

EVALUATION OF WRITING PATTERN OF PRESCRIPTION IN PUBLIC SECTOR

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ABSTRACT

A prescription is proof of transaction between a doctor and a patient. It is also a communication between a doctor and a pharmacist, guiding the latter in providing medication to patients for relief from a disease and to improve their quality of life. A prescription contains the patient's details, the name of the drugs, their method of dispersion and instructions on how to consume the medication along with details of the prescriber. Once a prescription is signed by the prescribing authority, it becomes a binding medico-legal document that may be presented in court, further exaggerating the importance of a complete and legible prescription. Prescription-related errors can lead from minor mismanagement to disaster i.e., patient's demise. This study aimed to evaluate prescriptions from the public sector under the WHO criteria for prescription writing. Purpose of the study was to identify any shortcomings so that they may be corrected to provide patients with optimum medication for their illnesses. In this study 72 prescriptions were collected from the public sector and scrutinized under the WHO criteria for prescription writing to determine their accuracy, and legibility.

Keywords Prescription writing, WHO Criteria, public sector.

INTRODUCTION

Prescription writing is a unique tool in the arsenal of a medical practitioner in his/her fight against disease and other debilitating conditions that alter a patient's quality of life. It provides a channel of communication between the doctor and the pharmacist, allowing patients to receive effective treatment. It is an authorized document issued by a registered medical practitioner instructing a pharmacist to provide a patient the required drug, in its specific doses, in the required manner of administration along with the required time of administration. ^[1, 2] Correct and precise prescriptions have remarkable beneficial effects on a patient's health. The strategy and the contents of a prescription may vary between countries, but the general details are almost always the same; patient's demographic details, drugs information (dosage, concentration, etc.) and the details of Physician prescribing them. Some services may also include the details of the Pharmacist. Patient's Demographic details are beneficial in evading the errors of incorrect patient's treatment, medico-legal issues and help in accurate records management.

The Drug details should be following the World Health Organization standards that include the generic name of drug, its concentration, the route of treatment and the treatment span.

Prescription Details give effectiveness to the prescription and authorizes the dispenser to hand over the drug. The Details of Pharmacist, when included, legalizes the drug that is of medico-legal importance. The advantage of using generic name of drug is that it frees the dispenser from the limitation of dispensing a particular brand of drugs. The pharmacist can then be free to prescribe a cheaper drug depending on the financial abilities of the patient. There are different indicators devised by the World Health Organization that measure drug performance in three related subjects of "prescribing practices, patient care, and facility-specific factors". Core prescribing indicators include the number of drugs prescribed per encounter, the percentage of drugs prescribed by generic name, the percentage of encounter by injection and antibiotics prescription, and the percentage of drugs prescribed from the essential drug list ^[3,4]

It is the ethical duty of a physician to write precise and legible prescriptions. Inappropriate usage of medicine is a waste of resources. Several studies have revealed that most physicians do not follow the guidelines issued by the Regulatory Bodies. According to a WHO report around 50% of all medicines are inappropriately prescribed, dispensed, or sold.^[5,6] Prescriptions errors are of two types, one is an error of omission and the other is of commission. A prescription that lacks the essential information is considered as an error of omission, while an incorrectly written prescription is considered an error of commission ^[1]. Prescription errors lead to incorrect medication, which is usually an avoidable medication error. Studies show that one-third of “adverse drug reactions” (ADRs) occur due to prescription errors.^[6] More than 15% of the medication errors are due to illegibility, unusual abbreviations, and incomplete medication orders.^[7] Unfortunately, in Pakistan there is no check and balance on the methodology of prescription writing by the Registered Medical Practitioners (RMPs) in the public and private sectors. This has led to inappropriate treatment of patients.^[8] An evaluation and comparison is a process or quality system which audit and equates the existing on-site practices against a defined standard or practice and highlights the differences between actual practices and recommended standards. Prescription auditing, if done correctly and regularly, allows the patients to receive effective and accurate treatment. However, if regular auditing isn’t done, it may lead to unnecessary expenditures by the patients, compromises in the quality of their treatment, and may potentially result in death of the patient.^[9]

AIM

The proposed study intends to evaluate the prescriptions written by health practitioners in the public sector under the WHO guidelines for prescription writing, and identify any shortcomings in the prescriptions that need be rectified.

