

MEDICAL PRESCRIPTION FORM AS A TOOL OF COMMUNICATION IN MEDICAL PRACTICE IN MUSCAT: AN EVALUATION STUDY

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ABSTRACT

Objective: The study was conducted to evaluate the quality of the medical prescription form which is used by prescribers who are working in different health care facilities in Muscat, Oman in terms of preprinted contents as well as to study prescribers attitude towards these forms.

Methods: for research purposes only, photocopies of 74 blank prescription forms were obtained from 74 health care facilities (71 private and 3 government) and 888 prescriptions were collected, reviewed and analyzed.

Results: medical prescription forms collected in the study showed an inconsistency in their preprinted contents as well as an attitude variation amongst prescribers towards the preprinted contents of the prescription forms was recorded. Only 13.51% of the 74 prescription forms are of an ideal standard quality and 42.45% of the 888 prescriptions showed prescribers adherence in completely filling in the prescription forms.

Conclusion: observations reported in this study regarding the prescription form quality and the prescriber attitude towards these forms could affect the communication between the prescriber and the recipient which ultimately influence patient safety. The policy adopted by the management of the health care facilities in Muscat could be a major contributor to these observations.

Keywords: Medical prescription form, preprinted contents, prescription errors.

INTRODUCTION

The concept of prescriptions dates back to the beginning of history, so long as there were medications to capture directions for their preparation and usage. The current form of prescriptions evolved with the separation of the role of the pharmacists from that of the physician. The word "prescription", from "pre-" (before) and "script" (writing, written), refers to the fact that the prescription is an order that must be written down and often must follow certain formal rules before a compound drug can be prepared or dispensed. A medical prescription, also known as "physician's prescription", is a medication order form written by a qualified medical professional. It serves as a medium of communication between the physician and the pharmacist/nurses to ensure that the right medication is delivered to the patient (Figure 1) [1].

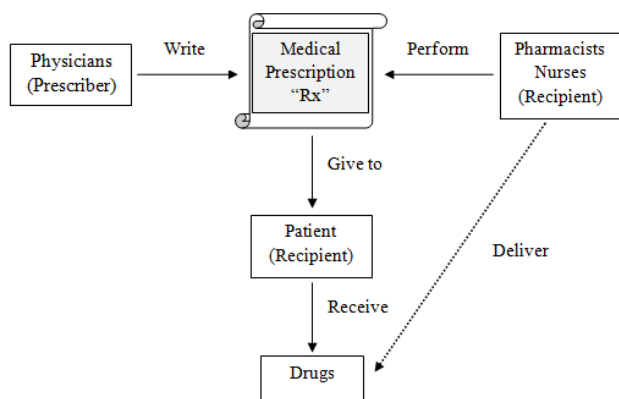


Figure1: Medical prescription as a communication tool between the prescriber and the recipient.

It has legal implications, as it may indicate that the prescriber takes responsibility for the clinical care of the patient and in particular for monitoring efficacy and safety [2]. Prescriptions are handwritten on prescription forms that are assembled into pads, or alternatively printed onto similar forms using a computer. Preprinted on the form

is text that identifies the document as a prescription. It is mainly composed of three parts: the heading, the body and the signature. These three parts consist of four must-have information sections [2]: a "superscription", "inscription", "subscription" and "signature" as illustrated in Table 1.

Table1: The elements of a typical medical prescription form.

Medical Prescription			
Element Description	The heading (Superscription)	The body (Inscription & Subscription)	The signature (Signature)
Content Description	Physician's affiliation (clinic, hospital, medical center) and address, the date of the prescription and patient information (name, age (Date of Birth), gender (sex) and weight).	The "inscription" section defines what is the medication. The "subscription" section contains dispensing directions to the pharmacist. This may be compounding instructions or quantities	Physician's name and signature. Include notification and directions to the patient and the pharmacist such as "do not substitute medication", "no substitution of medication", "do not change medication", "do not repeat prescription".
Remarks	Usually preprinted in the prescription form and filled by the prescriber.	Hand written or computer printed by the physician or health care provider.	Usually preprinted in the prescription form and filled by the prescriber.

An important feature in the prescription that distinguishes it from other medical reports and documents is the symbol (R) which separates the superscription from the inscription section of the prescription form. It is sometimes transliterated as "Rx". This symbol originated in medieval manuscripts as an abbreviation of the Late Latin verb *recipe*, the imperative form of *recipere*, "to take" or "take thus". Literally, the Latin word *recipe* means simply "Take...." and medieval prescriptions invariably began with the command to "take" certain materials and compound them in specified ways or dispense the following drug [2].

