



## Strategic Assessment of Dispensing Errors in Hospital Pharmacy

Majid Khan\*, Muhammad Riaz, Rahmatullah, Sharif Ahmad and Hayat Muhammad

Department of Pharmacy, Shaheed Benazir Bhutto University, Sheringal Dir Upper Khyber Pakhtun Khwa, Pakistan

### Abstract

World Health Organization defines the dispensing is the main part of the rational use of medications as the right medications are given to the patients in specific doses for specific time period and cost effective. The dispensing practice is the subpart of medications which is the third leading cause of death. The concurrent study conducted of 201 patients in Pharmacy department of Tertiary care hospital on special type of proforma recommended for Good dispensing practice and World Health Organization WHO indicator for patient care and rational dispensing. Out of total patients 115 (57.21%) were male and 86 (42.7%) were female the dispensing error evaluated by using dispensing cycle which is consist of 6 steps out of 6, 26 (86.6%) dispensing cycle were followed and 4 (13.6%) deviates, beside that the WHO indicator for patient care and rational dispensing utilized in which 10 (59%) steps followed and the remaining 07 (41%) not followed up to the mark to improve overall health status and rational dispensing, the therapeutic and generic equivalents were common in practice and all of the drugs mentioned once but this practice was on the basis of products availability. The current study concluded that the Good Dispensing Cycle was followed up to some extent but not completely.

### Keywords:

Dispensing cycle; dispensing error; WHO indicator for dispensing; Therapeutic equivalents; generic equivalents.

### Introduction:

The dispensing error is the subpart of medication errors. The dispensing is the main part of the rational use of medications as defined by "WHO" when the right medications are given to the patients in specific doses for specific time period and cost effective [1]. Dispensing is the main clinical activity that gives potential to the Pharmacists for preparation, labeling, packaging, record maintenance, giving and providing instructions about the drugs to the patient on prescription [1-10]. The "World Health Organization" documented those more than (50%) all medicines prescribed and dispensed irrationally and inappropriately and (50%) patients unable to take or use these medicines appropriately thus the dispensing cycle can affectively decrease the burden from the shoulders of the patients of irrational and inappropriate drugs use [11].

Dispensing is the major component of medications management pathway, which includes medications review, order, issues and provision of information's [4,12,13]. A good dispensing practice should be carry out in clean environment [2]. The dispensing process should be in compliance with standard guidelines as termed as dispensing cycle or good dispensing practice which is consist of six steps as mention below;

Dispensing cycle is well organized recommended step wise process of good dispensing and consists of six steps [2,3].

### Results

The total number of 201 patients evaluated in Pharmacy at Tertiary care hospital. The data contains 115 (57.21%) male and 86 (42.7%) female, as shown in the Figure 3. For standard dispensing an indicator used on the name of "Dispensing cycle" from (Ensuring good dispensing practice) which is consists of 6- steps in which 3 steps completely followed, one up to 5 steps, one up to 3 and 1 no need thus the total deviations from the standard were (11%) as shown in Table 2.

The 6-steps dispensing cycle is (86.6%) followed and (13.4%) deviate from the standard recommended. Along with that the WHO indicator for patient care and rational dispensing utilized in which 10 (59%) steps followed and the remaining 07 (41%) not followed up to the mark to improve overall health status and rational dispensing (Table 3). The therapeutic equivalents were (0.38%) and generic equivalents were (1.92%) and all drugs used once. This practice of therapeutic and generic equivalents was common in practice as shown in Table 4.

### Discussion:

The medications error are the combination of prescription, dispensing and administration errors and is a third leading cause of death after cancer and cardiac diseases in United State and are predominant source of iatrogenic diseases [17-19]. The dispensing errors are the least occurring subpart of medication errors, the dispensing is the third leading part of medication error in comparison with prescribing and administration in U.S, for dispensing a standard guideline used as an indicator on the name of 6-steps dispensing cycle.

The study on dispensing errors carried out in 2002 in British and reported the dispensing error is (2.1%) that is extensively lesser than our study, similar study carried out in 2003 in America and reported errors are (3.6%) that is also lesser than our study which is (13.4%) in GDP recommended pattern and (33.4%) in "WHO" recommended guideline for standard dispensing [20]. The Dessalegn et al reported that the poor writing of prescription is considered as the frequent causative way of dispensing error our study also insists to be corrected because it leads to iatrogenic diseases and that is third leading cause of death [1].

**Conclusion:**

The dispensing error is the subpart of medication errors by the Pharmacist. The 33 days study assessed, the liability came upon the Pharmacist but the route cause is prescription error, if Physicians prescribe wrong the whole pathway will be going wrong ultimately loss of the patient both health and wealth that is strictly prohibited by World Health Organization. The WHO guideline is the standard for therapy and followed in every country for rational treatment, the approaches and protocols for the medical field members is for the sake to provide good health to the patient, but unfortunately the health members are not performing their duty well as per the standard rules, the standard recommended guideline should be followed for the treatment of the patient to achieve the optimal therapeutic outcome.

