

Original Research

Assessment of drug dispensing practices at pharmacies

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ABSTRACT:

Background: Pharmacists are usually the final link between the medication and the patient. The present study was conducted to assess drug dispensing practices at pharmacies. **Materials & Methods:** The present study comprised of 176 pharmacists. The questionnaire was constructed based on GPP guidelines. The pre-validated semi-structured questionnaire was administered to the pharmacist and their response was recorded. **Results:** Out of 176 pharmacists, males were 120 and females were 56. Practice was dispensing encounters without prescription was seen in 60%, 73% dispense on older prescriptions, 65% dispense an alternative brand in case of nonavailability of prescribed brand, 80% insist on dispensing full course of antibiotics prescribed, 100% check expiry date before dispensing, 45% maintain an inventory, 62% dispense herbal medicines also and 64% check for all the particulars in the prescription before dispensing. The difference was significant ($P < 0.05$). **Conclusion:** Results showed improper dispensing practices at pharmacies.

Key words: pharmacies, Pharmacists, Drugs

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INTRODUCTION

Safe medication procurement by patients is a global issue. In developing countries, most medications including antibiotics and those with high incidence of side effects, are available without prescription despite regulations. This may have serious consequences on public health and also contribute to the already prevailing worldwide problem of antibiotic resistance.¹

Pharmacists are usually the final link between the medication and the patient.² Patient counseling is a key component of pharmaceutical care process. Drug dispensers should provide appropriate, understandable and relevant information to patient about their medication. It should also include an assessment of whether or not the information was received as intended and that the patient understands how to use the information to improve the probability of the therapeutic outcomes.³

Community pharmacists have a significant outreach to the public as pharmacies are often the first-point-of-call. Unlike olden times, due to

availability of ready-to-use (precompounded) drugs, the main health-related activity of a pharmacist today is to assure quality of dispensing, one of the key elements in promoting rational medicine use.⁴ It is recognized and accepted that the conditions of pharmacy practice vary widely from country to country and between different sectors/areas within a country despite existence of GPP guidelines by a recognized body.⁵ The present study was conducted to assess drug dispensing practices at pharmacies.

MATERIALS & METHODS

The present study comprised of 176 pharmacies. The consent was obtained from all enrolled pharmacists. Data such as name, age, gender etc. was recorded. The questionnaire was constructed based on GPP guidelines. The pre-validated semi-structured questionnaire was administered to the pharmacist and their response was recorded. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 176		
Gender	Males	Females
Number	120	56

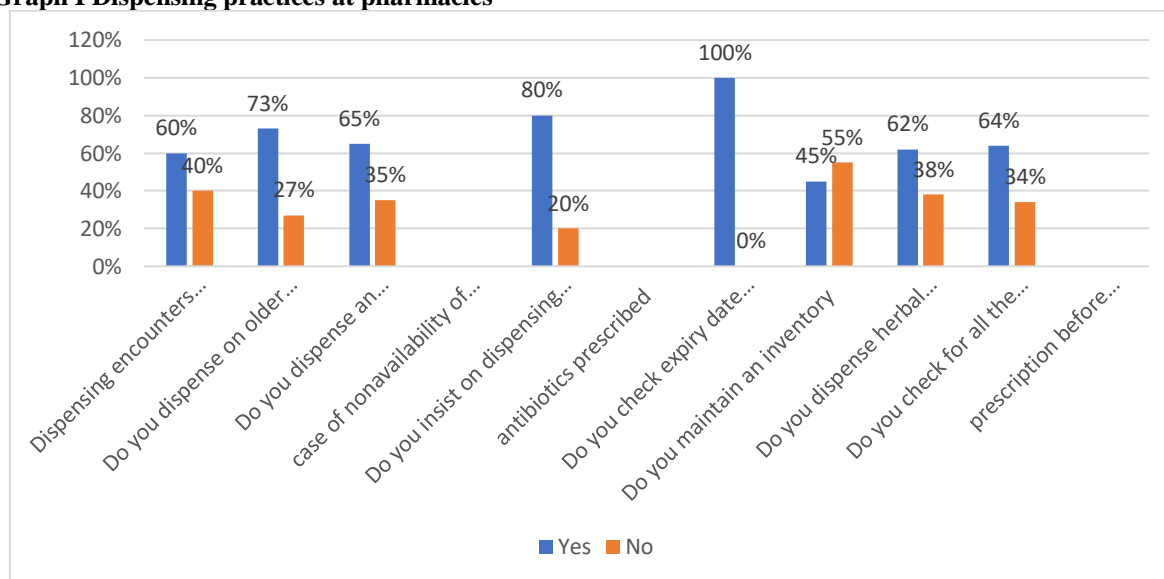
Table I shows that out of 176 pharmacists, males were 120 and females were 56.