There are many studies reporting the pattern of drug prescribing, prescribing errors, assessment of the WHO indicators for drug prescribing and the effect of these factors on rationale use of medicine and medicine safety [3, 4]. However, the medical prescription form *per se* as an important document in the process of drug utilization and use was undermined by researchers. As a universal document recognized by all health care providers (physicians, pharmacists, nurses, lab technicians, ect) in a health care system in any country for monitoring drug use, as well as patient safety, a typical prescription should consist of the information mentioned earlier in Table 1. Lack of one or more of these elements could disrupt the necessary effective communication between the prescriber and the recipient of the medical prescription. As a consequence, this will affect the end user of the medication. Therefore, the aim of this study is to evaluate the appropriateness of medical prescription forms, which are used by prescribers who are working in different health care facilities, both in private and the government sectors of Muscat, following a cross-sectional survey model. In addition, prescribers' attitude towards these forms will also be assessed.

METHODS

A cross-sectional survey that consists of (888) prescriptions received by patients and out-patient pharmacies dated from December 2012 – May 2013, as well as photocopies of (74) blank medical prescription forms obtained from 74 health care facilities (71 private and 3 government). These facilities include; 7 hospitals (5 private and 2 government), 29 medical centers (28 private and 1 government), 19 clinics, 2 eye clinics, 17 dental clinics. The study was designed to investigate two main issues: 1) To review the 74 blank medical prescription forms and evaluate the level of adherence to the elements of a typical medical prescription form discussed in Table 1 earlier. 2) To review the 888 medical prescriptions issued by physicians who are working in the health care facilities of the sample study and evaluate their level of adherence in filling in the medical prescription form, mainly the preprinted content present in the form.

RESULTS

Upon data analysis, results obtained can be presented in two sections:

Section 1: Prescription form adherence to the elements of a typical medical prescription form:

The heading part:

The heading part in a typical medical prescription must contain the following preprinted contents: health facility logo and full address, date, name, age and sex. Moreover, the extra preprinted contents are considered additional information such as; weight, nationality and patient's registration and file number. Table 2 below shows the occurrence frequency of the preprinted contents in the 74 prescription forms.

The number of prescription forms that shows the preprinted contents, which include health facility logo and full address, name, date, sex and age, was 28 prescriptions (37.84%).

The body part:

The prescription form has a writing space for the prescriber to write the medication information (inscription and subscription sections) within this given space. Therefore, the size of the prescription form (height x width) is critical in deciding the available space for writing.

Table2: The occurrence frequency of the preprinted contents of the heading part in the 74 prescription forms.

Preprinted contents	Frequency (%)	Remarks	
Health facility's official logo, full address.	Yes	74 (100)	28 prescriptions showed the full address in the signature part. Written in different terms: medical-, out-patient-, pharmacy-.
	No	None	
Prescription	Yes	21 (28.39)	One prescription used "Mr/Ms".
	No	53 (71.61)	
Name	Yes	63 (85.14)	5 prescriptions showed the date in the signature part.
	No	11 (14.86)	
Date	Yes	73 (98.65)	2 prescription: one used "gender" and the other used "Mr/Mr"
	No	1 (1.35)	
Sex	Yes	32 (43.24)	2 prescriptions used "Date of Birth".
	No	42 (56.76)	
Age	Yes	40 (55.41)	Only in prescriptions issued by government health care facilities.
	No	33 (44.59)	
Weight	Yes	3 (4.05)	
	No	71 (95.95)	
Nationality	Yes	6 (8.11)	
	No	68 (91.89)	

It was noticed that 65 prescriptions (87.83%) have a size of 23cm x 6cm ± 2cm, which seems acceptable for the availability of ample space for writing. While 9 of the prescription forms (12.17%) were above or below the recorded size mentioned above.

The presence of the "Rx" symbol in the body part of the prescription forms was recorded in 44 prescriptions (59.45%) and absent in 30 prescriptions (40.55%).

The signature part:

From the 74 prescription forms, 29 prescription forms (39.19%) have the word "signature" preprinted at the end of the prescription form. The use of terms such as "doctors signature", "Dr. signature and stamp" and "signature of Dr." was recorded. It was noticed that 10 prescriptions forms (13.51%) have either "name of the doctor", "Dr. name" and "name of prescriber" preprinted at the end of the prescription form.

A phrase such as: "do not substitute medication", "no substitution of medication", "do not change medication", "do not repeat prescription" is clearly preprinted in the signature part of 14 prescriptions (18.92%) and there wasn't any such phrase in 60 of the prescriptions (81.08%).

In all the 74 prescription forms collected only 10 prescription forms (13.51%) adhered and showed the elements and their contents discussed above; the heading, the body and the signature parts. These prescription forms can be considered as ideal forms with the required quality.

Section2: Physicians adherence in filling in the medical prescription form:

In the 888 collected prescriptions, it was recorded that prescribers considered date and name parameters in the prescription form as must-provide information in all prescriptions (100%). Regarding other parameters; age, sex, weight and nationality, they were provided by the prescribers in 343 (38.62%) prescriptions, 421 (47.41%) prescriptions, 0 (0%) prescriptions, 60 (6.75%) prescriptions respectively. The number of prescriptions which had the date, name, age, sex and nationality filled in by the prescriber was only 60 prescriptions (6.75%). Meanwhile, the number of prescriptions which had the date, name, age and sex filled in by the prescriber was 156 prescriptions (17.57%). The rest of the prescriptions have less than three of the parameters filled in by the

prescriber. It is worth mentioning that some of the missing parameters in a number of the prescription forms, such as age, sex and Rx symbol, were sometimes written by the prescriber. In the signature part of the prescription form, the prescriber tended to use his/her official seal/stamp which contains his/her name, medical specialty and license number in addition to his/her signature which was recorded in 826 prescriptions (93.02%). Meanwhile, in 62 of the prescriptions (6.98%) there was only the prescriber's signature.

