

ANALYSIS OF PHARMACEUTICAL SERVICES IN OUTPATIENT SERVICES OF PHARMACEUTICAL INSTALLATION AT BAUBAU CITY HOSPITAL

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A B S T R A C T

Pharmaceutical services in the outpatient pharmacy installation of the hospital involve direct and responsible care related to pharmaceutical products, aimed at improving patient quality of life. This study aims to evaluate the pharmaceutical services at the Outpatient Pharmacy Installation of RSUD Kota Baubau. The research uses a descriptive qualitative method with a questionnaire. The study population consists of all pharmacists at the Outpatient Pharmacy Installation of RSUD Kota Baubau, with the sample including 2 respondents: the Head of the Pharmacy Installation and a pharmacist at the Outpatient Pharmacy Installation of RSUD Kota Baubau. The results indicate that, overall, the standards of Pharmaceutical Services (PK) at the Outpatient Pharmacy Installation of RSUD Kota Baubau comply with the standards set out in the Ministry of Health Regulation No. 72 of 2016, with the following percentage values: PK 1 Standard Operating Procedure (SOP) for Pharmacy Management at 100%, PK 2 Standard Operating Procedure (SOP) for Clinical Pharmacy Services at 90.90%, PK 3 Drug Information Services at 83.3%, PK 4 Evaluation at 100%, PK 5 Prescription at 100%, PK 6 Visit at 100%, PK 7 Medication Therapy Monitoring (MTM) at 100%, PK 8 Drug Utilization Evaluation (DUE) at 100%, and PK 9 Adverse Drug Reaction Monitoring (ADR) at 100%. The total percentage of compliance with the pharmaceutical service standards in the outpatient service is 97.13%.

INTRODUCTION

Outpatient services are medical services for a patient for healing that are carried out free of the person being treated having to stay in the hospital (Haryanto, 2015). Pharmaceutical services are now starting to change their meaning from (*drug-oriented*) to (*patient-oriented*). This change in the frame of thinking is known to use the term (*Pharmaceutical care*) or pharmaceutical service care (Ministry of Health, 2011). Pharmaceutical care, meaning part of pharmaceutical practice that requires face-to-face communication by pharmacists to patients to solve patient rehabilitation problems, is related to drugs that aim to improve the quality of life of patients (Brata and Azizah, 2018).

With regard to the impact of the framework on pharmaceutical services, it is expected that pharmacists will be able to increase patient education, knowledge, and engagement, which will increase the likelihood of interactions between patients and doctors. The pharmacological assistance mentioned above includes the provision of patient care, medication administration, implementation of research procedures, and support for pharmaceutical and health issues. This also includes the use of consultation, information, and education (KIE) services for patients and working on follow-up regarding patient care if necessary to achieve the patient's goals and having appropriate documentation in place (Brata & Azizah, 2018).

In principle, pharmaceutical services are the main revenue center and occasionally provide supporting assistance. This shows that about 90% of the health services in hospitals are related to pharmaceuticals (medicines, chemicals, radiology, medical consumables, medical devices, and medical gases), and 50% of all hospital supplies are sourced by pharmaceuticals (Suciati and Adisamito, 2006).

One of the goals of Pharmaceutical care (PC) is to improve the quality of life of patients and to accept that there will be a good clinic. In PC practice, qualified pharmacists are needed and can foster good relationships using other health workers in treating patients. Cooperation between pharmacists and other health workers is very crucial, especially in dealing with chronic disease patients. Clinical pharmacy services mean an important part in improving the quality of therapy using the cheapest cost (Suryanita et al, 2021).

The main danger factor that can damage the global health system is the use of unreliable treatment practices and the associated side effects. Therefore, it is recommended that hospitals comply

with regulations in administering medications and create a safer medication administration system that will ultimately reduce drug-related side effects (Sabarudin et al, 2020).

The lack of optimization in pharmaceutical services is also reflected in a study conducted in NTB Province in 2012 regarding pharmaceutical services in class C general hospitals. The average score of achieving pharmaceutical service standards in the three hospitals is still below 75%, namely 52.17% in Hospital A, 54.78% in Hospital B, and 44.35% in Hospital C (Brata and Azizah, 2018).

This study identifies several obstacles in the implementation of optimal pharmaceutical services, including: lack of hospital management support for pharmaceutical services, facilities and infrastructure as support that are still inadequate, shortage of pharmaceutical personnel in pharmaceutical installations, inadequate archives, along with inadequate continuous evaluation of efforts to improve performance in pharmaceutical installations when running pharmaceutical services (Siddrotullah, 2012).

