

## Healthcare Practitioners Malpractices and Medication Errors of Narcotics Dispensing and Handling in Multiregional Hospitals in Saudi Arabia

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### Abstract

Healthcare errors and malpractices of pharmaceuticals are very serious issues in medicine and dramatically increase the mortality and morbidity. Narcotics prescribing, dispensing and handling are very restricted in Saudi Arabia and regulated by multiple legislations accredited by Saudi Food and Drug Authority (SFDA) and Saudi Ministry of Health. This pilot study investigated the malpractices of handling and dispensing narcotics as well as the medical errors in multiple hospitals for the first time. The major reported malpractices were missed signatures either by physicians or head nurses (45.97%), irregularities in the returned short dated and expired narcotics to pharmacy (17.74%) and the discarded amounts after dose administration (13.71%). Misuse of the remaining narcotic dose by the healthcare practitioners or by the patients was also a major finding of this study. Although reported malpractices causes no serious harm to patients, but still very essential to fulfill the requirements laid down in the narcotics dispensation forms and the recommended (SFDA) legislations. These malpractices if not corrected in time may affect the renewal of the accreditations of the hospitals. Expanded and detailed study is highly recommended to assess the extent of these malpractices in Saudi Arabia and to recommend any reforms and corrections.

### Introduction

Healthcare malpractice can be simply defined as any action or omission by a healthcare provider during treatment of a patient that deviates from accepted standards of practice in the medical community or does not match the legislations. Pharmacy malpractices in Saudi Arabian community pharmacies have been sought well in literature during the last few decades to assess pharmacy compliance or dispensing antibiotics without prescription [1, 2]. The main drawback of these articles is laying emphasis on only tracking the malpractices of the physicians that may lead harm or injury to patients but not the compliance of the healthcare staff in following the hospital approved policy and procedure or governmental regulation of any particular practices such as narcotics handling. Although such malpractices may be harmless to patients, proper investigations can help to improve the quality of the work, documentation and hospital accreditation. On the other hand, Medication errors (MEs) are very common in multiple medical practices, cause serious medical injuries and may lead to death in some cases. MEs are considered as the seventh most common cause related to the morbidity and mortality in hospitals [3]. There is no unified definition of a medication error and more than 26 different terminologies have been reported in the literature [4]. According to the United States National Coordinating Council for Medication Error Reporting, MEs are defined as “any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the

healthcare professional, patient, or consumer. Such events may be related to professional practice, healthcare products, procedures, and systems, including prescribing, order communication, product labeling, packaging, and nomenclature, compounding, dispensing, distribution, administration, education, monitoring, and use” [5]. There are a multiple classifications of MEs based on various approaches such as types of errors occurring and time or place of occurrence [6, 7]. However, a survey of literature clearly indicates a paucity of literature on the medical errors and malpractices involved in dispensing of narcotics except for some reports [8-10].

In Saudi Arabia, multiple articles have been published recently that discussed MEs in primary care or inpatient tertiary hospitals [11-15]. The main results of Saudi Arabian MEs studies showed that errors were mainly related to the prescribing process, dose calculation, route of administration and dose frequency.

Narcotics prescribing, administration and handling in Saudi Arabia is very restricted. Multiple legislations and regulations have been issued by Saudi Food and Drug Authority (SFDA) and Saudi Ministry of Health for the proper dispensation of these drugs [14]. A review of literature and to the best of the authors knowledge, medication errors and malpractices for narcotics dispensation in Saudi Arabian hospitals have not been reported yet. The aim of this study was to focus on narcotic’s dispensation related medication

errors and healthcare practitioner's malpractice in military hospitals over a period of six months in an inpatient setting.

### Method

This is a retrospective pilot study of MEs and malpractices of handling narcotics conducted in seven military hospitals in Saudi Arabia. Screening of different forms filled for the dispensation of narcotics was performed over a period of six months. More than 759 prescriptions were analyzed and checked during this period. The total bed capacities of the evaluated hospitals vary from 90 to 600 beds with a total of 1873 beds. This auditing study was conducted as part of stock control departments' missions after obtaining the necessary approval from the highest administration of the institutes. The incident reports, administration records, prescriptions and narcotics stock manager records of the seven hospitals were investigated during this study for any deviations from the prescribed instructions and guidelines. Collected information and records were analyzed for date and time of dose, patient name, age and sex, nationality ID, diagnoses, dose and route, identity of the prescribed and administered persons and the verification of the prescription. The malpractice detection was carried out according to the guidelines laid down in SFDA Procedures and Legislations Manual for Narcotics and Psychotropic Substances for medical and scientific purposes. Descriptive analysis of the data was conducted using the statistical package for the social science, version 17, (SPSS Inc., Chicago, IL, USA).

