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# APPROACHING COMMUNITY PHARMACISTS' ACTIONS RELATED TO ANTIDIASTHMATIC AND ANTIDIDIABETIC PRESCRIPTIONS

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## INTRODUCTION

It is important for patients to receive their prescriptions, but dispensing is a superficial practice of the profession that does not use the knowledge or skills that clinical pharmacists possess, even though it is an essential part of the profession [1].

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In pharmaceutical care, the pharmacist performs drug use control functions while paying close attention to the patient's interests and ensuring these are met. It is a form of pharmaceutical practice that revolves around the relationship between a patient and a pharmacist [1].

Patients are responsible and accountable for the outcomes of their medication therapy in pharmaceutical care. By managing drug therapy optimally, pharmacists aim to maintain patients' functional and psychosocial well-being at the highest possible level. In order to provide pharmaceutical care consistently, multiple practice settings must work together. Pharmaceutical care consists of three

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major functions; identifying potential problems related to drugs, resolving actual problems related to drugs, and preventing potential problems related to drugs [2]. An established and maintained professional relationship between a pharmacist and a patient is essential to the delivery of pharmaceutical care plans. An evaluation of patient-specific clinical information and the development of a drug therapy plan with the patient must be conducted after the patient's clinical information has been gathered, classified, saved, and maintained. All information and tools needed to follow the drug therapy plan must be provided by the pharmacist to the patient. As necessary and appropriate, the pharmacist should monitor the therapeutic plan and modify it as necessary [1-3].

Pharmaceutical care models include patient counseling as a vital component. Providing patients with all the information they need and monitoring their therapeutic outcomes is essential to achieving successful pharmacotherapeutic outcomes in the community pharmacy [4]. Pharmacists are increasingly encouraged to provide pharmaceutical care instead of just dispensing medications to improve patients' health. Pharmacy care includes "educating patients on medicines and disease states, discussing the side effects, effects, outcomes, and making sure patients are complying with medications" [5].

Pharmacists may either be required to provide pharmaceutical care in accordance with the country's legislation, or they may not be required to do so in accordance with the country's legislation. Pharmacists may be encouraged to provide pharmaceutical care services by their businesses for publicity and marketing purposes. Providers of pharmaceutical care must also be of a certain age to provide effective care [6, 7]. Pharmacists, pharmacy managers, and pharmacy associations who have the opportunity to improve this element of patient care are challenged to implement pharmaceutical care under such circumstances [8]. It is imperative that pharmacists are provided with programs that assist them with assessing their workplace and devising strategies for improving it [9]. Pharmaceutical care in the community pharmacy has been hampered by several obstacles identified by pharmacists and patients. Pharmaceutical care requires a lot of time, there is not enough private counseling space, and physicians are not easily accessible. For new prescriptions, complicated drugs with complicated instructions, or child medications, pharmacists provide the most counseling. In most cases, pharmacists assume customers are already aware of how to use medication, and are not expecting to receive counseling about how to use their medication [10]. As part of pharmaceutical care, patients' symptoms are monitored, counseling is provided, drug-related problems and resolved, interprofessional are discovered communication between pharmacists and physicians is established, and patient-specific interventions are performed as needed [11].

When consulting patients, pharmacists should adopt a problem-solving approach taking the patient's needs and level of understanding into account, rather than the traditional sender-message-receiver model [10]. There is a tendency for pharmacists in Moldova to focus more heavily on dispensing practices than pharmaceutical care, drug information, or self-care rather than on the traditional approach to pharmacy practice [12]. Pharmacy professionals in Brazil lack the skills to interpret drug related information for pregnant women, and they do not have access to reliable sources of information on drugs [13]. Pharmacy care and patient counseling are not taught to pharmacists in the UAE. There are more drug-related problems as a result of this shortage in implementing patient care. Pharmacists in the UAE are shown to have weaknesses and threats based on an examination of their behavior in offering proper patient counseling. Using a simulated patient approach, this testing will be conducted. An individual who simulates the symptoms of a medical condition can be described as a simulated patient. In education, assessment, and research, simulated patients have been used in a variety of ways [14].

Study objectives include assessing the effectiveness of community pharmacists in providing antidiabetic and antiasthma prescriptions and estimating the amount of missing data and information they provide to patients.

