

Prescription Writing Trends of General Practitioners in Karachi, Pakistan

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Abstract— Errors in writing prescriptions are common in hospital and outpatient clinical setups and a number of studies have been performed regarding prescription errors throughout the world but it is not yet enough in Karachi, Pakistan. The study was performed to identify the prescription writing trends of general practitioners in Karachi. A total of 100 prescriptions were randomly collected from different hospitals and clinics in Karachi from April 14-21, 2014. All prescriptions were analyzed to assess legibility (frequency of administration, route of administration, generic or brand name) and completeness (frequency of administration, route of administration, duration of prescription, signature of physician, generic or brand) of prescriptions. No prescription contained all essential components of prescription. Legibility was poor in 34% prescriptions. 100% prescriptions were prescribed by brand name. Patient age and gender were only mentioned in 54% and 52% respectively. Dosage form, frequency and duration of use were not written in 10%, 23% and 45% of prescriptions respectively. 6% of prescriptions were written without patient name. Over 34%, 15% and 26% of prescriptions did not have diagnosis, strength and route of administration. The highest proportion of prescription (96%) failed to demonstrate the patient allergies and the least number of prescriptions (10%) contain dosage form error. We observed a high frequency of illegibility and incompleteness in prescription writing. This indicates a need to establish the safety culture and in particular the awareness of professionals regarding the importance of writing, clear and complete prescription.

Index Terms—Components of prescription, Dose administration, General practitioners, Parameters of prescription writing, Prescription writing, Prescription trends, Strength of medications.

1 INTRODUCTION

PRESCRIPTION is a written order by physician that tells pharmacist what to dispense and tells patient what, when, and how to take [5]. Components of prescription should be very clear, free of non-official abbreviations, and accomplish the legal necessities of a prescription. Errors in prescribing are widely found and can cause avoidable adverse drug events so they are the most significant target for improvement. Studies on prescribing errors in Karachi appeared inadequate, therefore this study was conducted to assess the level of non-compliance with prescription writing skills as well as to identify the type of prescribing errors.

Many studies have already done which shows that wrong dose administration are the most common type of prescription error [14]. In Pakistan research on prescription writing carried out in Peshawar [13] and in Hyderabad [8] which shows presence of extensive errors in prescription.

As prescription errors have not been studied in Karachi, Pakistan, therefore, this study has been done to find the prescription errors prescriptions.

1 METHODOLOGY

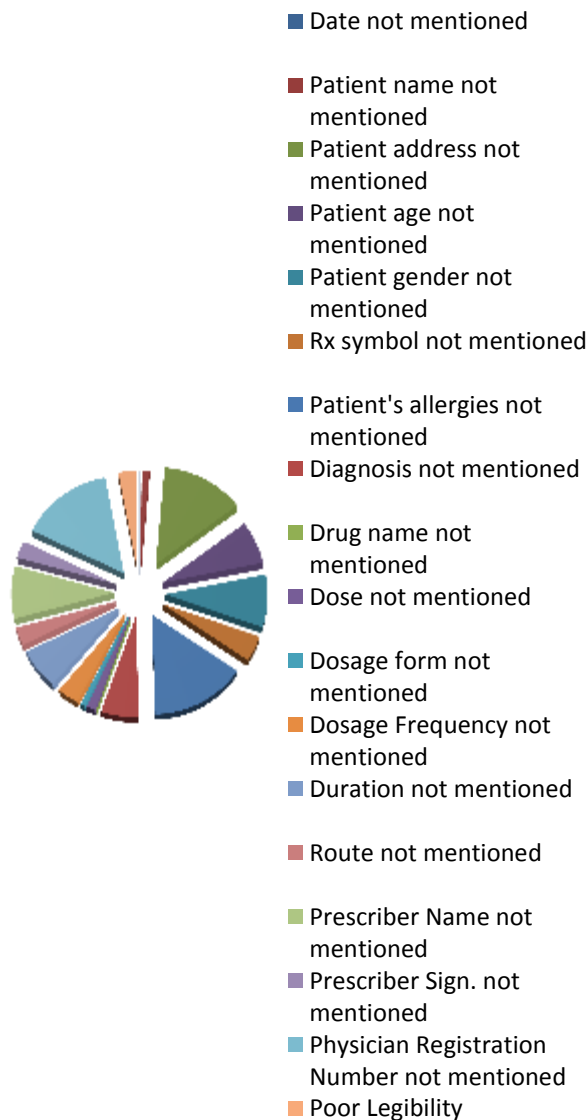
This retrospective study was conducted after generating prescriptions from two government hospitals, three private hospitals and two outpatients setting in various areas of Karachi, Pakistan over a period of one week. A total of 100 prescriptions were assessed to identify the completeness and legibility as per WHO parameters for prescription writing [4]. Depending on requirement for prescriber information, patient information and drug information in

each prescription 100 error categories were defined and then every prescription was evaluated for the presence of error and this was recorded in a standard form. MS office and descriptive statistics were used for analyzing the collected data.

