



PROCEEDING

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*Book 2:
Clinical and Social Pharmacy*

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THE PROFILE OF PRESCRIPTION SERVICES IN COMMUNITY PHARMACIES IN SURABAYA: A SIMULATED PATIENT METHOD

Umi Athijah¹, Erika Rismawati², Gesnita Nugraheni¹, Yunita Nita¹

¹Faculty of Pharmacy, Airlangga University

²Undergraduate Student, Faculty of Pharmacy, Airlangga University

ABSTRACT

It is important to provide good prescription service in order to achieve the goals of therapy and to identify, resolve and prevent drug related problems. The study aim was to describe the profile of prescription services delivered by pharmacy's staff in community pharmacies in Surabaya toward patient who comes with glibenclamide prescription. Simulated patient method was used and 90 pharmacies were selected randomly. The research instruments were scenario, assessment form, prescription written by doctor, and research protocol which have been tested for their validity and reliability. The primary outcome measure for the study was derived from assessment forms completed by simulated patient following covert visits to selected pharmacies. Of the 90 pharmacies visited, 5 pharmacies did not have the prescribed medicine. There were 38.8% (33/85) pharmacies which returned the prescription sheet to the researcher even though glibenclamide is a prescription only medicine. The information mostly asked by pharmacy's staff was patient address, accounted for 18.8% (16/85). Others information was only gathered by a small number of pharmacy's staff namely: who the patient was 7.1% (6/85), patient's phone number 4.7% (4/85), information that has been provided by the doctor 1.2% (1/85), and whether the patient knew how to use the medicine 1.2% (1/85). More important information has not been gathered by the pharmacy's staff. The information regarding medicine given to the patients to include frequency of drug use 64.7% (55/85), time to use 15.3% (13/85), amount of medicine for each use 30.6% (26/85), name of medicine 4.7% (4/85), indication 4.7% (4/85), total amount of medicine 2.4% (2/85), adverse effect and symptom of adverse effect 1.2% (1/85). Furthermore, label was given by 65.9% (56/85) pharmacy. To conclude the performance prescription services done by community pharmacies' staff in Surabaya toward patient with prescription needed to be improved.

Key words: Prescription service, simulated patient method, glibenclamide, community pharmacy

INTRODUCTION

Pharmaceutical services that are patient-oriented become the primary obligation of a pharmacist in performing professional responsibilities. Regulations supporting the implementation of the tasks of the pharmacist profession have also been published by the Department of Health and distributed to all pharmacists and pharmacist candidates (DEPKES RI, 2004). However, the evaluation of pharmacist performance in providing pharmaceutical services to the prescription drug is not widely applied. A study conducted to evaluate the provision of patient assessment and drug information toward antibiotics requests reported that the pharmacist provided information only upon request (Puspitasari, 2011). However, these results limited only for antibiotics.

Pharmacy is "where the pharmaceutical work and distribution of pharmaceuticals and other medical supplies to the community be done". While the definition of the "pharmaceutical work" is "manufacturing including pharmaceutical quality control, security procurement, storage and distribution of drugs, medication management, services for prescription drugs, drug information services, as well as drug development, medicinal and traditional medicine. The pharmaceutical work at the pharmacy is the responsibility of the pharmacist. (Pemerintah Republik Indonesia, 2009).

Prescription service provided at a pharmacy is part of pharmaceutical services. Based on the Decree of the Minister of Health No.1027 year of 2004 on Standards of Pharmaceutical Services at the pharmacy, there are two stages of prescription services. The first is the prescription screening conducted by a pharmacist, including administrative requirements, pharmaceutical suitability, and clinical considerations. The second phase includes the preparation of a drug compounding, labeling, packaging, drug delivery, drug information, counseling, and monitoring of drug use (DEPKES RI, 2004).

To achieve the optimal treatment, patients should obtain at least information about how to use the drugs, the drug storage, treatment period, and what activities, food and beverages should be avoided during therapy (DEPKES RI, 2004). Other information regarding the name and purpose of treatment, adverse effects, attention, contraindications, and monitoring of drug interactions are also important to be delivered to the patient (Puspitasari, 2009).

The prevalence of Diabetes Mellitus (DM) in Indonesia is increasing and now is the fourth biggest in the world. DM is a group of metabolic disorders characterized by hyperglycaemia with the abnormality of carbohydrate, fat, and protein metabolism which can lead to chronic complication including micro and macro vascular, and neuropathy (ADA, 2009).

DM patients in the community are those who regularly visit their doctor and then bring the prescription to the pharmacy, before taking the medicine. Pharmacists has a great responsibility as a front liner in health care system, allowing them to meet the patients, to deliver pharmaceutical services especially in medication use by ensuring the right medication and administration, giving counseling, and addressing the Drug Related Problems (DRPs). Therefore, DM patient who obtain a new prescription of glibenclamide was chosen as the model of the prescription services in this study.

The Study objective was to assess current practice of prescription services for DM patients who presented a new glibenclamide prescription at community pharmacies in Surabaya.