The Baubau City Hospital Pharmacy Installation is an installation under the head of the nursing field. Pharmacy installations are managed by a pharmacist who leads the management of pharmaceutical supplies, supervises the quality of pharmaceutical services, and provides clinical pharmacy services. Clinical pharmacists are in charge of clinical pharmacy services, while pharmaceutical technicians support pharmacists in the management of pharmaceutical supplies and clinic services. In addition, there are also administrative personnel involved (Ministry of Health of the Republic of Indonesia, 2016).

Pharmaceutical services at outpatient depots are the heart of the original drug distribution system. This depot plays an important role in becoming a center for controlling and distributing medicines to patients. Broadly speaking, the primary purpose of pharmaceutical services at outpatient depots is to ensure patient safety, increase the effectiveness of treatment, claim the availability of drugs, and maintain drug quality (Rambe et al, 2022).

METHODOLOGY

Time and Place of Research

The process of taking data for this study was carried out in June 2024 at the Outpatient Service of the Pharmacy Installation of the Baubau City Regional General Hospital (RSUD).

Research Population and Sample

The population of this research is all pharmacists in the Outpatient Service of the Pharmaceutical Installation of Baubau City Hospital and the sample of this research comes from 2 pharmacists as respondents, namely the Head of Pharmaceutical Installation and Pharmacist at the Outpatient Service of the Pharmaceutical Installation of the Baubau City Hospital.

Data Type

The data collection technique used in this research process uses the type of primary information. Primary information is information obtained directly through a questionnaire to Pharmacists at the Outpatient Service of Pharmacy Installation at Baubau City Hospital.

Data Collection Techniques

Inclusion and exclusion criteria used as respondents:

The inclusion criteria are authorized officials and pharmacists at the Pharmacy Outpatient Service Installation of Baubau City Hospital.

The exclusion criteria are pharmacists outside the Outpatient Services of the Pharmacy Installation of Baubau City Hospital.

The information collection technique used in this research step uses a questionnaire. The following is the procedure for collecting research data as follows:

Submit an application for a research permit at the Baubau Polytechnic campus.

Submit an application for a research permit to the Baubau City DPMPTSP.

Submit a research permit to the Head of Pharmaceutical Installation of Baubau Hospital.

Distribute questionnaires formally to pharmacists at the Outpatient Service of the Pharmacy Installation of Baubau Hospital.

Data Analysis

The information is analyzed descriptively and displayed in the form of a narrative. Using the Guttman scale with a score for existing questions will be given a score of 1 and answers not given a value of 0 and for wrong questions, reactions will be given a value of 0 and reactions will not be given a value of 1. The answer value of each statement is summed, then a percentage.

$$Persentase = \frac{jumlah\ nilai}{Jumlah\ parameter\ yang\ dinilai} \times 100\%$$

Outpatient services in pharmaceutical installations are considered to meet the standards if the average percentage value of achievement is more than 75%. On the other hand, if the value is less than 75%, it is declared not to meet the standard (Cesya et al., 2024). To provide an overview of the services of each standard, an evaluation of homogeneous average values (mean test) was used to obtain values using a percentage (%), and the average value obtained was compared to the standard percentage, namely (75%).

RESULTS AND DISCUSSION

Research has been carried out on pharmaceutical service standards in the Street Patrol Service at the Baubau City Hospital Pharmacy Installation by testing pharmaceutical service indicators (PK) in accordance with the Regulation of the Minister of Health No. 72 of 2016. These indicators include PK 1 Standard Operating Procedures (SPO) for Pharmaceutical Management, PK 2 Standard Operating Procedures (SPO) for Clinical Pharmacy Services, PK 3 for Drug Information Services, PK 4 for Counseling, PK 5 for Prescription Assessment, PK 6 Visite, PK 7 for Drug Therapy (PTO) Monitoring, PK 8 for Drug Use Evaluation (EPO) and PK 9 for Drug Side Effect Monitoring (MESO). Data was obtained through filling out questionnaires and interviews with pharmacists at the Pharmacy Installation of Baubau City Hospital. The following are the results of obtaining pharmaceutical service standards.

