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SCOPING REVIEW: SWOT ANALYSIS OF DRUG PLANNING IN HOSPITALS

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ABSTRACT

Hospitals function to provide complete health services, both curative and preventive, to the community. Hospital pharmacy installations have an important role in managing medicines such as selection, planning, procurement, storage, distribution, and use of medicines. Planning drug needs is one of the important factors in selecting the type and determining the amount of drug needs. To formulate a strategy, you must start with a situation analysis, one of which is using a SWOT analysis. To determine a SWOT analysis of drug planning in hospitals using a Scoping Review approach. This study uses a Scoping Review method of research using a qualitative approach. Searching for research data sources used the PRISMA-ScR flow diagram which came from several databases such as Google Scholar, ProQuest, and Science Direct. Where published in the last 5 years (2019-2023). Search results using the database obtained 1524 articles. After that, we checked the research location and the year the article was submitted, 1517 articles did not meet the inclusion criteria. A SWOT analysis was carried out from the seven articles. SWOT analysis is the most appropriate analysis for carrying out drug planning in hospitals. Using SWOT analysis makes it easier to determine opportunities and strategies that will be used in the next process.

Keywords: *SWOT analysis, medication planning, hospital, Indonesia*

INTRODUCTION

According to WHO (World Health Organization), a hospital is an integral part of a social and medical organization, which functions to provide complete health services, both curative and preventive, to the community (Kumayas et al., 2023). Hospitals are also important health service institutions for the community with their characteristics by developments in health science, modern technology, and the socio-economic life of the community to realize improvements in more advanced and quality services (L et al., 2022).

Pharmaceutical services are one of the main services in hospitals which are carried out directly by the Hospital Pharmacy Installation (IFRS) which is oriented towards patient service, providing quality medicines, including affordable clinical pharmacy services for all levels of society (L et al., 2022). The availability of medicines in hospitals can also be managed well by planning and procurement, where planning the need for medicines is also a process of selecting the type and determining the quantity according to the medicine needs (San et al., 2020).

Hospital pharmacy installations have an important role in managing medicines such as selection, planning, procurement, storage, distribution, and use of medicines. Planning drug needs is an important factor in selecting the type and determining the amount of drug needed. Good drug procurement planning has a superior role in ensuring that drug stocks are tailored to health service needs with guaranteed quality so that they can be obtained when needed. If planning and procurement of drugs are not managed using a good system, it will result in drug accumulation and drug shortages (Rarung et al., 2020). Medicines are an essential component

of a health service, so good and correct medication management is needed that is effective and efficient on an ongoing basis (Nisa, 2021).

Formulating a strategy must begin with a situation analysis. In this situation analysis process, strategic managers are required to find a strategic fit between external opportunities and internal strengths, in addition to paying attention to external threats and internal weaknesses. This analysis process is called a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats), with this analysis, the types of drugs that are needed can be identified (Rohmani et al., 2016). selection, procurement, distribution, and use.

According to Febriawati (2013) in carrying out drug planning in IFRS you must go through the following stages: 1). The selection stage functions to determine the drugs that are needed according to the number of patients/visits and hospital disease patterns, 2). The Usage Compilation Stage functions to determine the types of medicines used every month in the service unit for a year and as comparative data for optimum stock, 3). The Needs Calculation Stage functions to avoid problems with drug shortages or excess drugs (Febrianti, 2013). 4). The availability of sufficient funds will affect services. Because with the availability of adequate funds, procurement can be carried out according to planning (Mahdiyani et al., 2018). Based on the background above, this research aims to use the Scoping Review approach to determine the SWOT analysis of drug planning in hospitals.

METHOD

The method used in this research was a Scoping Review which was carried out to determine the SWOT analysis of drug planning in hospitals. The framework used is Arskey and O'Malley (2015) which consists of several stages, namely: (a) Identifying research questions, (b) Identifying relevant articles, (c) Carrying out thorough article selection, (d) Carrying out mapping data with tables, compiling, summarizing and reporting results (Tricco et al., 2016).