METHODOLOGY

Cross sectional, simulated patient method was used to minimize observation bias. A simulated patient is a person who is trained to visit a pharmacy to perform a scenario that assesses a specific behavior of the pharmacist or pharmacy staff (Watson, 2006).

Ninety pharmacies were randomly selected from 630 pharmacies in Surabaya. The instruments were:

- Data collection form
- Patient scenario

- Prescription written by doctor
- Study protocol.

Trained actor, acted as a patient, presented new prescription of glibenclamide in each pharmacy. The number of glibenclamide written in the prescription was 30 tablets and the direction was one tablet daily (s 1 dd 1). The actor was a pharmacy student. A form was completed by the simulated patient following covert visits to selected pharmacies.

The study obtained an Ethic Approval from Airlangga University (Lembaga Pengabdian Kepada Masyarakat Universitas Airlangga). It also obtained endorsement from the Indonesian Pharmacist Association, East Java Chapter (Ikatan Apoteker Indonesia Jawa Timur).

Table 1. Study Protocol

No	Protocol
1.	Actor studied patients scenario
2.	The actor must do training with the research team
3.	The actor signed a confidentiality statement of research
4.	Actors prepared logistics of research (prescription, funding, data collection form) before going to the pharmacy
5.	Prescription date filled in by the actor according to the scenario
6.	If the pharmacy staff ask open ended questions, the actor was asked to provide information relevant to the question.
7.	If the pharmacy staff asking closed ended questions, the actor was asked to answered 'yes' or 'no'
8.	Actors are asked to fill out data collection sheets as soon as finish visited a pharmacy (outside pharmacy locations)
9.	If the pharmacy staff asks the actor to check blood sugar levels while in the pharmacy (the prick test method), actors were asked to refuse

Table 2. Patient Scenario

A	Age and appearance	51 years old
S	Self/someone else	Actor acting as a patient daughter
M	Medicines	-
E	Exact symptoms	Frequent thirst Frequent urination
T	Time/duration	Not able to remember correctly
T	Taken anything/seen doctor	Visiting the doctor the day before visiting the pharmacy Then diagnosed DM by doctor
H	History	3 days ago do general check up (lab) Blood fasting sugar level 270 mg/dL (normal 126 mg/dL)
O	Other symptoms	-
D	Doing anything to aggravate/alleviate	-

RESULTS AND DISCUSSIONS

From 90 randomly assigned pharmacies, glibenclamide was available at 85 (94.4%) pharmacies.

A. Screening: Administrative Requirement

From those pharmacies who provide the medicine, 33 (38.8%) pharmacies returned the prescription back to the actor. Three pharmacy staffs stated that glibenclamide is an over the counter (OTC) medicine therefore it does not require a prescription to obtain it. The statement was incorrect because glibenclamide is a prescription only medicine (DEPKES RI, 2006). There was also one pharmacy who gave the number of glibenclamide below that was requested on the prescription and did not provide an apograph (prescription copy). Table 3 shows problems occurred during the prescription services.

Table 3. Dispensing Problems

Problems	n
• Returned the prescription to the actor	33
• Providing medicine below the number requested on the prescription without providing an apograph (prescription copy)	1
• No drug label attached to the drug	29
• Wrong color of drug label (blue/not for oral use)	1

B. Screening: Pharmaceutical Suitability

Results showed that all the drug provided by pharmacy staffs were correct.

C. Screening: Clinical Consideration

In order to achieve optimal therapy, interaction between pharmacists and clients is needed. In these interactions, pharmacists are expected to obtain information related to the patient's condition and able of providing drug-related counseling for patients. Extracting information can be done by asking questions, for examples: "For whom the drug is given", "What are the symptoms", "How long do these symptoms arise", "Any action that has been done", "What is other drugs being consumed", and "Do you have a history of allergy". A literature mentions one method (known as ASMETHOD) that can help pharmacists to obtain relevant information from client (Blenkinsopp and Paxton, 2002).

Table 4 shows the number of question that was asked by pharmacy staffs. The question that was asked by pharmacy staff were limited and not adequate when compared to the total number of questions expected based on literature review. Table 5 shows the distribution of pharmacy personnel who perform patient assessment while dispensing prescription drugs.

Table 4. Number of Question being Asked

Item of Question being Asked*	Number of Pharmacy doing Patient Assessment
0	65
1	13
2	4
3	3
Total number of pharmacies	85
Average of question	0.4 item

*Total number of expected questions based on literature review is 13

Of the thirteen components of the information mentioned in Table 5, none of the pharmacy staff assessed information about actions already carried out, the consumption of other drug and allergy history of patients. Information on whether the patient has been taking action in an attempt to resolve the symptoms important to be collected so that pharmacists can ensure that there is no duplication of therapy that allows the emergence of potential interactions. This also relates to the next question, namely "Does the patient currently taking other medications". Data regarding history of allergy is also very important to be assessed so that pharmacists can identify that the treatment recommendations given in accordance with the conditions of the client concerned.