Table 1. Standard Operating Procedures (SPO) for the Management of Pharmaceutical Preparations at the Pharmacy Installation of Baubau City Hospital

It	Pharmaceutical Service Standards	Exist	Not
PK 1	Having a Standard Operating Procedure (POS) for the management of pharmaceutical preparations includes:		
	1 Drug Selection	1	
	2 Drug Planning	1	
	3 Drug Procurement	1	
	4 Drug Acceptance	1	
	5 Drug Storage	1	
	6 Drug Distribution	1	
	7 Destruction of Drugs	1	
Shoes			7
Percentage			100%
Category			Meet the standards

From Table 1. It can be seen that the Management of Pharmaceutical Preparations in the Pharmacy Installation of Baubau City Hospital has met synchronous standards based on the Regulation of the Minister of Health No. 72 of 2016. The Management of Pharmaceutical Preparations at the Pharmacy Installation of Baubau City Hospital includes Selection, Planning, Procurement, Receipt, Storage, Distribution and Destruction of drugs.

Permenkes Number 58 of 2014 explains that drug selection is the process of determining the type of drug that is suitable for needs. Planning is a step to determine the quantity and schedule of drug procurement based on the results of the selection, to ensure that criteria such as the right type, appropriate amount, right time, and efficiency are met.

Table 2. Standard Operating Procedures (SPO) for Clinical Pharmacy Services at the Pharmacy Installation of Baubau City Hospital

No	Pharmaceutical Service Standards	Ada	No
HP 2	Have a Standard Operating Procedure (POS) for Clinical Pharmacy Services which includes:		
1	Assessment of prescriptions or treatment instructions	1	
2	Administration of medication	1	
3	Tracking of drug use history	1	
4	Provision of Drug Information (PIO)	1	
5	Counseling	1	
6	Visit	1	
7	Drug therapy monitoring (PTO)	1	
8	Medication use evaluation (EPO)	1	
9	Drug side effect surveillance (MESO)	1	
10	Extension		0
11	Provision of special preparations	1	
Shoes			10
Percentage			90,90%
Category			Meet the standards

Based on Table 2. It can be reviewed that the standard Operational mechanism (SPO) for Clinical Pharmacy Services at the Baubau City Hospital Pharmacy Installation is sufficient for synchronous standards using According to the Minister of Health Regulation No. 72 of 2016, the Baubau City Hospital Pharmacy Installation has a Standard Operating Mechanism (SPO) for Clinical Pharmacy Services which includes assessment of prescriptions or treatment instructions, drug administration, tracking of drug use history, Providing drug information, counseling, visits, drug therapy monitoring, drug use evaluation, and drug side effect monitoring.

Prescription assessment is the process of examining prescriptions to detect drug-related issues. Prescription assessments are carried out to analyze if there are any problems, and if errors or discrepancies are found, the doctor who wrote the prescription can be consulted, so that the risk of medication errors can be minimized. Drug use history tracking is the process of finding information about all drugs or pharmaceutical preparations that are currently in use.

Drug issue service (PIO) is an activity in the provision and provision of information and drug recommendations that are independent, thorough, unbiased, modern and comprehensive carried out by a pharmacist to doctors, nurses and patients as well as other fractions outside the hospital. Counseling is an activity by giving advice related to drug therapy from pharmacists to patients or families. Visite is an activity carried out by a pharmacist by visiting inpatients which is carried out independently or in a team to observe patient conditions exclusively, monitor drug therapy, investigate drug-related problems, and provide drug issues to doctors and patients.

Drug Therapy Monitoring (PTO) is a process that is carried out to ensure that drug therapy is carried out safely, appropriately, and effectively. The provision of information and drug recommendations that are independent, meticulous, unbiased, up-to-date, and comprehensive is carried out by pharmacists to doctors, nurses, patients, and other parties outside the hospital. Counseling involves pharmacists providing advice on drug therapy to patients or their families. Visite is an activity in which pharmacists visit inpatients, both individually and in teams, to assess a patient's condition, monitor drug therapy, investigate drug-related issues, and provide medication information to doctors and patients.

According to the Ministry of Health of the Republic of Indonesia (2002), health counseling is an effort to improve knowledge and skills with the aim of changing healthy living behaviors in individuals, groups, or communities through education or instruction. Dispensing of sterile preparations must be done in pharmaceutical installations using aseptic techniques to ensure sterilization and product stability, as well as anticipating officers from harmful substances and preventing errors in the use of drugs.