Identify Questions

Research questions were formulated using the concepts P (Population), C (concept), and C (Context) recommended by the Joanna Briggs Institute for Scoping Review.

P (Population)	Indonesia and Abroad
C (Concept)	SWOT Analysis
C (Context)	Drug planning in hospitals

Identify Relevant Articles

An online database search was carried out in the literature selection using 3 databases ScienceDirect, Google Scholar, and ProQuest.

No	Database	Keyword
1	Science Direct	"SWOT analysis" drug planning in hospitals
2	Proquest	SWOT analysis of hospital drug planning
3	Google Scholar	SWOT Analysis of Drug Planning in Hospitals or SWOT Analysis of Drug Planning in Indonesia

The articles selected were those that met the inclusion criteria. Inclusion criteria are 1) research articles in Indonesian and English 2) articles published in 2019-2023 and full text 3) Descriptive qualitative research type 4) Articles can be accessed in full 5) Place of research in Indonesia 6) Exclusion criteria are articles that are not suitable Population, concept, and context, such as discussing drug planning in community health centers and clinics, articles used in the SINTA journal 4,5,6 and not original articles.

The keywords used in the search were drug planning, hospital, SWOT analysis, and Indonesia. Literature search results were collected and compiled using Mendeley citation management software.

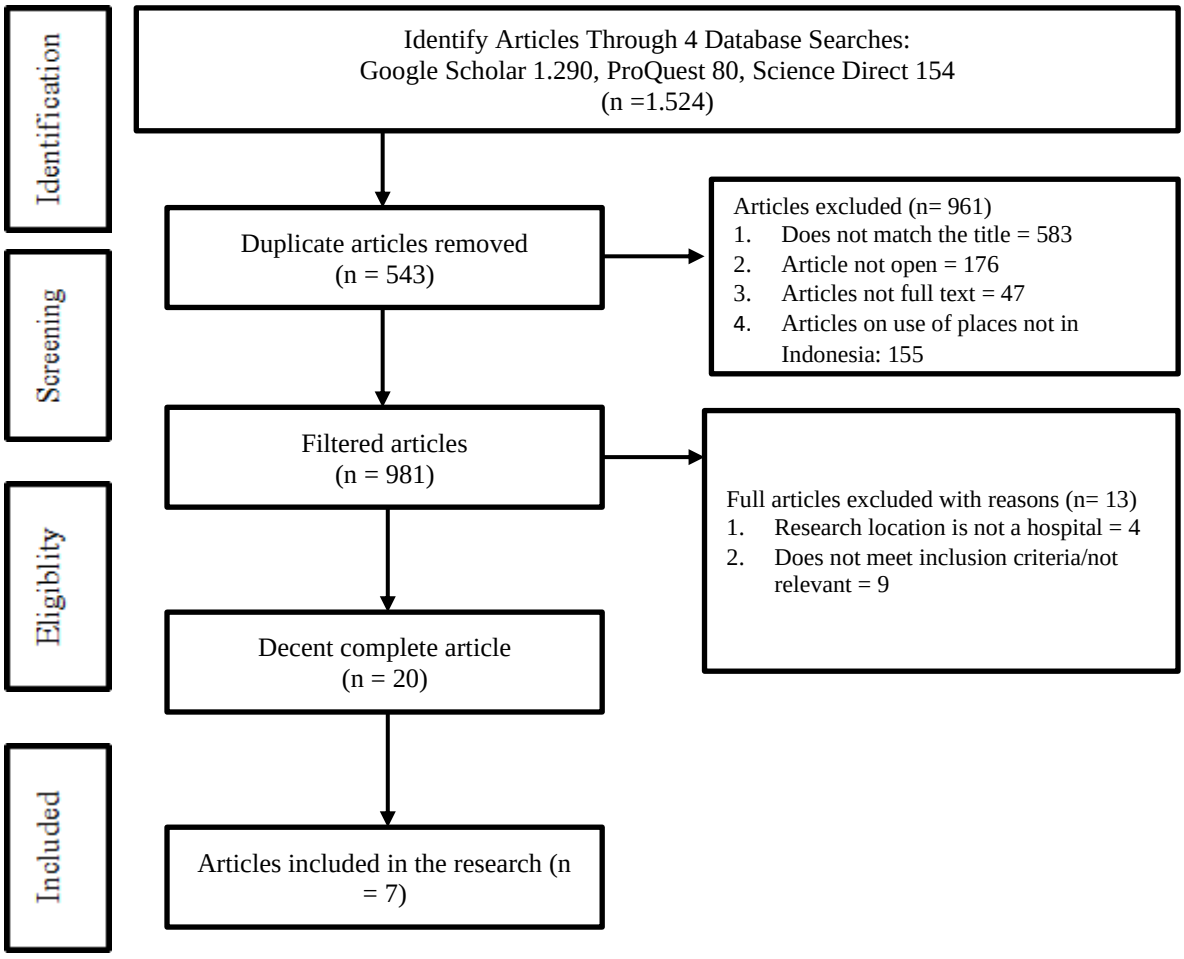

Figure 1. PRISMA-ScR Method Flowchart of Article Search and Selection

RESULTS AND DISCUSSION

The research results can be seen in the following table:

Table 1. Title, Research Place, Research Methods, Data Processing, Cases and Results

No	Researcher	Title	Place of Research	Type and Method	Data Processing	Case	Results
1	(Safitri et al., 2021)	Evaluation of drug planning	Mitra Siaga Regency	Qualitative descriptive with	SPSS version 23	Procurement problems with	According to needs planning (100%) and the

No	Researcher	Title	Place of Research	Type and Method	Data Processing	Case	Results
		and procurement at the pharmacy installation of the standby partner hospital Tegal Regency	Hospital Tegal	questionnaire assessment and interview of the head of IFRS		third parties (suppliers) Delays in ordering medicines due to late BPJS payments Orders are made online	drug procurement process (90.5%) by the 2019 Standard Technical Instructions for Pharmaceutical Services in Hospitals
