

Overview of drug information provision (PIO) for outpatients at Sungai Liuk Village Community Health Center, Sungai Penuh City

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Abstract

Background: Community Health Centers are healthcare service units that provide pharmaceutical care. One essential component of pharmaceutical care is the provision of drug information. Drug Information Services (PIO) play a crucial role in improving patients' understanding and adherence to the safe and appropriate use of medications. Therefore, this study aims to evaluate the implementation of Drug Information Services (PIO) and assess their effectiveness in improving patient medication adherence at Community Health Centers.

Method: This study aimed to describe the implementation of drug information services for outpatients at the Sungai Liuk Village Community Health Center in Sungai Penuh City. The study was conducted from July 18 to August 16, 2022. This research employed a non-experimental descriptive method with a cross-sectional design, in which data were collected at a single point in time using questionnaires administered to respondents. The collected data were then analyzed using univariate statistical analysis, which involved assessing the frequency distribution of the data

Results: The results showed the percentage of each type of drug information provided, including drug name (98.8%), dosage form (97.6%), drug dose (98.8%), directions for use (64.5%), storage instructions (0.4%), drug indications (98.0%), contraindications (0.4%), drug stability (9.3%), side effects (0.4%), and drug interactions (0.4%). Overall, the drug information provided at the Sungai Liuk Village Community Health Center did not comply with the standards outlined in the Indonesian Ministry of Health Regulation No. 74 of 2016 concerning pharmaceutical services in Community Health Centers.

Conclusion: Based on the research conducted at the Sungai Liuk Village Community Health Center from July 18 to August 16, 2022, it was found that 100% (248 respondents) did not receive complete medication information during outpatient services

Keywords: Drug Information Provision; Public Health Center; Pharmaceutical Services.

INTRODUCTION

Pharmaceutical services are a crucial component of patient-oriented healthcare systems. One of the main elements of pharmaceutical services is the provision of drug information (PIO) to patients. PIO plays an essential role in ensuring that patients understand the correct methods of drug use, dosage, side effects, interactions, and appropriate storage conditions (1). It significantly contributes to improving patients' quality of life and supporting the delivery of high-quality and effective healthcare services. Non-adherence to therapy may lead to reduced service quality and poorer health outcomes (2).

Community Health Centers are healthcare facilities that implement various public health efforts with a focus on promotive and preventive activities to achieve optimal health status within their service areas. These efforts include the provision of pharmaceutical services (3). One important component of pharmaceutical services is drug information provision, which aims to ensure that patients receive medications appropriate to their therapeutic needs, understand the goals of treatment, and adhere to the prescribed regimen (4).

However, in practice, drug information provision in healthcare facilities, particularly at Community Health Centers, is still far from

optimal. This condition is also evident at the local level, such as at the Sungai Liuk Village Community Health Center in Sungai Penuh City, where preliminary observations indicate that outpatient PIO practices often lack completeness. Despite its critical role, specific evaluations regarding drug information services at this facility remain scarce, leaving a notable gap in local quality assurance. Many patients receive medications without adequate explanations from pharmacy personnel regarding drug names, dosages, indications, or potential side effects (5). This situation may lead to irrational drug use, non-adherence to treatment regimens, and increased risk of undesirable adverse drug events. These conditions indicate a gap between Ministry of Health Regulation No. 74 of 2016 on Pharmaceutical Service Standards in Community Health Centers and the actual implementation in the field (6). Accordingly, this study provides a comprehensive descriptive mapping of drug information provision practices without evaluating clinical outcomes or establishing causal relationships. Therefore, this study aims to provide an overview of drug information provision for outpatients at the Sungai Liuk Village Community Health Center, Sungai Penuh City.

The urgency of this study lies in the need to assess the extent to which PIO is implemented by pharmacy personnel in Community Health Centers as primary healthcare facilities. The findings can be used to identify service aspects that require improvement to ensure patient safety and enhance the quality of pharmaceutical care. Understanding the current practice of drug information provision is expected to guide the development of more effective and standard-compliant quality improvement strategies.

The purpose of this study was to describe how PIO is provided to outpatients at the Sungai Liuk Village Community Health Center, Pesisir Bukit District, Sungai Penuh City. Through a descriptive approach, this study aimed to map the extent to which patients received information related to drug names, dosage forms, dosages, directions for use, proper storage methods, indications,

contraindications, side effects, stability, and drug interactions. The findings are expected to serve as a foundation for improving patient education systems in Community Health Centers and to provide recommendations for enhancing the competencies of pharmacy personnel.

Several previous studies have shown that drug information provision in primary healthcare facilities has not yet met the required standards. A study by (7) found that information regarding side effects, contraindications, interactions, and drug storage was still minimally provided to patients. Such non-adherence is often caused by the lack of adequate drug information (8). PIO can enhance patients' knowledge about the medications they use. For example, information regarding drug indications helps patients understand the purpose of their treatment (9). Comprehensive drug information provision may increase patients' trust in pharmacy personnel and prevent medication errors (2).

Based on this literature review, this study was designed to identify the completeness of drug information provided by pharmacy personnel at the Sungai Liuk Village Community Health Center and to assess its compliance with national pharmaceutical service standards.

METHOD

The type of research used in this study was a cross-sectional design, in which data were collected at a single point in time. Data were obtained through questionnaires administered to respondents who had received prescription services at the Community Health Center. The study was conducted at the Sungai Liuk Village Community Health Center, Pesisir Bukit District, Sungai Penuh City.

The study population consisted of patients who had received prescription services at the Community Health Centers, totaling 248 visits. The inclusion criteria were patients aged over 18 years who visited the Sungai Liuk Village Community Health Center. The exclusion criteria were patients

who refused or were unwilling to participate as respondents.