Table 3. Drug Information Services at the Pharmacy Installation of Baubau City Hospital

No	Pharmaceutical Service Standards	Ada	No
PK 3	Drug Information Services		
	Drug information service actions, namely:		
1	Delivering drug information to patients and healthcare workers	1	
2	Responding to questions	1	
3	Distribute newsletters, leaflets, posters, or newsletters	1	
4	Providing information for KFT in the preparation of the RS formulary	1	
5	Implementing health promotion in hospitals (PKRS)		0
6	Conducting training for pharmaceutical workers or other health workers	1	
Score		5	
Percentage		83,3%	
Category		Meet the standards	

According to Table 3. It can be reviewed that the drug news service at the Baubau City Hospital Pharmacy Installation has met synchronous standards using the Minister of Health Regulation No. 72 of 2016. Drug information service activities at the Baubau City Hospital Pharmacy Installation include drug info gifts to patients and health workers, Replying to questions from patients, distributing bulletins / leaflets / posters / news letters, Providing information for KFT (Pharmacy and Therapy Committee) in the preparation of hospital formularies and Holding briefings for pharmacy or other health energy plants. However, the Baubau City Hospital Pharmacy Installation does not carry out hospital health promotion (PKRS). The consequences that can occur if PKRS is not implemented include causing an increase in the number of patients using unhealthy behaviors that indicate a high incidence of disease (Agustiawan, 2022). In the PKRS application at the sick residence, there should be a reference to see the fulfillment of the health promotion standards in the hospital and the patient's peace. According to the Ministry of Health of the Republic of Indonesia in Permenkes No. 44 of 2018, PKRS was created as an effort to maximize the quality of health services in hospitals and fulfill the mandate of Law No. 44 of 2009.

Table 4. Counseling at the Pharmacy Installation of Baubau City Hospital

No	Pharmaceutical Service Standards	Ada	No
HP 4	Counseling		
1	Has the pharmacist counseled patients suffering from HIV/AIDS, TB, or chronic diseases?	1	
2	Has the pharmacist carried out counseling for patients going home?	1	
Shoes		2	
Percentage		100%	
Category		Meet the standards	

According to Table 4. drug counseling services at the Baubau City Hospital Pharmacy Installation have been based on the basis applied by the Minister of Health Regulation No. 72 of 2016. At the Baubau City Hospital Pharmacy Installation, pharmacists have carried out counseling to patients with HIV/AIDS, TB, or chronic diseases, and have conducted follow-up counseling to patients.

Table 5. Prescription Assessment at the Pharmacy Installation of Baubau City Hospital

It	Pharmaceutical Service Standards	Exist	Not
PK 5	Prescription review		
	Pharmacists conduct prescription assessments based on:		
	1 Administrative Requirements	1	
	2 Pharmaceutical Requirements	1	
	3 Clinical requirements	1	
Score		3	
Percentage		100%	
Category		Meet the standards	

According to Table 5. above it can be seen that the prescription assessment at the Baubau City Hospital Pharmacy Installation has met synchronous standards according to the Regulation of the Minister of Health No. 72 of 2016. In the prescription assessment at the Baubau City Hospital Pharmacy Installation Pharmacists have carried out synchronous prescription assessments using According to the Minister of Health Regulation No. 72 of 2016, in the prescription assessment at the Baubau City Hospital Pharmacy Installation, pharmacists have carried out prescription assessments in accordance with administrative, pharmaceutical, and clinical requirements.

Prescription screening, also known as prescription review, is an activity in which pharmacists assess prescriptions that include administrative, pharmaceutical, and clinical aspects before a drug is formulated. The goal is to ensure the safety and effectiveness of the prescribed drugs and to optimize the results of therapy.

Table 6. Visite at the Pharmacy Installation of Baubau City Hospital

It	Pharmaceutical Service Standards	Exist	Not
PK 6	Visite		
	1 Pharmacists make a visit with the team	1	
	2 Pharmacists conduct visits independently"	1	
Shoes		2	
Percentage		100%	
Category		Meet the standards	

based on Table 6. above it can be seen that the visite at the Baubau City Hospital Pharmacy Installation has met the synchronous standard based on the Regulation of the Minister of Health No. 72 of 2016. Visite at the Pharmacy Installation of Baubau City Hospital includes Pharmacists conducting visites with the team and Pharmacists conducting visites independently.

In independent visits, recommendations are more focused on patients to improve adherence to the use of drugs, including the terms of use, procedures for use, and important things that must be considered during therapy. Recommendations from pharmacists can include consultation with experts, learning, and coaching on the terms of using the drug. On the other hand, during the team visit, the proposal was more aimed at the treating doctor to maximize the impact of the therapy, especially in terms of drug selection. Recommendations should be based on information coming from the patient, the clinician's clinical history, and the best available evidence. The purpose of this advice is to ensure optimal use of the drug.

