

## **Evaluation of Drug Information Services For Outpatients In Pengadang Health Center**

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### **ABSTRACT**

This study evaluates the implementation of drug information services for outpatients at UPTD Puskesmas Pengadang in 2025. A descriptive quantitative design with a cross-sectional approach was employed. Data were collected from 63 outpatients using validated and reliable questionnaires based on Ministry of Health Regulation No. 74/2016. Descriptive statistics were used to assess the extent to which pharmaceutical staff delivered essential drug information, including dosage, administration, side effects, and storage. Results indicate that most aspects of PIO were categorized as very good: type and quantity of drugs (90.5%), dosage (93.7%), timing of use (100%), and drug administration (100%). Compliance counseling also scored positively (74.6%). However, deficiencies were observed in information regarding drug side effects (46.0%), management of side effects (34.9%), and storage instructions (25.4%), which ranged from fair to poor categories. These findings highlight both strengths and gaps in current practices, suggesting the need for continuous professional development for pharmacists and standardization of patient counseling services. The study provides important insights for improving patient safety, therapeutic outcomes, and the overall quality of pharmaceutical services at the primary care level.

**Keywords:** Community Health Center, Drug Information Service, Minister of Regulation No. 74 2016

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### **1. INTRODUCTION**

Drug information services are essential components of pharmaceutical care, aimed at ensuring rational and safe use of medicines (World Health Organization [WHO], 2021). In primary healthcare settings, such as community health centers (Puskesmas), pharmacists play a crucial role in counseling patients about dosage, administration, potential side effects, and drug storage [1]. Effective drug information improves adherence and therapeutic success while minimizing medication errors and adverse drug reactions.

In Indonesia, the Ministry of Health established standards for pharmaceutical services through Regulation No. 74/2016, which mandates that pharmacists provide comprehensive drug information to patients [4]. Despite these regulations, studies

indicate variability in the quality and completeness of information provided across Puskesmas [6]. Some aspects, such as dosage and indication, are generally well communicated, while counseling on side effects and storage remains insufficient.

Based on these concerns, this study was conducted to evaluate the implementation of drug information services for outpatients at UPTD Puskesmas Pengadang. The results are expected to provide evidence for improving service quality, strengthening patient safety, and guiding pharmacists in delivering standardized counseling aligned with national regulations.

### **2. RESEARCH METHODS**

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**2.1 Research Design**

This study employed a descriptive quantitative design with a cross-sectional approach, aiming to evaluate drug information services at a single time point [8].

**2.2 Participants/Sample**

The study population consisted of 175 outpatients who received drug information at UPTD Puskesmas Pengadang during August 2025. Using Slovin’s formula with a 10% margin of error, a total of 63 respondents were selected through accidental sampling [7]. Inclusion criteria were patients aged ≥17 years, having received at least one drug information service, and willing to participate.

**2.3 Instruments**

Data were collected using a questionnaire adapted from Hermansyah [3] and aligned with Permenkes No. 74/2016. The instrument comprised 8 dichotomous (Yes/No) items assessing information about drug type, dosage, usage time, administration, storage, side effects, management of side effects, and adherence. Validity tests showed item-total correlation above the r-table (0.361), and reliability testing yielded Cronbach’s Alpha = 0.770, indicating strong internal consistency.

**3. RESULTS AND DISCUSSION**

**Table 1.**  
Results of Drug Information Services at Puskesmas Pengadang (n=63)

Indicator	Percentage (%)	Category
Type and quantity of drugs	90.5	Very Good
Dosage instructions	93.7	Very Good
Time of drug administration	100	Very Good
Method of drug	100	Very

administration		Good
Adherence counseling	74.6	Good
Information on side effects	46.0	Fair
Management of side effects	34.9	Poor
Drug storage instructions	25.4	Poor

The findings indicate that pharmacists at Puskesmas Pengadang excel in providing information on dosage, timing, and drug administration, aligning with previous research that reported strong performance in core counseling areas [6]. However, significant gaps remain in counseling on side effects, their management, and drug storage. Similar shortcomings were also observed in studies from other regions, where pharmacists prioritized basic instructions but neglected broader aspects of medication safety [9].

The moderate level of adherence counseling (74.6%) reflects progress but underscores the need for stronger emphasis, as patient compliance is central to therapeutic success [1]. Poor delivery of side effect and storage information may stem from limited time, inadequate training, or absence of standardized counseling protocols [2]. These gaps highlight the importance of continuous pharmacist education and monitoring of service quality.

**4. CONCLUSION**

This study demonstrates that drug information services at Puskesmas Pengadang are generally very good in essential areas such as dosage, administration, and timing. Nonetheless, there are notable deficiencies in providing information about side effects, their management, and drug storage. Addressing these gaps is crucial to ensure comprehensive patient education, improve adherence, and enhance medication safety.

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