2	(Citraningtyas et al., 2022)	Development Strategy for Pharmacy Installation at a Hospital In Bitung City Using Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis Method	Hospital Pharmacy Installations in the Bitung City	Qualitative cross-sectional	Table and narrative	1. Lack of patient satisfaction 2. Pharmacist-patient consultation/counseling has not been carried out 3. The patient's growth rate fluctuates 4. Medication management is not optimal 5. Promotion of IFRS to the community is non-existent	Pharmacy installations in hospitals are in quadrant II, so an ST strategy is needed, to improve pharmaceutical service activities in hospitals that focus on clinical pharmacy services by expanding pharmacists and employee training to increase human resources, so that they can collaborate and utilize technology which exists
3	(Kumayas et al., 2023)	Evaluation of the implementation of Health Regulation Number 72 of 2016 Regarding the management of planning, procurement, and control of drugs in hospital pharmacy installations General area of North	General area of North Sulawesi Province Hospital pharmacy installations	Observational Type Qualitative Method	Table and narrative	Changing drug waiting times drug shortages because the stock buffer is only 10%, which does not match the waiting time procurement	Drug planning for the North Sulawesi Provincial General Hospital, by RI Minister of Health Regulation No. 72 of 2016 concerning Pharmaceutical Service Standards in Hospitals.

No	Researcher	Title	Place of Research	Type and Method	Data Processing	Case	Results
		Sulawesi province					
4.	(Afiya et al., 2022)	Analysis of Drug Logistics Management in Qim Batang Hospital Pharmacy Installation in 2021.	Qim Batang Hospital Pharmacy Installation	Method Qualitative	Table and narrative	-	the planning process, procurement 97.3% very good category, 100% acceptance good category, 100% storage very good category, control 100% good category, destruction 90.9% very good category and administration 100% category Very good.
5	(Pratama et al., 2022)	Strategy for Development of Pharmacy Installations at Muhammadiyah Siti Khodijah Hospital Gurah Kediri	Pharmacy Installation at Muhammadiyah Siti Khodijah Hospital Gurah Kediri	exploratory descriptive	Tables and narration	1. IFRS does not yet have a Vision and Mission 2. Long drug service time 3. The number of HR in IFRS is not yet available adequate 4. Suggestions and infrastructure that are not yet available and adequate 5. Not yet implemented visits to pharmacy staff to the ward 6. Pharmacy depot for hospitalized patients outpatient and inpatient in one 7. The doctor prescribed a new medicine not yet on the formulary Hospital	Based on a SWOT analysis of the internal and external conditions of the installation The Pharmacy of Muhammadiyah Hospital Siti Khodijah Gurah Kediri is in a position in quadrant I. This shows that IFRS Muhammadiyah Siti Khodijah Gurah Kediri has greater strengths and opportunities rather than weaknesses and threats.

