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**The Role Of Pharmacists In Medication Prevention Error In Hospital**Mukriani<sup>1\*</sup><sup>\*1</sup>Nursing Study Program, STIKes Gunungsari Makassar, Indonesia**ABSTRACT**

**Background:** Medication errors are a major problem for patient safety in hospitals, and can occur at any stage of the drug use process, from prescribing to monitoring therapeutic effects. Pharmacists, as healthcare professionals with specialized competencies in the field of drugs, play a strategic role in preventing medication errors.

**Objective:** This article examines the role of pharmacists in preventing medication errors in hospitals.

**Methods:** This article was written using literature review method, reviewing national and international journals, pharmacy textbooks, and relevant patient safety guidelines.

**Results:** The study shows that the active involvement of pharmacists in the prescribing, dispensing, providing drug information, and monitoring drug therapy can significantly reduce the incidence of medication errors.

**Conclusion:** Pharmacists play a crucial role in improving patient safety by preventing medication errors in hospitals. Optimizing the role of pharmacists requires support from hospital policies and interprofessional collaboration.

**Keywords:** Pharmacist, Medication Error, Patient Safety, Hospital

\*Correspondent Author: Mukriani

\*e- mail: [mukriani17@gmail.com](mailto:mukriani17@gmail.com)





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**1. Introduction**

Patient safety is a fundamental principle in providing quality healthcare services in hospitals. One patient safety issue that remains a major global challenge is medication error, namely an error that occurs in the process of using medication that has the potential or actual effect of causing injury to the patient. Medication Errors can occur at various stages, starting from prescribing, preparation, distribution, administration of drugs, to monitoring therapy.

The World Health Organization (WHO) reports that medication Medication errors contribute to significant economic losses and are a major cause of adverse events in healthcare facilities. Medication errors can lead to increased morbidity, mortality, length of hospital stay, and healthcare costs. Therefore, medication prevention is crucial. Error prevention is a top priority in patient safety programs in hospitals.

Medication Errors are multifactorial and can be caused by various factors, such as lack of communication between healthcare professionals, high workloads, non-standardized prescribing systems, and limited knowledge about medications. In this context, pharmacists hold a strategic position because they possess specialized competencies in the safe and rational management and use of medications.

The role of pharmacists in healthcare has evolved significantly. Pharmacists no longer focus solely on managing medication logistics but are also actively involved in clinical pharmacy services. Pharmacists play a role in reviewing prescriptions, providing drug therapy recommendations, educating patients and healthcare professionals, and monitoring therapeutic effects and side effects.

Various studies have shown that the involvement of pharmacists in the health care team can reduce the number of medication errors. significantly reduce errors. Pharmacists are able to identify potential dosing errors, drug interactions, duplication of therapy, and inappropriate medication use in specific patients. Furthermore, the education pharmacists provide to patients and healthcare professionals contributes to improved medication compliance and safety.

In Indonesia, regulations regarding pharmaceutical services in hospitals have emphasized the role of pharmacists in ensuring patient safety. However, in practice, the role of pharmacists in preventing medication errors is still limited. Error management is not optimal across all hospitals. Limited numbers of clinical pharmacists, administrative workloads, and a lack of interprofessional collaboration remain obstacles.

Based on this description, a comprehensive study is needed regarding the role of pharmacists in preventing medication abuse. Errors in hospitals are an effort to improve patient safety and the quality of healthcare services. This article is expected to provide a comprehensive overview of pharmacists' contributions and serve as a basis for strengthening clinical pharmacy practices in hospitals.





## 2. Research Methods

### a. Types and Design of Writing

This article is a literature review narrative review that aims to examine and synthesize various scientific sources related to the role of pharmacists in medication prevention error in the hospital.

### b. Data source

The data used is secondary data obtained from:

- 1) Reputable national and international scientific journals
- 2) Pharmacy and patient safety textbook
- 3) Official guidelines and regulations regarding pharmaceutical services and patient safety
- 4) Reports from national and international health organizations

### c. Literature Search Strategy

Literature searches were carried out systematically through several stages:

- 1) Keyword determination, including: *pharmacist role, medication error, patient safety, hospital pharmacy, and pharmaceutical care.*
- 2) Searching electronic databases such as Google Scholar and national journal portals.
- 3) Select articles based on title and abstract to ensure suitability to the study topic.

### d. Inclusion and Exclusion Criteria

1) Inclusion criteria:

- An article discussing the role of pharmacists in medication prevention error
- Publications in Indonesian and English
- Research articles, reviews, and official guidelines

2) Exclusion criteria:

- Articles that are not relevant to hospital pharmacy services
- Popular non-scientific publications
- Articles with unclear sources

### e. Data Analysis Techniques

Data analysis was carried out using a descriptive-analytical approach, with the following steps:

- Data reduction to select relevant information
- Data classification based on medication stages use process
- Synthesis of study results from various sources
- Interpretation of findings based on pharmaceutical theory and practice

### f. Data Validity and Validity

Data validity is maintained through:





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- Use of various literature sources (source triangulation)
- Selection of credible and up-to-date sources
- Consistency with official guidelines and regulations

### g. Writing Ethics

The writing of this article upholds academic ethics by:

- List all library sources clearly
- Avoiding plagiarism
- Presenting information objectively and responsibly

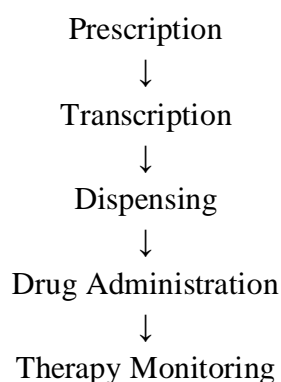
## 3. Results And Discussion

### a. Research Result

#### 1) Medication Error in the Drug Use Process

The results of the literature review show that medication Errors can occur at all stages of the Medication Use Process, from prescribing to monitoring drug effects. Each stage carries a different potential risk of error and requires specific pharmacist intervention.

#### Medication Use Process Flow and the Role of Pharmacists



Pharmacists have a strategic role in almost all stages, both directly and indirectly, in efforts to prevent medication abuse. error.

#### 2) Types of Medication Pharmacist Errors and Interventions

**Table 1.**

**Types of Medication Errors and the Role of Pharmacists in Preventing Them**

Stage	Types of Medication Error	The Role of Pharmacists
Prescription	Incorrect dosage, medication not according to indication, drug interactions	Review the prescription, clarify with the doctor
Transcription	Wrong spelling, wrong reading of the recipe	Verify and confirm prescription
Dispensing	Wrong medication, wrong dose, unclear label	Double check , clear labeling





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Stage	Types of Medication Error	The Role of Pharmacists
Giving	Wrong patient, wrong time, wrong route	Nurse education, 5 correct system
Monitoring	No side effects detected	Monitoring therapy and side effects

This table shows that pharmacists play a role as safety barriers in the drug service system in hospitals.

### 3) The Role of Pharmacists in the Prescribing Stage

The results of the study showed that most of the medication Errors begin at the prescribing stage, especially in patients with complex therapy or polypharmacy. Pharmacists review prescriptions to ensure the accuracy of the indication, dosage, frequency, and potential drug interactions and patient allergies.

Previous research has reported that pharmacist involvement in clinical teams can reduce prescribing errors by 30–50%. This confirms that pharmacists are a crucial component of patient safety systems.

### 4) The Role of Pharmacists in Drug Dispensing and Distribution

At the dispensing stage, the pharmacist is responsible for ensuring that the medication prepared is in accordance with the prescription. Errors at this stage are often caused by similarities in drug names (*lookalikes*), *alike sound alike / LASA*), concentration errors, and unclear labels.

Pharmacists prevent medication error via:

- Double verification system
- Standardization of drug labels
- Grouping of high-risk drugs (*high alert medications*)

### 5) The Role of Pharmacists in Drug Education and Communication

The results of the study showed that lack of drug education was the main factor in medication errors. errors at the medication administration stage. Pharmacists play a crucial role in providing accurate drug information to patients and healthcare professionals.

Effective education includes:

- How to use the medicine
- Side effects and danger signs
- Compliance with taking medication

This education has been shown to reduce medication errors by patients and increase therapeutic safety.





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### 6) The Role of Pharmacists in Monitoring Drug Therapy

Drug therapy monitoring is a final stage that is often overlooked, but has an important role in detecting medication errors. previously unidentified errors. Pharmacists play a role in monitoring therapeutic responses, side effects, and adverse drug reactions.

**Table 2.**

#### The Role of Pharmacists in Monitoring Drug Therapy

Activity	Objective
Monitoring the effects of therapy	Assessing drug effectiveness
Monitoring side effects	Early detection of adverse reactions
Compliance evaluation	Prevent misuse
Incident reporting	Safety system learning

### 7) Interprofessional Collaboration as Key to Medication Prevention Error

Literature findings confirm that medication prevention Error prevention is most effectively addressed through interprofessional collaboration between pharmacists, doctors, and nurses. Pharmacists act as drug consultants, providing evidence-based recommendations.

This collaboration strengthens the culture of patient safety and reduces errors due to miscommunication between healthcare professionals.

### 8) Synthesis of Study Results

Overall, the study results show that pharmacists have an important role as:

- Recipe reviewer
- Dispensing quality control
- Drug educator
- Therapy monitor
- Patient safety driver

Optimal pharmacist involvement, the risk of medication errors in hospitals will increase significantly.

#### Practical Implications

- a) Pharmacists need to be actively involved in hospital clinical teams
- b) The pharmaceutical service system must support the clinical role of pharmacists.
- c) Hospital policies are needed that place pharmacists as an integral part of patient safety.

## 4. Conclusion And Suggestions





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### a. Conclusion

Pharmacists have a strategic role in medication prevention Error prevention in hospitals through active involvement in prescribing, dispensing, drug education, and therapy monitoring. Optimizing the role of pharmacists has been shown to improve patient safety and the quality of healthcare services.

### b. Suggestion

- 1) Hospitals are advised to optimize the role of pharmacists in clinical services.
- 2) Interprofessional collaboration between pharmacists and other healthcare professionals.
- 3) Further research could use a quantitative approach to measure the impact of the pharmacist's role on reducing medication use. error.

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