2 RESULT

For our study we have collected 100 prescriptions from different hospitals and clinical setups. All the prescriptions were analyzed and evaluated for the presence of errors. Out of 100 prescriptions 6% were without patient name, 53% of prescriptions were without patient's address, 46% were not having patient's age, 48% were missing patient's gender, 96% were failed to demonstrate the patient allergies and about 34% of total prescription did not have any diagnosis. In all 100% prescriptions medications are written by using brand names of drugs, 15% of prescriptions were missing the strength of prescribed drugs, 10% were missing dosage form. We observed that 23% of prescriptions were not containing frequency of the prescribed medicines, 45% of prescriptions were missing duration of use of the particular drug regime and 26% were missing route of administration. It was further found that 54% of prescriptions were omit prescriber's name, 25 and 76% were without prescriber's signature and his registration number respectively. Unclear writing was observed in 34% of total prescriptions.

Percentage of Error



3 DISCUSSION

In our present investigation, we identified the different trends of prescription writing in Karachi. A total of 100 prescriptions were collected and evaluated for the presence of errors. In case of patient's diagnosis, our data revealed that 34% of the prescriptions were missing the diagnosis. This is in contrast to the studies of [6] who identified this error only in 15.1% prescriptions, whereas [2] had reported in 9.8% prescriptions and [3] had found in only 6.8% of the prescriptions. This shows that patient diagnosis factor should be considered, as the conditions of prescription writings in Karachi, Pakistan are worse.

Concerning the strength of medications, it is the most important factor especially when a drug is available in market, in more than one strength. We found that 15% of the prescriptions were without strength mentioned. This result is dissimilar to the report of [6] who stated that 52.8% of prescriptions were missing the strength of medications and also with those reported by [12] who identified that 26.8% of prescriptions did not contain the strength.

A large number of deficiencies also have been found regarding the gender and age of the patient. Our study investigated that in 48 and 46% of the prescriptions; the prescriber had not mentioned the gender and age, respectively, of the patients. However, a study by [12] found 10 and 11% of prescriptions in which the gender and age, respectively, of the patient were not written. [3] Identified that only 10 and 4.1% of prescriptions were missing the patients age and sex, respectively. Furthermore, [5] found that 22.7 and 48.7% of prescriptions did not contain the age and gender of the patient.

Our findings revealed that in 6% prescriptions, the name of the patient were not mentioned. In case of the drugs which can be administered by more than one route, it is necessary to mention their routes. We evaluated that 26% of prescriptions were deficient in mentioning routes of drug administration. But our results are in conflict with those reported by [21, 2], where only 13% and 0.1%, respectively cases were found with this deficiency.

Regarding the error category of writing an ambiguous medication order, we explored that 34% of prescriptions were not written clearly. Our result is dissimilar to the other findings reported, as [3, 6, 7 and 11] reported that 7.2%, 64.3%, 15% and 15% of prescriptions, respectively, had poor and incomprehensible hand writing.

In past patterns of prescription writings were analyzed in Peshawar and Hyderabad, which concluded that not even a single prescription fulfils the requirement of standard prescription. And now in Karachi which is densely populated city of Pakistan we also found the similar results which shows that the conditions getting worse instead of improvement.

4 CONCLUSION

It is concluded from that there is high percentage of prescription errors in practice. It was found that the majority of prescriptions did not mention allergies; also the legibility was poor which lead to many hypersensitivity problems and various problems of dispensing, incorrect doses and administration of medicine. So the physicians should pay proper attention to the prescription writing and patient's counseling. The physicians should be provided with the educational training to improve their prescription writing skills according to World Health Organization Guidelines for Prescription Writing or other recognized and published standards. The computerized physician order

entry system should be implemented. Pharmacist can also play an important role in preventing the errors by reviewing the prescriptions.

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