# METHODS

The community pharmacist's reaction to an antidiabetic and antiasthma medication prescription was assessed by simulating a patient's prescription for antidiabetic and antiasthma medications. In figure 1 we see the prescription for Donil® (glibenclamide) 5 mg, Glucophage® (metformine) 500 Ventolin® mg, (salbutamol) inhaler, and Prednisolone 5 mg, all of which were included in the order. An asthmatic and diabetic patient was prescribed this medication. During the study period, every available pharmacy in these areas was intended to be covered. Researchers acted as simulated patients. To dispense the prescription, this person visited pharmacies. In table 1, the researcher evaluates the pharmacist's behavior after all medications have been delivered by the pharmacist. Prednisolone was a medication error that may worsen diabetes mellitus since it did not include information about duration, directions, or age.

ASHP guidelines indicate the pharmacist should check for pregnancy or breast feeding before dispensing this prescription; first of all, since the simulated patient is female, the pharmacist should check for pregnancy or breastfeeding. It is also recommended that prescriptions be screened for drug-drug interactions. As a third step, pharmacists should teach patients how to use Ventolin® inhalers properly by implementing the "show and tell" technique. Fourth; making sure that patients have the right

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information about diabetes should be done using the filling in the gap technique. The patient should also be informed about diabetes complications. To monitor the side effects of the medication, patients should know what to expect from the medication. Lastly; patients should be informed about the most common side effects of the medication, such as hypoglycemia, GIT disturbances due to metformine and glibenclamide, and peptic ulcers due to prednisolone.

Based on the guidelines developed by the American Society for Healthcare Professionals (ASHP), a performance assessment sheet was created (table 1) [15]. It is estimated that there are 400 community pharmacies spread.

A prospective, quantitative, descriptive, and comparative analysis was conducted on this collection of data. Using Pearson Chi-square tests (crosstabs) and a 95% level of significance, we tested the effect of pharmacist gender on average time spent with patients.

#### RESULTS

As shown in table 2, the distribution of the selected pharmacies is based on the Indians population. In Figure 2, the dispensing time at the pharmacy is illustrated, which ranges from 2 to 10 minutes. Gender, nationality, and age were not independent factors influencing pharmacists' time with patients (p-values 0.087, 0.04), with older pharmacists spending more time with patients than younger pharmacists (p-value 0.002).

When pharmacists received prescriptions, most (90%) started prepping them without considering the

missing data or medication errors (no prescription screening was performed). During the preparation of the prescription, 55% of pharmacists inquired about the treatment duration, while only 9% suggested that patients contact their doctor in order to find out how long the treatment would last, and 30% dispensed the medication without knowing how long it would last. Pharmacy staff only asked about the patient's health status 15% of the time, 3% of the time if the patient was using any other medication, 6% of the time if the patient was pregnant.

Among pharmacists who explained how to use the inhaler correctly, only 58% used show-and-tell techniques. According to table 3, pharmacists respond differently to prescriptions for oral medications, reflecting a wide range of approaches to dealing with these medications. A pharmacist's responsibilities do not include counseling about diet and exercise, 96% of pharmacists did not mention this. As an example, the amount of prednisolone needed by the patient was influenced by the pharmacist's behavior, since the precise amount was not specified in the prescription and was considered missing. Approximately 40% of the pharmacists asked if the prescription was for herself or for someone else when they received the prescription. There were only 2% of people who asked if action or strenuous activity made their asthma worse, and only 6% asked about asthma's onset. The dose and frequency of prescription medications were correctly described by only 35% of respondents. No difference in counseling has been observed between pharmacists regardless of their gender or nationality.

#### Table No. 1. Evaluation sheet for performance

The nationality, age, and gender of the pharmacists

Patients spend a considerable amount of time in the pharmacy between entering and leaving it during dispensing time.

Location of the pharmacy: Coimbatore, Salem, Madurai, Trichy

Reading a prescription by a pharmacist

The pharmacist dispensing the prescription did not ask any questions

Interaction between pharmacists and physicians

Inquiries regarding the patient's health conditions and pregnancy status were asked by the pharmacist

If the pharmacist asked the patient whether he or she was taking any other medications, did he or she answer

Explained to you how to use the medication (doses, after/before/with meals) by the pharmacist

How was the medication dose explained by the pharmacist?

If yes, did the pharmacist provide the correct information about how to use the inhaler

Diet & exercise changes were recommended by the pharmacist to the patient

The pharmacist asked whether any action worsened asthma

The pharmacist asked about the onset of asthma and diabetes

Does the pharmacist ask the patient about their blood glucose level Does the pharmacist offer the patient advice about how to manage their glucose?