Table 5. Distribution of Pharmacy Staff doing Patient Assessment

Component of Assessment	n (%)
• To whom the drug is given?	6 (7.1 %)
• Patient's age	0
• What are the symptoms?	0
• How long do these symptoms present?	0
• What actions are already done?	0
• Has the patient taking the medicine before?	2 (2.4 %)
• Does the patient know how to use the medicine?	1 (1.2 %)
• Does the patient know what the medicine are for?	0
• Does the patient is taking other drugs?	0
• Does the patient have a history of allergies?	0
• Information given by doctor	1 (1.2 %)
• Patient's address*	16 (18.8 %)
• Patient's phone Number*	4 (4.7 %)

*Administrative screening

D. Drug Information

Table 6 shows the number of information provided by pharmacy staffs and Table 7 shows the distribution of pharmacy that provides drug information.

Table 6. Number of Information provided by Pharmacy Staff

Item of Information Provided*	Number of Pharmacy Providing Information
0	25
1	27
2	24
3	6
4	2
5	1
Total number of pharmacies	85
Average of information	1.2 item

*Total number of expected information based on literature review is 16

Table 7. Distribution of Information Provided to the Patient

Component of Information	n (%)
• Name of drug	4 (4.7%)
• Indications of drug	4 (4.7%)
• Number of drug each time	26 (30.6%)
• Total number of drug	2 (2.4%)
• Frequency of drug use	55 (64.7%)
• When to take the drug	13 (15.3%)
• Duration of use	0
• Side effects	1 (1.2%)
• Sign of side effects	1 (1.2%)
• How to manage side effects	0
• Storage of medicine	0
• Warning / interaction	0
• Food and drink to be avoided	0

This study shows that 7.1% of pharmacy staff assessed information on "for whom the drug is given" and none of pharmacy staff asking what the symptom was, the rest did not assessed information related to the condition of the patient. Without complete information, drug-related problems could arise. This proves that the majority of pharmacy staff at the pharmacy is more oriented to the medicinal products sale than the security, accuracy and rationality of drug use.

Indication of drug was given only by 4.7% of pharmacy staff. DM is a metabolic disease that lasts a lifetime. A correct understanding of the purpose of DM therapy will help patients to manage expectations on disease treatment. Knowledge of the names of the medicine is also important. This is to avoid the mistakes in the use of drugs. Awareness and knowledge about medications should begin from recognizing the name of medicine that they routinely use.

Time to take glibenclamide (morning, afternoon, evening or night) and when to take it (before, during or after meals) are both important. The absorption of glibenclamide is influenced by food so that information on when to take is important to be provided to the patient. The information provided by 15.3% pharmacies.

Hypoglycemia is the most common side effect of glibenclamide. None of the pharmacy staffs provided the information. It is important for patients to understand the signs of hypoglycemia and how to manage them. The high risk patients are those who skip meals, exercise vigorously, or lose substantial amounts of weight are also more likely to experience hypoglycemia (DiPiro, 2008). Hypoglycemia could be dangerous if not managed properly. A significant number of patient experienced hypoglycemia (Mufarrihah, 2010). Whilst a low number of patient actually knew what was hypoglycaemia and ways to manage it (Nita, 2009).

E. Drug Label

There were 56 (66%) pharmacies which provided drug label attached to the drugs with information written on it. Table 8 shows the details of information written on the drug label.

Table 8. Written Information Provided on Drug Label (N=56)

Written Information	n (%)
• Patient name	53 (94.6%)
• Date of dispensing	51 (91.1%)
• Direction on how to use	56 (100%)
• Dosage form (tablet)	48 (85.7%)
• Before food	2 (3.6%)
• After food	5 (8.9%)
• Prescription number	32 (57.1%)
• Drug's name	6 (10.7%)
• Total number of drugs (30 tab)	5 (8.9%)
• When to use (morning time)	2 (3.6%)
• Expiration date	1 (1.8%)

Prescription drug preparation should include provision of the drug label on the drug container and the written information must be correct, clear and readable (DEPKES RI, 2004). Drug label should contain the information of medicine needed, thus the drugs can be used appropriately. There was one blue label that is supposed to be given only for external route.

Research done in India found that counseling by pharmacist in pharmacy could improve patient perception regarding disease, diet, and life style. It also showed to maintain blood glucose and the patients' quality of life (Adepu, 2007). Having a good knowledge

about disease and medication is known to have a relation with the therapeutic outcome (Ambigapathy, 2003).

Patient with a new prescription needs to be educated on all aspects of the medication, and in this case is glibenclamide (Rantucci, 2007). The goal of therapy for DM patient is to achieved fasting blood glucose level of 80-100 mg/dL in order to avoid micro and macrovascular complication (PB Perkeni, 2006). Patient with chronic disease, to include DM, are more prone to non-adherence. Pharmacist has a big role in providing a quality care for DM patient and also in improving their quality of life.

CONCLUSION

In conclusion, the provision of prescription services for patient with new prescription was very low especially in the clinical consideration area and needed to be improved in order to prevent non-adherence and drug misadventures. Further investigation needs to be done to rule out factors contribute to pharmacist performance toward medicine information.

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