OBJECTIVES

To assess the legibility of prescriptions from doctors in the public sector. To document the shortcomings in prescription writing so that health practitioners can write complete and legible prescriptions.

SIGNIFICANCE OF THE STUDY

This study seeks to audit prescriptions written by healthcare professionals so that they may be better prepared to prescribe medication to their patients and help cutdown on the number of adverse drug reaction and mortality rates due to misuse of medication arising from illegible and incomplete prescriptions.

MATERIALS AND METHODS

Settings: Study was conducted in the Department of Pharmacology and Therapeutics, Nishtar Medical University.

Duration of Study: 6 months post-approval from Ethics Review Committee Nishtar Medical University

Study Design: Hospital (outpatient) based cross-sectional study

Sample Size: 72 samples were collected randomly from public hospital .

Sampling Technique: Non probability convenient sampling

Ethics Approval: Approval of the study was sought from Ethics Review Committee, Nishtar Medical University, Multan, Pakistan.

Inclusion criteria: Handwritten prescriptions of consultant doctors were included in this project

Exclusion criteria

1. Typed/Printed prescriptions were excluded.
2. Prescription of house officers, post graduate residents and medical officers were excluded.

Sample Collection and Criteria

A double-blind cross-sectional study was carried out where prescriptions provided to patients at government (public) hospitals were collected for research purposes. In this randomized study, the prescriptions were analyzed under the WHO Guide to Good Prescribing ^[10] and data was entered into a table containing all the requirements for a complete and legible prescription under WHO guidelines. The table contained details about the patient, the prescriber and details of the medications prescribed. Data about patients contained their name, age,

address, gender, vital information (blood pressure, heart rate, weight, oxygen saturation) and the date they visited the hospital. Prescriber's details covered the name, address, and phone number at which a patient may contact the doctor. Drug details included generic drug name, strength of the drug, dosage form, and total amount of drug to be prescribed. Instructions/warnings regarding the drug(s) prescribed was also included and the prescription was also assessed regarding its legibility. Confidentiality of the patients and doctors involved was strictly maintained.

RESULTS

Of the total prescriptions analyzed under the WHO criteria for prescription writing, 93.4% of prescriptions provided name of the patient, and just 18% of prescriptions mentioned the patient's gender. Address and the date of the prescription were mentioned on 31.1% and 65.5% respectively. Only 11% of the prescriptions provided complete vitals of the patient (weight, temperature, blood pressure), with 50% of the incomplete prescriptions mentioning either just weight, or temperature.

Regarding information of the prescriber's biodata, 77% of the prescriptions mentioned the name of the prescribing doctor, and 70.4% mentioned the hospital address (this was mostly stamped on the hospital letterhead, so wasn't required to be filled in separately). Unfortunately, none of the prescriptions provided a phone number in case a patient needed to contact the prescriber.

Of the prescriptions analyzed, just 1 prescription (1.6%) had medication prescribed under its generic name. The rest of the prescriptions mentioned drugs under their brand names. 70.4% of prescriptions provided the strength of drugs, while 85.2% and 55.7% gave the dosage form and the total amount of drug to be consumed respectively.

Legibility of the drug prescription was at 63.9% and label instructions/warnings were mentioned on 83.6% of the prescriptions.

DISCUSSION

This study evaluated prescriptions under the WHO guidelines for prescription writing.^[2] One of the main criteria for prescriptions, though somewhat subjective, is legibility of the prescription. Legibility for prescriptions was at 63.9%, with

36.1% of the prescriptions being illegible while in a study from Saudi Arabia, 29% of pharmacists complained of difficulty in reading the prescriber's handwriting^[11]. This can be overcome by implementation of a digital system of prescription writing, which not only helps in legibility but also provides record keeping benefits and warns of harmful drug interactions^[12]. This study found complete lack of the use of prescribing drugs under their generic name, which would help financially disadvantaged communities in accessing treatment plans due to the comparatively lower cost of generic drugs as compared to brand names.^[13] According to a study in India, 61% of patients believed that generic drugs are of a lower quality than brand medicine, which demonstrates a lack of knowledge of patients regarding generic drugs^[14]. Where the majority of the healthcare budget of a nation is spent on purchasing medicine for the populace, prescription of generic drugs could help the country save on essential medical imports. In 2014, the U.S.A saved \$254 billion because of the use of generic drugs^[13]

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