No	Researcher	Title	Place of Research	Type and Method	Data Processing	Case	Results
						8. Employee job satisfaction is still low 9. Internal coordination is still lacking Good	
6	(Husna et al., 2011)	SWOT Analysis in Formulating Strategies to Increase Patient Satisfaction Outpatient Pharmacy Installation Hospital x Samarinda	Hospital Pharmacy Installation x Samarinda	Descriptive Qualitative and quantitative	method Servqual and swot analysis	IFRS X Samarinda outpatient satisfaction analysis shows a negative gap in the five service dimensions. A negative gap indicates that patient satisfaction has not been achieved.	Results: SWOT analysis based on the internal and external environmental analysis of IFRS has great opportunities but also faces weaknesses
7	Kumayas et al., 2023; Ngir et al., 2023)	Analysis of Medicine Logistic Management in the Pharmacy Installation of Malinau District Hospital	Malinau District Hospital	descriptive qualitative	Tables and narration	The availability of medicines is still not being implemented properly, because there are still empty medicine stocks and expired medicines have been found piled up in warehouses that have not been destroyed.	Internal environmental factors include drug management, at the selection stage only 6% of drugs are by the DOEN, at the procurement stage, the average percentage of funds available to the total funds needed is 95.6%, at the distribution stage, there are no expired drugs in 2009, and at the use stage, the speed of outpatient prescription service time averaged 30.47 minutes for non-concocted prescriptions and 60.01 minutes for concocted prescriptions.

Hospitals have the task of providing health services, one of these services is pharmaceutical services. Pharmaceutical services are direct and responsible services to patients who are responsible for pharmaceutical assistance to improve the patient's quality of life (M et al., 2020). Pharmaceutical services in hospitals are carried out by the Hospital Pharmacy Installation (IFRS). Pharmaceutical services include a revenue center where 90% of pharmaceutical supplies are used in health services in hospitals, namely drugs, chemicals, radiological materials, consumable medical materials, medical devices, and medical gases and 50% of hospital income is obtained from pharmacy management. Procurement is one of the complex logistics management functions because procurement is technical. Procurement is the process of obtaining goods or medicines needed to support health services in hospitals which includes decision-making and action to determine the specific quantity of medicines, the price to be paid, the quality of the medicines received, delivery of goods on time, the process runs smoothly without requiring excessive time and energy.

The drug management system in pharmacy installations is regulated based on Minister of Health Regulation Number 72 of 2016 concerning Pharmaceutical Service Standards in Hospitals. Observation results regarding drug management in hospitals are less than optimal in terms of procurement. Effective drug distribution requires effective system design and management, including ensuring consistent drug supply, maintaining drug quality during distribution, and minimizing unused drugs due to damage or expiration (Citraningtyas et al., 2022). This must be achieved by preparing a proper drug plan with proper analysis.