The professional attitude of prescribers in completely filling in the prescription form was reported in 377 prescriptions (42.45%), while 511 prescriptions (57.55%) showed variation in prescribers attitude in filling in the prescription form which is in agreement with other related published studies [2, 5].

DISCUSSION

A medical prescription is an order document used for communication between the prescriber and the recipient of the order and it is considered a legal document. Therefore, the prescriber should treat this document in a professional manner and take responsibility by appropriately filling out the prescription form which as a result allows the recipient to understand the written order instructions. This will ultimately benefit the patient who the prescription was issued for. That is to say, errors in writing the order instructions in the prescription could seriously affect the safety and well being of the patient [5].

The prescription forms used in different health care facilities in Muscat showed inconsistent preprinted contents. It was very clear that three parameters of the heading part of the prescription forms collected are considered essential and these are: the logo of the health care facility from which the prescription is issued, the date and the name. The logo is an official recognition sign of the health care facility which is in turn registered and recognized by the corresponding authorities in the country. The date and the name are usually written by default by the prescriber. The expiry date of the prescription is specified by the date of issue written by the prescriber during which the patient can re-use the prescription. Depending on the drug prescribed, the prescription expires after six months from the date of issuing for controlled drugs and one year for non-controlled drugs [6, 7]. However, as it was recorded in some prescription forms, the phrase such as "don't repeat prescription" makes the prescription invalid for re-use by the patient.

Other parameters; age (Date of Birth), sex, weight and nationality were absent in a large number of prescription forms issued by the health care facilities and they were also undermined by the prescriber. These parameters; age (Date of Birth), sex, weight and maybe nationality represent the full identity of the patient. Therefore, the absence of one or more of these parameters either because it is not presented in the prescription form or it is not filled by the prescriber should not be tolerated.

It was surprising to find that a decent number of prescription forms (40.55%) didn't contain the "Rx" sign. This sign must be present in any prescription form as it distinguishes a medical prescription form from any other forms used by medical professionals such as laboratory reports. It was interesting to note that some of the prescribers wrote the Rx sign in the prescription appreciating the importance of this sign.

The preprinted content of the prescription form should be equally weighed, which means that the information present in each part of the prescription form; the heading, the body and the signature are equally important [2]. Therefore, it is unreasonable to see this inconsistency in the preprinted contents of the prescription forms. Moreover, a large portion of prescribers undermined the importance of some parameters such as age, sex, weight and nationality, which is considered as a malpractice amongst prescribers and considered as an error in prescription writing. This kind of inconsistency in the prescription forms and prescriber's malpractice could encourage forgery. Prescriptions are sometimes forged because many narcotics are cheaper and safer as prescription drugs than as street drugs. Forgery takes many forms: prescription forms are sometimes stolen or information may be altered on legitimate prescriptions [8].

Therefore, if a prescription form has minimal preprinted parameters, for example name and age, or in case the prescriber only provided for example the name and sex and ignored providing the age, weight and nationality the prescription in both examples would be easily forged which could lead to drug misuse and abuse.

The quality of the prescription form and the attitude of the prescriber towards the prescription form should be monitored by the management as well as the professional health care team in both private and government health care facilities in Muscat. In the case of prescription forms issued by private health care facilities (medical centers, clinics, dental clinics, hospitals) there was an obvious inconsistency in the form's preprinted contents. However, in the case of government health care facilities (2 hospitals and 1 health care center) the form has uniformed preprinted contents. A computer generated label with patient's name, age, sex, nationality is fixed to the prescription form by the prescriber which gives an advantage over the private health facilities where the inconsistency of the information provided by the prescriber prevails. One private hospital adopted an electronic prescription form that is filled and printed using a computer by the prescriber at the time of patient appointment. This practice would certainly reduce the element of attitude variation between prescribers within this facility. It seems obvious that the policy and measures set by any health facility, private or government, are the main factors affecting the quality of the prescription form and the attitude of the prescriber towards the form.

CONCLUSION

Due to the fact that medical prescription form is susceptible to forgery and misuse, more attention is required by the respective health authorities in Oman. Monitoring the prescription form quality and prescribers attitude should be enforced. This can be done by issuing guidelines in order to encourage the health care facilities to adopt the use of a uniform prescription form with standard quality to solve the problem of prescription form inconsistency especially between private health care facilities. Prescribers should be encouraged by the management of the health care facilities to adopt and implement an appropriate attitude toward the use of the prescription forms. The ultimate purpose of this is patient safety and well being.

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Conflict of interest

There is no conflict of interest.

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