Prednisone usage

Who was the medication prescribed for by the pharmacist

Table No. 2. Pharmacy location in the Tamilnadu		
Location	Frequency	Percent (%)
Coimbatore	20	10.3
Salem	72	37.1

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Madurai	90	46.4
Trichy	12	6.2

Table No. 3. Dosage recommendations from a pharmacist				
Respondent's pharmacist		%		
Daonil: A tablet should be taken in the morning and evening before meals, and a tablet of Glucophage		6.2		
should be taken in the morning and evening before meals. Prednisolone: Before meals, take one tablet				
in the morning and one in the evening.				
The dosage should be one tablet per medication given after a meal in the morning and in the evening	32	16.5		
Every morning, take two tablets from each medication together before meals	13	6.7		
Two times daily without explanation from each drug	37	19.1		
Before each meal, twice a day	28	14.4		
Before the patient asked, I did not mention the frequency or the dose	12	6.2		
After a meal, take two tablets of Daonil and Glucophage, then take two tablets of Prednisolone at night.	4	2.1		
Taking two tablets of Daonil before meals and two tablets of Glucophage after meals is recommended.	12	6.2		
During the night, take 2 tablets of prednisolone				
Didn't give any advice, don't know	7	3.6		
Don't know what he said	11	5.7		
The combination of Daonil and Glucophage is two tablets	1	0.5		
After every meal, take two tablets	3	1.5		
Without explanation, two tablets are placed together	20	10.3		

## DISCUSSION

Since more than 40 years ago, simulation has been used extensively in clinical literature for the analysis of a wide variety of health care delivery systems. Simulation is a method of identifying medical issues before they occur to real patients by creating a patient model. According to the findings of a study conducted in Malaysia using simulated patients to assess pharmacists' response to back pain medication requests, pharmacists must spend more quality time with patients before providing medication. Students are better able to understand all aspects of pharmacotherapy and patient counseling when they are taught using a simulated patient method. Using audio recording techniques to analyze patient medical situations has also proved successful. Simulated patients are considered one of the best methods of assessing professional performance in clinical settings because they can avoid the problems associated with implementing research methodologies based on patients and health care providers. Several studies have documented the use of simulated patients to evaluate pharmacists' behavior. Professional pharmacists can use this method to assess the patient counseling process accurately during medication dispensing. In addition to exposing students to real world context, it also plays an important role in the pharmacy curriculum, complementing practitioner-educators in teaching pharmacy. Simulated patients used in this study revealed a number of defects in patient counseling and its implementation in community pharmacies.

It is important to consider many factors when implementing patient counseling, including pharmacists' knowledge of pharmacology, attitude, communication skills, listening skills, skills for showing and telling, skills for filling in gaps, and interprofessional communication skills with other medical professionals, including physicians, pharmacists, nurses, and laboratory analysts. Several of these factors are lacking in community pharmacists in the UAE, as documented in this study.

According to a recent WHO report on disease burden, diabetes is one of the most prevalent diseases in the world. Therefore, antidiabetic and antiasthmatic prescriptions were selected. Medication errors and complications can be reduced significantly through continuous follow up and comprehensive counseling. Hence, asthmatic and diabetic patients need to focus on lifestyle changes and quality of life. Assuring better quality of life requires educating patients about proper medication use and alerting them to complications.

It is important for pharmacists to consult with patients and educate them about their condition; incorporating daily reminders for inhaler technique and labels on inhalers into community pharmacies can improve inhaler technique and asthma outcomes 10.

A wrongly used inhaler device can have an adverse effect on the clinical effectiveness of the medicine delivered. Educating patients about this tool's proper use requires the use of the show-and-tell technique.

## CONCLUSIONS

Taking care of a patient's health is one of the biggest responsibilities of community pharmacists. As the last stage of the drug therapy process, they are the most important. Patients will be harmed if this responsibility is not fulfilled in a timely manner. Pharmacists are



responsible for updating their pharmacological knowledge daily, improving their communication skills, and improving their attitude toward patient care to fulfill this responsibility. Career advancement can be achieved by taking courses about pharmaceutical care and its importance. Motivating community pharmacy practitioners to improve themselves through incentives, appreciation letters, and career advancement may also be useful to make community pharmacy practice more effective. For community pharmacies to provide the best pharmaceutical care, it is recommended that health authorities consider follow-up plans.

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