Table 7. Drug Therapy Monitoring (PTO) at the Pharmacy Installation of Baubau City Hospital

It	Pharmaceutical Service Standards	Exist	Not
PK 7	Monitoring of drug effect therapy		
	Include:		
	1 Identifying drug-related problems	1	
	2 Providing advice to address drug-related issues	1	
	3 Monitoring and follow-up	1	
Score		3	
Percentage		100%	
Category		Meet the standards	

Based on Table 7. above it can be seen that the monitoring of drug therapy at the Baubau City Hospital Pharmacy Installation has met the standards based on the Regulation of the Minister of Health No. 72 of 2016. Drug therapy (PTO) monitoring at the Baubau City Hospital Pharmacy Installation includes identifying drug-related cases, submitting recommendations for solving drug-related problems and conducting follow-up monitoring.

Drug therapy monitoring (PTO) is a stage that involves various activities that aim to ensure that drug therapy is free from harm, effective, and objective for patients. This process includes an assessment of drug options, dosages, modes of administration, therapy responses, unwanted side effects (ROTDs), and proposed or alternative therapies. To reduce the risk of ROTD, pharmacists monitor potential side effects that may arise from the therapist prescribed. In outpatients, PTO is carried out by monitoring the medication card that is always carried by the patient during control. The medication card records the patient's examination date along with the type and amount of medication the patient receives is the best to obtain optimal therapy.

Table 8. Evaluation of Drug Use in the Pharmacy Installation of Baubau City Hospital

It	Pharmaceutical Service Standards	Exist	Not
PK 8	Drug Use Evaluation (EPO) includes:		
	1 Evaluation of the use of antibiotic drugs	1	
	2 Evaluation of generic drug use	1	
	3 Evaluation of the average number of drug items per prescription	1	
Score		3	
Percentage		100%	
Category		Meet the standards	

Based on Table 8. Above it can be seen that the evaluation of the use of drugs in the Pharmacy Installation of Baubau City Hospital has met the standards regulated in the Regulation of the Minister of Health No. 72 of 2016. This evaluation includes the use of antibiotics, the average use of generic drugs, and the average number of drug items per prescription.

Drug use evaluation aims to gain knowledge about drug use patterns, analyze these patterns in a certain period of time, provide recommendations for improvement in drug use and assess the impact of medication regarding drug use. To prevent antibiotic resistance, evaluation of the use of antibiotics that exceed the dose needs to be carried out as the right path. Evaluation of drug use can be done with a quantitative or qualitative approach. The ATC system is used to classify drugs based on pharmacology, chemical compounds, and therapist function.

Table 9. Monitoring of Drug Side Effects (MESO) at the Pharmacy Installation of Baubau City Hospital

It		Pharmaceutical Service Standards	Exist	Not
PK 9		Drug Side Effect Monitoring (MESO), including:		
	1	Pharmacists have identified the possibility of drug side effects	1	
	2	Pharmacists have reported the incident to the National MESO Center	1	
Score				2
Percentage				100%
Category				Meet the standards

From Table 9 above, it can be seen that the monitoring standards at the Baubau City Hospital Pharmacy Installation are suitable based on the Regulation of the Minister of Health No. 72 of 2016. At the Baubau City Hospital Pharmacy Installation, pharmacists have identified possible drug side effects and have reported them to the National MESO Center. Drug Side Effect Monitoring (MESO) is the process of monitoring any adverse or unwanted response of a drug used at normal doses for diagnostic and therapeutic purposes. MESO activities at Baubau City Hospital are archived into the MESO form, and can be done from pharmacists and other health workers such as doctors, specialists, dentists, midwives, nurses, and other health workers involved in patient care.

CONCLUSION

Based on the results of the study, it can be concluded that overall Pharmaceutical Services (PK) in the Outpatient Services of Pharmaceutical Installation of Baubau City Hospital have met the Pharmaceutical Service Standards in accordance with the Regulation of the Minister of Health No. 72 of 2016 with the value of PK 1 Standard Operational Procedures (SPO) for Pharmaceutical Management 100%, PK 2 Standard Operational Procedures (SPO) for Clinical Pharmacy Services 90.90%, PK 3 Drug Information Services 83.3%, PK 3 Counseling 100%, PK 4 Assessment 100%, PK 5 Prescriptions 100%, PK 6 Visite 100%, PK 7 Drug Therapy Monitoring (PTO) 100%, PK 8 Drug Use Evaluation (EPO) 100% and PK 9 Drug Side Effect Monitoring (MESO) 100%.

The limitations of this study are the lack of time and access to research permits and the busyness of outpatient services for pharmaceutical installations, which makes it difficult for this study to obtain respondent data from the pharmacist in charge.

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