Data Analysis

Data were analyzed using univariate statistical analysis, which involved assessing the frequency distribution of the data collected during the study.

RESULTS

1. Provision of Drug Name Information

Table 1. Provision of Drug Name Information

Category	Frequency	Percentage
Provided	5	2.0%
Not provided	1	0.4%
Doubtful	242	97.6%
Total	248	100%

A total of 2% (5 respondents) reported receiving information about the drug name, 97.6% (242 respondents) was doubtful, and 0.4% (1 respondent) did not receive drug name information.

2. Provision of Dosage Form Information

Table 2. Provision of Dosage Form Information

Category	Frequency	Percentage
Provided	245	98.8%
Not provided	2	0.8%
Doubtful	1	0.4%
Total	248	100%

The majority 97.6%, (242 respondents) were doubtful about receiving dosage form information, 2.0% (5 respondents) stated it was provided, and 0.4% (1 respondent) reported that no such information was given.

3. Provision of Directions for Use

Table 3. Provision of Directions for Use

Category	Frequency	Percentage
Provided	160	64.5%
Not provided	28	11.3%
Doubtful	60	24.2%
Total	248	100%

A total of 64.5% received directions for use, while 24.2% were doubtful and 11.3% did not receive such information.

4. Provision of Drug Storage Information

Table 4. Provision of Drug Storage Information

Category	Frequency	Percentage
Provided	1	0.40%
Not provided	245	98.8%
Doubtful	2	0.80%
Total	248	100%

Only 0.40% received drug storage information, while 98.8% did not.

5. Provision of Drug Indication Information

Table 5. Provision of Drug Indication Information

Category	Frequency	Percentage
Provided	243	98.0%
Not provided	2	0.80%
Doubtful	3	1.2%
Total	248	100%

A total of 98.0% received indication information, while 1.2% were doubtful, and 0.80% did not receive such information.

6. Provision of Drug Contraindication Information

Table 6. Provision of Drug Contraindication Information

Category	Frequency	Percentage
Provided	1	0.40%
Not provided	245	98.8%
Doubtful	2	0.80%
Total	248	100%

Only 0.40% received contraindication information.

7. Provision of Drug Stability Information

Table 7. Provision of Drug Stability Information

Category	Frequency	Percentage
Provided	23	9.3%
Not provided	75	30.2%
Doubtful	150	60.5%
Total	248	100%

Only 9.3% received stability information.

8. Provision of Drug Side Effect Information

Table 8. Provision of Drug Side Effect Information

Category	Frequency	Percentage
Provided	1	0.40%
Not provided	246	99.2%
Doubtful	1	0.40%
Total	248	100%

Just 0.40% received side-effect information.

9. Provision of Drug Interaction Information

Table 9. Provision of Drug Interaction Information

Category	Frequency	Percentage
Provided	1	0.40%
Not provided	245	98.8%
Doubtful	2	0.80%
Total	248	100%

Drug interaction information was received by only 0.40%.

10. Overall Provision of Medication Information

Table 10. Provision of Medication Information

Category	Frequency	Percentage
Complete	0	0.0%
Incomplete	248	100.0%
Total	248	100%

All respondents (100%) received incomplete medication information.

DISCUSSION

Provision of complete and accurate medication information is a critical aspect of pharmaceutical services and is essential to ensuring rational drug use, preventing medication errors, and supporting positive therapeutic outcomes.

1. Drug Name Information

Most patients reported receiving drug name information. Providing drug names helps patients recognize their medications, avoid duplication, and use them correctly. Prior studies have shown that

misunderstanding medication identity can cause misuse and errors (10).

2. Dosage Form Information

A high percentage of respondents were doubtful about receiving dosage form information. This suggests that counseling is not consistently provided. Educating patients about dosage forms supports adherence and ensures they understand differences among medications (11).

3. Directions for Use

Although 64.5% received directions for use, the percentage remains inadequate. Improper use caused by unclear instructions is a major contributor to treatment failure and drug-related problems (12).

4. Storage Instructions

Only one respondent received storage information. Lack of storage counseling may be due to assumptions by pharmacy staff or small quantities dispensed. However, improper storage can reduce drug efficacy and pose safety risks (13,14).

5. Drug Indications

The majority received indication information, but a small percentage still did not. Understanding indications is essential for adherence and treatment success (15).

6. Drug Contraindications

Very few respondents received contraindication information. This is critical, as contraindications help identify conditions where drugs should not be taken. Failure to communicate these may cause harmful outcomes (16).

7. Drug Stability

Only 9.3% received information on stability. Stability determines whether a medication remains effective during storage and use (7). Without proper counseling, drugs may lose potency (17).

8. Side Effects

Information on side effects was almost never provided. Counseling on adverse drug reactions helps patients recognize early warning signs and seek timely care (18,19).

9. Drug Interactions

Drug interaction counseling was nearly absent. Interactions can decrease effectiveness or increase toxicity. Counseling

prevents avoidable risks, such as antibiotic–milk interactions (20,21).

10. Overall Medication Information

None of the respondents received complete medication information. According to the (4), community health centers must provide comprehensive medication counseling covering 10 essential aspects. Incomplete counseling increases the risk of medication errors, nonadherence, and poor therapeutic outcomes.

CONCLUSION

Based on the research conducted at the Sungai Liuk Village Community Health Center from July 18 to August 16, 2022, it was found that 100% (248 respondents) did not receive complete medication information during outpatient services. The specific medication information provided included: drug name (98.8%), dosage form (2.0%), drug dosage (98.8%), method of administration (64.5%), storage instructions (0.40%), drug indications (98.0%), drug contraindications (0.40%), drug stability (9.3%), drug side effects (0.40%), and drug interactions (0.40%).

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