Based on the table above, a SWOT analysis of drug planning in hospitals from one researcher to another has formulated that the strengths are implementing a one-stop pharmacy, planning according to the Technical Instructions for Pharmaceutical Service Standards in Hospitals (SOP), adequacy of funds needed, director's policy which supports hospital pharmacy activities, there is good cooperation with suppliers, there is good communication between the pharmacy and other health workers, and the planning process is carried out by the SPF pharmaceutical logistics team and there is a RAB (Cost Budget Plan). Weaknesses include delays in ordering medicines due to late BPJS payments, orders made online, the hospital planning team not functioning optimally, annual medicine planning still low, the mismatch between the presentation of the number of medicine items procured and that planned, lack of communication between patients with pharmacy employees and the IFRS location is far from the ward and the infrastructure is not optimal. Opportunities include potential collaboration with companies, potential economic growth in line with population growth, high patient demands for effective and efficient IFRS services, patient needs for drug information and drug counseling services, and the important role of Pharmacists in the Pharmacy and Therapeutics Committee (PFT). Threats include patients not being satisfied with IFRS services, disease prevalence patterns always changing, customer demands for completeness of medicines and quality of human resources in the competitive era of globalization (Rohmani et al., 2016; Nisa, 2021; Husna et al., 2021; Kumayas et al., 2023; Kumayas et al., 2023; Ngir et al., 2023).

Based on the SWOT analysis in drug planning, each pharmacy installation in a hospital has strengths and opportunities so that it can take advantage of existing opportunities to create strategies that must be implemented. The strategy that must be implemented in this condition is to support an aggressive growth policy (Growth Oriented Strategy), seen from several aspects, namely selection, planning and procurement, distribution and use which requires

support from the organization, availability of funding (financing sustainability), information management and development of human resources within it. In line with this, the Technical Guidelines for Standards of Pharmaceutical Services in Hospitals published by the Indonesian Ministry of Health in 2019 also states that drug management activities consist of the stages of selection, needs planning, procurement, receipt, storage, distribution, destruction and withdrawal of drugs, control of drug supplies. , as well as administration. Drug management aims to ensure the availability of drugs that are safe, efficacious, and of good quality as well as increase the rational use of drugs to achieve patient safety (Indriana et al., 2021).

One factor that can guarantee the availability of quality medicines is monitoring the medicine procurement process. One of the supporting management in drug procurement is Human Resources. In Kumayas et al's (2023) research, the availability of human resources at the IFRS Regional Hospital of North Sulawesi Province consisted of 10 Pharmacists, 11 Pharmaceutical Technical Personnel, and 3 Warehouse staff. Pharmaceutical personnel are available but their numbers are still lacking. Based on Minister of Health Regulation Number 72 of 2016, one pharmacist is required each for inpatient, outpatient, and pharmaceutical service activities in certain rooms such as the Emergency Unit (ER), Intensive Care Unit (ICU), and drug information services. Meanwhile, based on Minister of Health Regulation Number 56 of 2014 concerning the Classification and Licensing of Hospitals, Article 43 concerning human resources for class B public hospitals, especially pharmaceutical staff, consists of at least 1 pharmacist as the head of IFRS. So it is necessary to gather new health workers, namely pharmacists and pharmaceutical technical personnel (Kumayas et al., 2023).

Apart from human resources, what needs to be considered is the method used. One of the most frequently used methods is the consumption method. The consumption method is based on the analysis of consumption data for pharmaceutical supplies in the previous period through adjustments and corrections, the needs for the future period are calculated by considering lead time and safety stock is the steps for calculating the need for pharmaceutical supplies. Based on research by Agustini et al (2020), drug planning for outpatient BPJS Health patients using the consumption method provides results that match planning with drug use (Agustini et al., 2020).

CONCLUSION

This research concludes that in planning drugs in hospital pharmacy installations based on SWOT analysis, several crucial aspects need to be considered. First, planning for drug needs must comply with the Technical Instructions for Pharmaceutical Service Standards by implementing a one-stop pharmacy system. Second, drug planning should be carried out by detailing consumption methods, considering dominant disease patterns, and based on detailed drug stock records. Apart from that, increasing the quality and quantity of human resources (HR) in the pharmaceutical sector is an important step, which can be achieved through training or seminars. Efforts to improve pharmaceutical services by focusing on patient needs, as well as implementing hospital policies to separate inpatient depots from outpatient depots, were also identified as important factors in increasing the efficiency and effectiveness of pharmaceutical installations. Finally, developing facilities and infrastructure as well as good budget planning are key elements in supporting optimal drug planning in hospitals. This conclusion summarizes

strategic recommendations for improving medication management in the context of hospital pharmacy installations.

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