	0.20	Determining prescriptions
Hospital information system not yet implemented	0.10	2	0.20	Complicating management and services
Number		10	1.25	
Total	1.00		2.75	

The strength of the Pharmacy Installation at Harapan Insan Sendawar Regional Hospital lies in the availability of drugs to meet the patient's needs in the hospital and the maximum medication delivery service time, as indicated by the analysis of drug management evaluation. Additionally, there are sufficient human resources, supported by both self-directed and hospital-facilitated training, according to research by Ardiany (2020) which emphasizes the need to improve the quality and quantity of human resources to enhance pharmaceutical service knowledge. However, this is related to a weakness of the pharmacy installation, which is the RS information system not yet implemented at the Pharmacy Installation of Harapan Insan Sendawar Regional Hospital.

According to research by Dwi Rosita (2015), there is a need to improve the quality and quantity of human resources to create knowledge about pharmaceutical services. This is related to the weakness factor of the pharmacy installation, which is the Management Information System (SIM) that has not been implemented in the Harapan Insan Sendawar Regional Hospital Pharmacy Installation.

One of the benefits of having a Management Information System (SIM) in drug management is explained in a study by Janah *et al.* (2022) on WEB-based drug management that the emerging data can track stock flows, identify individuals involved in the system, and those operating the system, thus, with this SIM, it can resolve issues that occur in the drug management process. Another study by Muhandhis & Angga (2019) corroborates that having a WEB-based inventory information system facilitates EOQ calculations because the calculations can be continuous, and stock data is updated with the presence of incoming and outgoing goods data.

Table 7. The results of the discussion External Factor Analysis Strategy.

Opportunity factors	Weight	Rating	Score	Description
As a referral hospital	0.15	4	0.60	Revenue sources
Advancements in science and technology	0.15	3	0.45	Determining quality
The one-stop system of the pharmacy installation at the Harapan Insan Sendawar Regional General Hospital	0.10	2	0.20	Benefiting from supplies
Local government policies	0.10	2	0.20	Growth
Number		11	1.45	

Threat factors				
The expansion of other regional hospitals or private hospitals and clinics	0.10	4	0.40	Weaken
Public demand for services	0.15	3	0.45	Weaken
Keeping up with advancements in science and technology	0.10	2	0.20	Weakening positions
Declining trust from distributors	0.15	2	0.30	Weaken
Number		10	1.35	
Total	1.00		2.80	

Based on Table 8, one of the opportunities for the pharmacy installation is to enhance technological advancements in both infrastructure and technology knowledge. According to research by Ardiany (2020), adding technological facilities and infrastructure supports clinical pharmacy services and drug information.

The hospital formulary data currently used by pharmacy installation at the Harapan Insan Sendawar Regional General Hospital still utilizes an outdated format, and many drugs used in 2021 do not align with the existing hospital formulary. Research by Lolo *et al.* (2020) explains that through ABC analysis, it is possible to select types of drugs to avoid redundancy according to the criteria in drug selection.

Table 8. SWOT matrix

	Strength	***Weakness***
IFAS EFAS	1. The provision of education and training for the staff of the hospital pharmacy installation 2. Human resources meeting the needs of the pharmacy installation 3. The availability of drugs to meet the needs of the West Kutai Barat Regency 4. Maximum medication delivery service time	1. Suboptimal facilities and infrastructure 2. The collaboration of the pharmacy and therapy committee is not yet optimal 3. The formulary has not been updated (Format from 2018) 4. The hospital information and management system has not been implemented
Opportunity 1. The one-stop system of the pharmacy installation at the Harapan Insan Sendawar Regional General Hospital 2. Local government policies 3. Advancements in science and technology 4. As a referral hospital	Strategy SO : 1. Maximizing the quality of human resources towards knowledge and technology insights 2. Maximizing the hospital pharmacy installation facilities to support the hospital as a referral center 3. Conducting workshops or benchmarking studies with other Hospital pharmacy installation	Strategy WO : 1. The addition of facilities and education in the field of science and technology 2. The addition of pharmacy warehouse facilities to support as a referral hospital 3. The improvement of communication and evaluation by the pharmacy and therapy commitee regarding prescription patterns and hospital formulary.

Threats	Strategy ST :	Strategy WT :
1. The expansion of other regional hospitals or private hospitals and clinics 2. Public demand for services 3. Keeping up with advancements in science and technology 4. Declining trust from distributors	1. The existence of education in inventory management control and knowledge of science and technology to support the improvement of services to the community 2. The utilization of human resources to monitor drug product prices for competition with other hospitals 3. The evaluation and improvement of actual service quality perceived by patients	1. The addition of pharmacy warehouse facilities and technology such as hospital information and management systems to support competition with other hospitals 2. The reduction of procurement values through debt with distributors 3. The evaluation of hospital formulary and prescription patterns by the pharmacy and therapy committee to support services to the community

The SWOT matrix is used to formulate improvement strategies by considering internal and external factors of the pharmacy installation. Factors used for formulating improvement strategies are those that can influence market penetration and product development strategies, resulting in four strategies: SO, WO, S, and WT.

4. CONCLUSION

Based on the research conducted at the Pharmacy Installation of Harapan Insan Sendawar Regional Hospital in Kutai Barat Regency, that indicators meeting the standards include drug availability (15.6 months) and average prescription service times (23.37 minutes for non-compounded prescriptions and 39,8 minutes for compounded prescriptions). However, other indicators do not meet the standards, leading to inventory control as a strategy for improving drug management at Harapan Insan Sendawar Regional General Hospital. Based on the SWOT analysis, the implemented strategy is long-term utilization through the development of the pharmacy installation, service improvement, and the formation of horizontal or vertical integrals, which involve cooperation within the scope of the pharmacy installation.

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6. CONFLICT OF INTEREST

All authors declare no conflict of interest.

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