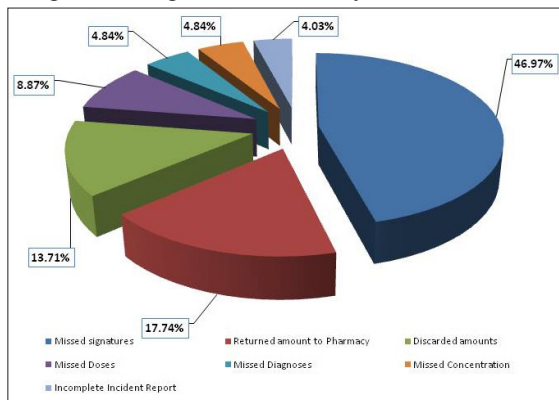
### Results

Screening of 759 multiple documents for the dispensation of narcotics revealed a total of 124 malpractice issues (16.34%) and 3 MEs (0.4%) as illustrated in Table 1.

**Table1: Malpractices and medication errors frequencies in this study.**

Findings	Frequency	% incidence
Malpractice	124	16.34 %
Medication errors	3	0.4%.

The major narcotics handling malpractice was missed signatures either by physicians or head nurses which represents 46.97% of the total reported malpractices. On the other hand, the least malpractice was the incomplete narcotic incident reports. The returned amount of short dated and expired narcotics to stock keeper as well as discarded amounts of narcotic after dose administration was also high; the overall malpractices reported in this study are illustrated in Figure 1.



**Figure 1: Subclasses of reported narcotics malpractices frequencies.**

The reported MEs in this study were limited to incorrect dose or incorrect medication as illustrated in Table 2.

**Table2: Narcotics medication errors reported in this study.**

MEs	Frequency	% incidence
Incorrect dose	2	0.26%
Incorrect medication	1	0.13%

### Discussion

Auditing and evaluation of healthcare practitioner practices is very essential to assess the quality of their work and to design suitable methods for improvement. Such kind of auditing study aims to increase the self-satisfaction and trust of the healthcare practitioners and helps in the renewal of the accreditations of the hospitals. Although narcotics prescribing and handling in Saudi Arabia are restricted and well regulated with specific guidelines at each step by the Ministry of Health (MOH), and SFDA legislations, the outcomes of this study showed high incidence of malpractices during narcotics handling (16.34%). Even if reported malpractices are not very serious and cause no serious harm to the patient but it is still very essential to fulfill the requirements laid down in the narcotics dispensation forms and the recommended legislations. The results of this study shed the light on the existence and the extent of narcotics malpractices and MEs in different regional hospitals for the first time. Ignoring of narcotic administration sheets signature by the physicians/ nurses was very high in this study and overruns the SFDA legislations. The returned amount of short dated and expired narcotics from the wards to the pharmacy department was the second major malpractice recorded in this study. This high incidence gives an indication that the narcotic nurse in charge in the ward does not arrange the received narcotic stock in proper order according to the expiry dates or order over stocks. The legislations and regulations for the management of expired and short dated narcotics are to be followed strictly by the stock keeper for proper reordering and stock controlling. The results also indicate that the discarded amounts of narcotics after dose administration were very high which may be mainly attributed to the use of single dose ampules. These results in wastage and affects the budget of the hospitals allocated for purchase of pharmaceuticals and can be avoided by ordering a multiple dose vials instead of single use ampules. However there is a possibility of the remaining dose being misused by the healthcare practitioners or by the patients. The fourth major malpractice reported in this study was the documentation of the administered dose for the admitted patient and this is very serious and threatens the patient's safety. The missed diagnoses, missed concentration of given drug and unfilled incident reports were the least reported malpractices. Although these malpractices are harmless to patients, but still required to fill the narcotics forms properly.

In conclusion, this pilot auditing study highlights the healthcare practitioner's malpractices for narcotics dispensing and handling for the first time. Although malpractices reported here might be harmless to the patients but still very essential to fulfill the SFDA requirements and legislations for this drug category. The outcomes showed carelessness of the staff in following the SFDA instructions for narcotics handling which may affect the hospital in many ways including accreditation of the hospitals. We believe that further expanded and detailed study is badly needed to assess the extent of these malpractices and to suggest a suitable plan for correction and compliance to prescribed rules and regulations.

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