Table II Dispensing practices at pharmacies

Practices	Yes	No	P value
Dispensing encounters without prescription	60%	40%	0.05
Do you dispense on older prescriptions	73%	27%	0.02
Do you dispense an alternative brand in case of nonavailability of prescribed brand	65%	35%	0.05
Do you insist on dispensing full course of antibiotics prescribed	80%	20%	0.01
Do you check expiry date before dispensing	100%	0%	0.001
Do you maintain an inventory	45%	55%	0.91
Do you dispense herbal medicines also	62%	38%	0.04
Do you check for all the particulars in the prescription before dispensing	64%	34%	0.05

Table II, graph I shows that practice was dispensing encounters without prescription was seen in 60%, 73% dispense on older prescriptions, 65% dispense an alternative brand in case of nonavailability of prescribed brand, 80% insist on dispensing full course of antibiotics prescribed, 100% check expiry date before dispensing, 45% maintain an inventory, 62% dispense herbal medicines also and 64% check for all the particulars in the prescription before dispensing. The difference was significant (P< 0.05).

Graph I Dispensing practices at pharmacies



DISCUSSION

The consumption of drugs by patients is often influenced by the dispensing practices and the type of information given during dispensing.⁶ Pharmacists can contribute to positive outcomes by educating and counseling patients as studies have repeatedly shown that effective medication counseling can significantly reduce patient non-adherence to prescribed drugs, treatment failure, and wasted health resources.^{7,8} On the contrary, inappropriate dispensing or storage of medications can undo many of the benefits of the health-care system.⁹ The present study was conducted to assess drug dispensing practices at pharmacies. We found that out of 176 pharmacists, males were 120 and females were 56. Wabe et al¹⁰ assessed drug

dispensers' knowledge, attitude and practice of patient medication counseling in drug retail outlets. Forty (62.5%) of the dispensers believe that patient counseling is a shared responsibility of pharmacy professionals and physicians. Only 29.7% of the dispensers always update their knowledge on drugs and their most frequent source of drug information on drugs were leaflets. Forty-nine (76.6%) of dispensers respond as they know the formal way and the information included in patient counseling. Lack of adequate knowledge on drugs and up-to-date drug information was major factor that prevent dispensers from counseling patients. Most of the dispensers are not accessible to up-to-date drug informations. The dispensers give less counseling. Lack of knowledge

and update drug information was the major barrier of patient medication counseling dispensers faced. Formal education should include patient counseling and continuous training should be given to increase dispensers' knowledge on patient counseling. Up to date and relevant drug information sources should be given to dispensers.

We observed that practice was dispensing encounters without prescription was seen in 60%, 73% dispense on older prescriptions, 65% dispense an alternative brand in case of nonavailability of prescribed brand, 80% insist on dispensing full course of antibiotics prescribed, 100% check expiry date before dispensing, 45% maintain an inventory, 62% dispense herbal medicines also and 64% check for all the particulars in the prescription before dispensing. Soumya et al¹¹ included 200 pharmacies, 100 each in various residential (R) and commercial (C) areas of Bengaluru, was conducted using a prevalidated questionnaire administered to the chief pharmacist or the person-in-charge by the investigators. Dispensing without prescription at pharmacies was 45% of the total dispensing encounters and significantly higher ($\chi^2 = 15.2$, $P < 0.001$, $df = 1$) in pharmacies of residential areas (46.64%) as compared to commercial areas (43.64%). Analgesics were the most commonly dispensed drugs (90%) without prescription. Only 31% insisted on dispensing full course of antibiotics prescribed and 19% checked for completeness of prescription before dispensing. Although 97% of the pharmacies had a refrigerator, 31% of these did not have power back-up. Only about 50% of the pharmacists were aware of Schedule H.

Medication counseling is the duty of the modern community pharmacists through which they can significantly contribute to medication safety and patient compliance. The GPP guidelines require the pharmacist to provide professional counseling with regard to the use of medicines, their side effects, and precautions, if any.¹² Recognizing the importance of medication counseling, The North Carolina Board of Pharmacy since 1993 made a rule to offer patient counseling on all new prescriptions.

CONCLUSION

Authors found that there was improper dispensing practices at pharmacies.

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